PECO STATEMENT NO. 22C

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PENNSYLVANIA PUBLIC UTILITY COMMISSION
v.
PHILADELPHIA ELECTRIC COMPANY
Docket No. R-850152

ADDITIONAL REBUTTAL TESTIMONY OF JOHN J. CARROLL

RE: PERFORMANCE STANDARDS FOR PECO NUCLEAR UNITS

February 1986

ADDITIONAL REBUTTAL TESTIMONY OF JOHN J. CARROLL

Q. Please state your name and address.

A. John J. Carroll, 2301 Market Street, Philadelphia, PA 19101.

Q. Have you previously submitted testimony in this proceeding?

A. Yes, I have sponsored Statements 22, 22A, 22B and Exhibit JJC-1 in this proceeding.

Q. What is the purpose of this Rebuttal Testimony?

A. The purpose of this testimony is to present a portion of the Company's response to the Direct Testimony of Governor's Energy Council Witness John W. Wilson proposing a performance standard for the Company's nuclear units. Specifically, my testimony challenges Witness Wilson's 60%-70% target performance range, his unbalanced and inequitable reward/penalty provisions and his failure to establish a cap on the potential gain or loss. In addition, I will point out significant errors in the data upon which Witness Wilson bases his analyses and which vitiate their usefulness as support for his proposals.

Q. Why do you disagree with Witness Wilson's proposed 60%-70% target nuclear performance range?

A. Witness Wilson's 60%-70% range is based upon a 65% performance standard, plus or minus a 5% "dead band" in which no reward or penalty would apply. This 65% target standard fails to properly reflect all of the available historic and projected data regarding the operation of nuclear units. For example, the weighted average lifetime capacity factor of PECO's nuclear units is 54.6%. Similarly, the historic weighted average lifetime capacity figures for all comparable nuclear units, as shown on Exhibit JW-3, pages 1 and 2, is 60.2%. In addition, the Company's capacity factor projections for its nuclear units for the next three years, as shown

on Exhibit JW-4, are 61.1% for 1987, 58.4% for 1988, and 65.6% for 1989 or a 61.7% average over the three-year period. I would note that Witness Wilson does not challenge the reasonableness or the accuracy of the Company's projections. Consideration of this data, along with the Company's long-term 65% capacity factor projection, leads me to the conclusion that a target performance range of 55%-70% (i.e., 60%-65% ± 5%) is a reasonable starting point for a performance standard if one is to be adopted.

Q. Can you illustrate why the aggregate capacity factor of PECO's nuclear units might be less than 65% in a particular year?

A. Yes. Let us assume a scenario of nuclear plant conditions with 5 nuclear plants requiring 2 outages every 3 years. This would require 3 and one-third outages every year on the average. Let us assume that one unit is required to be out of service for 19 weeks in one year. Such an outage could occur for the warranty inspection at Limerick, plus 2 weeks of scheduled outages, the 10 year In-Service Inspection at another station, or a combination of a normal refueling plus several one week scheduled outages to correct potential problems before they result in forced outages. Let us further assume that two other units are experiencing normal refueling outages of 12 weeks and only experience 2 weeks of other scheduled outages during the year and that the remaining two units only experience 4 weeks of scheduled outages to correct potential problems. Finally, assume that all units operate at their predicted forced outage rate.

Now let us assign names to these units. Since Limerick will require the warranty inspection, it will be assigned the 19 weeks of outage. Peach Bottom Unit No. 2 and Salem Unit No. 2 will be assigned the normal refueling outages and

Peach Bottom Unit No. 3 and Salem Unit No. 1 will only experience 4 weeks of scheduled outages.

This appears as a very favorable nuclear output year for the following reasons: (1) only 3 units are experiencing end-of-cycle outages, one-third of a unit outage less than the required average; (2) only 1 of the 5 units has an end-of-cycle outage longer than a normal length; (3) no unit experienced a high forced outage incident rate; and (4) the number of non-planned outage weeks was not unusually high, only 14 out of 215 unit weeks or 6.5% of the time. If we calculate the 12-month nuclear capacity factor for this scenario, it would only be 61.5%, as shown on Schedule 1.

Q. Does your scenario show that PECO is overly optimistic in stating that its nuclear units should achieve a lifetime capacity factor of 65% into the future?

A. No, it does not. The Company fully expects its units to achieve a 65% capacity factor over the long term. However, given certain unique conditions over the next three years, an initial performance standard of 60%-65% with a 55%-70% performance range would be more appropriate.

Q. What is causing a lower short-term nuclear capacity factor over the next three years?

A. In the immediate future, PECO has the following requirements for its nuclear units that will cause reduced capacity factors:

(1) The longer than normal warranty inspection outage for Limerick Unit No. 1;

(2) The experience-dictated, higher than normally expected forced outage rate for Limerick Unit No. 1 during its immature years of operation;

(3) The longer than normal 10 year In-Service Inspection outage required for Salem Unit No. 1. (This would not of itself present a major problem if the other situations did not exist); and

(4) The extended outage required for pipe replacement on Peach Bottom Unit No. 3 to mitigate IGSCC problems.

These known, necessary and required events make the Company's expected, long-range 65% capacity factor unrealistic for the short term but not as an average lifetime capacity factor for the long term. This is best shown by the Company-projected 58.4% capacity factor for 1988. This lower capacity factor is caused by the reasons set forth above, which Witness Wilson has not challenged. Yet, they would cause the Company to incur a substantial penalty under his plan. The 55%-70% capacity factor range, which I am proposing, balances the historic performance of PECO's units and other comparable units and the known, short-term projections, described above, with the long-range expectation of an overall lifetime 65% capacity factor. Witness Wilson's proposal, in contrast, fails to take into account the Company's historic average capacity factor, the Company's projections for the next three years, and the known events, described above, which will operate over the next three years to reduce the average capacity factor of the Company's nuclear units. Finally, I would also point out that a number of the operating performance standards adopted in other states, discussed by Witness Wilson in Statement No. 1A, have 55% low ends in their capacity factor ranges and provide for no penalty for performance above that percentage.

Q. Witness Wilson also proposes that PECO absorb 100% of the losses for operation below 60% but keep only 50% of the gains for operation above 70%. Does this provide an equitable allocation of benefits to the customer and stockholder?

A. No, it does not for two reasons. First, Witness Wilson's proposal is inequitable on its face because it places the Company at risk for 100% of potential losses but allows it to keep only 50% of the potential gains. Second, because of the nature of costs for the generation mix of a utility with diversified incremental cost generating sources such as PECO, there is an inherent penalty to the stockholders built into Witness Wilson's method of assessing reward/penalty clauses.

Q. Would you explain why this is so?

A. Yes. The incremental cost of the next highest block of power is not a straight line function as you progress from nuclear units through mine mouth coal units, urban coal units, oil fired units, and peaking units. Therefore, for each MWH of deviation around a base point, the costs increase faster as nuclear generation goes down than they decrease as nuclear generation increases. Let us assume that the base point is when the nuclear units are at 65% in Witness Wilson's proposed range. Let us also assume that, over a three-year period, the capacity factors, due to the timing of refueling, are 57%, 65% and 73%. Under this scenario, the Company has delivered an average of 65% capacity factor for the three-year cycle of nuclear refueling outages. Therefore, neither the customer nor stockholder should receive any net reward or penalty. However, since the cost incurred to generate each MWH to replace nuclear generation below a 65% capacity factor is greater than the savings resulting from nuclear generation above a 65% capacity factor, the Company will suffer a net penalty even though the desired 65% nuclear capacity factor was achieved over the three-year period.

Q. Do not the other sources of energy available to PECO, such as interchange purchases, two-party purchases, etc., eliminate this non-linear incremental cost curve condition you discuss?

A. No. These items could only help to reduce the inequity of the non-linear incremental curve if sufficient energy were available to PECO to off-set the reduction in nuclear power. Also, the loss of interchange sales in the low nuclear output year could compound the problem because the loss of savings passed through to the customers would, in all probability, be greater than the increase in savings in the high nuclear output year. However, everything else remaining at the best conditions for the customers, the penalty would be greater per MWH of undergeneration than the reward per MWH for overgeneration.

Q. Would you provide an illustration of the inequity inherent in Witness Wilson's reward/penalty provision?

A. Yes. This can be clearly demonstrated by using the figures from Witness Wilson's own Exhibit JW-6. There it can be seen that the potential loss in dollars to the Company for operating performance at 55% greatly exceeds the potential benefits for performance at 75%. Even when the figures for a 75% capacity factor are doubled (Wilson's figures reflect one half of the fuel cost savings to be retained by the customers), the potential losses significantly exceed the potential benefits.

Q. Mr. Carroll, does Witness Wilson's analysis accurately reflect the potential impact of his proposal on the Company?

A. No. Witness Wilson provided results employing a 55% and a 75% capacity factor. These do not fully reflect the potential loss to the Company under his proposal. To demonstrate this point, I have performed an analysis of the impact on the projected year ending June 30, 1988, if an NRC-imposed outage of 6 months duration was experienced by all General Electric BWRs. This NRC-imposed

outage was assumed to be coincident with the Peach Bottom No. 3 pipe replacement outage but will affect Peach Bottom No. 2 and Limerick No. 1.

These two additional outages lower PECO's nuclear capacity factor to 38.4% and result in an increase in the total fuel and interchange expense of over $240 million. Under Witness Wilson's proposal, PECO would be expected to absorb this entire $240 million because the nuclear capacity factor is under 60% and his proposed penalty is 100%.

Q. Given the inequities inherent on Dr. Wilson's reward/penalty provision, does the Company have an alternative proposal?

A. Yes. I would recommend that a 50% penalty for low generation, as well as a 50% reward for high generation be instituted. As I have detailed in my testimony above, imposing equal percentages on both the penalty and reward still carries an inducement to the Company to prevent low generation because of the difference in cost per MWH for the penalty versus the reward. It does not, however, permit a windfall to the customers when the long-range average is within the band established by the Commission.

Q. Do you have any further comments on Witness Wilson's testimony, GEC Statement No. 1A?

A. Yes. I have discovered several errors, omissions, and misrepresentations throughout Witness Wilson's prepared statement. For example, with respect to Exhibit JW-3, there are several errors or misrepresentations in the information supplied by Witness Wilson on nuclear unit capacity factors. First, on pages 1 of 4, 2 of 4, and 3 of 4, Witness Wilson has listed units that have less than one year of operation in the rankings of General Electric, Westinghouse and Combustion Engineering Units. Two of these units had less than one month of operation.

WPPSS, listed as the best GE Unit, had only 19 days of operation. Callaway 1, listed as the best Westinghouse Unit, had only 13 days. LaSalle 2, listed as the third best GE Unit, had only 73 days. McGuire 2, listed as the eighth best Westinghouse Unit, had only 10 months. San Onofre 3, listed as the ninth best Combustion Engineering Unit, had only 9 months of operation. To claim a unit has the highest ranking by a particular manufacturer after only 19 days of operation is a misrepresentation of the true historic conditions for nuclear units and does an injustice to the rating of all the units below it. In addition, Witness Wilson has included the Big Rock Point unit, a demonstration unit of only 70MW, in the ranking of General Electric units on page 1 of 4.

Second, the average values of capacity factors for the various manufacturers, shown on page 4 of 4, are arithmetic averages of the yearly values and do not take into account either the size of the unit and/or the number of units included in each yearly average.

Q. With respect to Exhibit JW-4, did you discover any omissions, errors or misrepresentations as presented by Witness Wilson?

A. Yes, there are two errors or misrepresentations: (1) The nuclear capacity is in error based on the information supplied in Exhibit JJC-1. It should be 2871.84 MW. (2) Witness Wilson has listed the statistics for a year ending June 30, 1990 as supplied in Exhibit JJC-1. No such information was supplied, since PECO did not make a ProdCost projection beyond June 30, 1989. The capacity factor shown for the year ending June 30, 1990 is the composite of the statistics for nuclear units shown as the average in Exhibit JJC-1 Data Request (3) (i). (3) The MWHs generated are in error except for the year ending June 30, 1987. The information for the years ending June 1988 and 1989 was supplied in response to IR-GEC-4-1.

They do not agree with Witness Wilson's values, and I cannot comment on how he obtained his values.

Q. With respect to Exhibit JW-5, did you discover any omissions, errors or misrepresentations as presented by Witness Wilson?

A. Yes, again, there are two errors or misrepresentations: (1) In the sources of energy, Witness Wilson has listed "two-party transactions" as "Firm Purchases." PECO has no "Firm Purchases" now or projected for the future. (2) Witness Wilson has created statistics for the year ending June 30, 1990.

Q. Does this conclude your Rebuttal Testimony at this time, Mr. Carroll?

A. Yes, it does.

Calculation of Nuclear Generation Capacity Factor

Unit	Capacity	x	Outage Factor	x	Avail. Rate	=	Equiv. Capac
Limerick 1	1055	x	(1-19/52) .6346	x	(1-.2235) .7765	=	519.87
Peach Bottom 2	447	x	(1-14/52) .7308	x	(1-.16) .84	=	274.40
Peach Bottom 3	439	x	(1-4/52) .9231	x	(1-.16) .84	=	340.40
Salem 1	459	x	(1-4/52) .9231	x	(1-.18) .82	=	347.44
Salem 2	471	x	(1-14/52) .7308	x	(1-.18) .82	=	282.25
Total	2871						1764.36

$$\text{Average Capacity Factor} = \frac{1764.36}{2871} = 61.5\%$$

PECO STATEMENT NO. 22D

3-12-86
H4
R-850152

PENNSYLVANIA PUBLIC UTILITY COMMISSION
VS
PHILADELPHIA ELECTRIC COMPANY

DOCKET NO. R-850152

ADDITIONAL REBUTTAL TESTIMONY
OF
JOHN J. CARROLL

RE: 80%/20% ENERGY COST RATE

MARCH 1986

ADDITIONAL REBUTTAL TESTIMONY OF JOHN J. CARROLL

Q. Please state your name and business address.

A. John J. Carroll, 2301 Market Street, Philadelphia, PA, 19101.

Q. Are you the same John J. Carroll who has previously supplied testimony in these proceedings?

A. Yes, I am.

Q. What is the purpose of this rebuttal testimony?

A. This rebuttal testimony will address those portions of the testimony of Trial Staff witnesses Rosenthal and Hosler that deal with the level of Total Fuel and Interchange expenses that are appropriate for the projected three years following the inclusion of Limerick No. 1 in the base rates of the Company. In addition, this rebuttal testimony will also address comments of Witness Wilson contained in GEC Statement No. 1C on the subject of integrating a nuclear plant capacity factor standard into the Commission's proposed 80/20 ECR.

Q. Schedules 3 and 4 of Staff Statement ECR-1 compare PECO's base load unit capacity factors, both historic and expected future, to NERC statistics for similar units. Do you have any comments on these comparisons?

A. Yes, while the Staff has proposed no adjustments due to the difference between PECO's projected capacity factors and the NERC national statistics, I present the following comments on the statistics used in these comparisons.

Schedule 3 compares the capacity factors of PECO's nuclear units with national statistics for reactors of a similar process (boiling water or pressure water reactors). Two observations are appropriate:

1 - All values shown that are attributed to NERC are capacity factors calculated on a gross MWH output basis while PECO's statistics were calculated on a net MWH output basis. The figures, therefore, are not directly comparable.

2 - The figures employed by Staff for pressure water reactors include all such units, rather than units comparable to Salem. A proper comparable group would, in my view, consist of Westinghouse pressure water reactors.

Schedule 4 compares the capacity factors of PECO's coal-fired units with national statistics for coal-fired units. However, the only criteria for comparison was unit size. Such a comparison does not reflect very different types of units, quality of fuel, climatic conditions, throttle temperature and pressure or any

other unique plant conditions. Therefore, in my view, the data on Schedule 4 are not comparable to PECO's coal-fired units.

Q. In Statement 22A, the Company stated it was collecting data so it could provide a comparison of historical performance statistics on units it considered comparable to PECO's base load capacity. Does PECO have these comparable unit statistics at this time?

A. The collection of this data is still not complete at this time. It has taken longer than anticipated to prepare this comparison because, in several instances, the owning companies have insisted on a declaration of confidentiality before they would permit the release of the data for their units. Thus, the comparison will not be available before the close of the record in this proceeding.

Q. On page 12 of Staff Statement ECR-1, Staff proposes to adjust 2-party purchases to a normalized value of 3,000,000 MWH per year. Do you agree with this adjustment?

A. No, I do not agree with the Staff assumption that PECO could import the same level of 2-party purchases during the three years presented in Exhibit JJC-1 as it has imported in the most recent three years of history of

3,000,000 MWH. During the three years used to develop the historical level of 2-party purchases on Schedule 5 of ECR-1, the base load generation of PECO (nuclear, Philadelphia Area coal and minemouth) accounted for the following percentage of PECO's total system output:

Year ending 6/30/83 = 47.2%
Year ending 6/30/84 = 41.9%
Year ending 6/30/85 - 43.1%

During the three projected years, the base load generation of PECO will produce the following percentage of PECO's total system output from these three sources:

Year ending 6/30/87 - 74.2%
Year ending 6/30/88 - 71.4%
Year ending 6/30/89 - 76.4%

The development of these percentages are shown on Schedule 1. Since the cost of PECO base load generation is lower than the cost to purchase 2-party energy, this substantial increase in the percentage of PECO's system output being supplied by base load generation greatly reduces opportunities to economically purchase from the west. In addition to the increase in PECO's base load generation, other PJM member companies have added base load generation. PP&L added Susquehanna No. 2 in early

1985 and this is reflected for less than 1/2 of a year during the 3 year history. TMI-1 has returned to service this year and Hope Creek No. 1 will be placed in operation by the end of 1986. The addition of these nuclear units, combined with the addition of Limerick No. 1 to the PECO system, will result in additional low cost PJM energy available for PECO for purchase at a lower cost than 2-party purchases, and will substantially reduce 2-party purchases from historic levels.

Q. The Staff on page 11 comments on the level of 2-party purchases in the face of the major expected outage at Peach Bottom 3. Do you have any comment on this statement?

A. Yes, during January 1986, when Peach Bottom 3 was also out of service for the entire month, the PJM's scheduled 2-party purchases were at a level that resulted in PECO averaging only 300 MW for the entire month. This reduced level, compared to history, was due to economics and transmission limitations on West to East energy and reflects the impact of new nuclear capacity on PJM. It must be remembered that January is normally a high cost month and the western PJM companies are experiencing their high winter loads. Even under these circumstances, the ability of PJM to import 2-party purchases, on an economic and reliable basis, was reduced from historic

levels. The addition of Hope Creek No. 1, before the outage of Peach Bottom No. 3 for its pipe replacement outage, will make the economics an even bigger factor.

Q. In calculating a 3,000,000 MWH annual import, has the Staff considered all the economic factors of 2-party transactions.

A. No, the Staff has evidently missed a significant point in utilization of 2-party contracts by PECO to reduce customer energy costs. If PECO has reserved 2-party capacity for a particular period, then PECO can either take the energy when it is a lower cost than PECO's other options or it can use the energy to calculate its replacement cost when purchasing lower cost energy from PJM. Therefore, the total savings to PECO from 2-party transactions are not reflected in just how many MWH were received during a period but also in how many additional MWH were used in reducing the cost of interchange purchases for the same period. The ProdCost simulation uses the 2-party capacity to obtain both of these type of savings which are available to PECO and they were reflected in the Fuel and Interchange expenses previously submitted in Exhibit JJC-1.

Q. Is there another reason why it would be uneconomical for PECO to increase their 2-party purchases?

A. Yes, 2-party agreements call for two sets of charges associated with receiving energy from the selling party. The first is a capacity charge which must be paid for the week and is a cost per MW of capacity. This entitles the buying company to schedule energy up to the amount of the capacity reserved for any or all hours of the week. The second is an energy charge for the MWH actually scheduled during the week.

If sufficient energy is scheduled during the week and the capacity charge is spread across all the MWH, the resultant total energy is inexpensive; however, if one were to schedule sufficient capacity to insure that one could still schedule additional energy during the higher loads of the weekdays, then the cost of these additional outside purchases could very easily become more expensive than the other sources of energy available. This is shown on the table below.

Total Cost of 2-Party Purchases ($/MWH)

Cap. Fact.	Cap. Chrg.	Energy Chrg.(A)	Total Cost
80%	7.4	19.8	27.2
60%	9.8	19.8	29.6
40%	14.8	19.8	34.6
20%	29.6	19.8	49.4

(A) Includes not only fuel cost but also transmission service charges.

Q. On page 14 of Staff Statement ECR-1, the Staff makes reference to a new flexible pricing agreement between AEP and APS and on-line operation of the three units mentioned previously in their testimony, (Bath County Pumped Storage, Perry 1 and Beaver Valley 2), and concludes that the prices would not escalate over the period examined. Would you please comment on this assumption?

A. The source of 2-party transactions available to PECO is coal generation. Since there is very little difference in performance between the western units, it make very little difference in cost between units as they move down their cost curves. The addition of nuclear generation to Duquesne and Ohio Edison, the Beaver Valley and Perry units, will affect the contribution of these companies to the cost of the total energy delivered, and I have made an adjustment in 1987 and 1988 to the 2-party purchase energy cost to recognize this fact. My revised projections of Total Fuel and Interchange expenses also reflects the contribution Bath County Pumped Storage Plant has made to existing 2-party energy prices. With respect to the flexible pricing agreement mentioned in

Staff's testimony, it deals with the capacity charge not the energy costs, and I have reflected this in my revised ProdCost projections.

Q. Has PECO done an evaluation to determine the economic level of imports from 2-party purchases that are appropriate during the 3 years of the projection?

A. Yes, PECO has made several ProdCost runs with all factors equal except the 2-party purchases, and has developed a revised level of 2-party purchases for PJM that is consistent with recent history, transmission limitations, the economics of the total PJM and PECO, and the ability of the Western companies to supply this energy during the period of projection. The results of this analysis have been included in PECO's revised Total Fuel and Interchange expense projections, as described below.

Q. On page 13 of Staff Statement ECR-1, reference is made to adjusting the price of interchange purchases to reflect the average yearly coal costs and non-escalated oil prices. Is this an appropriate adjustment?

A. Based on the assumed coal and oil prices used by the Staff, this would be appropriate if the Staff considered the following items:

1 - How much of the Total PJM Purchases were purchased for pumping power and, therefore, no adjustment should be made.

2 - How much of the Total PJM Purchases were made using PECO coal as the replacement values and, therefore, no adjustment should be made.

3 - How much of the Total PJM Purchases were made using 2-party energy as the replacement values and, therefore, no adjustment should be made.

Since none of this information was available to the Staff, their adjustment arrived at an incorrect result.

Q. What corrections do you propose to Staff recommendations for Total Fuel and Interchange expenses?

A. PECO has prepared new ProdCost projections for the three years ending 6/30/87, 6/30/88 and 6/30/89. These new projections incorporate the following:

1 - Minor revisions to the Maintenance schedule (listed on Schedule 2).

2 - Staff proposed oil prices, constant for the three years.

3 - The 2-party transactions at the level determined in our economic evaluation.

PECO proposes that the results of these projections which are attached as Exhibit JJC-2 be used in place of Exhibit JJC-1 or the Staff proposal contained in Staff Statement ECR-1. A summary of the Fuel and Interchange expenses for the three years of projection contained in Exhibit JJC-2 are attached as Schedule 3.

Q. In GEC Statement No. 1C, Witness Wilson proposed a method of incorporating his proposed nuclear performance factor into the Commission ordered 80/20 ECR. Would you please comment on his proposal?

A. Yes, Witness Wilson has previously (GEC Statement 1A) proposed a dead band of 5% around the established target nuclear performance factor. In the proposed method of incorporating this into the 80/20, Witness Wilson has stated that the ECR projection should be made using a 65% nuclear capacity factor. This imposes a 20% penalty/reward for nuclear performance within the dead band. This can be best illustrated by examining the application of Witness Wilson's proposal as it would apply to PECO's ProdCost projection of nuclear output submitted in these proceedings.

65.0% = Witness Wilson's Nuclear Capacity Factor for Projection Purpose.

61.0% = PECO's ProdCost Projection of Nuclear Capacity Factor Year Ending 6/30/87.

4.0% = Shortfall under Witness Wilson's Proposal.

Now let us assume that the actual capacity factor was exactly as predicted in PECO's ProdCost program. Under Witness Wilson's proposal, PECO would be expected to incur a penalty because it did not achieve 65%. If we were to assume the average replacement cost for nuclear energy was $25/MWH, and the average nuclear fuel expense was $7.5/MWH, then PECO would incur a penalty of approximately $3.5 million even though the nuclear energy was exactly as predicted and fell within Witness Wilson's proposed dead band. Thus, in integrating his performance standard with the Commission's 80%/20% ECR, Witness Wilson has proposed an additional penalty beyond that contemplated under either this nuclear performance standard or the 80%/20% ECR. Specifically, Witness Wilson changes his proposed penalty/reward from 100%/50% for operation outside the dead band to 20%/20% for the first five points of deviation around the single point standard and 100%/50% for greater than five points of deviation around the single point standard.

This additional penalty is demonstrated on page 41 of GEC Statement 1C, where Witness Wilson discussed a hypothetical in which Total Fuel and Interchange decreases by $20 million even though nuclear operation

fell to 55%. He attributes $50 million added expenses to the lack of nuclear production between 55% and 60% capacity factor and $30 million added expense to lack of nuclear production between 60% and 65%. Witness Wilson then proposes that a total penalty of $36 million made up of $50 million for operation below the lower limit of his proposed dead band, $6 million, or 20% of $30 million for operation within his dead band and $20 million credit calculated as 20% of $100 million. Witness Wilson assumes that since the performance of the nuclear units were responsible for $80 million of added cost due to operation below a 65% capacity factor, the other factors which control Fuel and Interchange expenses must have been responsible for a $100 million reduction to net a Total Fuel and Interchange reduction of $20 million. This clearly demonstrates Witness Wilson is proposing a 20% penalty/reward within his proposed $\pm$ 5% dead band.

Q. Has Witness Wilson proposed any method for determining the value to place on nuclear generation deviations around his newly proposed set point or outside of the dead band.

A. No, Witness Wilson had not presented any testimony addressing the determination of this value. Witness Wilson does, however, present his method as a way to eliminate "The substantial effort and time required for a

general rate investigation are needed in part to satisfy the procedural requirements that the interested parties (including the Company, the Commission Staff, and any interested intervenors who wish to participate) all have adequate opportunity to prepare their evidence and arguments and to be heard" (GEC Statement 1C page 6). During the Commission ordered investigations P-830453 et al and R-850010, considerable evidence and testimony was presented on the subject of the value of nuclear generation deviations under a pre-established level. Therefore, without a resolution of this important aspect of Witness Wilson's proposal, I do not feel it can be expected to obtain the results he claims.

Q. Has Witness Wilson supplied any information in GEC Statement 1C that supports your previous contention that a nuclear performance standard is biased in favor of ratepayers because the cost of replacement energy increases as the capacity factor for the nuclear plants decease, or conversely, that the savings decrease as the capacity factor for the nuclear plants increases?

A. Yes, on page 41 of GEC Statement 1C, Witness Wilson estimates that a reduction of nuclear capacity factor from 60% to 55% would increase energy costs by $50 million, an average of $10 million for each percentage point, while the impact on fuel expenses for the five

percentage points between 60 and 65% capacity factor is $30 million, or only $6 million for each percentage point.

Q. Does this conclude your additional rebuttal testimony?

A. Yes, it does.

Schedule 1

Base Load Generation as % of Output

Historical Data

	July 1, 1982 to June 30, 1983	July 1, 1983 to June 30, 1984	July 1, 1984 June 30, 1985
Nuclear	6,946,637	5,989,502	5,879,939
Phila. Area Coal	2,601,785	2,199,530	2,676,262
Mine Mouth	3,854,466	4,606,395	4,346,163
Total	13,402,888	12,795,427	12,902,364
System Output	28,388,261	30,512,172	29,960,987
%	47.2%	41.9%	43.1%

3 Year Future Projection

	July 1, 1986 to June 30, 1987	July 1, 1987 to June 30, 1988	July 1, 1988 to June 30, 1989
Nuclear	15,340,222	14,811,978	16,508,517
Phila. Area Coal	3,065,000	2,925,000	3,085,000
Mine Mouth	4,078,000	3,989,000	3,873,000
Total	22,483,222	21,725,978	23,466,517
System Output	30,297,964	30,440,020	30,720,039
%	74.2%	71.4%	76.4%

Schedule 2

The following table lists the changes in Maintenance schedules between Exhibit JJC-1 and Exhibit JJC-2. The numbers listed are week numbers during which the outages will occur.

Year	Unit	Exhibit JJC-1	Exhibit JJC-2
1986	Keystone 2	-----	26-30
1987	Limerick 1	14-31	14-30
	Keystone 1	15-18	15-19
	Keystone 2	37-42	37-41
1988	Delaware 7	22-24	43-45
	Delaware 8	50-52	19-23
	Salem 1	1-5	1-6
	Keystone 1	18-21	18-22
	Keystone 2	41-47	41-45

Development of Normalized Energy Cost

Cost

Year Ending	6/87	$ 458,380,771
	6/88	488,823,617
	6/89	461,720,247
		$1,408,924,635

MWH

Year Ending	6/87	28,298,319
	6/88	28,304,557
	6/89	28,649,259
		85,252,135

3 Year Normalized Fuel Cost 16.527 mills per KWH

7-1-86 to 6-30-87

	MWH	$
Oil - PE Stm.	1,829,000	92,663,000
Coal - PE Stm.	3,065,000	
Coal		56,774,000
Gas (Scrubber)		3,619,000
Oil (Scrubber)		4,262,000
Oil (Support)		2,335,000
Coal - Minemouth	4,078,000	58,962,000
Int. Comb.	146,550	9,205,300
Nuclear	15,340,222	115,267,615
Hydro	1,192,000	---
Received PJM	3,562,000	111,429,000
Delivered PJM	(1,434,000)	(65,913,000)
Steam Ht., CoGen	97,000	3,620,000
ME, PPL & DPL	192	14,856
2-Party Trans.	2,422,000	66,142,000
Total	30,297,964	458,380,771
Sales	28,298,319	$16.198/MWH

7-1-87 to 6-30-88

	MWH	$
Oil - PE Stm.	2,421,000	119,061,000
Coal - PE Stm.	2,925,000	
Coal		58,088,000
Gas (Scrubber)		2,477,000
Oil (Scrubber)		5,138,000
Oil (Support)		2,379,000
Coal - Minemouth	3,989,000	61,851,000
Int. Comb.	189,350	11,838,400
Nuclear	14,811,978	95,352,323
Hydro	1,166,000	---
Received PJM	3,884,000	127,188,000
Delivered PJM	(1,401,000)	(65,804,000)
Steam Ht., CoGen	111,500	4,353,000
ME, PPL & DPL	192	15,894
2-Party Trans.	2,343,000	66,886,000
Total	30,440,020	488,823,617
Sales	28,304,557	$17.270/MWH

7-1-88 to 6-30-89

	MWH	$
Oil - PE Stm.	2,105,000	104,614,000
Coal - PE Stm.	3,085,000	
Coal		66,620,000
Gas (Scrubber)		2,627,000
Oil (Scrubber)		5,438,000
Oil (Support)		2,439,000
Coal - Minemouth	3,873,000	64,773,000
Int. Comb.	147,230	9,306,700
Nuclear	16,508,517	111,470,543
Hydro	1,199,000	---
Received PJM	3,362,000	113,392,000
Delivered PJM	(1,854,000)	(88,418,000)
Steam Ht., CoGen	40,100	1,553,000
ME, PPL & DPL	192	17,004
2-Party Trans.	2,254,000	67,888,000
Total	30,720,039	461,720,247
Sales	28,649,259	$16.116/MWH

PECO STATEMENT NO. 18D

SQR
3-12-86
HRG
R-850152

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PHILADELPHIA ELECTRIC COMPANY

Docket No. R-850152

ADDITIONAL REBUTTAL TESTIMONY OF THOMAS P. HILL, JR.

RE: PHASE-IN, DISCOUNT RATE, ENERGY SAVINGS GUARANTEES, PERFORMANCE STANDARDS, AND REVENUE REQUIREMENT QUANTIFICATION FOR THE COSTS OF THE 1976 AND 1978 DELAYS

February 1986

ADDITIONAL REBUTTAL TESTIMONY OF THOMAS P. HILL, JR.

Q. Are you the same Mr. Hill who has previously filed Direct and Rebuttal Testimony in this proceeding?

A. Yes. I have previously submitted Direct Testimonies identified as PECO Statements No. 18, 18A and 18B and I have submitted Rebuttal Testimony identified as PECO Statement No. 18C.

Q. What is the purpose of this Rebuttal Testimony?

A. This Rebuttal Testimony addresses certain specific aspects of the phase-in proposals of Philadelphia Area Industrial Energy Users Group (PAIEUG) Witness Falkenberg, Governor's Energy Council (GEC) Witness Wilson, and City of Philadelphia Witness Palast; the discount rate utilized in the life cycle analyses presented by PAIEUG Witness Falkenberg and Utility User's Committee/University of Pennsylvania (UUC/UP) Witness Chernick; the proposal by several parties that PECO be required to guarantee projected Limerick 1 capacity factor or energy savings; GEC Witness Wilson's proposed performance standards for the Company's nuclear power plants; the proper quantification of announced delays in Limerick's construction schedule in 1976 and 1978 as discussed by Office of Consumer Advocate (OCA) Witnesses O'Brien and Knudsen and Trial Staff Witnesses Dougherty and Rosenthal.

Q. Do you agree with PAIEUG Witness Falkenberg's proposal to establish the Company's revenue requirement in this proceeding based upon a six-year average revenue requirement for Limerick 1?

A. No, I do not. Mr. Falkenberg proposes to take one item of the Company's total revenue requirement, i.e., Limerick 1, and establish rates for that single component on a six-year average basis because the Limerick 1 revenue

requirement is "known and measurable." As set forth below, Mr. Falkenberg's proposal should be rejected because it is fundamentally inconsistent with established ratemaking principles and is based upon an erroneous assumption that the Limerick revenue requirement is known and measurable.

Q. Is Mr. Falkenberg's proposal consistent with established ratemaking principles?

A. No. Mr. Falkenberg's proposal is completely inconsistent with the methodology employed by the Company and this Commission to establish rates. The rates proposed by the Company in this proceeding are based upon a future test year ending June 30, 1986, adjusted to reflect proforma conditions for revenue, expense, rate base and return in accordance with ratemaking principles and regulations specified by this Commission in its rate orders and filing regulations. Revenues are based upon sales and customer conditions that exist at the end of the future test year; claimed expense levels represent the Company's estimate for operating expenses, depreciation and taxes normalized and annualized for test year end conditions; the Company's rate base claims for plant in service, cash working capital, materials and supplies, and accumulated deferred taxes are based upon conditions expected to be representative of our balance sheet condition as of June 30, 1986; and the Company's claimed fair rate of return is based upon embedded costs for senior securities outstanding at the end of the future test year and a return on equity supported by Mr. Brennan to represent the cost of common equity at June 30, 1986. Under no circumstances has the Company reached beyond the end of the future test year to incorporate future sales, expenses or rate base conditions, and certainly has not sought to establish rates based upon six-year projections. Mr. Falkenberg's proposal therefore is completely

inconsistent with the ratemaking assumptions employed by the Company in this case for all elements of the ratemaking formula.

The two specific adjustments referenced by Mr. Falkenberg as reaching beyond the end of the test year do not support his proposal. The Company's claim for nuclear fuel for Limerick 1 utilizes a two-year average balance to determine the proforma condition for operation of this unit since no comparable historic data is available to determine this working capital requirement for nuclear fuel inventory. Likewise, the Company used a two-year average to reflect estimated fuel costs savings for Limerick 1 to establish a proforma condition for energy expenses for the test year. Moreover, since estimated fuel savings does not represent a specific claim for additional revenue requirements in this proceeding and since fuel cost recovery is provided through a separate mechanism outside the scope of general rate increases, it is immaterial that this adjustment was based upon prospective data rather than historic data. In any event, the Company certainly has not relied on any six-year projections in determining its revenue requirement for this case.

Q. How does the Company's phase-in proposal modify or affect established Commission procedures for determining revenue requirements?

A. The Company's phase-in proposal should not affect the Commission's determination of the Company's revenue requirement. Under the Company's phase-in proposal, the Commission will determine an appropriate level of revenue for the Company based upon future test year sales, expenses, and rate base and return utilizing traditional regulatory principles. The Company's plan does not modify or seek to modify those principles but only proposes a voluntary deferral in the recovery of this revenue from customers. This deferral and recovery of

deferrals will take place over a six-year period, but it is not the function or the intent of the Company's phase-in to set rates for the next six years. Except for the phase-in and recovery, the Commission is free to raise or lower the Company's rates over the next six years subject to compliance with the requirements of the Public Utility Code. Similarly, the Company is free to seek rate increases during this period subject to the Company's two-year stay-out proposal explained in Mr. Paquette's testimony. All elements of the ratemaking formula change over time and are subject to increases and decreases depending upon market conditions, inflation, weather and a myriad of other elements. As these elements change, adjustments to base rates will be required either by the actions of Philadelphia Electric Company, through rate filings, or by the actions of the Commission to adjust the Company's base rates. It is neither necessary nor feasible to project all elements of the ratemaking formula and determine revenue levels for the Company for the next three, four, five, six or ten years.

Q. Mr. Falkenberg seeks to distinguish the Limerick 1 revenue requirement from other elements of the ratemaking formula because it is known and measurable. Is this distinction accurate?

A. No, it is not. Mr. Falkenberg has projected revenue requirements for Limerick 1 utilizing data extrapolated from the Company's proforma test year claim. Tax rates, capital costs, depreciable plant balances and O&M expenses for Limerick 1 are all subject to substantial variations during the first six years of Limerick's operation. The revenue requirements associated with Limerick and all other PECO generating units will be affected by capital additions, refinancings associated with maturing fixed securities, general wage increases and increases in operating and maintenance expenses associated with inflation occurring beyond

the end of the future test year. Thus, contrary to Mr. Falkenberg's assumption, the Limerick 1 revenue requirement is not known and measurable and should not be established on a six-year average basis.

Moreover, even if one were to accept, for discussion purposes only, the decline in revenue requirements associated with fixed charge recovery of the initial placement of Limerick 1 and 100% of common plant into rate base, this reduction is a decline of but $143 million over the six-year period 1986 through 1991 (reference: Falkenberg, Exhibit 1-A). This would represent a decline in revenue requirements for this single element of ratemaking of less than $29 million per year for the six-year period. It is very likely that, with even modest increases in general inflation and marginal increases to total plant, that revenue requirements on a projected basis will substantially exceed and offset the revenue requirement reduction effect from Limerick 1. For example, a general wage and benefit increase of 5.2% in 1986 or a $150 million (2%) increase in rate base would completely offset the reduction in annual revenue requirement effect presented by Mr. Falkenberg.

Finally, the arguments presented by Mr. Falkenberg are not unique to Limerick 1. Over the period 1974 through 1985, the Company placed four nuclear units in service at Peach Bottom and Salem for ratemaking purposes, all of which were reflected in rates in the same manner proposed by the Company for Limerick 1. At no time during the period 1974-85 was there any base rate reduction made either by a filing by Philadelphia Electric Company or specific rate order by the Commission. In addition, at no time during that period did the Company's actual achieved return on equity exceed that level authorized by the Commission in its

Orders as being a fair and reasonable equity return, and there is no expectation that this trend will change at least into the near future.

Q. City of Philadelphia Witness Palast states at pages 67 and 68 of his testimony that if "the Company's total revenues fall short of its predictions, the entire sum of the revenue shortfall will be added to the accumulated deferred revenue account and added to rates over three or more years." Is this an accurate description of the Company's plan?

A. No, this is not correct. The actual revenues collected by the Company are always dependent on the level of sales. There is never any guarantee that the estimated revenues of the test year will be collected. Therefore, the total amount of revenue deferred at the end of year two under the Company's plan is not guaranteed.

Q. Mr. Palast also objects to the Company's proposal to recover the revenue in the deferred accounts in years four through six. Do you have any comment on this testimony?

A. Yes. Mr. Palast is concerned that the Company's sales may decline during the revenue recovery period and therefore the amounts deferred by classes will not be collected over the three-year period as estimated. Actually, it is more likely that the deferred amounts will be collected in less than the three-year period and the Company would overcollect the deferred amounts if the unrecovered revenue factors for each class were applied for the full three-year period. This is why reconciliation of the deferred accounts is important.

Q. What has been the variation in sales for the major rate classification during the last five years?

A. The sales history during the last five years has been as follows:

(MILLIONS OF KWH)

Rate	1980	1985	% Change
R & RH	7,639	7,786	1.9%
GS	2,947	3,622	22.9%
PD & HT	15,118	15,065	(0.3%)

Therefore, Mr. Palast's concern for major under collection of the amounts deferred does not appear to be well founded.

Q. Is the Company's proposal consistent with Commission precedent?

A. Yes. The Energy Cost Rate and Gas Cost Rate reconciliations and gas pipeline supplier refunds are all reconciled based on actual sales data. The Company's proposal for recovery of deferred revenue is identical in concept to these examples.

Q. Several parties would require the Company to file annual general rate cases to reflect the phase-in rates. Is this a desirable approach in your view?

A. No, it is not. It would be inefficient and a waste of Commission and Company resources to require annual rate filings for the next seven years to implement the Company's proposed phase-in. The Company will file extensive information with the Commission on a regular basis detailing the implementation of the phase-in. The Commission can review this data and adopt any adjustments required without the mandatory filing of annual general rate cases.

Q. Have you reviewed Mr. Falkenberg's discussion of a proper discount rate for evaluating economical alternatives?

A. Yes.

Q. What comments do you have concerning Mr. Falkenberg's use of a 14.3% discount rate versus the Company's use of an after-tax discount rate of 9.7%?

A. Mr. Falkenberg's conclusion that a majority of the electric utility industry would utilize a 14.3% discount rate is totally erroneous. Attached as Schedule 1 to my testimony is the questionnaire distributed to investor-owned electric utilities that was used as the basis of the data summarized in the EEI Report appended to Mr. Falkenberg's testimony (Exhibit 7). The questionnaire does not seek to determine the discount rate which electric utilities utilize for economic evaluations. Part B of Schedule 1 asks whether utilities employ incremental or non-incremental, i.e. embedded costs, for internal economic evaluation. If utilities generally used incremental costs for these economic evaluations, they were asked to supply those costs currently utilized. There was no indication on the survey whether utilities used gross or net of income tax cost of capital in economic evaluations. If a Company indicated that it used non-incremental cost of capital for internal economic evaluations, they were asked to indicate whether these non-incremental costs were embedded costs and/or net of tax costs and to provide those costs utilized.

Philadelphia Electric Company responded that it generally utilized incremental costs for internal economic evaluations, and therefore Mr. Falkenberg has incorrectly included Philadelphia Electric Company in what he believes to be the 76% of investor-owned electric utilities utilizing an average 14.3% discount rate. What this survey actually tells us is that 76% of electric utilities, including Philadelphia Electric Company, utilize incremental cost of capital rather than non-incremental costs. Since we were not asked through this EEI survey to indicate whether our cost of capital utilized was before or after tax, absolutely no

conclusion can be drawn from this survey concerning discount rates utilized by investor-owned electric utilities. I will note that Philadelphia Electric Company consistently employs an after-tax discount rate for all economic evaluations and has done so for at least 30 years. There is simply insufficient information within this survey from which to draw Mr. Falkenberg's conclusion.

The Company's use of the 9.7% net of tax discount rate and the use of embedded capital costs is consistent with the methodology employed in computing the Company's existing and past AFUDC rates, and is also consistent with the Commission's methodology in determining the proper rate of return and associated revenue requirements for rate base.

Q. What comments do you have concerning the Testimony of UUC/UP Witness Chernick?

A. My response to Mr. Chernick is limited to his discussion of discount rates as it appears on pages 77 through 81 of his Direct Testimony.

Q. Please discuss Mr. Chernick's testimony on discount rates?

A. Mr. Chernick cites three reasons why he believes Philadelphia Electric Company's 9.7% discount rate is inappropriate. First, he believes the proper discount rate should reflect customer discount rates rather than Philadelphia Electric's own discount rate. I believe this is an inappropriate conclusion. As a part of a utility's requirements to serve customers, it is necessary to make capital investments regularly to serve the needs of those customers. To provide for these facilities, the utility must raise capital in the financial markets through the issuance of long-term fixed securities and the sale of common stock. The terms and prices of the securities are determined by market conditions at the time the utility enters the capital market. The utility is entitled to the opportunity to earn a fair return

on the invested capital which includes recovery of the actual interest and dividends on fixed securities and a fair return on common equity, if the investment is used and useful in public service. These financing costs constitute, in part, the utility's cost of capital. While considering an average consumer discount rate may provide an interesting theoretical exercise, it is impossible to derive an average discount rate for our 1.3 million customers. I am confident of this conclusion since I am a customer of Philadelphia Electric Company and would be included in this hypothetical exercise proposed by Mr. Chernick, and yet, my own discount rate is unknown to me. My own discount rate is subject to many changing factors such as the size of the proposed investment, relative interest rates and many non-economic factors. Drawing any conclusion as to the aggregate rate for 1.3 million customers would be an impossible task. Any utility must borrow on behalf of all its customers and, thus, the utility's cost of capital is a reasonable proxy for its customers average discount rate.

Mr. Chernick's second concern relates to the relative risk of investments, specifically, Limerick Unit No. 1, and the Company's employment of its after tax cost of capital equal to 9.7%, as the appropriate discount rate. Mr. Chernick appears to be stating in his testimony that an after-tax return of 9.7% is an inadequate return on the Limerick plant when consideration is given to the specific risk of this investment. Unfortunately, Mr. Chernick fails to recognize that the Company is entitled only to a return equal to its cost of capital as determined by this Commission. The Company's accrual of Allowance for Funds Used During Construction, during the construction period of any investment, is limited to the embedded cost of senior securities and a return on equity not in excess of that allowed by this Commission. Likewise, after any plant, including

Limerick, is placed in service, the Company is entitled only to a return on invested capital again equal to embedded costs for debt and preferred securities and an allowed Commission return on common equity. It would certainly be most inequitable to impute a discount rate or an after-tax cost of capital higher than that utilized by the Company and this Commission. If it is the Commission's intention to grant a fair and reasonable rate of return based upon actual costs of securities and a fairly determined market rate of return for common equity, and if utilities are in fact making investments on behalf of customers, it is most appropriate to utilize the Company's cost of capital in determining a composite discount rate for our customers.

Finally, Mr. Chernick challenges the after-tax cost of capital which reflects the interest deductibility of debt securities in computing an appropriate discount rate. Philadelphia Electric Company borrows money at an average cost equal to its after-tax return rate. The benefits of tax deductibility of interest expense reduce the overall cost of money to the Company and its customers. The benefits of this tax deductibility are routinely passed on to customers as a reduction in the cost of service. Page D-9 of Exhibit TPH-2A reflects the very tax benefit that Mr. Chernick seeks to remove. Likewise, the Company employs an after-tax AFUDC rate in its calculation of all AFUDC accruals on construction projects. These calculations are routinely submitted for review and approval to the Commission on a semi-annual basis. This practice has been in effect in this jurisdiction since 1973.

In conclusion, there is no more appropriate discount rate to employ for any economic evaluation by Philadelphia Electric Company than its actual after tax

cost of money which is reflected in its cost of service and in the final determination of rates approved by this Commission.

Q. Mr. Hill, several witnesses have proposed that PECO be required to "guarantee" the energy savings projected for Limerick at a 65% capacity factor. Does the Company agree with these proposals?

A. No, it does not. First, such a guarantee is patently inconsistent with traditional ratemaking principles. Under these principles, a utility is entitled to recover its reasonable and prudent operating expenses. The energy savings guarantee proposals advanced by opposing parties would disallow all costs associated with a Limerick 1 capacity factor of less than 65% without any examination of whether the costs incurred were reasonable or prudent. An energy savings guarantee would make PECO an insurer not only of the operation of Limerick 1, but of all the myriad of other factors that affect total fuel costs. This is clearly unreasonable. 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. The Commission is free to investigate the operation of Limerick 1 or any other unit at any time and to disallow any costs which are found to be unreasonable or imprudent.

Second, the adoption of a Limerick 1 energy savings guarantee is duplicative of and inconsistent with the 80%/20% Energy Cost Rate. As explained in my Statement No. 18B, the Commission has required that the Company file an 80%/20% Energy Cost Rate in this proceeding under which the Company is placed

at risk for 20% of the variation in total energy costs and is only entitled to reconcile 80% of energy costs for refund or recovery purposes. If this proposal for Energy Cost Rate modification is adopted by this Commission, the Company is already placed at risk for the performance not only of Limerick 1, but also each and every other generating unit on our system and all other factors which affect total energy costs. Failure to meet the projected energy cost level in any annual period will result in the disallowance of 20% of the additional energy costs incurred by the Company to serve customer load. Likewise, the Company is entitled to retain 20% of energy savings resulting from decreases in energy costs below projected levels. A specific guarantee of Limerick energy savings at a 65% capacity factor as proposed by Mr. Falkenberg is simply duplicative of the stated purpose of the 80%/20% Energy Cost Rate mechanism.

Third, it is improper and unreasonable to establish a flat capacity factor performance standard for a single generating unit. As explained in Mr. Carroll's Statement No. 22C, performance of a single unit in a single year may vary dramatically for any number of reasons, e.g., refueling outages, maintenance outages, etc. It is simply unrealistic to expect a constant 65% capacity factor from any unit regardless of the quality of its operation. For this reason, approaches such as the 80%/20% ECR or the generic performance standards currently under consideration are far more rational than a flat 65% capacity factor for a single unit.

Fourth, the reference by several parties to the Company's agreement to guarantee the fuel savings for Salem Unit No. 2 at Docket No. R-842590 fails to recognize the entirely different circumstances that existed in that proceeding which are not present in this case. In the prior proceeding, the Company had

requested the inclusion of Salem Unit No. 2 in base rates, and just prior to the close of the record, Salem Unit No. 2 was taken out of service for an extended period of time for a generator replacement. There was a specific concern on the part of intervenors and the Commission, in that instance, whether Salem Unit No. 2 would return to service in time to provide substantial energy savings benefits during its first year of operation. To alleviate those concerns, the Company specifically offered to guarantee the performance of that unit for the first 14 months of operation in order to allow rate recognition of Salem Unit No. 2 in base rates. That guarantee will expire on March 31, 1986 and at that time Salem Unit No. 2 will be treated, for Energy Cost Rate purposes, in the same fashion as all other generating units on the Philadelphia Electric Company system. The Commission recognized the unique nature of this situation in their Order at Docket No. R-842590 and, I might also add, specifically denied a guarantee of any energy savings at the Susquehanna Units in Pennsylvania Power and Light Company's recent base rate proceedings.

Similarly, Mr. Knudsen expresses a "two-line" concern in his testimony on the availability of water to operate the plant and insists that this is akin to the major outage on the Salem Unit No. 2 facility. In the Company's direct testimony, Mr. Boyer presented the plans and necessary filings submitted by the Company in order to obtain adequate water supplies for Limerick 1 during the summer of 1986. This data fully indicates the Company's firm expectation that water will be available. 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.

Fifth, Mr. Falkenberg notes that without an energy savings guarantee an "unfortunate" fall in the price of oil will have a severe impact on customers'

rates. What Witness Falkenberg fails to note is that a drop in oil prices, below that projected by the Company, will only act to decrease rates to customers. If there is an actual reduction in the cost of the price of fossil fuels, i.e., the cost of oil, the Energy Cost Rate, which is constructed on the basis of total energy costs, will decline. Thus, any decrease in the absolute level of energy expense can only act to the customers' benefit by reducing the overall level of rates paid by our customers.

Sixth, I would note that the $207 million of estimated average annual energy savings for the first two years, as projected by the Company and the associated adjustment contained on page D-21 of Exhibit TPH-2A are no longer representative of current operational conditions for Limerick 1 for the first two years of its operations. Mr. Carroll, through his Supplemental Direct Testimony and specifically Exhibit JJC-1, has introduced revised Production Cost Model data and energy costs for Limerick and other units on our system. The $207 million estimated energy savings is only used in this proceeding to adjust the Company's existing base cost of energy, as defined under the Energy Cost Rate, from 28.178 mills per kilowatthour to 20.823 mills per kilowatthour. As I have explained in Statement No. 18B, it would be counterproductive and an unnecessary mathematical exercise to adjust this estimated energy savings calculation at this time since such an adjustment would require a total revision to the Company's Cost Allocation presented by Mr. Sundermeir and a total revision to the Company's proposed rate structure and phase-in plan calculations discussed by Mr. Williams.

Finally, any Limerick 1 operating guarantee should relate solely to the operation of Limerick 1 and not to a dollar level of energy savings, which is

dependent on a whole host of factors other than Limerick 1 operation which are beyond the Company's control as explained in my Statement No. 18B.

Q. What comments do you have concerning the testimony of GEC Witness Wilson contained in GEC Statement No. 1A?

A. Witness Wilson has proposed an operating performance standard for all of the Company's nuclear units. This proposal should also be rejected.

First, I believe that this standard as proposed is unnecessary, unreasonable and duplicative of the Commission's Order at ECR No. 8, covering the 80%/20% Energy Cost Rate as well as the Commission's proposed generic performance standards for all electric utilities at Docket No. M-820324. The Commission has already directed PECO to file an incentive program, the 80%/20% Energy Cost Rate, which I have discussed in PECO Statement 18B. Likewise, there are proposed generic standards issued by the Commission and expected to be published for comment in the Pennsylvania Bulletin some time this month. The Commission has indicated in its Order from our ECR No. 8 investigation that, when the generic standards are finalized, these standards would be adopted for all Pennsylvania electric utilities including Philadelphia Electric Company. It would be inappropriate at this time for the Commission to adopt a third performance standard, as proposed by Witness Wilson, for the nuclear units of Philadelphia Electric Company.

Q. What specific objections or flaws do you see in the performance standards as proposed by Witness Wilson?

A. To begin with, I believe Witness Wilson's proposal is a violation of a basic principle of ratemaking which allows the utility to recover prudent costs incurred to serve customers. Witness Wilson's proposal would disallow recovery of all replacement

power costs if the Company's nuclear units did not produce at an aggregate 60% capacity factor level, regardless of the reason for not meeting that standard of performance. Blind adherence to such a standard obviously does not take into account reasonableness, justness or prudence of specific replacement power costs.

Witness Wilson's proposal is also inequitable in that it does not provide a balanced treatment for rewards and penalties for performance above or below the 60%-70% capacity factor range. As such, it would lead to underrecovery of energy costs even if the units were able to perform on a lifetime basis at a projected capacity factor of 65%. While it is the Company's expectation that our nuclear units will perform at or about 65% over the lifetime of their operations, by allowing the Company to retain only one-half of the fuel costs savings when performance exceeds 70% and by penalizing the Company through absorption of the replacement power costs when the unit performs below 60%, leaves the Company 50% "short of the mark" over the nuclear units service years, even assuming that poor performance years are offset by good performance years.

Further, as explained in Mr. Carroll's rebuttal testimony (Statement No. 22C), the long-term 65% capacity factor employed by Witness Wilson is inconsistent with the expected short-term performance of the Company's units for the next three years. As Witness Wilson has not challenged these projections, the Commission should not adopt his proposal. As explained by Mr. Carroll, a proper review of historic performance of Company and other comparable units, short-term projections of Company unit operations, and a long-term expected 65% capacity factor indicates that, as an initial starting point, a target performance standard of 60%-65% is reasonable. Employing Witness Wilson's ±5% range would yield an operating range of 55%-70% without penalty or reward.

Finally, I believe that Witness Wilson's proposal as outlined would expose Philadelphia Electric Company to severe financial risk without the imposition of a cap on rewards and penalties. The additional Direct Testimony of Mr. Brennan and Mr. Carroll outline the volatility in energy expenses and the associated financial impact on Philadelphia Electric Company both generally and with the application of an 80%/20% ECR. In addition, Mr. Carroll's rebuttal testimony (Statement No. 22C) explains the potential additional financial impact of Witness Wilson's proposal. Acceptance of any regulatory proposal should consider the overall effect on the utility and its financial performance and should not subject the utility to such extreme financial risk so as to affect the quality of service and the utility's ability to raise capital on reasonable terms in the financial markets. The dual imposition of an 80%/20% ECR and Witness Wilson's nuclear performance standard would have a potentially severe impact on the Company's financial condition, as shown in Mr. Carroll's Rebuttal Testimony (Statement No. 22C). Witness Wilson fails to even consider or analyze this joint effect on the Company's financial condition.

In summary, the Company believes it would be entirely inappropriate to establish a nuclear performance standard in this proceeding. However, if one is established, it should be based on a 55%-70% operating range, the 50% limitation on gains proposed by Witness Wilson should apply to both gains and losses, and the same cap proposed by Mr. Brennan for the 80%/20% ECR should apply.

Q. Have you reviewed the testimony of Mr. O'Brien as submitted in OCA Statements No. 1 and No. 1A and if so, what comments do you have?

A. I have specifically reviewed the testimony of Mr. O'Brien and the attendant calculations performed by Mr. Plunkett as submitted in these Statements. Other

Company witnesses will provide significant rebuttal responses to the technical aspects of the proposed construction schedule as outlined by Mr. O'Brien in his testimony. My comments are limited to his calculations of comparable total costs of construction between the actual cost for Limerick 1 and its February 1986 service date versus Mr. O'Brien's hypothetical calculation of construction expenditures and an associated November 1983 commercial operation date.

Q. Please discuss these aspects of Mr. O'Brien's testimony.

A. In Exhibit JJO'B-17.4 (Revised), Mr. O'Brien seeks to compare the total cost of Limerick Unit No. 1 and 100% of common plant on an as-built basis with a February 1986 service date to his total cost for Limerick 1 and 100% of common plant incorporating a modified construction expenditure pattern and a November 1983 in-service date.

This comparison as shown in Mr. O'Brien's Exhibit is flawed. Mr. O'Brien has improperly omitted capitalized overheads and taxes and the attendant AFUDC in his calculation for a November 1983 service date and has also neglected to reflect capitalized overheads and taxes in the total cost for Limerick 1 and 100% of common plant on an actual as-built basis with a February 1986 service date. Schedule 2 attached to this Statement, utilizes Mr. O'Brien's calculation methodology to properly express the total cost for Limerick 1 and 100% of common plant including total direct costs, corrected total capitalized overheads and taxes, and the proper AFUDC accrual correcting this one error in methodology. As a result, the total difference in capitalized costs is reduced from $604.4 million to $552.0 million. A similar methodological error appears on Exhibit JJO'B-24.3 which reflects Limerick 1 and 50% of common plant and in each of the calculations in the OCA Exhibit 86. I will provide a later filed

schedule to demonstrate the effects of this correction on each of these calculations. In addition, the Company has not yet had the opportunity to review the accuracy of all the calculations of Mr. Plunkett, but will provide a later filed schedule setting forth any errors found.

Q. Are there any other errors in the methodology employed by Mr. O'Brien in calculating the total differential in capital costs with his alternate service date?

A. Yes. Mr. Paquette and Mr. Sanders have submitted Rebuttal Testimony outlining the financing requirements and associated capital costs necessary to meet the construction schedule as outlined by Mr. O'Brien. Additional capital requirements are not free as assumed by Mr. O'Brien in his calculations by holding AFUDC rates comparable in both the 1983 and 1986 completion cash construction forecasts. Mr. Paquette's analysis provides the additional capital requirements year-by-year from 1975 through 1985 to meet Mr. O'Brien's construction schedule. With these additional financings, it is necessary to recompute, on a semi-annual basis, the AFUDC rates, based upon revised embedded costs as we move through the construction period. Schedule 3 compares the actual AFUDC rates in existence and utilized by the Company for the period 1975 through 1985 with the revised semi-annual AFUDC rates that would have been utilized by the Company each year had Limerick proceeded on a construction schedule as hypothesized by Mr. O'Brien. Utilizing these revised AFUDC rates and also correcting for the previous error for capitalized overheads and taxes, I have recomputed the total capital costs for Limerick Unit No. 1 and 100% of common plant at November 20, 1983. This revised calculation, as shown on attached Schedule 4, reduces the total differential in the capital costs for Limerick 1 and 100% of common plant, as

completed and as compared to Mr. O'Brien's cash flow, from $522.0 million to $544.7 million.

Q. Has Mr. O'Brien reflected in his Limerick Schedule adjustment any additional cost associated with the need to maintain the Company's financial position in order to permit it to attract the substantial additional capital required during the 1975-1983 period to permit a July 1982 project completion?

A. No, he has not. As both Mr. Paquette and Mr. Sanders have testified, the Company's securities would probably have been downgraded and the Company would have experienced increased capital costs and difficulty attracting capital had it attempted to raise the additional capital required by the OKA proposed construction program without obtaining additional revenues to maintain its financial condition. These additional revenues would constitute a cost of the OKA schedule proposal to ratepayers which OKA has not recognized in its quanitification analysis.

The Company has sought to measure this cost in two ways. In each case, the principle emphasized in cost measurement is to assume additional revenues sufficient to maintain the Company's actual financial condition during this period. That financial condition, as explained in other testimony, was not strong. Moreover, this principle is viewed as equitable in that fixed income and equity security holders should not be made to suffer injury by further reductions in the financial position of these securities to permit implementation of the OKA proposed construction schedule. Also, as described by Witnesses Paquette and Sanders, the receipt of additional revenue is necessary if the required capital is to be attracted with a reasonable degree of assurance and without higher cost rates.

The Company has sought to measure this cost, i.e., the additional revenue required to maintain its historic financial position while pursuing the OKA construction schedule, by assuming sufficient additional revenue receipt in each year to maintain its mortgage indenture coverage. This ratio has been selected for maintaining because mortgage bonds are the Company's principal capital attraction instrument, and thus, attraction of adequate capital to meet the OKA construction schedule would have been threatened had this measure been permitted to deteriorate significantly. The Company also examined the additional revenue required to maintain its earnings per share during the period 1975-1985 but found that this did not result in maintenance of its financial condition due to a deterioration in the quality of earnings as measured by AFUDC as a percent of earnings and mortgage coverage.

The total additional revenue requirement indicated to maintain historic mortgage coverage levels for the 1975 to 1985 period is $386 million on a present worth basis at June 30, 1986. This additional revenue requirement can be reexpressed as an additional capital cost of $228 million (See Schedule 6). It is clearly in error for Mr. O'Brien to assume that additional capital is attracted to permit an advanced construction program for the benefit of ratepayers without reflecting an associated cost of that action. Thus, the O'Brien schedule adjustment should be reduced by an additional $228 million.

Q. After these adjustments, does the OKA calculation fairly represent the differential in capital costs resulting from the Company's announced delays in 1976 and 1978?

A. Absolutely not. As I have indicated, other Company witnesses have prepared extensive testimony which shows that the commercial operation date proffered by

Mr. O'Brien (i.e. November 20, 1983) was most certainly not achievable. In fact, the Rebuttal Testimony of Mr. Boyer, which summarizes the Company's position concerning the ability to reach an earlier in-service date for Limerick Unit No. 1 without cash constraints in the second half of the 1970's, shows that Limerick could not have achieved fuel load before October 1984 or commercial operation before February 1986.

Q. Under the conclusions reached by Mr. Boyer (i.e., irrespective of the cash constraint in the late 1970's Limerick still could not have achieved commercial operation prior to February 1986), what would have been the cost of Limerick Unit No. 1 and 100% of common relative to the Company's claim in this proceeding, if the Company had not delayed the Limerick No. 1 schedule in 1976 and 1978?

A. The cost of Limerick 1 and 100% of common plant at February 1986 would have been higher than the Company's claim in this proceeding.

Q. Please explain.

A. Quite simply, if the Company had spent more direct dollars on Limerick's construction than were actually spent during the 1975-1980 period, with the expectation of keeping the unit on its earlier commercial operation schedule, and if the unit did not achieve an earlier commercial operation date, the accruals for AFUDC would have been substantially in excess of actual accruals in each year throughout the construction period. Since AFUDC represents the capital carrying charges on a construction project, the higher the absolute invested capital, coupled with the longer period of time to carry that investment, the greater the final completed cost of the project. For instance, if the Company were to have spent an additional $50 million in direct costs over the actual level of the expenditure in 1976, the AFUDC accrual on this direct expenditure would have

increased total AFUDC accruals in each year throughout the remainder of the construction project.

Q. Assuming the service date of November 1983 and attendant construction expenditure assumptions as presented by Mr. O'Brien and revised by you, does the differential in capital cost represent a fair and equitable quantification of the cost to customers resulting from the 1976 and 1978 delay announcements?

A. No. Even if one were to accept the proposed schedule of construction as outlined by Mr. O'Brien as being the proper time differential (i.e., 27 months) in-service dates resulting from the delay announcements, it is certainly not a fair quantification of the net total cost of delay.

Q. What is the proper way to quantify the costs of delay announcements in 1976 and 1978 if there is a change in service date?

A. In order to derive such a result, it is necessary to consider all other cost effects on customers that would have resulted if the plant had been placed in service at an earlier date. This point is recognized by OCA Witness Knudsen in his testimony at page 18 of OCA Statement No. 7 but, unfortunately, is summarily dismissed in 28 lines of his testimony. There are in fact a number of "corollary consequences" of extreme significance that must be analyzed and incorporated into any fair quantification of the cost of delay. The appropriate tool for quantification is an analysis of total revenue requirements expressed on a present worth basis in order to capture the full effect on customers of two alternative construction schedules.

Q. Mr. Hill, please define the specific elements which must be included in a present worth/total revenue requirements analysis.

A. The elements required to be reviewed in a proper quantification analysis to determine the effects of alternative completion dates of a major generating facility such as Limerick are as follows:

1. The Differential Cost of Annual Carrying Charges on Capital Cost over the useful life (i.e 39 years);

2. Fuel Savings and Operating and Maintenance costs of the first completed unit during the period prior to completion of the second unit (i.e. November 1983 to February 1986);

3. Additional Carrying Charges for capital costs of a unit replacing the first completed unit and thus first retired unit during the period prior to the second completed unit's retirement (i.e. July 2022 to October 2024);

4. Fuel Savings and Operating and Maintenance Cost differentials for the period from the first retired unit to the second retired unit (i.e. July 2022 to October 2024);

5. Differential costs of attracting capital between the alternatives.

Other elements employed in the analysis, such as energy and O&M costs during the period that both units are operating, are identical and thus are not significant to the analysis. All of the above costs are then appropriately adjusted to place them upon an equivalent present worth basis through application of basic financial analysis techniques. In my analysis, I have applied these techniques and have used a discount rate equal to the Company's after-tax cost of capital or 9.7%.

Q. Please apply this analytical method to an evaluation of the ratepayer cost or benefit of the difference between the actual completion date of Limerick, i.e. 2/1/86 and the 11/20/83 date proposed by OKA?

A. Limerick Unit No. 1 is complete and did reach commercial operation on February 1, 1986. The Company has projected a 39-year service life for Limerick, commencing in 1986, which gives rise to revenue requirements to cover recovery

of and on invested capital as well as attendant operating expenses and fuel savings over the 39-year period. Adjusting to an earlier in-service date, hypothesized by Mr. O'Brien as November 20, 1983, shifts the in-service date of the plant back in time by a full 27 months. If Limerick had been placed in service at this earlier date, it is reasonable to assume that the Company would have sought, as we are today, inclusion of this investment in rate base with all associated revenue requirements for operating and maintenance expenses offset by fuel savings 27 months earlier. In addition, if Limerick had begun service 27 months earlier and its life estimate, which is fixed by our NRC license, remains at 39 years, the unit would be typically removed from service 27 months earlier than currently projected. In order to create equivalent alternatives, it is necessary to adjust for the "tail end" effect at the end of service life for the unit. Again, it is reasonable to assume that, with the retirement of Limerick Unit No. 1, an additional base load facility, equal in capacity, would have to be placed in service to fill the void left by the earlier retirement of Limerick Unit No. 1. Finally, as I have stated previously, in order to have met the aggressive construction schedule and the November 1983 service date, utilized by Mr. O'Brien, it would have been necessary to have raised significant amounts of capital above those levels actually issued during the period. These costs would have been borne in part by customers during the period as reflected in higher embedded costs for debt and preferred, offset to some degree by higher AFUDC accruals.

Q. Mr. Hill, please describe the results of your analysis employing the major cost affecting categories you described above.

A. The results of my analysis are as follows:

		Cost or Benefit	
1.	The Differential Cost of Annual Carrying Charges on Capital Cost over the useful life (i.e. 39 yrs.)	$264	Benefit
2.	Fuel Savings net of Operating and Maintenance costs of the first completed unit during the period prior to completion of the second unit (i.e, November 1983 to February 1986)	(146)	Cost
3.	Additional Carrying Charges for capital costs of a unit replacing the first completed unit and thus first retired unit during the period prior to the second completed unit's retirement (i.e. July 2022 to October 2024)	169	Benefit
4.	Fuel Savings and Operating and Maintenance cost differentials for the period from the first retired unit to the second retired unit (i.e. July 2022 to October 2024)	65	Benefit
	Total change in present worth of revenue requirements		
a.	Excluding gross receipts tax	$352 million	Benefit
b.	Including gross receipts tax	$369 million	Benefit

To be conservative, and because the analysis requires revision as described below, I have not included in the above statement of results the net benefit to the as-built Limerick scenario of the additional revenue required in the Limerick early completion scenario to maintain the Company's historic financial condition. Typically, this item should be included as an integral part of the analysis and would significantly increase the perceived benefit of the Limerick as-built case.

Q. Is it true, Mr. Hill, that your analysis shows a substantial net benefit to ratepayers from the assumed delay in Limerick completion?

A. No, not as stated above. Through oversight a substantial cost item, i.e. the OKA computed Bechtel Indirects and a portion of PECO Indirects, was not included in the analysis. This error will be corrected in supplemental tables to be filed shortly. After correction for this error and with the inclusion of the differential cost of attracting capital, the net results of the analysis will remain positive by several hundred million dollars.

Q. Mr. Hill, what then is the significance of your analysis?

A. It demonstrates that, when all cost considerations are taken into effect, that ratepayers most certainly have not been disadvantaged by the O'Brien assumed delay in Limerick completion. There is thus no cost disadvantage to be assessed against the Company in this proceeding. Mr. O'Brien quantifies such a disadvantage only because he focuses only upon one segment, i.e. the differential in capital costs, of what is a complex five-segment analysis. Accordingly, his results should be rejected.

Q. Mr. Hill, will you describe the supporting Schedule attached to this Statement which calculates and summarizes the net effect on present worth revenue requirements to customers?

A. Schedule 7 calculates the total revenue requirement effects, expressed on a present-worth basis, at June 30, 1986 for the adjustment in commercial operation date for Limerick No. 1 and 100% of common plant from February 1986 to November 1983. This schedule summarizes each of the revenue requirement effects I have previously discussed. Schedules 7.1 through 7.12 are the calculations and workpapers supporting the summary.

Q. Why is it inappropriate to quantify the effects of the 1976 and 1978 delays by looking at the variation in total capital costs as recommended by Mr. O'Brien and supported by Mr. Knudsen?

A. This approach quite simply ignores the time value of money, not only to the Company but also to our customers. For example, Mr. O'Brien and Mr. Knudsen take a November 1983 investment and compare it directly to a February 1986 investment and assume that customers and the Company have no time value associated with their money.

The accrual of AFUDC on any investment represents the capital carrying charges on CWIP or in essence, the time value of money on the investment. Customers are <u>not</u> disadvantaged by paying for accrued AFUDC at a future date since they do not support, or pay for, these time related costs currently. If the AFUDC rate is a fair representation of customer discount rate, which I believe is the case, customers would be impartial to paying for an investment currently or at a future date reflecting additional AFUDC accruals. The Commission has recognized this theory in its historic treatment of common plant facilities, by deferring current recovery from customers of 50% of such plant but allowing utilities to accrue AFUDC between the in-service dates of first and second units. Approximately $400 million of Mr. O'Brien's total adjustment reflects AFUDC cost. Upon the reasoning stated above, this portion of the O'Brien adjustment should not be adopted.

Q. Mr. Hill, would your provide an example to explain the time value of money theory that you discuss and to explain how it applies to the theory of present worth of revenue requirement?

A. Yes. If I were to deposit $10,000 in the bank in 1983 with the hopes of gaining interest over a 27-month period, I would expect that I would be woefully disappointed if at the end of that 27-month period the bank only returned to me my original $10,000. This is the precise subtraction or calculation that Mr. O'Brien and Mr. Knudsen employ in their proposed adjustment.

Another example, perhaps more akin to an investment decision, would be the decision to rent or purchase a home. If one alternative were to purchase a new home in November 1983 at a cost of $110,000 and a second option were to pay a fixed rental for a 27-month period and then buy at an inflated price of $125,000, I certainly would not evaluate my alternatives simply by subtracting the November 1983 purchase price from the prospective purchase price and assume that I would save $15,000. I must realize that, by buying the house in November 1983; I have lost the opportunity to invest this amount for the next 27 months.

This may seem like a small opportunity, but an evaluation shows that it would be to the person's advantage not to buy the house for $110,000, but rather to invest the $110,000 for 27 months while paying the monthly rental. Schedule 8 provides a simple model demonstrating this. While the numbers and concepts I have discussed concerning the revenue requirements analysis for variation in the service date Limerick 1 are greater and more complex, the theory of present worth of revenue requirements is as easily adopted to and understandable as in this simple example which highlights the gross overstatement of penalty recommended by the OCA Witnesses in this proceeding.

Q. Have you reviewed the testimony offered by Trial Staff Witnesses Dougherty and Rosenthal recommending similar disallowances of Limerick 1 and common plant

capital costs resulting from their quantification of the 1976 and 1978 delay announcements made by the Company?

A. Yes.

Q. What response do you have to their quantification?

A. Trial Staff has proposed a similar disallowance based upon an assumed in-service date for Limerick 1 of April 1981, as compared to the Consumer Advocate's estimate of November 1983, with both measured against the actual in-service date of February 1986. For all the reasons that I have identified in my discussion of the testimonies of Mr. O'Brien and Mr. Knudsen for the OCA, I would also respond in the same fashion to the testimony presented by these Trial Staff Witnesses. Like the OCA testimony, Trial Staff testimony fails to take into account all the corollary effects which must be analyzed in the determination of a proper quantification of the 1976 and 1978 delay announcements made by the Company. An analysis of a refinancing plan to meet a scheduled April 1981 in-service date would have to be constructed in a similar format as presented by Mr. Paquette in his testimony and, in addition, all the corollary effects of quantification must be expressed in terms of revenue requirements on a present worth basis in order to compare the impact on customers of delay. Other rebuttal testimony presented by Company Witnesses indicates why it would be impossible to meet the Consumer Advocate's fuel load date of July 1982 and a commercial operation date of November 1983. From the response presented in that testimony, it is more than evident that the arguments for an earlier in-service date (April 1981), which is two years and seven months earlier than that date utilized by the Consumer Advocate, is an absolute impossibility. Therefore, I have limited my presentation on the proper mechanics of quantification to that testimony presented by the OCA

Witnesses with the understanding that regardless of an alternative service date, the calculation procedures for quantification would be the same.

Q. Does that complete your Rebuttal Testimony on the Limerick issues at this time?

A. Yes.

1984 SURVEY OF THE COST OF CAPITAL USED FOR ECONOMIC EVALUATIONS BY INVESTOR-OWNED ELECTRIC UTILITIES

CONFIDENTIAL*

Please return one completed copy by November 2, 1984

Theodore I. Gradin
Director of Finance
EDISON ELECTRIC INSTITUTE
1111 19th Street, N. W.
Washington, D. C. 20036-3691

A. GENERAL INFORMATION ABOUT PARTICIPANT IN SURVEY

1. Name of Company Philadelphia Electric Company
2. Name of Correspondent J. F. Paquette Jr.
3. Name and telephone number of individual for follow-up of details of information Richard Wm. Wright (215) 841-5769
4. Line of Business (check space)
   a. Only electricity
   b. Combination company (e.g., electricity and gas) ✓

*No individual company data will be shown or divulged. Only aggregated data will be presented.

B. CAPITAL STRUCTURE

1. INCREMENTAL cost of capital currently used for INTERNAL ECONOMIC EVALUATIONS of plans for new electric facilities.

	I Capital Structure %	II Cost %	III (= I x II) Weighted Cost %
Debt	50	13.0	6.50
Pfd. & Pfd. Conv.	12	13.0	1.56
Common Equity	38	17.0	6.46
Other	-	-	-
	100		14.52

2. If your company uses NON-INCREMENTAL capital cost for INTERNAL ECONOMIC EVALUATIONS, please provide those costs below and indicate whether they are:

_____ Embedded

_____ Net of Tax

_____ Other (Please specify) _____

	I Capital Structure %	II Cost %	III (= I x II) Weighted Cost %
Debt			
Pfd. & Pfd. Conv.			
Common Equity			
Other			

3. Please indicate the method(s) of determining the current cost of common equity:

Primary Method: Discounted Cash Flow

Alternative Method(s): Capital Asset Pricing Model used as a check

C. REGULATORY DATA

1. Please provide details of the most recently APPROVED regulatory rate of return. If company operates in more than one jurisdiction, please provide data from the largest jurisdiction (in terms of revenue).

	I Capital Structure %	II Cost %	III (= I x II) Weighted Cost %
Debt	50.8	10.80	5.49
Pfd. & Pfd. Conv.	11.2	9.41	1.05
Common Equity	38.0	16.15	6.14
Other	-	-	-
Total	100.00		12.68

2. Is construction work in progress (CWIP) included in rate base:

_____ Yes _____ % CWIP included in rate base.

__✓__ No

If company operates in more than one jurisdiction, please provide percentage of CWIP allowed by each:

Jurisdiction	Percent of CWIP in Rate Base

3. Does the return on CWIP represent a real revenue flow (Yes/No); or

Does the regulatory commission require that AFUDC in the test year be netted against the authorized return for ratemaking purposes (Yes/No)?

D. FINANCIAL/ACCOUNTING

1. 1983 accounting rate of return for 12 months ending December 31, 1983 (Operating income ÷ net plant without CWIP)

10.67 %

2. Bond rating:

Moody's	Baa 3	1/83
Standard & Poor's	BBB-	7/82
~~Other (specify)~~ Duff and Phelps	9	3/80
Fitch Investors Service	BBB	7/82

3. Statistical data (12 months ending December 31, 1983)*

Utility plant, original cost (without CWIP)	($ millions)	$5,282
Utility plant, less depreciation (without CWIP)	($ millions)	$3690
Total operating revenues	($ millions)	$2,596
Total electric operating revenues	($ millions)	$2,202

*Please indicate whether or not these data correspond with data submitted in the 1983 Uniform Statistical Report:

____ Yes

____ No

PECO cost include Direct Cost, Taxes & overheads and AFUDC form
Interrogatory DR-STAFF-LIN-14

Schedule 2

Oka Costs are from the original OKA additions from 1975 plus
PECO Taxes & Overheads (DR-STAFF-LIN-14) plus additional PUNTA taxes
because of the changes in the construction expenditures (schedule 7 page 3)

	ANNUAL DIRECTS						AFUDC						Cumulative Totals	
	OKA			PECO			AFUDC Rates		ACCRUALS					
										OKA		PECO	OKA +	PECO
Year	Annual	Semi	Cum	Annual	Semi	Cum	Nominal	Effectiv	Semi	Annual	Cum	Annual	Cum		
1971				31.2	31.2		8.00%	8.00%	1.3	1.3	1.3	1.3	1.3	32.5	32.5
1972				33.9	33.9	65.1	8.00%	8.00%	4.1	4.1	5.4	3.9	5.4	70.5	70.5
1973				56.2	28.2	121.3	8.00%	4.00%	3.5	7.9	13.3	6.8	12.2	102.8	133.5
					28.0		7.50%	3.75%	4.4					134.6	
1974				71.9	36.3	193.2	7.50%	3.75%	5.8	13.3	26.6	11.3	23.5	176.7	215.7
					35.7		7.50%	3.75%	7.4					219.8	
1975	124.5	63.3	317.7	82.2		275.4	8.00%	4.00%	10.1	23.6	47.1	19.0	42.5	290.1	317.9
		61.3					8.25%	4.13%	13.5					364.9	
1976	144.3	73.9	462.0	107.2		382.6	8.20%	4.10%	16.8	37.9	85.0	26.3	68.8	455.6	451.4
		70.4					8.40%	4.20%	21.1					547.0	
1977	163.3	84.1	625.3	116.9		499.5	8.60%	4.30%	25.9	56.9	141.9	35.3	104.1	657.0	603.6
		79.2					8.70%	4.35%	31.0					767.2	
1978	161.5	84.2	786.8	94.0		593.5	7.10%	3.55%	29.2	63.4	205.3	47.4	151.5	880.6	745.0
		77.4					7.30%	3.65%	34.2					992.1	
1979	205.3	107.2	992.2	110.0		703.5	7.40%	3.70%	39.4	84.8	290.1	61.2	212.7	1138.7	916.2
		98.2					7.50%	3.75%	45.4					1284.4	
1980	301.6	156.6	1293.7	167.0		870.5	7.50%	3.75%	52.0	117.4	407.6	81.6	294.3	1490.9	1164.8
		145.0					8.20%	4.10%	63.4					1701.3	
1981	386.8	201.2	1680.5	227.1		1097.6	8.30%	4.15%	76.4	171.7	579.3	103.7	404.0	1978.9	1501.6
		185.5					9.00%	4.50%	93.4					2259.8	
1982	358.3	202.0	2078.8	325.7		1423.3	9.10%	4.55%	109.9	237.0	816.3	153.4	557.4	2571.7	1980.7
		156.4					9.30%	4.65%	127.1					2893.1	
1983	119.0	59.8	2197.8	399.7		1823.0	9.30%	4.65%	139.3	254.4	1070.7	203.6	761.0	3094.2	2584.0
		59.2					9.30%	3.62%	115.1					3258.4	
1984				408.7		2231.7	9.40%					266.9	1027.9		3259.6
							9.40%								
1985				149.7		2381.4	9.50%					323.7	1351.6		3733.0
1986				12.7		2394.1						74.7	1426.3		3820.4
DIFFERENCE IN TOTAL ACS:				$552.0									Per DR-Staff-LIN-14		3820.4

COMPARISON OF ACCRUAL AFUDC RATES
AND RECOMPUTED AFUDC RATES
WITH WITNESS O'BRIEN CONSTRUCTION SCHEDULE
1975 - 1985

Year	Semi-Annual Period	Actual AFUDC Rate	Recomputed AFUDC Rate With O'Brien Adjustment
1975	1	8.0%	8.0%
	2	8.25	8.11
1976	1	8.20	8.10
	2	8.40	8.22
1977	1	8.60	8.46
	2	8.70	8.50
1978	1	7.10	7.08
	2	7.30	7.22
1979	1	7.40	7.36
	2	7.50	7.40
1980	1	7.50	7.46
	2	8.20	8.17
1981	1	8.30	8.34
	2	9.00	9.10
1982	1	9.10	9.21
	2	9.30	9.46
1983	1	9.30	9.56
	2	9.30	9.58
1984	1	9.40	9.68
	2	9.40	9.72
1985	1	9.50	9.61
	2	9.50	9.47

PECO cost include Direct Cost, Taxes & overheads and AFUDC form Interrogatory DR-STAFF-LIM-14

Schedule 4

OKA Costs are from the original OKA additions from 1975 plus PECO Taxes & Overheads (DR-STAFF-LIM-14) plus additional PURTA taxes because of the changes in the construction expenditures (schedule 7 page 3)

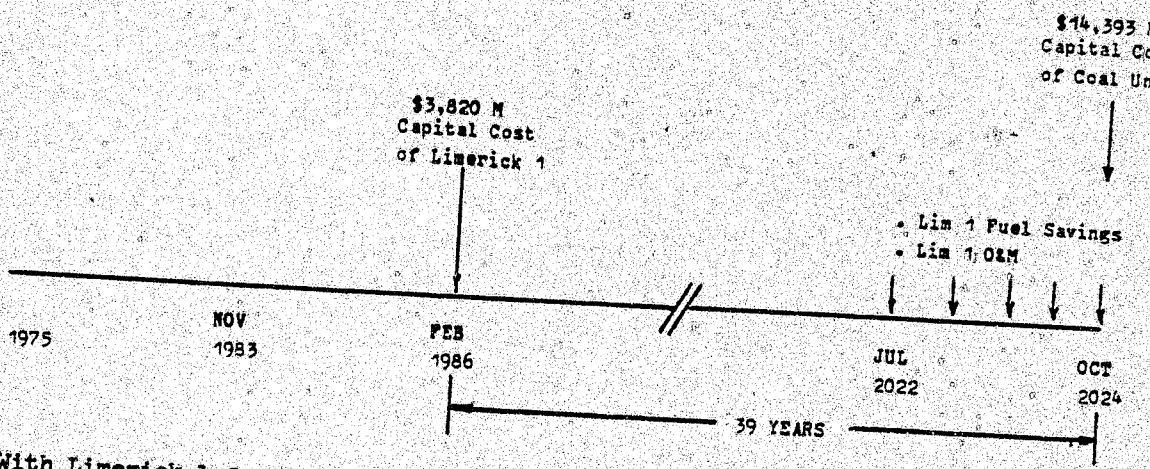
AFUDC rates were developed to reflect the change in the spread of the of the construction dollars

	ANNUAL DIRECTS						AFUDC		ACCRUALS					Cumulative Totals	
	OKA			PECO					OKA			PECO			
Year	Annual	Semi	Cum	Annual	Semi	Cum	Nominal	Effectiv	Semi	Annual	Cum	Annual	Cum	OKA	PECO
1971				31.2	31.2										
1972				33.9	33.9	65.1	8.00%	8.00%	1.3	1.3	1.3	1.5	1.5	32.5	32.7
1973				56.2	28.2	121.3	8.00%	8.00%	4.1	4.1	5.4	3.9	5.4	70.5	70.5
					28.0		8.00%	4.00%	3.5	7.9	13.3	6.8	12.2	102.2	133.5
1974				71.9	36.3	193.2	7.50%	3.75%	4.4					134.6	
					35.7		7.50%	3.75%	5.8	13.3	26.6	11.3	23.5	176.7	216.7
							7.50%	3.75%	7.4					213.8	
1975	124.5	63.3	317.7	82.2		275.4	8.00%	4.00%	10.1	23.4	46.9	19.0	42.5	290.1	317.9
		61.3					8.11%	4.06%	13.3					354.6	
1976	144.3	73.9	462.0	107.2		382.6	8.10%	4.05%	16.6	37.2	84.1	25.3	68.8	455.1	451.4
		70.4					8.22%	4.11%	20.6					546.1	
1977	163.3	84.1	625.3	116.9		499.5	8.46%	4.23%	25.4	55.6	139.7	35.3	104.1	655.6	603.6
		79.2					8.50%	4.25%	30.2					765.0	
1978	161.5	84.2	786.8	94.0		593.5	7.08%	3.54%	29.1	62.8	202.5	47.4	151.5	876.2	745.0
		77.4					7.22%	3.61%	33.7					989.3	
1979	205.3	107.2	992.2	110.0		703.5	7.36%	3.66%	39.1	83.8	286.2	61.2	212.7	1135.6	915.2
		98.2					7.40%	3.70%	44.7					1278.4	
1980	301.6	156.6	1293.7	167.0		870.5	7.46%	3.73%	51.6	116.6	402.8	81.6	294.3	1486.8	1164.9
		145.0					8.17%	4.09%	65.0					1696.6	
1981	386.8	201.2	1680.5	227.1		1097.6	8.34%	4.17%	76.5	172.8	575.6	109.7	404.0	1974.3	1501.6
		185.5					9.10%	4.55%	96.2					2256.1	
1982	398.3	202.0	2078.8	325.7		1423.3	9.21%	4.61%	111.1	240.3	815.9	153.4	557.4	2569.2	1980.7
		196.4					9.46%	4.73%	129.2					2894.8	
1983	119.0	59.8	2197.8	399.7		1823.0	9.56%	4.78%	143.2	262.0	1077.9	203.6	761.0	3097.8	2584.0
		59.2					9.58%	3.73%	118.8					3275.7	
1984				408.7		2231.7	9.68%					256.9	1027.9	=======	3259.5
							9.72%								
1985				149.7		2381.4	9.61%					323.7	1351.6		3733.0
1986				12.7		2394.1						74.7	1426.3		3820.4
DIFFERENCE IN TOTAL MCS:				$544.7											=======
				=======									Per DR-Staff-LIM-14		3820.4

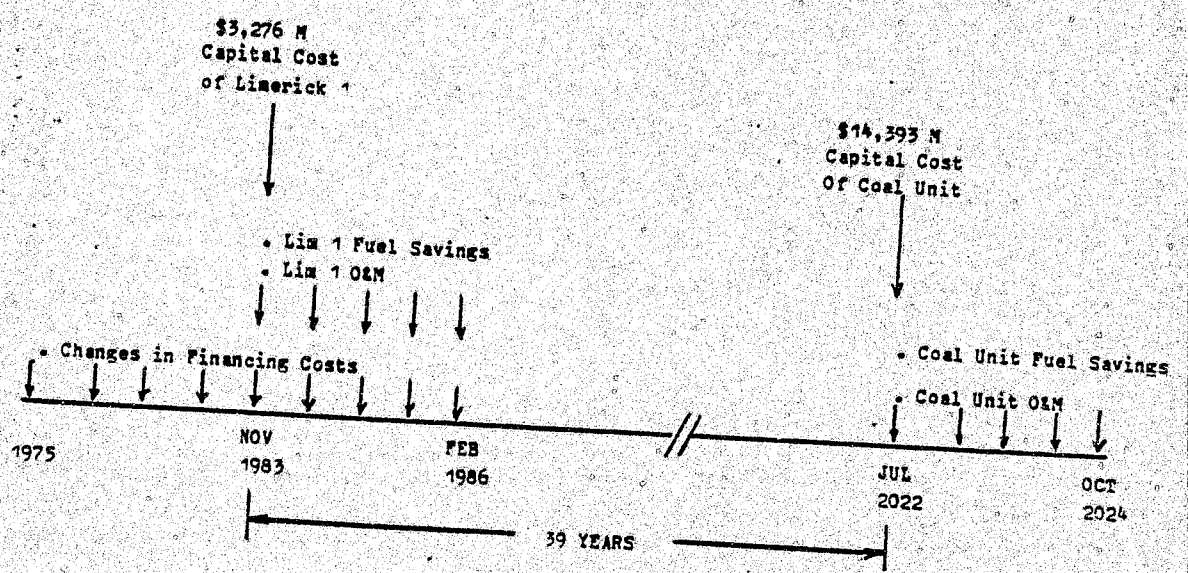
SCHEDULE 5

Capital Costs and Operating Expense Differences
That Must Be Considered in Evaluating
The Effects of Putting Limerick 1 and 100% of Common
In Service in November 1983 Rather Than in February 1986

With Limerick 1 Service Date in February 1986:



With Limerick 1 Service Date in November 1983:



REEXPRESSION OF PRESENT WORTH OF ADDITIONAL REVENUE REQUIREMENTS
TO MAINTAIN MORTGAGE COVERAGE IN
TERMS OF CAPITAL INVESTMENT
FOR LIMERICK NO. 1 AND 100% OF COMMON AS OF JUNE 30, 1986

Normal Application of Level Annual Carrying Charge Rate, f

Capital Cost x f = Level Annual Revenue Requirements

Reverse Application of Level Annual Carrying Charge Rate, f

Given: Present worth of annual revenue requirements

Level Annual Revenue Requirements = Present Worth of Annual Revenue Requirements x (A/P, %, n)

Therefore:

$$\text{Capital Cost} = \frac{\text{Level Annual Revenue Requirements}}{f}$$

Conversion of Present Worth of Revenue Requirements for Limerick No. 1 and 100% of Common to Terms of Capital Cost

Annual Revenue Requirements

= $386 Million x (A/P, 9.70%, 39 yrs)

= $386 Million x 0.0997

= $38.5 Million per year

Capital Cost

$$= \frac{\$38.5 \text{ Million per year}}{f \text{ (from Schedule 7.3, Page 2, Line 40)}}$$

$$= \frac{\$38.5 \text{ Million per year}}{16.90\%}$$

= $228 Million

ADDITIONAL REVENUE REQUIRED FROM CUSTOMERS FROM 1975 to 1985 TO MAINTAIN EARNINGS PER SHARE BASED UPON A CONSTRUCTION SCHEDULE TO MEET A NOVEMBER 1983 SERVICE DATE
(THOUSAND $)

Year Ended December (1)	No. of Years (n) and Months (m) to June 1986 n (2)	m (3)	Additional Revenue Required to Maintain Actual Earnings per Share (Note A) (4)	Future Worth Factors, (F/P,9.70%,n) (5)	Future Worth Factors, (F/P,9.70%/12,m) (6)	Present Worth at June 30, 1986 (7)=(4)x(5)x(6)
1975	10	6	($622)	2.524	1.049	($1,647)
1976	9	6	564	2.301	1.049	1,361
1977	8	6	(734)	2.097	1.049	(1,615)
1978	7	6	(4,360)	1.912	1.049	(8,745)
1979	6	6	(4,783)	1.743	1.049	(8,745)
1980	5	6	(4,769)	1.589	1.049	(7,949)
1981	4	6	84	1.448	1.049	128
1982	3	6	14,567	1.320	1.049	20,171
1983	2	6	27,263	1.203	1.049	34,404
1984	1	6	(1,046)	1.097	1.049	(1,203)
1985	0	6	26,160	1.000	1.049	27,442
Total, Thousand $						$53,602
Total, Million $						$54

(Note A) - From the Rebuttal Testimony of Joseph F. Paquette, Jr. (Statement 3A). 1984 and 1985 revenues are adjusted to remove the additional revenue requirements for Limerick 1 and 100% of common since these revenue requirements have been included in the calculations performed on Schedule 7.2. (This was done by deducting the AFUDC accruals, expressed in revenue requirements, on $3,275,000 for Limerick 1 and 100% of Common. The deduction for 1984 is $635,350 and for 1985 is $624,870).

1984 - $634,304 - $3,275,000 x 9.70% x (1-50%) = ($1,046)
1985 - $651,030 - $3,275,000 x 9.54% x (1-50%) = $26,160

ADDITIONAL REVENUE REQUIRED FROM CUSTOMERS FROM 1975 to 1985 TO MAINTAIN MORTGAGE COVERAGE BASED UPON A CONSTRUCTION SCHEDULE TO MEET A NOVEMBER 1983 SERVICE DATE
(THOUSAND $)

Year Ended December (1)	No. of Years (n) and Months (m) to June 1986 n (2)	m (3)	Additional Revenue Required to Maintain Actual Mortgage Coverage Ratios (Note A) (4)	Future Worth Factors, (F/P,9.70%,n) (5)	Future Worth Factors, (F/P,9.70%/12,m) (6)	Present Worth at June 30, 1986 (7)=(4)x(5)x(6)
1975	10	6	$1,924	2.524	1.049	$5,094
1976	9	6	1,644	2.301	1.049	3,968
1977	8	6	12,402	2.097	1.049	27,281
1978	7	6	28,919	1.912	1.049	58,002
1979	6	6	28,197	1.743	1.049	51,556
1980	5	6	30,133	1.589	1.049	50,228
1981	4	6	28,638	1.448	1.049	43,500
1982	3	6	33,920	1.320	1.049	46,968
1983	2	6	57,623	1.203	1.049	72,717
1984	1	6	(1,046)	1.097	1.049	(1,203)
1985	0	6	26,160	1.000	1.049	27,442
Total, Thousand $						$385,553
Total, Million $						$386

(Note A) - From the Rebuttal Testimony of Joseph F. Paquette, Jr. (Statement 3A).

Schedule 7

CHANGES IN TOTAL REVENUE REQUIREMENTS FOR LIMERICK NO. 1 AND 100% OF COMMON BASED ON PLACING THESE FACILITIES IN SERVICE IN NOVEMBER 1983 RATHER THAN IN FEBRUARY 1986
(Million $)

	Change in Present Worth of Revenue Requirements At June 30, 1986
1. Annual carrying charge differential for capital costs of Limerick No. 1 and 100% of common based on change in service date (Schedule 7.2)	$264
2. Change in fuel expenses and non-fuel O&M expenses in period November 1983 to February 1986 (Schedule 7.5)	($146)
3. Additional Carrying charges for capital costs of coal unit replacing Limerick No. 1 from July 2022 to October 2024 (Schedule 7.8)	$169
4. Change in fuel expenses and non-fuel O&M expenses in period July 2022 to October 2024 (Schedule 7.10)	$65
5. Total change in present worth of revenue requirements	
a. Excluding gross receipts tax	$352
b. Including gross receipts tax	
$352 x $\frac{1}{1-4.5\%}$	$369

ANNUAL CARRYING CHARGES FOR CAPITAL COSTS OF LIMERICK NO. 1 AND 100% OF LIMERICK COMMON WITH SERVICE DATE OF FEBRUARY 1986 (MILLION $)

Year Ended February (1)	No. of Years(n) and Months(m) to June 1986 n (2)	m (3)	Annual Carrying Charges (4) from 7.3	Present Worth Factors (P/F,9.70%,n) (5)	Present Worth Factors (P/F,9.70%/12,m) (6)	Present Worth at June 30, 1986 (7)=(4)x(5)x(6)
1987	0	8	$899	1.000	0.938	$843
1988	1	8	858	0.912	0.938	734
1989	2	8	820	0.830	0.938	638
1990	3	8	786	0.757	0.938	558
1991	4	8	753	0.691	0.938	488
1992	5	8	719	0.629	0.938	424
1993	6	8	686	0.574	0.938	369
1994	7	8	652	0.523	0.938	320
1995	8	8	619	0.477	0.938	277
1996	9	8	585	0.435	0.938	239
1997	10	8	573	0.396	0.938	213
1998	11	8	558	0.361	0.938	189
1999	12	8	543	0.329	0.938	168
2000	13	8	528	0.300	0.938	149
2001	14	8	512	0.274	0.938	132
2002	15	8	497	0.247	0.938	115
2003	16	8	482	0.227	0.938	103
2004	17	8	467	0.207	0.938	91
2005	18	8	452	0.189	0.938	80
2006	19	8	437	0.172	0.938	71
2007	20	8	421	0.157	0.938	62
2008	21	8	406	0.143	0.938	54
2009	22	8	391	0.130	0.938	48
2010	23	8	376	0.119	0.938	42
2011	24	8	361	0.108	0.938	37
2012	25	8	346	0.099	0.938	32
2013	26	8	331	0.090	0.938	28
2014	27	8	315	0.082	0.938	24
2015	28	8	300	0.075	0.938	21
2016	29	8	285	0.068	0.938	18
2017	30	8	270	0.062	0.938	16
2018	31	8	255	0.057	0.938	14
2019	32	8	240	0.052	0.938	12
2020	33	8	224	0.047	0.938	10
2021	34	8	209	0.043	0.938	8
2022	35	8	194	0.039	0.938	7
2023	36	8	179	0.036	0.938	6
2024	37	8	164	0.033	0.938	5
2025	38	8	149	0.030	0.938	4
Total Schedule 7.1 (February 1986 Service Date)						$6,649

ANNUAL CARRYING CHARGES FOR CAPITAL COSTS OF LIMERICK NO. 1 AND 100% OF LIMERICK COMMON WITH SERVICE DATE OF NOVEMBER 1983 (MILLION $)

Year Ended November (1)	No. of Years(n) and Months(m) To June 1986 n (2)	m (3)	Annual Carrying Charges (4) from 7.4	Future&Present Worth Factors (F/P,9.70%,n) or (P/F,9.70%,n) (5)	Future&Present Worth Factors (F/P,9/70%/12,m) or (P/F,9/70%/12,m) (6)	Present Worth at June 30, 1986 (7)=(4)x(5)x(6)
1984	1	7	$764	1.097	1.058	$887
1985	0	7	728	1.000	1.058	770
1986	0	5	695	1.000	0.961	668
1987	1	5	665	0.912	0.961	583
1988	2	5	636	0.830	0.961	507
1989	3	5	606	0.757	0.961	441
1990	4	5	577	0.691	0.961	383
1991	5	5	548	0.629	0.961	331
1992	6	5	518	0.574	0.961	286
1993	7	5	489	0.523	0.961	246
1994	8	5	479	0.477	0.961	220
1995	9	5	466	0.435	0.961	195
1996	10	5	454	0.396	0.961	173
1997	11	5	441	0.361	0.961	153
1998	12	5	428	0.329	0.961	135
1999	13	5	415	0.300	0.961	120
2000	14	5	403	0.274	0.961	106
2001	15	5	391	0.247	0.961	93
2002	16	5	377	0.227	0.961	82
2003	17	5	365	0.207	0.961	73
2004	18	5	352	0.189	0.961	64
2005	19	5	339	0.172	0.961	56
2006	20	5	327	0.157	0.961	49
2007	21	5	314	0.143	0.961	43
2008	22	5	301	0.130	0.961	38
2009	23	5	289	0.119	0.961	33
2010	24	5	276	0.108	0.961	29
2011	25	5	263	0.099	0.961	25
2012	26	5	251	0.090	0.961	22
2013	27	6	238	0.082	0.961	19
2014	28	5	225	0.075	0.961	16
2015	29	5	213	0.068	0.961	14
2016	30	5	200	0.062	0.961	12
2017	31	5	187	0.057	0.961	10
2018	32	5	175	0.052	0.961	9
2019	33	5	162	0.047	0.961	7
2020	34	5	149	0.043	0.961	6
2021	35	5	136	0.039	0.961	5
2022	36	5	124	0.036	0.961	4
Total Schedule 7.2 (November 1983 Service Date)						$6,913
Total Schedule 7.1 (February 1986 Service Date)						$6,649
Change in Present Worth of Revenue Requirements with a November 1983 Service Date ($6,913 - $6,649)						$264

CALCULATION OF ANNUAL CARRYING CHARGES RESULTING FROM LIMERICK NO. 1 AND 100% OF COMMON WITH A SERVICE DATE OF FEBRUARY 1986

The details of the calculation of the annual carrying charges for the 39 years starting February 1986 are shown on pages 2 through 7 of this schedule.

The carrying charges for Limerick No. 1 and 100% of Common facilities are equal to the sum of the carrying charges for Limerick No. 1 and 50% of Common, as calculated and shown in PECo's response to IR-OCA-2-25 (see Attachment IR-OCA-2-25b, Item 7) and the carrying charges for the other 50% of Common, as calculated and shown in PECo's response to IR-OCA-2-26. All assumptions reflected in the carrying charges for Limerick No. 1 and 100% of common are identical to those assumed in the referenced interrogatory responses.

PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU

APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 2039706 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 866959 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
1	CAPITAL FOR BOOK DEPRECIATION	3812651	3812651	3812651	3812651	3812651	3812651	3812651
2	AFDC	1400853	1400853	1400853	1400853	1400853	1400853	1400853
2A	50% OF ITC * (20)*(29)*50%	101985	101985	101985	101985	101985	101985	101985
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	2309813	2309813	2309813	2309813	2309813	2309813	2309813
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	97760	97760	97760	97760	97760	97760	97760
5A	ANNUAL AMOUNT(5)/(1-(11))	200041	200041	200041	200041	200041	200041	200041
6	CUMULATIVE AMOUNT	0	97760	195520	293280	391040	488800	586560
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.15000	0.12750	0.10837	0.09212	0.08700	0.08700	0.08700
8	ANNUAL AMOUNT=(3)*(7)	346472	294501	250326	212777	200956	200956	200956
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	59226	59226	59226	59226	59226	59226	59226
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	132133	168227	87906	70633	65196	65196	65196
13	ACCUMULATED DEFERRED INC TAXES	0	132133	240360	328266	398899	464095	529291
14	RATE BASE=(1)-(6)-(13)	3812651	3502758	3376771	3191105	3022712	2859756	2696800
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	487638	458235	431889	408142	386605	365763	344921
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN=							
	(16)*((15)-(17)(18))/(15)	257163	241657	227763	215240	203882	192891	181899
20	INCOME TAX ON RETURN							
	(19)*(11)/(1-(11))	269056	252832	238296	225194	213311	201811	190311
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	346472	294501	250326	212777	200956	200956	200956
23	TAXABLE INCOME=-(22)	-346472	-294501	-250326	-212777	-200956	-200956	-200956
24	INCOME TAX=(23)*(11)/(1-(11))	-362495	-308120	-261902	-222617	-210249	-210249	-210249
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	287246	235275	191100	153551	141730	141730	141730
26	TAXABLE INCOME=(25)	287246	235275	191100	153551	141730	141730	141730
27	INCOME TAX=(26)*0.46000/(1-0.51130)	270377	221458	179877	144533	133407	133407	133407
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	2039706	2039706	2039706	2039706	2039706	2039706	2039706
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-10702	-10702	-10702	-10702	-10702	-10702	-10702
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	19063	18574	18086	17597	17108	16619	16130
	REALTY TAX							
33	$ ELIGIBLE	866959	866959	866959	866959	866959	866959	866959
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	26009	25342	24675	24008	23341	22674	22007
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	211308	199384	188330	178013	166216	153560	140904
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	898987	857668	820260	786196	752862	719364	685866
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	23.58	22.50	21.51	20.62	19.75	18.87	17.99
39	ANNUAL CC RATE & 0.0 % MORT DISP	23.58	22.50	21.51	20.62	19.75	18.87	17.99
40	LEVEL ANNUAL CC RATE=16.90%							

02/12/86

Schedule 7.3
(Page 2)

PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 2039706 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 866959 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14
1	CAPITAL FOR BOOK DEPRECIATION	3812651	3812651	3812651	3812651	3812651	3812651	3812651
2	AFDC	1400853	1400853	1400853	1400853	1400853	1400853	1400853
2A	50% OF ITC = (20)*(29)*50%	101985	101985	101985	101985	101985	101985	101985
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	2309813	2309813	2309813	0	0	0	0
	BOOK DEPRECIATION--SL & BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	97760	97760	97760	97760	97760	97760	97760
5A	ANNUAL AMOUNT(5)/(1-(11))	200041	200041	200041	200041	200041	200041	200041
6	CUMULATIVE AMOUNT	684320	782080	879840	977600	1075360	1173120	1270880
	TAX DEPRECIATION --ACRS & TAX LIFE							
7	ANNUAL RATE	0.08700	0.08700	0.08700	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	200956	200956	200956	0	0	0	0
	TAX DEPRECIATION--SL & BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	59226	59226	59226	59226	59226	59226	59226
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	65196	65196	65196	-27243	-27243	-27243	-27243
13	ACCUMULATED DEFERRED INC TAXES	594407	659603	724879	798075	762832	735589	708346
14	RATE BASE=(1)-(6)-(13)	2533044	2370888	2207932	2044976	1974459	1903942	1833425
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	324079	303237	282395	261552	252533	243514	234495
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= -(16)*((15)-(17)(18))/(15)	178908	159917	148925	137933	133177	128421	123664
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	178812	167312	155812	144312	139336	134360	129383
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	200956	200956	200956	0	0	0	0
23	TAXABLE INCOME=-(22)	-200956	-200956	-200956	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	-210249	-210249	-210249	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	141730	141730	141730	-59226	-59226	-59226	-59226
26	TAXABLE INCOME=(25)	141730	141730	141730	-59226	-59226	-59226	-59226
27	INCOME TAX=(26)*0.46000/(1-0.51130)	133407	133407	133407	-55747	-55747	-55747	-55747
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	2039706	2039706	2039706	2039706	2039706	2039706	2039706
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-10702	-10702	-10702	-10702	-10702	-10702	-10702
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	15642	15153	14664	14175	13686	13198	12709
	REALTY TAX							
33	$ ELIGIBLE	866959	866959	866959	866959	866959	866959	866959
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	21341	20674	20007	19340	18673	18006	17339
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	128251	115595	102939	111378	105246	99115	92982
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	652371	618873	585375	572971	557820	542670	527518
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	17.11	16.23	15.35	15.03	14.63	14.23	13.84
39	ANNUAL CC RATE & 0.0 % MORT DISP	17.11	16.23	15.35	15.03	14.63	14.23	13.84
40	LEVEL ANNUAL CC RATE=16.90%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU

APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 HORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 2039706 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 866959 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21
1	CAPITAL FOR BOOK DEPRECIATION	3812651	3812651	3812651	3812651	3812651	3812651	3812651
2	AFDC	1400853	1400853	1400853	1400853	1400853	1400853	1400853
2A	50% OF ITC = (28)*(29)*50%	101985	101985	101985	101985	101985	101985	101985
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	97760	97760	97760	97760	97760	97760	97760
5A	ANNUAL AMOUNT(5)/(1-(11))	200041	200041	200041	200041	200041	200041	200041
6	CUMULATIVE AMOUNT	1368640	1466400	1564160	1661920	1759680	1857440	1955200
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	59226	59226	59226	59226	59226	59226	59226
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-27243	-27243	-27243	-27243	-27243	-27243	-27243
13	ACCUMULATED DEFERRED INC TAXES	681183	653860	626617	599374	572131	544888	517645
14	RATE BASE=(1)-(6)-(13)	1762908	1692391	1621874	1551357	1480840	1410323	1339806
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	225476	216457	207438	198419	189399	180380	171361
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN=							
	(16)*((15)-(17)(18))/(15)	118908	114152	109396	104639	99882	95126	90370
20	INCOME TAX ON RETURN							
	(19)*(11)/(1-(11))	124407	119431	114455	109478	104501	99525	94549
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-59226	-59226	-59226	-59226	-59226	-59226	-59226
26	TAXABLE INCOME=(25)	-59226	-59226	-59226	-59226	-59226	-59226	-59226
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-55747	-55747	-55747	-55747	-55747	-55747	-55747
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	2039706	2039706	2039706	2039706	2039706	2039706	2039706
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/8L	-10702	-10702	-10702	-10702	-10702	-10702	-10702
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	12220	11731	11242	10754	10265	9776	9287
	REALTY TAX							
33	$ ELIGIBLE	866959	866959	866959	866959	866959	866959	866959
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	16672	16005	15339	14672	14005	13338	12671
36	TOTAL TAXES=((20)+(24)+(27)+(30)+(32)+(35)	86850	80716	74587	68455	62322	56190	50058
37	REV REQMTS=((5A)+(16)+(36))/(1-GRY)	512367	497216	482066	466915	451762	436611	421460
38	ANNUAL CC RATE & 0.00% HORT DISP=(37)/(1)	13.44	13.04	12.64	12.25	11.85	11.45	11.05
39	ANNUAL CC RATE & 0.0 % HORT DISP	13.44	13.04	12.64	12.25	11.85	11.45	11.05
40	LEVEL ANNUAL CC RATE=16.90%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 # 2039706 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 # 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 # 866959 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 22	YEAR 23	YEAR 24	YEAR 25	YEAR 26	YEAR 27	YEAR 28
1	CAPITAL FOR BOOK DEPRECIATION	3812651	3812651	3812651	3812651	3812651	3812651	3812651
2	AFDC	1400853	1400853	1400853	1400853	1400853	1400853	1400853
2A	50% OF ITC = (28)*(29)*50%	101985	101985	101985	101985	101985	101985	101985
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	97760	97760	97760	97760	97760	97760	97760
5A	ANNUAL AMOUNT(5)/(1-(11))	200041	200041	200041	200041	200041	200041	200041
6	CUMULATIVE AMOUNT	2052960	2150720	2248480	2346240	2444000	2541760	2639520
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	59226	59226	59226	59226	59226	59226	59226
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-27243	-27243	-27243	-27243	-27243	-27243	-27243
13	ACCUMULATED DEFERRED INC TAXES	490402	463159	435916	408673	381430	354187	326944
14	RATE BASE=(1)-(6)-(13)	1269269	1198772	1128255	1057738	987221	916704	846187
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	162342	153323	144304	135285	126266	117246	108227
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	85614	80857	76101	71345	66588	61831	57075
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	89573	84596	79620	74644	69667	64690	59714
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-59226	-59226	-59226	-59226	-59226	-59226	-59226
26	TAXABLE INCOME=(25)	-59226	-59226	-59226	-59226	-59226	-59226	-59226
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-55747	-55747	-55747	-55747	-55747	-55747	-55747
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	2039706	2039706	2039706	2039706	2039706	2039706	2039706
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-10702	-10702	-10702	-10702	-10702	-10702	-10702
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	8798	8310	7821	7332	6843	6354	5866
	REALTY TAX							
33	$ ELIGIBLE	866959	866959	866959	866959	866959	866959	866959
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	12004	11337	10670	10003	9337	8670	8003
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	43926	37794	31662	25530	19398	13265	7134
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	406309	391158	376007	360856	345705	330552	315402
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	10.66	10.26	9.86	9.46	9.07	8.67	8.27
39	ANNUAL CC RATE & 0.0 % MORT DISP	10.66	10.26	9.86	9.46	9.07	8.67	8.27
40	LEVEL ANNUAL CC RATE=16.90%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU

APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 2039706 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.018 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 866959 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 29	YEAR 30	YEAR 31	YEAR 32	YEAR 33	YEAR 34	YEAR 35
1	CAPITAL FOR BOOK DEPRECIATION	3812651	3812651	3812651	3812651	3812651	3812651	3812651
2	AFDC	1400853	1400853	1400853	1400853	1400853	1400853	1400853
2A	50% OF ITC = (28)*(29)*50%	101985	101985	101985	101985	101985	101985	101985
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	97760	97760	97760	97760	97760	97760	97760
5A	ANNUAL AMOUNT(5)/(1-(11))	200041	200041	200041	200041	200041	200041	200041
6	CUMULATIVE AMOUNT	2737280	2835040	2932800	3030560	3128320	3226080	3323840
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	59226	59226	59226	59226	59226	59226	59226
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-27243	-27243	-27243	-27243	-27243	-27243	-27243
13	ACCUMULATED DEFERRED INC TAXES	299701	272458	245215	217972	190729	163486	136243
14	RATE BASE=(1)-(6)-(13)	775670	705153	634636	564119	493602	423085	352568
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	99208	90189	81170	72151	63132	54113	45093
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= ((16)*((15)-(17)(18))/(15)	52319	47563	42806	38050	33294	28537	23780
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	54738	49763	44786	39810	34834	29857	24880
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-59226	-59226	-59226	-59226	-59226	-59226	-59226
26	TAXABLE INCOME=(25)	-59226	-59226	-59226	-59226	-59226	-59226	-59226
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-55747	-55747	-55747	-55747	-55747	-55747	-55747
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	2039706	2039706	2039706	2039706	2039706	2039706	2039706
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/8L	-10702	-10702	-10702	-10702	-10702	-10702	-10702
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	5377	4888	4399	3910	3422	2933	2444
	REALTY TAX							
33	$ ELIGIBLE	866959	866959	866959	866959	866959	866959	866959
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	7336	6669	6002	5335	4668	4001	3335
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	1002	-5129	-11262	-17394	-23525	-29658	-35790
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	300251	285101	269949	254798	239648	224496	209344
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	7.88	7.48	7.08	6.68	6.29	5.89	5.49
39	ANNUAL CC RATE & 0.0 % MORT DISP	7.88	7.48	7.08	6.68	6.29	5.89	5.49
40	LEVEL ANNUAL CC RATE=16.90%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 2039706 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 866959 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 36	YEAR 37	YEAR 38	YEAR 39	YEAR 40	YEAR 41	YEAR 42
1	CAPITAL FOR BOOK DEPRECIATION	3812651	3812651	3812651	3812651	0	0	0
2	AFDC	1400853	1400853	1400853	1400853	0	0	0
2A	50% OF ITC * (28)*(29)*50%	101985	101985	101985	101985	0	0	0
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.0	0.0	0.0
5	ANNUAL AMOUNT=(1)*(4)	97760	97760	97760	97760	0	0	0
5A	ANNUAL AMOUNT(5)/(1-(11))	200041	200041	200041	200041	0	0	0
6	CUMULATIVE AMOUNT	3421600	3519360	3617120	3714880	0	0	0
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.0	0.0	0.0
10	ANNUAL AMOUNT=(3)*(9)	59226	59226	59226	59226	0	0	0
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.0	0.0	0.0
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-27243	-27243	-27243	-27243	0	0	0
13	ACCUMULATED DEFERRED INC TAXES	109000	81757	54514	27271	28	0	0
14	RATE BASE=(1)-(6)-(13)	282051	211534	141017	70500	0	0	0
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.0	0.0	0.0
16	OVERALL RETURN=(14)*(15)	36074	27055	18036	9017	0	0	0
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.0	0.0	0.0
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.0	0.0	0.0
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	19024	14268	9512	4755	0	0	0
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	19904	14928	9952	4975	0	0	0
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-59226	-59226	-59226	-59226	0	0	0
26	TAXABLE INCOME=(25)	-59226	-59226	-59226	-59226	0	0	0
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-55747	-55747	-55747	-55747	0	0	0
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	2039706	2039706	2039706	2039706	0	0	0
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.0	0.0	0.0
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-10702	-10702	-10702	-10702	0	0	0
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.0	0.0	0.0
32	ANNUAL AMOUNT=(31)*((1)-(6))	1955	1466	978	489	0	0	0
	REALTY TAX							
33	$ ELIGIBLE	866959	866959	866959	866959	0	0	0
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.0	0.0	0.0
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	2668	2001	1334	667	0	0	0
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	-41922	-48054	-54185	-60318	0	0	0
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	194193	179042	163892	148740	0	0	0
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	5.09	4.70	4.30	3.90	0.0	0.0	0.0
39	ANNUAL CC RATE & 0.0 % MORT DISP	5.09	4.70	4.30	3.90	0.0	0.0	0.0
40	LEVEL ANNUAL CC RATE=16.90%							

02/12/86

Schedule 7.3
(Page 7)

CALCULATIONS OF ANNUAL CARRYING CHARGES
RESULTING FROM LIMERICK NO. 1 AND 100% OF COMMON
WITH A SERVICE DATE OF NOVEMBER 1983

The details of the calculation of the annual carrying charges for the 39 years starting November 1983 are shown on pages 4 through 7 of this schedule.

The capital cost used is $3,275,000 (Schedule 4) less land cost of $7,349 (Exhibit TPH-2A, Page C-5). The portion of the capital cost eligible for ITC is assumed to have the same relationship to total direct cost as in the carrying charge calculations shown in Schedule 7.3 pages 2 through 7 (Note A). The portion of capital cost subject to realty tax is calculated as shown on pages 2 and 3 following. All other assumptions (cost of money, tax rates, etc.) are the same as used in the carrying charge calculations shown in Schedule 7.3 pages 2 through 7.

Note A:

$$\frac{\$2,039,706}{(\$3,812,651 - \$1,400,853)} \times (\$3,268,351 - \$1,077,900) = \$1,852,508$$

CALCULATION OF PURTA TAX BASE FOR LIMERICK 1 AND 100% OF COMMON WITH O'BRIEN'S CASH FLOWS

Actual PURTA Tax Base 2/15/86

$394,679 + $472,280 = $866,959 (See IR-OCA-2-25b, Item 6, page 1)

Actual PURTA Tax Base 4/1/82

Balance 12/31/81	$379,509
Balance 12/31/82	$464,094
Estimated Balance 4/1/82	$400,655

Removal of AFUDC accrual on PURTA Tax Base from 4/1/82 through 2/15/86

AFUDC Rates	April - Jun	1982	9.1%	1.02275
	July - Dec	1982	9.3%	1.0465
		1983	9.3%	1.0465 x 1.0465
		1984	9.4%	1.0470 x 1.0470
	1985 - Feb	1986	9.5%	1.0475 x 1.0475 x 1.0079

$866,959 / (1.02275 x 1.0465 x 1.0465 x 1.0465 x 1.0470 x 1.0470 x 1.0475 x 1.0475 x 1.0079)
= $610,088

Increase in PURTA Tax Base = $610,088 - $400,655
= $209,433 (for use on page 3)

Florida Electric Company
Additional Purta Tax Base Assuming
O'Brien Cash Flows, new AFUDC Rates
($1,000)

Schedule 7.4
Page 2

Year	Base Directs	O'Brien Directs	Additional Directs	Cum. Addl. Directs to 4/1/82	Add'l Directs Subject to M.A.D.
	(1)	(2)	(2)-(1)	(Note 3)	(3 per 4)
1975	$90,700	$131,300	$41,600	$41,600	$10,175
1976	104,700	140,800	36,100	36,100	$13,.03
1977	113,600	158,400	44,800	44,800	$16,.04
1978	89,700	154,700	65,000	65,000	$23,547
1979	104,900	196,300	91,400	91,400	$33,181
1980	161,200	290,000	128,800	128,800	$46,758
1981	219,700	371,100	151,400	131,400	$54,363
1982	322,300	392,700	70,400	17,600 (a)	$6,350
				$517,600	$209,.33 (b)

Year	Beginning Balance	Additional Direct Cost	Additional AFUDC	Subtotal	PURTA Tax Rate 9/1%	Ending Balance	1st Half 2nd Half Average AFUDC Rate	1st Half Rate	2nd Half Average Rate
	(1) from (b)	(2)	(3)=(2)x(1)	(4)=(2)+(3)	(5)=(4)x(1)	(6)=(4)-(5)	(7)	(8)	(9)=(7)+(8)
1975	$0	$10,175	$1,223	$10,398	$452	$10,890	0.00%	0.11%	0.06%
1976	10,890	13,103	2,448	26,441	973	25,468	0.10%	0.22%	0.16%
1977	25,468	16,064	4,213	45,745	1,817	43,928	0.48%	0.30%	0.40%
1978	43,928	23,547	3,535	71,010	2,743	67,268	1.04%	1.22%	1.13%
1979	67,268	33,181	5,892	106,341	3,681	102,660	1.38%	1.40%	1.39%
1980	102,660	46,758	10,017	159,435	5,863	153,572	1.44%	1.71%	1.58%
1981	153,572	54,963	22,226	230,761	8,313	222,448	1.54%	1.70%	1.62%
1982	222,448	6,350	6,814 (c)	235,612	2,240 (d)	233,372	1.64%	1.70%	1.67%

Additional PURTA Tax Base $300,384
Actual PURTA Tax Base 4/1/82 400,629

Total PURTA Tax Base with O'Brien Cash Flow $701,013

(a) 1982 is 1/4 of year difference
(b) From Case 2
(c) 3 months AFC for 1982
(d) 3 months annual accrual

PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER
BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1852508 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 701519 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
1	CAPITAL FOR BOOK DEPRECIATION	3268351	3268351	3268351	3268351	3268351	3268351	3268351
2	AFUC	1077900	1077900	1077900	1077900	1077900	1077900	1077900
2A	50% OF ITC = (28)*(29)*50%	92625	92625	92625	92625	92625	92625	92625
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	2097826	2097826	2097826	2097826	2097826	2097826	2097826
	BOOK DEPRECIATION--SL & BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	83804	83804	83804	83804	83804	83804	83804
5A	ANNUAL AMOUNT(5)/(1-(11))	171484	171484	171484	171484	171484	171484	171484
6	CUMULATIVE AMOUNT	0	83804	167608	251412	335216	419020	502824
	TAX DEPRECIATION --ACRS & TAX LIFE							
7	ANNUAL RATE	0.15000	0.12750	0.10837	0.09212	0.08700	0.08700	0.08700
8	ANNUAL AMOUNT=(3)*(7)	314674	267473	227352	193249	182513	182513	182513
	TAX DEPRECIATION--SL & BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	53790	53790	53790	53790	53790	53790	53790
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	120007	98294	79839	64151	59213	59213	59213
13	ACCUMULATED DEFERRED INC TAXES	0	120007	218301	298140	362291	421504	480717
14	RATE BASE=(1)-(6)-(13)	3268351	3064540	2882442	2718799	2570844	2427827	2284810
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	418022	391955	368664	347734	328811	310519	292227
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	220450	206703	194421	183383	173403	163757	154110
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	230645	216262	203412	191864	181422	171330	161237
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	314674	267473	227352	193249	182513	182513	182513
23	TAXABLE INCOME=-(22)	-314674	-267473	-227352	-193249	-182513	-182513	-182513
24	INCOME TAX=(23)*(11)/(1-(11))	-329226	-279842	-237866	-202186	-190953	-190953	-190953
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	260884	213683	173562	139459	128723	128723	128723
26	TAXABLE INCOME=(25)	260884	213683	173562	139459	128723	128723	128723
27	INCOME TAX=(26)*0.46000/(1-0.51130)	245563	201134	163369	131269	121163	121163	121163
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1852508	1852508	1852508	1852508	1852508	1852508	1852508
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/8L	-9720	-9720	-9720	-9720	-9720	-9720	-9720
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	16342	15923	15504	15085	14666	14247	13828
	REALTY TAX							
33	$ ELIGIBLE	701519	701519	701519	701519	701519	701519	701519
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	21046	20506	19966	19427	18887	18347	17803
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	174650	164263	154665	145739	135465	124414	113361
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	764156	727702	694813	664957	635760	606417	577074
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	23.38	22.27	21.26	20.35	19.45	18.55	17.66
39	ANNUAL CC RATE & 0.0 % MORT DISP	23.38	22.27	21.26	20.35	19.45	18.55	17.66
40	LEVEL ANNUAL CC RATE=16.61%							

02/16/84

Schedule 7.1
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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1852508 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 701519 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14
1	CAPITAL FOR BOOK DEPRECIATION	3268351	3268351	3268351	3268351	3268351	3268351	3268351
2	AFDC	1077900	1077900	1077900	1077900	1077900	1077900	1077900
2A	50% OF ITC = (28)*(29)*50%	92625	92625	92625	92625	92625	92625	92625
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	2097826	2097826	2097826	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	83804	83804	83804	83804	83804	83804	83804
5A	ANNUAL AMOUNT(5)/(1-(11))	171484	171484	171484	171484	171484	171484	171484
6	CUMULATIVE AMOUNT	586628	670432	754236	838040	921844	1005648	1089452
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.08700	0.08700	0.08700	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	182513	182513	182513	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	53790	53790	53790	53790	53790	53790	53790
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	59213	59213	59213	-24742	-24742	-24742	-24742
13	ACCUMULATED DEFERRED INC TAXES	539930	599143	658356	717569	692827	668085	643343
14	RATE BASE=(1)-(6)-(13)	2141793	1998776	1855759	1712742	1653690	1594618	1535556
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	273935	255643	237352	219060	211506	203952	196398
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	144464	134817	125171	115525	111541	107557	103573
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	151145	141052	130960	120867	116699	112531	108363
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	182513	182513	182513	0	0	0	0
23	TAXABLE INCOME=-(22)	-182513	-182513	-182513	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	-190953	-190953	-190953	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	128723	128723	128723	-53790	-53790	-53790	-53790
26	TAXABLE INCOME=(25)	128723	128723	128723	-53790	-53790	-53790	-53790
27	INCOME TAX=(26)*0.46000/(1-0.51130)	121163	121163	121163	-50630	-50630	-50630	-50630
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1852508	1852508	1852508	1852508	1852508	1852508	1852508
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9720	-9720	-9720	-9720	-9720	-9720	-9720
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	13409	12990	12571	12152	11733	11314	10894
	REALTY TAX							
33	$ ELIGIBLE	701519	701519	701519	701519	701519	701519	701519
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	17268	16729	16189	15649	15110	14570	14030
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	102312	91261	80210	88318	83192	78065	72937
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	547731	518388	489046	478862	466182	453501	440819
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	16.76	15.86	14.96	14.65	14.26	13.88	13.49
39	ANNUAL CC RATE & 0.0 % MORT DISP	16.76	15.86	14.96	14.65	14.26	13.88	13.49
40	LEVEL ANNUAL CC RATE=16.61%							

Schedule 7.4
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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER
BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 @ 1852508 ELIGIBLE COMB INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 @ 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 @ 701519 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21
1	CAPITAL FOR BOOK DEPRECIATION	3268351	3268351	3268351	3268351	3268351	3268351	3268351
2	AFDC	1077900	1077900	1077900	1077900	1077900	1077900	1077900
2A	50% OF ITC = (28)*(29)*50%	92625	92625	92625	92625	92625	92625	92625
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	83804	83804	83804	83804	83804	83804	83804
5A	ANNUAL AMOUNT(5)/(1-(11))	171484	171484	171484	171484	171484	171484	171484
6	CUMULATIVE AMOUNT	1173256	1257060	1340864	1424668	1508472	1592276	1676080
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	53790	53790	53790	53790	53790	53790	53790
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-24742	-24742	-24742	-24742	-24742	-24742	-24742
13	ACCUMULATED DEFERRED INC TAXES	618601	593859	569117	544375	519633	494891	470149
14	RATE BASE=(1)-(6)-(13)	1476494	1417432	1358370	1299308	1240246	1181184	1122122
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	188844	181290	173736	166181	159627	151073	143519
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	99590	95636	91622	87639	83654	79671	75687
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	104176	100027	95859	91691	87523	83355	79187
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-53790	-53790	-53790	-53790	-53790	-53790	-53790
26	TAXABLE INCOME=(25)	-53790	-53790	-53790	-53790	-53790	-53790	-53790
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-50630	-50630	-50630	-50630	-50630	-50630	-50630
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1852508	1852508	1852508	1852508	1852508	1852508	1852508
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9720	-9720	-9720	-9720	-9720	-9720	-9720
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	10475	10056	9637	9219	8799	8380	7961
	REALTY TAX							
33	$ ELIGIBLE	701519	701519	701519	701519	701519	701519	701519
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	13491	12951	12411	11872	11332	10793	10253
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	67812	62684	57557	52431	47304	42178	37051
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	428140	415458	402777	390096	377415	364735	352054
38	ANNUAL CC RATE @ 0.00% MORT DISP=(37)/(1)	13.10	12.71	12.32	11.94	11.55	11.16	10.77
39	ANNUAL CC RATE @ 0.0 % MORT DISP	13.10	12.71	12.32	11.94	11.55	11.16	10.77
40	LEVEL ANNUAL CC RATE=16.61%							

02/18/84

Schedule 7.4
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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1852508 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 701519 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 22	YEAR 23	YEAR 24	YEAR 25	YEAR 26	YEAR 27	YEAR 28
1	CAPITAL FOR BOOK DEPRECIATION	3268351	3268351	3268351	3268351	3268351	3268351	3268351
2	AFDC	1077900	1077900	1077900	1077900	1077900	1077900	1077900
2A	50% OF ITC = (28)*(29)*50%	92625	92625	92625	92625	92625	92625	92625
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	83804	83804	83804	83804	83804	83804	83804
5A	ANNUAL AMOUNT(5)/(1-(11))	171484	171484	171484	171484	171484	171484	171484
6	CUMULATIVE AMOUNT	1759884	1843688	1927492	2011296	2095100	2178904	2262708
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	53790	53790	53790	53790	53790	53790	53790
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-24742	-24742	-24742	-24742	-24742	-24742	-24742
13	ACCUMULATED DEFERRED INC TAXES	445407	420665	395923	371181	346439	321697	296955
14	RATE BASE=(1)-(6)-(13)	1063060	1003998	944936	885874	826812	767750	708688
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	135965	128411	120857	113303	105749	98195	90641
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= ((16)*((15)-(17)(18)))/(15)	71703	67719	63736	59752	55768	51785	47801
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	75019	70851	66683	62515	58347	54180	50012
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-53790	-53790	-53790	-53790	-53790	-53790	-53790
26	TAXABLE INCOME=(25)	-53790	-53790	-53790	-53790	-53790	-53790	-53790
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-50630	-50630	-50630	-50630	-50630	-50630	-50630
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1852508	1852508	1852508	1852508	1852508	1852508	1852508
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9720	-9720	-9720	-9720	-9720	-9720	-9720
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	7542	7123	6704	6285	5866	5447	5028
	REALTY TAX							
33	$ ELIGIBLE	701519	701519	701519	701519	701519	701519	701519
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	9713	9174	8634	8094	7555	7015	6476
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	31924	26798	21671	16544	11418	6292	1164
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	339373	326693	314012	301331	288651	275971	263291
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	10.38	10.00	9.61	9.22	8.83	8.44	8.06
39	ANNUAL CC RATE & 0.0 % MORT DISP	10.38	10.00	9.61	9.22	8.83	8.44	8.06
40	LEVEL ANNUAL CC RATE=16.61%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1852508 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 701519 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 29	YEAR 30	YEAR 31	YEAR 32	YEAR 33	YEAR 34	YEAR 35
1	CAPITAL FOR BOOK DEPRECIATION	3268351	3268351	3268351	3268351	3268351	3268351	3268351
2	AFDC	1077900	1077900	1077900	1077900	1077900	1077900	1077900
2A	50% OF ITC = (28)*(29)*50%	92625	92625	92625	92625	92625	92625	92625
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	83804	83804	83804	83804	83804	83804	83804
5A	ANNUAL AMOUNT(5)/(1-(11))	171484	171484	171484	171484	171484	171484	171484
6	CUMULATIVE AMOUNT	2346512	2430316	2514120	2597924	2681728	2765532	2849336
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	53790	53790	53790	53790	53790	53790	53790
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-24742	-24742	-24742	-24742	-24742	-24742	-24742
13	ACCUMULATED DEFERRED INC TAXES	272213	247471	222729	197987	173245	148503	123761
14	RATE BASE=(1)-(6)-(13)	649626	590564	531502	472440	413378	354316	295254
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	83087	75533	67979	60425	52871	45317	37763
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	43817	39933	35850	31866	27882	23899	19915
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	45843	41675	37508	33340	29171	25004	20836
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(4)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-53790	-53790	-53790	-53790	-53790	-53790	-53790
26	TAXABLE INCOME=(25)	-53790	-53790	-53790	-53790	-53790	-53790	-53790
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-50630	-50630	-50630	-50630	-50630	-50630	-50630
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1852508	1852508	1852508	1852508	1852508	1852508	1852508
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11)))/BL	-9720	-9720	-9720	-9720	-9720	-9720	-9720
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	4609	4190	3771	3352	2933	2514	2095
	REALTY TAX							
33	$ ELIGIBLE	701519	701519	701519	701519	701519	701519	701519
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	5936	5396	4857	4317	3777	3238	2698
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	-3962	-9089	-14214	-19341	-24469	-29594	-34721
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	250609	237928	225249	212568	199886	187207	174526
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	7.67	7.28	6.89	6.50	6.12	5.73	5.34
39	ANNUAL CC RATE & 0.0 % MORT DISP	7.67	7.28	6.89	6.50	6.12	5.73	5.34
40	LEVEL ANNUAL CC RATE=16.61%							

02/16/86

Schedule 7.4
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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYDY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MDIT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1852508 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 701519 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 36	YEAR 37	YEAR 38	YEAR 39	YEAR 40	YEAR 41	YEAR 42
1	CAPITAL FOR BOOK DEPRECIATION	3268351	3268351	3268351	3268351	0	0	0
2	AFDC	1077900	1077900	1077900	1077900	0	0	0
2A	50% OF ITC = (28)*(29)*50%	92625	92625	92625	92625	0	0	0
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL & BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.0	0.0	0.0
5	ANNUAL AMOUNT=(1)*(4)	83804	83804	83804	83304	0	0	0
5A	ANNUAL AMOUNT(5)/(1-(11))	171484	171484	171484	171484	0	0	0
6	CUMULATIVE AMOUNT	2933140	3016944	3100748	3184552	0	0	0
	TAX DEPRECIATION --ACRS & TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL & BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.0	0.0	0.0
10	ANNUAL AMOUNT=(3)*(9)	53790	53790	53790	53790	0	0	0
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.0	0.0	0.0
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-24742	-24742	-24742	-24742	0	0	0
13	ACCUMULATED DEFERRED INC TAXES	99019	74277	49535	24793	51	0	0
14	RATE BASE=(1)-(6)-(13)	236192	177130	118068	59006	0	0	0
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.0	0.0	0.0
16	OVERALL RETURN=(14)*(15)	30209	22655	15101	7547	0	0	0
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.0	0.0	0.0
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.0	0.0	0.0
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(19))/(15)	15931	11947	7964	3980	0	0	0
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	16668	12499	8332	4164	0	0	0
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-53790	-53790	-53790	-53790	0	0	0
26	TAXABLE INCOME=(25)	-53790	-53790	-53790	-53790	0	0	0
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-50630	-50630	-50630	-50630	0	0	0
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1852508	1852508	1852508	1852508	0	0	0
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.0	0.0	0.0
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/DL	-9720	-9720	-9720	-9720	0	0	0
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.0	0.0	0.0
32	ANNUAL AMOUNT=(31)*((1)-(6))	1676	1257	838	419	0	0	0
	REALTY TAX							
33	$ ELIGIBLE	701519	701519	701519	701519	0	0	0
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.0	0.0	0.0
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	2158	1619	1079	540	0	0	0
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	-39848	-44975	-50101	-55227	0	0	0
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	161845	149164	136484	123804	0	0	0
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	4.95	4.56	4.18	3.79	0.0	0.0	0.0
39	ANNUAL CC RATE & 0.0 % MORT DISP	4.95	4.56	4.18	3.79	0.0	0.0	0.0
40	LEVEL ANNUAL CC RATE=16.61%							

Schedule 7.4
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Schedule

CHANGE IN FUEL EXPENSES AND NON-FUEL O&M EXPENSES
NOVEMBER 1983 TO FEBRUARY 1986
(MILLION $)

Period	No. of Years(n) and Months (m) to June 1986 n	m	Change in Expenses	Future Worth Factors, (P/F,9.70%,n)	Future Worth Factors, (P/F,9/70%/12,m)	Present Worth Year Ended June 1986
(1)	(2)	(3)	(4) from 7.6	(5)	(6)	(7)=(4) x(5)x(6)
Change in Fuel Expenses						
2 Mos End Dec 1983	2	6	($21)	1.203	1.016	($26)
12 Mos End Dec 1984	1	6	(199)	1.097	1.058	(231)
12 Mos. End Dec 1985	0	6	(99)	1.000	1.058	(105)
2 Mos End Feb 1986	0	5	(32)	1.000	1.008	(32)
Total						
Change in Non-Fuel O&M Expenses			(4) from 7.7			
2 Mos End Dec 1983	2	6	$12	1.203	1.016	$15
12 Mos End Dec 1984	1	6	97	1.097	1.058	113
12 Mos. End Dec 1985	0	6	100	1.000	1.058	106
2 Mos End Feb 1986	0	5	14	1.000	1.008	14
Total						
Combined Change						
2 Mos End Dec 1983						($11)
12 Mos End Dec 1984						(118)
12 Mos. End Dec 1985						1
2 Mos End Feb 1986						(18)
Total						($146)

Change in Fuel Expenses
November 1983 to February 1986
(Million $)

If Limerick 1 had been put into service in November 1983, the fuel savings that result from its operation would have started in November 1983 rather then in February 1986 as a consequence, fuel costs for that period would have been lower.

In this scenario, Limerick Unit No. 1 was placed in commercial operation in mid-November 1983. It was operated until a refueling outage would have been required, starting on December 15, 1984. The refueling outage lasted for 17 weeks at which time the unit was returned to service. Based on the presently known situation on the availability of the Point Pleasant Pumping Station, the following assumptions were made regarding cooling water for Limerick Unit No. 1: supplemental cooling water was available for full operation during 1984, the first year of operation; reduced operation at 25% output was necessary from June 1, 1985 through September 30, 1985; after September 30, 1985, sufficient cooling water was available for the remaining life of the plant.

The fuel savings for the 27 months of advanced output from Limerick Unit No. 1 were obtained by a simulation of actual conditions and then superimposing Limerick Unit No. 1 operation on this simulation to determine the savings. For the period in 1985 when Limerick Unit No. 1 was producing precommercial generation, the actual savings rate in $/MWH was used and the simulation was not necessary.

The following changes in fuel costs would have resulted:

		Change in Fuel Costs With Limerick 1 Operating
November 20 to Dec	1983	($21)
	1984	(199)
	1985	(99)
Jan to Mid-Feb	1986	(32)

CHANGE IN NON-FUEL O&M
NOVEMBER 1983 TO FEBRUARY 1986
(MILLION $)

If Limerick 1 had been put into service in November 1983, the non-fuel O&M expenses associated with its operation would have started in November 1983 rather than in February 1986. Non-fuel O&M expenses are comprised of station O&M expenses and other O&M expenses, calculated as follows:

Station O&M data were based on the $79.01 Million of Station O&M shown for 1986 in the response to IR-OCA-2-25 (see Item 1, Page 1 of the attachment). This amount was reduced to 1985, 1984, and 1983 levels using inflation factors of 4.5% for 1986, 3.6% for 1985, and 3.8% for 1984, plus a 3% real growth factor for each year.

Other O&M data were based on the $31.24 Million, $31.62 Million, $32.98 Million and $39.96 Million for other O&M shown for years 1986 through 1989 respectively in the response to IR-OCA-2-25 (see Item 2, Page 1 of the attachment). Spent fuel amounts of $5.46 Million, $5.93 Million, $6.00 Million and $7.82 Million (same reference) were subtracted from the total O&M, since spent fuel charges are not affected by inflation, and the remaining amounts for years 1986 through 1989 were used for years 1983 through 1986 after removing inflation at the rates of 6.0% for 1989, 6.0% for 1988 and 5.0% for 1987, in addition to the inflation factors cited in the previous paragraph. Estimated spent fuel for the period November 1983 to February 1986 were subsequently added to determine total other O&M expenses.

The following non-fuel O&M would have resulted:

		Station O&M	Other O&M	Combined
November 20 to Dec	1983	$8	$4	$12
	1984	69	28	97
	1985	73	27	100
Jan to Mid-Feb	1986	10	4	14

ADDITIONAL CARRYING CHARGES FOR CAPITAL COSTS
OF COAL UNIT REPLACING LIMERICK 1 FROM
JULY 2022 TO OCTOBER 2024 (NOTE A)
(Million $)

Period	No. of Years(n) and Months(m) to June 1986 n	m	Level Annual Carrying Charges	Present Worth Factors (P/F,9.70%,n)	Present Worth Factors (P/F,9.70%/12,m)	Present Worth At June 30, 1986
(1)	(2)	(3)	(4) NOTE B	(5)	(6)	(7)=(4)x(5)x(6)
12 Mos End Jul 2023	37	1	$2,425	0.033	0.992	$79
12 Mos End Jul 2024	38	1	2,425	0.030	0.992	72
3 Mos End Oct 2024	38	4	606	0.030	0.968	18
Total						$169

NOTE A: Only the level annual carrying charges for the period July 2022 through October 2024 are included in the analysis. Carrying charges beyond October 2024 are considered common to both alternatives and, therefore, are omitted from the analysis. This method is sufficient to capture the difference between year-by-year carrying charges continuing for 35 years beginning July 2022 and year-by-year carrying charges continuing for 35 years beginning October 2024, provided the inflation effect on capital cost from July 2022 and October 2024 is ignored.

NOTE B: $14,393 x 16.85% = $2,425 for a 12 month period and $606 for a 3-month period.

The $14,393 is the total cost of two 525 MW coal units if placed in service in July 2022 (from Schedule 7.9).

The 16.85% is the level annual carrying charge rate equivalent to the year by year carrying charge rates at a discount rate of 9.70%. The calculation of the year by year carrying charges are contained in Schedule 7.9. The 16.85% level carrying charge rate is indicated in Schedule 7.9 on Page 2, Line 40.

Calculation of Annual Carrying Charges Resulting from a Coal Unit With a Service Date of July 2022 or October 2024

The details of this calculation of the annual carrying charges for the 35 years starting July 2022 or October 2024 are shown on pages 2 through 6 of this schedule.

The capital cost used is the direct cost of two 525 MW coal units if placed in service in July 2022. It is based on direct costs taken from the response to IR-OCA-6-9 in the Limerick 2 investigation. The direct construction and overhead expenditures shown there were inflated at 4.5% for 1986, 5.0% for 1987 and 6.0% for 1988 and beyond (from IR-OCA-2-25) to simulate a construction expenditure schedule ending in 2022. Then AFUDC at 9.8% (from IR-OCA-2-25) was added to obtain a total capital cost of $14,393 million.

The portion of capital cost eligible for ITC is assumed to be 97% of the direct cost of the coal units. The portion of capital cost subject to realty tax is assumed to be 14% of the total cost of the coal units. All other assumptions (cost of money, tax rates, etc.) are the same as used in the carrying charge calculations shown in Schedule 7.3, pages 2 through 7).

PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER
BOOK LIFE= 35 ACRS TAX LIFE= 15 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 X 10290 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 X 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 X 2015 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
1	CAPITAL FOR BOOK DEPRECIATION	14393	14393	14393	14393	14393	14393	14393
2	AFDC	3785	3785	3785	3785	3785	3785	3785
2A	50% OF ITC = (28)*(29)*50%	515	515	515	515	515	515	515
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	18094	18094	18094	18094	18094	18094	18094
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857
5	ANNUAL AMOUNT=(1)*(4)	411	411	411	411	411	411	411
5A	ANNUAL AMOUNT(5)/(1-(11))	841	841	841	841	841	841	841
6	CUMULATIVE AMOUNT	0	411	822	1233	1644	2055	2466
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.10000	0.09000	0.08140	0.07290	0.06561	0.05905	0.05905
8	ANNUAL AMOUNT=(3)*(7)	1809	908	818	736	662	596	596
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857
10	ANNUAL AMOUNT=(3)*(9)	288	288	288	288	288	288	288
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	332	285	244	206	172	142	142
13	ACCUMULATED DEFERRED INC TAXES	0	332	617	861	1067	1239	1381
14	RATE BASE=(1)-(6)-(13)	14393	13650	12954	12299	11682	11099	10546
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	1841	1746	1657	1573	1494	1420	1349
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	971	921	874	830	788	749	711
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	1816	964	914	868	824	784	744
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	1809	908	818	736	662	596	596
23	TAXABLE INCOME=-(22)	-1809	-908	-818	-736	-662	-596	-596
24	INCOME TAX=(23)*(11)/(1-(11))	-1056	-950	-856	-770	-693	-624	-624
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	721	620	530	448	374	308	308
26	TAXABLE INCOME=(25)	721	620	530	448	374	308	308
27	INCOME TAX=(26)*0.46000/(1-0.51130)	679	584	499	422	352	290	290
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	@ ELIGIBLE	10290	10290	10290	10290	10290	10290	10290
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-60	-60	-60	-60	-60	-60	-60
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	72	70	68	66	64	62	60
	REALTY TAX							
33	@ ELIGIBLE	2015	2015	2015	2015	2015	2015	2015
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	60	59	57	55	54	52	50
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	711	667	622	581	541	504	460
37	REV REQTS=((15A)+(16)+(36))/(1-GRT)	3393	3254	3120	2995	2876	2765	2650
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	23.57	22.61	21.68	20.81	19.98	19.21	18.41
39	ANNUAL CC RATE & 0.0 % MORT DISP	23.57	22.61	21.68	20.81	19.98	19.21	18.41
40	LEVEL ANNUAL CC RATE=16.85%							

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WILLAMETTE INDUSTRIES, INC. 02886

PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 35 ACRS TAX LIFE= 15 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 @ 10290 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 @ 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 @ 2015 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14
1	CAPITAL FOR BOOK DEPRECIATION	14393	14393	14393	14393	14393	14393	14393
2	AFDC	3785	3785	3785	3785	3785	3785	3785
2A	50% OF ITC = (28)*(29)*50%	515	515	515	515	515	515	515
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	10094	10094	10094	10094	10094	10094	10094
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857
5	ANNUAL AMOUNT=(1)*(4)	411	411	411	411	411	411	411
5A	ANNUAL AMOUNT(5)/(1-(11))	841	841	841	841	841	841	841
6	CUMULATIVE AMOUNT	2877	3288	3699	4110	4521	4932	5343
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.05905	0.05905	0.05905	0.05905	0.05905	0.05905	0.05905
8	ANNUAL AMOUNT=(3)*(7)	596	596	596	596	596	596	596
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857
10	ANNUAL AMOUNT=(3)*(9)	288	288	288	288	288	288	288
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	142	142	142	142	142	142	142
13	ACCUMULATED DEFERRED INC TAXES	1523	1665	1807	1949	2091	2233	2375
14	RATE BASE=(1)-(6)-(13)	9993	9440	8887	8334	7781	7228	6675
15	OVERALL RETURN RATE	0.12798	0.12798	0.12798	0.12798	0.12798	0.12798	0.12798
16	OVERALL RETURN=(14)*(15)	1278	1207	1137	1066	995	924	854
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	674	637	600	562	525	487	450
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	705	666	628	588	549	510	471
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	596	596	596	596	596	596	596
23	TAXABLE INCOME=-(22)	-596	-596	-596	-596	-596	-596	-596
24	INCOME TAX=(23)*(11)/(1-(11))	-624	-624	-624	-624	-624	-624	-624
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	308	308	308	308	308	308	308
26	TAXABLE INCOME=(25)	308	308	308	308	308	308	308
27	INCOME TAX=(26)*0.46000/(1-0.51130)	290	290	290	290	290	290	290
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	@ ELIGIBLE	10290	10290	10290	10290	10290	10290	10290
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-68	-68	-68	-68	-68	-68	-68
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	58	56	53	51	49	47	45
	REALTY TAX							
33	@ ELIGIBLE	2015	2015	2015	2015	2015	2015	2015
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	48	47	45	43	41	40	38
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	417	375	332	288	245	203	160
37	REV REQMTS=(15A)+(16)+(36))/(1-GRT)	2536	2423	2310	2195	2081	1968	1855
38	ANNUAL CC RATE @ 0.00% MORT DISP=(37)/(1)	17.62	16.83	16.05	15.25	14.46	13.67	12.89
39	ANNUAL CC RATE @ 0.0 % MORT DISP	17.62	16.83	16.05	15.25	14.46	13.67	12.89
40	LEVEL ANNUAL CC RATE=16.85%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - ECYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE III 1983 & AFTER
BOOK LIFE= 35 ACRS TAX LIFE= 15 MORT DISP FACTOR=0.0, GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 # 10290 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 # 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 # 2015 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21
1	CAPITAL FOR BOOK DEPRECIATION	14393	14393	14393	14393	14393	14393	14393
2	AFDC	3785	3785	3785	3785	3785	3785	3785
2A	50% OF ITC # (28)*(29)*50%	515	515	515	515	515	515	515
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	10094	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857
5	ANNUAL AMOUNT=(1)*(4)	411	411	411	411	411	411	411
5A	ANNUAL AMOUNT(5)/(1-(11))	841	841	841	841	841	841	841
6	CUMULATIVE AMOUNT	5754	6165	6576	6987	7398	7809	8220
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.05905	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	596	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857
10	ANNUAL AMOUNT=(3)*(9)	288	288	288	288	288	288	288
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	142	-131	-131	-131	-131	-131	-131
13	ACCUMULATED DEFERRED INC TAXES	2517	2659	2528	2397	2266	2135	2004
14	RATE BASE=(1)-(6)-(13)	4122	5569	5289	5009	4729	4449	4169
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	783	712	676	641	605	569	533
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	413	375	356	338	319	300	281
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	432	392	372	354	334	314	294
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	596	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	-596	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	-624	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	308	-288	-288	-288	-288	-288	-288
26	TAXABLE INCOME=(25)	308	-288	-288	-288	-288	-288	-288
27	INCOME TAX=(26)*0.46000/(1-0.51130)	290	-270	-270	-270	-270	-270	-270
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	# ELIGIBLE	10290	10290	10290	10290	10290	10290	10290
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-60	-60	-60	-60	-60	-60	-60
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((II)-(6))	43	41	39	37	35	33	31
	REALTY TAX							
33	# ELIGIBLE	2015	2015	2015	2015	2015	2015	2015
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	36	35	33	31	29	28	24
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	117	138	114	92	68	45	21
37	REV REQTS=((15A)+(36)+(36))/(1-GRT)	1741	1691	1631	1574	1514	1455	1395
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	12.10	11.75	11.33	10.94	10.52	10.11	9.69
39	ANNUAL CC RATE & 0.0 % MORT DISP	12.10	11.75	11.33	10.94	10.52	10.11	9.69
40	LEVEL ANNUAL CC RATE=16.85%							

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Schedule 7.9
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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1993 & AFTER
BOOK LIFE= 35 ACRS TAX LIFE= 15 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 % .10290 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 % 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 % 2015 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 22	YEAR 23	YEAR 24	YEAR 25	YEAR 26	YEAR 27	YEAR 28
1	CAPITAL FOR BOOK DEPRECIATION	14393	14393	14393	14393	14393	14393	14393
2	AFDC	3785	3785	3785	3785	3785	3785	3785
2A	50% OF ITC * (28)*(29)*50%	515	515	515	515	515	515	515
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857
5	ANNUAL AMOUNT=(1)*(4)	411	411	411	411	411	411	411
5A	ANNUAL AMOUNT(5)/(1-(11))	841	841	841	841	841	841	841
6	CUMULATIVE AMOUNT	8631	9042	9453	9864	10275	10686	11097
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857
10	ANNUAL AMOUNT=(3)*(9)	288	288	288	288	288	288	288
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-131	-131	-131	-131	-131	-131	-131
13	ACCUMULATED DEFERRED INC TAXES	1673	1742	1611	1480	1349	1218	1087
14	RATE BASE=(1)-(6)-(13)	3889	3609	3329	3049	2769	2489	2209
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	497	462	426	390	354	318	283
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	262	244	225	206	187	168	149
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	274	255	235	216	196	176	156
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-288	-288	-288	-288	-288	-288	-288
26	TAXABLE INCOME=(25)	-288	-288	-288	-288	-288	-288	-288
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-270	-270	-270	-270	-270	-270	-270
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	10290	10290	10290	10290	10290	10290	10290
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-60	-60	-60	-60	-60	-60	-60
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	29	27	25	23	21	19	18
	REALTY TAX							
33	$ ELIGIBLE	2015	2015	2015	2015	2015	2015	2015
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	24	22	21	19	17	16	14
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	-3	-24	-49	-72	-96	-119	-144
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	1335	1277	1218	1159	1099	1040	980
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	9.28	8.87	8.46	8.05	7.64	7.23	6.81
39	ANNUAL CC RATE & 0.0 % MORT DISP	9.28	8.87	8.46	8.05	7.64	7.23	6.81
40	LEVEL ANNUAL CC RATE=16.65%							

02/06/86

Schedule 7.9
(Page 5)

PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER
BOOK LIFE= 35 ACRS TAX LIFE= 15 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 % 10290 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 % 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 % 2015 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 29	YEAR 30	YEAR 31	YEAR 32	YEAR 33	YEAR 34	YEAR 35
1	CAPITAL FOR BOOK DEPRECIATION	14393	14393	14393	14393	14393	14393	14393
2	AFDC	3785	3785	3785	3785	3785	3785	3785
2A	50% OF ITC = (28)*(29)*50%	515	515	515	515	515	515	515
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857
5	ANNUAL AMOUNT=(1)*(4)	411	411	411	411	411	411	411
5A	ANNUAL AMOUNT(5)/(1-(11))	841	841	841	841	841	841	841
6	CUMULATIVE AMORT	11508	11919	12330	12741	13152	13563	13974
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857	0.02857
10	ANNUAL AMOUNT=(3)*(9)	288	288	288	288	288	288	288
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-131	-131	-131	-131	-131	-131	-131
13	ACCUMULATED DEFERRED INC TAXES	956	825	694	563	432	301	170
14	RATE BASE=(1)-(6)-(13)	1929	1649	1369	1089	809	529	249
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	247	211	175	139	103	68	32
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	130	111	92	73	54	36	17
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	136	116	96	76	56	38	18
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-288	-288	-288	-288	-288	-288	-288
26	TAXABLE INCOME=(25)	-288	-288	-288	-288	-288	-288	-288
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-270	-270	-270	-270	-270	-270	-270
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	10290	10290	10290	10290	10290	10290	10290
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-60	-60	-60	-60	-60	-60	-60
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	14	12	10	8	6	4	2
	REALTY TAX							
33	$ ELIGIBLE	2015	2015	2015	2015	2015	2015	2015
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	12	10	9	7	5	3	2
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	-168	-192	-215	-239	-263	-285	-308
37	REV REQTS=((5A)+(16)+(36))/(1-GRT)	920	860	801	741	681	624	565
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	6.39	5.98	5.57	5.15	4.73	4.34	3.93
39	ANNUAL CC RATE & 0.0 % MORT DISP	6.39	5.98	5.57	5.15	4.73	4.34	3.93
40	LEVEL ANNUAL CC RATE=16.65%							

02/06/86

Schedule 7.9
(Page 6)

CHANGE IN FUEL EXPENSE AND NON-FUEL O&M EXPENSES
JULY 2022 TO OCTOBER 2024
(Million $)

Period	No. of Years (n) and Months (m) to June 1986 n	m	Change in Expenses	Present Worth Factors, (P/F,9.70%,n)	Present Worth Factors, (P/F,9.70%/12,m)	Present Wor At June 30, 1
(1)	(2)	(3)	(4) from 7.11	(5)	(6)	(7)=(4) x(5)x(6)
Change in Fuel Expenses						
6 Mos Ended Dec 2022	36	10	$642	0.036	0.923	$21
12 Mos Ended Dec 2023	37	10	1,142	0.033	0.923	35
10 Mos Ended Oct 2024	38	8	1,003	0.030	0.923	28
Change in Non-Fuel Exp			(4) from 7.12			
6 Mos Ended Dec 2022	36	10	($133)	0.036	0.923	($4)
12 Mos Ended Dec 2023	37	10	(263)	0.033	0.923	(8)
10 Mos Ended Oct 2024	38	8	(247)	0.030	0.923	(7)
Combined Change						
6 Mos Ended Dec 2022						$17
12 Mos Ended Dec 2023						27
10 Mos Ended Oct 2024						21
Total						$65

Schedule 7.11

Change in Fuel Expenses
July 2022 to October 2024

If Limerick 1 had been put into service in November 1983, it would be replaced by coal units in July 2022, rather than in October 2024. As a consequence, for that period the Limerick 1 fuel savings expected under the PECo schedule would be replaced by coal unit fuel savings. Since the coal unit fuel savings are less than the nuclear unit fuel savings, an increase in cost results.

A coal-fired plant was installed to replace Limerick Unit No. 1 and it was placed in operation on July 15, 2022.

To determine the fuel savings for the coal unit operation for the 27 months after July 15, 2022, the coal unit was assumed to replace the generation received from Limerick Unit No. 1 during this period and a new savings value was calculated using fuel costs for coal vs nuclear. The fuel cost per megawatt hour generated for this plant is shown below:

	$/MWH
2022	$234.58
2023	253.41
2024	273.57

The following change in fuel costs would have resulted:

	Change in Fuel Costs with Limerick 1 Operating (a) (1)	Change in Fuel Costs With Coal Units Operating (2)	Change in Fuel Costs With Coal Units Operating in Lieu of Limerick 1 (3)=(2)-(1)
Mid-July to Dec 2022	($3,689)	($3,047)	$642
2023	(6,680)	(5,538)	1,142
Jan to Mid-Oct 2024	(5,823)	(4,820)	1,003

(a) From IR-OCA-2-25, Item 1, Page 2

CHANGE IN NON-FUEL O&M EXPENSES
JULY 2022 TO OCTOBER 2024
(Million $)

If Limerick 1 had been put into service in November 1983, it would be replacei by coal units in July 2022, rather than in October 2024. As a consequence, for that period the Limerick 1 non-fuel O&M expenses expected unier the PECo scheiule would be replacei by coal unit non-fuel O&M expenses. The iifference, a reiuction in non-fuel O&M expenses, is calculated as follows.

Limerick 1 non-fuel O&M expenses are comprisei of the station O&M expenses ani the other O&M expenses as shown in the Company's response to IR-OCA-2-25 for the periois shown in the table below. (Item 1, page 1, column 2, plus Item 2, page 1, column 9).

Coal non-fuel expenses are basei on 1984 costs of $74.9 million for two 525 MW units. These costs are escalated using the inflation factors of 3.6% for 1985, 4.5% for 1986, 5.0% for 1987 ani 6.0% for 1988 ani beyoni.

The following change in non-fuel O&M would have resulted:

	Limerick 1 Non-Fuel O&M	Coal Non-Fuel O&M	Difference
Mid-July to Dec 2022	$433	$300	($133)
2023	957	694	(263)
Jan to Mid-Oct 2024	890	643	(247)

Simple Example of Buy Now or Buy Later

Assumptions

Purchase price of home now	=	$110,000
Purchase price of home 27 months later	=	$125,000
Rental = $500 per month		
Interest rate = 12% or 1% per month		

Incomplete Analysis

Cost of house 27 months later	=	$125,000
Cost of house now	=	110,000
Difference	=	$15,000

Decision: Buy house now for $110,000

Complete Analysis

$110,000 x (F/P, 1%/27 mos)	=	$143,900
Less: Rental payments $500 x (F/A, 1%, 27 mos)	=	-15,410
Less: House purchase	=	-125,000
Excess funds available	=	$3,490

Decision: Buy house later for $125,000

PECO STATEMENT NO. 18E

SOR
3-12-86
HBG
R-850152

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PHILADELPHIA ELECTRIC COMPANY

DOCKET No. R-850152

SUPPLEMENTAL REBUTTAL TESTIMONY OF THOMAS P. HILL, JR.

Re: CORRECTIONS TO REVENUE REQUIREMENT QUANTIFICATION FOR THE COSTS OF THE 1976 AND 1978 DELAYS

February, 1986

SUPPLEMENTAL REBUTTAL TESTIMONY OF THOMAS P. HILL, JR.

Q. Are you the same Mr. Hill who has previously filed direct and rebuttal testimony in this proceeding?

A. Yes. I have previously submitted direct testimonies identified as PECo Statements No. 18, 18A and 18B and I have submitted rebuttal testimony identified as PECo Statements Nos. 18C, 18D.

Q. What is the purpose of this rebuttal testimony?

A. In PECo Statement No. 18D, I performed specific calculations to determine the revenue requirement quantification for the costs of the 1976 and 1978 delays utilizing the O'Brien Kreitzberg estimated November 1983 service date for Limerick Unit No. 1 and 100% of Common Plant as measured against the actual completion date for this unit in February 1986. My initial calculation was based upon OCA Statement No. 1 and 1A for the quantifications of delay but I did not include any adjustment for a lower level of indirect costs for Bechtel and Philadelphia Electric Company which would result from an earlier in-service date. My analysis was also based upon 100% of Common Plant being placed in service with the first unit, which was consistent with the Company's claim for Limerick 1 and 100% of Common Plant in this proceeding. This Rebuttal Statement incorporates the lower level of Bechtel indirect costs resulting from the proposed

27-month earlier in-service date plus somewhat lower PECo indirect costs.

Q. Have you incorporated the total reduction in indirects as outlined in Office of Consumer Advocate Interrogatory IR-OCA-PECo-10-1?

A. No. I have employed the total reduction in Bechtel indirects of $171.9 million but have reduced PECo indirects by only $39.1 million rather than the level of $101.5 million as recommended by Mr. O'Brien. The difference in PECo indirects reflects required adjustments to the PECo indirects as discussed by Mr. Clarey in PECo Statement No. 4A. Mr. Clarey concludes that $62.4 million of PECo indirects would not have been avoided even with the assumed earlier in-service date recommended by Mr. O'Brien. The aforementioned reductions in indirect costs are all based upon 100% of Common Plant placed in service with the first Limerick unit.

In addition, I have performed my revenue requirement analysis on the basis of 50% of Common Plant utilizing a reduction in the cost of Limerick 1 for Bechtel indirects of $140.6 million and $31.9 million for PECo indirects. These adjustments are also based upon OCA interrogatory IR-PECo-OCA-10-1, adjusting for errors identified by Mr. Clarey concerning PECo indirects.

Q. Why were these adjustments not included in your Rebuttal Statement No. 18D filed on February 19, 1986?

A. OCA Interrogatory IR-PECo-OCA-10-1, which identified a compounding error in Mr. O'Brien's analysis, was not received in time to incorporate my previous testimony (PECo Statement 18D). In addition, in order to make these calculations, it was necessary to review Mr. O'Brien's supporting calculations. Finally, since many intervenors have recommended inclusion in rate base of only 50% of common facilities with the first unit, I have performed a second revenue requirement analysis based on Limerick 1 and 50% of Common Plant.

Q. Would you summarize the results of your analysis?

A. Yes. Schedule 1, attached to this testimony summarizes the revenue requirement impact on customers for Limerick 1 and 100% of Common Plant with the assumption that the November 20, 1983 service date could be achieved. The conclusion of my revenue requirements analysis, expressed on a present worth at June 30, 1986, indicates that there was a net benefit to customers of $352 million by placing the unit in service in February 1986 rather than the November 1983 date identified by Mr. O'Brien. I have summarized the individual elements of my revenue requirement analysis for cost or benefit in a similar fashion to that presented in PECo Statement No. 18D and I have also included

the revenue effects of maintaining mortgage coverage in order to attract the additional capital necessary to construct the plant on Mr. O'Brien's schedule. The results of my analysis are as follows:

	Cost or Benefit
1. The differential cost of annual carrying charges on capital costs over the useful life (i.e. 39 years)	($ 91) cost
2. Fuel savings net of operating and maintenance costs of the first completed unit during the period prior to completion of the second unit (i.e., November 1983 to February 1986)	($146) cost
3. Additional carrying charges for capital costs of a unit replacing the first completed unit and thus first retired unit during the period prior to the second completed units retirement (i.e. July 2022 to October 2023)	$169 benefit
4. Fuel savings and operating and maintenance cost differentials for the period from the first retired unit to the second retired unit (i.e. July 2022 to October 2024)	$65 benefit
5. Additional revenue required from customers from 1975 to 1985 to maintain mortgage coverage based upon a construction schedule to meet a November 1983 service date	$339 benefit
Total Change and Present Worth of Revenue Requirements	
(a) Excluding Gross Receipts Tax	$336 benefit
(b) Including Gross Receipts Tax	$352 benefit

Schedule 2 provides similar calculations based upon Limerick 1 and 50% of Common Plant again assuming Mr. O'Brien's earlier service date. The results of this which shows a net benefit of $469 million to customers with the Company's actual February 1986 service date are as follows:

	Cost or Benefit
1. The differential cost of annual carrying charges on capital costs over the useful life (i.e. 39 years)	$ 21 benefit
2. Fuel savings net of operating and maintenance costs of the first completed unit during the period prior to completion of the second unit (i.e., November 1983 to February 1986)	($146) cost
3. Additional carrying charges for capital costs of a unit replacing the first completed unit and thus first retired unit during the period prior to the second completed units retirement (i.e. July 2022 to October 2023)	$169 benefit
4. Fuel savings and operating and maintenance cost differentials for the period from the first retired unit to the second retired unit (i.e. July 2022 to October 2024)	$ 65 benefit
5. Additional revenue required from customers from 1975 to 1985 to maintain mortgage coverage based upon a construction schedule to meet a November 1983 service date	$339 benefit
Total Change and Present Worth of Revenue Requirements	
(a) Excluding Gross Receipts Tax	$448 benefit
(b) Including Gross Receipts Tax	$469 benefit

Q. Mr. Hill, at pages 21 and 22 of your rebuttal testimony (Statement 18D), you present as an offset to the O'Brien proposed Limerick 1 schedule cost disallowance, the cost to the ratepayer of attracting the additional capital prior to 1983 while maintaining the Company's experienced financial position. Do the corrections which you have described above affect that analysis?

A. Yes, they reduce slightly the level of the offset. The total additional revenue requirement indicated to maintain historic mortgage coverage levels for the 1975 to 1985 period is reduced from $386 million to $339 million on a present worth basis at June 30, 1986. This additional revenue requirement can be re-expressed as an additional capital cost of $200 million, as compared to $228 million stated in my earlier rebuttal testimony.

I should emphasize that each of these analyses do not reflect possible additional costs of financing as described by Mr. Paquette and Mr. Sanders associated with a downgrading of the Company's securities had the O'Brien capital spending plan been pursued.

Q. Does that complete your additional rebuttal testimony concerning the revised revenue requirement quantification for the costs of the 1976 and 1978 delays?

A. Yes.

Schedule 1

CHANGES IN TOTAL REVENUE REQUIREMENTS FOR LIMERICK NO. 1 AND 100% OF COMMON BASED ON PLACING THESE FACILITIES IN SERVICE IN NOVEMBER 1983 RATHER THAN IN FEBRUARY 1986
(Million $)

	Change in Present Worth of Revenue Requirements At June 30, 1986
1. Annual carrying charge differential for capital costs of Limerick No. 1 and 100% of common based on change in service date (Schedule 1.2)	($91)
2. Change in fuel expenses and non-fuel O&M expenses in period November 1983 to February 1986 (From PECo Statement 18D, Schedule 7.5))	($146)
3. Additional Carrying charges for capital costs of coal unit replacing Limerick No. 1 from July 2022 to October 2024 (From PECo Statement 18D, Schedule 7.8)	$169
4. Change in fuel expenses and non-fuel O&M expenses in period July 2022 to October 2024 (From PECo Statement 18D, Schedule 7.10)	$65
5. Change in Customer Revenue Requirements from 1975 to Maintain Mortgage Coverage for Earlier Service Date (Schedule 1.8)	$339
6. Total change in present worth of revenue requirements	
a. Excluding gross receipts tax	$336
b. Including gross receipts tax	$352

ANNUAL CARRYING CHARGES FOR CAPITAL COSTS OF LIMERICK NO. 1 AND 100% OF LIMERICK COMMON WITH SERVICE DATE OF FEBRUARY 1986 (MILLION $)

Year Ended February	No. of Years(n) and Months(m) to June 1986 n	m	Annual Carrying Charges	Present Worth Factors (P/F,9.70%,n)	Present Worth Factors (P/F,9.70%/12,m)	Present Worth at June 30, 1986
(1)	(2)	(3)	(4)from 1.3	(5)	(6)	(7)=(4)x(5)x(6)
1987	0	8	$899	1.000	0.938	$843
1988	1	8	858	0.912	0.938	734
1989	2	8	820	0.830	0.938	638
1990	3	8	786	0.757	0.938	558
1991	4	8	753	0.691	0.938	488
1992	5	8	719	0.629	0.938	424
1993	6	8	686	0.574	0.938	369
1994	7	8	652	0.523	0.938	320
1995	8	8	619	0.477	0.938	277
1996	9	8	585	0.435	0.938	239
1997	10	8	573	0.396	0.938	213
1998	11	8	558	0.361	0.938	189
1999	12	8	543	0.329	0.938	168
2000	13	8	528	0.300	0.938	149
2001	14	8	512	0.274	0.938	132
2002	15	8	497	0.247	0.938	115
2003	16	8	482	0.227	0.938	103
2004	17	8	467	0.207	0.938	91
2005	18	8	452	0.189	0.938	80
2006	19	8	437	0.172	0.938	71
2007	20	8	421	0.157	0.938	62
2008	21	8	406	0.143	0.938	54
2009	22	8	391	0.130	0.938	48
2010	23	8	376	0.119	0.938	42
2011	24	8	361	0.108	0.938	37
2012	25	8	346	0.099	0.938	32
2013	26	8	331	0.090	0.938	28
2014	27	8	315	0.082	0.938	24
2015	28	8	300	0.075	0.938	21
2016	29	8	285	0.068	0.938	18
2017	30	8	270	0.062	0.938	16
2018	31	8	255	0.057	0.938	14
2019	32	8	240	0.052	0.938	12
2020	33	8	224	0.047	0.938	10
2021	34	8	209	0.043	0.938	8
2022	35	8	194	0.039	0.938	7
2023	36	8	179	0.036	0.938	6
2024	37	8	164	0.033	0.938	5
2025	38	8	149	0.030	0.938	4
Total Schedule 1.1 (February 1986 Service Date)						$6,649

ANNUAL CARRYING CHARGES FOR CAPITAL COSTS OF LIMERICK NO. 1 AND 100% OF LIMERICK COMMON WITH SERVICE DATE OF NOVEMBER 1983 (MILLION $)

Year Ended November (1)	No. of Years(n) and Months(m) To June 1986 n (2)	m (3)	Annual Carrying Charges (4)from 1.4	Future&Present Worth Factors (F/P,9.70%,n) or (P/F,9.70%,n) (5)	Future&Present Worth Factors (F/P,9/70%/12,m) or (P/F,9/70%/12,m) (6)	Present Worth at June 30, 1986 (7)=(4)x(5)x(6)
1984	1	7	$724	1.097	1.058	$840
1985	0	7	690	1.000	1.058	730
1986	0	5	659	1.000	0.961	633
1987	1	5	631	0.912	0.961	553
1988	2	5	603	0.830	0.961	481
1989	3	5	575	0.757	0.961	418
1990	4	5	548	0.691	0.961	364
1991	5	5	520	0.629	0.961	314
1992	6	5	492	0.574	0.961	271
1993	7	5	465	0.523	0.961	234
1994	8	5	455	0.477	0.961	209
1995	9	5	443	0.435	0.961	185
1996	10	5	431	0.396	0.961	164
1997	11	5	419	0.361	0.961	145
1998	12	5	407	0.329	0.961	129
1999	13	5	395	0.300	0.961	114
2000	14	5	383	0.274	0.961	101
2001	15	5	371	0.247	0.961	88
2002	16	5	358	0.227	0.961	78
2003	17	5	346	0.207	0.961	69
2004	18	5	334	0.189	0.961	61
2005	19	5	322	0.172	0.961	53
2006	20	5	310	0.157	0.961	47
2007	21	5	298	0.143	0.961	41
2008	22	5	286	0.130	0.961	36
2009	23	5	274	0.119	0.961	31
2010	24	5	262	0.108	0.961	27
2011	25	5	250	0.099	0.961	24
2012	26	5	238	0.090	0.961	21
2013	27	6	226	0.082	0.961	18
2014	28	5	214	0.075	0.961	15
2015	29	5	202	0.068	0.961	13
2016	30	5	190	0.062	0.961	11
2017	31	5	178	0.057	0.961	10
2018	32	5	166	0.052	0.961	8
2019	33	5	154	0.047	0.961	7
2020	34	5	142	0.043	0.961	6
2021	35	5	130	0.039	0.961	5
2022	36	5	117	0.036	0.961	4
Total Schedule 1.2 (November 1983 Service Date)						$6,558
Total Schedule 1.1 (February 1986 Service Date)						$6,649
Change in Present Worth of Revenue Requirements with a November 1983 Service Date ($6,558 - $6,649)						($91)

CALCULATION OF ANNUAL CARRYING CHARGES RESULTING FROM LIMERICK NO. 1 AND 100% OF COMMON WITH A SERVICE DATE OF FEBRUARY 1986

The details of the calculation of the annual carrying charges for the 39 years starting February 1986 are shown on pages 2 through 7 of this schedule.

The carrying charges for Limerick No. 1 and 100% of Common facilities are equal to the sum of the carrying charges for Limerick No. 1 and 50% of Common, as calculated and shown in PECo's response to IR-OCA-2-25 (see Attachment IR-OCA-2-25b, Item 7) and the carrying charges for the other 50% of Common, as calculated and shown in PECo's response to IR-OCA-2-26. All assumptions reflected in the carrying charges for Limerick No. 1 and 100% of common are identical to those assumed in the referenced interrogatory responses.

PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER
BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 2039706 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 866959 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
1	CAPITAL FOR BOOK DEPRECIATION	3812651	3812651	3812651	3812651	3812651	3812651	3812651
2	AFDC	1400853	1400853	1400853	1400853	1400853	1400853	1400853
2A	50% OF ITC = (28)*(29)*50%	101985	101985	101985	101985	101985	101985	101985
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	2309813	2309813	2309813	2309813	2309813	2309813	2309813
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	97760	97760	97760	97760	97760	97760	97760
5A	ANNUAL AMOUNT(5)/(1-(11))	200041	200041	200041	200041	200041	200041	200041
6	CUMULATIVE AMOUNT	0	97760	195520	293280	391040	488800	586560
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.15000	0.12750	0.10837	0.09212	0.08700	0.08700	0.08700
8	ANNUAL AMOUNT=(3)*(7)	346472	294501	250326	212777	200956	200956	200956
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	59226	59226	59226	59226	59226	59226	59226
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	132133	108227	87906	70633	65196	65196	65196
13	ACCUMULATED DEFERRED INC TAXES	0	132133	240360	328266	398899	464095	529291
14	RATE BASE=(1)-(6)-(13)	3812651	3582758	3376771	3191105	3022712	2859756	2696800
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	487638	458235	431889	408142	386605	365763	344921
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	257163	241657	227763	215240	203882	192891	181899
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	269056	252832	238296	225194	213311	201811	190311
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	346472	294501	250326	212777	200956	200956	200956
23	TAXABLE INCOME=-(22)	-346472	-294501	-250326	-212777	-200956	-200956	-200956
24	INCOME TAX=(23)*(11)/(1-(11))	-362495	-308120	-261902	-222617	-210249	-210249	-210249
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	287246	235275	191100	153551	141730	141730	141730
26	TAXABLE INCOME=(25)	287246	235275	191100	153551	141730	141730	141730
27	INCOME TAX=(26)*0.46000/(1-0.51130)	270377	221458	179877	144533	133407	133407	133407
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	2039706	2039706	2039706	2039706	2039706	2039706	2039706
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-10702	-10702	-10702	-10702	-10702	-10702	-10702
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	19063	18574	18086	17597	17108	16619	16130
	REALTY TAX							
33	$ ELIGIBLE	866959	866959	866959	866959	866959	866959	866959
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	26009	25342	24675	24008	23341	22674	22007
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	211308	199384	188330	178013	166216	153560	140904
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	898987	857660	820260	786196	752862	719364	685866
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	23.58	22.50	21.51	20.62	19.75	18.87	17.99
39	ANNUAL CC RATE & 0.0 % MORT DISP	23.58	22.50	21.51	20.62	19.75	18.87	17.99
40	LEVEL ANNUAL CC RATE=16.90%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER
BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 2039706 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 866959 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14
1	CAPITAL FOR BOOK DEPRECIATION	3812651	3812651	3812651	3812651	3812651	3812651	3812651
2	AFDC	1400853	1400853	1400853	1400853	1400853	1400853	1400853
2A	50% OF ITC = (28)*(29)*50%	101985	101985	101985	101985	101985	101985	101985
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	2309813	2309813	2309813	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	97760	97760	97760	97760	97760	97760	97760
5A	ANNUAL AMOUNT(5)/(1-(11))	200041	200041	200041	200041	200041	200041	200041
6	CUMULATIVE AMOUNT	684320	782080	879840	977600	1075360	1173120	1270880
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.08700	0.08700	0.08700	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	200956	200956	200956	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	59226	59226	59226	59226	59226	59226	59226
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	65196	65196	65196	-27243	-27243	-27243	-27243
13	ACCUMULATED DEFERRED INC TAXES	594487	659683	724879	790075	762832	735589	708346
14	RATE BASE=(1)-(6)-(13)	2533844	2370888	2207932	2044976	1974459	1903942	1833425
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	324079	303237	282395	261552	252533	243514	234495
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	170908	159917	148925	137933	133177	128421	123664
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	178812	167312	155812	144312	139336	134360	129383
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	200956	200956	200956	0	0	0	0
23	TAXABLE INCOME=-(22)	-200956	-200956	-200956	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	-210249	-210249	-210249	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	141730	141730	141730	-59226	-59226	-59226	-59226
26	TAXABLE INCOME=(25)	141730	141730	141730	-59226	-59226	-59226	-59226
27	INCOME TAX=(26)*0.46000/(1-0.51130)	133407	133407	133407	-55747	-55747	-55747	-55747
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	2039706	2039706	2039706	2039706	2039706	2039706	2039706
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11)))/BL	-10702	-10702	-10702	-10702	-10702	-10702	-10702
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	15642	15153	14664	14175	13686	13198	12709
	REALTY TAX							
33	$ ELIGIBLE	866959	866959	866959	866959	866959	866959	866959
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	21341	20674	20007	19340	18673	18006	17339
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	128251	115595	102939	111378	105246	99115	92982
37	REV REQMTS=((5A)+(16)*(36))/(1-GRT)	652371	618873	585375	572971	557820	542670	527518
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	17.11	16.23	15.35	15.03	14.63	14.23	13.84
39	ANNUAL CC RATE & 0.0 % MORT DISP	17.11	16.23	15.35	15.03	14.63	14.23	13.84

40 LEVEL ANNUAL CC RATE=16.90%

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 2039706 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 866959 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21
1	CAPITAL FOR BOOK DEPRECIATION	3812651	3812651	3812651	3812651	3812651	3812651	3812651
2	AFDC	1400853	1400853	1400853	1400853	1400853	1400853	1400853
2A	50% OF ITC = (28)*(29)*50%	101985	101985	101985	101985	101985	101985	101985
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	97760	97760	97760	97760	97760	97760	97760
5A	ANNUAL AMOUNT(5)/(1-(11))	200041	200041	200041	200041	200041	200041	200041
6	CUMULATIVE AMOUNT	1368640	1466400	1564160	1661920	1759680	1857440	1955200
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	59226	59226	59226	59226	59226	59226	59226
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-27243	-27243	-27243	-27243	-27243	-27243	-27243
13	ACCUMULATED DEFERRED INC TAXES	681103	653860	626617	599374	572131	544888	517645
14	RATE BASE=(1)-(6)-(13)	1762908	1692391	1621874	1551357	1480840	1410323	1339806
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	225476	216457	207438	198419	189399	180380	171361
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	118908	114152	109396	104639	99882	95126	90370
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	124407	119431	114455	109478	104501	99525	94549
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-59226	-59226	-59226	-59226	-59226	-59226	-59226
26	TAXABLE INCOME=(25)	-59226	-59226	-59226	-59226	-59226	-59226	-59226
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-55747	-55747	-55747	-55747	-55747	-55747	-55747
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	2039706	2039706	2039706	2039706	2039706	2039706	2039706
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-10702	-10702	-10702	-10702	-10702	-10702	-10702
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	12220	11731	11242	10754	10265	9776	9287
	REALTY TAX							
33	$ ELIGIBLE	866959	866959	866959	866959	866959	866959	866959
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	16672	16005	15339	14672	14005	13338	12671
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	86850	80718	74587	68455	62322	56190	50058
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	512367	497216	482066	466915	451762	436611	421460
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	13.44	13.04	12.64	12.25	11.85	11.45	11.05
39	ANNUAL CC RATE & 0.0 % MORT DISP	13.44	13.04	12.64	12.25	11.85	11.45	11.05
40	LEVEL ANNUAL CC RATE=16.90%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER
BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 2039706 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 866959 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 22	YEAR 23	YEAR 24	YEAR 25	YEAR 26	YEAR 27	YEAR 28
1	CAPITAL FOR BOOK DEPRECIATION	3812651	3812651	3812651	3812651	3812651	3812651	3812651
2	AFDC	1400853	1400853	1400853	1400853	1400853	1400853	1400853
2A	50% OF ITC * (28)*(29)*50%	101985	101985	101985	101985	101985	101985	101985
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	97760	97760	97760	97760	97760	97760	97760
5A	ANNUAL AMOUNT(5)/(1-(11))	200041	200041	200041	200041	200041	200041	200041
6	CUMULATIVE AMOUNT	2052960	2150720	2248480	2346240	2444000	2541760	2639520
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	59226	59226	59226	59226	59226	59226	59226
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-27243	-27243	-27243	-27243	-27243	-27243	-27243
13	ACCUMULATED DEFERRED INC TAXES	490402	463159	435916	408673	381430	354187	326944
14	RATE BASE=(1)-(6)-(13)	1269289	1198772	1128255	1057738	987221	916704	846187
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	162342	153323	144304	135285	126266	117246	108227
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	85614	80857	76101	71345	66588	61831	57075
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	89573	84596	79620	74644	69667	64690	59714
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-59226	-59226	-59226	-59226	-59226	-59226	-59226
26	TAXABLE INCOME=(25)	-59226	-59226	-59226	-59226	-59226	-59226	-59226
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-55747	-55747	-55747	-55747	-55747	-55747	-55747
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	2039706	2039706	2039706	2039706	2039706	2039706	2039706
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-10702	-10702	-10702	-10702	-10702	-10702	-10702
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	8798	8310	7821	7332	6843	6354	5866
	REALTY TAX							
33	$ ELIGIBLE	866959	866959	866959	866959	866959	866959	866959
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	12004	11337	10670	10003	9337	8670	8003
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	43926	37794	31662	25530	19398	13265	7134
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	406309	391158	376007	360856	345705	330552	315402
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	10.66	10.26	9.86	9.46	9.07	8.67	8.27
39	ANNUAL CC RATE & 0.0 % MORT DISP	10.66	10.26	9.86	9.46	9.07	8.67	8.27
40	LEVEL ANNUAL CC RATE=16.90%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 2039706 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 866959 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 29	YEAR 30	YEAR 31	YEAR 32	YEAR 33	YEAR 34	YEAR 35
1	CAPITAL FOR BOOK DEPRECIATION	3812651	3812651	3812651	3812651	3812651	3812651	3812651
2	AFDC	1400853	1400853	1400853	1400853	1400853	1400853	1400853
2A	50% OF ITC = (28)*(29)*50%	101985	101985	101985	101985	101985	101985	101985
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	97760	97760	97760	97760	97760	97760	97760
5A	ANNUAL AMOUNT(5)/(1-(11))	200041	200041	200041	200041	200041	200041	200041
6	CUMULATIVE AMOUNT	2737280	2835040	2932800	3030560	3128320	3226080	3323840
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	59226	59226	59226	59226	59226	59226	59226
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-27243	-27243	-27243	-27243	-27243	-27243	-27243
13	ACCUMULATED DEFERRED INC TAXES	299701	272458	245215	217972	190729	163486	136243
14	RATE BASE=(1)-(6)-(13)	775670	705153	634636	564119	493602	423085	352568
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	99208	90169	81170	72151	63132	54113	45093
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	52319	47563	42806	38050	33294	28537	23780
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	54738	49763	44786	39810	34834	29857	24880
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-59226	-59226	-59226	-59226	-59226	-59226	-59226
26	TAXABLE INCOME=(25)	-59226	-59226	-59226	-59226	-59226	-59226	-59226
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-55747	-55747	-55747	-55747	-55747	-55747	-55747
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	2039706	2039706	2039706	2039706	2039706	2039706	2039706
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-10702	-10702	-10702	-10702	-10702	-10702	-10702
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	5377	4888	4399	3910	3422	2933	2444
	REALTY TAX							
33	$ ELIGIBLE	866959	866959	866959	866959	866959	866959	866959
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	7336	6669	6002	5335	4668	4001	3335
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	1002	-5129	-11262	-17394	-23525	-29658	-35790
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	300251	285101	269949	254798	239648	224496	209344
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	7.88	7.48	7.08	6.68	6.29	5.89	5.49
39	ANNUAL CC RATE & 0.0 % MORT DISP	7.88	7.48	7.08	6.68	6.29	5.89	5.49
40	LEVEL ANNUAL CC RATE=16.90%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 2039706 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 866959 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 36	YEAR 37	YEAR 38	YEAR 39	YEAR 40	YEAR 41	YEAR 42
1	CAPITAL FOR BOOK DEPRECIATION	3812651	3812651	3812651	3812651	0	0	0
2	AFDC	1400853	1400853	1400853	1400853	0	0	0
2A	50% OF ITC = (28)*(29)*50%	101985	101985	101985	101985	0	0	0
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.0	0.0	0.0
5	ANNUAL AMOUNT=(1)*(4)	97760	97760	97760	97760	0	0	0
5A	ANNUAL AMOUNT(5)/(1-(11))	200041	200041	200041	200041	0	0	0
6	CUMULATIVE AMOUNT	3421600	3519360	3617120	3714880	0	0	0
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.0	0.0	0.0
10	ANNUAL AMOUNT=(3)*(9)	59226	59226	59226	59226	0	0	0
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.0	0.0	0.0
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-27243	-27243	-27243	-27243	0	0	0
13	ACCUMULATED DEFERRED INC TAXES	109000	81757	54514	27271	28	0	0
14	RATE BASE=(1)-(6)-(13)	282051	211534	141017	70500	0	0	0
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.0	0.0	0.0
16	OVERALL RETURN=(14)*(15)	36074	27055	18036	9017	0	0	0
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.0	0.0	0.0
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.0	0.0	0.0
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	19024	14268	9512	4755	0	0	0
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	19904	14928	9952	4975	0	0	0
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-59226	-59226	-59226	-59226	0	0	0
26	TAXABLE INCOME=(25)	-59226	-59226	-59226	-59226	0	0	0
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-55747	-55747	-55747	-55747	0	0	0
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	2039706	2039706	2039706	2039706	0	0	0
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.0	0.0	0.0
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-10702	-10702	-10702	-10702	0	0	0
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.0	0.0	0.0
32	ANNUAL AMOUNT=(31)*((1)-(6))	1955	1466	978	489	0	0	0
	REALTY TAX							
33	$ ELIGIBLE	866959	866959	866959	866959	0	0	0
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.0	0.0	0.0
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	2668	2001	1334	667	0	0	0
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	-41922	-48054	-54185	-60318	0	0	0
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	194193	179042	163892	148740	0	0	0
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	5.09	4.70	4.30	3.90	0.0	0.0	0.0
39	ANNUAL CC RATE & 0.0 % MORT DISP	5.09	4.70	4.30	3.90	0.0	0.0	0.0
40	LEVEL ANNUAL CC RATE=16.90%							

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Schedule 1.3
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CALCULATIONS OF ANNUAL CARRYING CHARGES RESULTING FROM LIMERICK NO. 1 AND 100% OF COMMON WITH A SERVICE DATE OF NOVEMBER 1983

The details of the calculation of the annual carrying charges for the 39 years starting November 1983 are shown on pages 4 through 7 of this schedule.

The capital cost used is $3,095,500 (Schedule 1.7) less land cost of $7,349 (Exhibit TPH-2A, Page C-5). The portion of the capital cost eligible for ITC is assumed to have the same relationship to total direct cost as in the carrying charge calculations shown in Schedule 1.3 pages 2 through 7 (Note A). The portion of capital cost subject to realty tax is calculated as shown on pages 2 and 3 following. All other assumptions (cost of money, tax rates, etc.) are the same as used in the carrying charge calculations shown in Schedule 1.3 pages 2 through 7.

Note A:

$$\frac{\$2,039,706}{(\$3,812,651 - \$1,400,853)} \times (\$3,088,151 - \$1,033,700) = \$1,737,491$$

CALCULATION OF PURTA TAX BASE FOR LIMERICK 1 AND 100% OF COMMON WITH O'BRIEN'S CASH FLOWS

Actual PURTA Tax Base 2/15/86

$394,679 + $472,280 = $866,959 (See IR-OCA-2-25b, Item 6, page 1)

Actual PURTA Tax Base 4/1/82

Balance 12/31/81	$379,509
Balance 12/31/82	$464,094
Estimated Balance 4/1/82	$400,655

Removal o AFUDC accrual on PURTA Tax Base from 4/1/82 through 2/15/86

AFUDC Rates	A ril - Jun	1982	9.1%	1.02275
	July - Dec	1982	9.3%	1.0465
		1983	9.3%	1.0465 x 1.0465
		1984	9.4%	1.0470 x 1.0470
	1985 - Feb	1986	9.5%	1.0475 x 1.0475 x 1.0079

$866,959 / (1.02275 x 1.0465 x 1.0465 x 1.0465 x 1.0470 x 1.0470 x 1.0475 x 1.0475 x 1.0079)
= $610,088

Increase in PURTA Tax Base = $610,088 - $400,655
= $209,433 (for use on page 3)

PHILADELPHIA ELECTRIC COMPANY
LIMERICK #1 AND 100% COMMON
ADDITIONAL PURTA TAX BASE ASSUMING
NEW CASH FLOWS WITH PECO AND BECHTEL INDIRECTS OUT
MOST RECENT AFUDC RATES DEVELOPED IN FINANCIAL
($1,000)

Schedule 1.4
(Page 3)

Year	PECO Directs	O'Brien Directs	Additional Directs	Total Addl. Directs to 4/1/82	Addl. Directs Subject to PURTA
	(1)	(2)	(3=2-1)	(4=3)	(5 per 4)
1975	$80,700	$118,900	$38,200	$38,200	$16,796
1976	104,700	137,700	33,000	33,000	$14,510
1977	113,600	154,500	40,900	40,900	$17,933
1978	89,700	149,100	59,400	59,400	$26,117
1979	104,900	186,500	81,600	81,600	$35,878
1980	161,200	266,100	104,900	104,900	$46,123
1981	219,700	332,800	113,100	113,100	$49,728
1982	322,300	343,200	20,900	5,225 (a)	$2,298
				$476,325	$209,433 (b)

Year	Beginning Balance	Additional Direct Cost	Additional AFUDC	Subtotal	PURTA TAX @3%	Ending Balance	1st half AFUDC Rate	2nd half AFUDC Rate	Average AFUDC Rate
	(1) from (6)	(2)	(3=1+2+9)	(4=1+2+3)	(5=4+3%)	(6=4+5)	(7)	(8)	(9=7+8/2)
1975	$0	$16,796	$1,354	$18,150	$545	$18,695	8.00%	8.12%	8.06%
1976	18,695	14,510	2,726	35,931	1,078	37,009	8.14%	8.27%	8.21%
1977	37,009	17,983	4,724	59,716	1,791	61,507	8.54%	8.63%	8.59%
1978	61,507	26,117	6,265	93,889	2,817	96,706	7.07%	7.22%	7.15%
1979	96,706	35,878	9,798	142,382	4,271	146,653	7.37%	7.41%	7.39%
1980	146,653	45,123	15,094	207,870	6,236	214,106	7.48%	8.18%	7.83%
1981	214,106	49,728	22,980	286,814	8,604	295,418	8.32%	9.09%	8.71%
1982	295,418	2,298	6,944 (b)	304,660	2,285 (c)	306,945	9.20%	9.45%	9.33%
		Additional PURTA Tax Base				$306,945			
		Actual PURTA Tax Base 4/1/82				400,655			
		Total PURTA Tax Base with O'Brien Cash Flow				$707,600			

(a) 1982 is 1/4 of year difference
(b) from page 2
(c) 3 months afc for 1982
(d) 3 months annual accrual

INTEREST RATES FORM TABLE B LINE 16

PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1737491 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 707600 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
1	CAPITAL FOR BOOK DEPRECIATION	3088151	3088151	3088151	3088151	3088151	3088151	3088151
2	AFDC	1033700	1033700	1033700	1033700	1033700	1033700	1033700
2A	50% OF ITC * (28)*(29)*50%	86875	86875	86875	86875	86875	86875	86875
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	1967576	1967576	1967576	1967576	1967576	1967576	1967576
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	79183	79183	79183	79183	79183	79183	79183
5A	ANNUAL AMOUNT(5)/(1-(11))	162028	162028	162028	162028	162028	162028	162028
6	CUMULATIVE AMOUNT	0	79183	158366	237549	316732	395915	475098
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.15000	0.12750	0.10837	0.09212	0.08700	0.08700	0.08700
8	ANNUAL AMOUNT=(3)*(7)	295136	250866	213236	181251	171181	171181	171181
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	50451	50451	50451	50451	50451	50451	50451
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	112555	92191	74881	60168	55536	55536	55536
13	ACCUMULATED DEFERRED INC TAXES	0	112555	204746	279627	339795	395331	450867
14	RATE BASE=(1)-(6)-(13)	3088151	2896413	2725039	2570975	2431624	2296905	2162186
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	394975	370451	348532	328828	311005	293774	276544
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	208296	195363	183804	173412	164013	154926	145840
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	217929	204398	192304	181431	171598	162091	152584
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	295136	250866	213236	181251	171181	171181	171181
23	TAXABLE INCOME=-(22)	-295136	-250866	-213236	-181251	-171181	-171181	-171181
24	INCOME TAX=(23)*(11)/(1-(11))	-308785	-262467	-223097	-189633	-179097	-179097	-179097
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	244685	200415	162785	130800	120730	120730	120730
26	TAXABLE INCOME=(25)	244685	200415	162785	130800	120730	120730	120730
27	INCOME TAX=(26)*0.46000/(1-0.51130)	230315	188645	153225	123118	113640	113640	113640
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1737491	1737491	1737491	1737491	1737491	1737491	1737491
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9116	-9116	-9116	-9116	-9116	-9116	-9116
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	15441	15045	14649	14253	13857	13461	13065
	REALTY TAX							
33	$ ELIGIBLE	707600	707600	707600	707600	707600	707600	707600
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	21228	20684	20139	19595	19051	18506	17962
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	167012	157189	148104	139648	129933	119485	109038
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	724015	689668	658664	630504	602966	575287	547610
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	23.44	22.33	21.33	20.42	19.53	18.63	17.73
39	ANNUAL CC RATE & 0.0 % MORT DISP	23.44	22.33	21.33	20.42	19.53	18.63	17.73
40	LEVEL ANNUAL CC RATE=16.67%							

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Schedule 1.4
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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1737491 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 707600 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14
1	CAPITAL FOR BOOK DEPRECIATION	3088151	3088151	3088151	3088151	3088151	3088151	3088151
2	AFDC	1033700	1033700	1033700	1033700	1033700	1033700	1033700
2A	50% OF ITC = (28)*(29)*50%	86875	86875	86875	86875	86875	86875	86875
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	1967576	1967576	1967576	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	79183	79183	79183	79183	79183	79183	79183
5A	ANNUAL AMOUNT(5)/(1-(11))	162028	162028	162028	162028	162028	162028	162028
6	CUMULATIVE AMOUNT	554281	633464	712647	791830	871013	950196	1029379
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.08700	0.08700	0.08700	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	171181	171181	171181	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	50451	50451	50451	50451	50451	50451	50451
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	55536	55536	55536	-23206	-23206	-23206	-23206
13	ACCUMULATED DEFERRED INC TAXES	506403	561939	617475	673011	649805	626599	603393
14	RATE BASE=(1)-(6)-(13)	2027467	1892748	1758029	1623310	1567333	1511356	1455379
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	259313	242082	224852	207621	200462	193302	186143
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	136753	127666	118579	109492	105717	101941	98165
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	143077	133570	124063	114555	110606	106655	102705
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	171181	171181	171181	0	0	0	0
23	TAXABLE INCOME=-(22)	-171181	-171181	-171181	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	-179097	-179097	-179097	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	120730	120730	120730	-50451	-50451	-50451	-50451
26	TAXABLE INCOME=(25)	120730	120730	120730	-50451	-50451	-50451	-50451
27	INCOME TAX=(26)*0.46000/(1-0.51130)	113640	113640	113640	-47487	-47487	-47487	-47487
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1737491	1737491	1737491	1737491	1737491	1737491	1737491
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9116	-9116	-9116	-9116	-9116	-9116	-9116
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	12669	12273	11878	11482	11086	10690	10294
	REALTY TAX							
33	$ ELIGIBLE	707600	707600	707600	707600	707600	707600	707600
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	17418	16874	16329	15785	15241	14696	14152
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	98591	88144	77697	85219	80330	75438	70548
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	519932	492254	464577	454868	442820	430768	418719
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	16.84	15.94	15.04	14.73	14.34	13.95	13.56
39	ANNUAL CC RATE & 0.0 % MORT DISP	16.84	15.94	15.04	14.73	14.34	13.95	13.56
40	LEVEL ANNUAL CC RATE=16.67%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1737491 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 707600 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21
1	CAPITAL FOR BOOK DEPRECIATION	3088151	3088151	3088151	3088151	3088151	3088151	3088151
2	AFDC	1033700	1033700	1033700	1033700	1033700	1033700	1033700
2A	50% OF ITC = (28)*(29)*50%	86875	86875	86875	86875	86875	86875	86875
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	79183	79183	79183	79183	79183	79183	79183
5A	ANNUAL AMOUNT(5)/(1-(11))	162028	162028	162028	162028	162028	162028	162028
6	CUMULATIVE AMOUNT	1108562	1187745	1266928	1346111	1425294	1504477	1583660
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	50451	50451	50451	50451	50451	50451	50451
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-23206	-23206	-23206	-23206	-23206	-23206	-23206
13	ACCUMULATED DEFERRED INC TAXES	580187	556981	533775	510569	487363	464157	440951
14	RATE BASE=(1)-(6)-(13)	1399402	1343425	1287448	1231471	1175494	1119517	1063540
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	178984	171824	164665	157505	150346	143186	136027
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	94390	90614	86839	83063	79287	75511	71736
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	98755	94804	90855	86904	82954	79003	75053
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-50451	-50451	-50451	-50451	-50451	-50451	-50451
26	TAXABLE INCOME=(25)	-50451	-50451	-50451	-50451	-50451	-50451	-50451
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-47487	-47487	-47487	-47487	-47487	-47487	-47487
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1737491	1737491	1737491	1737491	1737491	1737491	1737491
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9116	-9116	-9116	-9116	-9116	-9116	-9116
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	9898	9502	9106	8710	8314	7918	7522
	REALTY TAX							
33	$ ELIGIBLE	707600	707600	707600	707600	707600	707600	707600
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	13608	13063	12519	11975	11431	10886	10342
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	65658	60766	55877	50986	46096	41204	36314
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	406670	394618	382570	370519	358470	346418	334369
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	13.17	12.78	12.39	12.00	11.61	11.22	10.83
39	ANNUAL CC RATE & 0.0 % MORT DISP	13.17	12.78	12.39	12.00	11.61	11.22	10.83
40	LEVEL ANNUAL CC RATE=16.67%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 # 1737491 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 # 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 # 707600 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 22	YEAR 23	YEAR 24	YEAR 25	YEAR 26	YEAR 27	YEAR 28
1	CAPITAL FOR BOOK DEPRECIATION	3088151	3088151	3088151	3088151	3088151	3088151	3088151
2	AFDC	1033700	1033700	1033700	1033700	1033700	1033700	1033700
2A	50% OF ITC = (28)*(29)*50%	86875	86875	86875	86875	86875	86875	86875
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	79183	79183	79183	79183	79183	79183	79183
5A	ANNUAL AMOUNT(5)/(1-(11))	162028	162028	162028	162028	162028	162028	162028
6	CUMULATIVE AMOUNT	1662843	1742026	1821209	1900392	1979575	2058758	2137941
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	50451	50451	50451	50451	50451	50451	50451
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-23206	-23206	-23206	-23206	-23206	-23206	-23206
13	ACCUMULATED DEFERRED INC TAXES	417745	394539	371333	348127	324921	301715	278509
14	RATE BASE=(1)-(6)-(13)	1007563	951586	895609	839632	783655	727678	671701
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	128867	121708	114548	107389	100229	93070	85911
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	67960	64185	60409	56633	52857	49082	45306
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	71103	67153	63203	59252	55301	51352	47401
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-50451	-50451	-50451	-50451	-50451	-50451	-50451
26	TAXABLE INCOME=(25)	-50451	-50451	-50451	-50451	-50451	-50451	-50451
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-47487	-47487	-47487	-47487	-47487	-47487	-47487
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1737491	1737491	1737491	1737491	1737491	1737491	1737491
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9116	-9116	-9116	-9116	-9116	-9116	-9116
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	7127	6731	6335	5939	5543	5147	4751
	REALTY TAX							
33	$ ELIGIBLE	707600	707600	707600	707600	707600	707600	707600
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	9798	9253	8709	8165	7620	7076	6532
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	31425	26534	21644	16753	11861	6972	2081
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	322320	310270	298220	286170	274118	262070	250020
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	10.44	10.05	9.66	9.27	8.88	8.49	8.10
39	ANNUAL CC RATE & 0.0 % MORT DISP	10.44	10.05	9.66	9.27	8.88	8.49	8.10
40	LEVEL ANNUAL CC RATE=16.67%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1737491 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 707600 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 29	YEAR 30	YEAR 31	YEAR 32	YEAR 33	YEAR 34	YEAR 35
1	CAPITAL FOR BOOK DEPRECIATION	3088151	3088151	3088151	3088151	3088151	3088151	3088151
2	AFDC	1033700	1033700	1033700	1033700	1033700	1033700	1033700
2A	50% OF ITC * (28)*(29)*50%	86875	86875	86875	86875	86875	86875	86875
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	79183	79183	79183	79183	79183	79183	79183
5A	ANNUAL AMOUNT(5)/(1-(11))	162028	162028	162028	162028	162028	162028	162028
6	CUMULATIVE AMOUNT	2217124	2296307	2375490	2454673	2533856	2613039	2692222
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	50451	50451	50451	50451	50451	50451	50451
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-23206	-23206	-23206	-23206	-23206	-23206	-23206
13	ACCUMULATED DEFERRED INC TAXES	255303	232097	208891	185685	162479	139273	116067
14	RATE BASE=(1)-(6)-(13)	615724	559747	503770	447793	391816	335839	279862
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	78751	71592	64432	57273	50113	42954	35794
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	41531	37755	33979	30204	26428	22652	18877
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	43452	39501	35550	31601	27650	23700	19750
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-50451	-50451	-50451	-50451	-50451	-50451	-50451
26	TAXABLE INCOME=(25)	-50451	-50451	-50451	-50451	-50451	-50451	-50451
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-47487	-47487	-47487	-47487	-47487	-47487	-47487
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1737491	1737491	1737491	1737491	1737491	1737491	1737491
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9116	-9116	-9116	-9116	-9116	-9116	-9116
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	4355	3959	3563	3167	2771	2376	1980
	REALTY TAX							
33	$ ELIGIBLE	707600	707600	707600	707600	707600	707600	707600
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	5987	5443	4899	4355	3810	3266	2722
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	-2809	-7700	-12591	-17480	-22372	-27261	-32151
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	237970	225920	213869	201821	189769	177721	165671
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	7.71	7.32	6.93	6.54	6.15	5.75	5.36
39	ANNUAL CC RATE & 0.0 % MORT DISP	7.71	7.32	6.93	6.54	6.15	5.75	5.36
40	LEVEL ANNUAL CC RATE=16.67%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1737491 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 707600 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 36	YEAR 37	YEAR 38	YEAR 39	YEAR 40	YEAR 41	YEAR 42
1	CAPITAL FOR BOOK DEPRECIATION	3088151	3088151	3088151	3088151	0	0	0
2	AFDC	1033700	1033700	1033700	1033700	0	0	0
2A	50% OF ITC = (28)*(29)*50%	86875	86875	86875	86875	0	0	0
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.0	0.0	0.0
5	ANNUAL AMOUNT=(1)*(4)	79183	79183	79183	79183	0	0	0
5A	ANNUAL AMOUNT(5)/(1-(11))	162028	162028	162028	162028	0	0	0
6	CUMULATIVE AMOUNT	2771405	2850588	2929771	3008954	0	0	0
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.0	0.0	0.0
10	ANNUAL AMOUNT=(3)*(9)	50451	50451	50451	50451	0	0	0
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.0	0.0	0.0
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-23206	-23206	-23206	-23206	0	0	0
13	ACCUMULATED DEFERRED INC TAXES	92861	69655	46449	23243	37	0	0
14	RATE BASE=(1)-(6)-(13)	223885	167908	111931	55954	0	0	0
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.0	0.0	0.0
16	OVERALL RETURN=(14)*(15)	28635	21475	14316	7157	0	0	0
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.0	0.0	0.0
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.0	0.0	0.0
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	15101	11325	7550	3774	0	0	0
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	15799	11849	7899	3949	0	0	0
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-50451	-50451	-50451	-50451	0	0	0
26	TAXABLE INCOME=(25)	-50451	-50451	-50451	-50451	0	0	0
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-47487	-47487	-47487	-47487	0	0	0
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1737491	1737491	1737491	1737491	0	0	0
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.0	0.0	0.0
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9116	-9116	-9116	-9116	0	0	0
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.0	0.0	0.0
32	ANNUAL AMOUNT=(31)*((1)-(6))	1584	1188	792	396	0	0	0
	REALTY TAX							
33	$ ELIGIBLE	707600	707600	707600	707600	0	0	0
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.0	0.0	0.0
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	2177	1633	1089	544	0	0	0
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	-37043	-41933	-46823	-51714	0	0	0
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	153620	141570	129521	117471	0	0	0
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	4.97	4.58	4.19	3.80	0.0	0.0	0.0
39	ANNUAL CC RATE & 0.0 % MORT DISP	4.97	4.58	4.19	3.80	0.0	0.0	0.0
40	LEVEL ANNUAL CC RATE=16.67%							

02/25/86

PECO cost incluce Direct Cost, Taxes & overheads and AFUDC from
Interrogatory DR-STAFF-LIM-14 (Limreick #1 and 100% Common)

Schedule 1.5

Oka Costs are from the original OKA additions from 1975 plus
PECO Taxes & Overheads (DR-STAFF-LIM-14) plus additional PURTA taxes
because of the changes in the construction expenditures

	ANNUAL DIRECTS						AFUDC							Cumulative Totals	
	OKA			PECO			AFUDC Rates		ACCRUALS					OKA	PECO
									OKA			PECO			
Year	Annual	Semi	Cum	Annual	Semi	Cum	Nominal	Effectiv	Semi	Annual	Cum	Annual	Cum		
1971				31.2	31.2		8.00%	8.00%	1.3	1.3	1.3	1.5	1.5	32.5	32.7
1972				33.9	33.9	65.1	8.00%	8.00%	4.1	4.1	5.4	3.9	5.4	70.5	70.5
1973				56.2	28.2	121.3	8.00%	4.00%	3.5	7.9	13.3	6.8	12.2	102.2	133.5
					28.0		7.50%	3.75%	4.4					134.6	
1974				71.9	36.3	193.2	7.50%	3.75%	5.8	13.3	26.6	11.3	23.5	176.7	216.7
					35.7		7.50%	3.75%	7.4					219.8	
1975	120.9	61.5	314.1	82.2		275.4	8.00%	4.00%	10.1	23.5	47.0	19.0	42.5	288.2	317.9
		59.5					8.25%	4.13%	13.4					361.1	
1976	141.3	72.5	455.4	107.2		382.6	8.20%	4.10%	16.6	37.4	84.4	26.3	68.8	450.2	451.4
		68.9					8.40%	4.20%	20.8					539.8	
1977	159.6	82.4	615.0	116.9		499.5	8.60%	4.30%	25.5	56.1	140.5	35.3	104.1	647.7	603.6
		77.3					8.70%	4.35%	30.5					753.5	
1978	156.2	81.7	771.2	94.0		593.5	7.10%	3.55%	28.8	62.4	202.8	47.4	151.5	865.9	745.0
		74.6					7.30%	3.65%	33.6					974.0	
1979	195.9	102.7	967.1	110.0		703.5	7.40%	3.70%	38.7	83.1	285.9	61.2	212.7	1115.3	916.2
		93.3					7.50%	3.75%	44.4					1253.0	
1980	278.1	145.1	1245.2	167.0		870.5	7.50%	3.75%	50.7	114.1	400.0	81.6	294.3	1448.7	1164.8
		133.1					8.20%	4.10%	63.4					1645.2	
1981	348.8	182.4	1594.0	227.1		1097.6	8.30%	4.15%	73.6	164.9	564.9	109.7	404.0	1901.1	1501.6
		166.4					9.00%	4.50%	91.4					2158.9	
1982	348.9	177.3	1942.9	325.7		1423.3	9.10%	4.55%	104.6	224.9	789.8	153.4	557.4	2440.8	1980.7
		171.6					9.30%	4.65%	120.3					2732.7	
1983	119.0	59.8	2061.9	399.7		1823.0	9.30%	4.65%	131.5	240.4	1030.2	203.6	761.0	2924.0	2584.0
		59.2					9.30%	3.62%	108.8					3092.0	
1984				408.7		2231.7	9.40%					266.9	1027.9	------	3259.6
							9.40%								
1985				149.7		2381.4	9.50%					323.7	1351.6		3733.0
1986				12.7		2394.1						74.7	1426.3		3820.4
	DIFFERENCE IN TOTAL MCG:			$728.4					Per DR-Staff-LIM-14						3820.4

COMPARISON OF ACCRUAL AFUDC RATES AND RECOMPUTED AFUDC RATES WITH WITNESS O'BRIEN CONSTRUCTION SCHEDULE 1975 - 1985

Year	Semi-Annual Period	Actual AFUDC Rate	Recomputed AFUDC Rate With O'Brien Adjustment
1975	1	8.0%	8.0%
	2	8.25	8.12
1976	1	8.20	8.14
	2	8.40	8.27
1977	1	8.60	8.54
	2	8.70	8.63
1978	1	7.10	7.07
	2	7.30	7.22
1979	1	7.40	7.37
	2	7.50	7.41
1980	1	7.50	7.48
	2	8.20	8.18
1981	1	8.30	8.32
	2	9.00	9.09
1982	1	9.10	9.20
	2	9.30	9.45
1983	1	9.30	9.42
	2	9.30	9.38
1984	1	9.40	9.52
	2	9.40	9.70
1985	1	9.50	9.54
	2	9.50	9.69

PECO cost include Direct Cost, Taxes & overheads and AFUDC form Interrogatory DR-STAFF-LIM-14 (Limerick #1 and 100% Common)

Oka Costs are from the original OKA additions from 1975 plus PECO Taxes & Overheads (DR-STAFF-LIM-14) plus additional PURTA taxes because of the changes in the construction expenditures

AFUDC rates were developed to reflect the change in the spread of the of the construction dollars

Schedule 1.7

	ANNUAL DIRECTS						AFUDC						Cumulative Totals	
	OKA			PECO			AFUDC Rates		ACCRUALS					
									OKA			PECO		
Year	Annual	Semi	Cum	Annual	Semi	Cum	Nominal	Effectiv	Semi	Annual	Cum	Annual	Cum	OKA	PECO
1971				31.2	31.2		8.00%	8.00%	1.3	1.3	1.3	1.5	1.5	32.5	32.7
1972				33.9	33.9	65.1	8.00%	8.00%	4.1	4.1	5.4	3.9	5.4	70.5	70.5
1973				56.2	28.2	121.3	8.00%	4.00%	3.5	7.9	13.3	6.8	12.2	102.2	133.5
					28.0		7.50%	3.75%	4.4					134.6	
1974				71.9	36.3	193.2	7.50%	3.75%	5.8	13.3	26.6	11.3	23.5	176.7	216.7
					35.7		7.50%	3.75%	7.4					219.8	
1975	120.9	61.5	314.1	82.2		275.4	8.00%	4.00%	10.1	23.3	46.8	19.0	42.5	288.2	317.9
		59.5					8.12%	4.06%	13.2					360.9	
1976	141.3	72.5	455.4	107.2		382.6	8.14%	4.07%	16.5	36.9	83.7	26.3	68.8	449.8	451.4
		68.9					8.27%	4.14%	20.4					539.1	
1977	159.6	82.4	615.0	116.9		499.5	8.54%	4.27%	25.3	55.5	139.3	35.3	104.1	646.8	603.6
		77.3					8.63%	4.32%	30.2					754.3	
1978	156.2	81.7	771.2	94.0		593.5	7.07%	3.54%	28.6	61.8	201.0	47.4	151.5	864.5	745.0
		74.6					7.22%	3.61%	33.2					972.2	
1979	195.9	102.7	967.1	110.0		703.5	7.37%	3.69%	38.4	82.2	283.2	61.2	212.7	1113.3	916.2
		93.3					7.41%	3.71%	43.8					1250.3	
1980	278.1	145.1	1245.2	167.0		870.5	7.48%	3.74%	50.4	113.6	396.8	81.6	294.3	1445.8	1164.8
		133.1					8.18%	4.09%	63.1					1642.0	
1981	348.8	182.4	1594.0	227.1		1097.6	8.32%	4.16%	73.6	165.8	562.6	109.7	404.0	1898.0	1501.6
		166.4					9.09%	4.55%	92.1					2156.6	
1982	348.9	177.3	1942.9	325.7		1423.3	9.20%	4.60%	105.7	227.9	790.5	153.4	557.4	2439.6	1980.7
		171.6					9.45%	4.73%	122.2					2733.4	
1983	119.0	59.8	2061.9	399.7		1823.0	9.42%	4.71%	133.3	243.2	1033.7	203.6	761.0	2926.5	2584.0
		59.2					9.38%	3.65%	109.9					3095.5	
1984				408.7		2231.7	9.52%					266.9	1027.9	=======	3259.6
							9.70%								
1985				149.7		2381.4	9.54%					323.7	1351.6		3733.0
1986				12.7		2394.1						74.7	1426.3		3820.4
															=======
DIFFERENCE IN TOTAL MCGs:				$724.9								Per DR-Staff-LIM-14			3820.4

ADDITIONAL REVENUE REQUIRED FROM CUSTOMERS FROM 1975 to 1985 TO MAINTAIN EARNINGS PER SHARE BASED UPON A CONSTRUCTION SCHEDULE TO MEET A NOVEMBER 1983 SERVICE DATE
(THOUSAND $)

Year Ended December (1)	No. of Years (n) and Months (m) to June 1986 n (2)	m (3)	Additional Revenue Required to Maintain Actual Earnings per Share (Note A) (4)	Future Worth Factors, (F/P,9.70%,n) (5)	Future Worth Factors, (F/P,9.70%/12,m) (6)	Present Worth at June 30, 1986 (7)=(4)x(5)x(6)
1975	10	6	($4,548)	2.524	1.049	($12,042)
1976	9	6	(11,047)	2.301	1.049	(26,665)
1977	8	6	(22,219)	2.097	1.049	(48,876)
1978	7	6	(4,165)	1.912	1.049	(8,354)
1979	6	6	(3,050)	1.743	1.049	(5,577)
1980	5	6	54	1.589	1.049	90
1981	4	6	1,826	1.448	1.049	2,774
1982	3	6	10,896	1.320	1.049	15,087
1983	2	6	71,339	1.203	1.049	90,026
1984	1	6	2,514	1.097	1.049	2,893
1985	0	6	(14,699)	1.000	1.049	(15,419)
Total, Thousand $						($6,063)
Total, Million $						($6)

(Note A) - From the Supplemental Rebuttal Testimony of Joseph F. Paquette, Jr. (Statement 3B). 1984 and 1985 revenues are adjusted to remove the additional revenue requirements for Limerick 1 and 100% of common since these revenue requirements have been included in the calculations performed on Schedule 1.2. (This was done by deducting the AFUDC accruals, expressed in revenue requirements, on $3,095,500 for Limerick 1 and 100% of Common. The deduction for 1984 is $594,955 and for 1985 is $595,574).

1984 - $597,469 - $3,095,500 x 9.61% / (1-50%) = $2,514
1985 - $580,875 - $3,095,500 x 9.62% / (1-50%) = ($14,699)

ADDITIONAL REVENUE REQUIRED FROM CUSTOMERS FROM 1975 to 1985 TO MAINTAIN MORTGAGE COVERAGE BASED UPON A CONSTRUCTION SCHEDULE TO MEET A NOVEMBER 1983 SERVICE DATE
(THOUSAND $)

Year Ended December	No.of Years (n) and Months (m) to June 1986		Additional Revenue Required to Maintain Actual Mortgage Coverage Ratios (Note A)	Future Worth Factors, (F/P,9.70%,n)	Future Worth Factors, (F/P,9.70%/12,m)	Present Worth at June 30, 1986
	n	m				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4)x(5)x(6)
1975	10	6	$1,924	2.524	1.049	$5,094
1976	9	6	1,644	2.301	1.049	3,968
1977	8	6	12,402	2.097	1.049	27,281
1978	7	6	28,919	1.912	1.049	58,002
1979	6	6	28,197	1.743	1.049	51,556
1980	5	6	30,133	1.589	1.049	50,228
1981	4	6	26,638	1.448	1.049	43,500
1982	3	6	33,920	1.320	1.049	46,968
1983	2	6	51,266	1.203	1.049	64,695
1984	1	6	2,514	1.097	1.049	2,893
1985	0	6	(14,699)	1.000	1.049	(15,419)
Total, Thousand $						$338,766
Total, Million $						$339

(Note A) - From the Supplemental Rebuttal Testimony of Joseph F. Paquette, Jr. (Statement 3B).

Schedule 2

CHANGES IN TOTAL REVENUE REQUIREMENTS FOR LIMERICK NO. 1 AND 50% OF COMMON BASED ON PLACING THESE FACILITIES IN SERVICE IN NOVEMBER 1983 RATHER THAN IN FEBRUARY 1986
(Million $)

	Change in Present Worth of Revenue Requirements At June 30, 1986
1. Annual carrying charge differential for capital costs of Limerick No. 1 and 100% of common based on change in service date (Schedule 2.2)	$21
2. Change in fuel expenses and non-fuel O&M expenses in period November 1983 to February 1986 (From PECo Statement 18D, Schedule 7.5))	($146)
3. Additional Carrying charges for capital costs of coal unit replacing Limerick No. 1 from July 2022 to October 2024 (From PECo Statement 18D, Schedule 7.8)	$169
4. Change in fuel expenses and non-fuel O&M expenses in period July 2022 to October 2024 (From PECo Statement 18D, Schedule 7.10)	$65
5. Change in Customer Revenue Requirements from 1975 to Maintain Mortgage Coverage for Earlier Service Date (Schedule 2.8)	$339
6. Total change in present worth of revenue requirements	
a. Excluding gross receipts tax	$448
b. Including gross receipts tax	$469

Schedule 2.1

ANNUAL CARRYING CHARGES FOR CAPITAL COSTS
OF LIMERICK NO. 1 AND 50% OF LIMERICK COMMON
WITH SERVICE DATE OF FEBRUARY 1986
(MILLION $)

Year Ended February	No. of Years(n) and Months(m) to June 1986 n	m	Annual Carrying Charges	Present Worth Factors (P/F,9.70%,n)	Present Worth Factors (P/F,9.70%/12,m)	Present Worth at June 30, 1986
(1)	(2)	(3)	(4)from 2.3	(5)	(6)	(7)=(4)x(5)x(6)
1987	0	8	$747	1.000	0.938	$701
1988	1	8	712	0.912	0.938	609
1989	2	8	681	0.830	0.938	530
1990	3	8	653	0.757	0.938	464
1991	4	8	625	0.691	0.938	405
1992	5	8	598	0.629	0.938	353
1993	6	8	570	0.574	0.938	307
1994	7	8	542	0.523	0.938	266
1995	8	8	514	0.477	0.938	230
1996	9	8	486	0.435	0.938	198
1997	10	8	476	0.396	0.938	177
1998	11	8	464	0.361	0.938	157
1999	12	8	451	0.329	0.938	139
2000	13	8	438	0.300	0.938	123
2001	14	8	426	0.274	0.938	109
2002	15	8	413	0.247	0.938	96
2003	16	8	401	0.227	0.938	85
2004	17	8	388	0.207	0.938	75
2005	18	8	376	0.189	0.938	67
2006	19	8	363	0.172	0.938	59
2007	20	8	350	0.157	0.938	52
2008	21	8	338	0.143	0.938	45
2009	22	8	325	0.130	0.938	40
2010	23	8	313	0.119	0.938	35
2011	24	8	300	0.108	0.938	30
2012	25	8	287	0.099	0.938	27
2013	26	8	275	0.090	0.938	23
2014	27	8	262	0.082	0.938	20
2015	28	8	250	0.075	0.938	18
2016	29	8	237	0.068	0.938	15
2017	30	8	225	0.062	0.938	13
2018	31	8	212	0.057	0.938	11
2019	32	8	199	0.052	0.938	10
2020	33	8	187	0.047	0.938	8
2021	34	8	174	0.043	0.938	7
2022	35	8	162	0.039	0.938	6
2023	36	8	149	0.036	0.938	5
2024	37	8	137	0.033	0.938	4
2025	38	8	124	0.030	0.938	3
Total Schedule 2.1 (February 1986 Service Date)						$5,522

ANNUAL CARRYING CHARGES FOR CAPITAL COSTS OF LIMERICK NO. 1 AND 50% OF LIMERICK COMMON WITH SERVICE DATE OF NOVEMBER 1983 (MILLION $)

Year Ended November (1)	No. of Years(n) and Months(m) To June 1986 n (2)	m (3)	Annual Carrying Charges (4)from 2.4	Future&Present Worth Factors (F/P,9.70%,n) or (P/F,9.70%,n) (5)	Future&Present Worth Factors (F/P,9/70%/12,m) or (P/F,9/70%/12,m) (6)	Present Worth at June 30, 1986 (7)=(4)x(5)x(6)
1984	1	7	$612	1.097	1.058	$710
1985	0	7	583	1.000	1.058	617
1986	0	5	557	1.000	0.961	535
1987	1	5	533	0.912	0.961	467
1988	2	5	510	0.830	0.961	407
1989	3	5	486	0.757	0.961	354
1990	4	5	463	0.691	0.961	307
1991	5	5	440	0.629	0.961	266
1992	6	5	416	0.574	0.961	229
1993	7	5	393	0.523	0.961	198
1994	8	5	385	0.477	0.961	176
1995	9	5	375	0.435	0.961	157
1996	10	5	364	0.396	0.961	139
1997	11	5	354	0.361	0.961	123
1998	12	5	344	0.329	0.961	109
1999	13	5	334	0.300	0.961	96
2000	14	5	324	0.274	0.961	85
2001	15	5	313	0.247	0.961	74
2002	16	5	303	0.227	0.961	66
2003	17	5	293	0.207	0.961	58
2004	18	5	283	0.189	0.961	51
2005	19	5	273	0.172	0.961	45
2006	20	5	263	0.157	0.961	40
2007	21	5	252	0.143	0.961	35
2008	22	5	242	0.130	0.961	30
2009	23	5	232	0.119	0.961	27
2010	24	5	222	0.108	0.961	23
2011	25	5	212	0.099	0.961	20
2012	26	5	202	0.090	0.961	17
2013	27	6	191	0.082	0.961	15
2014	28	5	181	0.075	0.961	13
2015	29	5	171	0.068	0.961	11
2016	30	5	161	0.062	0.961	10
2017	31	5	151	0.057	0.961	8
2018	32	5	140	0.052	0.961	7
2019	33	5	130	0.047	0.961	6
2020	34	5	120	0.043	0.961	5
2021	35	5	110	0.039	0.961	4
2022	36	5	100	0.036	0.961	3
Total Schedule 2.2 (November 1983 Service Date)						$5,543
Total Schedule 2.1 (February 1986 Service Date)						$5,522
Change in Present Worth of Revenue Requirements with a November 1983 Service Date ($5,543 - $5,522)						$21

CALCULATION OF ANNUAL CARRYING CHARGES RESULTING FROM LIMERICK NO. 1 AND 50% OF COMMON WITH A SERVICE DATE OF FEBRUARY 1986

The details of the calculation of the annual carrying charges for the 39 years starting February 1986 are shown on pages 2 through 7 of this schedule.

The carrying charges for Limerick No. 1 and 100% of Common facilities are equal to the sum of the carrying charges for Limerick No. 1 and 50% of Common, as calculated and shown in PECo's response to IR-OCA-2-25 (see Attachment IR-OCA-2-25b, Item 7) and the carrying charges for the other 50% of Common, as calculated and shown in PECo's response to IR-OCA-2-26. All assumptions reflected in the carrying charges for Limerick No. 1 and 100% of common are identical to those assumed in the referenced interrogatory responses.

PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER
BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1720570 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 630819 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
1	CAPITAL FOR BOOK DEPRECIATION	3176476	3176476	3176476	3176476	3176476	3176476	3176476
2	AFDC	1175829	1175829	1175829	1175829	1175829	1175829	1175829
2A	50% OF ITC * (28)*(29)*50%	86029	86029	86029	86029	86029	86029	86029
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	1914619	1914619	1914619	1914619	1914619	1914619	1914619
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	81448	81448	81448	81448	81448	81448	81448
5A	ANNUAL AMOUNT(5)/(1-(11))	166663	166663	166663	166663	166663	166663	166663
6	CUMULATIVE AMOUNT	0	81448	162896	244344	325792	407240	488688
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.15000	0.12750	0.10837	0.09212	0.08700	0.08700	0.08700
8	ANNUAL AMOUNT=(3)*(7)	287193	244114	207497	176372	166574	166574	166574
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	49093	49093	49093	49093	49093	49093	49093
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	109526	89710	72866	58548	54041	54041	54041
13	ACCUMULATED DEFERRED INC TAXES	0	109526	199236	272102	330650	384691	438732
14	RATE BASE=(1)-(6)-(13)	3176476	2985502	2814344	2660030	2520034	2384545	2249056
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	406271	381846	359955	340218	322312	304983	287654
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	214253	201372	189828	179419	169976	160837	151699
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	224161	210684	198607	187716	177837	168275	158714
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	287193	244114	207497	176372	166574	166574	166574
23	TAXABLE INCOME=-(22)	-287193	-244114	-207497	-176372	-166574	-166574	-166574
24	INCOME TAX=(23)*(11)/(1-(11))	-300474	-255403	-217093	-184528	-174277	-174277	-174277
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	238100	195021	158404	127279	117481	117481	117481
26	TAXABLE INCOME=(25)	238100	195021	158404	127279	117481	117481	117481
27	INCOME TAX=(26)*0.46000/(1-0.51130)	224117	183568	149101	119804	110582	110582	110582
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1720570	1720570	1720570	1720570	1720570	1720570	1720570
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9027	-9027	-9027	-9027	-9027	-9027	-9027
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	15882	15475	15068	14661	14253	13846	13439
	REALTY TAX							
33	$ ELIGIBLE	630819	630819	630819	630819	630819	630819	630819
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	18925	18439	17954	17469	16984	16498	16013
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	173584	163736	154610	146095	136352	125897	115444
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	746518	712245	681228	652976	625327	597543	569761
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	23.50	22.42	21.45	20.56	19.69	18.81	17.94
39	ANNUAL CC RATE & 0.0 % MORT DISP	23.50	22.42	21.45	20.56	19.69	18.81	17.94
40	LEVEL ANNUAL CC RATE=16.85%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1720570 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 630819 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14
1	CAPITAL FOR BOOK DEPRECIATION	3176476	3176476	3176476	3176476	3176476	3176476	3176476
2	AFDC	1175829	1175829	1175829	1175829	1175829	1175829	1175829
2A	50% OF ITC * (28)*(29)*50%	86029	86029	86029	86029	86029	86029	86029
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	1914619	1914619	1914619	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	81448	81448	81448	81448	81448	81448	81448
5A	ANNUAL AMOUNT(5)/(1-(11))	166663	166663	166663	166663	166663	166663	166663
6	CUMULATIVE AMOUNT	570136	651584	733032	814480	895928	977376	1058824
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.08700	0.08700	0.08700	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	166574	166574	166574	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	49093	49093	49093	49093	49093	49093	49093
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	54041	54041	54041	-22582	-22582	-22582	-22582
13	ACCUMULATED DEFERRED INC TAXES	492773	546814	600855	654896	632314	609732	587150
14	RATE BASE=(1)-(6)-(13)	2113567	1978078	1842589	1707100	1648234	1589368	1530502
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	270325	252996	235667	218338	210809	203280	195751
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	142560	133421	124283	115144	111173	107203	103232
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	149153	139591	130030	120469	116314	112161	108006
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	166574	166574	166574	0	0	0	0
23	TAXABLE INCOME=-(22)	-166574	-166574	-166574	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	-174277	-174277	-174277	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	117481	117481	117481	-49093	-49093	-49093	-49093
26	TAXABLE INCOME=(25)	117481	117481	117481	-49093	-49093	-49093	-49093
27	INCOME TAX=(26)*0.46000/(1-0.51130)	110582	110582	110582	-46209	-46209	-46209	-46209
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1720570	1720570	1720570	1720570	1720570	1720570	1720570
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9027	-9027	-9027	-9027	-9027	-9027	-9027
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	13032	12624	12217	11810	11403	10996	10588
	REALTY TAX							
33	$ ELIGIBLE	630819	630819	630819	630819	630819	630819	630819
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	15528	15043	14557	14072	13587	13102	12616
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	104991	94536	84082	91115	86068	81023	75974
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	541979	514195	486412	476116	463540	450966	438388
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	17.06	16.19	15.31	14.99	14.59	14.20	13.80
39	ANNUAL CC RATE & 0.0 % MORT DISP	17.06	16.19	15.31	14.99	14.59	14.20	13.80
40	LEVEL ANNUAL CC RATE=16.85%							

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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1720570 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 630819 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21
1	CAPITAL FOR BOOK DEPRECIATION	3176476	3176476	3176476	3176476	3176476	3176476	3176476
2	AFDC	1175829	1175829	1175829	1175829	1175829	1175829	1175829
2A	50% OF ITC = (28)*(29)*50%	86029	86029	86029	86029	86029	86029	86029
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	81448	81448	81448	81448	81448	81448	81448
5A	ANNUAL AMOUNT(5)/(1-(11))	166663	166663	166663	166663	166663	166663	166663
6	CUMULATIVE AMOUNT	1140272	1221720	1303168	1384616	1466064	1547512	1628960
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	49093	49093	49093	49093	49093	49093	49093
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-22582	-22582	-22582	-22582	-22582	-22582	-22582
13	ACCUMULATED DEFERRED INC TAXES	564568	541986	519404	496822	474240	451658	429076
14	RATE BASE=(1)-(6)-(13)	1471636	1412770	1353904	1295038	1236172	1177306	1118440
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	188222	180693	173164	165635	158106	150577	143048
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	99262	95291	91321	87350	83380	79409	75439
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	103852	99698	95544	91390	87236	83081	78928
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-49093	-49093	-49093	-49093	-49093	-49093	-49093
26	TAXABLE INCOME=(25)	-49093	-49093	-49093	-49093	-49093	-49093	-49093
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-46209	-46209	-46209	-46209	-46209	-46209	-46209
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1720570	1720570	1720570	1720570	1720570	1720570	1720570
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9027	-9027	-9027	-9027	-9027	-9027	-9027
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	10181	9774	9367	8959	8552	8145	7738
	REALTY TAX							
33	$ ELIGIBLE	630819	630819	630819	630819	630819	630819	630819
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	12131	11646	11161	10675	10190	9705	9220
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	70928	65882	60836	55788	50742	45695	40650
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	425813	413238	400663	388086	375511	362935	350361
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	13.41	13.01	12.61	12.22	11.82	11.43	11.03
39	ANNUAL CC RATE & 0.0 % MORT DISP	13.41	13.01	12.61	12.22	11.82	11.43	11.03
40	LEVEL ANNUAL CC RATE=16.85%							

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Schedule 2.3
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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER
BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1720570 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 630819 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 22	YEAR 23	YEAR 24	YEAR 25	YEAR 26	YEAR 27	YEAR 28
1	CAPITAL FOR BOOK DEPRECIATION	3176476	3176476	3176476	3176476	3176476	3176476	3176476
2	AFDC	1175829	1175829	1175829	1175829	1175829	1175829	1175829
2A	50% OF ITC = (28)*(29)*50%	86029	86029	86029	86029	86029	86029	86029
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	81448	81448	81448	81448	81448	81448	81448
5A	ANNUAL AMOUNT(5)/(1-(11))	166663	166663	166663	166663	166663	166663	166663
6	CUMULATIVE AMOUNT	1710408	1791856	1873304	1954752	2036200	2117648	2199096
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	49093	49093	49093	49093	49093	49093	49093
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-22582	-22582	-22582	-22582	-22582	-22582	-22582
13	ACCUMULATED DEFERRED INC TAXES	406494	383912	361330	338748	316166	293584	271002
14	RATE BASE=(1)-(6)-(13)	1059574	1000708	941842	882976	824110	765244	706378
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	135520	127991	120462	112933	105404	97875	90346
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	71469	67498	63527	59557	55586	51616	47645
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	74774	70619	66465	62311	58157	54003	49848
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-49093	-49093	-49093	-49093	-49093	-49093	-49093
26	TAXABLE INCOME=(25)	-49093	-49093	-49093	-49093	-49093	-49093	-49093
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-46209	-46209	-46209	-46209	-46209	-46209	-46209
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1720570	1720570	1720570	1720570	1720570	1720570	1720570
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9027	-9027	-9027	-9027	-9027	-9027	-9027
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	7330	6923	6516	6109	5701	5294	4887
	REALTY TAX							
33	$ ELIGIBLE	630819	630819	630819	630819	630819	630819	630819
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	8734	8249	7764	7279	6793	6308	5823
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	35602	30555	25509	20463	15415	10369	5322
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	337785	325209	312634	300059	287482	274907	262331
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	10.63	10.24	9.84	9.45	9.05	8.65	8.26
39	ANNUAL CC RATE & 0.0 % MORT DISP	10.63	10.24	9.84	9.45	9.05	8.65	8.26
40	LEVEL ANNUAL CC RATE=16.85%							

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Schedule 2.3
(Page 5)

PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1720570 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 630819 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 29	YEAR 30	YEAR 31	YEAR 32	YEAR 33	YEAR 34	YEAR 35
1	CAPITAL FOR BOOK DEPRECIATION	3176476	3176476	3176476	3176476	3176476	3176476	3176476
2	AFDC	1175829	1175829	1175829	1175829	1175829	1175829	1175829
2A	50% OF ITC = (28)*(29)*50%	86029	86029	86029	86029	86029	86029	86029
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	81448	81448	81448	81448	81448	81448	81448
5A	ANNUAL AMOUNT(5)/(1-(11))	166663	166663	166663	166663	166663	166663	166663
6	CUMULATIVE AMOUNT	2280544	2361992	2443440	2524888	2606336	2687784	2769232
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	49093	49093	49093	49093	49093	49093	49093
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-22582	-22582	-22582	-22582	-22582	-22582	-22582
13	ACCUMULATED DEFERRED INC TAXES	248420	225838	203256	180674	158092	135510	112928
14	RATE BASE=(1)-(6)-(13)	647512	588646	529780	470914	412048	353182	294316
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	82817	75288	67759	60230	52701	45172	37643
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	43675	39704	35734	31763	27793	23822	19852
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	45695	41540	37387	33232	29078	24924	20770
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-49093	-49093	-49093	-49093	-49093	-49093	-49093
26	TAXABLE INCOME=(25)	-49093	-49093	-49093	-49093	-49093	-49093	-49093
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-46209	-46209	-46209	-46209	-46209	-46209	-46209
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1720570	1720570	1720570	1720570	1720570	1720570	1720570
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-9027	-9027	-9027	-9027	-9027	-9027	-9027
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	4480	4072	3665	3258	2851	2443	2036
	REALTY TAX							
33	$ ELIGIBLE	630819	630819	630819	630819	630819	630819	630819
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	5338	4852	4367	3882	3397	2911	2426
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	277	-4772	-9817	-14864	-19910	-24958	-30004
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	249757	237179	224605	212029	199454	186877	174302
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	7.86	7.47	7.07	6.67	6.28	5.88	5.49
39	ANNUAL CC RATE & 0.0 % MORT DISP	7.86	7.47	7.07	6.67	6.28	5.88	5.49
40	LEVEL ANNUAL CC RATE=16.85%							

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Schedule 2.3
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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER
BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1720570 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 630819 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 36	YEAR 37	YEAR 38	YEAR 39	YEAR 40	YEAR 41	YEAR 42
1	CAPITAL FOR BOOK DEPRECIATION	3176476	3176476	3176476	3176476	0	0	0
2	AFDC	1175829	1175829	1175829	1175829	0	0	0
2A	50% OF ITC = (28)*(29)*50%	86029	86029	86029	86029	0	0	0
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.0	0.0	0.0
5	ANNUAL AMOUNT=(1)*(4)	81448	81448	81448	81448	0	0	0
5A	ANNUAL AMOUNT(5)/(1-(11))	166663	166663	166663	166663	0	0	0
6	CUMULATIVE AMOUNT	2850680	2932128	3013576	3095024	0	0	0
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.0	0.0	0.0
10	ANNUAL AMOUNT=(3)*(9)	49093	49093	49093	49093	0	0	0
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.0	0.0	0.0
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-22582	-22582	-22582	-22582	0	0	0
13	ACCUMULATED DEFERRED INC TAXES	90346	67764	45182	22600	18	0	0
14	RATE BASE=(1)-(6)-(13)	235450	176584	117718	58852	0	0	0
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.0	0.0	0.0
16	OVERALL RETURN=(14)*(15)	30114	22585	15056	7527	0	0	0
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.0	0.0	0.0
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.0	0.0	0.0
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	15881	11911	7940	3969	0	0	0
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	16615	12462	8307	4153	0	0	0
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-49093	-49093	-49093	-49093	0	0	0
26	TAXABLE INCOME=(25)	-49093	-49093	-49093	-49093	0	0	0
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-46209	-46209	-46209	-46209	0	0	0
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1720570	1720570	1720570	1720570	0	0	0
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.0	0.0	0.0
30	ANNUAL AMOUNT=((28)*(29)/(1-(11)))/BL	-9027	-9027	-9027	-9027	0	0	0
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.0	0.0	0.0
32	ANNUAL AMOUNT=(31)*((1)-(6))	1629	1222	815	407	0	0	0
	REALTY TAX							
33	$ ELIGIBLE	630819	630819	630819	630819	0	0	0
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.0	0.0	0.0
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	1941	1456	971	485	0	0	0
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	-35051	-40096	-45143	-50191	0	0	0
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	161726	149152	136576	123999	0	0	0
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	5.09	4.70	4.30	3.90	0.0	0.0	0.0
39	ANNUAL CC RATE & 0.0 % MORT DISP	5.09	4.70	4.30	3.90	0.0	0.0	0.0
40	LEVEL ANNUAL CC RATE=16.85%							

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Schedule 2.3
(Page 7)

CALCULATIONS OF ANNUAL CARRYING CHARGES RESULTING FROM LIMERICK NO. 1 AND 50% OF COMMON WITH A SERVICE DATE OF NOVEMBER 1983

The details of the calculation of the annual carrying charges for the 39 years starting November 1983 are shown on pages 4 through 7 of this schedule.

The capital cost used is $2,625,700 (Schedule 2.7) less land cost of $7,349 (Exhibit TPH-2A, Page C-5). The portion of the capital cost eligible for ITC is assumed to have the same relationship to total direct cost as in the carrying charge calculations shown in Schedule 2.3 pages 2 through 7 (Note A). The portion of capital cost subject to realty tax is calculated as shown on pages 2 and 3 following. All other assumptions (cost of money, tax rates, etc.) are the same as used in the carrying charge calculations shown in Schedule 2.3 pages 2 through 7.

Note A:

$$\frac{\$1,720,570}{(\$3,176,476 - \$1,175,829)} \times (\$2,618,351 - \$887,000) = \$1,488,974$$

CALCULATION OF PURTA TAX BASE FOR LIMERICK 1 AND 50% OF COMMON WITH O'BRIEN'S CASH FLOWS

Actual PURTA Tax Base 2/15/86

$394,679 + $236,140 = $630,819 (See IR-OCA-2-25b, Item 6, page 1)

Actual PURTA Tax Base 4/1/82

Balance 12/31/81	$282,140
Balance 12/31/82	$344,503
Estimated Balance 4/1/82	$297,731

Removal of AFUDC accrual on PURTA Tax Base from 4/1/82 through 2/15/86

AFUDC Rates	April - Jun 1982	9.1%	1.02275
	July - Dec 1982	9.3%	1.0465
	1983	9.3%	1.0465 x 1.0465
	1984	9.4%	1.0470 x 1.0470
	1985 - Feb 1986	9.5%	1.0475 x 1.0475 x 1.0079

$630,819 / (1.02275 x 1.0465 x 1.0465 x 1.0465 x 1.0470 x 1.0470 x 1.0475 x 1.0475 x 1.0079)

= $443,914

Increase in PURTA Tax Base = $443,914 - $297,731

= $146,183 (for use on page 3)

PHILADELPHIA ELECTRIC COMPANY
LIMERICK #1 AND 50% COMMON
ADDITIONAL PURTA TAX BASE ASSUMING
NEW CASH FLOWS WITH PECO AND BECHTEL INDIRECTS OUT
MOST RECENT AFUDC RATES DEVELOPED IN FINANCIAL
($1,000)

Schedule 2.4
(PAGE 3)

Year	PECO Directs	O'Brien Directs	Additional Directs	Total Addl. Directs to 4/1/82	Addl. Directs Subject to PURTA
	(1)	(2)	(3=2-1)	(4=3)	(5 per 4)
1975	$68,900	$101,500	$32,600	$32,600	$11,431
1976	90,200	119,800	29,600	29,600	$10,379
1977	96,200	134,700	38,500	38,500	$13,500
1978	74,300	127,900	53,600	53,600	$18,794
1979	93,000	163,500	70,500	70,500	$24,720
1980	142,900	237,800	94,900	94,900	$33,276
1981	176,400	268,400	92,000	92,000	$32,259
1982	259,400	280,200	20,800	5,200 (a)	$1,824
				$416,900	$146,183 (b)

Year	Beginning Balance	Additional Direct Cost	Additional AFUDC	Subtotal	PURTA TAX 03%	Ending Balance	1st half AFUDC Rate	2nd half AFUDC Rate	Average AFUDC Rate
	(1) from (6)	(2)	(3=1+2+9)	(4=1+2+3)	(5=4*3%)	(6=4+5)	(7)	(8)	(9=7+8/2)
1975	$0	$11,431	$921	$12,352	$371	$12,723	8.00%	8.12%	8.06%
1976	12,723	10,379	1,897	24,999	750	25,749	8.14%	8.27%	8.21%
1977	25,749	13,500	3,371	42,620	1,279	43,899	8.54%	8.63%	8.55%
1978	43,899	18,794	4,483	67,176	2,015	69,191	7.07%	7.22%	7.15%
1979	69,191	24,720	6,940	100,851	3,026	103,877	7.37%	7.41%	7.39%
1980	103,877	33,276	10,739	147,892	4,437	152,329	7.48%	8.18%	7.83%
1981	152,329	32,259	16,078	200,666	6,020	206,686	8.32%	9.09%	8.71%
1982	206,686	1,824	4,863 (b)	213,373	1,600 (c)	214,973	9.20%	9.45%	9.33%
			Additional PURTA Tax Base			$214,973			
			Actual PURTA Tax Base 4/1/82			297,731			
			Total PURTA Tax Base with O'Brien Cash Flow			$512,704			

(a) 1982 is 1/4 of year difference
(b) from page 2
(c) 3 months afc for 1982
(d) 3 months annual accrual

INTEREST RATES FORM TABLE B LINE 16

PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1488974 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 512704 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
1	CAPITAL FOR BOOK DEPRECIATION	2618351	2618351	2618351	2618351	2618351	2618351	2618351
2	AFDC	887000	887000	887000	887000	887000	887000	887000
2A	50% OF ITC = (28)*(29)*50%	74449	74449	74449	74449	74449	74449	74449
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	1656902	1656902	1656902	1656902	1656902	1656902	1656902
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	67137	67137	67137	67137	67137	67137	67137
5A	ANNUAL AMOUNT(5)/(1-(11))	137379	137379	137379	137379	137379	137379	137379
6	CUMULATIVE AMOUNT	0	67137	134274	201411	268548	335685	402822
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.15000	0.12750	0.10837	0.09212	0.08700	0.08700	0.08700
8	ANNUAL AMOUNT=(3)*(7)	248535	211255	179567	152632	144152	144152	144152
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	42485	42485	42485	42485	42485	42485	42485
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	94783	77634	63058	50668	46767	46767	46767
13	ACCUMULATED DEFERRED INC TAXES	0	94783	172417	235475	286143	332910	379677
14	RATE BASE=(1)-(6)-(13)	2618351	2456631	2311660	2181465	2063660	1949756	1835852
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	334887	314178	295661	279009	263942	249374	234805
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	176608	165687	155921	147140	139194	131511	123828
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	184775	173349	163132	153945	145631	137593	129554
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	248535	211255	179567	152632	144152	144152	144152
23	TAXABLE INCOME=-(22)	-248535	-211255	-179567	-152632	-144152	-144152	-144152
24	INCOME TAX=(23)*(11)/(1-(11))	-260029	-221025	-187871	-159690	-150818	-150819	-150818
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	206050	168770	137082	110147	101667	101667	101667
26	TAXABLE INCOME=(25)	206050	168770	137082	110147	101667	101667	101667
27	INCOME TAX=(26)*0.46000/(1-0.51130)	193949	158859	129032	103678	95696	95696	95696
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1488974	1488974	1488974	1488974	1488974	1488974	1488974
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-7812	-7812	-7812	-7812	-7812	-7812	-7812
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	13092	12756	12420	12085	11749	11413	11078
	REALTY TAX							
33	$ ELIGIBLE	512704	512704	512704	512704	512704	512704	512704
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	15381	14987	14592	14198	13804	13409	13015
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	139356	131114	123493	116404	108250	99481	90713
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	611622	582671	556533	532792	509571	486234	462897
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	23.36	22.25	21.26	20.35	19.46	18.57	17.68
39	ANNUAL CC RATE & 0.0 % MORT DISP	23.36	22.25	21.26	20.35	19.46	18.57	17.68

Schedule 2.4
(Page 4)

PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CGYBY PA TAX FLOW-THRU

APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1488974 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 512704 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14
1	CAPITAL FOR BOOK DEPRECIATION	2618351	2618351	2618351	2618351	2618351	2618351	2618351
2	AFDC	887000	887000	887000	887000	887000	887000	887000
2A	50% OF ITC * (28)*(29)*50%	74449	74449	74449	74449	74449	74449	74449
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	1656902	1656902	1656902	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	67137	67137	67137	67137	67137	67137	67137
5A	ANNUAL AMOUNT(5)/(1-(11))	137379	137379	137379	137379	137379	137379	137379
6	CUMULATIVE AMOUNT	469959	537096	604233	671370	738507	805644	872781
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.08700	0.08700	0.08700	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	144152	144152	144152	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	42485	42485	42485	42485	42485	42485	42485
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	46767	46767	46767	-19542	-19542	-19542	-19542
13	ACCUMULATED DEFERRED INC TAXES	426444	473211	519978	566745	547203	527661	509119
14	RATE BASE=(1)-(6)-(13)	1721948	1608044	1494140	1380236	1332641	1285046	1237451
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	220237	205669	191101	176532	170445	164357	158270
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= ((16)*((15)-(17)(13)))/(15)	116145	108463	100780	93097	89887	86676	83466
20	INCOME TAX ON RETURN (19)*((11)/(1-(11))	121516	113479	105441	97402	94044	90684	87326
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	144152	144152	144152	0	0	0	0
23	TAXABLE INCOME=-(22)	-144152	-144152	-144152	0	0	0	0
24	INCOME TAX=(23)*((11)/(1-(11))	-150818	-150818	-150818	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	101667	101667	101667	-42485	-42485	-42485	-42485
26	TAXABLE INCOME=(25)	101667	101667	101667	-42485	-42485	-42485	-42485
27	INCOME TAX=(26)*0.46000/(1-0.51130)	95696	95696	95696	-39989	-39989	-39989	-39989
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1488974	1488974	1488974	1488974	1488974	1488974	1488974
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-7812	-7812	-7812	-7812	-7812	-7812	-7812
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	10742	10406	10071	9735	9399	9064	8728
	REALTY TAX							
33	$ ELIGIBLE	512704	512704	512704	512704	512704	512704	512704
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	12620	12226	11832	11437	11043	10648	10254
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	81944	73177	64410	70773	66685	62595	58507
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	439560	416225	392890	384684	374509	364331	354156
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	16.79	15.90	15.01	14.69	14.30	13.91	13.53
39	ANNUAL CC RATE & 0.0 % MORT DISP	16.79	15.90	15.01	14.69	14.30	13.91	13.53
40	LEVEL ANNUAL CC RATE AT 12%							

Schedule 2.4
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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1488974 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 512704 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21
1	CAPITAL FOR BOOK DEPRECIATION	2618351	2618351	2618351	2618351	2618351	2618351	2618351
2	AFDC	887000	887000	887000	887000	887000	887000	887000
2A	50% OF ITC = (28)*(29)*50%	74449	74449	74449	74449	74449	74449	74449
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL & BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	67137	67137	67137	67137	67137	67137	67137
5A	ANNUAL AMOUNT(5)/(1-(11))	137379	137379	137379	137379	137379	137379	137379
6	CUMULATIVE AMOUNT	939918	1007055	1074192	1141329	1208466	1275603	1342740
	TAX DEPRECIATION --ACRS & TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL & BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	42485	42485	42485	42485	42485	42485	42485
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-19542	-19542	-19542	-19542	-19542	-19542	-19542
13	ACCUMULATED DEFERRED INC TAXES	488577	469035	449493	429951	410409	390867	371325
14	RATE BASE=(1)-(6)-(13)	1189856	1142261	1094666	1047071	999476	951881	904286
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	152193	146095	140008	133920	127833	121746	115658
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(11))/(15)	80256	77045	73835	70625	67415	64205	60994
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	81967	80608	77250	73891	70533	67174	63815
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-42485	-42485	-42485	-42485	-42485	-42485	-42485
26	TAXABLE INCOME=(25)	-42485	-42485	-42485	-42485	-42485	-42485	-42485
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-39989	-39989	-39989	-39989	-39989	-39989	-39989
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1488974	1488974	1488974	1488974	1488974	1488974	1488974
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-7812	-7812	-7812	-7812	-7812	-7812	-7812
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	8392	8056	7721	7385	7049	6714	6378
	REALTY TAX							
33	$ ELIGIBLE	512704	512704	512704	512704	512704	512704	512704
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	9860	9465	9071	8677	8282	7888	7493
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	54418	50328	46241	42152	38063	33975	29885
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	343980	333802	323628	313451	303275	293100	282922
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	13.14	12.75	12.36	11.97	11.58	11.19	10.81
39	ANNUAL CC RATE & 0.0 % MORT DISP	13.14	12.75	12.36	11.97	11.58	11.19	10.81

Schedule 2.4
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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYRY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER
BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 # 1488974 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 # 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 # 512704 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 22	YEAR 23	YEAR 24	YEAR 25	YEAR 26	YEAR 27	YEAR 28
1	CAPITAL FOR BOOK DEPRECIATION	2618351	2618351	2618351	2618351	2618351	2618351	2618351
2	AFDC	887000	887000	887000	887000	887000	887000	887000
2A	50% OF ITC = (28)#(29)#50%	74449	74449	74449	74449	74449	74449	74449
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)#(4)	67137	67137	67137	67137	67137	67137	67137
5A	ANNUAL AMOUNT(5)/(1-(11))	137379	137379	137379	137379	137379	137379	137379
6	CUMULATIVE AMOUNT	1409877	1477014	1544151	1611288	1678425	1745562	1812699
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)#(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)#(9)	42485	42485	42485	42485	42485	42485	42485
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))#TXPAFT	-19542	-19542	-19542	-19542	-19542	-19542	-19542
13	ACCUMULATED DEFERRED INC TAXES	351733	332241	312699	293157	273615	254073	234531
14	RATE BASE=(1)-(6)-(13)	856691	809096	761501	713906	666311	618716	571121
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)#(15)	109571	103483	97396	91309	85221	79134	73046
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (16)#((15)-(17)(19))/(15)	57784	54573	51363	48153	44943	41733	38522
20	INCOME TAX ON RETURN (19)#(11)/(1-(11))	60456	57097	53738	50380	47021	43663	40303
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)#(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-42485	-42485	-42485	-42485	-42485	-42485	-42485
26	TAXABLE INCOME=(25)	-42485	-42485	-42485	-42485	-42485	-42485	-42485
27	INCOME TAX=(26)#0.46000/(1-0.51130)	-39989	-39989	-39989	-39989	-39989	-39989	-39989
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1488974	1488974	1488974	1488974	1488974	1488974	1488974
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)#(29)/(1-(11)))/8L	-7812	-7812	-7812	-7812	-7812	-7812	-7812
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)#((1)-(6))	6042	5707	5371	5035	4700	4364	4028
	REALTY TAX							
33	$ ELIGIBLE	512704	512704	512704	512704	512704	512704	512704
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)#(34)((1)-(6))/(1)	7099	6705	6310	5916	5521	5127	4733
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	25796	21708	17618	13530	9441	5353	1263
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	272746	262570	252393	242219	232041	221866	211688
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	10.42	10.03	9.64	9.25	8.86	8.47	8.08
39	ANNUAL CC RATE & 0.0 % MORT DISP	10.42	10.03	9.64	9.25	8.86	8.47	8.08

Schedule 2.4
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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU

APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0

TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1488974 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000

CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 512704 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 29	YEAR 30	YEAR 31	YEAR 32	YEAR 33	YEAR 34	YEAR 35
1	CAPITAL FOR BOOK DEPRECIATION	2618351	2618351	2618351	2618351	2618351	2618351	2618351
2	AFDC	887000	887000	887000	887000	887000	887000	887000
2A	50% OF ITC = (28)*(29)*50%	74449	74449	74449	74449	74449	74449	74449
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
5	ANNUAL AMOUNT=(1)*(4)	67137	67137	67137	67137	67137	67137	67137
5A	ANNUAL AMOUNT(5)/(1-(11))	137379	137379	137379	137379	137379	137379	137379
6	CUMULATIVE AMOUNT	1879836	1946971	2014110	2081247	2148384	2215521	2282658
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564	0.02564
10	ANNUAL AMOUNT=(3)*(9)	42485	42485	42485	42485	42485	42485	42485
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130	0.51130
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-19542	-19542	-19542	-19542	-19542	-19542	-19542
13	ACCUMULATED DEFERRED INC TAXES	214989	195447	175905	156363	136821	117279	97737
14	RATE BASE=(1)-(6)-(13)	523526	475931	428336	380741	333146	285551	237956
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790	0.12790
16	OVERALL RETURN=(14)*(15)	66959	60872	54784	48697	42609	36522	30435
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090	0.12090
19	TAXABLE PORTION OF RETURN= (15)*((15)-(17)(18))/(15)	35312	32102	28891	25681	22471	19260	16050
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	36945	33587	30227	26869	23510	20151	16792
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(8)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(8)-(10)	-42485	-42485	-42485	-42485	-42485	-42485	-42485
26	TAXABLE INCOME=(25)	-42485	-42485	-42485	-42485	-42485	-42485	-42485
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-39989	-39989	-39989	-39989	-39989	-39989	-39989
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1488974	1488974	1488974	1488974	1488974	1488974	1488974
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000	0.10000
30	ANNUAL AMOUNT=((28)*(29)/(1-(11))/BL	-7812	-7812	-7812	-7812	-7812	-7812	-7812
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500	0.00500
32	ANNUAL AMOUNT=(31)*((1)-(6))	3693	3357	3021	2686	2350	2014	1678
	REALTY TAX							
33	$ ELIGIBLE	512704	512704	512704	512704	512704	512704	512704
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000	0.03000
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	4338	3944	3550	3155	2761	2366	1972
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	-2825	-6913	-11003	-15091	-19180	-23270	-27359
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	201513	191338	181160	170985	160808	150631	140455
38	ANNUAL CC RATE & 0.00% MORT DISP=(37)/(1)	7.70	7.31	6.92	6.53	6.14	5.75	5.36
39	ANNUAL CC RATE & 0.0 % MORT DISP	7.70	7.31	6.92	6.53	6.14	5.75	5.36

Schedule 2.4
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PHILADELPHIA ELECTRIC COMPANY-CALCULATION OF YEAR BY YEAR CARRYING CHARGE RATES - CCYBY PA TAX FLOW-THRU
APPLIC TO PLANT PUT INTO SERVICE IN 1983 & AFTER

BOOK LIFE= 39 ACRS TAX LIFE= 10 MORT DISP FACTOR=0.0 GROSS REC TAX=0.0
TAX DEPRECIATION RATE=1.50 DB/SL ITC RATE=.100 * 1488974 ELIGIBLE COMP INC TAX RATE FOR PA FLOW-THRU=0.46000
CAPITAL STOCK TAX RATE=0.010 * 0.50 COMMON & PREF STK RATIO REALTY TAX RATE=.030 * 512704 ELIGIBLE

LINE NO.	DESCRIPTION	YEAR 36	YEAR 37	YEAR 38	YEAR 39	YEAR 40	YEAR 41	YEAR 42
1	CAPITAL FOR BOOK DEPRECIATION	2618351	2618351	2618351	2618351	0	0	0
2	AFDC	887000	887000	887000	887000	0	0	0
2A	50% OF ITC = (28)*(29)*50%	74449	74449	74449	74449	0	0	0
3	CAPITAL FOR TAX DEPRECIATION=(1)-(2A)	0	0	0	0	0	0	0
	BOOK DEPRECIATION--SL @ BOOK LIFE							
4	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.0	0.0	0.0
5	ANNUAL AMOUNT=(1)*(4)	67137	67137	67137	67137	0	0	0
5A	ANNUAL AMOUNT(5)/(1-(11))	137379	137379	137379	137379	0	0	0
6	CUMULATIVE AMOUNT	2349795	2416932	2484069	2551206	0	0	0
	TAX DEPRECIATION --ACRS @ TAX LIFE							
7	ANNUAL RATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	ANNUAL AMOUNT=(3)*(7)	0	0	0	0	0	0	0
	TAX DEPRECIATION--SL @ BOOK LIFE							
9	ANNUAL RATE	0.02564	0.02564	0.02564	0.02564	0.0	0.0	0.0
10	ANNUAL AMOUNT=(3)*(9)	42485	42485	42485	42485	0	0	0
11	COMPOSITE INCOME TAX RATE	0.51130	0.51130	0.51130	0.51130	0.0	0.0	0.0
12	DEFERRED INC TAXES=((8)-(10))*TXPAFT	-19542	-19542	-19542	-19542	0	0	0
13	ACCUMULATED DEFERRED INC TAXES	78195	58653	39111	19569	27	0	0
14	RATE BASE=(1)-(6)-(13)	190361	142766	95171	47576	0	0	0
15	OVERALL RETURN RATE	0.12790	0.12790	0.12790	0.12790	0.0	0.0	0.0
16	OVERALL RETURN=(14)*(15)	24347	18260	12172	6085	0	0	0
17	CAPITALIZATION RATIO	0.50000	0.50000	0.50000	0.50000	0.0	0.0	0.0
18	DEBT RETURN RATE	0.12090	0.12090	0.12090	0.12090	0.0	0.0	0.0
19	TAXABLE PORTION OF RETURN= (16)*((15)-(17)(18))/(15)	12840	9630	6419	3209	0	0	0
20	INCOME TAX ON RETURN (19)*(11)/(1-(11))	13434	10075	6716	3357	0	0	0
	INCOME TAX BENEFITS OF DEPREC-TOTAL							
22	TAX DEPRECIATION=(3)	0	0	0	0	0	0	0
23	TAXABLE INCOME=-(22)	0	0	0	0	0	0	0
24	INCOME TAX=(23)*(11)/(1-(11))	0	0	0	0	0	0	0
	INC TAX BENEFITS OF DEPREC-PORTION DEFD							
25	TAX DEPRECIATION=(3)-(10)	-42485	-42485	-42485	-42485	0	0	0
26	TAXABLE INCOME=(25)	-42485	-42485	-42485	-42485	0	0	0
27	INCOME TAX=(26)*0.46000/(1-0.51130)	-39989	-39989	-39989	-39989	0	0	0
	INVESTMENT TAX CREDIT BENEFITS, AMORTIZED							
28	$ ELIGIBLE	1488974	1488974	1488974	1488974	0	0	0
29	ANNUAL RATE	0.10000	0.10000	0.10000	0.10000	0.0	0.0	0.0
30	ANNUAL AMOUNT=((28)*(29)/(1-(11)))/8L	-7812	-7812	-7812	-7812	0	0	0
	CAPITAL STOCK TAX							
31	ANNUAL RATE	0.00500	0.00500	0.00500	0.00500	0.0	0.0	0.0
32	ANNUAL AMOUNT=(31)*((1)-(6))	1343	1007	671	336	0	0	0
	REALTY TAX							
33	$ ELIGIBLE	512704	512704	512704	512704	0	0	0
34	ANNUAL RATE	0.03000	0.03000	0.03000	0.03000	0.0	0.0	0.0
35	ANNUAL AMOUNT=(33)*(34)((1)-(6))/(1)	1578	1183	789	394	0	0	0
36	TOTAL TAXES=(20)+(24)+(27)+(30)+(32)+(35)	-31446	-35536	-39625	-43714	0	0	0
37	REV REQMTS=((5A)+(16)+(36))/(1-GRT)	130280	120103	109926	99750	0	0	0
38	ANNUAL CC RATE @ 0.00% MORT DISP=(37)/(1)	4.98	4.59	4.20	3.81	0.0	0.0	0.0
39	ANNUAL CC RATE @ 0.0 % MORT DISP	4.98	4.59	4.20	3.81	0.0	0.0	0.0
40	LEVEL ANNUAL CC							

Schedule 2.4
(Page 9)

PECO cost include Direct Cost, Taxes & overheads and AFUDC from
Interrogatory DR-STAFF-LIM-14 (Limerick #1 and 50% Common)

Schedule 2.5

Oka Costs are from the original OKA additions from 1975 plus
PECO Taxes & Overheads (DR-STAFF-LIM-14) plus additional PURTA taxes
because of the changes in the construction expenditures

	ANNUAL DIRECTS						AFUDC							Cumulative Totals	
	OKA			PECO			AFUDC Rates		ACCRUALS						
										OKA		PECO			
Year	Annual	Semi	Cum	Annual	Semi	Cum	Nominal	Effectiv	Semi	Annual	Cum	Annual	Cum	OKA	PECO
1971				26.5	26.5		8.00%	8.00%	1.1	1.1	1.1	1.3	1.3	27.6	27.8
1972				28.6	28.6	55.1	8.00%	8.00%	3.5	3.5	4.6	3.4	4.7	59.7	59.8
1973				50.1	25.2	105.2	8.00%	4.00%	2.9	6.8	11.4	5.9	10.6	87.8	115.8
					25.0		7.50%	3.75%	3.8					116.6	
1974				61.3	30.9	166.5	7.50%	3.75%	5.0	11.5	22.8	9.7	20.3	152.5	186.8
					30.4		7.50%	3.75%	6.4					189.3	
1975	103.2	52.5	269.7	70.2		236.7	8.00%	4.00%	8.7	20.2	40.5	16.3	36.6	247.9	273.3
		50.8					8.25%	4.13%	11.5					310.2	
1976	122.8	62.9	392.5	92.4		329.1	8.20%	4.10%	14.3	32.2	72.7	22.2	58.8	387.4	387.9
		59.9					8.40%	4.20%	17.9					465.2	
1977	138.9	71.6	531.4	99.1		428.2	8.60%	4.30%	22.0	48.4	121.1	29.7	88.5	558.8	516.7
		67.4					8.70%	4.35%	26.3					652.5	
1978	133.6	69.7	665.0	78.0		506.2	7.10%	3.55%	24.8	53.8	174.9	40.2	128.7	747.0	634.9
		64.0					7.30%	3.65%	29.0					839.9	
1979	171.0	89.3	836.0	97.5		603.7	7.40%	3.70%	33.3	71.7	246.6	51.8	180.5	962.5	784.2
		81.8					7.50%	3.75%	38.3					1062.6	
1980	247.2	128.3	1083.2	147.9		751.6	7.50%	3.75%	43.8	98.8	345.4	69.4	249.9	1254.7	1001.5
		118.9					8.20%	4.10%	55.0					1428.6	
1981	280.4	146.2	1363.6	182.4		934.0	8.30%	4.15%	63.6	142.2	487.5	92.2	342.1	1638.4	1276.1
		134.2					9.00%	4.50%	78.5					1851.1	
1982	284.6	144.5	1648.2	262.2		1196.2	9.10%	4.55%	89.6	192.2	679.7	129.8	471.9	2085.2	1668.1
		140.1					9.30%	4.65%	102.6					2327.9	
1983	90.5	45.5	1738.7	332.2		1528.4	9.30%	4.65%	111.9	204.3	884.0	171.2	643.1	2485.3	2171.5
		45.0					9.30%	3.62%	92.4					2622.7	
1984				329.9		1858.3	9.40%					223.5	866.6	=======	2724.9
							9.40%								
1985				116.0		1974.3	9.50%					270.3	1136.9		3111.2
1986				8.0		1982.3						62.3	1199.2		3181.5
DIFFERENCE IN TOTAL MCS:				$558.8											
				=======											
Per DR-Staff-LIM-14															3181.5

COMPARISON OF ACCRUAL AFUDC RATES AND RECOMPUTED AFUDC RATES WITH WITNESS O'BRIEN CONSTRUCTION SCHEDULE 1975 - 1985

Year	Semi-Annual Period	Actual AFUDC Rate	Recomputed AFUDC Rate With O'Brien Adjustment
1975	1	8.0%	8.0%
	2	8.25	8.12
1976	1	8.20	8.14
	2	8.40	8.27
1977	1	8.60	8.54
	2	8.70	8.63
1978	1	7.10	7.07
	2	7.30	7.22
1979	1	7.40	7.37
	2	7.50	7.41
1980	1	7.50	7.48
	2	8.20	8.18
1981	1	8.30	8.32
	2	9.00	9.09
1982	1	9.10	9.20
	2	9.30	9.45
1983	1	9.30	9.42
	2	9.30	9.38
1984	1	9.40	9.52
	2	9.40	9.70
1985	1	9.50	9.54
	2	9.50	9.69

PECO cost include Direct Cost, Taxes & overheads and AFUDC from
Interrogatory DR-STAFF-LIM-14 (Limerick #1 and 50% Common)

Schedule 2.7

Oka Costs are from the original OKA additions from 1975 plus
PECO Taxes & Overheads (DR-STAFF-LIM-14) plus additional PURTA taxes
because of the changes in the construction expenditures

AFUDC rates were developed to reflect the change in the spread of the
of the construction dollars

	ANNUAL DIRECTS						AFUDC							Cumulative Totals	
	OKA			PECO			AFUDC Rates			ACCRUALS				OKA	PECO
										OKA		PECO			
Year	Annual	Semi	Cum	Annual	Semi	Cum	Nominal	Effectiv	Semi	Annual	Cum	Annual	Cum		
1971				26.5	26.5		8.00%	8.00%	1.1	1.1	1.1	1.3	1.3	27.6	27.8
1972				28.6	28.6	55.1	8.00%	8.00%	3.5	3.5	4.6	3.4	4.7	59.7	59.8
1973				50.1	25.2	105.2	8.00%	4.00%	2.9	6.8	11.4	5.9	10.6	87.8	115.8
					25.0		7.50%	3.75%	3.8					116.6	
1974				61.3	30.9	166.5	7.50%	3.75%	5.0	11.5	22.8	9.7	20.3	152.5	186.8
					30.4		7.50%	3.75%	6.4					169.3	
1975	103.2	52.5	269.7	70.2		236.7	8.00%	4.00%	8.7	20.0	40.3	16.3	36.6	247.9	273.3
		50.8					8.12%	4.06%	11.3					310.0	
1976	122.8	62.9	392.5	92.4		329.1	8.14%	4.07%	14.2	31.8	72.1	22.2	58.8	387.1	387.9
		59.9					8.27%	4.14%	17.6					464.6	
1977	138.9	71.6	531.4	99.1		428.2	8.54%	4.27%	21.8	47.9	120.0	29.7	88.5	558.0	516.7
		67.4					8.63%	4.32%	26.1					651.4	
1978	133.5	69.7	665.0	78.0		506.2	7.07%	3.54%	24.7	53.3	173.3	40.2	128.7	745.8	634.9
		64.0					7.22%	3.61%	28.6					838.3	
1979	171.0	89.3	836.0	97.5		603.7	7.37%	3.69%	33.1	71.0	244.3	51.8	180.5	960.7	784.2
		81.8					7.41%	3.71%	37.8					1080.3	
1980	247.2	128.3	1083.2	147.9		751.6	7.48%	3.74%	43.6	98.4	342.7	69.4	249.9	1252.2	1001.5
		118.9					8.18%	4.09%	54.8					1425.9	
1981	280.4	146.2	1363.6	182.4		934.0	8.32%	4.16%	63.7	142.9	485.6	92.2	342.1	1635.8	1276.1
		134.2					9.09%	4.55%	79.2					1849.2	
1982	284.6	144.5	1648.2	262.2		1196.2	9.20%	4.60%	90.5	194.7	680.3	129.8	471.9	2084.1	1668.1
		140.1					9.43%	4.73%	104.2					2328.5	
1983	90.5	45.5	1738.7	332.2		1528.4	9.42%	4.71%	113.4	206.7	887.0	171.2	643.1	2487.4	2171.5
		45.0					9.38%	3.65%	93.3					2525.7	
1984				329.9		1858.3	9.52%					223.5	866.6	=======	2784.9
							9.70%								
1985				116.0		1974.3	9.54%					270.3	1136.9		3111.2
1986				8.0		1982.3						62.3	1199.2		3181.5
	DIFFERENCE IN TOTAL MCB:			$555.8								Per DR-Staff-LIM-14			3181.5

ADDITIONAL REVENUE REQUIRED FROM CUSTOMERS FROM 1975 to 1985 TO MAINTAIN EARNINGS PER SHARE BASED UPON A CONSTRUCTION SCHEDULE TO MEET A NOVEMBER 1983 SERVICE DATE
(THOUSAND $)

Year Ended December (1)	No.of Years (n) and Months (m) to June 1986 n (2)	m (3)	Additional Revenue Required to Maintain Actual Earnings per Share (Note A) (4)	Future Worth Factors, (F/P,9.70%,n) (5)	Future Worth Factors, (F/P,9.70%/12,m) (6)	Present Worth at June 30, 1986 (7)=(4)x(5)x(6)
1975	10	6	($4,548)	2.524	1.049	($12,042)
1976	9	6	(11,047)	2.301	1.049	(26,665)
1977	8	6	(22,219)	2.097	1.049	(48,876)
1978	7	6	(4,165)	1.912	1.049	(8,354)
1979	6	6	(3,050)	1.743	1.049	(5,577)
1980	5	6	54	1.589	1.049	90
1981	4	6	1,826	1.448	1.049	2,774
1982	3	6	10,896	1.320	1.049	15,087
1983	2	6	71,339	1.203	1.049	90,026
1984	1	6	2,514	1.097	1.049	2,893
1985	0	6	(14,699)	1.000	1.049	(15,419)
Total, Thousand $						($6,063)
Total, Million $						($6)

(Note A) - From the Supplemental Rebuttal Testimony of Joseph F. Paquette, Jr. (Statement 3B). 1984 and 1985 revenues are adjusted to remove the additional revenue requirements for Limerick 1 and 100% of common since these revenue requirements have been included in the calculations performed on Schedule 2.2. (This was done by deducting the AFUDC accruals, expressed in revenue requirements, on $3,095,500 for Limerick 1 and 100% of Common. The deduction for 1984 is $594,955 and for 1985 is $595,574).

1984 - $597,469 - $3,095,500 x 9.61% / (1-50%) = $2,514
1985 - $580,875 - $3,095,500 x 9.62% / (1-50%) = ($14,699)

ADDITIONAL REVENUE REQUIRED FROM CUSTOMERS FROM 1975 to 1985 TO MAINTAIN MORTGAGE COVERAGE BASED UPON A CONSTRUCTION SCHEDULE TO MEET A NOVEMBER 1983 SERVICE DATE
(THOUSAND $)

Year Ended December (1)	No.of Years (n) and Months (m) to June 1986 n (2)	m (3)	Additional Revenue Required to Maintain Actual Mortgage Coverage Ratios (Note A) (4)	Future Worth Factors, (F/P,9.70%,n) (5)	Future Worth Factors, (F/P,9.70%/12,m) (6)	Present Worth at June 30, 1986 (7)=(4)x(5)x(6)
1975	10	6	$1,924	2.524	1.049	$5,094
1976	9	6	1,644	2.301	1.049	3,968
1977	8	6	12,402	2.097	1.049	27,281
1978	7	6	28,919	1.912	1.049	58,002
1979	6	6	28,197	1.743	1.049	51,556
1980	5	6	30,133	1.589	1.049	50,228
1981	4	6	26,638	1.448	1.049	43,500
1982	3	6	33,920	1.320	1.049	46,968
1983	2	6	51,266	1.203	1.049	64,695
1984	1	6	2,514	1.097	1.049	2,893
1985	0	6	(14,699)	1.000	1.049	(15,419)
Total, Thousand $						$338,766
Total, Million $						$339

(Note A) - From the Supplemlental Rebuttal Testimony of Joseph F. Paquette, Jr. (Statement 3B).