City Statement No. 2

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Before the Commonwealth of Pennsylvania
Public Utility Commission

In the matter of Philadelphia Electric Company Proposed increase in rates and Ratemaking Treatment for the Limerick 1 Nuclear Generating Station	]]]]]	Docket No. R-850152 et.seq.

Testimony and Exhibits of

Gregory A. Palast

Union Associates

Regarding Economic Impact; Financial Analysis of Phase-in

on behalf of

The City of Philadelphia

January 1986

I. WITNESS QUALIFICATIONS

Q. Please state your name, address and summary qualifications.

A. My name is Gregory Palast. I am a Senior Associate with Union Associates of Chicago and New York, a consulting firm, 64 Second Avenue, New York, New York 10003.

In 1981 and 1982, I served as Executive Director of the New York State Legislature's Commission on Science and Technology, prior to which I served as Economist to the State Assembly's Subcommittee on Public Power. Between 1976 and 1979, in addition to consulting, I taught economics in the Department of Labor Studies at Indiana University.

I also serve as Consulting Economist to the Labor Coalition on Public Utilities, Chicago. I reside in New York.

Q. Describe your education.

A. I hold a Masters Degree in Business Administration from the University of Chicago Graduate School of Business 1976) where I specialized in Finance of Regulated Industries.

Q. Describe your duties and experience in your various positions which qualify you as a witness in this matter.

A. Union Associates is a consulting firm to labor unions, government and others.

With Union Associates, I have testified before utility commissions and legislatures in approximately fifty proceedings nationwide on behalf of the Attorneys General of New Mexico, Washington, New York and Illinois, the Communications Workers of America (AFL-CIO), the Illinois Governor's Office of Consumer Services, Legal Services Corporation and others. Topics of testimony have included utility corporate divestiture, rate of return, income tax accounting and many other financial issues in electric, gas and telephone proceedings.

Current clients include the Governor of Ohio, the Maine State Public Advocate, the City of New Orleans and others.

In addition to regulatory studies and testimony, my duties include analysis of industries and collective bargaining on behalf of labor unions such as the Transport Workers Union Gas Utility Division.

The Labor Coalition on Public Utilities, to which I am advising Economist, represents the leadership of thirty-five Chicago-area unions on utility rate, service and employment matters.

As Director of the New York State Legislative Commission on Science and Technology, I drafted and reviewed legislation regarding energy, utility rates and telecommunications. In that position, I reviewed rate and legislative policy matters regarding utility plant operation and cancellation costs, including a review of "phase-in" plans such as that presented here by the utility.

In 1980, I served as Economist for the New York State Assembly's Subcommittee on Public Power which has oversight responsibility for the state's Power Authority, the nation's largest state-owned utility.

At Indiana University I taught Collection and Use of Economic Data, Collective Bargaining and Contemporary Economic Issues.

I have published articles on economic issues in **Public Utilities Fortnightly** and elsewhere.

Q. Have you previously testified on or studied issues related to this proceeding?

A. Yes. I testified in the recent Kansas Gas & Electric rate proceeding on the economic and financial impact of the utility's plan to phase-in to rates charges for the Wolf Creek nuclear plant.

For the County of Suffolk, New York, I led a team of ten of my associates in reviewing the economic consequences of charging the Shoreham nuclear plant to ratepayers. For state legislators, I am reviewing plans to "phase-in" Shoreham rate increases.

For the County and the Blue Ribbon Panel on Shoreham Rates (government-appointed business leaders), I have directed a number of Union Associates studies on the effect of the Shoreham rate increases on taxes, employment, utility rates, and property values. Also, I analysed the effect of the utility's financial re-organization.

For a group of business leaders in New Hampshire, I have measured the economic impact of charges for the Seabrook nuclear plant and testified before the NHPUC on the financial re-organization of Public Service of New Hampshire.

For the Maine State Public Advocate, I have testified on the financial effect of denying Central Maine Power recovery of its investment in nuclear plant projects. I am now providing consulting services to the State on proposed solutions to financial difficulties faced by other utilities in that state which own a portion of the Seabrook plants.

For the Missouri Public Service Commission, I reviewed the disposition of costs of the cancelled Callaway 2 nuclear plant.

On behalf of the City of Gary, Indiana, I testified on the disposition of costs of the cancelled Bailly nuclear plant.

For the Attorney General of Washington State I testified on the financial effects of the cancellation of the Skagit/Hanford and other nuclear stations.

For the Governor of Ohio, I have analyzed the financial and rate implications of major nuclear plant investments by the state's utilities including their investment in the Zimmer project.

Q. Have this testimony and accompanying exhibits been prepared by you or under your supervision?

A. Yes.

II. SUMMARY

Q. Please summarize your recommendations.

A. Despite Philadelphia Electric Company's claim that its proposed rate phase-in plan will minimize the economic impact of the rates on the Philadelphia area economy, in fact, the economic effect of PECO's rate plan on the City is harsh and severe.

I propose the following adjustments to PECO's rate plan, adjustments which reasonably protect the ratepayers' interests while giving reasonable consideration to the utility's financial needs.

I recommend:

1. **Phase-in period.** Charges for Limerick 1 should be phased-in over no less than seven years. The company has proposed that the rates reflect 100% of Limerick 1 revenues after only two years.

2. **Deferred revenue recovery.** PECO seeks to add a

surcharge for recovery of all billings deferred in the first two years of its plan through a three-year surcharge beginning in year four of the plan. This is an unusually swift recovery of deferred revenue. Occuring just as Limerick 2 charges are expected to enter rates, the economic effect of this surcharge would be devastating.

I propose that the Commission amortize the deferred revenue charges over ten years.

3. **No interest on phase-in deferrals.** PECO has agreed to forego interest on sums deferred during the phase-in. I urge adoption of this concept, even if the phase-in is extended. As will be explained in the text of this testimony, interest charges on the deferred balance would undo, if not reverse, the macroeconomic benefits of a phase-in.

4. **Deny the PECO scheme for creating ratepayer "debts."** PECO has proposed a unique and unprecedented method for charging Limerick 1 to customers: PECO would establish accounts by class and all rate revenue sought by the Company would

be "owed" by that class for collection as part of the deferred revenue surcharge. If any class of customer uses less electricity than PECO projects, the three-year surcharge will rise to make up the difference. Thus, the three-year surcharge could be much, much higher than PECO now predicts. Moreover, no class of customers may reduce their bills through conservation because the class "owes" PECO the revenue. The Commission should reject this unprecedented attempt by a utility to impose a debt on consumers.

5. **Fuel savings.** The Company's rate plan is based on Limerick's reducing fuel costs by $207.5 million annually in each of the next two years; yet, the Company states it may increase rates (through the energy adjustment) if the savings do not occur. The Commission should require the utility to **guarantee** this $207.5 million in annual fuel savings during the first two years of the phase-in, similar to the Commission's requirements regarding the Salem plant. Thereafter, for the life of the plant, the Commission should require the Company to guarantee to the ratepayers fuel savings equivalent to the plant's operating at 65%

of capacity.

Q. Summarize your testimony.

A. In Section III, I discuss the reasons for rejecting PECO's short phase-in period. I also discuss the relationship of the economic impact studies performed by the City to the regulation of rates.

In Section IV, I discuss the need to lengthen the period for PECO's recovery of phase-in revenues deferred, the so-called, "phase-out" period.

Section V is a short note explaining why proposed changes in financial reporting rules (FASB 71) do not restrict this Commission's authority to order a reasonable phase-in plan.

In Section VI, I review PECO's ability to financially sustain a longer period for phasing-in rates and a longer period for recovering the deferred revenues.

In Section VII, I review other accounting adjustments to PECO's proposed phase-in plan: a) a guarantee of the fuel-savings promised, b) modification of the "Unrecovered Revenue Rider," and c) adoption of PECO's proposal to forego a profit on revenues deferred.

Q. Can PECO financially sustain a longer period for the phase-in of rates and a longer deferred revenue recovery period?

A. Yes. The completion of Limerick 1 marks a financial turning point for PECO -- for the better. The end of construction means both the end of enormous outflows of cash required by the project and, for the securities holders, the end of risk in the long project. With Limerick complete, the Company's cash flow increases enormously -- depreciation, tax benefits, and cash profits will rise while the company will receive increased charges for the plant's operations and maintenance. Even with a longer phase-in, the Company's financial indicators will improve greatly over the construction period.

On December 9, PECO announced that it had bought back $217 million of its own 18% bonds, bonds which the Company expects to replace at an interest rate of only 12-1/2%. This refunding is the sign of a financially strong utility.

During the 1970s when its financial position was precarious, PECO raised $3.3 billion. Now that its finances are improving, its cash needs have declined. Should the utility choose to finish Limerick 2, it need borrow only half a billion dollars per year to do so. In the six years following Limerick 2's completion, from 1991 through 1998, the Company's financial model has predicted that PECO will need no new external capital at all.

Given the Company's improving cash position and relatively low cash needs, it could well afford to protect the economy of the City of Philadelphia by accepting a slower recovery of Limerick 1 charges.

III. THE PHASE-IN AND ECONOMIC IMPACT

Q. By what standard should the Commission judge a rate phase-in plan?

A. PECO's management states that,

> The Company recognizes that this is a significant rate increase and presents this phase-in proposal **in an effort to reduce the impact** of this increase on ratepayers and the economy of the Company's service territory. [Prepared testimony of Mr. Paquette at page 4, emphasis added.]

The Commission must determine if the Company's plan does indeed accomplish what it is intended to do: prevent serious damage to the general economic health of the greater Philadelphia community.

Q. Does the Company's plan prevent major economic damage?

A. No. PECO's rate increase proposal will cause serious harm to the Philadelphia economy, as described in detail by the

City's witnesses.

PECO itself has provided no evidence whatsoever that the Philadelphia economy can sustain its rate plan. Mr. Williams and the utility were asked to provide any studies or evidence considered in reaching the conclusion that the PECO plan will reduce the economic impact of the proposed charges for Limerick 1. Mr. Williams responded,

> "The Company performed no specific study to support these statements." [PECO response to City Interrogatory I-37.]

PECO has, apparently done no studies as the City has done to measure the effect of higher rates on employment, despite the fact the loss of jobs and industry effects not only the ratepayer but the utility itself.

Q. The Company has proposed collecting the full cost of Limerick 1 in rates by the third year of its plan and seeks to recover the revenue deferred in the fourth, fifth and sixth years, the so-called, "phase out" period. Does PECO have a reasonable basis choosing this plan over any other plan?

A. No. The Company's choice of a three-year phase-in and three-year phase-out can only be described as abitrary.

In response to City interrogatories and under cross-examination, the utility's witnesses admit they did not seriously consider any other plan than the three-year phase-in they have proposed. [See in particluar, PECO Response to DR-RCW4 GEC (12/13/85).]

There have been no calculations, notes or any evidence at all that other periods were considered -- let alone financial model runs. In response to a specific City request for evidence of review of other periods or methods of phase-in, the Company responds with a defense of its three-year phase-in -- but no evidence that it considered any other period. [PECO response to City Interrogatory I-17.] Under cross-examination, PECO's Mr. Williams remembers mentioning the idea of a four-year phase-in to others, but this passing mention appears to be as far as PECO went in reviewing alternatives.

The Commission should also be aware that the Company did not run its financial model (FINAN) to evaluate alternatives to the plan proposed here nor make financial projections, by computer or otherwise, of alternatives.

[See PECO response to City Interrogatories I-17, I-20, I-21, I-23.] Indeed, the Company did not even run the FINAN model incorporating its own phase-in plan, let alone alternatives.

The Company did not conduct an economic analysis of its phase-in plans -- nor did it give serious consideration to other alternatives. There is no reasonable basis for the Company's proposed phase-in (and phase-out) plan.

Q. Did the Company state any basis for choosing a three-year phase-in and three-year recovery period?

A. Yes. In response to City Interrogatory I-17, the Company does state that it considered its own finances and the alleged restraints of Financial Accounting Standards Board Statement 71. However, the Company company did not consider the financial effects of any alternative plan. Also, the claimed restraints of FASB 71 would not apply to a four-year or an eight-year or another, alternative plan. (FASB 71 and financial issues will be discussed in more detail later in this testimony.) The Company has no basis for choosing a three-year plan over a four-year or five-year or any other plan.

Q. Is the Company's three-year phase-in and three-year recovery plan adequate to protect the Philadelphia-area economy?

A. No. From the studies presented by City witness Dr. Schinnar, we know that PECO's plan will cause widespread dislocation in the Philadelphia economy. PECO's rate plan will cost the city and surrounding areas jobs in the thousands. This is clear evidence that PECO's plan fails to adequately protect the interests of ratepayers.

The role of economic impact in setting rates.

Q. As a matter of policy, why should this Commission consider measurements of economic impact in setting rates?

A. As expressed by the Supreme Court in the Hope decision, the goal of utility regulation is to balance the interests of the investors against the interests of the consumer.

Utility commissions are used to reviewing detailed analyses and fine measurements of the investor's needs and interests, typically in the form of rate-of-return testimony, and often, statements from rating agency executives and Company managers about the financial community's desires.

On the other hand, testimony measuring the consumers' interest is somewhat novel. This is because most rate increases have come in small increments and therefore, Commissioners have reasonably assumed that a community's entire economic health is not at risk. In a case such as this, where extraordinary rate increases are at stake, a careful measurement of the economic effect of higher rates is called for.

The economic measurements presented here should be used by the commission to measure the consumers' interests just as rate-of-return testimony is used to measure investors' interests.

As stated by the New York Public Service Commission in its, "Statement of Policy Concerning Evidence of Economic Impact in Rate Cases" (January 14, 1980),

> These decisions are derived directly from our statutory responsibility to assure safe and adequate service at just and reasonable rates. For that purpose, it may make sense to moderate a rate increase

> [...] where, for example, there is persuasive testimony that higher rates, at a time of economic distress, would adversely affect the public -- including the utility company -- by precipitating or aggravating economic dislocations and problems such as unemployment, dependence on public assistance, and departure of industries.

Q. How should the Commission evaluate the economic studies presented here?

A. Generally, commissions consider rates too low which prevent a utility from raising capital. That is the lower limit below which rates are unreasonable. Here, the Commission is given a standard for measuring the upper limit for rates: rates are too high which would substantially impair the economy of a community.

Q. How should the Commission use economic impact findings in setting rates?

A. Within the accepted rate-setting formula, there are areas where the Commission may exercise great discretion. While the commission may have little discretion in recognizing legitimate labor costs in rates, for example, regulators certainly have wide latitude in determining the period and method for phasing-in rates or recovering deferred revenue.

Q. Has any Commission recently used specific measures of economic impact to establish a phase-in plan?

A. Yes. The Kansas Corporation Commission made a specific finding that the rate phase-in plan proposed by Kansas Gas and Electric would cause unacceptable economic harm to the Wichita community. In addition to a very large disallowance of the utility's expenditures on the Wolf Creek nuclear plant (for managerial imprudence), the Commission, citing the economic impact of higher rates, also imposed an eight-year phase-in/phase-out plan on KG&E. [Kansas Corporation Commission, Order of September 27, 1985; Docket 84-KG&E-197-R.]

The City's Economic Impact Studies

Q. What do you conclude from your review of the economic studies of the City's witness and your own knowledge of the economic impact of electric rate increases.

A. The evidence is strong that PECO's rate plan, raising rates by more than $894 million annually by 1989, will cause serious damage to the Philadelphia economy, costing growth in employment in some industries and the loss of some jobs in others. The Philadelphia SMSA would forfeit 19,000 jobs. In addition, the social hardship caused by the increase is an unreasonable cost to pay for Limerick 1.

I recommend a phase-in of seven years with reluctance because a phase-in of seven years will still cause harm to the Philadelphia economy.

Q. How did you decide on your seven-year phase-in recommendation from Dr. Schinnar's studies?

A. Dr. Schinnar calculated that the Philadelphia economy could withstand the added charges for Limerick 1 if its cost is phased-in over six years and the deferred sum recovered over approximately five years. However, such a plan would allow for no increases in electric rates for any other purpose during this period; that is, for a period of more than a decade, the Commission would have to bar PECO from recovering any added costs for rising fuel costs, for general inflation and bar any charges at all for Limerick 2 during the decade to fully protect the economy.

In deference to the financial needs of the utility, I have recommended a slightly modified plan which would permit the company to recover reasonable rising costs in the normal course of events, in other words, reasonable increases in operations, maintenance and capital costs other than those associated with Limerick 1. The Commission should recognize that my recommended seven-year phase-in and ten-year recovery period will still mean that the Philadelphia economy will be burdened because we will allow for increases in rates beyond those projected as safe for the economy by Dr. Schinnar in his study. The seven-year phase-in period is the bare minimum required to provide reasonable protection for the City's ratepayers.

Q. From your knowledge of these issues, can you tell us whether the findings of the City's econometric witness provide an accurate portrait of the consequences of increased rates?

A. Yes. If anything, the findings are conservative. When the rates of one city far exceed those of competing cities, the area with high rates will, of course, lose some current or potential buinesses. This shift of operations from a company's operations from Philadelphia to other, lower-cost cities is an effect which, in part, adds to the job losses projected by Dr. Schinnar's econometric studies.

Q. Is business flight a serious threat to Philadelphia?

A. Yes. To evaluate the probability of the problem of business flight, consider that we can expect PECO's rate for businesses to rise by a minimum of 37.6% by 1989 under PECO's rate plan. Small commercial and industrial customers will pay over 14 cents per kilowatthour in the fourth year of the rate plan (1989), assuming no other increases for ECR, general inflation or Limerick 2. We expect PECO's rate for these customers to exceed the national average by more than one-third in 1989.

Q. Are Philadelphia's families and individuals particularly vulnerable to higher rates?

A. Yes. As shown in Exhibit GP-1, the last Census found 341,000 Philadelphians with incomes below the poverty line. One in four people in Philadelphia live at or near the poverty line. In addition, 26,000 families in the Philadelphia urban area (Pennsylvania portion) lack their own complete plumbing. The Company's plan will raise a typical residential bill (non-heating) to $941 per year.

Other states

Q. What have other utilities proposed and other regulators adopted to phase-in electric rates?

A. PECO requests permission to place the entire cost of Limerick 1 in rates in the third year of its plan. The public only receives the putative benefits of their plan for only two years. In the fourth year, due to the deferred revenue surcharge, rates will rise **above** rates determined by the normal ratesetting formula. This barely can be called a phase-in plan at all.

By contrast, some other states have adopted much lengthier periods for phase-ins and deferred charge recovery. These are a few examples:

Mississippi - Mississippi regulators have imposed on Mississippi Power and Light [MPL] a phase-in far longer and more restrictive than PECO's plan. By the Mississippi plan, MPL **may not commence to charge customers for one third of its portion of the Grand Gulf plant until the tenth year of the rate plan.** The deferred portion, which has been "inventoried," will be collected over the remaining life of the plant. Twenty-three percent of MPL's Grand Gulf allocation may not enter the rates until the fourth year of the rate plan, until which time it is also "inventoried." The Mississippi plan would permit the utility to charge only these portions of its Grand Gulf share (approximately) during the first three years of the phase in plan:

Year 1 - 13%.

Year 2 - 22%.

Year 3 - 35%.

As shown, by the third year of the Mississippi rate plan, MPL may only charge 35% of its Grand Gulf costs. This contrasts with PECO's demand for 100% of Limerick in Year 3. The Mississippi Commission, in deciding on this restrictive phase-in/inventory plan, stated, "The Commission takes judicial notice of the high unemployment in our state and, in particular, the service area of this Company. This Commission cannot ignore such testimony in reaching its decision in this case and it has been considered." [MissPSC Case U-4620, September 16, 1985 at page 5.]

Kansas - In 1985, Kansas Gas and Electric requested an increase in its rates to recover its one-and-a-half billion dollar investment in its share of the Wolf Creek nuclear plant. On September 27, 1985, the Kansas Corporation Commission reduced KG&E's rate base request by $910 million. Despite the unprecedented write-off for an operating plant, the Commission still felt compelled to adopt, in the same order, a four-year phase-in plan (the company had proposed five years), stating,

"As noted in prior portions of this order, there was substantial evidence from the public and expert witnesses that a significant increase in rates would have serious consequences on ratepayers and the economy." [Order in Docket 84-KG&E-197-R at page 133.]

New Mexico has adopted, and other states are considering, open-ended plans which include the concepts of "inventorying" or "economic depreciation." In the case of New Mexico, the utility commission will prohibit Public Service of New Mexico from including its portion of the Palo Verde Nuclear plant in rates until such time as the capacity is needed. [PECO response to City Interrogatory I-1(b), AICPA "Issues Paper" at page 40.]

Q. Are you endorsing the plans adopted by other commissions?

A. No. Our recommendations are based on our particular analysis of the Philadelphia economy and PECO's finances. Each commission faces parculiar circumstances and each order takes on other matters which may effect the phase-in or inventory program. Nevertheless, it is important for the Pennsylvania commission to be aware of the phase-in plans adopted in other states as a reasonable measure of the range of possibilities. Our proposal of a seven-year phase-in is very conservative in light of what has been adopted or proposed in some other states.

IV. RECOVERY OF DEFERRED REVENUES

Q. The Company has proposed that it recover its deferred revenues as a surcharge during the fourth, fifth and sixth year of its rate plan. Do you agree with this method for recovering deferred revenue?

A. No. The period of recovery of deferred revenue is as important to the economy of Philadelphia as us the period of the phase-in itself.

While PECO witnesses have referred to this as the "phase-out" period, that is a misnomer because, under PECO's plan, the rates rise during this period, not fall. The period for recovering deferred revenues is best called, "the recovery surcharge period."

The Commission should reject PECO's recovery surcharge period because,

1. PECO's three-year recovery period is far too rapid and too steep for the economy, costing ratepayers at least $223 million per year **on top of** the $671 million increase for Limerick 1.

2. Like the phase-in, it is not accompanied by any financial analysis of alternatives nor any econometric study whatsoever.

3. The surcharge, 1989 through 1991, is timed to coincide with the completion of (and charges for) Limerick 2. PECO could not have chosen a worse time for a surcharge from the point of view of the economy.

4. A surcharge, coming at or near the end of the Limerick 2 project, is unnecessary to support the utility's cash flow needs.

5. Other commissions and utilities have proposed and adopted far longer recovery surcharge periods.

Q. Does the utility need a rapid recovery surcharge period?

A. No. Following the completion of Limerick 2, the cash needs of the company are minimal. Indeed, PECO's internal cash flow will adequately take care of all its new capital needs for most of the decade following the completion of the plant. Thus, while the Company may be entitled to a recovery of the deferred revenue, there is no financial need which would argue for the especially rapid recovery proposed by the Company.

If the Commission adopts my recommendation, the recovery surcharge period will begin in year 8 of the rate plan, 1993. I have recommended a recovery surcharge a ten-year period. Exhibit GP-2 indicates that, for the ten-year period 1993 through 2002, the Company projected that it will need to raise only about $867 million in new capital, all of it at the end of the period. Assuming a seven-year phase-in, the ten-year surcharge will total just under $2 billion. After taxes, this surcharge would produce a cash flow nearly equal to all the new capital PECO will need for the period, somewhat less than $100 million per year.

The exhibit does not suggest that the utility may avoid all borrowings to refinance its debts because of the surcharge cash flow. That is because the utility will pay income taxes on the surcharge when collected, not when booked and will incur some out-of-pocket interest charges to capitalize the deferral. Nevertheless, the exhibit shows that, due to the completion of its nuclear building program, the future cash flow needs of the Company are relatively small and therefore provide no basis for a large and rapid recovery surcharge.

Q. In comparing the seven-year to the five-year phase-in plans, you begin the recovery surcharge period in 1993, the eighth year, in both cases. Must the recovery surcharge period begin immediately after the phase-in?

A. No. There is no compelling reason to begin the recovery surcharge immediately following the end of the phase-in period. In this case in particular, there are two reasons to hold off the recovery surcharge until the seventh year: the threat of Limerick 2's addition to rates in the fifth or sixth year of the rate plan, and Dr. Schinnar's measurement of job losses if rates are raised significantly or rapidly.

Q. Have other commissions adopted longer surcharge recovery periods than proposed by PECO?

A. Yes. Indeed, utilities themselves have proposed longer periods.

For example, Kansas Gas and Electric proposed to recover the deferred portion of its revenues **over the remaining useful life of the plant**, Wolf Creek. (The Kansas commission, having denied the Company a lion's share of the plants' cost, allowed a short recovery period for the small sums phased-in.)

The Mississippi commission's complex phase-in plan contained two separate provisions for deferred recovery. A portion of the Grand Gulf charges will be phased in over four years. The deferred revenues from this part of the phase-in will be recovered over six years. The portion of the plant which will not begin to enter the rates until the tenth year will be charged off over the remaining life of the plant.

Arkansas' Grand Gulf phase-in plan also calls for amortizing deferred revenues over the remaining life of the plant.

All this indicates that commissions have great latitude in establishing a recovery surcharge period. Therefore, the economic interests of the ratepayer should determine the recovery period length, limited only by the financial needs of the utility.

Q. What other principle of regulation applies to determining the length of a phase-in or recovery surcharge period?

A. The principle of **intergenerational equity** is a key element in determining the length of a phase-in plan. For example, one utility executive recognized the intergenerational problem in stating that his company's rate phase-in plan, "...would spread both the benefits and the costs of nuclear generation more evenly between current and future customers." [Mr. Lee Randall, New Orleans Public Service Company, May 17, 1985.]

Whether the New Orleans' utility's plan would accomplish the objective of intergenerational equity, I cannot say. However, the principle is especially important in charging for nuclear plants whose benefit (fuel savings) begins low relative to the high initial fixed charges. A phase-in plan should recognize that customers a decade from now will be charged less for the plant (due to its depreciation) while they will receive greater benefits from the plant, assuming fuel costs rise. Therefore, phase-in and recovery surcharges should reflect the differences in costs and benefits between current and future customers.

In the case of Limerick 1, calculations produced by PECO's own witness, Mr. Hieronymous, indicate that the Limerick 1 "breakeven" point in producing net cumulative benefits for consumers is the year 2006 or the year 2008. This is illustrated in Exhibit GP-3. The calculations by Mr. Hieronymous indicate that the plant will not begin to show a net savings over cost until the ninth year of operation -- and Mr. Heironymous' calculation may be considered optimistic. Therefore, by PECO's own calculation, intergenerational equity suggests a much longer phase-in and recovery period than proposed by either the Company or myself if the costs of Limerick were divided equitably between present and future ratepayers.

Q. Are there grounds to require a longer phase-in period than ten years?

A. Yes. In principle, given the great burden on ratepayers of Limerick 1 and the additional burden of Limerick 2, it would be appropriate, in the first instance, to require the Company to recover Limerick 1 deferrals over the remaining life of the plant. I have recommended a relatively short period of ten years based on the following assumptions: 1) the Company will earn no return, interest or profit on the sums deferred, 2) the Commission will require the Company to reduce and phase-in Limerick 2 charges over a reasonably long period when that plant is complete, 3) the recovery period does not begin until after Limerick 2's completion, and 3) I assume some write-off of Limerick 1 as a result of this proceeding.

Were these condition not met, the Commission should then consider a longer recovery period to protect ratepayers.

V. FASB 71 AND THE PHASE-IN

Q. Mr. Farling of Coopers and Lybrand, PECO's auditor, has testified on the effects of potential changes in Statement 71 of the Financial Accounting Standards Board [FASB] in regards to phase-in plans. For example, he gives the impression that a long phase-in period may not be approved by the FASB. Do you agree with the thrust of Mr. Farlings testimony?

A. Mr. Farling gives the **impression** that a longer phase-in period than recommended by the Company may be limited by proposed changes in FASB 71. This is not true. The Commission is in no way prohibited from adopting the City's phase-in proposal by current or proposed reporting standards.

1. The rules of financial reporting do not now and never should limit regulators' authority to establish rates or its own accounting methods for rate-setting purposes.

2. Under FASB 71, my recommended phase-in proposal, though longer than the Company's, will permit the

Company to report both deferred income and current income as if it were collected currently.

3. Mr. Farling's prognostications on changes to FASB 71 are speculative, based on proposed amendment to FASB 71 in the early stages of discussion.

4. If Mr. Farling's predicted changes do occur, PECO may then have to **shift** the year of income recognition, not write-off income permanently.

5. If Mr. Farling's predicted changes do occur, PECO's own phase-in plan fails to meet the standards to permit current recognition of deferred income.

Q. Should this Commission constrain its actions on the basis of proposed changes in FASB 71?

A. No. I accept Mr. Farling's expertise on questions of financial reporting. However, it is extremely important that this Commission maintain the distinction between accounting methods used to set just and reasonable rates and the method by which the resulting income is reported.

Accounting for rate-setting and accounting for financial reporting purposes has never been identical. To establish a "test year," for rate-setting purposes, utilities adjust their regulatory income statements and balance sheets to include such constructs as "normalizations," "annualizations," "disallowances," "amortizations" and any number of adjustments to books which are not recognized at all for financial reporting purposes. These adjustments are common and necessary for purposes of regulation.

For example, regulators generally do not allow utilities to book political lobbying costs as an expense, though, in fact, it is an expense for reporting purposes. For setting rates, then, the utility's income is set at a higher level than reported. On the other hand, the utility cannot book this additional income for reporting purposes. The FASB's prohibition on reporting such income does not prevent any commission from deducting lobbying expense.

Regulators must set accounting rules for rate-setting for the purpose of establishing reasonable rates. How those rate revenues are **reported** are the domain of Mr. Farling and the company's auditors. One has no direct influence on the rules of the other.

Q. Should the Commission ignore FASB rules?

A. No. Commissions always have an indirect concern with how their actions are reported to the financial community. However, the FASB is not now, and should not become, a shadow regulator.

Q. For reporting purposes, would a longer phase-in period meet the current standards of FASB 71?

A. Yes. Mr. Farling states at page 8 of his testimony that, "... the Company's phase-in plan, as filed, meets the present requirements of Statement 71." What he fails to say is that a longer phase-in plan, such as proposed here, would also meet those requirements.

Q. What are the changes to Statement 71 proposed by the FASB?

A. The FASB has **not proposed any** changes as yet. Mr. Farling's discussion is based on his speculations on the fate of a year-old proposal by a subcommittee of the AICPA. It has not approached the "proposal" stage, that is, as of this writing, no Exposure Draft has been issued for comment. (See Mr. Farling's response to City Interrogatory I-1.) The Wall Street Journal has reported that a rule may not be issued until 1987.

Q. If the changes imagined by Mr. Farling are adopted, will PECO be required to permanently write-off phase-in revenues?

A. No, not at all. The question here is **not** whether PECO may adopt a rate phase-in plan of seven years or longer. The question is **when** PECO may record revenues which it may receive under the plan.

Specifically, PECO hopes to report both the current increases in revenues for Limerick 1 as well as deferred revenues as current revenue. In other words, PECO prefers to report to stockholders a $670 million per year increase in revenues beginning immediately. The Company would rather not defer this revenue for reporting purposes.

Q. What would be the consequence to PECO have having to defer the reporting of some of the phase-in revenue?

A. The effect on reported revenue would be minor. Over time, there is no net effect at all. (See Exhibit GP-4.)

The FASB staff has booted about the idea of "discounting" the value of deferred revenue. If this idea is ultimately adopted, PECO would have to slightly reduce its reported income in the first year of the increase, as Mr. Farling notes. However, Mr. Farling leaves out the other half of the story: if PECO discounts revenues in the first years, the utility will report **higher** revenues in later years when the funds are collected from ratepayers.

Q. Have you calculated the effect of this "discounting" requirement?

A. Given that the requirement is speculative, we can only estimate the effect, not measure it. I have done such an estimate in Exhibit GP-4. For illustration purposes, I use a phase-in plan along the lines proposed by the Company. I have discounted revenues by a net-of-tax 6%. Under current FASB rules, the Company could book additional revenue of $670 million per year in each of the next six years. If discounting is required, PECO will report about $128 million less revenue in the first two years of its phase-in plan; however, the discounting requirement will also result in PECO's reporting $128 million **more** in revenues in the fourth, fifth and sixth year of the phase-in.

The same is true of longer phase-in plans. If discounting is required, then a small fraction of current revenue will be reduced slightly -- balanced by an equal increase in reported revenues in later years.

Therefore, on net, PECO's finances are not harmed by the change in deferred revenue accounting. Indeed, PECO's financial profile may be boosted by one measure: under the discounting method, the Company's reported return on equity is slightly higher because the "asset" of accumulated deferred revenue is reduced.

Thus, the Commission need not fear a "discounting" requirement for financial reporting in establishing the rate phase-in plan.

Moreover, the FASB may not require any "discounting" of revenues deferred for less than ten years.

Q. Why would PECO's own plan fail to meet FASB standards if the AICPA's suggestions are ultimately adopted?

A. Mr. Farling bases his speculations about changes in FASB

71 based on an AICPA Issues Paper [Attachment to City Interrogatory-I-1(b)]. Page 46 of the Issues Paper would **require the utility to perform an economic study** to support, "the economic basis for delaying the recovery of current costs...." As I have discussed, PECO has performed no economic study of its rate plan. Therefore, PECO would be barred from currently reporting deferred revenue no matter what this Commission's actions.

VI. PECO'S FINANCES

Q. Can PECO sustain the longer phase-in and recovery period you recommend?

A. Yes. To understand PECO's ability to withstand a longer phase-in period, it is important to review the very basic change in PECO's financial profile which result from the Company's completing Limerick 1. No matter the phase-in period or recovery surcharge period, all of PECO's financial indicators will improve dramatically over the next few years as a result of Limerick 1's completion.

Q. How does completion of Limerick 1 change PECO's financial condition and improve its ability to sustain a phase-in?

A. The testimony of PECO witnesses Abrams and Paquette is repleat with discussion of the very difficult times faced by PECO during the late 1970s. (It was at this time that the Company decided to delay completion of the plants.) Yet, as Mr. Paquette notes,

> We were able to raise $3.3 billion in new capital from 1970 to 1979 under extremely difficult conditions.

[Paquette, Prepared testimony at page 48.]

Compared to that period, the coming years are far less risky to PECO's investors. Even with a longer phase-in and phase-out period, the company's indicators will be far superior to those suffered by the Company in the late 1970s. No matter the length of the phase-in period, completion of the plant means that,

- **Cash flow rises.** The Company begins the collection of depreciation, return, operations and maintenance charges and the amortization of AFUDC, even if a portion of such charges are phased in. (Under our proposed phase-in plan, the Company may immediately increase base rates by $307 million.)

- **Cash outflow falls.** The end of the project reduces borrowing needs dramatically, bolstering such indicators as interest coverage and internal cash generation to construction spending.

- **Project risk ends.** The unknowns of project cost, project completion date and the sum of recovery will have passed into history. There is now less inherent risk in PECO's securities on a forwardgoing basis.

Due to the end of construction of Limerick 1 (and the impending end of Limerick 2 construction), the Company will have a financial profile during the phase-in period superior to the construction period of the late 1970s.

Q. Describe the improvements in the Company's economic profile and the way in which a longer phase-in period will effect those improvements, beginning with a reveiw of interest coverage.

A. **Coverage ratios** - From 1977 through 1979, the Company's interest coverage (SEC method) dropped from 2.4x to 2.1x with AFUDC excluded. In the first year of the rate plan, coverage will jump to 3.2x. Excluding AFUDC income, the improvement is more dramatic yet, with the Company's interest coverage rising from 1.5x to 2.9x for the first year of the rate plan. See Exhibit GP-5.

The coverage ratio for Standard and Poor's ratings are expected to rise to 2.9x in the first year of the rate plan. While the Company's goal is merely maintenance of a BBB rating, such a coverage puts PECO in the range for an "A" rating, 2.5x to 4.0x.

Mortgage coverages will rise from a high of 2.3x during the late '70s construction period to a strong 4.6x, as shown in Exhibit GP-6.

Q. Won't extending the phase-in of Limerick 1 rates from three to seven years eliminate this improvement in coverage?

A. No, the effect, if any, will be negligible. As shown in Exhibit GP-7, a seven-year phase-in will require the company to capitalize only $32 million more during the year for deferred revenue (annualized) than it would under its own three-year plan. This is equal to less than 1% of the Company's total debt. Even if the entire additional amount is funded by debt, interest costs will rise by only 1%, a sum too small to notably change the coverage ratios.

Q. What other indicators will improve as a result of the end of construction?

A. The quality of earnings and assets will rise sharply. For example, construction work in progress will fall from a precarious 147% of book equity to approximately 37% upon including Limerick 1 in rates, no matter the length of phase-in. See Exhibit GP-8.

A very significant aid to the Company's quality of earnings is the reversal of AFUDC charges. During the plant's construction, the income represented by AFUDC is often discounted by investors as a questionable, non-cash asset. With Limerick 1's completion, depending on disallowances for managerial imprudence, the approved portion of the AFUDC is collected from ratepayers (as part of the depreciation charge). Because the AFUDC was previously reported as income, the cash collection of the sum does not appear as an addition to income during the phase-in period. It is interesting to note that utilities commonly complain about the lack of cash earnings due to AFUDC accounting. In PECO's case, cash earnings will be **higher** than reported due to the reversal of AFUDC on Limerick 1.

As shown in Exhibit GP-9, AFUDC charges represented 72% of the Company's reported net income in 1984. For 1987, AFUDC will make up less than 52% of earnings. The 1987 figure may be high as it is based on FINAN projections which assume 50% of Limerick common will be charged to Limerick 2. (Also, given accounting customs, I have not reduced the 1987 AFUDC figure for the reversal of Limerick 1 AFUDC charges.) Following completion of Limerick 2, during the "phase-out" period we have proposed, the Company's AFUDC will fall to a minor sum -- 6% in 1993.

Q. Won't investors discount deferred revenue from a phase-in as they would AFUDC?

A. No, these are not financially equivalent charges. The problem with AFUDC income is that the investor does not know **if nor when** the AFUDC income booked will be received. In PECO's case, for example, rational investors must have assumed that some portion of the AFUDC booked on Limerick 1 and 2 would be written off. That is why accrued AFUDC is a questionable asset. Also, because of the Company's inability to complete the plant in a timely manner, investors could not know when they would be able to recover the AFUDC charges.

Deferred phase-in revenues do not carry these risks. The Commission, by establishing both the sum and schedule for recovery, virtually eliminates questions about the value of the asset represented by the accumulated deferrals.

Therefore, accumulated deferred revenues are no more (nor less) risky than any other asset which the commission has approved for amortization. Risk is nearly eliminated.

(This does not guarantee that there will be an exact match of deferred revenues booked and ultimate collections -- just as there is no exact matching of any book charge and the sum actually collected. For example, the Commission may permit a company to depreciate a truck over 5 years, but the ultimate collection from consumers may not exactly match the depreciation charges for that asset.)

Q. How will the longer phase-in plan you have proposed affect the earned return?

A. As shown in Exhibit GP-10, the effect is minor. The pro-forma return for 1986 will decline from 15.5% to approximately 15.4%, the small adjustment due to the additional cost of funding the larger sum deferred. The adjustment will grow slightly each year of the phase-in. However, this small adjustment to earned return is a reasonable burden for shareholders to bare to protect the economy of Philadelphia. We should keep in mind that utility's own financial success depends on the long-term growth of the City's economy.

Q. How will a longer phase-in effect the Company's internal generation of funds?

A. A phase-in has its greatest effect on internal cash flow indicators, especially the ratio of internally generated cash to construction spending. In the phase-in period, cash flow will increase but at slower rate than the Company had planned. (On the other hand, cash flow in later years will be higher under our plan than the Company's.)

Exhibit GP-11 shows that for the first year of the phase-in plan, the Company's internal cash flow under its three-year phase-in will equal about 58.7% of construction spending. If a seven-year plan is used, internal cash declines slightly to approximately 47.2% of construction spending. To obtain a perspective on the meaning of these statistics, I've noted on the exhibit that during the Limerick construction period of 1977-80, internal sources of capital averaged only 21% of construction spending. Thus, the longer phase-in does not prevent a major improvement in this cash flow indicator.

Moreover, the Company's internal cash generation rises each year under any of the phase-in plans. The Company's financial forecast for investors shows internal cash rising to 69% of construction spending in 1989, despite the heavy burden of Limerick 2. See Exhibit GP-12.

Q. Will the Company's cash flow be sufficient to complete a reasonable construction program?

A. A longer phase-in will only slow, not reverse, the improvement in the ratio of internal cash to construction spending. Shortening the phase-in from seven to three years will have only a minor effect compared to terminating the Limerick 2 project. As shown in Exhibit GP-13, Limerick 2 spending between 1986 and 1989 will absorb at least 95% of the PECO's internally generated capital.

Given that PECO successfully completed Limerick 1 with far weaker indicators, it is doubtful that lengthening the phase-in period will have any notable effect on PECO's ability to obtain capital for Limerick 2. I am neither endorsing nor rejecting the completion of Limerick 2. However, should PECO believe that a reasonable phase-in plan puts Limerick 2 beyond its means, that is no reason to reject the phase-in. The phase-in should not be shortened to provide a special cash subsidy for the completion of Limerick 2.

The Limerick project should stand or fall on its merits. The Commission should not subsidize Limerick 2 with permissive rate treatment of Unit 1 to the harm of the Philadelphia economy.

Q. Has PECO provided evidence that a longer phase-in will prevent it from funding needed construction projects?

A. No. First, the Company did not calculate the effects of a longer phase-in or recovery period. In response to the question, "Provide any minutes or other documentation of the Company discussion(s) of 'various lengths of time for the phase-in' referred to in City Exhibit 1," Mr. Williams replies,

> "There are no minutes or documents of the Company's discussions of the various lengths of time for the phase-in." [DR-RCW3-GEC(12/31/85).]

No FINAN model projections were run nor hand calculations made of the financial indicators resulting from other phase-in periods.

Q. Will PECO have any difficulty in obtaining the external funding it desires?

A. If there is any difficulty, it will result from the self-inflicted burden of Limerick 2 and other matters not directly affected by the phase-in period. For example, Moody's, despite improving indicators, held PECO to a Baa3 rating, commenting,

> "This rating reflects our concern about the increased cost of the Limerick nuclear plant because of further delays, uncertain prospects for support from the Pennsylvania Public Utility Commission with regard to Limerick Unit 2 and continued weak debt-protection measurements, despite the granting of a full-power operating license for Unit 1." Moody's Bond Survey, November 18, 1985, page 2106. [Contained in PECO response to City Interrogatory I-14.]

Moody's also discussed at length Limerick 1's cooling water problem. A longer or shorter phase-in will not remove the distrust of investors for nuclear construction projects such as Limerick 2 nor will it a shorter period provide cooling water for Unit 1. The Company's securities have improved -- the common stock rose 16% in 1985 -- but, the company still faces nuclear construction and operation risks which cannot be eliminated by shortening the phase-in period.

Q. Are there indications that the Company can successfully market new securities?

A. Yes. Despite the uncertainties facing the company until the completion of this proceeding, PECO announced on December 9 that it successfully re-funded, through a tender offer, $216 million in high-cost debts. The coupon rates on these bonds ranged from 17-5/8% to 18-3/4%. The Company expects to obtain new debt at cost of only 12-1/2%. This refunding is the sign of a financially healthy utility. Troubled utilities, such as Maine Public Service, a Seabrook plant owner, have not been able to reduce their borrowing costs in such a manner.

Also, during the Limerick 2 investigations, PECO's Mr. Rimmerman insisted that the Company had the ability to finance Limerick 2 construction even if it were not granted 100% recovery of Limerick 1 charges. [Cited in the Recommended Decision of ALJ Turner, 7/12/85, page 334.] If the Company can sustain a write-off, a permanent loss of revenue, it can sustain a longer phase-in which merely shifts the period of revenue collection.

The Company has also stated, in response to City Interrogatory I-31, that its creditors and bankers have given no indication that PECO will have trouble obtaining the Company's projected capital needs.

Q. Have other fundamental conditions changed for PECO other than the completion of Limerick 1?

A. Yes. Capital-intensive firms are vulnerable to the risks of inflation. As shown in Exhibit GP-14, the GNP deflator has fallen from 9.2% in 1980 to 3.3% for 1985.

Securities ratings

Q. How will PECO's securities ratings fare if the Commission does not grant PECO a phase-in which is as swift as that sought by the Company?

A. If recent, similar cases in which I've participated (in Kansas, Maine and Ohio) are a guide, then the Commission need not fear a de-rating if the phase-in period is lengthened to a reasonable period, even if the phase-in is coupled with some deductions for imprudence.

On September 27, 1985, Kansas regulators denied Kansas Gas and Electric a return on nearly $1 billion of the utility's $1-1/2 billion investment in the Wolf Creek nuclear plant coupled with an 8-year phase-in/phase-out plan.

Despite this newsmaking stern treatment of KGE by the Kansas regulators, less than one month after the decision, Standard and Poors **upgraded** the utility's securities from BB+ to BBB-.

The case of Central Maine Power should also provide this Commission with assurance that less-than-lenient ratesetting will not harm PECO's ratings. [Order and

Stipulation, Case 84-120, 1985.]

Q. What does the experience of Central Maine Power [CMP] tell us about the possible reaction of the financial community to a longer phase-in (and phase-out) period for PECO?

A. On May 31, 1985, CMP, settled a rate proceeding by agreeing to write-off 30% of its investment to date in the Seabrook 1 nuclear plant. In addition, the utility agreed to write-off 40% of its investment in Seabrook 2 and limit the remaining amount of Seabrook 1 charges in its rates in a special phase-in plan.

Shortly, thereafter, the rating firm of Duff and Phelps UPGRADED CMP's ratings. In addition, despite the large write-offs, the utility's stock has soared. CMP's stock rose 46.2% in 1985.

In that rate proceeding, Central Maine Power presented the testimony of Mr. William Abrams of Duff and Phelps, just as PECO is presenting his testimony here. As in the case before us, Mr. Abrams stated (for CMP) that, in establishing ratings, his firm considers, "financial integrity" and regulatory policy in determining securities ratings. Indeed, the opening of his testimony on behalf of CMP [Case 84-120, submitted August 31, 1984] is virtually word-for-word the testimony he has presented in regards to PECO.

In his testimony for PECO, Mr. Abrams states,

> "Investors, investment advisors, and rating agencies such as Duff and Phelps regard regulation as a key factor in assessing a utility company. ...Important considerations are the allowed rates of return; proper recognition of test year sales, expenses, and rate base; the relationship of the test year and timing of the rate increase to the period when those rates will be in effect; and the recovery of capital." [Mr. Abrams prepared testimony for PECO at pages 7 and 8.]

In his testimony for CMP, Mr. Abrams stated,

> "Investors, investment advisors, and rating agencies such as Duff and Phelps regard regulation as a key factor in assessing a utility company. ...Important considerations are the allowed rates of return; proper recognition of test year sales, expenses, and rate base; the relationship of the test year and timing of the rate increase to the period when those rates will be in effect; and the recovery of capital." [Mr.

Abrams prepared testimony for CMP at pages 9 and 10.]

It is to Mr. Abrams' credit that he clearly believes the same standards apply to PECO as to CMP. Given that his firm upgraded CMP in the face of a 30%-to-40% write-off, the Pennsylvania Public Utility Commission can feel reasonably assured that the relatively benign action of lengthening the phase-in and phase-out periods will not cause a deterioration of PECO's bond ratings.

Q. What role does regulation play in securities' ratings?

A. During the Maine proceeding, Mr. Abrams stated, in response to the question, "What, in your opinion, is necessary for Central Maine to improve its financial integrity?," he answered,

> "The cash quality of earnings and the related quality of regulation are two of the principal factors influencing the cost of capital, not only debt but also equity." [Mr. Abrams' prepared testimony for CMP at page 31.]

Given that Mr. Abrams' firm upgraded the utility after the CMP write-off order was entered, we can assume that his rating agency does not believe that a 30%-to-40% write-off is an overwhelming regulatory impediment.

Q. Do you mean to state that rating agencies will be pleased with this Commission ordering a large write-off and very long phase-in?

A. Any temporary distress to cash flow caused by the phase-in will be viewed in context of the much more important improvement in PECO's overall financial profile. Thus we find that, after large write-offs for nuclear plants and the imposition of phase-in plans, many utilities -- such as KG&E, CMP, PacifiCorp, and Dayton Power and Light -- find their securities upgraded.

Q. Why is it that utilities are often upgraded following a large nuclear plant write-off?

A. It is not that investors are pleased with the write-off but that the regulatory adjustments -- which treat sunk costs and past events -- are less important than the concomitant improvement in a company's financial outlook. The end of a nuclear plant's construction marks the end of uncertainty, a rise in cash flow and an improvement in the cash quality of earnings. Such improvements are more important to the financial health of a utility than the number of years in a phase-in plan.

VII. OTHER PHASE-IN ACCOUNTING ISSUES

Q. What are the topics of this section of your testimony?

A. In this section, I discuss three critical accounting aspects of PECO's proposed phase-in plan:

1. The accounting of projected Limerick 1 fuel savings.

2. The so-called, "Unrecovered Revenue Rider."

3. PECO's plan, with which I concurr, to forego interest on deferred revenues.

A. Guarantee the Fuel Savings

Q. The Company has projected that consumers will save an average of $207.5 million in fuel costs in the first three years of the rate plan. Should the Company be required to guarantee that savings?

A. Yes. The Commission should require PECO to guarantee its projected savings of $207.5 million for each of the first two years of its rate plan. This is similar to the requirement placed on PECO by the Commission in regards to the Salem plant. In its last PECO rate order, the Commission imposed an obligation on the Company to produce an annual fuel savings of $101 million in its operation of the Salem plant. [Order of January 24, 1985 at page 146.]

For the remainder of the operating life of Limerick 1, the Commission should obligate the Company to guarantee fuel savings of a sum which would result from the plants operating at a capacity factor of 65%. This factor may be calculated in a manner similar to the method adopted by the Commission for Limerick 2. [Opinion and Order, Limerick Unit No. 2 Nuclear Generating Station, I-840381, December 5, 1985.]

Q. Why should the Commission require PECO to guarantee Limerick 1 fuel savings?

A. A guarantee of fuel savings is particularly appropriate for the Limerick 1 plant:

1. The City's phase-in proposal -- as is PECO's -- is based on the assumed $207 million per year fuel savings. Were consumers to pay for Limerick but

receive little or no fuel savings, the macroeconomic effect would be devastating.

2. PECO has crafted its plan in a somewhat unusual manner. Rather than place increasing portions of Limerick 1 in rates, it has chosen to phase-in the **incremental revenue** required by PECO after deduction of the fuel savings. While the total rates will rise by 9% under PECO's plan in the first year, base rates actually rise by 18%. Should PECO fail to keep Limerick on line, then, consumer bills will increase by double the sum predicted by PECO, with devastating economic effects. PECO's rate phase-in plan is, in effect, a promise to its ratepayers.

   The only value to ratepayers of Limerick 1 at this time is its fuel savings of $207.5 million per year. According to PECO Appendix A of its, "Statement of Reasons," the Company is asking to charge consumers $849 million per year for added profits for stock and bondholders for Limerick 1. It is reasonable to hold the Company to its promise of fuel savings in return for receiving the rewards of a return on equity and debt for Limerick 1.

3. Whether or not PECO can operate the plant continuously at rated capacity is still an open question given the failure of the Company to secure an adequate supply of cooling water. The public should not be asked to indemnify the utility against the consequences of its business decisions.

Q. Should the Company be penalized for the lack of cooling water?

A. This is not a question of managerial prudence or imprudence. Plant neither used nor useful should be charged to ratepayers. If Limerick 1 is only partly used and useful due to a lack of cooling water, then the company's revenue requirement should be adjusted proportionately.

B. Consumer "Debt" Created by the Unrecovered Revenue Collection Rider.

Q. Should the Commission adopt PECO's proposed, "Unrecovered

Revenue Rider?"

A. No, the Commission should reject PECO's method for recovering its deferred revenues. PECO should, of course, be permitted to recover revenues deferred during the phase-in; but the proposed method is unprecedented, violates basic regulatory principles, and threatens to raise rates beyond PECO's phase-in plan projections.

Q. Describe the PECO plan as you understand it.

A. During the phase-in period, PECO would accumulate all revenues not immediately charged to ratepayers (the deferred revenues) to a balance sheet account. This deferred revenue will be charged over the fourth, fifth and sixth year of the rate plan as a surcharge to rates (an amortization).

To this extent, PECO's plan is similar to other phase-in plans.

PECO's plan deviates in one major respect: if, during the next three years, 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.

Thus, the surcharge may (and probably will) exceed the $670 million now predicted by PECO.

Q. What is wrong with this plan of additional surcharges?

A. First, the PECO plan violates the regulatory prohibition against retroactive ratemaking. If PECO has underestimated its test year revenues for 1986, PECO should not, in 1989, reach back and recover 100% of the shortfall of 1987. The prohibition against retroactive ratemaking rightly prevents ratepayers from indemnifying a utility against its miscalculations.

Second, and most important, this system of creating a consumer "debt" to PECO will permit the utility to raise rates by a greater amount than it concedes in its filing. The Company implies by its press releases and by illustrations in its testimony that the surcharge period will last only 3 years at a cost of $670 million. However, if the economy contracts in the face of higher rates and electricity sales fall, the company's rider will permit it to continue the deferred revenue surcharge for longer than three years. The utility should not be given approval for a phase-in plan which, in fact, has a potentially higher cost than it admits.

Because the rider permits rates to rise by a greater sum than predicted by PECO, permitting this retroactive surcharge will exacerbate the economic harm of the rising rates.

As businesses reduce usage or abandon Philadelphia, the surcharge will rise, leading to more business flight and again raising the surcharge. By PECO's method, we do not know high the rates will go. Higher rates will chase economic decline which will lead to further economic decline.

Q. Why else do you object to the PECO deferred revenue recovery method?

A. PECO would track revenue by customer class. Those customer classes which conserve the most electricity will be punished with the highest surcharges during the deferred recovery period. Despite the claim that customer classes (excepting street lighting and public transit) will receive the same percentage increase in rates to pay for Limerick 1, in fact, the highest charges will go to the group that conserves the most.

Q. How should PECO recover its deferred revenue?

A. The accumulated deferred revenue should be amortized no differently than any other asset. For example, a truck costing the company $10,000, if amortized over 10 years, adds $1,000 to depreciation expense for the test year in which rates are figured. The Commission does not guarantee that revenues over the next ten years will match exactly the $10,000 spent on the truck. There is no reason to treat the asset of deferred revenue differently from other amortizable assets.

Q. Have other states used PECO's method of imposing a "debt" obligation on consumers for deferred revenues?

A. No. I have found none in my experience and, in response to City interrogatories, neither the Company nor its auditor can name one state where such a plan has been adopted. [See PECO response to City Interrogatories 1-3 and I-6.]

Q. Mr. Farling recommends, "First, it is paramount that the rate order contain indisputable language assuring the Company of recovery from the customers of all costs recognized as unrecovered revenue under the rate phase-in plan." [Mr. Farling's Testimony at page 11.] Does this require the Commission to adopt the system of consumer indebtedness proposed by PECO?

A. No, not at all. In order for PECO to book capitalized deferred revenue as an asset (assuming such a goal is desirable) the utility does need some form of recognition of this asset from the Commission. However, a typical order granting amortization of the deferred revenue to rates in later years should be sufficient, without the need for ratepayer indebtedness as sought by PECO.

While Mr. Farling states that, "In my opinion, the Company's plan, if adopted by the Commission, as filed, meets these [general accounting] requirements," he does not state that the usual methods of rate-setting fail the requirements. They do not.

Other regulators throughout the nation have permitted amortization of charges for cancelled or completed plant without a utility's having to prematurely write off those assets. To my knowledge, no other utility has ever been granted a plan of ratepayer indebtedness as PECO proposes, yet other utilities have not run afoul of accounting requirements.

Despite his endorsement of the PECO plan, Mr. Farling has never heard of a consumer guarantee such as proposed by PECO:

> "Mr. Farling does not have specific knowledge of any proposed or approved phase-in methods, such as the method proposed by PECO in its Unrecovered Revenue Collection Rider, in which recovery of deferred revenue is 'guaranteed.' [Mr. Farling's Response to City Interrogatory I-3.]

Q. If the Commission states that the company may collect deferred revenue in later years but denies the concept of ratepayer indebtedness, will PECO's auditors reject the Company's booking the deferred revenue as an asset?

A. Judging from the record of Mr. Farling's firm, Coopers and Lybrand, I would say that PECO has little to fear. Coopers and Lybrand provided an unqualified opinion to the utility's 1984 Annual Report, which included as an asset the AFUDC on Limerick 1. This Commission has adopted no plan of consumer indebtedness for the AFUDC on Limerick 1. Indeed, the Commission had already given every indication that it would find a delay in Limerick 1 imprudent; and therefore, the probability of PECO's collecting all its AFUDC is about zero. Given that Coopers and Lybrand did not question this questionable asset, it is unlikely to expect that firm to question the much sturdier asset of revenues deferred during the phase-in.

C. No Interest on Deferred Revenue.

Q. Do you agree with the Company's proposal to eliminate interest on revenue deferred during the phase-in?

A. Yes. Even if the Commission lengthens the phase-in period or deferred revenue recovery period as we have recommended, it should not be tempted to permit interest or a return to accrue on the sums deferred.

While the Company and I agree on this matter, it is worth reviewing the importance of this principle.

Q. What is the principal reason to bar a return or interest on revenues deferred during the phase-in,

A. Economic impact. As stated by Company witness Mr. Williams, the Company will not charge a return on the deferrals as part of its plan to minimize the rate reduction for the purpose of protecting the economy.

For example, were PECO's plan of a three-year phase-in and three-year recovery adopted, but with a return of 12.7% on the deferred balance, the accumulated deferral would reach nearly one billion dollars by the end of the three year period, instead of the $670.7 under the current plan. If, in addition, deferrals are included in the return during the surcharge period, rates will rise for the fourth through sixth years of the plan not by $223 million, but by an average of $349 million. Thus, the fourth year increase would place rates in mid-1989 at a level approximately 43% higher than today's rates! See Exhibit GP-15.

Based on the Dr. Schinnar's macroeconomic studies, we can reasonably conclude that the additional interest burden would undoubtedly cause great economic harm.

As the period of phase-in lengthens, the accumulated deferral rises. To place the accumulated deferrals in the rate base where they would earn a return would, in a seven-year phase-in, result in an increase in rate base nearly equal to the cost of Limerick 1 itself.

Indeed, permitting a return on the deferred sums can overturn the positive effects of a phase-in plan. Because PECO's return on rate base (they have requested 12.7%) is far higher than the rate of inflation, there is the potential for the deferred amount, if compounded at 12.7%, to cause real-dollar increases in rates -- and hence, unemployment in Philadelphia.

Q. Does the Company need the additional revenue provided by a return on the deferred sum?

A. No. First, as the Company has not asked for the charge, we can assume that it is not needed.

Second, the calculations of the previous section on the company's finances did not anticipate an interest surcharge, yet we find that the Company's indicators (coverage, cash flow, etc.) are adequate in the near term and exceptionally strong following the completion of Limerick 2.

Third, while any interest would accrue on phase-in deferrals, the Company would not receive the funds until the recovery period which, by our recommendation, begins after the completion of Limerick 2. Following Limerick 2, the Company's cash needs are minimal: in most of the decade following completion of the plant, the Company will need no external capital. Therefore, any return on deferred revenues will provide an unneeded windfall to the Company.

Q. If the Company is required to adopt a longer phase-in than it requests, won't it need the additional revenue that a return on deferral provides so that the Company may boost its financial reports?

A. According the proposed changes in FASB 71, **the Company may not be permitted to report a return on the deferred revenue even if the return is granted by the Commission.** (This again illustrates the division between regulatory and financial reporting.) Thus, a return on deferrals will provide no financial reporting boost for PECO during its near-term construction program -- yet would cost consumers hundreds of millions of dollars in later years.

Q. Whether or not the Company needs the return on the deferral, does it not deserve a return on these funds?

A. No. The question goes to the heart of regulation. As stated by PECO's witness, Mr. Hieronymous, regulation is a "social contract" between investors and consumers. [Prepared testimony of Mr. Hieronymous at page 12.] The PECO witness believes, however, that the social contract means that the public should indemnify utilities against all losses and guarantee investors all their profits. A more reasonable statement of the "social contract" is that consumer and investors interests must balance: investors give up the right to extraordinary profits but are generally protected against unreasonable losses.

Prohibiting interest on deferred revenues strikes a reasonable balance between consumer and investor interests. What we call a "return" in regulation or "cost of capital" is, of course, "profit" -- the reward received by businesses well run who sell products at reasonable prices.

Limerick 1, whether through the fault of management or not, would not be considered a successful project by the standards of the free market: it's fully allocated cost of its product, electricity, $949.5 million per year, is five times the cost of the product it replaces (the "fuel savings" of $207.5 million per year). [See, PECO "Statement of Reasons," Appendix A.] Were PECO selling cars instead of a monopoly service, it would probably have to write off most or all of the book value of the plant whether the result of managerial imprudence or not.

In its Order regarding Susquehanna 2 nuclear plant, this Commission denied Pennsylvania Power and Light a return on equity on the plant, noting that ratepayers cannot indemnify utilities against all consequences of its business decisions. [PUC Docket R-842651, Order of April 26, 1985.] Similarly, PECO should not be guaranteed a profit on the excessive cost of Limerick 1.

Due to its regulated monopoly status, PECO will not suffer the consequences of a free-market firm: PECO's ratepayers will pay for all of the "prudent" expenditures on Limerick 1. In return, PECO's offer to forego a profit (return) on the deferred revenues should be adopted as a reasonable means of the Company's accepting a small share of the burden imposed on the public by its Limerick venture.

Q. Does this conclude your testimony?

A. Yes.

Before the Commonwealth of Pennsylvania
Public Utility Commission

In the matter of	]	
Philadelphia Electric Company	]	Docket No. R-850152
Proposed increase in rates	]	et.seq.
and Ratemaking Treatment for the	]	
Limerick 1 Nuclear Generating Station	]	

Exhibits GP-1 through GP-15

Witness Gregory A. Palast

Union Associates

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-1

POVERTY IN PHILADELPHIA

PERSONS WITH INCOMES BELOW THE POVERTY LINE	341,000	
PERCENT OF ALL PERSONS IN PHILADELPHIA		20.6%
PERSONS WITH INCOMES BELOW 125% OF THE POVERTY LINE	438,000	
PERCENT OF ALL PERSONS IN PHILADELPHIA		26.5%

For the City of Philadelphia
Bureau of the Census

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-2

PECO'S PROJECTED ADDITIONAL FINANCING NEEDS
DURING PROPOSED DEFERRED REVENUE RECOVERY PERIOD

New Issues
In $millions

1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
$0	$0	$0	$0	$0	$0	$175	$300	$0	$392

See FINAN run base case, pp. 44-45.

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-3

CUMULATIVE NET COST/BENEFIT OF LIMERICK 1
YEAR-BY-YEAR

(In $millions)

1986	-432.35
1987	-782.35
1988	-1072.07
1989	-1247.32
1990	-1411.58
1991	-1534.11
1992	-1573.43
1993	-1619.76
1994	-1606.62
1995	-1506.52
1996	-1439.55
1997	-1359.95
1998	-1225.46
1999	-1147.37
2000	-1047.68
2001	-909.27
2002	-791.95
2003	-686.25
2004	-521.95
2005	-405.62
2006	-285.17
2007	-118.41
2008	12.75

Negative sign indicates a net cost to ratepayers.
Net present value discounted at 9.7% in $1985.
Calculations based on PECO Attachment IR-OCA 2-25b, Item I.

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-4

EFFECT OF DISCOUNTING DEFERRED REVENUE

IF REQUIRED BY FASB 71

Revenue which may be booked as current.
$millions.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Under FASB 71 now in effect	$670	$670	$670	$670	$670	$670
If discounting required	$578	$634	$670	$702	$713	$723

Cumulative for Years 1 through 6

Under FASB 71 now in effect	$4,020 million
If discounting required	$4,020 million

Note: Rate revenue attributable to rate plan may decline in later years due to plant depreciation or changes in costs. Such changes will affect booked revenue equally under either financial reporting rule.

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-5

SEC COVERAGES

CONSTRUCTION PERIOD VERSUS PHASE-IN PERIOD

	1977	1978	1979	1980	1986
SEC Coverage with AFUDC	2.4x	2.4x	2.1x	2.1x	3.2x
SEC Coverage without AFUDC	1.9x	1.9x	1.6x	1.5x	2.9x

Source: PECO, Paquette Tables 4 and 8

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-6

MORTGAGE INTEREST COVERAGE

CONSTRUCTION PERIOD VERSUS PHASE-IN PERIOD

---- Mid-construction ---				Phase-in
1977	1978	1979	1980	1986
2.3x	2.4x	2.1x	2.3x	4.6x

Source: PECO, Paquette Tables 4 and 8.

PECO CARRYING COSTS

3-YEAR VS. 7-YEAR PHASE-IN

Year 1 of rate plan.

Additional borrowing needed for year	$ 32.1 million
Additional borrowing compared to PECO total debt capitalization	1%
Additional debt cost for year	$ 4.0 million
Additional debt cost compared to total PECO long term interest charges	1%

Source: Union Assoc.; see workpapers.

PECO carrying costs
3-year vs. 7-year phase-in

Year 1 of rate plan.

PECO request.

Increase in base rates equal to normalized fuel savings [Paquette, Table 3, footnote A.]	$211.0 million
Increase in base rates, incremental revenue phase-in	$223.6
TOTAL INCREASE IN BASE RATES, PECO	$434.6 MILLION

Palast recommendation.

Increase in base rates equal to normalized fuel savings	$211.0 million
Increase in base rates, incremental revenue phase-in	$ 95.8 million
TOTAL INCREASE IN BASE RATES, City	$306.8 MILLION

7-year vs. 3-year plan revenue, year 1	$127.8 million
Difference net of taxes (1-49.8%)x$127.8 [IR-City I-15.]	$ 64.2 million
Weighted average borrowing needed for year, $64.2 divided by 2	$ 32.1 million

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-8

CONSTRUCTION WORK IN PROGRESS

AS A PERCENTAGE OF BOOK EQUITY

Prior to completion of Limerick 1:

Total CWIP, 6/30/85	$4.47 billion	
As a % of book equity		147%

After completion of Limerick 1:

Total CWIP, 6/30/86	$1.21 billion	
As a % of book equity		37%

From PECO response to DR-JFB 1-City (12/10/85).

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-9

AFUDC AS A PERCENTAGE OF PECO INCOME

1984	1987	1993
72%	52%	6%

Sources: 1984 calculated from PECO Ann. Rep. to stockholders.
1987, 1993 from FINAN run base case; 50% of Limerick common plant assumed to be capitalized.

Note: If the Commission grants PECO 100% of Limerick common in this proceeding, the 1987 percentage of income represented by AFUDC will decline further.

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-10

EFFECT OF PHASE-IN PERIOD ON RETURN ON EQUITY

Year 1 (1986 pro forma)

Three-year phase-in

Pro forma income [1]	$620 million
Return on equity	15.5%

Seven-year phase-in

Pro forma income adjusted [2]	$616 million
Return on equity	15.4%

[1] PECO, Mr. Paquette, Table 3.

[2] Income reduced by additional cost of added debt to capitalize longer phase-in period. See Exhibit GP-7.

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-11

INTERNALLY-GENERATED CAPITAL
AS A PERCENTAGE OF CONSTRUCTION SPENDING

Assumes construction of Limerick 2.
AFUDC excluded.

1977 - 1980 average	1986 pro forma: 3-year phase-in	1986 pro forma: 7-year phase-in
21%	58.7%	47.2%

1977-80 - Actual
1986, 3-year plan - Paquette, Table 8.
1986, 7-year - Union Assoc.; see workpapers.

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-12

INTERNALLY-GENERATED CAPITAL

AS A PERCENTAGE OF CONSTRUCTION SPENDING

PECO plan.
Assumes construction of Limerick 2.
AFUDC excluded.

1977-1980	1986	1987	1988	1989
21%	38%	54%	66%	69%

Sources:

1977-1980 - Calculated from PECO, Mr. Paquette, Table 8.

1986-1989 - PECO, Financial Analysts Forecast Information, OCA Exhibit 27.

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-13

LIMERICK 2 SPENDING

AS A PERCENTAGE OF INTERNAL SOURCES OF FUNDS

$millions

	1986	1987	1988	1989	**TOTAL**
Limerick 2 spending*	$419	$531	$575	$502	$2,027
Internal sources of funds	$326	$518	$652	$634	$2,130
Limerick 2 spending as % of internal funds	129%	92%	88%	79%	95%

*Excludes common plant; as per Analysts Forecast.

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-14

THE DECLINING RATE OF INFLATION

- GNP deflator -

1977	5.8%
1978	7.4%
1979	8.6%
1980	9.2%
1985	3.3%

Sources: Paquette Table 6 and Wall Street Journal.

Witness: Palast
PaPUC Docket R-850152
Exhibit GP-15

THE EFFECT OF AN INTEREST SURCHARGE ON RATES IN A PHASE-IN

$millions.

Plan year		Rate surcharge required	
Year 4	1989	$223	$308
Year 5	1990	$223	$347
Year 6	1991	$223	$391
Surcharge if averaged:		**$223**	**$349**

Source: Union Assoc.
The PECO 6-year plan is used for purposes of illustration.
Interest: 12.7%.

OCA Statement No. 7
30h
2-6-86
1459
R-850152

PENNSYLVANIA PUBLIC UTILITY COMMISSION
v.
PHILADELPHIA ELECTRIC COMPANY

DOCKET NO. R-850152

Direct Testimony
Of
Thomas E. Knudsen

Concerning

Rate Recognition Of Limerick Unit #1

And Overall Revenue Recommendation

On Behalf Of
Pennsylvania Office Of Consumer Advocate

January, 1986

TABLE OF CONTENTS

I. STATEMENT OF QUALIFICATIONS

Q. Would you please state your name and address?
A. My name is Thomas E. Knudsen and my business address is 733 Summer Street, Stamford, Connecticut.

Q. By whom are you employed?
A. I am a partner in a financial and management consulting firm, Woodside Associates, located in Stamford, Connecticut.

Q. What is your educational background and employment experience?
A. I received a B.A. degree with a major in Economics from Northwestern University in 1964 and an M.B.A. in Finance from Columbia University in 1968. From 1964 to 1966 I served as a supply officer in the United State Navy. From 1968 to 1970 I was an assistant to the Finance Administrator of the City of New York. From 1971 to 1978 I was employed in the Management Service Division of Touche Ross & Co., an international public accounting firm offering services in auditing, tax and general management consulting. My experience with Touche Ross centered on government, health care and utility regulatory consulting.

Q. Please expand upon your experience in regulatory matters.
A. The work with Touche Ross referred to above, as well as

that with Woodside Associates, was performed for various state consumer agencies, industrial intervenors and for the Public Service Commissions of the Virgin Islands and State of New Mexico. My efforts principally addressed financial and accounting issues raised in the determination of rate base and operating income. Specifically by location these engagements included:

<u>New Jersey</u>
<u>Testimony submitted</u>:

- Elizabethtown Water Company	(Docket No. 757-769)
- New Jersey Natural Gas Company	(Docket Nos. 759-901 838-687-LPGA)
- West Keansburg Water Company	(Docket No. 759-993)
- Public Service Electric & Gas Co.	(Docket No. 761-8 and 812-76)
- Atlantic City Electric Company	(Docket No. Base-7911-951; LEAC-7911-951)
	(Docket No. 772-113)
	(Docket No. 8310-883)
	(Docket No. ER8504-434)
- Rockland Electric Company (Subsidiary of Orange and Rockland Electric Company)	(Docket No. 7611-1100)
Elizabethtown Gas Company	(Docket No. 789-1319)
Jersey Central Power & Light Co.	(Docket Nos. 795-427, 797-643, 801-45, 807-488, 805-314, 811-25, 818-726, LEAC-841-17, 841-55 ER 8507698

<u>Participation in Proceeding</u>:

- Atlantic City Electric Company	(Docket Nos. 758 and 783-253)
- Rockland Electric Company	(Docket No. 7412-849)
- South Jersey Gas Company	(Docket No. 7412-872)
- New Jersey Natural Gas	(Docket No. 831-46)

<u>Ohio</u>
<u>Testimony submitted</u>:

- Dayton Power & Light Company	(Case No. 76-823-EL-AIR)
- Columbus and Southern Ohio Electric Company	(Case No. 77-545-EL-AIR)
- Ohio Edison Company	(Case No. 79-44-EL-AEM)

Pennsylvania
Testimony submitted:

- People's Natural Gas Company (Subsidiary of the Consolidated Natural Gas Company)	(Docket No. R-78010545)
- Columbia Gas of Pennsylvania	(Docket No. R-78120724)
- Philadelphia Electric Co. (Gas)	(Docket No. R-79040785) (Docket No. R-811719)
- Philadelphia Electric Co. (Electric)	(Docket No. R-80061225) (Docket No. R-811626) (Docket No. R-822291) (Docket No. R-842590)
- Pennsylvania Gas & Water	(Docket Nos. R-821961 and R-822102)

Participation in Proceeding:

- National Fuel Gas Distribution Company (Pennsylvania Division)	(Docket No. R077110514)
- Equitable Gas Company	(Docket Nos. R-78040598 and R-80041169)
- Columbia Gas of Pennsylvania	(Docket No. R-80031129)
- Duquesne Power & Light	(Docket Nos. R-811470 R-832337)
- West Penn Power	(Docket No. R-811836)
- The Peoples Natural Gas Co.	(Docket No. R-821906)

Delaware
Testimony submitted:

- Delmarva Power & Light Company	(Docket Nos. 923 and 82-22)

Virgin Islands
Participation in Proceeding:

- Virgin Islands Water and Power Authority	(Docket No. 106)

Colorado
Testimony submitted:

- Public Service Company of Colorado	(Docket No. 1330)

New Mexico
Testimony submitted:

- Public Service Company of New Mexico	(Docket No. 1536) (Docket No. 1631/1632) (Docket No. 1602) (Docket No. 1693) (Docket No. 1804) (Docket No. 1828) (Docket No. 1835)

I would note that, as indicated above, I have been the chief accounting and policy witness for the Office of Consumer Advocate (OCA) in each of the last four Philadelphia Electric Company electric rate cases. I also testified in two prior PECO-Gas Division rate cases. I am therefore very familiar with the accounting and financial history and practices of this Company in its rate increase applications.

II. SUMMARY OF CONCLUSIONS

Q. MR. KNUDSEN, WOULD YOU PLEASE SUMMARIZE YOUR CONCLUSIONS IN THIS CASE.

A. I am recommending that PECO receive a rate increase of no more than $133,708,000 in this case. This amount represents approximately 19.6% of the $681,760,000 net revenue requirement increase proposed by PECO. Overall, my proposal results in an increase in pro forma revenue of approximately 5.3%.

My conclusions regarding the overall revenue increase that should be accorded PECO at this time are based on this testimony and that of Mr. Michael Bleiweis. The attached Schedules TEK-1 through 3 summarize the Revenue Requirement, Rate Base and Income for the test year resulting from our combined positions. Schedules TEK-4 through 8 present my position on various proposals relating to the rate treatment of Limerick Unit #1. Schedules TEK-9 through 14 present the proper pro forma interest and working capital requirement computations, including the effects of the Limerick disallowances on rate base and taxes used in the calculations.

As indicated on Schedule TEK-1, we propose a net reduction in rate base of $1,490 million represented principally by the Limerick disallowances discussed below.

This reduces the Company's measures of value from $6,963 million to $5,473 million. Employing OCA witness Rothschild's cost of capital of 12.01%, there results a pro forma income requirement of $657.3 million, or $227 million less than requested by PECO. Further we calculate the pro forma income at present rates to be $487.5 million, resulting in an income deficiency of $169.8 million versus the $439.6 million calculated by the Company. Applying the tax conversion factor, we are recommending a revenue requirement, prior to the base rate fuel cost reduction, of $344.9 million compared to the filed request of $893 million, a reduction of $548 million. Combined with the base rate fuel cost reduction of $211.2 million proposed by the Company, we recommend the net increase to customer rates of $133.7 million noted above.

To place these numbers somewhat more in context, the Company has filed for rate relief associated with the Limerick Unit #1 and 100% of common plant. Given the Commission's consistent position of permitting only 50% of common plant in rates with the first of two units and allowing the accrual of AFUDC on the remaining 50%, the earnings picture and need for rate relief is not what PECO's numbers suggest.

If one assumes that the $639.5 million, which is the 50% of the investment in common plant associated with Limerick Unit #2, is simply not considered at this time (a proposal which I make), then the Company's starting position is not $892 million in revenue requirement. Rather, it is approximately $130 million less, or $762 million before energy savings and $551 million after energy savings.

Since the OCA recommendation on a net revenue basis would increase rates by approximately 5%, I have not recommended a phase-in of my base rate recommendation. However, should the Commission not accept OCA's positions and increase the revenue requirement by a substantially greater amount, then the Commission may wish to consider a phase-in of rates over a period of years.

Addressing the substance of our recommendations, Mr. Bleiweis has proposed a number of adjustments which deal with traditional ratemaking concerns. His testimony explains in detail his rationale for each adjustment.

The major revenue adjustments can be found in the cost of capital reduction and the Limerick rate base and income eliminations. Addressing OCA's position regarding the Limerick proposals, its witnesses support four specific revenue adjustments. First, the elimination of common plant associated with Limerick Unit #2 from the rate base claim has already been noted. Second, OCA proposes to eliminate the portion of the rate base claim associated with capital expenditures on the Mark II containment problem. Third, OCA has quantified the delay identified by the Commission in the Limerick Unit #1 investigation and made an adjustment to remove those delay costs from rates. Fourth, following the precedent established by the Commission in the Susquehanna Unit 2 proceeding, OCA quantifies the specific level of Limerick Unit #1 which represents excess capacity and eliminates the equity return on that portion of the Limerick Unit #1 investment. In addition, as will be set forth in the last section of my testimony, OCA also proposes that ratepayers not be required to pay for any shortfalls in Limerick Unit #1 energy savings that are incorporated in both the Company's and my pro forma revenue requirements in this case.

III. INTRODUCTION

Q. MR. KNUDSEN, WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The central issue in this proceeding is the regulatory recognition of the Limerick Unit #1 Generating Station in the cost of service and thereby in PECO's revenues. The OCA has previously submitted a number of testimonies related to Limerick for consideration by the ALJ and the Commission. The purpose of my testimony is to recommend a revenue requirement for PECO which is based upon my own analyses and the findings of these witnesses.

Q. PLEASE SUMMARIZE THE MAJOR CONCERNS OF THE OCA RELATING TO THE RATE RECOGNITION OF THE LIMERICK UNIT.

A. The OCA has had an on-going concern with the prudence of, necessity for, and the eventual ratepayer burden resulting from the construction of the Limerick units. A number of issues have been raised both in special investigations conducted by the Commission and in base rate cases. The major arguments that the OCA is presenting at this time are essentially five:

1. The Commission found in the Limerick Unit #1 investigation that "PECO management did not exercise judgment sufficient to meet our reasonable man standard in delaying construction at Limerick in 1976 and 1978." OCA argues: that delay did occur; there is a basis for

analyzing the results of the delay; and, because the company now makes a claim for recovery of those delay costs, a quantification is now possible and appropriate for the Commission to use in its deliberations. Three elements of cost resulting from the delay have been identified by OCA witness O'Brien: direct costs (plus AFUDC), PECO indirect costs (plus AFUDC), and Bechtel indirect costs (plus AFUDC).

2. OCA argues secondly, through the testimony of Dr. Hanauer, that costs associated with the Mark II containment errors were imprudently incurred. Dr. Hanauer also testifies that completion of Limerick Unit #1 on the schedule proposed by OCA witness O'Brien would not have been prevented by either the resolution of the Mark II problem or NRC requirements.

3. Third, the OCA has presented testimony regarding the need for and economics of Limerick 1 at this time. Witness Lanzalotta concludes that at least 450 megawatts of Limerick Unit #1 is excess to PECO's capacity needs in terms of reliability and need for power. Witness Komanoff finds that, based upon an analysis of the economic costs and benefits of Limerick Unit #1, the plant will not provide net benefits to ratepayers.

4. Fourth, the OCA takes the position that the Company should be allowed to place no more than 50% of Limerick common plant in rate base at this time, for

reasons I will discuss below.

5. Last, the OCA submits that if a substantial portion of Limerick 1 is to be included in base rates at this time, ratepayers must be assured that they will receive the near-term energy savings included in the Company's pro forma revenue requirement.

Q. ARE THERE OTHER CONCERNS SUGGESTED FROM THE PRESENTATIONS MADE BY THE VARIOUS COMPANY WITNESSES?

A. Yes, in undertaking the Limerick construction effort, PECO management has been obdurate in its efforts to push ahead with both units. Management made a business judgment which it has implemented at enormous cost to its shareholders and to its customers. It is now turning to those customers to support the first of two units, as well as all of the common facilities. This support is asked in light of the poor history of performance of nuclear installations and management's failure to sell any part of the venture or the energy which it might potentially produce. The customers are, once again, the financial resource of last resort for PECO.

At this juncture, the proposed burden on customers is somewhat more than one-half of the venture. Although the Company has announced its intention to complete Unit #2, the Commission must not allow the Company to charge excessive rates at the end of this rate proceeding simply as a means of facilitating the course management has selected relative to Unit #2. Where PECO goes relative to Unit #2 is at its own risk. Therefore, the rate recognition for Unit #1 must address what is fair to customers in this proceeding. The rate of return should make no provision for financial risks that management has assumed for Unit #2. The recognition of allowable costs must be on the merits of Limerick Unit #1 and not on what PECO may or may not need to meet future construction requirements on Limerick Unit #2.

One other consideration is the "phase-in" of rates as proposed by the Company. It is my position that the revenue recommendation resulting from this proceeding should be a function of the merits of the various issues raised by the parties. While I agree that it may be advisable in this case to phase in any substantial rate increase over a period of time, the use of a phase-in should not be allowed to become a <u>substitute</u> for ratemaking disallowances based on the regulatory principles which have traditionally been followed by this Commission.

Q. TO GIVE A CONTEXT FOR YOUR FURTHER DISCUSSION OF THESE ISSUES, CAN YOU FIRST INDICATE THE IMPACT ON RATE BASE OR INCOME OF EACH PROPOSAL?

A. Yes, on Schedules TEK-4 and TEK-8 I have summarized OCA's position on these various points. Schedule TEK-4, dealing with construction costs and the appropriate recognition of common plant, shows a proposed deletion from rate base as follows:

o Mark II Costs		$ 194,000,000
o Cost Of Delay (Limerick Unit #1 & 50% of Common)		
- Direct	$485,800,000	
- Indirect (PECO)	83,000,000	
- Indirect(Bechtel)	140,600,000	
- Total		709,400,000
o 50% Of Common		639,500,000
Total		$1,542,900,000

Each of these reductions is discussed in detail below. Note also that these plant adjustments impact computations relating to depreciation, ITC amortization, deferred taxes, interest synchronization and working capital.

Schedule TEK-8 is an income adjustment wherein I have calculated the effect on the pro forma operating statement of a disallowance of the equity return on 450 megawatts of the Limerick plant. Based on the OCA valuation of Limerick Unit #1 and weighted cost of equity, this proposal produces an income adjustment of $52,159,000. This topic is also discussed in detail below.

IV. LIMERICK UNIT #1 RATE BASE ADJUSTMENTS

Q. YOU HAVE MADE AN INITIAL ELIMINATION FOR COSTS ASSOCIATED WITH THE MARK II CONTAINMENT. PLEASE EXPLAIN THE BASIS FOR THAT ADJUSTMENT.

A. In his testimony, Dr. Hanauer established that costs associated with the Mark II modifications were not prudently incurred for the reasons stated. It is my understanding that the cost of these modifications was estimated by the Company to be $136.1 million plus $58 million of AFUDC, or a total of $194.1 million.

It is my recommendation that since these costs were not prudently incurred, the Company should receive neither a return of nor a return on this portion of its investment.

Q. WHY HAS THE QUESTION OF DELAY IN PLANT CONSTRUCTION BEEN A CENTRAL FOCUS OF THE OCA'S EFFORT IN THIS CASE?

A. In considering the recognition of a major generating station in base rates, the Commission must address issues of the prudence of the construction effort and whether all or a part of the plant costs were not reasonably incurred. In the recent past, these concerns have been addressed in a single proceeding. The Limerick undertaking is unusual in that the parties arrive at this point of ultimate rate determination after an extensive evaluation of the Limerick project.

The discussion of prudence necessarily starts with the Commission's findings in the Limerick #1 investigation docket. In its order in that docket, the Commission expressed its opinion that PECO management did not exercise sufficient judgment when it delayed construction at Limerick in 1976 and 1978. In arriving at that position the Commission stated that it considered a number of factors. These factors included:

- The finding by the ALJ that the Company proceeded with its construction program without adequate analysis of the impact of delay on customers and that management consciously decided to protect its own interest, i.e. to avoid an excess capacity penalty.
- The finding that the post-1974 deteriorated financial condition was a result of PECO's ambitious construction program and its decreasing load growth.
- The finding that while PECO's load projections remained more optimistic than the trends justified, the company "delayed construction in the hope that load would improve."
- PECO's argument that on balance ratepayers and shareholders were benefited by delay was not persuasive.

With all of the foregoing having been duly considered by the Commission, the OCA is now answering the one major question left standing by the Commission: i.e., the quantification of the cost of delay to ratepayers.

Q. IN YOUR VIEW HOW DO THE O'BRIEN AND HANAUER TESTIMONIES ADDRESS THIS QUESTION?

A. The O'Brien testimony accepts the Commission findings and opinion as establishing certain preconditions for analysis, i.e., that such issues as the financial constraints on the Limerick #1 project and the need for the plant in terms of load growth were removed and that the Company's actions in implementing the 1975 construction schedule properly formed the basis for any measurement of delay. His working premise was: Given the 1975 schedule (the last schedule before the 1976 and 1978 modifications), how promptly could the plant have been completed for fuel loading.

The Hanauer testimony establishes that the Mark II containment rework and the applicable NRC requirements could have been resolved by the July 1982 fuel load date that OCA posits is the base period against which to measure delay.

Q. HOW DO YOU PROPOSE MR. O'BRIEN'S FINDINGS BE ADDRESSED FOR RATEMAKING PURPOSES?

A. Ratepayers should not pay a return on nor a return of costs associated with the delay as quantified by Mr. O'Brien. I therefore recommend the exclusion from rate base of the direct and indirect costs, including AFUDC, resulting from the delay on Limerick #1 and its associated 50% of common facilities. The adjustment totals $709,400,000, as noted above and as shown on Schedule TEK-4.

Q. MR. KNUDSEN, ASSUMING THE PLANT HAD BEEN COMPLETED EARLIER AND THAT IT HAD COST LESS, IS THE CUSTOMER BASICALLY INDIFFERENT WHETHER THE PLANT WAS COMPLETED OR NOT? THAT IS, ISN'T THERE A TRADE OFF BETWEEN THE AFUDC CREDIT AND HAVING TO PAY A CURRENT RETURN ON THE INVESTMENT?

A. That argument concerning the comparative capital return on the investment presupposes that the rate treatment of the plant in a 1982-1983 time frame would have been to place it totally in base rates. In fact, there would have been two other options. First, the record indicates that Limerick 1 would have represented excess capacity on the PECO system in the relevant time frame. I believe it is very plausible, therefore, that all or a part of Limerick would have been excluded from rates on that basis.

Secondly, PECO was selling the output from Salem Unit #2 to Jersey Central Power and Light Company (JCP&L) in 1982 and 1983. That contract was set to expire at the end of 1984. It was no secret that JCP&L was actively looking for firm load to purchase and had, at that point, been foiled in its attempt to bring power (900 megawatts) from Canada under Lake Erie. JCP&L subsequently purchased 945 megawatts of capacity from Pennsylvania Power & Light Company (PP&L).

Thus, while it is true that PECO ratepayers avoided paying capital charges on Limerick #1 for 27 months, we can only speculate as to whether all or part of the plant would have been sold to another utility or excluded as excess capacity if it had been completed earlier. One cannot simply assume, therefore, that ratepayers would have had to pay for 100% of Limerick costs if the plant had been completed on schedule.

Q. ARE THERE OTHER COST CONSIDERATIONS WITH WHICH CUSTOMERS SHOULD BE CONCERNED AS A RESULT OF THE 27 MONTH DELAY?

A. Yes. Because the plant was not finished earlier, there were a number of corollary consequences. First, as noted by Mr. O'Brien, there were substantial overhead and other indirect costs that were a result of extending the schedule. Those costs, and the AFUDC on them, would have been totally avoided if the plant had been completed 27 months earlier. Second, it is reasonable to assume that customers paid higher fuel costs in the interim. If the customers had had to pay for a portion of the plant, they would have been entitled to fuel savings. But even if the output had been sold, the effect of 1000 megawatts of nuclear capacity on the PJM grid would have been to reduce the PJM running rate. Moreover, PECO's existing nuclear capacity operated so poorly during the past few years that the advantage of Limerick Unit #1 in terms of PECO energy savings might have been greater than otherwise expected.

Third, because the plant was not finished earlier, there was additional burden placed on existing facilities with concomitant expense increases.

Fourth, because the plant was not finished earlier, there were continuing pressures on capital markets which were reflected, for example, in an 18.75% debt issuance and a PUC allowed 17.75% return on equity in the relevant time period.

Lastly, delay not only raised the overall cost of the plant in terms of material and labor but, with an inflated AFUDC rate (incorporating the capital charges above), that cost escalation was compounded.

Q. YOU ADDRESS THE SPECIFIC QUESTION OF CURRENT EXCESS CAPACITY BELOW, BUT ISN'T THERE A CORRELATION IN THIS INSTANCE BETWEEN EXCESS CAPACITY AND DELAY?

A. Yes. If the Company is now allowed to put Limerick #1 in base rates unhindered, and one accepts the ALJ's finding in the Limerick investigation that a major consideration for not completing the plant was fear of an excess capacity cost disallowance, one must view the regulatory process somewhat cynically.

The ALJ concluded that PECO may have essentially attempted to hedge its bet on Limerick #1 -- at ratepayer expense -- by delaying the unit and thus avoiding the excess capacity adjustment that might have been imposed. The Company could finesse the issue of excess capacity simply by delaying the unit and accruing AFUDC during the delay.

If this approach is not challenged, then the Company will escape the brunt of an excess capacity adjustment which could have applied in 1982/83, run up additional cost for the customers to pay back at a future period, and, in a real sense, receive a reward, or at least be held harmless, for the delay.

Assuming these circumstances, it would then be particularly difficult to reconcile the treatment accorded the Limerick plant with that accorded PP&L's Susquehanna Units 1 and 2. In the latter cases, the Susquehanna units were found to be prudently constructed at costs much lower than those of Limerick. Management was found to have completed the plants prudently, but was confronted with excess capacity adjustments in both instances when rate recognition was requested. In response, PP&L moved in the first instance to sell its excess capacity and in the second was required to bear the consequences in terms of a denial of all equity return on the unit.

Compare this to a plant which was delayed at substantial expense to avoid an excess capacity adjustment. On one hand, where a plant is efficiently built, but unneeded, the Commission orders a sharing of the costs of excess capacity. On the other hand, a plant is not efficiently built but is delayed in order to avoid a penalty. The proposal to recover a return on and a return of all costs of the latter plant, including the cost of delay, is patently unfair.

It is also instructive to compare PECO's proposed treatment of Limerick Unit #1 with its own treatment of Salem Unit #2. In the latter instance, PECO sold its share of the output from the unit and moved all the costs and benefits below the line until the sale was terminated. When PECO sought base rate inclusion for Salem Unit #2, the plant certainly did not include an allowance for AFUDC and direct and indirect costs that would have been incurred if the plant had been delayed rather than sold.

If PECO is unchecked on this issue, any incentive a utility would have for efficiency in construction is defeated. Indeed, utilities would be given an incentive not to manage effectively.

Q. YOUR LAST ADJUSTMENT ON SCHEDULE TEK-4 SHOWS THE ELIMINATION OF THE COMPANY'S $639 MILLION INVESTMENT IN 50% OF LIMERICK'S COMMON FACILITIES. WHAT IS YOUR BASIS FOR THIS ADJUSTMENT?

A. The Commission's position regarding how investment in common plant is to be handled is well established and has been consistently enforced. Under that policy, only one half of the common facilities in a two-unit plant is included in rates with the first unit.

Q. WHY IS IT IMPORTANT TO ASSIGN ONLY ONE-HALF OF COMMON FACILITIES TO EACH UNIT OF A TWO-UNIT PLANT?

A. Experience has shown that the ratemaking treatment applied to second units by this Commission often has been different from the treatment of the first units for the same plant.

For example, when Salem 1 entered rates, only one-half of common facilities were included. When Salem 2 was sold to JCP&L, PECO ratepayers thus were not only relieved of the costs of that unit, but also the costs of the second half of common.

Similarly, the Commission arrived at a different result for Susquehanna 2 and the second half of common than it allowed for Susquehanna 1 and the first half of common. The difference was that the excess capacity adjustment for the first unit involved a "slice of the system", while in the adjustment for Unit 2, the Commission identified Unit 2 itself as being excess capacity and disallowed the equity return on this unit <u>plus</u> 50% of common.

Also, the events at TMI-2, and the extraordinary delays in completion of Beaver Valley 2, give added support to the Commission's policy on common plant.

Q. WHAT IS YOUR RECOMMENDATION REGARDING LIMERICK COMMON PLANT?

A. Consistent with prior Commission policy on this issue, I am recommending that only one-half of Limerick common facilities be included in rates at this time. To the extent that these common facilities are associated with both Limerick units, and in light of the Company's apparent intention to continue Limerick 2, the costs of the second half of common facilities should be assigned to that unit.

By dividing the common plant between two units, the Commission effectively divides the risks, costs, and benefits. This division is both fair and appropriate, and should be applied in this case.

V. LIMERICK UNIT #1 EXCESS CAPACITY ADJUSTMENT

Q. WHAT IS YOUR RECOMMENDATION WITH RESPECT TO EXCESS CAPACITY?

A. Based on the testimony of OCA witnesses Lanzalotta and Komanoff, and my understanding of applicable Pennsylvania ratemaking principles, I am recommending that the Commission deny PECO any equity return on 450 megawatts of Limerick 1 capacity.

Q. WHAT IS THE BASIS OF YOUR RECOMMENDATION?

A. OCA witness Lanzalotta has testified that all of Limerick 1 capacity is excess to PECO's needs -- including its PJM reserve requirement -- at the present time. He also states that at least 450 megawatts of Limerick capacity is excess through 1990. I would also note that 450 megawatts is <u>less</u> than the 458 megawatts of combustion turbine peaking capacity that PECO is prematurely retiring in 1986 rather than 1996. It is also less than the 471 megawatts of less expensive Salem 2 nuclear baseload capacity that the Company tried to sell through 1996. In terms of reliability or need for power, it is clear that at least 450 megawatts of Limerick 1 represents excess capacity at this time.

Q. HAVE THE OCA WITNESSES ALSO CONSIDERED THE ECONOMIC BENEFITS OF LIMERICK 1 IN THEIR ANALYSIS?

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

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

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

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

Q. WHAT IS YOUR RATEMAKING RECOMMENDATION?

A. Ideally, I believe that the appropriate ratemaking treatment for Limerick Unit #1 excess capacity would match the ratemaking treatment that PECO itself initially utilized for its share of Salem Unit #2. That is, during the period Salem Unit #2 was sold to JCP&L, the entire transaction was below the line. Ratepayers paid none of the costs of the unit, and shareholders received all of the benefits from the sales to JCP&L. That is also effectively the treatment that PP&L has applied to the 945 megawatts of capacity which that utility has sold to JCP&L.

In accordance with the Commission precedent established in the PP&L case on Susquehanna Unit #2, however, I have excluded only the common equity return on the 450 megawatts of Limerick Unit #1 capacity that has been identified as excess.

As shown on Schedule TEK-8, using OCA's adjusted rate base valuation for Limerick Unit #1, and OCA's proposed weighted cost of equity, this excess capacity adjustment produces an increase in pro forma net income of $52,159,000.

To the extent that the Commission adopts different weighted cost of equity and rate base valuations for Limerick, this adjustment should be modified accordingly.

VI. LIMERICK UNIT #1 ENERGY SAVINGS

Q. YOUR SUMMARY SCHEDULE, TEK-1, RECOGNIZES THE ENTIRE PROPOSED FUEL SAVINGS IN YOUR CALCULATION OF NET REVENUE REQUIREMENT. DO YOU HAVE A SPECIFIC VIEW REGARDING THIS BASE RATE OFFSET AND HOW IT SHOULD BE TREATED FOR RATEMAKING PURPOSES?

A. The issue of energy cost savings related to nuclear plant operations is troublesome for ratepayers. The promise is that overall revenue requirements are reduced. Frequently the reality is that these cost savings do not materialize and the revenue short-fall experienced by the utility is rolled forward as a requirement in a subsequent energy cost rate computation.

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

This concern is mitigated in this case, but only partially, by the institution of the Commission's 80/20 ECR policy for PECO. I believe, however, that the particular circumstances related to the operation of the Limerick plant require some further consideration in this case.

While I am not prepared to make a long-term recommendation on this issue, for purposes of this case, I propose that PECO be held to the average standard of performance for Limerick 1 that it has set for itself for the next two years. This standard is reflected in the Company's fuel cost saving figure which I have incorporated in my pro forma base rate revenue requirement.

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

There is a parallel between the Limerick circumstance and that which existed for Salem Unit No. 2 for which the Commission approved a guarantee of energy savings in the last PECO rate case. In that instance, the Commission found that there was substantial uncertainty as to whether a failed generator could be replaced in a timely fashion and whether the replacement generator would function properly. The major present concern is whether the plant will have sufficient water to operate as designed.

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

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes.

SCHEDULE TEK-1

PHILADELPHIA ELECTRIC CO.
REVENUE REQUIREMENT
TEST YEAR AT JUNE 30, 1986
($000)

	COMPANY (1)	ADJ (2)	O.C.A. (3)	SCHEDULE
MEASURE OF VALUE	$6,963,532	($1,490,180)	$5,473,352	TEK-2
COST OF CAPITAL	12.70%	-0.69%	12.01%	St. 4, Sch. 1
P.F. OP INC-PROP RATES	$884,369	($227,019)	$657,350	
P.F. OP INC-PRES RATES	$444,781	$42,773	$487,554	TEK-3
INCOME DEFICIENCY	$439,588	($269,792)	$169,796	
CONVERSION FACTOR	2.031388		2.031388	
REVENUE REQUIREMENT	$892,974	($548,052)	$344,922	
FUEL ROLL-OUT	$211,214	$0	$211,214	
NET REV REQUIREMENT	$681,760	($548,052)	$133,708	

PHILADELPHIA ELECTRIC CO.
MEASURE OF VALUE
TEST YEAR AT JUNE 30, 1986
($000)

SCHEDULE TEK-2

	COMPANY (1)	ADJ (2)	O.C.A. (3)	SCHEDULE
UTILITY PLANT IN SERVICE				
ELECTRIC	$8,757,719	($18,132)	$8,739,587	St. 4, Sch. 2
ALLOCATED COMMON	122,807	0	122,807	
LIMERICK #1 & 50% COMMON		(1,542,912)	(1,542,912)	TEK-4
TOTAL	8,880,526	(1,561,044)	7,319,482	
LESS: DEPRECIATION RESERVE	1,665,850	(626)	1,665,224	St. 4, Sch. 2
LIM#1 DEP RESERVE		(15,645)	(15,645)	TEK-5
DEP UTILITY PLANT	7,214,676	(1,544,773)	5,669,903	
PLUS: NON-REV PROD CWIP	4,657	(1,650)	3,007	St. 4, Sch. 3
LAND HELD FF USE	8,651	(8,651)	0	
M&S	90,550	2,207	92,757	St. 4, Sch. 4
NUCLEAR FUEL	82,252	0	82,252	
CASH WORKING CAP'L	99,351	1,923	101,274	TEK-9
TOTAL ADDITIONS	285,461	(6,171)	279,290	
LESS: ACCUM DEF INC TAX				
ACCEL AMORT	2,323	0	2,323	
LIB DEPREC	526,166	(7,921)	518,245	St. 4, Sch. 5&6
LIMERICK #1		(64,160)	(64,160)	TEK-6
CUSTOMER DEP	7,682	0	7,682	
CUSTOMER ADV	434	0	434	
SALEM UNIT #1	0	4,380	4,380	
SALEM #2 TAX BENEFITS	0	6,098	6,098	St. 4, Sch. 7
TOTAL DEDUCTS	536,605	(61,603)	475,002	
TOTAL MEASURE OF VALUE	$6,963,532	($1,490,180)	$5,473,352	

PHILADELPHIA ELECTRIC CO.
INCOME ADJUSTMENTS
TEST YEAR ENDED JUNE 30, 1986
($000)

SCHEDULE TEK-3

		SCHEDULE OR SOURCE
P.F. OPERATING INCOME- COMPANY	$444,781	
ADJUSTMENTS:		
ANNUALIZATION FOR GROWTH AND CUSTOMERS	3,607	St. 4, Sch. 11
BOOK DEPRECIATION	626	St. 4, Sch. 2
TAX DEPRECIATION	(1,048)	St. 4, Sch. 6
NORMALIZATION OF TAX DEFERRALS	754	St. 4, Sch. 6
PRO FORMA INTEREST	(41,191)	TEK-14
NUCLEAR & STEAM PRODUCTION O&M (INCL SALEM MGMT)	2,639	St.4,Sch.12 [A]
KEYSTONE ALLIANCE	2,305	St. 4, Sch. 13
MISC ADJUSTMENTS & AMORTIZATIONS	642	St. 4, Sch. 10
DECOMMISSIONING	347	St. 4, Sch. 14
SPENT FUEL DISPOSAL	660	St. 4, Sch. 9
SALEM UNIT #2-TAX BENEFIT TRANSFER	115	St. 4, Sch. 7
ACCUM DEFERRED STATE INCOME TAXES	3,055	St. 4, Sch. 5
CONSOLIDATED INCOME TAX SAVINGS	342	St. 4, Sch. 8
SEQUOYAH & LEE MINES	1,322	TPH-2, D-24
DEPRECIATION-LIMERICK	41,989	TEK-5
TAX DEPRECIATION-LIMERICK	(89,150)	TEK-6
EXCESS TAX DEPRECIATION-LIMERICK	64,160	TEK-6
I.T.C.-LIMERICK	(560)	TEK-7
EXCESS CAPACITY	52,159	TEK-8
TOTAL ADJUSTMENTS TO INCOME	42,773	
P.F. OPERATING INCOME- O.C.A.	$487,554	

[A] Statement 4, Schedule 12 shows an income adjustment of $809,000. The income adjustment associated with the Salem Management amortization claim is $1,830,000.

PHILADELPHIA ELECTRIC CO.
LIMERICK UNIT #1 ADJUSTMENTS
TEST YEAR AT JUNE 30, 1986
($000)

UTILITY PLANT IN SERVICE	BALANCE	SOURCE
LIMERICK #1	$2,532,627	
LIMERICK 100%		
COMMON FACILITIES		
NON-DEPRECIABLE	7,349	
DEPRECIABLE	1,271,675	
LIMERICK TRANSMISSION	8,349	
LIMERICK #1&100% COMMON	3,820,000	TPH-2, C-2
ADJUSTMENTS:		
MARK II	(194,000)	St. 1A, JJO'B-23.3
DELAY-DIRECT(LIM#1&50% COMMON)	(485,800)	St. 1A, JJO'B-24.3
DELAY-INDIRECT-PECO(LIM#1&50% COMMON)	(83,000)	St. 1A, JJO'B-25
DELAY-INDIRECT-BECHTEL(LIM#1&50% COMM)	(140,600)	St. 1A, JJO'B-26
50% COMMON FACILITIES	(639,512)	
TOTAL ADJUSTMENTS	(1,542,912)	
LIMERICK #1&50% COMMON	$2,277,088	

PHILADELPHIA ELECTRIC CO.
LIMERICK UNIT #1 ADJUSTMENTS
TEST YEAR AT JUNE 30, 1986
($000)

SCHEDULE TEK-5

DEPRECIATION & DEPRECIATION RESERVE	BALANCE	SCHEDULE OR SOURCE
LIMERICK #1 & 50% COMMON ADJUSTMENTS TO PLANT	($1,542,912)	TEK-4
DEPRECIATION RATE-COMPOSITE	2.72%	TPH-2, C-5c
ADJUSTMENT TO DEPRECIATION EXPENSE	($41,989)	
ADJUSTMENT TO INCOME	$41,989	
% OF TEST PERIOD TO BE IN SERVICE (FEB. 15- JUNE 30, 1986)	37.26%	
ADJUSTMENT TO DEPRECIATION RESERVE	($15,645)	

PHILADELPHIA ELECTRIC CO.
LIMERICK UNIT #1 ADJUSTMENTS
TEST YEAR AT JUNE 30, 1986
($000)

SCHEDULE TEK-6

	DEPREC'N BASE FOR TAXES (1)	DEPREC'N RATE FOR TAXES (2)	DEPREC'N (3)	SOURCE
TAX DEPRECIATION				
LIB. PLANT INSTALLED 1986	($1,542,912)	11.61%	($179,132)	TPH-2, D-7a
INCOME TAX @49.768%			$89,150	
ADJUSTMENT TO INCOME			($89,150)	
TAX DEFERRAL				
DEPRECIATION- LIBERALIZED	1,542,912	11.61%	$179,132	TPH-2, D-7a
STRAIGHT LINE	1,542,912	2.57%	39,653	TPH-2, D-8a
EXCESS DEPRECIATION			$139,479	
TAX DEFERRAL @46%			($64,160)	
ADJUSTMENT TO INCOME			$64,160	
ADJUSTMENT TO RATE BASE			($64,160)	

PHILADELPHIA ELECTRIC CO.
LIMERICK UNIT #1 ADJUSTMENTS
TEST YEAR AT JUNE 30, 1986
($000)

SCHEDULE TEK-7

I.T.C. AMORTIZATION	AMOUNT	SOURCE
LIMERICK #1 & 100% COMMON PLANT	$3,820,000	
LIMERICK #1 & 50% COMMON PLANT ADJ.	1,542,912	
RATIO:PLANT ADJ/PLANT	40.39%	
I.T.C AMORT-LIMERICK #1 & 100% COMMON	$1,387	TPH-2, D-20
ALLOCATION OF I.T.C. AMORTIZATION	$560	
ADJUSTMENT TO INCOME	($560)	

PHILADELPHIA ELECTRIC CO.
LIMERICK UNIT #1 ADJUSTMENTS
TEST YEAR AT JUNE 30, 1986
($000)

SCHEDULE TEK-8

EXCESS CAPACITY

LINE NO.		BALANCE	SCHEDULE OR SOURCE
1	LIMERICK #1 & 50% COMMON	$2,277,088	TEK-4
2	LESS:LIMERICK TRANSMISSION	8,349	TPH-2, C-2
3	LIMERICK NET OF TRANSMISSION	$2,268,739	
4	EXCESS CAPACITY	450 MW	
5	LIMERICK #1 CAPACITY	1,055 MW	
6	WEIGHTED COST OF COMMON EQUITY	5.39%	St. 4, Sch. 1
7	ADJUSTMENT TO INCOME (LINE 3x(LINE 4/LINE 5)xLINE 6)	$52,159	

PHILADELPHIA ELECTRIC CO.
CASH WORKING CAPITAL- SUMMARY
TEST YEAR AT JUNE 30, 1986
($000)

SCHEDULE TEK-9

	COMPANY (1)	ADJ (2)	O.C.A. (3)	SCHEDULE
O&M EXPENSE	$91,104	($480)	$90,624	TEK-10
TAXES	35,028	(5,482)	29,546	TEK-11
INTEREST PAYMENTS	(36,698)	7,931	(28,767)	TEK-12
PREFERRED DIVIDEND PAYMENT	217	(46)	171	TEK-13
AVERAGE BANK BALANCES	9,700	0	9,700	
TOTAL	$99,351	$1,923	$101,274	

PHILADELPHIA ELECTRIC CO.
CASH WORKING CAPITAL- O&M
TEST YEAR AT JUNE 30, 1986
($000)

SCHEDULE TEK-10

WAGES & BENEFITS

D-5	WAGES	5,695
D-18	LIM O&M	6,408
		12,103

NET INTERCHANGE

D-3	OP.EXP	17,406
D-19	FUEL	(3,775)
D-21	FUEL-R.O.	(206,990)
		(193,359)

OTHER INVOICES

D-10	PROD O&M	7,273
D-11	O&M RETIR	(10,556)
D-12	RATE CASE	(4,300)
D-15	DECOMM'G	8,010
D-16	SP FUEL	4,047
D-18	LIM O&M	69,332
B-13	UNCOLL	(16,472)
	KEYSTONE	(4,589)
		52,745

	ACTUAL	PRO FORMA ADJ	PRO FORMA EXP	LAG DAYS	LAG DOLLARS
PAYROLL	275,564	5,270	280,834	11	3,089,174
NET INTER	421,472	(193,359)	228,113	35	7,983,955
NUC FUEL	136,823		136,823	47	6,430,681
COAL	84,660		84,660	31	2,624,460
COAL FRT	16,766		16,766	15	251,490
OIL	120,360		120,360	19	2,286,840
BENEFITS	19,276	6,194	25,470	2	50,940
PENSIONS	29,009	639	29,648	15	444,720
OTH INV	315,051	52,745	367,796	15	5,516,940
A&G	87,912		87,912	15	1,318,680
TOTAL	1,506,893	(128,511)	1,378,382	22	29,997,880

RESIDENTIAL	928,292	47.7	44,279,528
SMALL C&I	359,462	47.6	17,110,391
LARGE C&I	1,174,680	43.5	51,098,580
TOTAL	2,462,434	46.0	112,488,499

AVE LAG IN RECEIPT OF REVENUE	46
AVE LAG IN PAYMENT OF EXP	22
NET LAG	24
PRO FORMA TEST YEAR O&M	$1,378,382
PER DAY	$3,776
REQUIREMENT	$90,624

PHILADELPHIA ELECTRIC CO. — SCHEDULE TEK-11

CASH WORKING CAPITAL- TAXES

TEST YEAR AT JUNE 30, 1986

($000)

TAXES OTHER			INCOME TAXES		STATE	F.I.T.
A-4	GRT @4.5%	15,521	A-4	REV-PROP	(10,648)	(65,308)
D-3	GRT @4.5%	2,240	D-3	REV	2,189	13,425
D-14	FICA	741	D-5	WAGES	(397)	(2,437)
D-21	GRT @4.5%	(9,753)	D-7	TAX DEP	5,565	34,127
			D-9	INT	(7,842)	(48,094)
		8,749	D-10	PROD O&M	(507)	(3,113)
			D-11	O&M RETIR	736	4,518
			D-12	RATE CASE	(187)	(1,153)
			D-14	FICA	(52)	(317)
			D-15	DECOMM'G	(559)	(3,427)
			D-16	SPENT FUEL	(282)	(1,732)
			D-18	LIM O&M	(5,284)	(32,410)
			D-19	NON-JURIS	767	4,707
				CONSOL TAX		(342)
				KEYSTONE	320	1,964
				ACC DEF ST		2,603
				SALEM #2 TA	16	98
				LIM#1 TAX D	12,498	76,652
					(3,667)	(20,239)

	ACTUAL (1)	PRO FORMA ADJ (2)	PRO FORMA TAXES (3)	LAG DAYS (4)	LAG DOLLARS (5)
AD VALORUM	69,124		69,124	26	1,797,224
TAXES OTHE	130,713	8,749	139,462	(31)	(4,323,322)
STATE INC	26,900	(3,667)	23,233	62	1,440,446
F.I.T.	105,773	(20,239)	85,534	59	5,046,506
TOTAL	332,510	(15,157)	317,353	12	3,960,854

AVERAGE LAG IN RECEIPT OF REVS	46
AVE LAG IN PAYMENT OF TAXES	12
NET LAG	34
PRO FORMA TEST YEAR TAXES	$317,353
PER DAY(/365)	$869
REQUIREMENT	$29,546

PHILADELPHIA ELECTRIC CO.
CASH WORKING CAPITAL- INTEREST OFFSET
TEST YEAR AT JUNE 30, 1986
($000)

RATE BASE	$5,473,352
% FINANCED BY DEBT	50.70%
RATE BASE FINANCED BY DEBT	$2,774,989
COST OF DEBT	10.81%
INTEREST ALLOCATED TO RATE BASE	$299,976
AVERAGE DAILY INTEREST	$821.9
NET LAG DAYS	35
DECREASE IN CASH WORKING CAPITAL	$28,767

SCHEDULE TEK-13

PHILADELPHIA ELECTRIC CO.
CASH WORKING CAPITAL- PREFERRED DIVIDEND OFFSET
TEST YEAR AT JUNE 30, 1986
($000)

RATE BASE	$5,473,352
% FINANCED BY PREFERRED	10.80%
RATE BASE FINANCED BY PREFERRED	$591,122
COST OF PREFERRED	10.54%
DIVIDENDS ALLOCATED TO RATE BASE	$62,304
AVERAGE DAILY DIVIDENDS	$170.7
NET LAG DAYS	-1
INCREASE IN CASH WORKING CAPITAL	$171

PHILADELPHIA ELECTRIC COMPANY
PRO FORMA INTEREST
TEST YEAR AT JUNE 30, 1986
($000)

	COMPANY (1)	ADJ (2)	O.C.A. (3)	SOURCE
ACTUAL TEST YR. INTEREST CHGS	$187,595	$0	$187,595	
MEASURE OF VALUE	6,963,532	(1,490,180)	5,473,352	TEK-2
WEIGHTED COST OF DEBT	5.50%	-0.02%	5.48%	St.4, Sch. 1
PRO FORMA INTEREST CHGS	382,707	(82,767)	299,940	
ADJUSTMENT TO INTEREST	195,112	(82,767)	112,345	
INCOME TAXES @ 49.768%	(97,103)	41,167	(55,936)	
ADJUSTMENT TO INCOME	97,103	(41,167)	55,936	