PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA
1625 I Street, N.W., Washington, D. C. 20006

Order No. 5739

November 12, 1975

IN THE MATTER OF

Application of POTOMAC ELECTRIC POWER COMPANY for an increase in its retail rates for the sale of electric energy) Formal Case No. 630

FINAL OPINION AND ORDER

BEFORE THE COMMISSION: Ruth Hankins-Nesbitt, Chairperson; H. Mason Neely, Vice Chairman; and William R. Stratton, Commissioner

APPEARANCES:

C. Belden White, II, and Linus H. Deeny, Assistant Corporation Counsel; Thomas J. O'Reilly, Agent, for the Public Service Commission; Alan G. Kirk, II, Edward A. Caine, Cameron F. MacRae, Carl D. Hobelman and Stephen A. Trimble for Potomac Electric Power Company; Annice M. Wagner, People's Counsel, and Julian Karpoff, Assistant People's Counsel, for the Office of People's Counsel for the District of Columbia; Robert V. Grahn for All-Electric Customers of the District of Columbia; Elizabeth Johnson and Frederic D. Houghteling, for All Souls Church; Frann G. Francis and Charles Jay Pilzer for Apartment and Office Building Association of Metropolitan Washington, Inc.; Peter Kimball, for Center for United Labor Action; Girardeau A. Spann and Alan B. Morrison, for Consumers

Urging Rate Equity; Ian Volner, Cohn & Marks, for Department of Highways and Traffic, District of Columbia Government; John Schell, for D.C. Power; Michael DeMouy for Friendship House; Renn C. Fowler, Harold Trimmer, Jr., Maurice J. Street, Clinton Swift and John Cassidy for General Services Administration; Selma Kallis and Anne R. Goldberg, for League of Women Voters; A.F. Hinrichs for Lincoln-Westmoreland Housing, Inc.; Gilbert Hahn, Jr., for Washington Public Interest Organization and Dr. and Mrs. Henry Kalmus.

PROCEDURAL HISTORY

This case had its genesis in the December 20, 1974 application by Potomac Electric Power Company (PEPCO) for increased rates annually for retail electric service amounting to $48,243,000 and subsequently increased to $50,832,000 in the District of Columbia. On January 9, 1975, the Commission gave public notice of the filing and content of the PEPCO application and of the scheduling of a February 19, 1975 prehearing conference. This prehearing conference, rescheduled for February 20, 1975 by Commission notice dated January 27, 1975, was then rescheduled for March 7, 1975 (Commission Notice, February 18, 1975), and again rescheduled for and held on May 6, 1975.

By Supplemental Notice of Prehearing dated April 18, 1975, the Commission urged parties having common interests to endeavor to arrange consolidated presentations, and directed all parties to prepare and file with the Commission prior to the prehearing a statement of issues proposed

to be addressed, the number of witnesses and the subject matter of their testimony, and a proposed procedural schedule.

By Order No. 5718, May 20, 1975, the Commission granted intervention to some thirteen parties: The Office of People's Counsel; Department of Highways and Traffic, District of Columbia Government; All-Electric Customers of the District of Columbia (AC/DC); Apartment and Office Building Association of Metropolitan Washington, Inc.; Consumers Urging Rate Equity; D.C. Power; Friendship House; General Services Administration; League of Women Voters; All Souls Church; Washington Public Interest Organization and Dr. and Mrs. Henry Kalmus. The Commission also announced in Order No. 5718 its acceptance of the issues designated by the parties as relevant and material to the ultimate issue of just and reasonable rates; and fixed procedural dates for the entire case, beginning with a hearing on June 4, 1975 and concluding with oral argument on September 3, 1975. By Public Notice dated June 2, 1975, two additonal hearings were scheduled to obtain citizen expression. Although minor adjustments in hearing dates were found necessary and were made, hearings in this case were concluded on schedule.

During the pendency of its basic application, PEPCO twice sought interim rate increases (by applications dated March 12, 1975 and July 3, 1975). Both applications were dismissed by the Commission (Order No. 5707, April 7, 1975; Order No. 5725, July 11, 1975).

Also during the pendency of this proceeding, two other formal cases were consolidated with this case. By Order No. 5703, March 25, 1975 PEPCO's application for approval of an environmental surcharge (Formal Case No. 629) was denied and the issue added to this case. By Order No. 5714, May 6, 1975, the Commission dismissed a compliant against PEPCO by the D.C. Government insofar as it sought reconsideration of prior orders or reparations for past overcharges, but consolidated with this case issues raised by the complaint with respect to the lawfulness of existing PEPCO rates.

The Commission held 22 days of hearings in this case, which produced a transcript of 2,923 pages; and in addition received from the parties 130 exhibits. Briefs were filed by: The Office of People's Counsel; Department of Highways and Traffic, District of Columbia Government; All-Electric Customers of the District of Columbia (AC/DC); Apartment and Office Building Association of Metropolitan Washington, Inc.; Consumers Urging Rate Equity; D.C. Power; Friendship House; General Services Administration; League of Women Voters; All Souls Church; Washington Public Interest Organization and Dr. and Mrs. Henry Kalmus.

THE CASE IN GENERAL

At the outset, we must observe that this decision will be the fourth decision by this Commission in the past six years on rate increase applications by PEPCO. We make this observation not by way of criticism of either PEPCO or our regulatory predecessors, but rather as an expression

of our deep concern that the time, effort and expense involved in the 1970, 1972, and 1973 PEPCO cases appears to have been ineffectual in solving the economic problems of this utility. We are faced again in this case, as was the Commission in the 1973 PEPCO case, with the assertion by PEPCO that no matter what rate of return the Commission allows, PEPCO will not be able to earn it unless the Commission includes an inflation allowance in the rate of return, adopts an end of period rate base, includes all claimed items of investment and expense, approves a new fuel clause, adds a separate allowance for attrition, or selects some combination of several of these items.

We are aware of the well settled principle of utility regulation that it is the end result of the regulatory process that must meet the test of justness and reasonableness. We are also aware of the corollary to that principle, that we are not bound to follow any particular methodology in reaching our ultimate conclusion. And while we are desirous in the interest of both sound regulation and a financially sound utility of avoiding the almost annual PEPCO rate increase application, a desire that might suggest radical departure from historical regulatory principles and methodologies, we are not convinced that experimentation in these uncertain economic times would be in the best interest of the ratepayers in the District of Columbia.

In this context, we must and do recognize, as do all parties in this proceeding, the presence of unusual circumstances in the year 1974.

More specifically, as the record shows, PEPCO's operating results and earnings picture in early 1974 approached quite closely the picture drawn by this Commission in its 1973 PEPCO case order. In fact PEPCO's own financial data indicates that for the 12 months ended July 1974 it achieved earnings per share of $1.86, a ratio of earnings to fixed charges of 2.74 times, and a return on average common stock equity of 12.2 percent. The Commission's 1973 order found 12.5 percent to be a reasonable return on equity.

The latter part of 1974, however, witnessed a sharp and steady decline in the PEPCO financial results. Viewing the record as a whole, two factors stand out as perhaps the principal causes of this decline: (1) energy conservation resulted in a substantial decrease in the number of kilowatt hours sold at retail by PEPCO in 1974; and (2) a substantial decrease in the energy and capacity sold by PEPCO to the Pennsylvania, New Jersey, Maryland (PJM) Pool, of which PEPCO is a member. Had these two dramatic changes not occurred, the need for a rate increase application by PEPCO may very well have been eliminated. Together, the two changes represented an order of magnitude decrease in PEPCO's gross revenue of some $65,000,000.

We see no evidence of record which persuades us that there will be a return to past normalcy in the near term future in either or both of these items. Although 1975 operating data, of which we may take official notice, indicates a resumption of a growth trend in retail kilowatt hour sales, it appears that the over 60% reduction in PJM sales is continuing

and thus the two factors tend to offset each other to some degree. Thus, while 1974 was indeed an unusual year for PEPCO when compared to the 1970-1973 period, the record indicates that 1974 level conditions, rather than those prevailing in 1973, are more representative of conditions reasonably expected to exist in the future.

A look at the future, therefore, indicates a new and different "normalcy" on which our predictions of things to come may properly be based. With that base, we believe that adherence to traditional regulatory concepts will give reasonable assurance of achieving the desired end result. We shall therefore follow that course here, and will now proceed to consider and determine the major issues of rate of return, rate base, expenses and rate structure.

RATE OF RETURN

Our analysis of the rate of return issue in this proceeding will begin at the beginning, i.e., with a summary of the testimony of record on this subject.

Not unexpectedly, there is little variation in the evidence of record in respect of return requirements on (or capital cost of) debt and preferred stock. The relatively minor differences in expert opinion presented to us result not from differences in the precise mathematical calculations of the embedded costs of these senior securities, but rather from the inclusion or exclusion of short term debt and the use of different points in time to make the calculations, i.e., embedded costs

as of the time the testimony was prepared (early or mid-1975), or on pro forma costs anticipated to exist at year-end 1975. As indicated, the differences are minor, with calculated embedded costs ranging from 6.93% to 7.15%, and embedded costs of preferred within a range of 7.83% to 7.88%.

Similarly, equally minor differences arise in the expert witnesses views on PEPCO's capital structure. It appears from the record that the experts are in general agreement that PEPCO's capital structure consists of approximately 56% debt, 12% preferred stock, and 32% equity.

Expectedly, there are wider differences of opinion among the experts on the cost of (or return requirement on) PEPCO's common stock. It is to that issue that we must devote primary attention.

PEPCO's principle rate of return witness was L. Sanford Reis, who recommended a rate of return for PEPCO of 9.75% to 10.0%. Mr. Reis, whose qualifications as an expert witness on the subject of rate of return are beyond question, has testified frequently before this Commission. In his prior appearances, Mr. Reis' basic approach to the determination of return on equity has been of "comparable earnings." As we understand his testimony in this case, he continues to rely primarily on that approach, although he has also offered for consideration other methods which he used essentially as checks on or verification of the comparable earnings method. In arriving at his conclusion, Mr. Reis studied the realized return on common equity of 13 "comparison" companies and of PEPCO. His analysis showed that realized returns on average common stock equity have declined substantially since 1969, and that PEPCO's performance during that period has

been well below the "comparison" companies.

It was Mr. Reis' view that the return required to attract equity necessarily increases by at least as much as the increase in debt costs, and because of the greater risk inherent in equity, probably more. Mr. Reis also noted the undisputed fact of institutional investor disenchantment with utility securities in general, the impact of attrition on equity earnings, and the need to attract outside capital to finance even PEPCO's drastically curtailed construction program. Consideration of all these factors, according to Mr. Reis, leads to the conclusion that PEPCO should be afforded an opportunity to earn between 15.5% and 16.0% on its common stock capital. Given today's economic conditions and trends, it was Mr. Reis' view that a "stated" return on equity in that range should permit PEPCO to actually realize an equity return of approximately 14.0% to 14.5%.

People's Counsel offered rate of return testimony through witness Edgar Bernstein, a former member of this Commission, now a consulting economist, who has presented testimony in a substantial number of utility rate cases before Federal and State Commissions. As with Mr. Reis, Mr. Bernstein's qualifications as an expert witness in the rate of return field are unchallenged. Mr. Bernstein, as did Mr. Reis, also selected a group of companies which he considered to be comparable to PEPCO. Unlike Mr. Reis, however, Mr. Bernstein used his comparable companies (and FPC electrics) to develop earning price ratios. To the arithmetically calculated

earnings price ratios, Mr. Bernstein added an adjustment for the cost of flotation and pressure of 10%, and a second upward adjustment for future earnings growth and to accommodate market price at a reasonable margin above book value. On the basis of his analysis, Mr. Bernstein concluded that a reasonable return on PEPCO's equity would be 11.5% to 12.5%. Adding the cost of senior securities, Mr. Bernstein concluded that a fair rate of return to PEPCO would be 8.70%, applied to an average net investment rate base for 1974, excluding construction work in progress (CWIP). Should the Commission include construction work in progress in the rate base and use an end of period rate base for purposes of determining revenue requirements, Mr. Bernstein's recommended rate of return is no higher than 8.5%. In his view, adoption of that regulatory approach would significantly reduce investor's risk.

People's Counsel witness Peter Karpoff, while not offering a full rate of return study, did submit a recommendation that the rate of return found reasonable by the Commission be applied to a capital structure consisting of embedded amounts of outstanding debt and preferred stock and the aggregate market value of outstanding common stock or its book value, whichever is higher.

The General Services Administration (GSA) on behalf of the Federal government as a customer, offered a rate of return evidence through its witness Jerome Nicholas. Mr. Nicholas has testified for GSA in the last two PEPCO rate cases, and his approach to a rate of return in this case is essentially similar to his prior testimony. Mr. Nicholas uses essentially

a comparable earnings approach, in which he reviewed and analyzed published financial data on bond yields, bond yield averages, prime interest rates, returns on equity; and compared financial data of 21 operating electric companies, including PEPCO, in terms of before and after tax interest coverages, experienced returns on common equity, growth in net income available for common equity, and debt ratios. On the basis of his analysis, Mr. Nicholas concluded that a fair and reasonable rate of return for PEPCO would be 8.75 percent, a figure which includes a return on equity of 12.18%.

The rate of return witness for the Commission staff in this case was David A. Kosh. Mr. Kosh's long and distinguished career as a rate of return witness includes innumerable appearances before this Commission and other State and Federal regulatory bodies, and although the discounted cash flow (DCF) methodology employed by Mr. Kosh has been the subject of differences of opinion, we are aware of no instance in which Mr. Kosh's qualifications as an expert witness have been questioned.

Simply stated, the DCF approach to a determination of the cost of equity is expressed in terms of a formula: the cost of equity is equal to dividend yield plus its anticipated growth. In applying the DCF formula in this case Mr. Kosh made several different analyses of the experienced growth of PEPCO and a group of eight companies which he considered similar to PEPCO, and on the basis of his analysis of annual rates of growth in dividends and book value per share concluded that a 3.0% annual growth rate for PEPCO and a 3.47% average annual growth rate for the eight

similar electric operating companies could reasonably be expected by investors.

Similar analyses were made by Mr. Kosh in order to develop the dividend yield figure. Using the figures thus developed in the DCF formula, Mr. Kosh concluded that what he termed the "equity capitalization rate" for PEPCO was 11.75%. According to Mr. Kosh, however, the equity capitalization rate is a "bare bones" cost of equity, a rate insufficient to allow the sale of common stock at a price above book value, a fact which in the long run would result in dilution. It was Mr. Kosh's view that earnings on equity should be at a level which would tend, for the near term future at least, to keep market price about 20% above book value.

To achieve this result, Mr. Kosh made detailed studies of a group of 45 electric utilities in which he analyzed the relationship between the rate earned on book and the market/book ratio. These studies lead Mr. Kosh to the conclusion that if PEPCO in fact earned, and if investors were persuaded that PEPCO were to continue to earn, at a rate of 13% on equity its market price would tend to be approximately 20% above book value. In Mr. Kosh's view, the 1.25% increase in the bare bones cost of equity figure would be sufficient to cover the cost of financing and pressure and to accommodate an anticipated further decline in market price in the near term future. Mr. Kosh's ultimate conclusion was that a fair rate of return would be 9.1%, a return which he found would provide an after tax coverage of interest of 2.3 times and a fixed charge coverage of 1.8 times, coverages which he concluded were both safe and an indication that 9.1% is indeed a fair rate of return.

DISCUSSION AND CONCLUSION

The ease of summarization of testimony on the rate of return issue is matched by the ease with which equitable legal principles may be stated. The classic tests of Bluefield and Hope* remain valid. To be fair and reasonable, a rate of return must be sufficient to protect the financial integrity of the company, to maintain its credit and attract its capital, and to provide investors a return in line with that available from investments having comparable risks. While these principles may appear to be investor oriented, equally well settled is the principle that in reaching a conclusion on rate of return we have an obligation to protect the customer interest in rates that while sufficient to assure investor confidence are not excessive. It is, in short, this delicate balancing of investor and customer interest which we must strive to achieve, a balance which is often stated cannot be achieved by use of simple mathematics or mathematical formula. We are bound, of course by the evidence of record in this case, and it is on that evidence that we must make our judgment as to a fair rate of return for PEPCO. We are not

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*Bluefield Water Works & Improv. Co. v. West Virginia Public Service Commission, 262 US 679, PUR1923D 11, 67 L Ed. 1176, 43 S Ct. 675; Federal Power Commission v. Hope Nat. Gas Co. (1944) 320 US 591, 51 PUR NS 193, 88 L Ed. 333, 64 S Ct. 281.

bound, however, by the recommendation or methodology of any particular expert witness, and we must acknowledge here, as this Commission has in prior cases, our unwillingness or perhaps our inability to accept in total the methodology of any one witness. We recognize and we emphasize the essentially judgmental approach of each of the rate of return witnesses who testified in this case. The selection of comparable companies, for example, a process utilized by each of the four principal rate of return witnesses here, is almost entirely a mattter of judgment. The appearance of objectivity introduced by the use of criteria for determining comparability is indeed an appearance, for the selection of criteria themselves involves basically an exercise in judgment. Needless to say the selection of criteria and the selection of comparable companies can produce widely varied end results.

These comments, directed particularly to the use of the comparable earnings approach, are equally applicable to the DCF formula or the use of earnings/price ratios. These two approaches to determing rate of return on equity suggest mathematical precision. However, each involves an exercise in judgment in the selection of companies and the selection of time periods to be analyzed in order to provide the mathematical data which is then substituted for the terms of DCF formula, or which appear in earnings/price ratio calculations.

Our emphasis on the judgmental aspect of these matters should not be construed as a rejection of that factor. Indeed, it is that factor and that factor alone which we must utilize in reaching our own conclusion as to a fair rate of return for PEPCO. It is in short our judgment that must be translated into a mathematical figure; and on this record, it is our judgment that a fair rate of return for PEPCO is 9.1%.

We reach this conclusion for the following reasons. At the outset, determination of the cost of debt and the cost of preferred stock present no real problem. These are embedded costs and can be determined with mathematical precision. There are, it is true, differences in the experts' conclusions in this case.

With regard to embedded costs of debt capital, the mathematical result of an analysis of PEPCO's debt outstanding as of December 31, 1974, is 6.89%. The experts are agreed, however, that this figure must be adjusted to reflect the retirement in August, 1975, of some $10 million in debt securities carrying a 2.87% rate of interest. Mr. Reis and Mr. Kosh would further adjust debt cost in anticipation of a planned new 1975 issue by PEPCO of some $50 million in debt securities, with each witness arriving at a year-end 1975 cost of debt of 7.11%. To that cost, Mr. Kosh would add .4% to recognize as a cost of capital the compensating bank balances maintained by PEPCO to insure lines of bank credit.

In determining the cost of debt that we have used in reaching our rate of return conclusion, we have recognized and accepted known changes from the December 31, 1974, figure. In this regard, we are aware, both from our own records and from reports submitted to us by PEPCO, of which we may take official notice, that the $50 million debt issue anticipated by Messrs. Reis and Kosh was not made. Rather, it appears that PEPCO chose to meet its projected 1975 capital needs through short term borrowings, largely in the commercial paper market. Given these facts, it would be inappropriate to use the pro forma December 31, 1975 debt costs as precisely estimated by Messrs. Reis and Kosh. Rather, we have adjusted the calculated 1974 embedded debt cost to reflect only the August, 1975, debt retirement and our conclusion that compensating balances are properly considered in cost of capital computations. The arithmetic of these adjustments produces a figure of 6.97%, a figure which we will round to 7% in recognition of the fact that at current costs of debt capital, any new debt issue by PEPCO will necessarily increase its embedded figure.

We come next to the cost of preferred stock. After the April, 1975, sale of preferred stock, the cost of that portion of PEPCO's capital structure is calculated at 7.83% (Bernstein), 7.84% (Reis) or 7.88% (Kosh). It appears that the difference between the 7.83% and 7.84% calculations of Mr. Bernstein and Mr. Reis, respectively, and Mr. Kosh's 7.88% is accounted

for by Mr. Kosh's inclusion and repricing of convertible preferred. Mr. Kosh's rationale for this treatment begins with the observation that convertible preferred carries the characteristics of both fixed cost and equity capital, giving the owner a valuable option. Exercise of this option, according to Mr. Kosh, would act to dilute the earnings of existing shareholders; and repricing the convertible issue at straight preferred stock cost at the time of issue reflects true economic cost.

We find Mr. Kosh's reasoning persuasive, and we have therefore used 7.88% as the cost of PEPCO's preferred stock.

With regard to capital structure, our calculations indicate a current capital structure of approximately 55.4% debt and 12.3% preferred. Thus for purposes of determining rate of return for PEPCO our calculations reflect 55.4% debt at a cost of 7.0%, and 12.3% preferred stock at a cost of 7.88%.

We turn then to the more difficult task of detemining the cost of common equity. As we have noted above, while it is possible to mathematically calculate the actually realized earnings on equity, there is no mathematical formula by which we could reach the magic number that will make PEPCO common stock sufficiently attractive to investors to assure its purchase in the money markets.

Our review of the expert opinion testimony offered us begins with the recognition that it is not our function to determine the market price of PEPCO stock or to guarantee to investors a fair return on their stock. Rather, our role is to set retail rates reasonably designed to

produce revenue which, if produced, would afford the Company an opportunity to achieve a reasonable return.

Viewing our function in this light, we must reject Mr. Bernstein's assertion that the cost of equity capital in this year 1975 is in a range below the 12.5% found reasonable by this Commission for PEPCO in 1973. We note in this connection that PEPCO's current cost of debt is approximately 10% and that PEPCO's preferred stock offering in April of 1975 was sold at a cost of 11.25%. We note also that in 1973 PEPCO sold common stock at approximately $15.00 per share, in 1974 at approximately $11.12, and 1975 at approximately $10.63 per share. The increased cost of senior securities and the decline in the amount investors are willing to pay for common stock of PEPCO are persuasive to us that investors today are demanding a higher return on equity investments than they were two years ago.

We are also unpersuaded that we should fix rates to be paid by District of Columbia customers of PEPCO on the basis of the "stated" return on equity proposed by Mr. Reis. In addittion to what seems to us a patent unfairness to the District of Columbia ratepayers, we are troubled by two other points in Mr. Reis' testimony. First we believe that there are enough intangibles and uncertainties involved in the determination of the cost of equity without adding, as Mr. Reis did, an additional judgmental allowance of 1.5% to accommodate anticipated inflation or to reflect PEPCO's past inability to earn its authorized rate of return. Our second difficulty with Mr. Reis' testimony is, not unexpectedly, in the area of his selection of "comparable" companies. We note, for example, substantial variations in achieved earnings among the companies selected, with the highest rate being earned in each year being at least 47% above the lowest. The use of an average necessarily obscures the variation, but is not persuasive that the average is comparable to PEPCO. We also note that of the 13 companies

Mr. Reis selected only 4 that were regulated on the same basis as PEPCO, i.e., original cost, a fact that further weakens the assertion of comparability.

Having rejected the two extremes, we turn now to the testimony offered by Mr. Kosh. We are aware, of course, that the DCF method used by Mr. Kosh has been both praised and criticized by the regulatory bodies over the years. We recognize, as we have indicated, that the DCF appearance of mathematical certainty is illusory, since the end result produced by the DCF formula is entirely dependent upon the judgment used in selecting the growth and dividend factors. It is in the area of judgment, rather than the use of the DCF formula, that we are impressed with Mr. Kosh's testimony. We find persuasive, for example, Mr. Kosh's point that the cost of equity is determined in the market rather than a comparison of earnings on book equity. We are also persuaded that the criteria used by Mr. Kosh in selecting comparison companies tend to eliminate to a substantial degree subjectivity and possibly bias in selections. We also agree that use of a recent period (also favored by Mr. Reis) provides a sounder indication of investors' expectations of earnings and dividends (and growth in each) than does, for example, the 1967-1974 period used by Mr. Bernstein. While today's investors may indeed research the history of a company, perhaps even from its beginning, it is our view that investors are more strongly influenced by the company's performance in recent years. Moreover, although predictions of the future in these troubled economic times is most difficult, we are convinced that experience during these times is a better indicator of the future than a company's performance in the calmer times of the late 1960's.

We conclude, therefore that in order to attract equity capital, a return on equity of 13% is required by PEPCO; and we find an equity return at that level to be fair and reasonable.

That our judgment on the evidence of record arrives at the same result as that reached by Mr. Kosh should not be construed as a suggestion that Messrs. Reis, Bernstein and Nicholas have been of no help to the Commission. On the contrary, we have found the testimony of those witnesses invaluable in the formation of our own judgment in this case, and without their testimony we would have faced a difficult, if not impossible task in our effort to achieve that balance between customer and investor interest which is in the final analysis our function in making a rate of return determination.

To sum up this point, it is our conclusion that PEPCO's embedded cost of debt is 7%, its embedded cost of preferred stock is 7.88%, and its required return on equity is 13%. Application of these percentages to PEPCO's existing capital structure of 55.4% debt, 12.3% preferred, and 32.3% equity produces a calculated overall rate of return requirement of 9.05%. The precision of these calculations however, is both comforting and disturbing. In today's money markets, for example, there is no reason to believe that PEPCO could issue new debt or new preferred at the calculated embedded costs of those securities, and no doubt that any new issue of senior securities will increase those embedded costs. While we are reluctant to attempt to predict the future costs of debt and preferred stock, we cannot ignore current costs. We will therefore adjust the mathematically arrived at 9.05% rate of return to 9.1%, a future which in our judgment is just and reasonable under today's economic condition.

RATE BASE

Having disposed of the difficult rate of return issue we now turn our attention to the question of what is the proper rate base to be used in determining PEPCO's revenue requirements for retail service in the District of Columbia. Here we begin with the proposition that PEPCO's system, which serves customers in Virginia and Maryland as well as in the District of Columbia, is a unified, integrated electrical system. Generating plants and transmission lines, wherever physically located, are used to serve all PEPCO customers regardless of their geographical location.

Prior to 1970, PEPCO's operations in all three jurisdictions were regulated on a unified basis, with no effort being made to allocate costs or expenses among the jurisdictions. In 1970 however, this Commission, concerned that the more rapid suburban Maryland growth might have created a jurisdictional imbalance to the prejudice of customers within the District of Columbia, required PEPCO to make a jurisdictional allocation study. In the 1972 and 1973 cases similar studies were made by PEPCO, with all being found acceptable by this Commission.

We had in this case a jurisdictional allocation study, again prepared by PEPCO, and again utilizing essentially the same technique used in prior cases. This technique, known as the average and excess demand method, is one of three methods found generally acceptable by regulatory bodies. As explained by PEPCO witness, Frank Walters, the

average and excess demand method involves essentially an allocation among jurisdictions of generation and transmission plant on the basis of average jurisdictional demands, a second allocation on the basis of peak demands, and a combining of the factors developed by these two calculations to produce the final percentage factor, which is then applied to the plant to be allocated.

Mr. Walters also presented for the record the results of an allocation on the basis of coincident and non-coincident peak demand, results which vary only a miniscule amount from the result reached by the average and excess demand method.

Other than the PEPCO study, which was reviewed and accepted by the Commission Staff, no other jurisdictional allocation studies were presented for the record in this case. There are suggestions in the record, however, suggestions which are more strenously argued on brief (particularly by the D. C. Department of Highways and Traffic) that because of the undisputed higher growth in demand in the suburban areas, all production plant installed by PEPCO since 1970 should be assigned to those areas.

We have several problems with this suggestion. First, as a purely factual matter the suggestion as stated ignores the fact of actual use of this more recently installed plant in serving customers in the District of Columbia. Secondly, the suggestion appears to ignore the fact that the average and excess demand method of allocation does

reflect the more rapid suburban growth, as demonstrated by the declining share assigned to the District of Columbia in each of the years in which studies utilizing this method have been submitted to us. Third, while we are urged to make a "pragmatic" adjustment in recognition of the fact of steadily increasing unit cost of production plant, even pragmatic adjustments must be based on some supporting rationale. We are offered none on this record. Rather than arbitrarily adjust the jurisdictional allocation study, we believe it more appropriate to recognize the increasing unit cost of plant, a major contributing factor to the phenomenon called "attrition", in dealing with the rate structure issues that have been presented in this case. In our view, demand and cost causation are not peculiar to suburban customers, and those customers in the District of Columbia who contribute substantially to PEPCO peak demand and who use the more recently constructed production plant should in all fairness shoulder their share, but no more than their share, of the burden of increased cost. We will therefore again accept the average and excess demand method of jurisdictional allocation, and deal with the problem of demand causation and peak load responsibility in our determination of appropriate rate schedules.

The next issue we must address under the heading of rate base is the perennial question of whether to use average or end of period

figures. There is not, and indeed there cannot be, any question on this record that PEPCO has experienced a decline in earnings in the latter half of 1974 and that this declining trend shows no signs of a reversal. This fact, of course, does not in and of itself demonstrate the presence of "attrition." As the Commission said in the last PEPCO rate case "while a decline in rate of return may be the result of attrition, it may with equal validity be said to result from other factors, e.g., imprudent investment or excessive expenses."

As we have indicated in our preliminary views, it appears to us that the major factors contributing to PEPCO's decline in earnings were the reduction in kilowatt sales to retail customers and the significant drop in sales to PJM. Putting these two factors aside, however, the record is clear that the increase in investment costs per unit of output noted in our last decision has continued; and in this case not only is this fact demonstrated by the actual dollar investment figures in the record but it is confirmed, we believe, by the vigorous advocacy on the part of consumer intervenors of the use of marginal or long run incremental cost figures for rate making purposes. The underlying theory of this advocacy is that the cost of new production plant is higher than the average embedded cost of that plant. Thus, while we are urged by some parties to match revenue, expense and rate base by using average rate base figures, we find little support in the record for those recommendations. In short, we are persuaded that attrition is a

phenomenon that is still with us, and we will therefore now, as we have in the past, use an end of period rate base, with appropriate adjustments, in order to compensate for the presence of attrition.

The point is made by PEPCO that use of an end of period rate base will only partially reflect the "attrition" in earnings that has taken place since our 1973 PEPCO decision. We are not persuaded, however, that the decline in earnings has been due solely to attrition, but has in large part been due to the drop in sales noted previously. Since sales to retail customers appear to have resumed a somewhat normal growth pattern, and since sales to PJM appear to have leveled off to a large degree, and since PEPCO has substantially reduced its construction budget, it appears reasonable to conclude that attrition in the future may play a less significant role than it has in the past.

A number of adjustments to rate base have been presented for consideration by our Staff and by several of the intervening parties in this case. People's Counsel witness McCabe, for example, with the support of other consumer parties, has urged elimination of construction work in progress from the rate base and substitution of an allowance for funds used during construction (AFUDC). Our Chief Accountant, Mr. Manheimer, noting the unusually large amounts included in construction work in progress at year end, has recommended averaging construction work in progress over the test period. Intervenor All Souls Unitarian Church

has urged that PEPCO's investment in the Douglas Point Nuclear station be eliminated from rate base. Mr. Manheimer also recommends that we average materials and supplies over the test period, and that we eliminate amounts reflecting preliminary surveys, land transactions undistributed, prepaid insurance, and compensating bank balances, in our calculation of rate base.

We have given most serious consideration to all of these recommendations. We are disposed to agree with our Staff and accept Mr. Manheimer's recommendation for the use of an average amount of construction work in progress and an average amount in the materials and supplies account in rate base as more representative of the flow of dollars in and out of the accounts. The record shows wide fluctuations in these accounts over time and a substantial increase in fuel inventories in 1974, resulting from stockpiling due to the unusual fuel market in that year. The amounts at the end of the period in both accounts appear to be abnormally high. In view of PEPCO's projected reduction in its construction program and the reduction in fuel inventory in 1975, we do not believe that the end period figures can be called representative of anticipated future conditions. The adjustment of materials and supplies is consistent with the Commission's treatment accorded to this item in Formal Case No. 610.

With regard to Mr. McCabe's recommendation that construction work in progress be excluded from rate base (a recommendation subsequently

modified to permit 10% of plant in service to be included as a construction work in progress allowance) we are disturbed by two factors. First, the 10% allowance appears to us to be wholly arbitrary and without foundation. Second, we would note that including CWIP in rate base without AFUDC and capitalizing AFUDC but excluding CWIP from rate base produce about the same ultimate result. Essentially, only the timing is different; but in the long run, use of AFUDC may result in a greater overall cost to the customer than inclusion in the rate base of construction work in progress. Projects begun in the period between rate cases, for example, earn no return under the CWIP approach, and if placed in service prior to the next rate case appear in rate base at the actual cost of the project. Were AFUDC used, the same project would appear in rate base at the cost of the project plus capitalized interest, and ratepayers would be required to provide a return on that higher cost. In consideration of all factors, we believe that the interest of both customer and investor would be better served by continuing our long standing practice of allowing PEPCO to include construction work in progress in its rate base.

With regard to the Douglas Point nuclear project, there is no question but that substantial funds have been invested in that project, and that nuclear projects require an extraordinarily long lead time required to plan and complete. We understand and appreciate the views

expressed by All Souls witness Father Millard in support of his recommendation that the $28.6 million already invested in Douglas Point now be excluded from rate base. In consideration of current fuel uncertainties and the 8 year or longer lead time, however, we are not convinced that we should at this time declare the nuclear project imprudent or unnecessary.

We are disposed to agree with our Chief Accountant that amounts reflecting preliminary surveys and undistributed land transactions should not be included in rate base. As Mr. Manheimer has pointed out, there is no certainty that any of these amounts will be transferred to plant in service and for that reason we believe their exclusion is appropriate. Similarly, we agree with Mr. Manheimer that prepaid insurance premiums and compensation bank balances should be excluded from rate base, since insurance premiums are expensed over time and compensating bank balances are in our view more properly a part of the cost of money and have been included in our calculations of fair rate of return.

For these reasons, then, and having considered all data and recommendations of record, we find the appropriate District of Columbia rate base to be $650,091,000, as shown on Attachment A, Page 1.

To achieve a 9.1% rate of return on a rate base of $650,091,000, PEPCO's operations must produce a return of $59,158,000, as shown on Attachment A, Page 3. We turn now to consideration of observed expenses and operating results, from which we may determine the amount of revenues needed to produce this net return.

EXPENSES AND OPERATING RESULTS

On this record, few if any questions were raised about the income, expense, and operating results recorded on the PEPCO's books. A number of adjustments in those figures were proposed however, some by PEPCO, some by our Staff, and some by intervenor parties.

Among these adjustments, the one with the most substantial dollar impact was PEPCO's proposal for a new depreciation rate. PEPCO's current depreciation rate of 2.94% was approved in 1971 on the basis of a study required by and performed for the Commission. In this case, PEPCO presented a new depreciation study prepared by its witness Ritter, a well recognized expert on the subject of depreciation. Mr. Ritter also prepared the study for the Commission in 1971.

That portion of Mr. Ritter's study relating to traffic signal and street light plant was sharply criticized by the D.C. Department of Highways and Traffic. Portions of the study were also questioned by GSA, and Mr. Ritter's entire study was considered unacceptable by People's Counsel. The Commission's Chief Accountant, Mr. Manheimer, however, testified that he and his staff had reviewed Mr. Ritter's study and found it to have been done in a manner consistent with prior depreciation studies of PEPCO as approved by this Commission and in accordance with accepted practices and procedures. Mr. Manheimer also recommended acceptance of the study and its results by the Commission, for the reason that accuracy in depreciation rates and depreciation

accounting are of great importance today in view of the substantial additions to plant made by PEPCO in recent years. As Mr. Manheimer pointed out, PEPCO's plant in service, now about $1.5 billion, increased by about $600 million in the last four years. Sound regulation requires, in our opinion, that depreciation rates and the resulting depreciation reserve be neither overstated nor understand, particularly when we are dealing with figures of this magnitude.

We are troubled somewhat by PEPCO's departure from past practice in instituting a depreciation study on its own initiative. Past practice has been for the Commission to order depreciation studies at times of the Commission's own choosing, and we remain convinced that sound and effective regulation requires control by the Commission over the amount, direction and timing of depreciation rate changes. We will accept the PEPCO depreciation study in this instance, but henceforth our past practice of ordering depreciation studies is to be followed.

The change in depreciation expense resulting from the change in depreciation rate necessitates a change in the depreciation reserve. PEPCO has proposed an appropriate adjustment to the depreciation reserve figure, and we will accept that adjustment.

A second rate making adjustment having significant dollar impact was PEPCO's proposal that it be permitted to "normalize" the four percent investment tax credit over the full anticipated use of the

assets giving rise to the credit, i.e., some thirty-one years. In prior PEPCO cases, this Commission has recognized the fact that investment tax credits in any particular year may vary widely from credits from the year before or the year following. Our past practice has been to require an averaging of investment tax credits over first a four-year period, and in more recent decisions over a six-year period. PEPCO now contends that the six-year averaging convention would not adequately normalize fluctuations in the investment tax credit, and that therefore full asset life normalization is necessary. PEPCO's proposal is vigorously opposed by People's Counsel on two grounds: first, as unnecessary to even out fluctuations; and second, as merely a device to enhance PEPCO's internal cash generation and its earnings quality by making ratepayers involuntary lenders to PEPCO.

We find no evidence in the record that persuades us that it is necessary to extend the six-year convention to thirty-one years for the purpose of smoothing out variations in year to year investment tax credit. We are therefore disposed to agree in part with the position taken by People's Counsel on this point and will use the six-year convention as approved by the Commission in the prior PEPCO decision (Formal Case No. 596); and although we recognize PEPCO's desire to improve its earnings through any and all avenues of relief that might be available to it, we will undertake to fulfill our responsibility

to PEPCO through more direct means, rather than requiring the ratepayer to advance substantial sums of money to PEPCO over the next thirty years.

People's Counsel has proposed two other adjustments to test year operating results which we find less persuasive. The first of these, which would recognize the uncontroverted fact that PEPCO's sales to retail customers were significantly lower in 1974 than 1973, suggests an increase of approximately $6 million in operating income to reflect this sales decline. We have two problems with this proposal: first, we find no evidence in this record on which to base a conclusion that operating results in 1975 will achieve 1973 levels of retail kilowatt hour sales, much less reflect a growth in sales over 1973 at the growth rate existing in the 1970-1973 period; second, even if there were such evidence, the amount to be added to operating income in the test year is, on this record, speculative at best.

It is possible, of course, to mathematically calculate a revenue figure if we were to assume a specific number for revenue per kilowatt hour of sales. The problem here is that we do not know and cannot determine when, to which customers, and at what rates these hypothetical additional kilowatt hours would have been sold. Additionally, as PEPCO points out, revenues cannot be adjusted without calculating the expenses that would have been incurred in producing those additional revenues. To the revenue uncertainties we have noted must be added the further uncertainties of fuel and other expenses, perhaps offset in

part by additional sales to PJM. These expense hypotheticals would convert such a mathematical exercise to pure speculation. We decline to indulge in that speculation.

People's Counsel also proposes an adjustment to operating results to give effect to weather normalization. While we have no conceptual difficulty with the concept of weather normalization, and recognize it as an adjustment quite commonly made in the gas utility field, we are not persuaded that such adjustment is appropriate, in any case, for an electric utility. It is not appropriate in this case. The record here suggests, in fact, the impossibility of defining "normal" wheather conditions for a utility such as PEPCO, since a review of the 20-30 year weather averages shows a deviation in yearly experience of greater than 6 percent in each year but three and in excess of 10 percent in fourteen of the 22 years examined, with an average deviation of 16 percent.

Another adjustment, proposed both by People's Counsel and our Chief Accountant, would annualize test year interest expense to reflect changes in expense brought about by changes in the Company's debt securities, thereby reducing income taxes. We believe this adjustment, recognizing as it does a known change, is appropriate. It will be made. In addition, we will accept the Staff adjustment which places commitment fees "below the line."

PEPCO has proposed two additional adjustments: first, that its wage and salary expense figure be increased to reflect a new union

contract, and to acknowledge increases normally given management employees during the year; second, that its tax expense be increased to reflect an anticipated change in the District of Columbia gross receipts tax rate.

We are persuaded that the wage and salary increase for unionized employees is a proper factor for adjustment in this proceeding. With respect to union wage increases, it is a fact of labor management contract life that PEPCO is obligated, in am amount certain, to increase wages of its craft employees. With regard to management salary increases, we do not agree that the adjustment requrested by PEPCO should be made. We are persuaded that the uncertainties as to amount, timing, and fact of these projected increases are such that the proposed adjustment cannot be made.

With regard to the proposed adjustment for a gross receipts tax increase, we may take official notice of the fact that the District of Columbia gross receipts tax rate has now been changed from 5% to 6%. Since the tax rate change is now both known and effective, we will make the appropriate adjustment.

Additionally, although not requested by PEPCO, we must take official notice of the fact that the District of Columbia corporate franchise tax rate has now been increased to 9%, and we are constrained to also adjust our tax computations to reflect that change.

PEPCO has also requested that it be authorized to pass on to District of Columbia customers, as an operating expense, that portion

of payments made to the State of Maryland's environmental trust fund properly allocable to the consumption of electricity in the District of Columbia. While we are troubled by the proposition that District of Columbia customers should provide funds to the State of Maryland, we are persuaded that, as revised, the Maryland Environmental Trust Fund is not a tax by Maryland on District of Columbia residents but rather is an appropriate and necessary PEPCO operating expense. Since the basis for payment is power and energy generated in Maryland, a substantial portion of which is used in the District of Columbia, we believe that the portion of this operating expense represented by energy consumed within the District should properly be borne by District of Columbia ratepayers. We are not persuaded however, that D.C. residents should be required to pay the 1.5% collection fee provided by the Maryland statute, and we shall therefore disallow that amount. We intend to keep this entire matter under review, and our action here is without prejudice to our right to reach a different conclusion should changes in circumstances occur which, in our judgment, would warrant a different judgment.

At this point, then, having concluded that a 9.1% rate of return on a District of Columbia rate base of $650,091,000 requires a return of $59,158,000, and that PEPCO operating results, as adjusted in accordance with our conclusions, indicate a realization under currently effective rates of some $12,302,000 less than required, we turn now

to the question of rate schedules and rate levels which will afford PEPCO an opportunity to achieve that level of earnings. Giving effect to taxes, this additional net income equates to some $27.7 million in additional revenues.

RATE LEVEL AND RATE STRUCTURE

Of all the issues in this proceeding, the issue of rate structure drew the most attention.

PEPCO's proposed rate structure follows, in large part, the trend toward rate simplification and rate flattening that has prevailed over the past several years. Offered for our consideration were also a variety of proposals from customer intervenor parties, most of which have as a central theme the proposition that rates should be set on the basis of long run incremental costs. Specific criticism of PEPCO's proposed rate structure was offered, insofar as their particular interests were involved, by the Apartment and Office Building Association, the Gneral Services Administration, the D.C. Department of Highways and Traffic, and the AC/DC Committee, which spoke for the all electric residential customers in the District of Columbia.

Turning first to the proposition that long run incremental cost should be the basis for retail rates we must acknowledge the confusion on this record arising from the apparent use of the terms "marginal" and "long run incremental" as interchangeable. As we understand it,

marginal costs and long run incremental costs are not synonomous, yet these concepts appear to be so used by some intervenor witnesses. Given our understanding of these concepts, i.e., that marginal costs include essentially only the out of pocket costs of supplying an additional unit of output, whereas long run incremental cost includes the additional cost of capital investment required for the additional unit, we find the recommendations and arguments of People's Counsel and residential intervenor groups persuasive on this point. To the degree that increased demand requires the installation of additional production capacity, at higher than existing embedded unit costs, it appears that long run incremental costs should be considered in establishing rate schedules.

Implicit to us in the theory of long run incremental cost pricing are the concepts of peak load and time of day pricing, both of which also appeal to us in the light of the current costs of producing and delivering electric energy in the District of Columbia. The theory that those who cause the costs should bear them seems to us to be not only good economics and sound regulatory practice, but is fair and equitable as a matter of common sense. We recognize, of course, that long run incremental costs may be difficult to determine with great precision, but by the same token we do not believe that rate making is an exact science or that rates must or may be set to recover

precise costs in each instance. There are, as the record in this case clearly shows, other factors which must enter into the development of just and reasonable rates.

All parties to this proceeding appear to recognize the presence of three components of cost in producing and distributing electric energy: (1) customer cost, which includes meter reading, billing and connection costs, costs which are incurred whether the customer uses any or no energy; (2) demand cost, which includes generation, transmission and distribution capacity cost which may vary with kilowatt demand but generally reflects the total cost of capacity committed by the utility to provide service to its customers whether used or not; (3) energy costs, which include essentially the operating and maintenance cost associated with supplying a given number of kilowatt hours and which vary directly with the amount of energy produced and consumed.

Each of these cost components has felt the effect of inflation, and were each to be priced today at its long run incremental cost, the impact on existing rate schedules would be staggering.

We find persuasive the theory that the demand component of electric rates should be set with reference to long run incremental costs. We are troubled, however, by variations shown by the record in the definition of long run incremental cost. We are further troubled by the apparent assumption that rates based on long run incremental cost should be applied to all units of consumption, which by definition

reflect average costs generally different from and lower than the long run incremental cost.* In short, the concept of long run incremental costs, as we understand it, is the cost of additional units of output. And if additional, it necessarily follows that there exists a base to which the addition can be made. Thus, while we are in agreement with the theory, its full implementation on this record at this time does not appear possible. We do not have an adequate showing of base costs, particularly by customer class nor do we have on this record a satisfactory definition or calculation of long run incremental costs.

Nevertheless, we do believe that the evidence of record is adequate to strongly support the studies currently underway by PEPCO and the further studies which we shall direct PEPCO to make. We also believe the record supports a beginning now, rather than at the conclusion of PEPCO's proposed studies, of a movement in the direction of long run incremental cost pricing.

In this context we believe that PEPCO's proposal to flatten the summer residential rate is a step in the right direction. We note and agree with the recommendation of People's Counsel witness Karpoff that a single rate for all residential consumption be adopted, higher in summer and lower in winter. Given the increased

*This was demonstrated by the excessive revenue produced under the LRIC rate proposals advanced by several intervenors.

and increasing unit costs associated with the provision of electric service, we see no justification for continuation of volume discount rates. Moreover, energy conservation remains a national goal, and in our judgment flat rates will help achieve that goal. Additionally, with respect to the residential class of customers, we remain of the view expressed in our last PEPCO case that basic use of residential electric service in the District of Columbia has not caused and does not contribute to the need for new and increased plant investment by PEPCO. The average consumption of energy in the District of Columbia for residential customers is 450 KWH per month. For this reason, and in an effort to encourage energy conservation without penalizing essential use, we will require that no part of the base rate increase authorized shall be applied to monthly residential consumption below 450 kilowatt hours. To the degree that this may require a shift in revenue requirements, we will direct that the amount involved be spread among all customer classes in proportion to the percentage increase for each class proposed by PEPCO.

For the same reasons, we also believe this flat rate principle should be applied to the commercial low voltage rate structure. PEPCO's proposed increase in the demand charge for large power users is also, in our judgment, a step in the right direction, since it tends to flatten the conbined demand and energy schedule. Again, in regard to large power customers, the record indicates the existence of graphic

demand meters currently in service for most of these large customers, meters however, that for the most part measure kilowatts of demand rather than kilowatt hours. We believe that these large customers should be put on a peak load, time of day, rate schedule and we shall therefore direct PEPCO to proceed forthwith to obtain and install appropriate meters and associated equipment for these large customers, to complete that installation within a period of one year from the date of this order and to file sufficiently in advance of the expiration of the one year period a new tariff to reflect time of day, peak load pricing.

We are persuaded that the existing and proposed rate schedules are inappropriate in their application to all-electric residential customers in the District of Columbia and may also be inappropriate in their application to residential tenants living in apartment houses which receive electricity under the general services schedule. We are aware of the problem involved in apartment metering, where the apartment building may contain, in addition to residential units, commercial units. We do not believe, however, that the problem is insurmountable, and we shall therefore direct PEPCO to immediately conduct a study of the apartment segment of the general services class to determine whether discrimination exists between residential apartment tenants (who are users but not customers) and customers under the residential schedule.

The possibility of discrimination and adverse impact on low income residents was graphically portrayed in this case by the testimony of Lincoln-Westmoreland Housing witness Hindrichs, and PEPCO may wish to consider beginning its study with an analysis of that project.

The results of this study, which will be designed in consultation with an agent to be appointed by the Commission, shall be reported to the Commission within six months of the date of this order, and the Company shall simultaneously forward its proposals, if any, for establishment of a new or changed classification of residential users and a new tariff.

With regard to the all-electric customers we do not believe that further study is required. The evidence of record is sufficient, we believe, to permit the immediate preparation and filing of a new tariff schedule for this class which reflects the off-peak nature of the electric heating load, and relates the return earned from this customer class to the Company's return from all residential customers as a class. We shall direct PEPCO to do so promptly. In this connection the Company is urged to consider an optional time-of-day peak load pricing tariff for these customers. Additionally, we are persuaded that the all-electric concept, initially introduced as a promotional effort, no longer serves the public interest. The new schedule for the all-electric customer will be available only to those customers receiving that type of service on the effective date of the

tariff, and shall specifically provide that no new customers will be added after that date.

The ultimate goal of this and all rate making proceedings is a tariff structure and rate design that will be equitable to all of PEPCO's customers, provide the overall revenue to be allowed and, to the extent practicable, attain other broad objectives advocated here and elsewhere such as conservation of energy, optimum allocation of resources, independence from foreign energy suppliers, reduction in capacity needs, and relief to low and fixed income consumers. At this time, it is clear that many of the views expressed in this proceeding are without the benefit of adequate factual data on the manner in which various proposed rate reforms would be implemented, whether they would accomplish desired objectives, and their impact upon customers. Further study is required to evaluate the desirability and feasibility of attaining any or all such objectives through reforms in utility rates.

In addition to the particular study heretofore specified, we will by a subsequent order direct PEPCO to undertake a study of the feasibility and efficiency of implementing various proposed rate making theories and rate forms on its system including average cost pricing, marginal cost pricing, long-run and short-run incremental

cost pricing, peak load pricing, time-of-day pricing, flat rates, "lifeline" rates, inverted rates, service charge in rates, and such other rate forms as may warrant consideration.

There remains the issue of rates for street lighting and traffic signals in the District of Columbia. On this item, we have carefully reviewed the record and the numerous contentions advanced by the D. C. Department of Highways and Traffic. Among the Department's contentions are that PEPCO has "doubled counted" equipment and facilities allocated to street lighting service; has improperly applied the composite depreciation rate to those facilities; has failed to recognize the load characteristics and patterns of street lighting demand; has used an unjustified "burning hour" calculation for non-metered service; and has improperly allocated expenses on the basis of lumen output rather than actual operating and maintenance costs.

We have thorougly reviewed the somewhat voluminous record on these points, but find little, if any, factual support for many of the Department's contentions.

Our review also indicates that most, if not all of the contentions urged on us in this proceeding are similar to if not identical with contentions raised by the Department in previous proceedings. We remain of the view that application of the composite depreciation rate is proper, that PEPCO's allocation of investment

and expense to street lighting is appropriate, and that many of the Department's contentions, even if persuasive, would have no measurable effect on street lighting rate schedules.

Two points urged by the Department, however, are persuasive. Its witness, Basaran, points out, for example, an apparent discrimination in the treatment of the Department in terms of the "burning standard" for unmetered street lights. The Department is currently billed for energy used in these installations on the basis of 4200 burning hours per year. Other customers are billed on a lower "burning standard." The study on which this standard is based appears to have been conducted in Maryland some five to eight years ago. The age of the study and the criticism of its results convince us of its inapplicability to today's circumstances. We shall therefore direct PEPCO to undertake a new study of burning hours in the District of Columbia, and pending its completion to bill the Department for this category of service on the basis of a burning standard no higher than the 4033.8 hours it uses for Maryland street lighting.

We are also concerned with regard to the question of our authority to allow charges for energy for street lighting in excess of 2 cents per kilowatt hour. Our position on this matter has been clearly stated in the Commission's April 9, 1975 letter to the chairmen of the cognizant Congressional committees and the City

Council, i.e., "We believe it is the intent of the Congress that the Commission's jurisdiction in this area be exclusive and plenary. . .". Our letter further stated our approval of the currently effective street lighting tariff rate of 2 cents per kilowatt hour plus the fuel adjustment surcharge, and pointed out the difficulties in properly distributing increased revenue requirements in the face of an appropriations limitation on one class of service.

We are informed that efforts to clarify this matter have been undertaken. Until the question is resolved, however, we believe that unilateral action on our part might be both presumptious and counter-productive. We shall therefore require continuation of the existing tariff for street lighting energy pending definitive Congressional action.

As a general observation, we believe that many of the Department-PEPCO difficulties are the resulting of misunderstanding and we believe that much can be accomplished by a continuation and intensification of discussions between PEPCO and the Department. We urge that this be done.

The final problem of significance in the rate structure area is the question of PEPCO's proposal for a new fuel adjustment charge. Under its proposal, PEPCO would remove from the base rates the entire cost of fuel and include that cost as a separate charge, offset in part

by credits resulting from the sale of energy and capacity to the PJM system.

The short answer to PEPCO's proposal, in our judgment, is that it is wholly unfair to PEPCO's customers. As observed repeatedly on the record in this proceeding, the PEPCO proposal totally removes any incentive for reducing or minimizing fuel costs; and although we may maintain constant surveillance over PEPCO's operations in this area we are of the view that retention of the profit motive would perhaps be a more powerful incentive to reduce costs than our regulatory supervision. We will therefore disapprove the PEPCO proposal for a new fuel adjustment clause, and direct PEPCO to continue in effect its present fuel adjustment clause, modified to include only increases in costs reflected in Account 151, which includes only the cost of fuel, transportation, and related items. The cost of such items as disposal of ash, fuel handling and fuel procurement will be reflected in base rates.

MISCELLANEOUS

There remains one item which does not fit neatly into the categories of rate of return, rate base, expenses, operating results and rate structure. This item is the contention of the Washington Public Interest Organization (WPIO) that PEPCO's revenue requirements be reduced because of a realized gain from the sale and transfer of

PEPCO property previously devoted to public service. We are aware of course, of the judicial opinion on which the WPIO contention is based.* We do not, however, view that decision as controlling in this case. Apart from the question of jurisdiction (our decisions are not subject to review by the United States Court of Appeals for the District of Columbia Circuit), we believe that the unique factual situation presented to the court in that case is not present here. The properties in question in this case, which PEPCO has placed "below the line" were not acquired at a price below book value, nor under any special circumstances such as existed at the time of enactment of the D. C. Transit franchise act. Nor has there been an accounting treatment which would lay a basis for ratepayers to claim an interest in these properties. Accordingly, we find the exception to established regulatory principles recognized in the Democratic Central Committee's case inapplicable.

Treatment in accordance with the Company's handling of this matter is in accordance with the F.P.C. Uniform System of Accounts which this Commission has adopted, thereby establishing its policy on this issue. An ex post facto change in this policy would be inappropriate.

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*Democratic Central Committee v. WMATC, 485 F.2d 786 (D. C. Cir. 1973).

FINDINGS OF FACT AND CONCLUSIONS

The Commission finds and concludes on the evidence of record the following:

1. That the use of an end-of-period rate base with adjustments to average construction work in progress and materials and supplies is appropriate.

2. That the year ended December 31, 1974 is an appropriate test period and that PEPCO's District of Columbia rate base as of December 31, 1974 is $650,091,000, as shown on Attachment A, Page 1.

3. That the test period operating results, as adjusted, show operating income for the period of $46,856,000, as shown on Attachment A, Page 2.

4. That a fair rate of return to PEPCO is 9.1 percent and that this figure, related to the rate base of $650,091,000 indicates a revenue deficiency of $12,302,000.

5. That in order to realize a 9.1 percent rate of return on its test year rate base, the Company must increase its District of Columbia operating revenues by $27,657,000 after allowing for taxes as shown on Attachment A, Page 3.

6. We find, pursuant to Rule 17.1, that the increase

is cost justified and does not reflect future inflationary expectations; it is the minimum required to assure continued, adequate and safe service and to provide for necessary expansion to meet future requirements; it is intended to achieve the minimum rate of return necessary to attract capital at reasonable costs and yet not impair the credit rating of PEPCO; and it takes into account expected and obtainable productivity gains.

We conclude, therefore, that PEPCO should prepare and submit for our approval rate schedules consistent with this opinion which are reasonable and appropriate in this decision.

THEREFORE IT IS ORDERED:

Section 1. That PEPCO should be authorized to file and put into effect rate schedules calculated to produce approximately $12,302,000 additional net income;

Section 2. That to produce this amount of additional net income, PEPCO rate schedules should be designed to produce some $27.7 million additional gross revenue;

Section 3. That PEPCO should be authorized, and it is hereby authorized, to prepare and file, subject to our approval, rate schedules which comply with our findings and directions and which are calculated to produce $27.7 million

additional revenue; provided however that:

(a) Said rate schedules shall not provide for any increase over current rates for the first 450 kilowatt hours of electricity sold to customers under the residential rate schedule, and

(b) A separate schedule of rates shall be submitted which shall be applicable solely for existing all-electric residential customers.

Section 4. That, by not later than one year from the date of this Order PEPCO shall have installed meters at the facilities of its large power customers which are designed to operate pursuant to a peak load, time of day rate schedule.

Section 5. That, in addition to the rates otherwise to be filed pursuant to Section 3 above, PEPCO shall also file with the Commission a new tariff schedule applicable to those customers specified in Section 4 above which shall be based upon time of day, peak load pricing principles. Said tariff schedule shall be filed at a date sufficiently in advance of the one-year deadline set in Section 4 above so as to give the Commission reasonable opportunity to review and act upon said tariff schedule by the one-year deadline.

Section 6. That PEPCO shall undertake a study of the apartment house segment of the general service customer class in order to determine whether an unreasonable discrimination exists between apartment house residents (receiving service pursuant to the general services rate schedule) and customers receiving service under the residential schedule. PEPCO shall submit said study to the Commission by not later than six months from the date of this Order.

A TRUE COPY:

Chief Clerk

By the Commission:

Ruth Hankins-Nesbitt
Chairperson

Majority Opinion By:

Ruth Hankins-Nesbitt, Chairperson
H. Mason Neely, Vice Chairman

Dissent Opinion By:

William R. Stratton, Commissioner

Order No. 5739

POTOMAC ELECTRIC POWER COMPANY
FORMAL CASE NO. 630
DISTRICT OF COLUMBIA
RATE BASE FOR THE YEAR ENDED DECEMBER 31, 1974

Electric plant in service	$655,274,000
Experimental electric plant	2,915,000
Electric plant held for future use	2,355,000
Electric plant acquisition adjustments	142,000
Construction work in progress	104,356,000 1/
Materials and supplies	28,448,000 1/
Cash working capital	11,958,000
Accumulated provision for depreciation	(151,717,000)
Accumulated provision for amortization	(234,000)
Customer advances for construction	(6,000)
Accumulated deferred income taxes	(3,400,000)
Total Rate Base	$650,091,000

NOTE:

1/ average

POTOMAC ELECTRIC POWER COMPANY
FORMAL CASE NO. 630
DISTRICT OF COLUMBIA
OPERATING REVENUES, EXPENSES AND NET OPERATING INCOME
TEST YEAR ENDED DECEMBER 31, 1974

Operating revenues	$190,054,000
Operating expenses:	
Operation and maintenance expenses	99,333,000
Depreciation expense	19,666,000
Amortization expense	78,000
Taxes - other	18,651,000
Federal income taxes	5,470,000
Total operating expenses	143,198,000
Net operating income	$ 46,856,000
Pro forma Rate of Return	7.21%

POTOMAC ELECTRIC POWER COMPANY
FORMAL CASE NO. 630
COMPUTATION OF ADDITIONAL REVENUE REQUIREMENT
APPLICABLE TO THE DISTRICT OF COLUMBIA

Net Rate Base	$650,011,000
Return at 9.1%	$ 59,158,000
Net Utility Operating Income	$ 46,856,000
Deficiency in return	$ 12,302,000
Complement of Composite Tax Rate	44.48%
Additional Revenue Requirement	$ 27,657,000

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA
1625 I Street, N. W., Washington, D. C. 20006

November 12, 1975

IN THE MATTER OF

Application of POTOMAC ELECTRIC POWER)
COMPANY for an Increase in its Retail) Formal Case No. 630
Rates for the Sale of Electric Energy)

DISSENTING OPINION OF COMMISSIONER STRATTON

With today's decision the Commission takes a giant step -- backwards. Backwards into the rate-making ethos of a departed era when the harsh realities of an uncertain energy environment, and rampant inflation were not with us. Today's decision denies the reality, abundantly demonstrated in the record, of remorseless price escalation in virtually every component of the cost of service, and by doing so insures the prompt relitigation of all the issues in this case.

The real issue in this case is whether this Commission can so demonstrate its understanding of this utility and the world in which it must exist as to issue a rate order under which the utility can operate for a reasonable period of time without returning to us in quest of higher rates. This we have failed to do. Our failure is rooted in our denial of known and inexorable upward pressures on operating and capital costs, with which revenues

must keep pace if a utility is to fulfill its service obligation.

I

These considerations of inflation and uncertainty could best have been addressed in dealing with the so-called attrition effect, which requires separate consideration in traditional, test year rate-making as practiced by this Commission.

To understand the attrition effect one must recognize that the test year approach to rate-making is a forecasting methodology, as it must be, since rates are made for the future. The test year approach is implemented as follows: a recent 12-month period (calendar 1974 in this case) is selected as the test year; financial results of that year's operations are used as the base data in the analytical process; known changes are reflected as pro-forma adjustments to the test year operating results; rates are established at a level that, applied to test year usage, will produce sufficient revenue to cover test year expenses as adjusted and provide the funds necessary to produce a fair rate of return on the adjusted test year rate base.

The purpose of this exercise, and its theoretical justification it must be emphasized, is not that future rates are reasonable if in the test year they would have produced a fair return, or that the increase in revenues that would have produced a fair return in the test year is ipso facto the increase that will do so in the future. The test year approach assumes -- and this is vital to an understanding of it -- that the relationship among revenues, expenses and rate base that obtained in the test year will continue into the future. Only if this assumption is valid does it follow that rates which would have produced a fair rate of return in the test year will produce a fair rate of return in the future.

If this assumption as to continuance of relationships holds true, an increase in sales revenues will be accompanied by an equivalent increase in expenses and in rate base; and the utility will earn at the authorized rate notwithstanding the differences in experienced future revenues, expenses and rate base from those of the test year.[1/]

1/ To illustrate: if R=revenues, E=expenses and B=rate base, the rate of return is found by the formula $(R-E) \div B$. If revenue rises by 10% to 1.1R the test year approach assumes that expenses and rate base will maintain their relationship to revenues and also rise by 10%, i.e., to 1.1E and 1.1B. In this situation earned rate of return

(Footnote cont'd page 4)

If test year relationships among revenues, expense and rate base do not continue into the future, then the rates ordered on the assumption the relationship will continue are ineffective to produce the results contemplated by the order.

If revenues rise faster than both expenses and rate base, excessive returns are produced; if revenues rise faster than expenses (and rate base does not rise enough to require application of the excess funds thus produced to meet the fair return requirement on rate base) excessive return is produced; or, if revenues rise faster than rate base (and expenses do not rise enough to absorb the excess funds thus generated) an excessive return results.

Conversely, if rate base and expenses both rise faster than revenues a return deficiency results. A return deficiency also results if the faster rate of increase is experienced only in rate base or only in expenses, unless the revenue shortfall resulting from the faster increase in one cost component is offset by slower than anticipated increases in the other. This erosion of return

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2/ (Cont'd) will be found by the formula $[\overline{1}.1R-1.1E]\div 1.1B$. Dividing through by 1.1 the formula is again expressed $[\overline{R}-E]\div B$ producing the same rate of return as authorized on the basis of test year data.

by cost component increases that outpace revenue increases is known as attrition.

The attrition effect has been felt in the electric utility industry for the past five years, as is illustrated by the results of a recent survey comparing authorized rates of return for the industry with actual earnings:

	1970	1971	1972	1973	1974
Equity Return Authorized	11.97%	12.09%	12.33%	12.2%	13.01%
Return Earned	11.76%	11.64%	11.74%	11.45%	10.96%

As these figures show, actual earned returns on equity have declined, even as state regulatory commissions have authorized ever higher rates of return based on a test year. Obviously the rate of growth in expenses and rate base has exceeded the rate of revenue growth, and the effect has been felt on earnings as demonstrated by inability of the inudstry to achieve earnings that approach levels found reasonable by regulators. PEPCO is no exception.

Obviously the revenue/expense/rate base relationship is dynamic. The relationship that existed in the test year is never exactly maintained in the future. To that extent the test year device is imperfect, but, like democracy, it is probably better than the alternatives. This imperfection is compensated for in some measure by adjusting

test year data in order that it better mirror the future, typically by taking into account known changes that are not fully reflected in test year data, such as annualizing a wage increase that occurred part way through the test year, thereby recognizing a level of expense that will continue throughout an entire future year. Sometimes test year data are adjusted to take account of events occurring after the test year; a wage increase occurring during the pendency of a rate case might be an example. Some such adjustments have been made in this case.

However, the assumption that the revenue/expense/rate base relationship expressed by the adjusted test year data upon which this order is based will continue for a reasonable period into the future is not valid. This order assumes lower expenses and rate base in relation to revenue than will occur. The record abundantly demonstrates, and the majority decision acknowledges, the increasing expense and the increasing rate base required to produce a unit of sales, and the 1975 data admitted into the record bear this out.

The Commission itself has acknowledged the present invalidity of the revenue/expense/rate base continuity assumption in its solemn finding that attrition does in fact exist for this company, no other finding being possible

on the record in this case. Where I part company with the Commission is in its treatment of the attrition malady for which the remedy prescribed lies somewhere between a placebo and blood-letting.

II

The Commission purports to countervail the rate base attrition effect[2/] by granting an end-of-period rate base for plant in service.[3/] Since the value of plant-in-service at the end of the test year was more than the average value of this component of rate base, this has the effect of increasing the jurisdictional rate base by about 14.6 million dollars,[4/] which at the authorized 9.1% rate of return including provision for taxes, increases the revenue requirement by some 2.8 million dollars.

To express this in terms of the earlier theoretical discussion of test year rate-making, the Commission has

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2/ As pointed out above, attrition can result either from increases in rate base at a faster rate than revenues or increases in expenses at a faster rate than revenues, or, of course, both in combination. I will deal with the two effects separately.

3/ Under traditional test year rate-making a weighted average rate base for plant-in-service would ordinarily be used in order to match test year revenues and expenses to the related investment.

4/

Figures in Thousands			
Average rate base	632,610	End of period rate base	655,274
Less depreciation	143,628	Less depreciation	151,717
Net plant in service	488,982	Net p-ant in service	503,577

Difference: $14,575,000

accepted the view that the future relationship between revenues and rate base is more properly expressed by the relationship between test year revenues and the end-of-period plant in service rate base than that between test year revenues and the (lower) average plant in service. Or, put more simply, it will more likely require a greater investment in plant in service in the future to produce a dollar of revenues than it did, on average, in the test year. The relationship of D. C. sales of $190,054,000 is thus to an investment of $503,557,000 rather than $488,982,000, an increase from $2.57 in plant in service needed to produce a dollar of revenue to $2.65. Thus did the right hand give, but what of the left hand?

II. A.

There was a downward rate base adjustment in the materials and supplies account of 9.4 million dollars, with a concomitant reduction in the revenue requirement of 1.9 million dollars. The basis for this adjustment (which, it will be remembered, affects the critical relationship which test year rate-making is designed to produce) is the Commission's acceptance of the conclusion of its accounting witness that the average test year balance in the materials and supplies account ($66,296,000 ". . . . will be more

representative of materials and supplies usage." than the conclusion of the Company's financial witness than an end-of-period balance of $88.177,000 would be more representative of the amount of inventory in the future.5/ The staff witness went on to support the averaging approach by noting that inventories fluctuate and the balance in the account at any particular time may be misleading. This proposition may be conceded. The question is not whether inventories fluctuate, but what figure they will fluctuate around during the future period when the rates established in this order will be in effect. It begs the question to discuss fluctuations, or to compare the appropriate treatment of this account for an electric utility with that of a gas utility, especially when in other contexts -- such as treatment of compensating bank balances where the considerations are exactly the same for gas and electric utilities -- we have reached differing results.

The error of the staff's position is seen to be more glaring when one considers that the principal item in the materials and supplies account is fuel, the price of which rose throughout 1974 to levels which have only just begun

5/ The difference between these figures, $21,881,000, is a system figure, the jurisdictional allocation process makes the relevant figure for the District of Columbia $9,389,000.

to level off. To predict the future, the value of the inventory at the end of the year 1974 would seem to be the one to pick rather than the 1974 average which includes fuel bought at 1973 prices, an era that is never to return.

But the Commission was not compelled to select between the conjecture of the company and the conjecture of the staff. We have accepted into the record monthly operating statements and balance sheets for the first eight months of 1975, and these were available to us as we deliberated upon this case. I had thought our purpose in accepting current financial reports was to permit us to make a better informed decision. Are we free to decline the opportunity to do so? I think not. Balance sheet figures for the materials and supplies account from January 1973 through August 1975 appear in footnote 6/ together with running 12-month totals and monthly average balances. They demonstrate an average balance in the account for the first eight months of 1975 of slightly over $79 million, a figure based on fact. I believe we are required to accept this figure, now that it is available, rather than the staff's $66 million or the company's $88 million in the absence of a showing that the $79 million average balance of 1975 to date is more

(See following page 11.)

6/

POTOMAC ELECTRIC POWER COMPANY
Formal Case No. 630
Moving 12 Months Average Materials & Supplies
(Figures in Thousands)

	Month	Monthly Balance	12 Month Totals	12 Month Average
1973	Jan.	36,101,194		
	Feb.	35,768,162		
	Mar.	38,570,144		
	Apr.	39,213,497		
	May	40,709,193		
	June	39,566,422		
	July	38,882,160		
	Aug.	38,906,292		
	Sept.	41,779,374		
	Oct.	43,836,441		
	Nov.	47,438,741		
	Dec.	39,215,495	479,987,115	39,998,926
1974	Jan.	41,595,105	485,481,026	40,456,752
	Feb.	47,229,003	496,941,867	41,411,822
	Mar.	54,563,959	512,935,682	42,744,640
	Apr.	60,474,935	534,197,120	44,516,427
	May	67,048,383	560,536,310	46,711,359
	June	67,843,292	588,813,680	49,067,807
	July	70,736,490	620,668,010	51,722,334
	Aug.	74,288,950	656,050,668	54,670,889
	Sept.	81,066,707	695,338,001	57,944,833
	Oct.	81,194,291	732,695,851	61,057,988
	Nov.	82,871,245	768,128,355	64,010,696
	Dec.	88,073,144	816,986,004	68,082,167
1975	Jan.	88,390,036	863,780,935	71,981,745
	Feb.	88,422,992	904,974,924	75,414,577
	Mar.	85,660,167	936,071,132	78,005,928
	Apr.	84,461,874	960,058,071	80,004,839
	May	82,441,275	975,450,963	81,287,580
	June	77,942,234	985,549,405	82,129,117
	July	73,755,987	988,568,902	82,380,742
	Aug.			

unrepresentative of the future than $66 or $88 million.

The classic argument to be made against this adjustment is that it violates the test year concept because it accepts data outside the test year to vary test year figures. This is fallacious. Test year data are always adjusted to reflect known changes and this data is certainly known. The purpose of adjusting the test year for known changes is to make it more useful as a predictive tool. To reject this opportunity to improve our inputs in the face of the evidence outlined above reflects not only a misunderstanding of the purpose and proper techniques for test year rate-making, but is an act that is inconsistent with Commission's finding that this is an attrition-afflicted company since, contrary to the evidence, it establishes a revenue/rate base relationship that will produce a revenue shortfall. The majority has actually built attrition into the decision.

II. B.

Other downward rate base adjustments with which I disagree have also been made: removing $5.7 million[7/] in survey and land acquisition costs from rate base, and reducing

7/ The D. C. allocable share of a system total of $10.6 million in these accounts.

the rate base cash working capital account by $4.7 million as a result of denying rate base treatment to compensating bank balances. These are both issues over which reasonable people can differ, and I could accept the Commission decisions on these items if they did not represent reversals of the position taken by the Commission the last time it addressed these issues. As I read this and prior cases, no new arguments have been advanced on either side of either proposition, and I am therefore unwilling to join the Commission in confessing the error of its earlier considered determination of these matters, even though I might have qualified my agreement with the Commission's decision in Case 596 to accept the survey and land acquisition item in rate base. This is said in order to make two points: first, I believe our decisions should demonstrate consistency and fidelity to our established policies in the absence of changed circumstances; second, disallowance of the $5.7 million dollar land and survey item has a downward revenue requirement effect of $1.2 million thereby further offsetting the attrition allowance.

II. C.

But where the Commission has erred, and erred most gravely, is in accepting the staff suggestion that only the

average amount of construction work in progress (CWIP) be included in rate base.[8/]

The Commission's order discussed the two approaches (CWIP and AFUDC in regulatory shorthand) that commissions use to insure that the carrying costs of the investment in utility plant while it is under construction are recovered. Under CWIP plant is carried in rate base while it is under construction; under AFUDC plant does not enter rate base until it goes in service. Under the CWIP approach today's rates must cover the carrying costs of the investment in plant under construction, whereas under the AFUDC approach these costs are not recognized and translated into rates until the plant goes into service. So, on a short-range view

8/ The average balance allocable to the District of Columbia in the CWIP account during the test year was $104.3 million. At year end the District's share of the balance in the account was $131.8 million. The CWIP account is a "holding" account into which the rising investment is an element of utility plant is booked during the time it is under construction. Once construction is completed and the plant is put in service the related investment is transferred from the CWIP account to the plant-in-service account where it remains during the operating life of the plant. The balance in the CWIP account fluctuates during the year, rising as construction investment is booked into it and falling as plant goes into service and the related investment is transferred to the plant in service account. During the test year, there were no significant transfers out of the CWIP account but substantial construction costs were booked into it. For that reason the balance at year's end was significantly higher than the average balance in the account.

of the matter rate payers may be said to be better off when a Commission follows the AFUDC approach where the piper's recompense is deferred. A long-range view of the issue tends to lead to the conclusion that the CWIP approach favors ratepayers. In any event, both ratepayers and utilities seem to be adherents of the bird-in-hand school; utilities favor CWIP, which produces current cash flow, while ratepayers' representatives favor AFUDC, which leaves dollars in consumer's pockets today, leaving tomorrow to take care of itself. It was this verity that led People's Counsel and other intervenors to mount a vigorous effort to cause the Commission to reverse its long-standing policy and shift from CWIP to AFUDC. This was one of two big dollar issues in the case,[9/] for if CWIP could be removed from an end-of-period rate base, rate base would decline by almost $132 million, and the revenue deficiency (if any remained) would be lower by almost $12 million -- not small change, that.

It was onto this battlefield that the staff's accounting witness ventured with the recommendation that the Commission take the average of CWIP ($104.3 million) rather than the end-of-year figure ($131.8 million) in establishing the company's rate base.

9/ The other relates to the Fuel Adjustment Clause, and is discussed later.

The reason originally advanced in support of this proposal, that it would put CWIP treatment on a par with AFUDC, is flawed, as will be demonstrated. In fact, as cross-examination of the staff witness developed, the recommendation was offered with no other purpose than to point out to the Commission a path through the thorny thicket created by the challenge to inclusion of any CWIP in rate base.

As to including CWIP in rate base, the Commission has by this decision reaffirmed its policy of including it. That we were right to do so is best revealed by the nationwide movement of regulatory commissions to follow our lead and switch from AFUDC to CWIP even though it requires higher-than-otherwise rate increases at a time when inflation is exacting a heavy toll on consumers.

Where error has crept in is in acceptance of the average of CWIP in rate base. The staff witness argued that using an average CWIP balance would, ". . . . place the method employed by PEPCO /CWIP7 on an equal basis with the AFUDC accounting convention . . . ." His point was that under the AFUDC approach the interest which is capitalized during construction and ultimately added to rate base to be amortized by the ratepayers is computed in a way that takes into account the fact that the balance in the

construction account fluctuates from month to month. Under an end-of-year CWIP approach this refinement does not exist, and at first glance it appears that use of the AFUDC, weighted-average approach would in fact introduce an element of refinement and rationality to the CWIP convention. But this initially appealing conclusion is quickly rejected when one examines the underlying rationale which the AFUDC and CWIP techniques share -- namely to provide reimbursement for the carrying costs of an investment in utility plant while it is under construction. As the majority opinion points out: the AFUDC plant enters rate base at its cost plus the sum of all interest necessary to carry the investment during the construction period, which is not so with CWIP where recovery of a goodly portion of these carrying costs is never made. If the objective is to bring the result of applying one accounting technique (CWIP) into parity with the other (AFUDC) the task is to make adjustments that more nearly lead to total recovery of interest costs under CWIP, not the opposite, which is the effect of the Commission's order accepting this recommendation.

The point just made is both exotic and elusive; perhaps an example will help. PEPCO's Chalk Point #3 unit was under construction during 1974. Being under construction,

the related investment was carried in the CWIP account, and, hence, was not recognized as plant-in-service and brought into rate base in this case. Nor, because CWIP was averaged, is the total investment in this plant brought into rate base under the CWIP rubric. In May 1975,*/ Chalk Point #3 was put into service and $160 million in related investment was transferred from the CWIP account to the plant-in-service account where it will not earn a return (as "plant-in-service") until the next rate case when the Commission will, as it must, include the whole $160 million in the plant-in-service rate base. Meanwhile, the portion of this investment that has been "averaged out" by the Commission;s decision is not permitted to earn a return -- and this result flows from Commission application of an accounting technique, which is claimed to bring about recovery of construction related interest costs!

Thus seen, it was manifestly unreasonable to use the lower, average CWIP balance in establishing rate base. In this connection, it bears mention that in a holding account such as CWIP an end-of-period balance is not necessarily higher or lower than an average balance. The balance rises incrementally as construction investments are made and falls as plant goes into service, so, while the end-of-period balance on December 31, 1974 was higher than the average

*/ After the test year, but during pendency of the case.

balance during the year, the opposite would have been the case if a June 30, 1975 test year were used because in May 1975 the Chalk Point plant (which raised the average balance in the account in the preceding months) was put in service thereby reducing the end-of-period balance in the CWIP account.

The timing of when a plant goes into service is independent of rate case filings or selections of what 12-month period shall constitute the test year -- or should be. Query, whether the Commission would have adopted an average CWIP balance if a June 30, 1975 test year had been used in this case, when to do so would have meant a higher total rate base.

If one concedes our agency expertise, the CWIP-averaging decision must be deemed to be an informed decision. Since it is clearly wrong, and the circumstances point to only one other explanation for it - namely an expediency perpetrated in the interest of holding down rates it must be seen as arbitrary and is, on that basis, probably reversible error.

One obvious way to deal with this matter under test year rate-making was to adjust plant-in-service upwards and CWIP downwards for the known change that occurred when Chalk Point #3 went into service.

I discuss the CWIP issue in the rate base attrition section of this opinion because this Commission includes CWIP in rate base, and therefore the figure selected as representative of CWIP affects the critical revenue/expense/ rate base relationship.

The effect of using average CWIP in the rate base under the circumstances of this case is to reduce the D. C. rate base by $27.5 million with a resultant decrease in the revenue requirement of some $5.5 million, an amount that more than offsets the attrition allowance granted by permitting an end-of-period rate base for plant in service. This of course is directly contradictory to the Commission's finding of attrition.

II. D.

This is probably the point at which to compare the rate base adjustments made in this case with those made in our last case involving the Company, Case 596 decided about two years ago. In that case, upon a finding of attrition, an end-of-year rate base was selected. The Commission then gave end-of-year treatment to all items included in rate base, not only plant in service as in this case. In this case two significant components of rate base, construction work in progress,and materials and supplies have been

averaged, and the survey and land item has been disallowed in its entirety. Placing the rate base in this case on the same basis as Case 596 would have resulted in a rate base of $692,593,000 and not $650,090,000 as found by the Commission. To equate the two, the following should be added to the Commission's D. C. rate base:

Land Surveys	$ 5,659,000
CWIP	27,455,000
Materials and Supplies	9,389,000
Total	$ 42,503,000

The comparison between the last case and this one is offered to raise the question whether the rate base attrition being felt by the Company today is so different from that felt in 1973 as to call for different treatment by the Commission. This Commission has never dealt with the attrition issue in quantitative terms although techniques to measurement of the attrition effect and tailor a measured response are available. I would like to see us move in this direction.

III

Attrition, it will be remembered, takes two forms, expense attrition and rate base attrition, each brought about by increases in those components at a faster rate than revenues. They may combine in a cumulative way or in an

offsetting way. The prior discussion relates principally to rate base attrition.

As regards expense attrition, I am generally in accord with the way this Commission has dealt with the energy utilities under our jurisdiction. This has been by acceptance of carefully monitored, automatic adjustments to rates to reflect fluctuations in fuel and purchased gas costs. These are the major expense items for energy utilities, and recent history has revealed them to be the least predictable. Establishing a fixed fuel expense/revenue relationship under test year rate-making would have been fallacious and events have demonstrated the correctness of our decision not to attempt it. The remaining expense items have historically been more controllable and stable than fuel and hence more amenable to the test year rate-making formulation. By adjusting for the post-test year wage increase in this case we have moved toward establishing the appropriate relationship of wage expense to revenues and maintain the validity of the test year approach to that item, especially if one accepts the company's claim that employment levels are as low as is prudent with safe and reliable operations and that new and replacement hiring is carefully controlled. It may be that the future will bring sufficient volatility to other major expense categories --

wages, taxes, and supplies particularly -- as to cause the Commission to consider automatic adjustments in rates to deal with changes in expense other than fuel. That day should not come before the Commission is equipped to measure the operating and financial efficiency of the utilities, however. The quest for these competencies has begun among thoughtful and forward-looking regulatory bodies and we should associate ourselves with it.

Returning to consideration of the expense attrition issue as it developed in this case one finds that it centered around the automatic fuel adjustment clause. The Company proposed a comprehensive revision of the clause, the principal change being a proposal to account for the financial results of the Company's transactions on the PJM interchange grid in a manner that would reflect these financial results in the fuel surcharge element of rates rather than in the base rate as they are now. This was the second issue of major financial moment in the case. The Commission has rejected the Company's proposal; I would have accepted it with modifications which I will outline below.

Since the majority opinion does not discuss the issue except in the broadest terms and purports to decide it upon some unexplained conception of fairness, I think an explanation of the issue might be in order for those who are

disposed to examine the consequences of the Commission's decision on this point.

PEPCO buys and sells power and energy over the PJM grid, an electrical interconnection among several utiliteis in the mid-Atlantic area. The most important transations on this grid are the so-called "economy energy" transactions in which, to oversimplify a little bit, utilities buy and sell electricity in order to achieve the lowest possible cost of sales. Transactions are made at a price midway between the (lower) cost of generation at the selling utility and the (higher) cost of generation at the purchasing utility. Thus, if the selling utility's current cost of generation is 2.0¢ per kilowatt-hour (2.0¢/kwh) and the purchasing utility's current cost is 3.0¢/kwh the transaction is made at 2.5¢/kwh, thereby providing energy to the purchasing company at a cost 0.5¢/kwh lower than it would incur if it generated it itself, and offering a sales incentive of 0.5¢ to the selling company.

For reasons related to mix of generating plant and asynchronization of system peaks of the utilities connected to PJM, PEPCO has historically sold more electricity each year on the grid than it has bought, although there are times when it is a purchaser. These transactions are not

insignificant; during the 1974 test year PEPCO sold 4,823,553,000 kwh of energy more than it bought (by contrast, I used about 6,100 kwh of energy in my house during the test year). These sales produced a "profit" of about $41.5 million, a figure derived as follows: 4,823,553,000 kwh sold at an average price of 3.31¢/khw =

	$111,481,000
less cost of generation at 1.45¢/kwh	69,941,000
	$ 41,540,000

The word profit above is placed in quotation marks because these net proceeds do not emerge as profits on the accounting statements. Under the accounting treatment ordained by the Commission the gross margin earned on interchange transactions is applied as an offset against expenses in the test year calculations used to establish the revenue requirement, which, in turn, determines the level of rates.

At this point I again remind the readers of the purpose of test year rate-making: to predict financial relationships expected to obtain in the future period when rates will be in effect. But -- as should be obvious -- there is no relationship whatsoever between PEPCO's net "profit" on PJM transactions and the jurisdictional operating expenses against which they are offset. PEPCO's margin of revenues over expenses earned on the PJM is

related to the volume of business done in PJM and the prices at which this business is transacted. If PEPCO's PJM margins move in equilibrium with the changes in revenue/expense/rate base presumed by the test year then no harm is done by treating them as we do. But if not, the validity of the test year as a predictive device is diminished and with it the integrity of today's order.

There can, of course, be no demonstration in advance that PEPCO's PJM margins will move with the other elements of the test year relativity equation. To the contrary. The uncontradicted evidence in this case is that PEPCO's total PJM margin will decline, in the future both in terms of volumes of business transacted (other PJM companies have added generating capacity that will make them more self-sufficient) and in the margin earned on the transactions made (much of this new capacity is efficient, low-cost generation which will narrow the difference in the cost of generation between PEPCO and the purchasing utility). E.g., if the purchaser's generating cost is not 3¢ but 2.4¢/kwh and the seller's cost is 2.0¢/kwh the transaction is at 2.2¢/kwh which produces a margin to the seller of .2¢/kwh; so, even if the same volume is transacted the profit will be only 40% of what it would have been at a 3.0¢/kwh purchaser's cost.

Let us now consider the effect of this on test year rate-making. On the basis of the test year data used in this case, PEPCO's D. C. expenses are understated by $17.3 million,[10/] which represents the amount by which test year expenses were reduced because of the offset related to PJM transactions. I.e., absent the PJM offset, PEPCO's operating expenses would be $160.5 million and not $143.2 million as shown on Attachment A, page 2. This expense figure relates to $190 million in D. C. revenues, and is the significant figure in establishing the test year revenue/expense relationship. If D. C. revenues rise 5% next year and expenses also rise 5% the revenue/expense relationship established by the text year will be maintained and all will be well. But it must be remembered that the expense figure is derived after deduction of the PJM "profit." In short, operating expenses are as low as they are because the PJM net is as high as it is. If PJM net declines, the offset to expenses declines and stated expenses rise on that account alone, thereby making it impossible for the utility to achieve the return authorized by the Commission.

As I mention above, PJM revenues do not vary in relationship to PEPCO's revenues, expenses or rate base. It

10/ The D. C. share of the $41.5 million total.

is, therefore, conceptually inappropriate to incorporate the PJM experience into test year rate-making. This theoretical problem is not significant if it can be shown that its effect will be neutral or negligible in the future period during which rates will be in effect. The difficulty in this case is that this has not been done. Not only has it not been done, but the 1975 operating results accepted into the record in this case reveal that the D. C. share of PJM offsets to date for 1975 is lower, as predicted. In fact it is only about $4.1 million as compared with $11.7 million for the comparable 1974 period used in the test year. This $7.6 million dollar difference translates directly into rates. Is it any wonder that this issue was hard fought?

PEPCO's proposal was to remove the accounting for PJM transactions from the test year operating expense calculation, and, instead apply the PJM profits as a direct offset to the fuel adjustment surcharge which is added on to base rates. This would eliminate the distorting effect of the volatile PJM offset on the test year rate-making process just as the Commission has done with fuel costs. I believe that if there had not been immediate and significant consequences for rates, the Commission would have accepted this change because of its theoretical soundness and its

contribution to an enduring order in this case.[11] On that basis, I would have had the Commission's decision on this issue go the other way, not only because I subscribe to the reasoning advanced earlier, but because I feel that the "fairness" the Commission extends to ratepayers by its decision need extend no farther than insuring that they get 100% of the benefit of profits earned by PEPCO on the PJM -- as they would if these profits are offset against the fuel adjustment surcharge. Moreover, as I hope a reading of the foregoing has demonstrated, the Commission by denying that future PJM margins will be lower in the face of uncontradicted testimony, and actual evidence of operations which proves it, has brought about expense attrition and not countered it, which is our obligation. The majority's reliance on the argument that moving PJM accounting to the fuel adjustment charge removes the profit incentive to earn as much as possible from interchange transactions is misplaced; treatment of interchange margins can be accounted for in a manner that will retain the financial incentive to maximize the gross margin on this business.

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[11] The Company deserves no kudos for waiting to make this proposal until the presumed political consequences attendant on its acceptance overwhelmed the Commission's will to consider it on it s merits.

IV

By following the traditional test-year rate-making approach in this case without making an appropriate allowance for attrition, the Commission assumes that the distorted revenue/expense/rate base relationship in which this order is rooted will apply in 1976 and beyond, so long as this order is in effect. At the same time, protestations of bewilderment are entered at the fact that this is this company's fourth rate case in six years. The reason is obvious: increases in expense and rate base outpaced the increases in revenue after the 1970, 1972 and 1973 rate cases, as they will do after the 1975 case in the absence of an order that recognizes that fact and allows for it. Unhappily, the Commission has done no more in this case than to set the stage for lamentations over the company's fifth rate request, which is sure to come in the near future. For, if ever a record demonstrated attrition, this one does. If ever a record called for realistic steps to deal with attrition, this one does. If there was ever a demonstration of the failure of revenue growth to keep up with the growth of expenses and investment, it appears in the record spread before the Commission in this

case, where there is data not only for the test year but also for the nine months following -- data which the Commission accepted into the record, I had thought, for the purpose of reaching a decision that took account of the real world as it was revealed to us by the operating results of the company during the pendency of the case.

V

If there is strength in this order it is in its rate design aspects, where first steps are taken in what must be an evolutionary process to restructure PEPCO's rates using costs as the primary basis for rate making while taking account of the potential of rates to alter demand so as to achieve whatever improvement in load factor may be brought about by economically justificable pricing techniques. Our order for a cost of service study, which a Commission appointed agent will help design and monitor, is a first step, and our order to the company to poise itself to implement a time-of-day rate for the 750 large customers who use 54% of the energy is step two.[12/] In the interest of creating customer classes

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12/ Although this order is out of phase in presuming that the company can recommend cost-based time-of-day rates before the cost study is completed. Hopefully, this will be adjusted.

of more homogeneous characteristics we also direct the company to identify the apartment customers in its commercial class with a view to ascertaining their load characteristics and perhaps incorporating apartments into the residential class. Two possible deterrents exist: first, many apartment structures are partly commercial and it may be infeasible to split the electric service in the building; second, some apartment dwellers may now actually be enjoying rates that are lower, not higher, than residential rates if their dwelling structure is an efficiently managed, large General Service schedule customer.

I have pointed out earlier the conceptual fallacy of including net interchange transactions as an offset to fuel expenses within the test-year concept and the attrition-exacerbating effect of the Commission's failure to move this item to the FAC. It also seems to me that there are some other aspects of the fuel adjustment clause that should have been dealt with.

I believe that if we did nothing else we should have put the Fuel Adjustment Clause FAC on a "zero basis" (i.e. collecting the entire cost of fuel in the FAC) in order to

eliminate the confusion engendered by having part of the fuel costs in the base rate and part in the Fuel Adjustment Clause.[13] We all remember the distortions introduced into the debate on the fuel clause last year when the Fuel Adjustment Charge rose at a faster rate than the rise in the cost of fuel itself. This problem was the direct result of having part of the fuel costs hidden in the base rate, and it led to massive public confusion. No party to the case disagreed with moving to a zero-based FAC. Moreover, it would be a step in the direction of 3-part rates favored by the Commission since it would establish an energy component to rates.

As to the company's proposal to move the Fuel Adjustment Clause charges to an estimated basis in order to match expenses and revenues, I believe the Commission was correct to retain the present procedure, which involves a collection lag, rather than adopt the company's proposal to use estimated costs and then adjust them after the fact. Keeping a short lag in the billing is a financial lever that induces the company to minimize

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13/ Under the present rate structure, continued by the Commission in this case, the charge for each kilowatt hour of electricity sold includes 6/10¢ for fuel. Only the fuel cost in excess of .6¢/kwh is collected in the fuel adjustment surcharge.

its fuel cost in order that its carrying charges are minimized. Moreover, keeping a lag will eliminate the problem of collecting almost 13 million dollars in deferred fuel costs from the rate payers, which would be necessary if the company's proposal to accelerate the billing had been accepted.

Finally, the issue was raised as to whether the slightly lower multiplier for high voltage customers should be retained in the FAC to account for electrical efficiency of the system. I believe it should be because the company has given no reason for abandoning it other than "simplification".

The Commission's determination that there shall be no rate increase at all for residential rates up to 450 kwh/month is utterly baffling to me. On October 30 -- less than two weeks ago -- the Commission presented unanimous testimony to the D. C. Council in opposition to a lifeline rate bill. Yet, on November 11 we order implementation of lifeline rates. As everyone knows lifeline rates bestow indiscriminately a subsidy that is generally agreed to be merited only by the poor. Lifeline rates are the antithesis of cost-causation as the basis for rate-making. This order is also subject to the criticism that income redistribution is a function

appropriately confided to legislatures using taxes as the vehicle to accomplish the task -- not a result to be accomplished by regulatory bodies using utility rates as a device. A former Chairman of this Commission, 14/ while recognizing the existence of conscious cross-subsidization in utility rates sounded a note of caution:

> "All in all, therefore, there is nothing wrong in leaving to regulation the power to make a judgment that the economically disadvantaged should be protected in some measure from the increasing cost of Electricity. The decision as to how that judgment should be exercised in particular cases must be left to those charged with the responsibility for fixing rates on the basis of record facts.
>
> "However, this latter observation raises another point which merits some consideration. While the regulatory process can be used to effect income redistribution, there is some question whether the social judgments involved should be made by appointed officials with a relatively narrow scope of responsibility or should be left to elected representatives directly answerable to the people. The question is particularly acute where the appointed regulator has been given no legislative guidance on the issue involved" 15/ (emphasis mine).

14/ George A. Avery, Esquire. "Social and Economic Factors Underlying Current Trends in Rate Design", Proceedings of the Symposium on Rate Design Problems of Regulated Industries, p.59, Foster Associates, Inc., 1975.

15/ Ibid. p. 71.

Chairman Avery there describes the situation in this jurisdiction, where lifeline rate legislation is now pending. I for one do not have the temerity to anticipate the outcome of the legislative process, and would not have tried to do so in this order.

The limits of the "reasonable, just and nondiscriminatory" standard upon our discretion were tested in the last rate case involving this company, and a similar order as to residential rates was upheld.[16/] Nevertheless, I am concerned that this decision may have carried the degree of subsidization of residential customers beyond the limits of discretion we enjoy under our statute. Moreover, the subsidy involved, about $1.8 million as I calculate it, must be borne in part by apartment-house dwellers. I believe our consumer constituency is broader than the single-family residential class.

I accept the flattening of summer residential rates as sound ratemaking, but the combination of no increase and flat rates for the winter residential rate and flat-rating

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16/ Apartment House Council vs. PSC (D.C.C.A., 1975).

the low voltage commercial schedule jeopardizes achievement of the overall revenue goal by shifting recovery of costs to tailblocks, a danger pointed out by the Commission's erudite witness on rate structures, Mr. James Lim.

VI

It cannot be demonstrated that the rate of return found reasonable by the Commission in this case fails the statutory test, and I support it even though it is in the low range, because I am not convinced that the ability to attract capital (one of PEPCO's problems) bears any necessary relationship to the company's authorized rate of return in today's investment climate. Investors, rather, evaluate the expected actual earnings and the quality of those earnings. Therefore, my concern was that in this case we would adhere to our CWIP policy which produces a flow of green dollars and not book-keeping entries, and that we would squarely address the question of what is required to counteract attrition and give the company an opportunity to earn the return we authorized. If we had addressed and dealt with that latter question I think a rate of return on equity as low as what is authorized in this case could have been justified. For me the question

is whether, attrition having been found, the Commission is required to forecast it, even on the basis of historical projections, and relate its return allowance to a quantitative finding. This we did not do in this case, partly because of the failure of the company to develop an adequate record on the subject.

To sum up, the Commission's order posits an economic environment reminiscent of the early 1960's. In failing to acknowledge and deal with the fact that operating and capital requirements per unit of sales have risen, and continue to rise, faster than revenues the Commission has taken a step that can only bring regulation in the District of Columbia into disrepute among the fairminded and knowledgeable.

At a minimum, the rate base should have been established at $693 million; and the credits for PJM interchange transactions should have been made applicable as offsets to the fuel adjustment surcharge.

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA
1625 I Street, N. W., Washington, D. C. 20006

November 12, 1975

IN THE MATTER OF

Application of POTOMAC ELECTRIC POWER)
COMPANY for an Increase in its Retail) Formal Case No. 630
Rates for the Sale of Electric Energy)

DISSENTING OPINION OF COMMISSIONER STRATTON

With today's decision the Commission takes a giant step -- backwards. Backwards into the rate-making ethos of a departed era when the harsh realities of an uncertain energy environment, and rampant inflation were not with us. Today's decision denies the reality, abundantly demonstrated in the record, of remorseless price escalation in virtually every component of the cost of service, and by doing so insures the prompt relitigation of all the issues in this case.

The real issue in this case is whether this Commission can so demonstrate its understanding of this utility and the world in which it must exist as to issue a rate order under which the utility can operate for a reasonable period of time without returning to us in quest of higher rates. This we have failed to do. Our failure is rooted in our denial of known and inexorable upward pressures on operating and capital costs, with which revenues

must keep pace if a utility is to fulfill its service obligation.

I

These considerations of inflation and uncertainty could best have been addressed in dealing with the so-called attrition effect, which requires separate consideration in traditional, test year rate-making as practiced by this Commission.

To understand the attrition effect one must recognize that the test year approach to rate-making is a forecasting methodology, as it must be, since rates are made for the future. The test year approach is implemented as follows: a recent 12-month period (calendar 1974 in this case) is selected as the test year; financial results of that year's operations are used as the base data in the analytical process; known changes are reflected as pro-forma adjustments to the test year operating results; rates are established at a level that, applied to test year usage, will produce sufficient revenue to cover test year expenses as adjusted and provide the funds necessary to produce a fair rate of return on the adjusted test year rate base.

The purpose of this exercise, and its theoretical justification it must be emphasized, is not that future rates are reasonable if in the test year they would have produced a fair return, or that the increase in revenues that would have produced a fair return in the test year is ipso facto the increase that will do so in the future. The test year approach assumes -- and this is vital to an understanding of it -- that the relationship among revenues, expenses and rate base that obtained in the test year will continue into the future. Only if this assumption is valid does it follow that rates which would have produced a fair rate of return in the test year will produce a fair rate of return in the future.

If this assumption as to continuance of relationships holds true, an increase in sales revenues will be accompanied by an equivalent increase in expenses and in rate base; and the utility will earn at the authorized rate notwithstanding the differences in experienced future revenues, expenses and rate base from those of the test year.[1/]

1/ To illustrate: if R=revenues, E=expenses and B=rate base, the rate of return is found by the formula $(R-E) \div B$. If revenue rises by 10% to 1.1R the test year approach assumes that expenses and rate base will maintain their relationship to revenues and also rise by 10%, i.e., to 1.1E and 1.1B. In this situation earned rate of return

(Footnote cont'd page 4)

If test year relationships among revenues, expense and rate base do not continue into the future, then the rates ordered on the assumption the relationship will continue are ineffective to produce the results contemplated by the order.

If revenues rise faster than both expenses and rate base, excessive returns are produced; if revenues rise faster than expenses (and rate base does not rise enough to require application of the excess funds thus produced to meet the fair return requirement on rate base) excessive return is produced; or, if revenues rise faster than rate base (and expenses do not rise enough to absorb the excess funds thus generated) an excessive return results.

Conversely, if rate base and expenses both rise faster than revenues a return deficiency results. A return deficiency also results if the faster rate of increase is experienced only in rate base or only in expenses, unless the revenue shortfall resulting from the faster increase in one cost component is offset by slower than anticipated increases in the other. This erosion of return

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1/ (Cont'd) will be found by the formula $[I.1R-1.1E]+1.1B$. Dividing through by 1.1 the formula is again expressed $[\bar{R}-E]+B$ producing the same rate of return as authorized on the basis of test year data.

by cost component increases that outpace revenue increases is known as attrition.

The attrition effect has been felt in the electric utility industry for the past five years, as is illustrated by the results of a recent survey comparing authorized rates of return for the industry with actual earnings:

	1970	1971	1972	1973	1974
Equity Return Authorized	11.97%	12.09%	12.33%	12.2%	13.01%
Return Earned	11.76%	11.64%	11.74%	11.45%	10.96%

As these figures show, actual earned returns on equity have declined, even as state regulatory commissions have authorized ever higher rates of return based on a test year. Obviously the rate of growth in expenses and rate base has exceeded the rate of revenue growth, and the effect has been felt on earnings as demonstrated by inability of the inudstry to achieve earnings that approach levels found reasonable by regulators. PEPCO is no exception.

Obviously the revenue/expense/rate base relationship is dynamic. The relationship that existed in the test year is never exactly maintained in the future. To that extent the test year device is imperfect, but, like democracy, it is probably better than the alternatives. This imperfection is compensated for in some measure by adjusting

test year data in order that it better mirror the future, typically by taking into account known changes that are not fully reflected in test year data, such as annualizing a wage increase that occurred part way through the test year, thereby recognizing a level of expense that will continue throughout an entire future year. Sometimes test year data are adjusted to take account of events occurring after the test year; a wage increase occurring during the pendency of a rate case might be an example. Some such adjustments have been made in this case.

However, the assumption that the revenue/expense/rate base relationship expressed by the adjusted test year data upon which this order is based will continue for a reasonable period into the future is not valid. This order assumes lower expenses and rate base in relation to revenue than will occur. The record abundantly demonstrates, and the majority decision acknowledges, the increasing expense and the increasing rate base required to produce a unit of sales, and the 1975 data admitted into the record bear this out.

The Commission itself has acknowledged the present invalidity of the revenue/expense/rate base continuity assumption in its solemn finding that attrition does in fact exist for this company, no other finding being possible

on the record in this case. Where I part company with the Commission is in its treatment of the attrition malady for which the remedy prescribed lies somewhere between a placebo and blood-letting.

II

The Commission purports to countervail the rate base attrition effect[2] by granting an end-of-period rate base for plant in service.[3] Since the value of plant-in-service at the end of the test year was more than the average value of this component of rate base, this has the effect of increasing the jurisdictional rate base by about 14.6 million dollars,[4] which at the authorized 9.1% rate of return including provision for taxes, increases the revenue requirement by some 2.8 million dollars.

To express this in terms of the earlier theoretical discussion of test year rate-making, the Commission has

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2/ As pointed out above, attrition can result either from increases in rate base at a faster rate than revenues or increases in expenses at a faster rate than revenues, or, of course, both in combination. I will deal with the two effects separately.

3/ Under traditional test year rate-making a weighted average rate base for plant-in-service would ordinarily be used in order to match test year revenues and expenses to the related investment.

4/

Figures in Thousands			
Average rate base	632,610	End of period rate base	655,274
Less depreciation	143,628	Less depreciation	151,717
Net plant in service	488,982	Net p-ant in service	503,577

Difference: $14,575,000

accepted the view that the future relationship between revenues and rate base is more properly expressed by the relationship between test year revenues and the end-of-period plant in service rate base than that between test year revenues and the (lower) average plant in service. Or, put more simply, it will more likely require a greater investment in plant in service in the future to produce a dollar of revenues than it did, on average, in the test year. The relationship of D. C. sales of $190,054,000 is thus to an investment of $503,557,000 rather than $488,982,000, an increase from $2.57 in plant in service needed to produce a dollar of revenue to $2.65. Thus did the right hand give, but what of the left hand?

II. A.

There was a downward rate base adjustment in the materials and supplies account of 9.4 million dollars, with a concomitant reduction in the revenue requirement of 1.9 million dollars. The basis for this adjustment (which, it will be remembered, affects the critical relationship which test year rate-making is designed to produce) is the Commission's acceptance of the conclusion of its accounting witness that the average test year balance in the materials and supplies account ($66,296,000 ". . . . will be more

representative of materials and supplies usage." than the conclusion of the Company's financial witness than an end-of-period balance of $08.177,000 would be more representative of the amount of inventory in the future.5/ The staff witness went on to support the averaging approach by noting that inventories fluctuate and the balance in the account at any particular time may be misleading. This proposition may be conceded. The question is not whether inventories fluctuate, but what figure they will fluctuate around during the future period when the rates established in this order will be in effect. It begs the question to discuss fluctuations, or to compare the appropriate treatment of this account for an electric utility with that of a gas utility, especially when in other contexts -- such as treatment of compensating bank balances where the considerations are exactly the same for gas and electric utilities -- we have reached differing results.

The error of the staff's position is seen to be more glaring when one considers that the principal item in the materials and supplies account is fuel, the price of which rose throughout 1974 to levels which have only just begun

5/ The difference between these figures, $21,881,000, is a system figure, the jurisdictional allocation process makes the relevant figure for the District of Columbia $9,389,000.

to level off. To predict the future, the value of the inventory at the end of the year 1974 would seem to be the one to pick rather than the 1974 average which includes fuel bought at 1973 prices, an era that is never to return.

But the Commission was not compelled to select between the conjecture of the company and the conjecture of the staff. We have accepted into the record monthly operating statements and balance sheets for the first eight months of 1975, and these were available to us as we deliberated upon this case. I had thought our purpose in accepting current financial reports was to permit us to make a better informed decision. Are we free to decline the opportunity to do so? I think not. Balance sheet figures for the materials and supplies account from January 1973 through August 1975 appear in footnote 6/ together with running 12-month totals and monthly average balances. They demonstrate an average balance in the account for the first eight months of 1975 of slightly over $79 million, a figure based on fact. I believe we are required to accept this figure, now that it is available, rather than the staff's $66 million or the company's $88 million in the absence of a showing that the $79 million average balance of 1975 to date is more

(See following page 11.)

6/

POTOMAC ELECTRIC POWER COMPANY
Formal Case No. 630
Moving 12 Months Average Materials & Supplies
(Figures in Thousands)

	Month	Monthly Balance	12 Month Totals	12 Month Average
1973	Jan.	36,101,194		
	Feb.	35,768,162		
	Mar.	38,570,144		
	Apr.	39,213,497		
	May	40,709,193		
	June	39,566,422		
	July	38,882,160		
	Aug.	38,906,292		
	Sept.	41,779,374		
	Oct.	43,836,441		
	Nov.	47,438,741		
	Dec.	39,215,495	479,987,115	39,998,926
1974	Jan.	41,595,105	485,481,026	40,456,752
	Feb.	47,229,003	496,941,867	41,411,822
	Mar.	54,563,959	512,935,682	42,744,640
	Apr.	60,474,935	534,197,120	44,516,427
	May	67,048,383	560,536,310	46,711,359
	June	67,843,292	588,813,680	49,067,807
	July	70,736,490	620,668,010	51,722,334
	Aug.	74,288,950	656,050,668	54,670,889
	Sept.	81,066,707	695,338,001	57,944,833
	Oct.	81,194,291	732,695,851	61,057,988
	Nov.	82,871,245	768,128,355	64,010,696
	Dec.	88,073,144	816,986,004	68,082,167
1975	Jan.	88,390,036	863,780,935	71,981,745
	Feb.	88,422,992	904,974,924	75,414,577
	Mar.	85,660,167	936,071,132	78,005,928
	Apr.	84,461,874	960,058,071	80,004,839
	May	82,441,275	975,450,963	81,287,580
	June	77,942,234	985,549,405	82,129,117
	July	73,755,987	988,568,902	82,380,742
	Aug.			

unrepresentative of the future than $66 or $88 million.

The classic argument to be made against this adjustment is that it violates the test year concept because it accepts data outside the test year to vary test year figures. This is fallacious. Test year data are always adjusted to reflect known changes and this data is certainly known. The purpose of adjusting the test year for known changes is to make it more useful as a predictive tool. To reject this opportunity to improve our inputs in the face of the evidence outlined above reflects not only a misunderstanding of the purpose and proper techniques for test year rate-making, but is an act that is inconsistent with Commission's finding that this is an attrition-afflicted company since, contrary to the evidence, it establishes a revenue/rate base relationship that will produce a revenue shortfall. The majority has actually built attrition into the decision.

II. B.

Other downward rate base adjustments with which I disagree have also been made: removing $5.7 million[7/] in survey and land acquisition costs from rate base, and reducing

7/ The D. C. allocable share of a system total of $10.6 million in these accounts.

the rate base cash working capital account by $4.7 million as a result of denying rate base treatment to compensating bank balances. These are both issues over which reasonable people can differ, and I could accept the Commission decisions on these items if they did not represent reversals of the position taken by the Commission the last time it addressed these issues. As I read this and prior cases, no new arguments have been advanced on either side of either proposition, and I am therefore unwilling to join the Commission in confessing the error of its earlier considered determination of these matters, even though I might have qualified my agreement with the Commission's decision in Case 596 to accept the survey and land acquisition item in rate base. This is said in order to make two points: first, I believe our decisions should demonstrate consistency and fidelity to our established policies in the absence of changed circumstances; second, disallowance of the $5.7 million dollar land and survey item has a downward revenue requirement effect of $1.2 million thereby further offsetting the attrition allowance.

II. C.

But where the Commission has erred, and erred most gravely, is in accepting the staff suggestion that only the

average amount of construction work in progress (CWIP) be included in rate base.[8/]

The Commission's order discussed the two approaches (CWIP and AFUDC in regulatory shorthand) that commissions use to insure that the carrying costs of the investment in utility plant while it is under construction are recovered. Under CWIP plant is carried in rate base while it is under construction; under AFUDC plant does not enter rate base until it goes in service. Under the CWIP approach today's rates must cover the carrying costs of the investment in plant under construction, whereas under the AFUDC approach these costs are not recognized and translated into rates until the plant goes into service. So, on a short-range view

8/ The average balance allocable to the District of Columbia in the CWIP account during the test year was $104.3 million. At year end the District's share of the balance in the account was $131.8 million. The CWIP account is a "holding" account into which the rising investment is an element of utility plant is booked during the time it is under construction. Once construction is completed and the plant is put in service the related investment is transferred from the CWIP account to the plant-in-service account where it remains during the operating life of the plant. The balance in the CWIP account fluctuates during the year, rising as construction investment is booked into it and falling as plant goes into service and the related investment is transferred to the plant in service account. During the test year, there were no significant transfers out of the CWIP account but substantial construction costs were booked into it. For that reason the balance at year's end was significantly higher than the average balance in the account.

of the matter rate payers may be said to be better off when a Commission follows the AFUDC approach where the piper's recompense is deferred. A long-range view of the issue tends to lead to the conclusion that the CWIP approach favors ratepayers. In any event, both ratepayers and utilities seem to be adherents of the bird-in-hand school; utilities favor CWIP, which produces current cash flow, while ratepayers' representatives favor AFUDC, which leaves dollars in consumer's pockets today, leaving tomorrow to take care of itself. It was this verity that led People's Counsel and other intervenors to mount a vigorous effort to cause the Commission to reverse its long-standing policy and shift from CWIP to AFUDC. This was one of two big dollar issues in the case,[9/] for if CWIP could be removed from an end-of-period rate base, rate base would decline by almost $132 million, and the revenue deficiency (if any remained) would be lower by almost $12 million -- not small change, that.

It was onto this battlefield that the staff's accounting witness ventured with the recommendation that the Commission take the average of CWIP ($104.3 million) rather than the end-of-year figure ($131.8 million) in establishing the company's rate base.

9/ The other relates to the Fuel Adjustment Clause, and is discussed later.

The reason originally advanced in support of this proposal, that it would put CWIP treatment on a par with AFUDC, is flawed, as will be demonstrated. In fact, as cross-examination of the staff witness developed, the recommendation was offered with no other purpose than to point out to the Commission a path through the thorny thicket created by the challenge to inclusion of any CWIP in rate base.

As to including CWIP in rate base, the Commission has by this decision reaffirmed its policy of including it. That we were right to do so is best revealed by the nationwide movement of regulatory commissions to follow our lead and switch from AFUDC to CWIP even though it requires higher-than-otherwise rate increases at a time when inflation is exacting a heavy toll on consumers.

Where error has crept in is in acceptance of the average of CWIP in rate base. The staff witness argued that using an average CWIP balance would, ". . . . place the method employed by PEPCO /CWIP/ on an equal basis with the AFUDC accounting convention . . . ." His point was that under the AFUDC approach the interest which is capitalized during construction and ultimately added to rate base to be amortized by the ratepayers is computed in a way that takes into account the fact that the balance in the

construction account fluctuates from month to month. Under an end-of-year CWIP approach this refinement does not exist, and at first glance it appears that use of the AFUDC, weighted-average approach would in fact introduce an element of refinement and rationality to the CWIP convention. But this initially appealing conclusion is quickly rejected when one examines the underlying rationale which the AFUDC and CWIP techniques share -- namely to provide reimbursement for the carrying costs of an investment in utility plant while it is under construction. As the majority opinion points out: the AFUDC plant enters rate base at its cost plus the sum of all interest necessary to carry the investment during the construction period, which is not so with CWIP where recovery of a goodly portion of these carrying costs is never made. If the objective is to bring the result of applying one accounting technique (CWIP) into parity with the other (AFUDC) the task is to make adjustments that more nearly lead to total recovery of interest costs under CWIP, not the opposite, which is the effect of the Commission's order accepting this recommendation.

The point just made is both exotic and elusive; perhaps an example will help. PEPCO's Chalk Point #3 unit was under construction during 1974. Being under construction,

the related investment was carried in the CWIP account, and, hence, was not recognized as plant-in-service and brought into rate base in this case. Nor, because CWIP was averaged, is the total investment in this plant brought into rate base under the CWIP rubric. In May 1975,*/ Chalk Point #3 was put into service and $160 million in related investment was transferred from the CWIP account to the plant-in-service account where it will not earn a return (as "plant-in-service") until the next rate case when the Commission will, as it must, include the whole $160 million in the plant-in-service rate base. Meanwhile, the portion of this investment that has been "averaged out" by the Commission;s decision is not permitted to earn a return -- and this result flows from Commission application of an accounting technique, which is claimed to bring about recovery of construction related interest costs!

Thus seen, it was manifestly unreasonable to use the lower, average CWIP balance in establishing rate base. In this connection, it bears mention that in a holding account such as CWIP an end-of-period balance is not necessarily higher or lower than an average balance. The balance rises incrementally as construction investments are made and falls as plant goes into service, so, while the end-of-period balance on December 31, 1974 was higher than the average

*/ After the test year, but during pendency of the case.

balance during the year, the opposite would have been the case if a June 30, 1975 test year were used because in May 1975 the Chalk Point plant (which raised the average balance in the account in the preceding months) was put in service thereby reducing the end-of-period balance in the CWIP account.

The timing of when a plant goes into service is independent of rate case filings or selections of what 12-month period shall constitute the test year -- or should be. Query, whether the Commission would have adopted an average CWIP balance if a June 30, 1975 test year had been used in this case, when to do so would have meant a higher total rate base.

If one concedes our agency expertise, the CWIP-averaging decision must be deemed to be an informed decision. Since it is clearly wrong, and the circumstances point to only one other explanation for it - namely an expediency perpetrated in the interest of holding down rates it must be seen as arbitrary and is, on that basis, probably reversible error.

One obvious way to deal with this matter under test year rate-making was to adjust plant-in-service upwards and CWIP downwards for the known change that occurred when Chalk Point #3 went into service.

I discuss the CWIP issue in the rate base attrition section of this opinion because this Commission includes CWIP in rate base, and therefore the figure selected as representative of CWIP affects the critical revenue/expense/ rate base relationship.

The effect of using average CWIP in the rate base under the circumstances of this case is to reduce the D. C. rate base by $27.5 million with a resultant decrease in the revenue requirement of some $5.5 million, an amount that more than offsets the attrition allowance granted by permitting an end-of-period rate base for plant in service. This of course is directly contradictory to the Commission's finding of attrition.

II. D.

This is probably the point at which to compare the rate base adjustments made in this case with those made in our last case involving the Company, Case 596 decided about two years ago. In that case, upon a finding of attrition, an end-of-year rate base was selected. The Commission then gave end-of-year treatment to all items included in rate base, not only plant in service as in this case. In this case two significant components of rate base, construction work in progress,and materials and supplies have been

averaged, and the survey and land item has been disallowed in its entirety. Placing the rate base in this case on the same basis as Case 596 would have resulted in a rate base of $692,593,000 and not $650,090,000 as found by the Commission. To equate the two, the following should be added to the Commission's D. C. rate base:

Land Surveys	$ 5,659,000
CWIP	27,455,000
Materials and Supplies	9,389,000
Total	$ 42,503,000

The comparison between the last case and this one is offered to raise the question whether the rate base attrition being felt by the Company today is so different from that felt in 1973 as to call for different treatment by the Commission. This Commission has never dealt with the attrition issue in quantitative terms although techniques to measurement of the attrition effect and tailor a measured response are available. I would like to see us move in this direction.

III

Attrition, it will be remembered, takes two forms, expense attrition and rate base attrition, each brought about by increases in those components at a faster rate than revenues. They may combine in a cumulative way or in an

offsetting way. The prior discussion relates principally to rate base attrition.

As regards expense attrition, I am generally in accord with the way this Commission has dealt with the energy utilities under our jurisdiction. This has been by acceptance of carefully monitored, automatic adjustments to rates to reflect fluctuations in fuel and purchased gas costs. These are the major expense items for energy utilities, and recent history has revealed them to be the least predictable. Establishing a fixed fuel expense/revenue relationship under test year rate-making would have been fallacious and events have demonstrated the correctness of our decision not to attempt it. The remaining expense items have historically been more controllable and stable than fuel and hence more amenable to the test year rate-making formulation. By adjusting for the post-test year wage increase in this case we have moved toward establishing the appropriate relationship of wage expense to revenues and maintain the validity of the test year approach to that item, especially if one accepts the company's claim that employment levels are as low as is prudent with safe and reliable operations and that new and replacement hiring is carefully controlled. It may be that the future will bring sufficient volatility to other major expense categories --

wages, taxes, and supplies particularly -- as to cause the Commission to consider automatic adjustments in rates to deal with changes in expense other than fuel. That day should not come before the Commission is equipped to measure the operating and financial efficiency of the utilities, however. The quest for these competencies has begun among thoughtful and forward-looking regulatory bodies and we should associate ourselves with it.

Returning to consideration of the expense attrition issue as it developed in this case one finds that it centered around the automatic fuel adjustment clause. The Company proposed a comprehensive revision of the clause, the principal change being a proposal to account for the financial results of the Company's transactions on the PJM interchange grid in a manner that would reflect these financial results in the fuel surcharge element of rates rather than in the base rate as they are now. This was the second issue of major financial moment in the case. The Commission has rejected the Company's proposal; I would have accepted it with modifications which I will outline below.

Since the majority opinion does not discuss the issue except in the broadest terms and purports to decide it upon some unexplained conception of fairness, I think an explanation of the issue might be in order for those who are

disposed to examine the consequences of the Commission's decision on this point.

PEPCO buys and sells power and energy over the PJM grid, an electrical interconnection among several utiliteis in the mid-Atlantic area. The most important transations on this grid are the so-called "economy energy" transactions in which, to oversimplify a little bit, utilities buy and sell electricity in order to achieve the lowest possible cost of sales. Transactions are made at a price midway between the (lower) cost of generation at the selling utility and the (higher) cost of generation at the purchasing utility. Thus, if the selling utility's current cost of generation is 2.0¢ per kilowatt-hour (2.0¢/kwh) and the purchasing utility's current cost is 3.0¢/kwh the transaction is made at 2.5¢/kwh, thereby providing energy to the purchasing company at a cost 0.5¢/kwh lower than it would incur if it generated it itself, and offering a sales incentive of 0.5¢ to the selling company.

For reasons related to mix of generating plant and asynchronization of system peaks of the utilities connected to PJM, PEPCO has historically sold more electricity each year on the grid than it has bought, although there are times when it is a purchaser. These transactions are not

insignificant; during the 1974 test year PEPCO sold 4,823,553,000 kwh of energy more than it bought (by contrast, I used about 6,100 kwh of energy in my house during the test year). These sales produced a "profit" of about $41.5 million, a figure derived as follows: 4 823,553,000 kwh sold at an average price of 3.31¢/khw =

	$111,481,000
less cost of generation at 1.45¢/kwh	69,941,000
	$ 41,540,000

The word profit above is placed in quotation marks because these net proceeds do not emerge as profits on the accounting statements. Under the accounting treatment ordained by the Commission the gross margin earned on interchange transactions is applied as an offset against expenses in the test year calculations used to establish the revenue requirement, which, in turn, determines the level of rates.

At this point I again remind the readers of the purpose of test year rate-making: to predict financial relationships expected to obtain in the future period when rates will be in effect. But -- as should be obvious -- there is no relationship whatsoever between PEPCO's net "profit" on PJM transactions and the jurisdictional operating expenses against which they are offset. PEPCO's margin of revenues over expenses earned on the PJM is

related to the volume of business done in PJM and the prices at which this business is transacted. If PEPCO's PJM margins move in equilibrium with the changes in revenue/expense/rate base presumed by the test year then no harm is done by treating them as we do. But if not, the validity of the test year as a predictive device is diminished and with it the integrity of today's order.

There can, of course, be no demonstration in advance that PEPCO's PJM margins will move with the other elements of the test year relativity equation. To the contrary. The uncontradicted evidence in this case is that PEPCO's total PJM margin will decline, in the future both in terms of volumes of business transacted (other PJM companies have added generating capacity that will make them more self-sufficient) and in the margin earned on the transactions made (much of this new capacity is efficient, low-cost generation which will narrow the difference in the cost of generation between PEPCO and the purchasing utility). E.g., if the purchaser's generating cost is not 3¢ but 2.4¢/kwh and the seller's cost is 2.0¢/kwh the transaction is at 2.2¢/kwh which produces a margin to the seller of .2¢/kwh; so, even if the same volume is transacted the profit will be only 40% of what it would have been at a 3.0¢/kwh purchaser's cost.

Let us now consider the effect of this on test year rate-making. On the basis of the test year data used in this case, PEPCO's D. C. expenses are understated by $17.3 million,[10/] which represents the amount by which test year expenses were reduced because of the offset related to PJM transactions. I.e., absent the PJM offset, PEPCO's operating expenses would be $160.5 million and not $143.2 million as shown on Attachment A, page 2. This expense figure relates to $190 million in D. C. revenues, and is the significant figure in establishing the test year revenue/expense relationship. If D. C. revenues rise 5% next year and expenses also rise 5% the revenue/expense relationship established by the text year will be maintained and all will be well. But it must be remembered that the expense figure is derived after deduction of the PJM "profit." In short, operating expenses are as low as they are because the PJM net is as high as it is. If PJM net declines, the offset to expenses declines and stated expenses rise on that account alone, thereby making it impossible for the utility to achieve the return authorized by the Commission.

As I mention above, PJM revenues do not vary in relationship to PEPCO's revenues, expenses or rate base. It

10/ The D. C. share of the $41.5 million total.

is, therefore, conceptually inappropriate to incorporate the PJM experience into test year rate-making. This theoretical problem is not significant if it can be shown that its effect will be neutral or negligible in the future period during which rates will be in effect. The difficulty in this case is that this has not been done. Not only has it not been done, but the 1975 operating results accepted into the record in this case reveal that the D. C. share of PJM offsets to date for 1975 is lower, as predicted. In fact it is only about $4.1 million as compared with $11.7 million for the comparable 1974 period used in the test year. This $7.6 million dollar difference translates directly into rates. Is it any wonder that this issue was hard fought?

PEPCO's proposal was to remove the accounting for PJM transactions from the test year operating expense calculation, and, instead apply the PJM profits as a direct offset to the fuel adjustment surcharge which is added on to base rates. This would eliminate the distorting effect of the volatile PJM offset on the test year rate-making process just as the Commission has done with fuel costs. I believe that if there had not been immediate and significant consequences for rates, the Commission would have accepted this change because of its theoretical soundness and its

contribution to an enduring order in this case.[11/] On that basis, I would have had the Commission's decision on this issue go the other way, not only because I subscribe to the reasoning advanced earlier, but because I feel that the "fairness" the Commission extends to ratepayers by its decision need extend no farther than insuring that they get 100% of the benefit of profits earned by PEPCO on the PJM -- as they would if these profits are offset against the fuel adjustment surcharge. Moreover, as I hope a reading of the foregoing has demonstrated, the Commission by denying that future PJM margins will be lower in the face of uncontradicted testimony, and actual evidence of operations which proves it, has brought about expense attrition and not countered it, which is our obligation. The majority's reliance on the argument that moving PJM accounting to the fuel adjustment charge removes the profit incentive to earn as much as possible from interchange transactions is misplaced; treatment of interchange margins can be accounted for in a manner that will retain the financial incentive to maximize the gross margin on this business.

11/ The Company deserves no kudos for waiting to make this proposal until the presumed political consequences attendant on its acceptance overwhelmed the Commission's will to consider it on it s merits.

IV

By following the traditional test-year rate-making approach in this case without making an appropriate allowance for attrition, the Commission assumes that the distorted revenue/expense/rate base relationship in which this order is rooted will apply in 1976 and beyond, so long as this order is in effect. At the same time, protestations of bewilderment are entered at the fact that this is this company's fourth rate case in six years. The reason is obvious; increases in expense and rate base outpaced the increases in revenue after the 1970, 1972 and 1973 rate cases, as they will do after the 1975 case in the absence of an order that recognizes that fact and allows for it. Unhappily, the Commission has done no more in this case than to set the stage for lamentations over the company's fifth rate request, which is sure to come in the near future. For, if ever a record demonstrated attrition, this one does. If ever a record called for realistic steps to deal with attrition, this one does. If there was ever a demonstration of the failure of revenue growth to keep up with the growth of expenses and investment, it appears in the record spread before the Commission in this

case, where there is data not only for the test year but also for the nine months following -- data which the Commission accepted into the record, I had thought, for the purpose of reaching a decision that took account of the real world as it was revealed to us by the operating results of the company during the pendency of the case.

V

If there is strength in this order it is in its rate design aspects, where first steps are taken in what must be an evolutionary process to restructure PEPCO's rates using costs as the primary basis for rate making while taking account of the potential of rates to alter demand so as to achieve whatever improvement in load factor may be brought about by economically justificable pricing techniques. Our order for a cost of service study, which a Commission appointed agent will help design and monitor, is a first step, and our order to the company to poise itself to implement a time-of-day rate for the 750 large customers who use 54% of the energy is step two.[12/] In the interest of creating customer classes

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12/ Although this order is out of phase in presuming that the company can recommend cost-based time-of-day rates before the cost study is completed. Hopefully, this will be adjusted.

of more homogeneous characteristics we also direct the company to identify the apartment customers in its commercial class with a view to ascertaining their load characteristics and perhaps incorporating apartments into the residential class. Two possible deterrents exist: first, many apartment structures are partly commercial and it may be infeasible to split the electric service in the building; second, some apartment dwellers may now actually be enjoying rates that are lower, not higher, than residential rates if their dwelling structure is an efficiently managed, large General Service schedule customer.

I have pointed out earlier the conceptual fallacy of including net interchange transactions as an offset to fuel expenses within the test-year concept and the attrition-exacerbating effect of the Commission's failure to move this item to the FAC. It also seems to me that there are some other aspects of the fuel adjustment clause that should have been dealt with.

I believe that if we did nothing else we should have put the Fuel Adjustment Clause FAC on a "zero basis" (i.e. collecting the entire cost of fuel in the FAC) in order to

eliminate the confusion engendered by having part of the fuel costs in the base rate and part in the Fuel Adjustment Clause.[13/] We all remember the distortions introduced into the debate on the fuel clause last year when the Fuel Adjustment charge rose at a faster rate than the rise in the cost of fuel itself. This problem was the direct result of having part of the fuel costs hidden in the base rate, and it led to massive public confusion. No party to the case disagreed with moving to a zero-based FAC. Moreover, it would be a step in the direction of 3-part rates favored by the Commission since it would establish an energy component to rates.

As to the company's proposal to move the Fuel Adjustment Clause charges to an estimated basis in order to match expenses and revenues, I believe the Commission was correct to retain the present procedure, which involves a collection lag, rather than adopt the company's proposal to use estimated costs and then adjust them after the fact. Keeping a short lag in the billing is a financial lever that induces the company to minimize

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13/ Under the present rate structure, continued by the Commission in this case, the charge for each kilowatt hour of electricity sold includes 6/10¢ for fuel. Only the fuel cost in excess of .6¢/kwh is collected in the fuel adjustment surcharge.

its fuel cost in order that its carrying charges are minimized. Moreover, keeping a lag will eliminate the problem of collecting almost 13 million dollars in deferred fuel costs from the rate payers, which would be necessary if the company's proposal to accelerate the billing had been accepted.

Finally, the issue was raised as to whether the slightly lower multiplier for high voltage customers should be retained in the FAC to account for electrical efficiency of the system. I believe it should be because the company has given no reason for abandoning it other than "simplification".

The Commission's determination that there shall be no rate increase at all for residential rates up to 450 kwh/month is utterly baffling to me. On October 30 -- less than two weeks ago -- the Commission presented unanimous testimony to the D. C. Council in opposition to a lifeline rate bill. Yet, on November 11 we order implementation of lifeline rates. As everyone knows lifeline rates bestow indiscriminately a subsidy that is generally agreed to be merited only by the poor. Lifeline rates are the antithesis of cost-causation as the basis for rate-making. This order is also subject to the criticism that income redistribution is a function

appropriately confided to legislatures using taxes as the vehicle to accomplish the task -- not a result to be accomplished by regulatory bodies using utility rates as a device. A former Chairman of this Commission, 14/ while recognizing the existence of conscious cross-subsidization in utility rates sounded a note of caution:

> "All in all, therefore, there is nothing wrong in leaving to regulation the power to make a judgment that the economically disadvantaged should be protected in some measure from the increasing cost of Electricity. The decision as to how that judgment should be exercised in particular cases must be left to those charged with the responsibility for fixing rates on the basis of record facts.
>
> "However, this latter observation raises another point which merits some consideration. While the regulatory process can be used to effect income redistribution, there is some question whether the social judgments involved should be made by appointed officials with a relatively narrow scope of responsibility or should be left to elected representatives directly answerable to the people. The question is particularly acute where the appointed regulator has been given no legislative guidance on the issue involved" 15/ (emphasis mine).

14/ George A. Avery, Esquire. "Social and Economic Factors Underlying Current Trends in Rate Design", Proceedings of the Symposium on Rate Design Problems of Regulated Industries, p.59, Foster Associates, Inc., 1975.

15/ Ibid. p. 71.

Chairman Avery there describes the situation in this jurisdiction, where lifeline rate legislation is now pending. I for one do not have the temerity to anticipate the outcome of the legislative process, and would not have tried to do so in this order.

The limits of the "reasonable, just and nondiscriminatory" standard upon our discretion were tested in the last rate case involving this company, and a similar order as to residential rates was upheld.[16/] Nevertheless, I am concerned that this decision may have carried the degree of subsidization of residential customers beyond the limits of discretion we enjoy under our statute. Moreover, the subsidy involved, about $1.8 million as I calculate it, must be borne in part by apartment-house dwellers. I believe our consumer constituency is broader than the single-family residential class.

I accept the flattening of summer residential rates as sound ratemaking, but the combination of no increase and flat rates for the winter residential rate and flat-rating

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16/ Apartment House Council vs. PSC (D.C.C.A., 1975).

the low voltage commercial schedule jeopardizes achievement of the overall revenue goal by shifting recovery of costs to tailblocks, a danger pointed out by the Commission's erudite witness on rate structures, Mr. James Lim.

VI

It cannot be demonstrated that the rate of return found reasonable by the Commission in this case fails the statutory test, and I support it even though it is in the low range, because I am not convinced that the ability to attract capital (one of PEPCO's problems) bears any necessary relationship to the company's authorized rate of return in today's investment climate. Investors, rather, evaluate the expected actual earnings and the quality of those earnings. Therefore, my concern was that in this case we would adhere to our CWIP policy which produces a flow of green dollars and not book-keeping entries, and that we would squarely address the question of what is required to counteract attrition and give the company an opportunity to earn the return we authorized. If we had addressed and dealt with that latter question I think a rate of return on equity as low as what is authorized in this case could have been justified. For me the question

is whether, attrition having been found, the Commission is required to forecast it, even on the basis of historical projections, and relate its return allowance to a quantitative finding. This we did not do in this case, partly because of the failure of the company to develop an adequate record on the subject.

To sum up, the Commission's order posits an economic environment reminiscent of early 1960's. In failing to acknowledge and deal with the fact that operating and capital requirements per unit of sales have risen, and continue to rise, faster than revenues the Commission has taken a step that can only bring regulation in the District of Columbia into disrepute among the fairminded and knowledgeable.

At a minimum, the rate base should have been established at $693 million; and the credits for PJM interchange transactions should have been made applicable as offsets to the fuel adjustment surcharge.