

(Decision No. 87474)

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

IN THE MATTER OF PROPOSED INCREASED) RATES AND CHARGES CONTAINED IN) TARIFF REVISIONS FILED BY PUBLIC) SERVICE COMPANY OF COLORADO UNDER) ADVICE LETTER NO. 650 - ELECTRIC,) ADVICE LETTER NO. 651 - ELECTRIC,) ADVICE LETTER NO. 250 - GAS, AND) ADVICE LETTER NO. 251 - GAS.)	INVESTIGATION AND SUSPENSION DOCKET NO. 935 DECISION OF THE COMMISSION ESTABLISHING REVENUE REQUIREMENT
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September 12, 1975

Appearances: Kelly, Stansfield and O'Donnell, by
Bryant O'Donnell, Esq., William F.
Skewes, Esq., and James McCotter,
Esq., Denver, Colorado, for Public
Service Company;

Melborn, Dufford, Cook & Brown, by
David W. Furgason, Esq., Denver,
Colorado, for CF&I Steel Corporation;

Harold S. Trimmer, Jr., Esq., General
Counsel, Maurice J. Street, Esq.,
Assistant General Counsel, General
Services Administration, Washington,
D. C., and John L. Mathews, Esq.,
Regional Counsel, John M. Hewins, Esq.,
Assistant Regional Counsel, Region 8,
General Services Administration,
Denver, Colorado, for The Administrator
of General Services, on behalf of the
Executive Agencies of the United States;

Gorsuch, Kirgis, Campbell, Walker &
Grover, by Leonard M. Campbell, Esq.,
and William H. McEwan, Esq., Denver,
Colorado, for Climax Molybdenum Company,
a division of AMAX;

Gorsuch, Kirgis, Campbell, Walker & Grover,
by Leonard M. Campbell, Esq., and
William H. McEwan, Esq., Denver, Colo-
rado, and Rothgerber, Appel & Powers,
by James M. Lyons, Esq., Denver, Colo-
rado, for The Home Builders Associa-
tion of Metropolitan Denver;

Elbridge Burnham, Denver, Colorado,
pro se;

George Falconer Wilson, Denver, Colorado,
pro se; and,

James K. Tarpey, Esq., and Tucker K.
Trautman, Esq., Denver, Colorado,
for the Commission.

BY THE COMMISSION:

STATEMENT

On March 24, 1975, Public Service Company of Colorado (Public Service) filed four Advice Letters accompanied by tariff revisions, which would result in increased rates in all classes of service. More specifically, the increases sought were as follows:

<u>Advice Letter No.</u>	<u>Revenue Increase</u>	<u>Percentage Increase</u>	<u>Proposed Effective Date</u>
650 - Electric	\$13,426,000*	5.79%	4/23/75
651 - Electric	24,416,000**	10.05%	7/1/75
205 - Gas	2,945,000*	2.61%	4/23/75
206 - Gas	6,492,000**	5.61%	7/1/75

*Based on a calendar 1974 test year.

**Based on a test year ending June 30, 1975.

The proposed increases set forth in Advice Letters No. 651 - Electric and No. 206 - Gas incorporate and include (and are not in addition to) the increases proposed in Advice Letters No. 650 - Electric and No. 205 - Gas.

Notice in accordance with the provisions of Rule 18 of the Commission's Rules of Practice and Procedure was given by Public Service to its customers. The Commission received approximately 1700 letters in response thereto, and the majority voiced opposition to the proposed rate increases.

By Decision No. 86674, the Commission set for hearing the tariffs filed with the above Advice Letters. The effective date of the tariff revisions accompanying Advice Letters No. 650 - Electric and No. 205 - Gas was suspended for the period ending November 19, 1975, unless otherwise ordered by the Commission, and the effective date of the tariff revisions accompanying Advice Letters No. 651 - Electric and No. 206 - Gas was suspended for the period ending January 27, 1976, unless otherwise ordered by the Commission.

The following schedule sets forth the names of all persons, corporations and/or associations which filed formal pleadings with the Commission seeking leave to intervene as a party, the dates of filing such pleadings, and the dates when the pleadings for leave to intervene were granted by the Commission:

<u>Name</u>	<u>Date Filed</u>	<u>Date Granted</u>
Elbridge Burnham	4/22/75	4/29/75
Metro-Denver Chapter, Colorado Motel Association	4/28/75	5/6/75
CF&I Steel Corporation	5/7/75	5/13/75
Colorado Workers Unity Organization	5/8/75	5/13/75
George Falconer Wilson	5/9/75	5/20/75
Home Builders Association of Metropolitan Denver (HBA)	5/21/75	5/27/75
Administrator of General Services (GSA)	5/21/75	5/27/75
Climax Molybdenum Company, a division of AMAX	5/21/75	5/27/75
Board of County Commissioners of Pitkin County	5/22/75	5/27/75

On June 12, 1975, the Colorado Workers Unity Organization filed a motion to withdraw as a party, which was granted by Decision No. 86697, dated June 13, 1975. By letter, dated June 13, 1975, the Metro-Denver Chapter of the Colorado Motel Association advised the Commission that, rather than participate as a party, it would appear as a public witness and Mr. Robert Hahn would be its representative. On September 8, 1975, the Commission received notice that the Board of County Commissioners of Pitkin County withdrew its appearance as an intervenor.

At the time the Commission set the proposed rate increases for hearing, the Commission also issued Decision No. 86675, which provided for the taking of testimony from members of the public at the following dates, times and places:

<u>Date</u>	<u>Time</u>	<u>Place</u>
6/16/75	10:00 a.m. 2:00 p.m. 7:00 p.m.	Hearing Room of the Commission, Denver, Colorado
6/18/75	10:00 a.m. 2:00 p.m. 7:00 p.m.	Hearing Room of the Commission, Denver, Colorado
6/19/75	10:00 a.m. 2:00 p.m.	Hearing Room of the Commission, Denver, Colorado
7/16/75	9:00 a.m.	Mesa County Courthouse, Grand Junction, Colorado
7/18/75	10:00 a.m.	Federal Building, Pueblo, Colorado

Hearings were held as set forth above, and, to accommodate the needs and convenience of the public, the Commission additionally heard testimony from members of the public with respect to The Mountain States Telephone and Telegraph Company's proposed rate increase (Investigation and Suspension Docket No. 930).

Approximately 35 persons testified at the above hearings. A majority of these persons were residential customers who opposed the proposed increases. Also, some concern was raised with regard to the rate structure applicable to "all-electric" customers. Several witnesses, including a representative of Local 111 of the International Brotherhood of Electrical Workers, testified in support of the proposed rate increases.

At the time the decision setting for hearing the proposed tariff revisions of Public Service was issued, the Commission indicated its intention to divide the instant proceeding into two phases. Operating income, operating expenses, rate base, rate of return on rate base and rate of return on equity (generally referred to as "revenue requirement") were to be the subject of the first phase, and the manner of spreading any total increase (generally referred to as "spread of the rates") was to be the subject of the second phase. As a result, by Decision No. 86674, the Commission stated that, upon the conclusion of the first phase, it would enter an interim decision setting forth the total amount of any rate increase ("revenue requirement") it would grant to Public Service, and that hearings with regard to how the total increase should be spread among the various categories of customers ("spread of the rates") would be held subsequently on dates to be later specified.

Accordingly, the Commission, by Decision No. 86674, ordered and set forth the following procedural dates: (1) written prepared direct testimony and supporting exhibits with regard to operating income, operating expenses, rate base, rate of return on rate base and rate of return on equity were to be filed by Public Service no later than May 30, 1975, and by intervenors and Commission Staff no later than August 1, 1975; (2) July 21, 1975, was set as the date for Public Service to produce its witnesses, enter each witness' testimony and exhibits into the record, make any corrections, if necessary, and summarize each witness' testimony, if desired; (3) July 23, 1975, was set as the date to commence cross-examination of Public Service's witnesses, and August 11, 1975, was the date set for commencement of cross-examination of the intervenors' witnesses and Commission Staff witnesses, with regard to operating income, operating expenses and rate base; and, (4) September 3, 1975, was the date set for commencing cross-examination of all witnesses with regard to rate of return on rate base and rate of return on equity.

In accordance with Decision No. 86674, Public Service filed its testimony and exhibits on May 30, 1975, and, on August 1, 1975, the testimony and exhibits of the Commission Staff witnesses were filed.

On July 21, 1975, Public Service placed the testimony and exhibits of its witnesses in the record and made certain corrections, and cross-examination with regard to operating income, operating expenses and rate base was held on July 23 and 24, 1975. On August 11,

1975, the testimony and exhibits of the Commission Staff witnesses were placed in the record, certain corrections were made, and cross-examination was held as to operating income, operating expenses and rate base. Rebuttal testimony was presented by Public Service on August 13, 1975.

Cross-examination with regard to return on rate base and return on equity commenced on September 3, 1975, and was completed on that same date.

Statements of position with regard to revenue requirements, by any party wishing to do so, were to be filed no later than September 5, 1975. The only party that elected to file a statement of position on that date was the General Services Administration.

During the first phase of the hearings, a total of 36 exhibits were admitted into evidence. Exhibit Nos. 1 through 29 and No. 35 were sponsored by Public Service, and Exhibit Nos. 30 through 34 were sponsored by Commission Staff witnesses. One exhibit, marked "Zarlengo Exhibit No. 1," was sponsored by Commissioner Zarlengo.

As previously mentioned, the Commission, by Decision No. 86674, did not set forth the specific dates for commencing the "spread-of-the-rates" phase of the hearings. However, this matter was raised by counsel for the Commission at the July 23, 1975, and August 13, 1975, hearings. In addition, the matter of certain persons appearing as amicus curiae during the "spread-of-the-rates" phase of the proceeding was discussed at the July 23, 1975, August 13, 1975, and September 3, 1975, hearings. Finally, various parties to the proceeding emphasized that the Commission should issue an interim decision setting forth the amount of any rate increase to be granted to Public Service prior to the commencement of hearings with regard to "spread of the rates" so that the hearings with regard to "spread of the rates" would be meaningful and not conducted in a vacuum. In response thereto, the Commission considered and decided the following procedural matters:

- (1) August 18, 1975 - date by which the transcripts of all hearings up to and including August 13, 1975, shall be filed with the Commission;
- (2) September 12, 1975 - date by which an interim decision would be entered by the Commission setting forth the total amount of the increase;
- (3) Irwin M. Stelzer, National Economic Research Associates, Inc.; Douglas C. Bauer, Federal Energy Administration; and the Environmental Defense Fund will appear during the "spread-of-the-rates" phase as amicus curiae on behalf of the Commission;
- (4) Witnesses for the Environmental Defense Fund will be Ernst R. Habicht, Jr., Staff Scientist, Environmental Defense Fund; William Vickrey, Professor of Economics, Columbia University; and William Gillen, Consultant with regard to environmental and utility economics;

- (5) September 15, 1975 - date by which testimony and exhibits of Public Service regarding the proposed manner of spreading the above-mentioned increase among its customers shall be filed and personally served;
- (6) September 15, 1975 - date by which testimony and exhibits, in total or in substance, of the amicus curiae with regard to "spread of the rates" shall be filed and personally served;
- (7) September 19, 1975 - date by which testimony and exhibits, in full or in substance, of intervenors and Commission Staff regarding "spread of the rates" shall be filed and personally served;
- (8) September 22, 1975 - hearings to commence with respect to "spread of the rates";
- (9) Tentative order of witnesses commencing September 22, 1975, shall be Public Service, intervenors and Commission Staff, except as the testimony of amicus curiae requires a change or interruption in said order;
- (10) Testimony and cross-examination of Dr. Stelzer is tentatively scheduled to commence on September 23, 1975;
- (11) Testimony and cross-examination of Dr. Bauer is tentatively scheduled to commence on September 25, 1975;
- (12) Testimony and cross-examination of the Environmental Defense Fund's witnesses is tentatively scheduled to commence on September 26, 1975;
- (13) Counsel for Environmental Defense Fund shall have the right to participate in the same manner as counsel for the other parties to the proceeding;
- (14) Testimony and exhibits of each witness shall be entered into the record, and a summary may be given, if desired; and,
- (15) Additional dates, if necessary, shall be set by the Commission.

The hearings with regard to the first phase of the proceeding have now been completed. This decision is in accordance with the schedule outlined above, and its main purpose is to help make the "spread-of-the-rates" phase more meaningful, a point which the parties have emphasized at various times during the hearings. Pursuant to the provisions of the Sunshine Act of 1972 and Rule 32 of the Commission's Rules of Practice and Procedure, this matter was placed on the agenda for the Open Public Meeting held on Tuesday, September 9, 1975.

This decision is interim in nature; a final Commission decision will not be entered until after completion of the hearings commencing September 22, 1975. Therefore, Public Service may not increase its rates as a result of this decision and no party may institute those steps preliminary to appellate review [C.R.S. 1973, 40-6-111, 40-6-114, 40-6-115; cf. Public Utilities Commission v. Poudre Valley Rural Electric Assn., 173 Colo. 364, 369, 480 P.2d 106 (1970)].

Upon completion of the "spread-of-the-rates" phase of the hearings, the Commission will enter a decision incorporating this decision, including any necessary changes or additions, deciding how the total increase should be spread among the various categories of customers, and setting forth the appropriate orders. It will be to this subsequent decision that parties may file, if so desired, applications seeking reconsideration, reargument or rehearing.

FINDINGS OF FACT

Based upon the evidence of record, the following is found as fact:

1. Public Service Company is a public utility operating within the State of Colorado engaged principally in the generation, transmission, purchase, distribution and sale of electricity and in the purchase, distribution and sale of natural gas throughout a number of areas in the State of Colorado.

2. Public Service is also engaged in rendering steam service within a limited area in the downtown business district of the City and County of Denver, in operating a small bus transportation system in the City of Boulder, and in operating a water system in the general area around and in Evergreen. No changes in the rates for steam, bus or water service provided by Public Service have been requested in this proceeding.

3. Public Service's wholesale electric rates and service are under the jurisdiction of the Federal Power Commission. In the findings below, adjustments have been made to various items and amounts resulting in changes in net operating earnings. Said changes have been taken into account as they affect the amount allocated to FPC Jurisdictional Sales so that only those items and amounts under Commission jurisdiction have been considered.

4. The Commission has jurisdiction of the rates charged by Public Service for its retail sales of electricity and gas.

5. As of March 31, 1975, Public Service had 633,661 electric customers and 547,474 gas customers.

6. The test year utilized in this proceeding for determination of operating revenue, operating expenses and rate base is the 12-month period ended March 31, 1975. The use of this test period is discussed in Part I of "Discussion" as hereinafter set forth.

7. The year-end rate base for the electric department totals \$869,157,948, and is comprised of the following items and amounts:

Utility Plant in Service	\$ 900,142,289
Utility Plant Held for Future Use	718,306
Construction Work in Progress	190,381,611
Common Utility Plant in Service	
Allocated	24,693,320
Prepayments	2,056,318
Utility Materials and Supplies	28,869,627
Cash Working Capital Requirements	--
Compensating Bank Balances	
Allocated	7,238,236
Customer Advances for Construction	<u>(1,177,357)</u>
Year-End Gross Original Cost	
Rate Base	\$1,152,922,350
Reserve for Depreciation and	
Amortization	(221,062,395)
Rate Base Allocated to FPC	
Jurisdictional Sales	<u>(62,702,007)</u>
Year-End Net Original Cost	
Rate Base	<u>\$ 869,157,948</u>

The rationale for adoption of a year-end rate base for the electric department is discussed in Part II of "Discussion" as hereinafter set forth.

In Exhibit No. 24, Public Service sets forth a year-end rate base in the amount of \$867,649,493. In Exhibit No. 30, Commission Staff witness Pierre made two adjustments to that dollar amount.

The first was an adjustment to Construction Work in Progress in the amount of \$1,617,277. This adjustment was made as the result of an adjustment made by another Commission Staff witness with regard to Allowance For Funds Used During Construction. The Commission adopts witness Pierre's adjustment, and the rationale for the adjustment is explained in Part III of "Discussion" as hereinafter set forth.

The second adjustment made by Mr. Pierre was the elimination of \$7,238,236 included by Public Service as "Compensating Bank Balances." The Commission adopts the full amount included by Public Service for the reasons hereinafter set forth in Part V of "Discussion."

The difference in the amount allocated to FPC Jurisdictional Sales in the rate base is a result of the other adjustments adopted above by the Commission.

8. The average rate base for the gas department totals \$162,783,416, and is comprised of the following items and amounts:

Utility Plant in Service	\$200,311,490
Utility Plant Held for Future Use	112,008
Construction Work in Progress	9,481,530
Common Utility Plant in Service	
Allocated	14,129,503
Prepayments	207,304
Utility Materials and Supplies	2,803,264
Cash Working Capital	2,858,190
Compensating Bank Balances	
Allocated	1,316,417
Customer Advances for Construction	<u>(1,479,124)</u>
Average Gross Original Cost Rate Base	\$229,740,582
Reserve for Depreciation and Amortization	<u>(66,957,166)</u>
Average Net Original Cost Rate Base	<u>\$162,783,416</u>

The rationale for adoption of an average rate base for the gas department is discussed in Part II of "Discussion."

Public Service witness Hock submitted an exhibit (Exhibit No. 25) setting forth an average rate base in the amount of \$162,814,922. In Exhibit No. 30, Commission Staff witness Pierre made an adjustment to Compensating Bank Balances similar to one he made with regard to the electric department. The Commission adopts the amount of \$1,316,417, and the rationale underlying this approach is explained in Part V of "Discussion."

The amount to be included as Cash Working Capital is \$2,858,190.

9. The combined rate base of the electric and gas departments for the test period ended March 31, 1975, is as follows:

Utility Plant in Service	\$1,100,453,779
Utility Plant Held for Future Use	830,314
Construction Work in Progress	199,863,141
Common Utility Plant in Service	
Allocated	38,822,823
Prepayments	2,263,622
Utility Materials and Supplies	31,672,891
Cash Working Capital Requirements	2,858,190
Compensating Bank Balances	
Allocated	8,554,653
Customer Advances for Construction	<u>(2,656,481)</u>
Gross Original Cost Rate Base	\$1,382,662,932

Reserve for Depreciation and Amortization	(288,019,561)
Rate Base Allocated to FPC Jurisdictional Sales	<u>(62,702,007)</u>
Net Original Cost Rate Base	<u>\$1,031,941,364</u>

10. The total operating revenues for the electric department for the test period are \$251,240,866 and the total operating deductions are \$186,233,150, resulting in net operating revenues in the amount of \$65,007,716. Adding \$1,617,277 to the amount of \$8,728,859 already included in Allowance For Funds Used During Construction and adding \$195,138 to the amount of \$3,719,729 already allocated to FPC Jurisdictional Sales results in net operating earnings of \$71,438,985.

The total operating revenues set forth above are the amounts submitted by Public Service witness Hock (Exhibit No. 22) and Commission Staff witness Merrell (Exhibit No. 33).

The total operating deductions are derived in the following manner. The amount submitted by Public Service was \$188,371,912. This amount was premised upon the proposition that the Company is authorized to normalize its income taxes which are deferred as a result of liberalized depreciation. However, the Commission does not authorize Public Service to adopt normalization, and the reasons are discussed in Part IV of "Discussion."

Public Service included in its total operating deductions the amount of \$2,831,965 as an out-of-period wage adjustment for the electric department, whereas Commission Staff witness Merrell eliminated this amount. The Commission adopts a reduction in the amount of \$583,243 to this out-of-period adjustment for the reasons set forth in Part VI of "Discussion."

Other amounts included by Public Service in its total operating deductions were the following: service club dues and civic and related activities expenses - \$47,797; certain advertising expenses - \$299,918; and, bank line commitment fees - \$97,215. Also, it is noted that Public Service erred in its calculation of property casualty reserve expense in the amount of \$36,290, which the Commission corrects.

Commission Staff witness Merrell eliminated the amount of \$47,797. Although the Commission does not adopt this adjustment in its entirety, an adjustment is made in the amount of \$20,547 for the reasons set forth in Part VII of "Discussion." Whereas Mr. Merrell eliminated the amount of \$299,918, the Commission hereby adopts an adjustment in the amount of \$80,891. The rationale for this adjustment, and future guidelines for all gas and electric utilities, are set forth in Part VIII of "Discussion." Mr. Merrell also eliminated the amount of \$97,215, and the Commission hereby adopts this adjustment for the reasons set forth in Part V of "Discussion."

Mr. Merrell has also adjusted the total operating deductions in the amount of \$44,864. Public Service included this amount to reflect a full 12-month amortization expense associated with the July 1974 third anniversary purchase of Intermountain REA facilities. The Commission concurs that it is not proper to annualize this expense for ratemaking purposes and, accordingly, adopts this adjustment.

As a result of the above adjustments, it is necessary to adjust Federal Income Taxes in the amount of \$339,996 and State Income Taxes in the amount of \$37,280. Taking into consideration the above adjustments, the total operating deductions for the electric department amount to \$186,233,150.

Subtracting the total operating deductions from total operating revenues determines the net operating revenues of \$65,007,716. The amount of \$1,617,277 has been added by witness Merrell to the amount already included in Allowance For Funds Used During Construction, which adjustment the Commission adopts for the reasons set forth in Part III of "Discussion." Finally, to reflect a change in net operating earnings allocated to FPC Jurisdictional Sales as a result of the above adjustments, the additional amount of \$195,138 is allocated to that account. Adding the adjusted amounts in the last two accounts to net operating revenues determines net operating earnings in the amount of \$71,438,985.

11. The total operating revenues for the gas department for the test period are \$116,519,234, and the total operating deductions are \$103,040,776, resulting in net operating revenues of \$13,478,458. Allowance For Funds Used During Construction in the amount of \$106,449, when added to net operating revenues, results in net operating earnings of \$13,584,907.

Exhibits with regard to the above were submitted by Public Service witness Hock (Exhibit No. 22) and Commission Staff witness Merrell (Exhibit No. 33), and the amounts set forth for total operating revenues are those submitted by both witnesses.

The total operating deductions submitted by Public Service are premised upon the proposition that the Company is authorized to normalize its income taxes which are deferred as a result of liberalized depreciation. However, the Commission does not authorize Public Service to adopt normalization, and the reasons are discussed in Part IV of "Discussion."

Adjustments in the amount of \$8,907 in service club dues and civic and related activities expenses, \$61,895 in advertising expenses, and \$43,565 in bank line commitment fees are adopted for the reasons discussed in Parts VII, VIII and V of "Discussion," respectively. These adjustments require further adjustments of \$52,152 in Federal Income Taxes and \$5,718 in State Income Taxes.

Taking into consideration the above adjustments, the total operating deductions amount to \$103,040,776, net operating revenues in the amount of \$13,478,458, and, with the addition of Allowance For Funds Used During Construction, net operating earnings in the amount of \$13,584,907.

12. The appropriate capital structure, discussed in Part IX of "Discussion," for Public Service is the following:

	Amount	Ratio
Long-Term Debt	\$ 542,912,924	50.99%
Preferred Stock	169,400,000	15.91%
Common Equity	342,741,665	32.19%
Reserves and Deferred Taxes	<u>9,620,893</u>	<u>.91%</u>
	\$1,064,675,482	100.00%

13. A rate of return on equity of 15% is fair and reasonable, sufficient to attract equity capital in today's market, and commensurate with rates of return on investments in other industries having comparable risks. This rate of return is explained in greater detail in Part X of "Discussion."

14. A reasonable cost to be assigned to long-term debt is 5.97%, to preferred stock is 6.38%, to reserves and deferred taxes is 0%, and to equity is 15%, resulting in a rate of return on rate base of 8.89%, developed as follows:

	<u>Ratio</u>	<u>Annual Rate</u>	<u>Composite Cost</u>
Long-Term Debt	50.99%	5.97%	3.04%
Preferred Stock	15.91%	6.38%	1.02%
Common Equity	32.19%	15.00%	4.83%
Reserves and Deferred Taxes	.91%	0.00%	<u>0.00%</u>
Return on Rate Base			<u>8.89%</u>

15. Based upon a total rate base of \$1,031,941,364 and an 8.89% rate of return on rate base, the total authorized net operating earnings for Public Service are \$91,739,587. The earnings deficiencies, based upon the test year, are as follows:

	<u>Electric</u>	<u>Gas</u>	<u>Total</u>
Authorized Net Operating Earnings	\$76,942,574	\$14,797,013	\$91,739,587
Actual Net Operating Earnings for the Test Period	<u>71,438,985</u>	<u>13,584,907</u>	<u>85,023,892</u>
Net Operating Earnings Deficiencies	<u>\$5,503,589</u>	<u>\$ 1,212,106</u>	<u>\$ 6,715,695</u>

Because of income and franchise taxes, it is necessary to increase gross revenues for the electric department in the amount of \$2,062,867 to produce an additional one dollar in net operating earnings and to increase gross revenues for the gas department in the amount of \$2,013,648 to produce an additional one dollar in net operating earnings. Accordingly, a total increase of \$11,353,172 in retail electric revenues and \$2,440,755 in retail gas revenues are required with regard to the above earnings deficiencies. Therefore, the total revenue requirement increase for both gas and electric is \$13,793,927.

DISCUSSION

General

Before discussing several issues in particular, the presentation of a few general principles appears advisable.

Ratemaking, which is a legislative function, is not an exact science. It involves the balancing of the interests of the consumer and of the investor. Thus, it is not a matter of ascertaining certain facts and applying set rules. To a considerable extent, it involves questions of judgment and discretion. To aid the Commission in fulfilling these responsibilities, it hires financial analysts and engineers, among others, who provide the necessary expertise.

As will be seen from the various subjects to be discussed shortly, the Commission must decide several questions which rely heavily on expertise, are highly complex, and require the considerable exercise of judgment in reaching a determination. The testimony and exhibits submitted by Public Service's witnesses and Commission Staff witnesses, as well as the cross-examination by the various attorneys, have aided the Commission immeasurably in exercising that judgment.

This proceeding has been divided into two phases: "revenue requirement" and "spread of the rates." In the "revenue requirement" phase, it is the Commission's duty to determine the total revenue increase, if any, to which Public Service is entitled. That phase was heard between the dates of July 21 and September 3, 1975, and this interim decision is a determination of the issues raised at the hearings during those dates.

Having considered the "revenue requirement" phase, the Commission will commence hearings regarding Phase 2, "spread of the rates," on September 22, 1975. The purpose of the latter phase will be to determine how the total revenue increase granted to Public Service will be collected from its various categories of customers. Upon completion of Phase 2, the Commission will enter its final decision ordering how the total revenue increase should be spread in Public Service's rate structure. Due to time limitations imposed by statute, the Commission anticipates entering its final decision toward the end of October 1975.

I

Test Period

As indicated earlier, the rate increase proposed by Public Service in the tariffs accompanying Advice Letters No. 650-Electric and No. 205-Gas was premised upon a calendar 1974 test year, and the rate increase proposed in the tariffs accompanying Advice Letters No. 651-Electric and No. 206-Gas was premised upon the 12 months ending June 30, 1975.

In Decision No. 86674, the Commission explained why the above Advice Letters were consolidated in one proceeding, and that explanation is adopted here. In that same decision, the Commission adopted as the test year the 12-month period ended March 31, 1975, and the rationale set forth in that decision also is adopted here.

Although Public Service's proposed June 30, 1975, test year was based on estimates only for part of the period, and despite testimony by Public Service witness Speer that its rates should be predicated on a future test year, the Commission remains convinced that use of a future test year would not be in the public interest.

The Commission has adopted as the test year the most recent 12 months for which actual data are available. This approach is premised upon the relationship between revenues, expenses and investment as a reliable guide upon which calculations with regard to fair and reasonable rates to be charged in the foreseeable future can be made. Use of a future test year is not a reliable guideline for such purpose. It would involve use of estimates and projections which cannot be verified. Further, such an approach would tend to erode the Commission's authority and responsibility with regard to ratemaking.

For all the above reasons, the Commission concludes that the consolidation of hearings using the 12 months ended March 31, 1975, as the test year is proper.

II

Year-End vs Average Rate Base

Pursuant to Decision No. 86674, Public Service set forth the average rate base for the test period for its electric department and for its gas department. It also set forth separately for each department the rate base as of March 31, 1975, commonly referred to as "year-end" rate base.

Public Service relied upon two reasons for submitting a year-end rate base. First, the Commission, by Decision No. 85724, issued September 24, 1974, authorized Public Service to utilize year-end rate base for ratemaking purposes, and Public Service contends that the factors (inflation, attrition and growth) cited in that decision exist at the present time, and, therefore, the previous decision should be followed. Secondly, Public Service contends that the overall effects of inflation, economic growth of its service territories, costs of pollution control equipment, continued high cost of capital and increased need to raise such capital, and increases in operation and maintenance expenses are sufficient to justify use of a year-end rate base.

Commission Staff witness Pierre set forth various reasons in support of adoption of the average rate base and several potential problems inherent in adoption of a year-end rate base.

Commission Staff witness Garrison submitted two exhibits (Exhibit Nos. 31 and 32) in which is set forth the cost to Public Service's electric department of pollution control equipment and the rate of increase in such costs. Although Mr. Garrison did not advocate the adoption of a year-end rate base for the electric department, he thought the Commission should be aware of these costs and their rate of increase and that the Commission may wish to consider same in reaching a decision concerning adoption of a year-end rate base or average rate base for the electric department.

The purpose of determining a rate base for the test period is to establish a relationship between investment, revenues and expenses. Then, as a change in one factor in the relationship occurs as a result of growth, a corresponding change in the other factors is expected to occur. It is this relationship that serves as a reliable guideline by which to set rates for the foreseeable future.

If one factor in the relationship is overstated, then the matching relationship is distorted. Use of the year-end rate base approach, as proposed by Public Service, is an example. Public Service's approach takes advantage of its growth in rate base, but makes no corresponding adjustments to revenues or expenses which result from that growth.

Therefore, the Commission is of the opinion that use of average rate base is a sound regulatory principle.

Public Service defends its support of the year-end rate base on the general proposition that the additional revenue generated by its use will help to offset the overall earnings erosion or attrition it has suffered. This argument, however, raises several questions which convince the Commission it should not be adopted for that reason.

Since the Commission is setting rates for the future, the concern should be earnings erosion in the foreseeable future which will not be offset in some other manner. Public Service made no attempt to quantify the future effect of earnings erosion and Mr. Speer acknowledged the inability to do so. Thus, there is no rational basis for assuming that the additional revenue generated by use of a year-end rate base corresponds to any degree to the future monetary impact of earnings erosion. Therefore, the Commission rejects the argument that year-end rate base should be adopted as an overall offset to attrition resulting from the general effect of the factors advanced by Public Service.

As a result, the Commission is of the opinion that average rate base as opposed to a year-end rate base should be adopted for the gas department.

As for the electric department, however, the Commission reaches the opposite conclusion and adopts year-end rate base. The Commission is of the opinion that the above discussion is equally applicable to gas and electric utilities. However, in the case of Public Service's electric department, the Commission is of the opinion

that the situation is sufficiently unique to justify use of a year-end rate base at this time as explained more fully below. This rationale does not appear to be applicable to any other utility subject to this Commission's jurisdiction.

Before proceeding with the explanation, it is necessary to provide some background information. At the time the Commission sets rates for a utility, it is necessary to determine its rate base. Included in the rate base will be certain items that help produce revenue and others that do not. Revenue-producing items are those which directly aid in increasing revenues, such as generators and transmission lines. Nonrevenue-producing items are those that do not directly aid in increasing revenues, such as administrative office buildings and computers for billing purposes. If the latter comprises 10% of total rate base, the rates authorized by the Commission will compensate the utility for the nonrevenue-producing items, and, as rate base grows, the utility will continue to be compensated for that same percentage. If the percentage of nonrevenue-producing items increases, however, the utility will not recover its costs associated with the increase unless it reduces expenses elsewhere to offset the increase. If the increase in nonrevenue-producing items is too great, it may be unreasonable to expect the utility to produce savings in other areas to offset the increase.

One item which may be classified as "nonrevenue-producing" is pollution control equipment. Its addition to facilities does not help generate additional revenue. The Commission firmly believes that such equipment is essential and desirable; however, its costs and its increase as a percentage of rate base cannot be ignored.

At the end of 1968, the rate base of the electric department was \$463,297,000 and pollution control equipment constituted 1.70% of that amount, or \$7,857,000 (see Exhibit Nos. 31 and 32). By the end of 1974, the rate base for the electric department had almost doubled, to \$858,022,000, whereas pollution control equipment was nine times greater, or \$60,388,000, constituting 7.04% of the rate base. The additional revenue necessary to provide a return on this pollution control equipment is \$9,205,000.

On March 31, 1975, the electric department's rate base included approximately 7.09% of pollution control equipment, or \$61,014,000. As discussed above, the decision in this matter should compensate Public Service for pollution control equipment as long as it does not exceed 7.09% in the future.

At the present time, however, pollution control equipment accounts for approximately 20% of every dollar spent for construction. By March 31, 1976, it is estimated that pollution control equipment in the amount of \$92,953,000 will be included in the rate base, thereby comprising 9.33% of the total. By March 31, 1977, it is estimated that pollution control equipment in the amount of \$132,095,000 will be included in the rate base, thereby comprising 11.32% of the total. Although the amounts set forth for March 31, 1976, and March 31, 1977, are estimates, the testimony indicates they are on the conservative side.

Therefore, the Commission adopts year-end rate base for the electric department for the following reasons: the electric department is engaged in generation; these generation facilities must be fitted with certain pollution control equipment; this requirement

is imposed by law and is not within the control of Public Service; the pollution control equipment does not aid in producing revenue; the percentage of rate base which such equipment comprises has been increasing rapidly and will continue to accelerate at a rapid pace; the amount of expense attributable to such equipment can reasonably be quantified and is too large to reasonably expect offsetting savings; and, it has reasonably been shown that the additional revenue which will result from use of year-end rate base will be less than the loss of revenue that will be incurred from the increase in pollution control equipment as a percentage of rate base.

Several additional points must be stressed at this time. It is not only the amount of pollution control equipment contained in rate base that is relevant. It is the expected increase in its ratio to the rate base that is important. The Commission will continue reviewing this item for the purpose of determining its future financial impact. Further, in any future rate proceeding, the Commission expects extensive evidence to justify its continuance on this basis.

III

Annualization of Allowance For Funds Used During Construction

For reasons discussed earlier, the Commission has adopted a year-end rate base for the electric department of Public Service. One of the adjustments to the year-end rate base made by Commission Staff witness Merrell was an increase in Allowance For Funds Used During Construction in the amount of \$1,617,277. Witness Merrell's adjustment was the basis for Commission Staff witness Pierre's corresponding adjustment to Construction Work in Progress. As stated in Finding of Fact Nos. 7 and 10, these adjustments are adopted by the Commission.

In determining how to treat Construction Work in Progress, the Commission must balance the interests of those who have supplied the funds for such purpose and those who are ratepayers. On the one hand, "investors" have supplied funds which allow Public Service to engage in construction work, and failure to provide a return thereon will encourage these persons to invest their funds elsewhere. However, consumers do not receive the benefit of such construction until the property is placed in service. Therefore, the argument is made that ratepayers should not have to compensate for the funds invested in construction work until such time as the property is placed in service and is of direct benefit to the ratepayers.

In an attempt to balance these conflicting interests, the Commission has utilized the following approach. The costs of construction work, including the interest costs associated therewith, are set forth in Construction Work in Progress and are included in rate base under that title, thereby allowing the utility to earn a return thereon. At the same time, in the Income Statement, an amount is credited to Allowance For Funds Used During Construction, which amount is similar to the amount of earnings on rate base attributable to Construction Work in Progress. The net effect of these entries while property

is under construction is, to a substantial degree, the receipt of no benefit by the utility and the incurrence of no increased rates by the ratepayers.

When a particular piece of property is transferred from Construction Work in Progress to Utility Plant in Service, the entire cost of such property, including the interest cost associated therewith, is transferred and the entire amount is capitalized over the life of the property. No further amounts are credited to Allowance For Funds Used During Construction with regard to that piece of property. At the end of the year, the amount included in Allowance For Funds Used During Construction is transferred to the Profit and Loss Statement so that, at the beginning of the new year, Allowance For Funds Used During Construction has a zero balance.

Thus, at the time a particular piece of property is placed in service, the utility begins to recover the entire cost and will continue to do so over the life of the property. Since the interest associated therewith is included, the utility, and in turn the "investor," is compensated for the use of the funds and for the delay occurring prior to the property being placed in service. This compensation to the utility, and in turn the "investor," is borne by future, and not present, ratepayers.

As the above illustrates, the amount credited to Allowance For Funds Used During Construction during the test period is directly related to the amount of construction work during the test period as well as the amount on hand as of the end of the test period. When the average rate base approach is used, as with the gas department, the matching relationship between rate base, revenues and expenses as it pertains to Construction Work in Progress and Allowance For Funds Used During Construction is maintained. However, when year-end rate base is used, as with the electric department, the matching relationship as to these two accounts is not maintained unless witness Merrell's and witness Pierre's adjustments are adopted.

Since the amount in Construction Work in Progress is set forth as of March 31, 1975, the end of the test year, thereby raising the assumption it has been in rate base for the full test year, the amount credited to Allowance For Funds Used During Construction should reflect that assumption. This is accomplished by witness Merrell's adjustment of \$1,617,277. Since Construction Work in Progress includes the interest costs associated therewith, the \$1,617,277 also should be added to this account, and this is accomplished by witness Pierre's adjustment. For regulatory purposes, therefore, these adjustments are adopted to maintain the matching relationship between rate base, revenues and expenses as it pertains to Construction Work in Progress and Allowance For Funds Used During Construction.

IV

Normalization vs Flow-Through of Deferred Income

Taxes Resulting From Liberalized Depreciation

For income tax purposes, Public Service depreciates its property on an accelerated basis, thereby reducing its taxes. The question arises whether these tax savings should be normalized by

setting up in a separate account referred to as "Deferred Income Taxes - Liberalized Depreciation," or whether the tax savings should be "flowed through" to the rates to the benefit of the present ratepayers.

Public Service presently uses the flow-through approach. In this proceeding, Public Service has requested authority to normalize for ratemaking purpose its deferred taxes arising from liberalized depreciation, and Public Service's witnesses Speer, Hock and Meyer testified in support of the request.

As contended by Public Service's witnesses, a utility that normalizes its deferred taxes has access to interest-free capital, thereby improving its cash flow or internal funds generation, with the result that its financial strength is enhanced. Also, it is claimed that this is especially important to a utility such as Public Service which is involved in a tremendous construction program and which must contend with the present capital markets.

However, these witnesses also acknowledged that the amount saved in taxes originated with the present ratepayers and that an expanding utility may never be required to return to the ratepayers the amount saved in taxes.

It also was acknowledged during testimony that the ten utilities which Public Service's witness Reis proffered as comparable to Public Service were evenly divided between utilities using normalization and flow-through and that there was no apparent adverse effect upon the latter's financial standing as a result of their use of flow-through.

The Commission is of the opinion that the evidence in this proceeding is not sufficiently convincing to persuade it to authorize Public Service to change to normalization from its present use of flow-through.

V

Compensating Bank Balances and
Commitment Line Fees

Included as Compensating Bank Balances in Public Service's proposed year-end rate base for the electric department was \$7,238,236, and in the proposed average rate base for the gas department, \$1,316,417. Commission Staff witness Pierre submitted an exhibit (Exhibit No. 30) eliminating these amounts in their entirety.

In the total operating deductions, Public Service included \$97,215 for the electric department and \$43,565 for the gas department as bank line commitment fees. Commission Staff witness Merrell submitted an exhibit (Exhibit No. 33) which removed these amounts from expenses for ratemaking purposes.

Compensating Bank Balances refers to those balances which Public Service must maintain in banks so as to enable it to have available a line of credit. The Compensating Bank Balances must equal

10% of the line of credit that Public Service desires to have available. If Public Service sells commercial paper, it may do so in an amount not to exceed ten times the amount maintained in Compensating Bank Balances. This is generally true of bank loans also, although recently a large number of banks require Public Service, during times it actually borrows, to maintain in Compensating Bank Balances an amount equal to 20% of the amount borrowed. Further, Public Service may utilize any combination of bank loans or commercial paper so long as the total amount borrowed does not exceed ten times the amount maintained in bank balances. Finally, banks do not pay interest to Public Service on the amounts maintained in these balances. In effect, these balances are cost-free funds to the bank and are a prerequisite to Public Service's access to short-term funds.

Public Service's witness Speer testified in detail as to the necessity of maintaining these balances as a prerequisite to short-term borrowing and as to the favorable impact such balances may have on short-term interest rates. Generally, it was his opinion that these amounts should be included in rate base for regulatory purposes because they are a permanent investment and should be treated like materials and supplies or any other item in inventory which is included in rate base. Further, it was his opinion that having access to the short-term money markets was more beneficial than Public Service having to rely on long-term financing any more than necessary.

Commission Staff witness Pierre's approach was premised primarily upon the theory that Compensating Bank Balances, and the costs associated therewith, are an integral part of short-term interest costs and should be treated accordingly. Further, it was his opinion that Compensating Bank Balances should be maintained at the lowest possible balance and their exclusion from rate base would provide incentive for so doing.

Before proceeding with a discussion explaining the Commission's approach, the Commission believes it necessary to specify one ground upon which it does not rely. During the hearings, certain questions were raised concerning the necessity of such balances and the lack of any witness other than Mr. Speer to testify as to their really being required by banks.

Mr. Speer, whose extensive background need not be repeated here, has been associated with Public Service for many years. Although his philosophy with regard to how regulatory bodies should treat Compensating Bank Balances differs from the Commission, there is no reason to doubt his sworn testimony with regard to his statement that banks, indeed, do require such balances. Although the Commission does not condone this questionable practice of the banking industry, it appears that Public Service has no alternative but to comply in order to obtain available lines of credit. The Commission Staff has conducted its own investigation with regard to Compensating Bank Balances, and, as Commission Staff witness Garrison testified, the Staff's exclusion of the amounts is based upon philosophy and not upon any concerns as to their necessity. Finally, although it appears unnecessary after these many years of regulation to have to so state, technical rules of evidence, including the hearsay rule, even if applicable, are not binding upon the Commission.

As with many other issues in this proceeding, the question of whether Compensating Bank Balances should be included in rate base requires the exercise of judgment. In support of the argument that such balances should be included, Public Service's witness Speer has presented a persuasive argument. On the other hand, Commission Staff witness Pierre has set forth valid reasons to support the theory that they should be excluded.

The Commission's decision to include Compensating Bank Balances is influenced, in addition to the above, by one other factor. Approximately one year ago, by Decision No. 85724, issued September 24, 1974, the Commission included Compensating Bank Balances in rate base, and the rationale set forth in that decision was primarily the reasons advanced by witness Speer in this proceeding. Public Service has relied in good faith on that decision issued last year and the amount tied up in Compensating Bank Balances, as of March 31, 1975, was approximately double the amount from one year ago.

This good-faith reliance by Public Service cannot be dismissed lightly. It would not be in the public interest to reverse the approach taken just one year ago. Therefore, the Commission will allow Compensating Bank Balances to be included in the rate base for purposes of this proceeding. However, Public Service now should be aware that good-faith reliance will not be a factor in its next rate proceeding.

Commitment fees are the fees paid to banks to establish a line of credit as well as the premium over the prime rate of interest if amounts are actually borrowed. The question of whether these are an operating expense for regulatory purposes involves generally the same arguments set forth with regard to whether Compensating Bank Balances should be included in rate base.

The amounts involved with regard to commitment fees are relatively minor. Unlike its approach with regard to Compensating Bank Balances, the Commission does not believe the exclusion of these amounts will be contrary to the public interest, and, therefore, these amounts are excluded.

VI

Out-Of-Period Wage Adjustment

In calculating its total operating deductions, Public Service included an out-of-period wage adjustment in the amount of \$4,264,058, of which \$2,831,965 was allocated to the electric department and \$1,432,093 was allocated to the gas department. These amounts are equivalent to an 8.4% wage increase and were part of the terms offered by Public Service to its union employees to be effective June 1, 1975. The union had rejected this wage "package" offered by Public Service, and negotiations were still in progress as of August 13, 1975, the last day of testimony with regard to operating expenses. Commission Staff witness Merrell submitted an exhibit (Exhibit No. 33) in which he eliminated the out-of-period wage adjustment as to the amount allocated to the electric department only.

The Commission is aware of its duty to take into account out-of-period adjustments, but is of the opinion it should proceed responsibly because of the distortion effect such adjustments have upon the matching relationship between rate base, revenues and expenses. Further, the Commission is cognizant of the fact that offsetting factors, such as productivity, may have an impact upon out-of-period adjustments to wages.

The Colorado Supreme Court, in Mountain States Telephone and Telegraph Company v. Public Utilities Commission, 182 Colo. 269, 513 P.2d 721 (1973), stated that the Commission must consider an out-of-period wage adjustment which is known and contractual in nature. If an adjustment fails to meet these criteria, the Commission may still include the amount, but is not required to do so as a matter of law.

This raises the question of whether Public Service has met the tests enunciated by the Colorado Supreme Court. As of August 13, 1975, the last day of hearings with regard to operating expenses, no contract had been signed between management and labor, and, therefore, the amount of any increase is not known, certain or contractual.

On the other hand, as witness Speer testified, the adjustment included by Public Service is the amount it has offered in the bargaining sessions, which increase has already been rejected. Management is not negotiating increases based on individual merit, but is negotiating for an across-the-board increase with a labor union. If the labor negotiations are not successful, arbitration will be sought, and management's last offer becomes the "floor" for arbitration purposes. Regardless of the date a contract is signed, the increase is retroactive to June 1, 1975. Under these circumstances, although there is no formal contract to date, it is difficult, if not unreasonable, to deny that the wage adjustment which Public Service submitted in its exhibits is known and certain to the extent that it is the minimal amount upon which management and labor will settle.

Therefore, the Commission concludes this is an out-of-period adjustment that it will consider. The question to be resolved now is whether the wage adjustment to the electric department should be offset to any degree by productivity.

Productivity is a very controversial topic which is discussed in various articles and is an issue in an increasing number of regulatory proceedings. Yet, the ability to measure it is difficult, to say the least.

Public Service has set forth in its exhibits various measurements of performance. Commission Staff witness Merrell measured productivity by comparing the kilowatt-hour sales per operating labor hours in 1974 to the same factor for the year 1973. The amounts used by Mr. Merrell are set forth in Exhibit No. 33 and the numbers are based upon Public Service's exhibits and information supplied during the Commission Staff audit of Public Service's books and records. As a result of this approach, Mr. Merrell concluded that the productivity increase in 1974 exceeded the percentage increase in the wage adjustment for the electric department and, therefore, used the former as a complete offset to the latter.

In its rebuttal testimony, Public Service stated that witness Merrell's approach, even if correct in theory, failed to take into account the fact that the 1974 productivity increase over 1973 resulted in large part from the addition of two customers who consumed very huge amounts of kilowatt-hours (KWH). Since these two users are now customers of Public Service, witness Speer contended that future productivity increases would be far less. To illustrate the point, Exhibit No. 35 was submitted by witness Speer, in which he eliminated the addition of the two customers mentioned above. Witness Speer concluded that the productivity offset as measured by witness Merrell, and adjusted by the elimination of the two customers, is 1.62%.

The Commission adopts the principle underlying Mr. Merrell's approach as being reasonable under the circumstances. Total KWH sales measures the volume of electricity sold, which directly impacts upon revenue and need not be adjusted for price variations or inflation during the periods used for comparison. These observations are equally true with regard to the number of operating labor hours, the other factor in the equation.

The Commission also agrees, however, with the adjustment contained in Exhibit No. 35. Since the productivity increase in 1974 was due in large part to the addition of two high-usage customers, the productivity increase in 1975 and future years is not expected to continue showing such high percentage increases.

Therefore, the Commission reduces the out-of-period wage adjustment applicable to the electric department by \$583,243, which reduction is derived from the following formula:

1. Total compensation increase net of productivity gain expressed as a percentage (108.4 ÷ 101.62)	6.67%
2. Productivity offset expressed as a percentage (8.40 - 6.67)	1.73%
3. Productivity offset expressed as percentage of total compensation increase (1.73 ÷ 8.40)	20.595%
4. Total compensation increase times productivity offset developed in No. 3 (\$2,831,965 x 20.595%)	\$583,243

VII

Service Club Dues and Civic and Related Activities Expenses

Included by Public Service in its total operating deductions were certain amounts attributable to service club dues and to lobbying activities.

As for service club dues, Public Service's witnesses presented little testimony to justify their inclusion as an expense for ratemaking purpose. Essentially, the defense of these items was based upon conjecture as to how these items may indirectly benefit the ratepayer. The Commission is of the opinion that the benefit, if any, is too remote and hypothetical to justify their inclusion as an expense for ratemaking purposes.

As for lobbying activities, the Commission does not believe these are sufficiently beneficial to the ratepayers to justify their inclusion as an expense for ratemaking purposes.

VIII

Advertising

Included by Public Service in its total operating deductions, for the electric and gas departments, was an amount of \$831,924 for certain advertising purposes. Of this amount, \$534,106 was eliminated by Commission Staff witness Merrell, which adjustment was based to a large degree on recent Commission decisions with regard to "pass-on" proceedings.

The following is a list of categories that the Commission is allowing in this proceeding as a proper expense: energy supply, cost of service, environmental, conservation and efficient use, insulation and related matters, and safety. The categories excluded are: historical, heritage and special events, employee activities and community service, seasonal, and cooking schools.

Although the categories allowed appear reasonable, the Commission does not believe the record shows sufficient benefit flowing from the other categories to justify their inclusion as an operating expense for ratemaking purposes.

Some of these categories are listed in the Uniform System of Accounts as promotional advertising and the others are listed as institutional advertising. However, during the hearings it became clear these headings may be misleading. Therefore, the following is a general discussion of the Commission's present thoughts on the subject in the hope that gas and electric utilities will have some guidelines in the future.

Although various persons may disagree as to the severity of the energy shortage, there is general agreement that there is a shortage and that energy in the future will be more expensive than presently. Utilities which must expand their facilities, either because of increased demand by present customers or by the addition of new customers, are in a more difficult financial position than utilities which are not faced with the need to construct new facilities or who are faced with it to a lesser degree.

Therefore, advertising which will promote increased total usage does not appear to the Commission to be sufficiently beneficial to ratepayers to justify its inclusion as an expense for ratemaking

purposes. On the other hand, advertising which is intended to aid in more efficient use of plant (e. g., off-peak usage) does appear to be sufficiently beneficial. Advertising which is geared toward conservation, better use of insulation and environmental concerns also appears to be sufficiently beneficial.

The mere fact that advertising is done in the name of an association as opposed to the name of a particular utility should not necessarily preclude its inclusion as an expense for ratemaking purposes. The former type of advertising can be as beneficial as the latter. Obviously, questions such as the geographical location of the advertising, the media used, and the amount may be factors.

Advertising related to historical events and employee activities appear to be more beneficial to shareholders than to ratepayers and their inclusion as an expense for ratemaking purposes does not appear justified.

The Commission believes sufficient evidence should be presented concerning advertising expenses. As mentioned above, some of the titles may be misleading and the factors, important at the time such titles were established, may not be relevant today. Thus, evidence in sufficient detail will aid the Commission in making reasonable determinations with regard to the manner of treating various types of advertising.

IX

Capital Structure

The capital structure set forth in Finding of Fact No. 12 reflects the adjustments submitted by Commission Staff witness Richards, which the Commission adopts. The purposes of these adjustments are to take into account cost-free funds accumulated by Public Service and also to exclude funds related to nonutility and subsidiary operations so as to eliminate the impact of these latter funds upon the utility operations. These adjustments are in accordance with previous Commission decisions, wherein a more detailed discussion is presented (see, e. g., Decision No. 78811).

The reasonableness of Public Service's debt/equity ratio in its capital structure has been made an issue in this proceeding. As raised in this proceeding, it is maintained that if necessary capital were raised by a larger percentage of debt financing over equity financing, thereby increasing the debt/equity ratio, the savings in costs including income tax would be substantial and the need for rate increases would be correspondingly reduced. As for any possible adverse effects flowing from a high debt/equity ratio, the advocates contend these consequences are based on opinion only and, even if true, would not outweigh the tax savings just mentioned.

The issue of what is the proper debt/equity ratio for a utility is an issue that has been raised previously before the Commission. In Mountain States Telephone and Telegraph Company v. Public

Utilities Commission, 182 Colo. 269, 281-2, 513 P.2d 721 (1973), the Colorado Supreme Court stated:

. . . [M]ethods of raising capital should be left to the discretion of management unless there is a substantial showing that rate payers are being prejudiced materially by the managerial options in the area of capital financing. . . .

One aspect of interest with regard to the above quotation is that the remarks were directed at the theory, which, similar to that raised in this proceeding, is a theoretical discussion premised upon an arithmetical analysis that failed to weigh all the factors influencing the highly complex subjects of capital financing in general and debt/equity ratios in particular.

Since the advocates of the above theory have submitted no concrete evidence in this proceeding to support their allegations, one could conclude that the above-quoted remarks of the Colorado Supreme Court are sufficient to dispose of the matter. However, rather than leave the impression that the issue of the proper debt/equity ratio is not complex and rather than mislead the public into thinking the Commission has not given it serious thought, the following is a deeper analysis of the subject.

First, it is appropriate to present in more detail the theory presented by the advocates of a high debt ratio. The approximate composite tax applicable to Public Service is 50%. Since income is taxed at 50% for every dollar required to pay a return on equity, an additional dollar is required to pay the tax. Public Service's authorized return on equity is 15%. Because of the doubling effect of taxes, Public Service must collect \$30 for every \$100 of equity capital. Therefore, every \$100 of equity capital costs the ratepayers at the rate of \$30.

On the other hand, the theory continues, for every \$100 of long-term debt acquired at an assumed rate of 8.75%, the interest of \$8.75 is deducted from taxable income, and, using the tax rate of 50%, results in a savings in taxes of \$4.37 or 4.37%. As a result of this deduction, the actual cost of long-term debt is not the ostensible rate of 8.75%; its true cost is 4.37%. Deducting the true cost of long-term debt from the actual cost of equity, the result is a cost of equity that is 25.63 percentage points higher than the cost of debt.

The Commission's discussion of this theory shall be set forth in two parts. The first part will attempt to place into perspective the relative costs, as affected by taxes, of debt versus equity. The second part will discuss the other factors affecting the reasonableness of a debt/equity ratio.

The advocates of a high debt ratio set forth the relative costs of long-term debt and equity by comparing a utility financed by 100% debt to a utility financed by 100% equity. In comparing these two extremes in a vacuum, the mathematics are correct. To be realistic, however, the relative costs of debt and equity must be analyzed under various capital structures, and the following schedule sets forth their relative costs under 11 different debt/equity ratios.

The capital structure is set forth in Column A. Columns B and C contain the amounts and the ratios of debt and equity with total capital being \$100. In Column D are set forth the costs of debt and equity. The embedded costs of debt and equity are set forth in Column E. In Column F are set forth the tax savings resulting from interest costs and Column G contains the additional taxes necessary before the return on equity can be paid. Columns F and G are based on a composite tax rate of 50%. Column H is the total of the amounts in Columns E and G, less the amount in Column F.

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
<u>Capital</u>	<u>Amount</u>	<u>Ratio</u>	<u>Cost</u>	<u>Embedded Cost</u>	<u>Tax Savings</u>	<u>Impact of Taxes</u>	<u>Total Revenue Needed</u>
1) Debt Equity	\$100 -0-	100% -0-	8.75% 15.00%	\$8.75 -0-	\$4.37	-0-	\$ 4.38
2) Debt Equity	\$ 90 \$ 10	90% 10%	8.75% 15.00%	\$7.87 \$1.50	\$3.93	\$ 1.50	\$ 6.94
3) Debt Equity	\$ 80 \$ 20	80% 20%	8.75% 15.00%	\$7.00 \$3.00	\$3.50	\$ 3.00	\$ 9.50
4) Debt Equity	\$ 70 \$ 30	70% 30%	8.75% 15.00%	\$6.12 \$4.50	\$3.06	\$4.50	\$12.06
5) Debt Equity	\$ 60 \$ 40	60% 40%	8.75% 15.00%	\$5.25 \$6.00	\$2.62	\$ 6.00	\$14.63
6) Debt Equity	\$ 50 \$ 50	50% 50%	8.75% 15.00%	\$4.37 \$7.50	\$2.18	\$ 7.50	\$17.19
7) Debt Equity	\$ 40 \$ 60	40% 60%	8.75% 15.00%	\$3.50 \$9.00	\$1.75	\$ 9.00	\$19.75
8) Debt Equity	\$ 30 \$ 70	30% 70%	8.75% 15.00%	\$2.62 \$10.50	\$1.31	\$10.50	\$22.31
9) Debt Equity	\$ 20 \$ 80	20% 80%	8.75% 15.00%	\$1.75 \$12.00	\$.87	\$12.00	\$24.88
10) Debt Equity	\$ 10 \$ 90	10% 90%	8.75% 15.00%	\$.87 \$13.50	\$.43	\$13.50	\$27.44
11) Debt Equity	-0- \$100	-0- 100%	8.75% 15.00%	-0- \$15.00	-0-	\$15.00	\$30.00

Thus, as the examples above illustrate, a utility with a debt/equity ratio of 50:50 will decrease its costs if its debt/equity ratio is changed to 60:40, the savings being \$2.56 or a difference of 2.56 percentage points. This is radically different from the range implied in the approach of the advocates of high debt, and it demonstrates the defect in their reasoning. Their theory is relevant only when comparing a utility financed by 100% debt to a utility financed 100% by equity. The Commission is not aware of any informed person who advocates that a utility such as Public Service be financed by 100% debt.

The Commission agrees that there is a difference between the cost of equity and the cost of debt when only the impact of taxes is considered. As the above demonstrates, however, it is much less than has been alleged. Having placed it in perspective, it is appropriate now to proceed and discuss other factors affecting the reasonableness of a debt/equity ratio. Although the advocates of high debt treat these in summary fashion or avoid them entirely, they are the very factors that must be considered by any Commission if it is to perform its duties in a responsible manner.

No matter how perfect the arithmetical exercise in which one engages, it is only as valid as the assumptions upon which it rests. As the debt ratio of a utility is increased, buyers of new bond issues will require an increase in yield to compensate for the additional risk inherent in the lessening of security to support the issue. Equity holders, in turn, will require an even higher rate of return to compensate the greater risk imposed upon them. To allege otherwise is to ignore the economic realities of the capital market. If the debt ratio is increased continuously, the point will be reached when additional bonds cannot be sold regardless of the yield offered. Since bonds are considered more secure than equity, it is obvious that equity capital could not be sold at that point either.

Further, the advocates of high debt have overlooked the legal liability associated with interest on long-term debt. One of the basic principles of regulatory philosophy is that the authorized rate of return is not guaranteed. Thus, if a utility does not realize its net operating earnings, the rate of return to equity will be less than the rate of return that was authorized. This brings into perspective another basic principle - equity holders assume the risk that the authorized return may not be earned.

However, the interest payable on long-term debt is not flexible. It is a legal obligation that the utility is required to pay if it is to avoid default. If the high debt ratio is the result of Commission action, it becomes the Commission's responsibility to insure sufficient rates so that default may be avoided. Thus, as the debt ratio is increased as a result of Commission decisions, the guarantee of a rate of return correspondingly comes closer to being a necessity.

Another point deserving mention is the "Times Interest Earned Ratio." If a utility is to maintain its rating, its earnings must exceed its interest payments on long-term debt a certain number of times. In the instance of utilities rated "AA," earnings generally must be three times the amount of long-term interest to be paid. Thus, as the debt ratio increases, the necessary earnings must increase threefold. If they do not, the point will be reached when potential investors no longer consider

the utility to be a worthwhile investment, resulting in a downgrading of its rating and a probable foreclosure to all sources of capital in today's market.

The response of the advocates of a high debt ratio to the above concerns is the statement that a downgrading in Public Service's rating from "AA" to "A" would have little effect upon the costs of raising capital. This response is made despite testimony to the contrary by Eugene W. Meyer, Vice-President of Kidder, Peabody & Co., Inc., and L. Sanford Reis, President of Reis & Chandler, Inc. As set forth in their testimony in far greater detail, the effects of a downgrade from "AA" to "A" in today's economic climate will, at best, result in higher costs of financing, and, more probably, result in an inability to finance under any conditions. This can only result in a decline in the quality of service and an increase in the rates.

The Commission does not believe that the debt/equity ratio of any utility is inviolate. However, what constitutes a reasonable debt/equity ratio involves many factors other than income tax considerations. Before intruding into the domain of management, the Commission must have substantial evidence to justify such intervention. The Commission does not believe such action is justified merely because one wishes to dismiss summarily the opinions of experts in the field without concrete evidence to the contrary.

As for the suggestion that Public Service continue to increase its debt ratio until it is no longer feasible, the response of David A. Kosh, previously recognized by this Commission as an expert on rate of return when he appeared on behalf of the Colorado Municipal League in the 1974 Mountain Bell proceeding, captures the essence of the problem:

... [I]t's like saying to somebody we don't know whether a certain medicine is good or bad so we are going to let you try it, and if you die it's bad and if you don't it's good. (Investigation and Suspension Docket No. 867, Volume XXXII, pp. 224-225 of transcript.)

In summary, the Commission does not believe it should intrude into management's discretion with regard to the capital structure of Public Service, where such debt ratio appears reasonable, where the evidence supports such debt ratio and where there is no evidence that demonstrates ratepayers are being prejudiced by such debt/equity ratio. To assume the role of "financial doctor" and force a higher debt ratio upon Public Service can have disastrous effects upon its ability to raise, and its costs of raising, capital, and the one fact the Commission must not forget is that the ratepayers, and not this Commission, will have to bear the consequences of such adverse results.

Return on Equity

By Decision No. 85724, issued September 24, 1974, the Commission adopted an authorized rate of return on equity of 15% as being fair and reasonable. In this proceeding, three witnesses who appeared on behalf of Public Service testified with regard to rate of return on equity, and the essence of their testimony was that the Commission continue to authorize 15%.

In submitting that the authorized rate of return on equity of 15% should be left unchanged, Mr. Speer discussed pre-tax interest coverage of Public Service and various other utilities; analyzed the rate of return necessary to achieve a market value 20% above book value; submitted a Discounted Cash Flow Study; analyzed the costs of long-term debt and equity, the trends in such costs, and the relationship between such costs; and discussed the risk premium approach.

Mr. Meyer, after discussing the present capital market conditions and various financial indicators, submitted that the market price should exceed the book value, that the rate of return on equity should be sufficiently high so that market price will exceed book value, and that the rate of return on equity should be sufficiently higher than the return on bonds to compensate for the difference in risks.

Mr. Reis, after analysis of various capital structures, used Public Service's capital structure as of March 31, 1975, as a reasonable one to consider when determining a fair rate of return on equity. He then proceeded to compare Public Service to companies he believed to be comparable, and the comparisons were of various financial indicators. Also, he conducted an in-depth analysis of Public Service with regard to such indicators as book value earnings, dividend history, quality of earnings, size of the construction program and effects of attrition. Finally, he discussed the expectations of investors and the effect of such expectations upon the market price of stock.

Each of these witnesses, after submitting their respective approaches, concluded that the rate of return on equity should be 15% at the absolute minimum. However, as Mr. Speer stated in his testimony, Public Service was not seeking an authorized return on equity in excess of 15%; instead, it was requesting that the previously authorized rate of return on equity of 15% not be lowered.

Commission Staff witness Richards conducted a Discounted Cash Flow analysis, and, based upon that analysis, submitted a range of 14.4% to 15.6% as being a fair and reasonable rate of return on equity.

In contrast to long-term debt and preferred stock, common stock has no cost that can be derived for regulatory purposes by application of a mathematical formula. However, it most certainly does carry a cost - the rate of return which it must be able to offer investors to induce them to invest money in Public Service as opposed to investing their funds elsewhere.

In establishing an authorized rate of return on equity, the Commission must determine that return which is fair and reasonable, sufficient to attract capital in today's market, and comparable to rates of return in other enterprises having corresponding risks. Keeping in mind the above objectives, realizing that the rate of return authorized approximately one year ago was 15%, and having considered all the testimony of the witnesses on this highly complex subject, the Commission adopts an authorized rate of return on equity of 15%.

CONCLUSIONS ON FINDINGS OF FACT

Based on the foregoing findings of fact, the Commission concludes that:

1. The Public Utilities Commission has jurisdiction over the retail electric and gas rates of Public Service and has jurisdiction over the subject matter of this proceeding.
2. The proper test period for determining the reasonableness of the proposed rate increase is the 12-month period ended March 31, 1975.
3. It is proper to use a year-end rate base for the electric department and an average rate base for the gas department.
4. The amount of \$869,157,948 is proper and reasonable for the electric department's year-end rate base.
5. The amount of \$162,783,416 is proper and reasonable for the gas department's average rate base.
6. The amount of \$1,031,941,364 is proper and reasonable for the combined electric and gas rate base.
7. A 15% return on common equity is fair and reasonable, sufficient to attract equity capital in today's market, and commensurate with rates of return on investments in other industries having comparable risks.
8. A fair and reasonable rate of return on rate base is 8.89%.
9. The existing retail electric and gas rates of Public Service do not, and will not in the foreseeable future, produce a fair and reasonable rate of return.
10. The rates that are presently in effect, in the aggregate, are not just and reasonable or adequate and, based upon the test year ended March 31, 1975, result in an overall revenue deficiency in the amount of \$13,793,927.
11. The original revenue increase in electric rates requested by Public Service in its Advice Letters filed March 24, 1975, was \$24,416,000.

12. A total increase of \$11,353,172 is required in retail electric rates.

13. The original increase in gas rates requested by Public Service in its Advice Letters filed March 24, 1975, was \$6,492,000.

14. A total increase of \$2,440,755 is required in retail gas rates.

15. Any motions presently pending and not disposed of otherwise should be denied.

ORDER

THE COMMISSION ORDERS THAT:

1. Hearings with regard to the "spread of the rates" shall commence on September 22, 1975, in the manner previously set forth in this decision.

2. Subsequent to the "spread-of-the-rates" phase of the hearings, the Commission shall enter a decision authorizing Public Service to increase its electric revenues, based upon the test year ended March 31, 1975, in the amount of \$11,353,172, and to increase its gas revenues, based upon the test year ended March 31, 1975, in the amount of \$2,440,755.

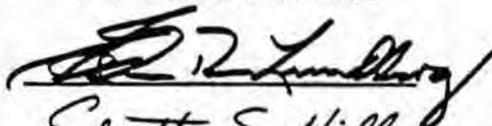
3. This decision is interim in nature.

4. Any motions presently pending and not disposed of otherwise be, and hereby are, denied.

This Order shall be effective forthwith.

DONE IN OPEN MEETING the 12th day of September, 1975.

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO


Edythe S. Hiller
Commissioners

jsk/nlr

COMMISSIONER HENRY E. ZARLENGO DISSENTING:

I respectfully dissent.

The proceeding was very protracted, with intermittent sessions commencing June 16th and terminating September 3rd, 1975, involves many complex issues of law and of fact, includes 36 voluminous exhibits, and

required over 900 pages of testimony not including the testimony of public witnesses. The decision is being entered within 9 days of termination of the proceeding, which period included 2 days of weekend and 2 days of Mountain Bell hearings, and within 3 days of the filing of the transcript of testimony of cross examination of the utility's witnesses, which period included 2 days of Mountain Bell hearings.

Under the circumstances, for lack of time I am unable to properly draft a completed dissent. Such dissent will follow.

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO



Commissioner
hbp