(Decision No. C80-130)

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

***

IN THE MATTER OF THE PROPOSED INCREASED RATES AND CHARGES CONTAINED IN TARIFF REVISIONS FILED BY PUBLIC SERVICE COMPANY OF COLORADO, 550 15TH STREET, DENVER, COLORADO, UNDER ADVICE LETTER NO. 277-GAS, ADVICE LETTER NO. 278-GAS, ADVICE LETTER NO. 760-ELECTRIC, ADVICE LETTER NO. 761-ELECTRIC, ADVICE LETTER NO. 19-STEAM, AND ADVICE LETTER NO. 20-STEAM.	)	INVESTIGATION AND SUSPENSION DOCKET NO. 1330 DECISION AND ORDER OF THE COMMISSION

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January 22, 1980

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P R E C I S

PUBLIC SERVICE COMPANY OF COLORADO AUTHORIZED TO INCREASE ITS ELECTRIC, GAS AND STEAM RATES SO AS TO PROVIDE, ON A TEST YEAR BASIS, ADDITIONAL REVENUE OF $40,391,348; RATE OF RETURN ON COMBINED RATE BASE OF 9.53% AND 14.6% RATE OF RETURN ON EQUITY AUTHORIZED.

Appearances: Kelly, Stansfield and O'Donnell by
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James R. McCotter, Esq., and
James K. Tarpey, Esq.,
Denver, Colorado for
Public Service Company of Colorado;

Gorsuch, Kirgis, Campbell, Walker & Grover
by Leonard M. Campbell, Esq., and
Clinton P. Swift, Esq.,
Denver, Colorado for
AMAX, Inc.;

Gorsuch, Kirgis, Campbell, Walker & Grover
by William H. McEwan, Esq., and
Robert E. Warren, Esq.
Denver, Colorado for
The City of Lakewood

John L. Mathews, Esq., San Francisco,
California, Western Area Chief Counsel
for Regulatory Law, General Services
Administration for the Executive
Agencies of the United States;

Jerold L. Schmidt, Esq.,
Denver, Colorado, for
Building Owners and Managers Association,
Plaza Building Venture
Energy Center I Venture
Division of Urban Investment and Development Co.;

Richard L. Fanyo, Esq.,
Denver, Colorado, for
CF&I Steel Corporation;

Rudolph Schware, Esq.,
Denver, Colorado, for
Colorado Committee for Economic Survival and
Concerned Citizens Congress of Northeast Denver;

D. Bruce Coles, Esq.
Denver, Colorado, for
Colorado Energy Advocacy Office and
Colorado Association of Community Organizations
for Reform Now;

Jacquelyn J. Higinbotham, Esq., and
Henry G. Wright, Esq.,
Fort Morgan, Colorado, for
Jessie Acosta;

William E. Benjamin, Esq.,
Denver, Colorado, for
Ann Caldwell;

James M. Lyons, Esq., and
Frederic L. Coldwell, Esq.,
Denver, Colorado, for
Home Builders Association of Metropolitan Denver

Max P. Zall, Esq.,
Brian H. Goral, Esq., and
Geoffrey S. Wasson, Esq.,
Denver, Colorado for
City and County of Denver;

Jane Roberts, Esq.,
Wheat Ridge, Colorado, for
Colorado Municipal League;

Roger W. Noonan, Esq.,
Arvada, Colorado, for
The City of Arvada;

David L. Nelson, Esq.,
Denver, Colorado, for
Ideal Basic Industries, Inc.;

Elbridge Burnham,
Denver, Colorado, pro se;

David Milburn-Lauer,
Fort Collins, Colorado;
pro se;

Jeffrey G. Pearson, Esq.,
Denver, Colorado, for
The Staff of the Commission;

John E. Archibold, Esq.,
Denver, Colorado
For the Commission.

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BY THE COMMISSION:

I.

HISTORY OF PROCEEDINGS

On June 20, 1979, Public Service Company of Colorado ("Public Service" or "Company" or "Respondent") filed with the Commission six advice letters, two of which pertain to gas rates, two of which pertain to electric rates, and two of which pertain to steam rates. The six advice letters are as follows:

1. Advice Letter No. 277-Gas, which is accompanied by 78 tariff sheets pertaining to Colorado PUC No. 4 - Gas;
2. Advice Letter No. 278-Gas, which is accompanied by 2 tariff sheets pertaining to Colorado PUC No. 4 - Gas;
3. Advice Letter No. 760-Electric, which is accompanied by 100 tariff sheets pertaining to Colorado PUC No. 5 - Electric;
4. Advice Letter No. 761-Electric, which is accompanied by 2 tariff sheets pertaining to Colorado PUC No. 5 - Electric;
5. Advice Letter No. 19-Steam, which is accompanied by 2 tariff sheets pertaining to Colorado PUC No. 1 - Steam; and
6. Advice Letter No. 20-Steam, which is accompanied by 2 tariff sheets pertaining to Colorado PUC No. 1-Steam.

With respect to the filing made pursuant to Advice Letters No. 278-Gas, 761-Electric and 20-Steam, Public Service requested that the filings accompanying said advice letters become effective upon thirty (30) days' notice, or on July 20, 1979. With respect to the filings accompanying Advice Letters No. 277-Gas, 760-Electric and 19-Steam, Public Service requested that the Commission immediately suspend the same and establish procedural and hearing dates in order that the rates resulting from these respective filings become effective at as early a date as possible, but not before thirty (30) days after the filing thereof.

In essence, Public Service, in Advice Letter No. 278-Gas, Advice Letter No. 761-Electric, and Advice Letter No. 20-Steam, stated that the respective filings therein are to allow the Company the opportunity to earn a rate of return on test year conditions which the Company is lawfully entitled to in accordance with Commission Decision No. C78-1018 in Investigation and Suspension Docket No. 1200, which the Commission entered on August 1, 1978. Accordingly, Advice Letter No. 278-Gas filing sought an increase in gas revenues in the amount of $7,337,000, which Public Service stated is an increase of 2.1 percent in the total base rate and gas cost adjustment (GCA) revenues at GCA levels in effect on June 20, 1979. Advice Letter No. 761-Electric sought an increase in electric revenues in the amount of $24,273,000 which is an increase of 6.4 percent in electric base rate revenues and an increase of 6.0 percent in total base rate, purchased power adjustment (PPA), and fuel cost adjustment (FCA) revenues at PPA and FCA levels in effect on June 20, 1979. Advice Letter No. 20-Steam sought an increase in steam revenues of $435,000 which is an increase of 10.9 percent in steam base rate revenues and an increase of 7.9 percent in total base rate and fuel cost adjustment (FCA) revenues at FCA levels in effect on June 20, 1979.

The Advice Letter No. 277-Gas filing sought an increase in gas revenues in the amount of $10,999,000 which amount includes and is not in addition to the increase in the amount of $7,337,000 sought by Advice Letter No. 278-Gas filing. The $10,999,000 increase sought by Advice Letter No. 277-Gas is an increase of 6.6 percent in gas base rate revenue and an increase of 3.1 percent in total base rate and GCA revenue at GCA levels in effect on June 20, 1979.

The Advice Letter No. 760-Electric filing sought an increase in electric revenues in the amount of $52,938,000 which amount includes and is not in addition to the increase in the amount of $24,273,000 sought by the Advice Letter No. 761-Electric filing. The $52,938,000

increase sought in Advice Letter No. 760-Electric is an increase of 14.0 percent in the electric base rate revenue and an increase of 13.1 percent in total base rate, PPA, and FCA revenues at PPA and FCA levels in effect on June 20, 1979.

The Advice Letter No. 19-Steam filing sought an increase in steam revenues in the amount of $508,000 which amount includes and is not in addition to the increase in the amount of $435,000 sought by the Advice Letter No. 20-Steam filing. The $508,000 increase sought in Advice Letter No. 19-Steam is an increase of 12.7 percent in steam base rate revenue and an increase of 9.2 percent in total base rate and FCA revenues at FCA levels in effect on June 20, 1979.

As a result of the six filings referred to above, Public Service sought additional revenues of $64,445,000 which consists of $52,938,000 in electric revenues, $10,999,000 in gas revenues and $508,000 in steam revenues.

On June 27, 1979, the Commission entered Decision No. C79-1000 wherein it set the tariff revisions filed by Public Service with respect to its Advice Letters No. 277-Gas, 278-Gas, 760-Electric, 761-Electric, 19-Steam, and 20-Steam, for hearing to commence on September 5, 1979. By notice dated July 31, 1979, the initial hearing date of September 5, 1979 was vacated and reset for September 19, 1979.

Pursuant to the provisions of CRS 1973, 40-6-111(1), the effective date of the tariffs filed with the above-mentioned advice letters was suspended until February 15, 1980, or until further order of the Commission.

Also by Decision No. C79-1000, the Commission determined that the proceedings would be conducted in two phases: Phase I would center on the revenue requirements and Phase II would center on the spread of the rates. For purposes of Phase I in this proceeding, the Commission determined that it would use the twelve-month period ended December 31, 1978 as a test period. The Commission also provided, in Decision No. C79-1000, that Public Service would file on or before August 1, 1979 ten copies

of all its prepared written direct testimony and supporting exhibits. Ordering paragraph 10 in Decision No. C79-1000 further provided that said written direct testimony and supporting exhibits would include, but not be limited to, operating income, operating expenses, rate base, rate of return upon rate base, and rate of return to common equity, upon the basis of the 12-month period ended December 31, 1978. Ordering paragraphs 11, 12 and 13 contained in the Decision No. C79-1000 set forth further procedural requirements with respect to the prefiled written direct testimony and exhibits to be filed by Public Service.

Decision No. C79-1000 further provided that any person, firm, or corporation desiring to intervene as a party in the within proceeding would be required to file an appropriate pleading therefor with the Commission on or before July 16, 1979.

The following parties moved to intervene, and by various interim decisions of the Commission were granted status to participate as intervenors:

AMAX, Inc. (AMAX)
The City of Lakewood (Lakewood)
General Services Administration on behalf of
The Executive Agencies of the United States (GSA)
Building Owners and Managers Association (BOMA)
Colorado Association of Community Organizations for Reform Now (ACORN)
Ann Caldwell
Home Builders Association of Metropolitan Denver (HBA)
Colorado Energy Advocacy Office (CEAO)
City and County of Denver (Denver)
CF&I Steel Corporation (CF&I)
Colorado Municipal League (League)
City of Arvada (Arvada)
Ideal Basic Industries, Inc. (Ideal)
Concerned Citizens Congress of North East Denver
Colorado Committee for Economic Survival
Jessie Acosta
The 17th & Lincoln Street Division of Urban Investment and Development Company (URBAN)
The Plaza Building Venture (Plaza)
The Energy Center I Venture (Energy Center)
Elbridge Burnham
David Milburn-Lauer (oral motion to intervene granted)

Phase I

On August 1, 1979, Public Service filed the written direct testimony and supporting exhibits of eight witnesses; namely:

R. F. Walker
D. D. Hock
J. H. Price, Jr.
J. H. Ranniger
R. E. Kelly
M. Andrew
E. W. Meyer
J. N. Bumpus.

On July 30, 1979, the Commission issued a Notice of Hearings which provided that public testimony would be heard in Pueblo, Colorado on August 20, 1979; Alamosa, Colorado on August 21, 1979; Grand Junction, Colorado on August 22, 1979; Rifle, Colorado on August 22, 1979; Greeley, Colorado on August 23, 1979 and in Denver, Colorado on August 30, 1979. Public hearings were so held. The July 30, 1979, Notice set October 3, 1979 as the date upon which the summary of direct examination and cross-examination of Public Service's witnesses would commence. The Notice further stated that the dates of October 4, 5, 10, 11 and 12, 1979, would be reserved on the Commission's calendar, if necessary.

Also, the July 30, 1979 Notice further provided that the summary of direct examination and the cross-examination of the Commission Staff and intervenors' witnesses would commence on October 31, 1979, and that the hearing dates of November 1 and 2, 1979, were reserved on the Commission's calendar, if necessary.

The dates of November 7, 8 and 9, 1979 were further reserved, if necessary.

On September 19, 1979, the Commission convened a prehearing conference in the within matter for the purposes of:

1. Determining which issues possibly might be settled between or among the parties; and

2. Determining which issues remained to be heard in formal hearings.

On September 25, 1979, the Commission issued Decision No. C79-1502 which stated that no negotiated settlement of the issues had

been achieved by any of the parties herein, and that it would be necessary to proceed with formal hearings on all issues which had been raised by the parties. Decision No. C79-1502 set forth further procedural directives with respect to the filing of written direct testimony and supporting exhibits by the Staff of the Commission and intervenors.

The summary of direct testimony and the cross-examination of Public Service witnesses commenced, as scheduled, on October 3, 1979 and was concluded on October 12, 1979.

On or before October 22, 1979, the Staff of the Commission and certain of the intervening parties filed written direct testimony of witnesses as follows:

On behalf of General Services Administration,
John W. Rettenmayer and Robert L. Marshall;

On behalf of Colorado Committee for Economic
Survival and Concerned Citizens Congress of
North East Denver, Victor Perlo;

David Milburn-Lauer (Neighbor to Neighbor), pro se;

On behalf of BOMA, Plaza, Energy Center, and URBAN,
David D. Charles;

On behalf of CEAO and Colorado ACORN,
William Schroer;

On behalf of AMAX, Inc., Thomas E. Knudsen and
Matityahu Marcus;

On behalf of the Staff of the Commission,
Eric L. Jorgensen
Anthony F. Karahalios
Garrett Y. Fleming
Craig Merrell
James A. Richards.

On October 31, 1979, November 1, 2, 7 and 8, 1979, the Commission heard cross-examination of all witnesses who had filed testimony on behalf of the Staff of the Commission and intervenors GSA, Colorado Committee for Economic Survival and Concerned Citizens Congress of North East Denver, David Milburn-Lauer, BOMA, CEAO, ACORN, and AMAX, Inc.

On November 8, 1979, Public Service called as witnesses in its rebuttal case the following:

R. F. Walker
D. D. Hock
M. F. Hanzlick
R. E. Kelly
J. N. Bumpus
J. H. Ranniger.

Intervenor AMAX called as a witness in its surrebuttal case Matityahu Marcus.

On November 9, 1979, Public Service filed "Motion of Public Service Company of Colorado for Order Directing Filing of Tariff Sheets Providing for Pro Rata Increases in Rates and Charges Immediately Upon the Rendition of the Commission's Order Concerning Revenue Requirements." In said Motion Public Service requested that the Commission order it to file, to become effective upon one (1) day's notice, tariff sheets providing for permanent steam base rate increases and interim gas and electric base rate increases based upon the revenue requirements found to be appropriate by the Commission to be placed into effect pending the Commission's decision on cost allocation and rate design aspects with respect to electric and gas rates.

No formal responses to Public Service's aforesaid motion were filed by any of the parties, although certain parties stated their opposition to the granting of the interim rate relief in their Statements of Position.

Statements of Position with respect to Phase I were filed by the following parties: Building Owners and Managers Association of Denver; Jessie Acosta; Home Builders Association of Metropolitan Denver; The Colorado Committee for Economic Survival and The Concerned Citizens Congress of North East Denver; Staff of the Public Utilities Commission; AMAX, Inc.; Colorado Energy Advocacy Office and Colorado Association of Community Organizations for Reform Now.

Certain parties also filed proposed findings of fact with their Statements of Position.

Phase I - Decision and Order Establishing Interim Rates

On November 21, 1979, the Commission entered Decision No. C79-1821 to become effective November 23, 1979, wherein it established the Phase I revenue requirement and authorized Public Service to file interim rates, to be effective no earlier than November 26, 1979, pending the Commission's decision on Phase II. The increase in electric rates authorized was $31,169,094, or 7.65%; the increase in gas rates authorized was $8,771,360, or 5.28%; and the increase in steam rates authorized was $450,894, or 11.26%. The foregoing increased rates were to utilize Public Service's current rate structures and were to be effective until February 15, 1980, or until further order of this Commission.

On December 13, 1979, AMAX filed a pleading entitled "Petition for Reconsideration, Reargument or Rehearing" which was addressed to Decision No. C79-1821, entered on November 21, 1979. By Decision No. C79-1981, entered on December 18, 1979, the Commission stated that AMAX's petition for reconsideration, reargument or rehearing, which it filed on December 13, 1979, was filed prematurely and as such, AMAX's petition was dismissed. However, the Commission also did construe AMAX's December 13, 1979 pleading alternatively as a motion to set aside or modify or stay the interim decision and order of the Commission entered on November 21, 1979. Construing AMAX's pleading in the foregoing manner, the Commission stated that it intended to modify Decision No. C79-1821 so as to make explicit that in the event a lower revenue requirement ultimately was found for the electric, gas, or steam departments, respectively, appropriate refunds would be ordered. Accordingly, to that extent, the Commission granted AMAX's pleading, construed as a motion to set aside or modify or stay the interim order of the Commission pursuant to Rule 14 R

of the Rules of Practice and Procedure before the Commission. In all other respects AMAX's pleading, construed as a motion to set aside or modify or stay the order of the Commission, was denied.

Accordingly, on December 18, 1979, the Commission entered Decision No. C79-1982, wherein it stated that it intended to modify ordering paragraph 9 in Decision No. C79-1821 so as to make explicit the Commission's intention that the interim rates authorized therein would be subject to appropriate refund in the event the final Commission decision in this docket were to find the revenue requirement to be lower than that found in Decision No. C79-1821. The Commission pursuant to CRS 1973, 40-6-112(1), caused a copy of Decision No. C79-1982 to be served upon Public Service so as to enable it to have the opportunity to be heard with respect to the proposed modification of ordering paragraph 9 set forth in Decision No. C79-1821. The Commission's December 18, 1979, Decision No. C79-1982 provided that Public Service could request the opportunity to be heard with respect to the proposed modification of ordering paragraph 9 as contained in Decision No. C79-1821 on or before December 21, 1979. Decision No. C79-1982 further provided that unless Public Service did request the opportunity to be heard on or before December 21, 1979, ordering paragraph 9 of Decision No. C79-1821 would be modified, effective December 22, 1979 so as to provide for the potential refund in the event the revenue requirement ultimately was found to be lower than that authorized in Decision No. C79-1821, entered on November 21, 1979.

Inasmuch as Public Service did not request a hearing with respect to the proposed modification of ordering paragraph 9 of Decision No. C79-1821 that Decision was modified so as to provide the potential refund element of ordering paragraph 9. The modification became effective on December 22, 1979.

On December 14, 1979, ACORN and CEAO filed a Motion to Set Aside Interim Rate Increase. That motion was denied by the Commission on December 18, 1979 by Decision No. C79-1983.

Phase II

Phase II, as indicated above, was for the purpose of considering the spread-of-the-rates to produce the respective electric, gas and steam revenue requirements as found by the Commission on November 21, 1979 in its Decision No. C79-1821.

On October 16, 1979, the Commission entered Decision No. C79-1644 wherein it set forth the procedures for Phase II. The same decision provided that Public Service would file its Phase II written direct testimony and supporting exhibits on or before December 5, 1979. The Decision further provided that the summary and direct examination and cross examination of Public Service's witnesses in Phase II would commence on December 12, 1979.

The Phase II procedural order further provided that the Staff of the Commission and each intervenor who wished to present direct testimony in Phase II would file prepared written direct testimony and supporting exhibits on or before December 12, 1979. In addition, the order provided that summary of the direct examination and cross examination of Staff and intervenor witnesses with respect to Phase II would commence on December 19, 1979.

On December 5, 1979, Public Service filed the written direct testimony and supporting exhibits of witnessesnamely, J. D. Heckendorn and J. H. Ranniger. The summary of direct examination and the cross examination of Mr. Heckendorn and Mr. Ranniger was conducted on December 12, 1979.

On December 12, 1979, the Staff of the Commission and certain intervening parties filed written direct testimony of witnesses, as follows:

On behalf of Denver, William E. Wells;

On behalf of the CEAO and ACORN, Eugene P. Coyle and Ronald Binz;

On behalf of the Staff of the Commission, Donald W. Orendorff.

On December 12, 1979, ACORN Counsel requested permission to late-file, by one day, the written direct testimony of Thomas M. Power which request, with no objection, was granted. On December 13, 1979, the written direct testimony of Witness Thomas M. Power was filed on behalf of CEAO and ACORN.

On December 19, 1979, the direct examination and cross examination of the foregoing witnesses of the intervenors and staff was conducted. Also on December 19, 1979, Public Service called J. H. Ranniger as a rebuttal witness. CEAO and ACORN called Eugene P. Coyle as a surrebuttal witness.

Hearings in Investigation and Suspension Docket No. 1330 were concluded on December 19, 1979.

All prefiled written direct testimony was marked as exhibits using letters of the alphabet. All exhibits filed with and in support of written direct testimony were marked using arabic numerals. Public witness testimony was filed by name. The list of exhibits is appended to the decision as Appendix A.

Statements of position with respect to Phase II were filed on or before January 9, 1980 by the following parties:

Public Service;
Jessie Acosta;
HBA;
AMAX;
CEAO and ACORN;
Ideal;
Arvada;
GSA;
CF&I.

GSA filed proposed findings of fact with its statement of position.

Submission.

The herein instant matter has been submitted to the Commission for decision. Pursuant to the provisions of the Colorado Sunshine Act of 1972, CRS 1973, 24-6-401, et seq., and Rule 32 of the Commission's Rules of Practice and Procedure, the subject matter of this proceeding has been placed on the agenda for the open public meeting of the Commission. At an open public meeting the herein Decision was entered by the Commission.

II

DESCRIPTION OF THE COMPANY

Public Service is the largest public utility operating within the State of Colorado which is engaged in the generation, transmission, distribution and sale of electricity and the purchase, distribution and sale of natural gas to various areas of the State of Colorado. Public Service is the result of the merger and acquisition of many gas and electric companies dating back to the organization of the Denver Gas Company in 1869. The present entity was incorporated under Colorado law on September 3, 1924. In addition to its gas and electric service, Public Service also renders steam heat service in the downtown business district of Denver.

Electric or natural gas service, or both, are rendered at retail in 105 incorporated cities and towns and in various other communities and rural areas throughout Colorado. The Company also sells electric power and energy at wholesale for resale to six municipal electric utilities, one distribution Rural Electric Association (REA) cooperative, Home Light and Power Company, Colorado-Ute Electric Association, Inc., and Southern Colorado Power Division of CentralTelephone and Utilities Inc. Wholesale electric rates and service are under the jurisdiction of the Federal Energy Regulatory Commission (FERC), the successor to the Federal Power Commission.

The Company owns all of the common stock of two subsidiary operating utility companies, namely, Cheyenne Light, Fuel and Power Company, which supplies electric, natural gas, and steam services in Cheyenne, Wyoming, and its environs, and Western Slope Gas Company, which is a natural gas transmission company transporting natural gas for service in several geographic areas in Colorado.

In addition, the Company owns approximately 99.5 percent of the common stock of Home Light and Power Company, which renders electric utility service in the City of Greeley and a large portion of Weld County, Colorado, serving 31,000 customers.

The Company also owns all of the common stock of 1480 Welton, Inc., basically a real estate company which owns its central office building, and of Fuel Resources Development Company (Fuelco), a subsidiary primarily engaged in exploration, development, and production of natural gas and oil. The Company also owns stock in various ditch and irrigation companies in connection with its use of water for generating plants.

Public Service as of December 31, 1978, had 750,601 electric customers and 611,387 gas customers. Generally, these customers are broadly classified as residential, commercial, and industrial. As of December 31, 1978, the Company had 54,867 shareholders holding common stock in the Company (24,860 of whom own 100 shares or less) and 6,802 shareholders owning preferred stock in the Company. Common shareholders who live in the State of Colorado comprise 20,839 of the total number thereof.*

III

GENERAL

There have been a number of rate proceedings involving Public Service in the past several years. During these years there has been an increased awareness and interest in the ratemaking functions of this Commission. Utility rates with respect to gas and electric service affect virtually all segments of the public. In view of inflationary and other economic pressures, general rate cases have become more frequent despite the fact that gas cost adjustment (GCA) or purchased gas adjustment (PGA) and fuel cost adjustment (FCA) clauses will, generally speaking, tend

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*Information as to the number of electric and gas customers and shareholders was supplied informally to the Commission by counsel for Public Service.

to mitigate the frequency of general rate case filings.* Public participation in the rate making process before the Commission also has increased in the past several years.

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*The Commission in 1977 investigated the GCA and the Public Service FCA in Cases No. 5721 and No. 5700, respectively. On April 5, 1978, the Commission, in Decision No. C78-414 entered a decision which, in essence, continues the use of GCA or PGA Adjustment Clauses (with a procedural modification for an annual hearing) so as to reflect the delivered price of pipeline and wellhead gas, including charges for gathering, compression and transportation. The Commission also required annual GCA or PGA reports to be filed by the utiltities, followed by an investigative hearing to encompass present and projected market requirements for gas service, present and projected supplies of gas available to meet those requirements, any current or projected curtailment of service as a result of inadequate supplies, the gas purchase practices of the utilities as they affect the success of the utilities in obtaining adequate supplies of gas at reasonable prices, and any other subject that the Commission may wish to investigate. Certain technical modifications to Decision No. C78-414 were made pursuant to an errata notice dated April 7, 1978, Decision No. C78-583, dated May 2, 1978, an errata notice dated May 4, 1978, and Decision No. C78-741, dated May 30, 1978. By Decision No. C79-941, dated June 19, 1979, in Application No. 31896, the Commission changed the annual review requirement for Public Service to a quarterly review requirement. A GCA hearing for the period April 5, 1978 - December 31, 1978 and calendar year 1979 currently is set for March 6, 1980. A more specific "methodology" hearing based on the third and fourth quarters of 1979 will be held on February 14, 1980 in Application No. 31896.

On September 13, 1977, the Commission entered its Decision No. 91290 in Case No. 5700 dealing with the FCA tariff of Public Service. The Commission authorized the continued use of an FCA clause subject to certain modifications such as the exclusion of transportation costs, and costs associated with unloading, handling of stockpiles, fuel treatment and ash disposal. The Commission also required quarterly audits and hearings with respect to the implementation of the FCA clause. The Commission also ordered Public Service to credit against the FCA certain amounts as a result of moneys paid by Public Service to Fuel Development Resources Company during the period October 1, 1973, to November 1, 1977. Certain modifications to Decision No. 91220 were made subsequently by Decision No. 91519, dated October 20, 1977, Decision No. 91577, dated October 31, 1977, Decision No. 91868, dated December 22, 1977, Decision No. 91904, dated January 4, 1978, Decision No. C78-158, dated February 7, 1978, Decision No. C78-280, dated March 7, 1978, and Decision No. C79-432, dated March 27, 1979. Decision No. R78-746, dated June 1, 1978 (which became the Decision of the Commission on June 21, 1978) approved the first quarterly report filed by Public Service with regard to its FCA tariff. Subsequent Public Service Quarterly reports have been approved by the Commission by Decisions Nos. R78-1033, R78-1464, R79-252, R79-710, R79-1150 and R79-1680, dated August 2, 1978, November 9, 1978, February 26, 1979, May 14, 1979, July 26, 1979 and October 26, 1979, respectively.

The regulatory jurisdiction of the Public Utilities Commission over non-municipal utilities in the State of Colorado is grounded in Article XXV of the Constitution of the State of Colorado which was adopted by the general electorate in 1954. The Public Utilities Law, which currently is contained in Article 40 of the Colorado Revised Statutes (1973, as amended), implements Article XXV of the Colorado Constitution. More specifically, CRS 1973, 40-3-102, vests in this Commission the power and authority to govern and regulate all rates, charges and tariffs of every public utility.

It first must be emphasized that ratemaking is a legislative function. The City and County of Denver vs. People ex rel Public Utilities Commission, 129 Colo. 41, 266 P.2d 1105 (1954); Public Utilities Commission vs. Northwest Water Corporation, 168 Colo. 154, 551 P.2d 266 (1963). It should also be emphasized that ratemaking is not an exact science, Northwest Water, supra, at 173. In the landmark case of Federal Power Commission vs. Hope Natural Gas Company, 320 U.S. 591, 602-603 (1944), Justice Douglas, speaking for the United States Supreme Court, stated that the "ratemaking process under the (Natural Gas) Act, i.e., the fixing of 'just and reasonable' rates, involves a balancing of the investor and consumer interests." The Hope case further sets forth the proposition that under "the statutory standard of 'just and reasonable,' it is the result reached, not the method employed, which is controlling."

In the case of Public Utilities Commission v. The District Court, 186 Colo. 278, 527 P.2d 233, the Colorado Supreme Court stated at pages 282 and 283:

> [4,5] Under our statutory scheme, the PUC is charged with protecting the interest of the general public from excessive, burdensome rates. The PUC must determine that every rate is "just and reasonable" and that services provided "promote the safety, health, comfort and convenience of its patrons, employees, and the public and shall in all respects be adequate, efficient, just and reasonable." C.R.S. 1963, 115-3-1. The PUC must also consider the reasonableness and fairness of rates so far as the public utility is concerned. It must have adequate revenues for operating expenses and to cover the capital costs of doing business. The revenues must be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.

The process by which utility rates are established should be explained. Under current law, when a public utility desires to change its rate or rates, it files its new rates with this Commission, and they are open for public inspection. Unless the Commission otherwise orders, no increase in any rate or rates may go into effect except after thirty (30) days' notice to the Commission and to the customers of the utility involved.

If the thirty (30) day period after filing goes by without the Commission having taken any action to set the proposed new rate or rates for hearing, the new rate or rates automatically become effective by operation of law.* However, the Commission has the power and authority to set the proposed new rate or rates for hearing, which, if done, automatically suspends the effective date of the proposed new rate or rates for a period of 120 days,** or until the Commission enters a decision on the filed rates within that time. The Commission has the further option of continuing the suspension of the proposed new rate or rates for an additional period of up to ninety (90) days for a total maximum of 210 days or approximately seven months. If the Commission has not, by order, permitted the proposed new rate or rates to become effective, or established new rates, after hearing, prior to the expiration of the maximum 210-day period, the proposed new rate or rates go into effect by operation of law and remain effective until such time thereafter as the Commission establishes the new rates in the docket.

As indicated above, in "History of Proceedings," Decision No. C79-1000 entered on June 27, 1979, set for hearing the proposed electric, gas and steam tariffs filed by Public Service, and suspended

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*Under CRS 1973, 40-3-104, most fixed utilities file rates on thirty (30) day notice; however, thirty (30) days is a minimum notice period, unless otherwise ordered by the Commission. A utility may select a longer notice period. In any event, if the Commission elects to set the proposed rate or rates for hearing, it must do so before the proposed effective date.

** CRS 1973, 40-6-111.

their effective date until February 15, 1980, or until further order of the Commission. The Decision herein is the Order which effectively establishes electric, gas and steam rates for Public Service.

In the simplest terms, the Commission must determine and establish just and reasonable rates. In order to make this determination, the Commission must answer two questions; first, what are the reasonable revenue requirements of the utility involved that will enable it to render its service, and, second, how are the reasonable revenues to be raised from its rate payers. In other words, the Commission must determine the "revenue requirement" and the "spread of the rates" to meet the revenue requirement. To accomplish its task, in these regards, it must exercise a considerable degree of judgment and, to the best of its ability, be as fair as possible to the different parties and positions that inevitably present themselves in any major rate case. The ratemaking function involves, in other words, the making of "pragmatic adjustments" (the Hope case, supra, at page 602). It is not an easy task, but, on the other hand, neither is it a task impossible of attainment.

IV

TEST PERIOD

In each rate proceeding it is necessary to select a test period. The operating results of the test period then are adjusted for known changes in revenue and expense levels so that the adjusted operating results of the test period will be representative of the future, and thereby afford a reasonable basis upon which to predicate rates which will be effective during a future period.

In this case the Commission finds that the 12-month period commencing January 1, 1978, and ending December 31, 1978, is the appropriate 12-month period which constitutes a representative year and is the test period for purposes of setting rates herein. In-period and out-of-period revenue and expense adjustments are discussed hereinafter.

V.

RATE BASE

Year-End Rate Base

The Commission, in Investigation and Suspension Docket No. 935, authorized Public Service to utilize a year-end rate base for its Electric Department inasmuch as Public Service had been adding significant amounts of non-revenue producing pollution control equipment to its plant. In Decision No. 91581, dated November 1, 1977, in Investigation and Suspension Docket No. 1116 and recommended Decision No. R78-765, affirmed by the Commission June 5, 1978, in Investigation and Suspension Docket Nos. 1185 and 1186, the authorization for year-end rate base was extended to the Gas and Steam Departments, respectively. The Commission found that adoption of year-end rate base is a methodology that recognizes earnings attrition which is beyond the Company's control. Nothing in the evidence of this Docket changes the basis for those findings; accordingly, the Commission hereby adopts in this docket a year-end rate base to offset, in part, the effects of attrition beyond the control of Public Service.

Further, the Commission recognizes that Public Service has still continued to suffer attrition even though the use of the year-end rate base has been in effect for several years. Accordingly, a reversal of the year-end rate base approach at this time would contribute to further deterioration for Public Service's financial condition.

Although GSA witness Marshall contended that year-end revenues and expenses should be annualized to "match" year-end rate base, such a procedure (although conceptually appealing) is impractical since year-end expenses and revenues are not representative of the actual revenues and expenses experienced over a twelve month period. Investment is a stock whereas revenues and expenses are a flow, and to measure the latter at a single point in time and increase by a factor of 12 simply magnifies what may be a totally unrepresentative figure.

Customer Advances

Customer Advances represent those funds provided by customers for the extension of services. Under Public Service's tariffs, those moneys either are refunded to the customer as additional hookups of service occur or transferred as a credit to the plant account. Traditionally, the amounts in the Customer

Advances account are deducted from rate base as was done in this case.

Prior to Decision No. C78-1018, the lowest balance in the Customer Advances account over the five preceding years was deducted from rate base for ratemaking purposes. In Decision No. C78-1018, in 1978, the Commission determined that, in view of the upward trend of those balances, it would be appropriate to deduct the average of the balances for the five previous years rather than the lowest one. Although Public Service presented its evidence on this basis, the Staff suggested that it would be appropriate to deduct from rate base the test year-end balance in the Customer Advances account. The balances in Customer Advances account have increased considerably each year since 1974. We do not believe that it is appropriate, at this time when the rate and quantum of customer growth is uncertain, to change from the methodology which was adopted only a year ago in 1978 in Investigation and Suspension Docket No. 1200. Rather than changing to a third methodology in less than eighteen months, we believe it more appropriate to utilize the methodology so recently adopted in the previous rate case.

Construction Work in Progress

Consistent with past decisions, we have included Construction Work in Progress (CWIP) in Public Service's rate base.

In determining how to treat CWIP, the Commission must balance the interest of the ratepayers and the investors who have supplied the funds for such construction. The investors are required to supply the funds for construction and to pay the associated capital costs on those funds during the construction period. The investors are entitled to earn a return on the funds committed for those purposes. The ratepayers, however, do not receive the direct benefit of new construction until the property is placed in service. Therefore, the argument is made that the ratepayer should not be required to compensate the company for funds invested in construction work until it is placed in service.

In order to allow the company an opportunity to earn a return on funds invested for construction work and at the same time defer payment by the ratepayer of that return until such time as the plant is in service, an accounting entry is made on the books and records of the company. The

accounting entry increases construction costs by including Allowance for Funds Used During Construction (AFUDC) in CWIP. This increases the size of the investment base upon which the company can earn a return and recover depreciation in the future.

To prevent the company from earning currently on the construction costs and associated capital costs, another accounting entry is made to credit AFUDC to the income statement. The net effect of the two reciprocal accounting entries is to a substantial degree to defer recovery of the capital costs of construction until the plant is placed into service. It should be noted, however, that to the extent that the rate of return authorized for the utility is in excess of the rate at which AFUDC is charged to construction; to the extent that capitalization of AFUDC is delayed on a booking basis; to the extent that AFUDC is not capitalized on small construction work; and to the extent thatAFUDC is not capitalized on previously accrued AFUDC, there is an imbalance or "slippage" which in fact requires current ratepayers to pay some of the costs of future plant. The fact that some portion of the needed construction expenditures is being paid for by current customers (that portion being measured by "slippage") means that the cash flow position and resulting financial strength of the utility will be enhanced, providing for lower costs to all ratepayers, current and future.

The balance of the construction costs (except for "slippage") arising from the indicated accounting entries is borne by future ratepayers who will benefit from the plant being constructed.

Public Service, in this docket, proposed that the Commission make a significant adjustment to its past policy with respect to AFUDC. Public Service requested that the 1978 year end expenditures with regard to its Pawnee Generating Station (Pawnee) in the amount of $121 million be included in the rate base without an offset for AFUDC credited to the income statement. The Pawnee plant represents a substantial addition to the generating capacity of Public Service, and when it is completed, its net capacity will be 470 megawatts (MW).

Public Service has requested that the non-AFUDC offset principle be established so that expenditures with respect to future major power plants will be accorded treatment similar to that requested in this docket for Pawnee.

The adoption of a non-AFUDC offset principle with respect to Pawnee was opposed by the Staff of the Commission, AMAX, CEAO and ACORN.

In support of its proposal that no AFUDC offset treatment be applied to Pawnee, Public Service stated that both the Company and its present and future customers will be benefited. Public Service pointed out that if Pawnee is included in rate base as construction work in progress with no AFUDC offset credit to the income statement, it will recover currently its financing costs related to Pawnee. In other words, Public Service's earnings with respect to Pawnee's construction costs would not be deferred (as they would be with an AFUDC offset credit to the income statement) but would be "hard cash earnings" currently, that is an increase in the Company's internal generation of funds. With an increase in internal generation of funds, there is less need for capital to be obtained from outside sources and arguably the Company's flexibility in obtaining outside capital is increased. An increase in flexibility in obtaining outside capital funds, other things being equal, would tend to lower the cost of obtaining such outside capital.

Public Service further contended that being able to earn currently on construction costs with respect to Pawnee will lower the total revenue requirement associated with that project. If the financing costs are not recovered currently but are instead capitalized, the plant account balance on which depreciation is taken and a rate of return earned when the project goes in to service is greater than it would otherwise be thereby resulting in an increased total revenue requirement over the operating period. In essence, Public Service was saying that if one defers paying for present capital costs, like a customer using an extended payment plan under a credit card account operation, the overall cost will be more than if a substantial portion of the capital cost is paid for currently.

In regard to the traditional philosophy that present ratepayers should not be required to pay for future plant, Public Service replied that present customers are to a large extent future customers and that vertical growth* in electricity consumption constitutes a substantial percentage of the annual increase in electricity consumption. Thus, Public Service stated that the requirements of present customers to a large extent necessitate the construction of such projects as Pawnee. Public Service contended further that construction expenditures related to pollution control facilities and the replacement of existing facilities are a direct result of the requirements of existing customers. Public Service's proposal was to have present customers assessed only in paying the financing costs of large projects, whereas future customers alone will pay for the direct cost of construction through depreciation, operating and maintenance expenditures and the cost of financing during the operating period.

As indicated above, the Staff opposed the adoption of a principle which would allow total current earnings with regard to Pawnee. Staff witness Richards contended basically that although AFUDC does not represent current cash earnings, it does not necessarily follow that AFUDC earnings are of a "lower quality." Inasmuch as AFUDC earnings are accrued earnings, Mr. Richards contended that earnings generated by AFUDC are no different than the "cash" generated from normalization of liberalized depreciation, other deferred income taxes, inclusion of the estimated cost to dispose of and store spent nuclear fuel, or estimated costs of decommissioning power plants. Mr. Richards contended that there was nothing in rate-making history to suggest that a regulatory agency had disallowed the recovery of AFUDC through changes in depreciated expense, nor have the regulatory agencies failed to allow a return on the undepreciated AFUDC remaining in rate base. Mr. Richards further contended that not to recognize an AFUDC offset credit to the income statement would result in an arbitrary understatement

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* Vertical growth refers to increased consumption by present customers, whereas horizontal growth refers to the addition of new customers.

of assets and income and would not be an appropriate application of the doctrine of conservatism with respect to accounting measurements.

However, Mr. Richards did suggest that there were four exceptions, all of which would have to co-exist, which would justify application of a non-AFUDC offset principle thereby allowing current earnings on CWIP. Mr. Richards' first exception is when capital costs to be paid as a result of deferring AFUDC to future customers would exceed the capital costs that would be incurred by current customers. Mr. Richards contended that in his opinion the capital costs to future customers did not exceed such cost to current customers.

Mr. Richards' second exception was when current customers are creating a substantial portion of the construction needs. His third exception was when the cash flow of the utility is in such a poor condition that the utility cannot finance by alternative means. Mr. Richards' stated fourth exception was when the cost of alternative means would be so great that it would be detrimental to the "overall customer" (whether a current or future customer).

AMAX's witness, Mr. Knudsen, basically supported the four exceptions set forth by Mr. Richards. He also argued that adoption of the non-AFUDC offset principle would be inconsistent with the traditional regulatory concept of "used and useful."

After taking into consideration the varying regulatory philosophies, the Commission would reiterate that a pure "used and useful"concept has not been applied by this Commission for almost a decade. This is true inasmuch as CWIP has been included as a part of rate base for a number of years without a complete offset for AFUDC credited to the income statement. There is no question that the inclusion of CWIP in rate base is a regulatory concept which may be utilized by a regulatory agency, such as this Commission, based on its own best judgment of the facts. Colorado Municipal League v.Public Utilities Commission, 172 Colo. 188, 204; 473 P.2d 960. Whether and the extent to which "slippage" should be allowed and/or current earnings

should be permitted likewise is subject to the judgment and discretion of the Commission.

In our view, there is no legal or economic requirement that Mr. Richards' four "exceptions" need to co-exist to justify the use, or partial use, of a non-AFUDC offset principle. A regulatory body, such as this Commission, must endeavor to balance the interests of the investors and ratepayers of the utility involved. In addition it must balance the interests (within the ratepayer category) of present and future customers. It would be unrealistic to attempt to measure with exquisite precision the quantum of additional plant required by present customers who use more electricity vis-a-vis the amount of electricity which will be required by new customers who are added to the system. However, Public Service's president, Mr. Walker, testified that in his estimation approximately 60% of increased kilowatt hour sales is attritbutable to new customers. He also attributed 30% of commercial growth to existing customers, and most industrial growth to existing customers. Mr. Walker has been a long-time employee and officer of the Company, whose experience primarily has been on the operating side. We have no reason to doubt that his estimate of the various proportions of vertical growth vis-a-vis horizontal growth has a substantial basis.

For purposes of our treatment of CWIP, and AFUDC, we adopt will adopt a 40%-60% split between vertical and horizontal growth. On this basis, then, it is reasonable to conclude that current customers are responsible for 40% of the need for an additional plant such as Pawnee. Accordingly, we find and conclude that it is reasonable to offset with an AFUDC credit to the income statement only 60% of the construction costs in connection with Pawnee. Stated another way, this will have the effect of permitting 40% of the CWIP related to Pawnee to be earned on currently.

The Commission recognizes that valid arguments legitimately can be advanced with respect to whether or not construction costs should be offset entirely, partially, or not at all. For purposes of this docket, in recognition of the financial condition of the Company (as described in more detail hereinafter) the Commission believes that its treatment of earnings on construction costs, as indicated above, is reasonable and proper. We wish to caution, however, that

the CWIP treatment adopted herein is not to be construed as an established general policy of the Commission.

The 40% non-AFUDC offset credit to the income statement treatment with regard to Pawnee, of course, includes, rather than is in addition to, the "slippage," which otherwise would have been attributable to Pawnee. With respect to CWIP other than Pawnee, the Commission will adhere to that treatment of "slippage" (which is actual dollars of current earnings a utility receives when, for any reason and for any period of time, it is allowed to earn a rate of return on a portion of CWIP in rate base without a total dollar for dollar offset to those earnings by means of a reciprocal AFUDC credit to income) which we previously have utilized in Investigation and Suspension Docket No. 1116 and Investigation and Suspension Docket No. 1200. As we previously noted, "slippage" is justified to the extent that increased usage of existing customers partially results in the need for new plant and also tends to minimize the magnitude of the increase in revenue requirements once the plant goes into service.

Public Service's witness, Mr. Price, recommended that the Commission also allow the Company to normalize the tax-book timing differences of the debt component of AFUDC. Public Service pointed out that such normalization is permitted by the Federal Energy Regulatory Commission (FERC) and would be consistent with this Commission's Decision No. 91581, dated November 1, 1977, which was affirmed by the Colorado Supreme Court in Colorado Municipal League v. Public Utilities Commission, et al. (No. 28351)____Colo.____; 597 P2d 586 (1979). In Commission Decision No. 91581, the Commission authorized the normalization of the tax-book timing differences resulting from liberalized depreciation. The rationale, as we understand it, of Mr. Price's proposal is that inasmuch as present customers would get the benefit of tax reductions resulting from the interest paid on money borrowed to finance present construction, absent normalization, the current customer is getting the best of both worlds and the future customer is getting the worst of both worlds.

The Staff did not favor normalizing the tax-book timing differences of the debt component of AFUDC. It has not been the practice of the Commission

to authorize the normalization of the tax reduction used for tax purposes due to the debt component interest deduction related to AFUDC. In view of the treatment which we are giving to AFUDC, as outlined above, wherein present customers are currently paying a portion of the interest costs of CWIP, the Commission finds and concludes that it should not alter its present methodology of not normalizing the tax-book timing differences of the debt component of AFUDC.

Allocation of Zuni Plant

The Building Owners and Managers Association (BOMA) challenged the methodology that had been used historically by Public Service in allocating the Company's Zuni plant in downtown Denver between the steam and electric departments. Public Service's Zuni plant is a co-generation facility used to produce both electricity for the Company's electric customers and steam for the Company's steam customers located in downtown Denver. The joint use of the plant requires the allocation between steam and electric departments of certain facilities and the related production expense used for both steam and electric service. The allocation methodology presently used originally was developed in connection with Investigation and Suspension Docket No. 747. The Company's proposed allocation methodology was adopted in Investigation and Suspension Docket No. 747 and redefined in Investigation and Suspension Dockets Nos. 1185 and 1186. The adaptation of that a methodology in this proceeding appears on Public Service's Exhibit No. 43, which shows the proposed allocation of the Zuni plant to the steam department.

BOMA's witness, Mr. Charles, challenged the methodology used by Public Service and initially proposed that none of the Zuni plant be allocated to the steam department. However, that initial suggestion was later withdrawn. Mr. Charles recommended that the 50.1% allocation factor used by Public Service be reduced to 18.8% as the result of his determination that the peak hour and the average hour usage of the Zuni plant for steam service was 18.8%. We do not agree with Mr. Charles' methodology inasmuch

as such a methodology, if applied also to the electric department, would result in a portion of the investment of the Zuni plant being unallocated unless Zuni was running at full capacity 100% of the time. This, of course, is an unrealistic assumption. Accordingly, the Commission finds and concludes that, in the absence of convincing evidence to the contrary, Public Service's allocation methodology with respect to the Zuni plant should not be changed.

Summary of Year-End Rate Base

Premises considered, we find that year-end rate base for Public Service's Electric Department totals $1,097,848,111 and is comprised of the following items and amounts:

1978 Year End Rate Base	
Utility Plant in Service	$1,198,061,194
Utility Plant Held for Future Use	1,508,616
Construction Work in Progress	236,875,777
Common Utility Plant in Service Allocated	38,554,668
Prepayments	2,188,584
Utility Materials and Supplies	56,653,836
Customer Advances for Construction	(9,185,556)
Year-End Gross Original Cost Rate Base	$1,524,657,119
Reserve for Depreciation and Amortization	(339,531,097)
Rate Base Allocated to FERC Jurisdictional Sales	(87,277,911)
Year-End Net Original Cost Rate Base	$1,097,848,111

Premises considered, we find that year-end rate base for Public Service's Gas Department totals $205,034,299 and is comprised of the folowing items and amounts:

1978 Year End Rate Base

Utility Plant in Service	$268,639,187
Utility Plant Held for Future Use	138,639
Construction Work in Progress	196,580
Common Utility Plant in Service Allocated	26,792,227
Prepayments	420,214
Utility Materials and Supplies	3,507,026
Cash Working Capital Requirements	4,964,440
Customer Advances for Construction	(4,645,938)
Year-End Gross Original Cost Rate Base	$300,012,375
Reserve for Depreciation and Amortization	(94,978,076)
Year-End Net Original Cost Rate Base	$205,034,299

Premises considered, we find that the year-end rate base for Public Service's Steam Department totals $5,897,266 and is comprised of the following items and amounts:

1978 Year End Rate Base

Utility Plant in Service	$9,383,796
Construction Work in Progress	16,894
Common Utility Plant in Service Allocated	15,510
Prepayments	12,877
Materials and Supplies	144,062
Cash Working Capital	131,590
Customer Advances for Construction	(24,029)
Year-End Gross Original Cost Rate Base	$9,680,700
Reserve for Depreciation and Amortization	(3,783,434)
Year-End Net Original Cost Rate Base	$5,897,266

We find that the combined year-end rate base of the Electric, Gas, and Steam departments totals $1,308,779,676 and is comprised of the following items and amounts:

1978 Year End Rate Base

Utility Plant in Service	$1,476,084,177
Utility Plant Held for Future Use	1,647,255
Construction Work in Progress	237,089,251
Common Utility Plant in Service Allocated	65,362,405
Prepayments	2,621,675
Utility Materials and Supplies	60,304,924
Cash Working Capital Requirements	5,096,030
Customer Advances for Construction	(13,855,523)
Year-End Gross Original Cost Rate Base	$1,834,350,194
Reserve for Depreciation and Amortization	(438,292,607)
Rate Base Allocated to FERC Jurisdictional Sales	(87,277,911)
Year-End Net Original Cost Rate Base	$1,308,779,676

VI

RATE OF RETURN

Capital Structure

There is no disagreement among the parties with respect to the capital structure of Public Service. For purposes of this docket we find the following capital structure of Public Service as of December 31, 1978 which was submitted by Mr. Bumpus:

	Adjusted Capitalization	Ratio
Long term debt	$ 648,242,124	48.12%
Preferred stock	204,400,000	15.17%
Common equity	477,853,180	35.47%
Reserves and Deferred Taxes	16,643,819	1.24%
TOTAL	$1,347,139,123	100%

Cost of Long Term Debt and Preferred Stock

There is no disagreement among the parties regarding the test period costs of long term debt and preferred stock of 6.90% and 6.78%, respectively.

Rate of Return on Equity

As in the past, the parties were not in agreement with respect to the proper cost to be assigned to equity. The range of recommended returns on equity ranged from 9.05% on the low side to 16.% on the high side.

The determination of the cost of the common stock portion of a utility's capital is a difficult and complex task, since the utility has no fixed contractual obligation to pay dividends to its common shareholders. To be sure, equity capital has a market cost in the sense that there is always a going rate of compensation which investors expect to receive for providing equity capital, but it is not a cost that is directly observable from the market or accounting data. Whereas a purchaser of senior securities acquires a right to a contractual return, a purchaser of common stock in a utility simply acquires a claim on the utility's future residual revenue after over-all costs, including the carrying cost of debt and preferred stock, have been met. This essentially venturesome claim is capitalized in the market price of the stock. Conceptually, then, the true cost of common stock is the discount rate equating the market price of the stock with a typical investor's estimate of the income stream, including a possible capital gain or loss, which he or she might reasonably expect to receive as a shareholder.

A determination of a reasonable discount rate, adjusted as necessary for market pressure on new stock issues and underwriting costs, is implicit in every regulatory decision in which an allowance for a cost of equity capital is included as a component of the approved rate of return on a utility's rate base. Although theoretically it might be said that there is no cost for utility capital raised by common stock since there is no contractual right of a common shareholder to receive any dividend return, it is obvious that no reasonable investor will entrust his capital funds to a utility, by purchasing common stock, unless he can expect to obtain a reasonable return on his investment.

On the basis of the record made in this proceeding, we find that a rate of return on Public Service's rate base of 9.53% and a rate of return of 14.6% to common equity is fair and reasonable, sufficient to maintain financial integrity and to attract equity capital in today's market, and commensurate with rates of return on investments and other enterprises having corresponding risks.

As in the past, the Commission concludes that the "discounted cash flow" (DCF) methodology is an acceptable one for deriving fair rate of return on common equity.* All rate of return witnesses (except Mr. Perlo) in this docket used the DCF methodology to measure stockholder expectations. The DCF methodology basically states that the capitalization rate for a particular stock is equal to the dividend yield thereon plus the expected growth in the price of the stock.

Even though the rate of return witnesses (except Mr. Perlo) of the parties used a DCF methodology, their respective conclusions were not in agreement. This is not surprising given the existence of variations in the application of the DCF methodology, and the corresponding variations in results due to differences in (1) the time frame during which the dividend yield is to be calculated, and (2) the ability to use any of he following as a proxy for growth: (a) dividend yield, (b) book value of the stock, or (c) earnings.

It should be noted that the DCF basically deals with the so-called "bare cost" of equity. The bare cost of equity then is usually adjusted to take into consideration such factors as market pressure, selling costs, attrition, and the ability to sell the issues of common stock without dilution to existing shareholders.

With respect to the issue of the bare cost of equity, the following table summarizes the end result found by the various witnesses:

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* The Commission recognizes that other methodologies for deriving returns on equity that have been developed; however, such other methodologies have not been formally advanced by any of the parties herein.

Witness	Bare Cost of Equity
Bumpus (Public Service)	14 to 15%
Marcus (AMAX)	13.17%
Rettenmayer (General Services Administration)	13 to 14%
Karahalios (Staff of the Commission)	12.10 to 12.40%

With respect to the range of return on equity, a summary of the result of the various witness was as follows:

WITNESS	RETURN OF EQUITY	OVERALL RETURN ON RATE BASE
Bumpus (Public Service)	16.0%	10.03%
Marcus (AMAX)	13.65%	9.19%
Karahalios (Commission Staff)	15.0%	9.67%
Rettenmayer (General Services Administration)	14.0%	9.32%
Perlo (Colorado Committee for Economic Survival)	9.05%	7.56%

We find that the testimony of Dr. Rettenmayer most nearly approximates a realistic range with respect to the cost of equity. With regard to the yield of Public Service common stock, Dr. Rettenmayer measured average yield over a relatively recent sixteen week time frame, running from June 11, 1979 to September 24, 1979. The stock yield during that period of time was 10.02% which Dr. Rettenmayer rounded to 10.00%. In a period when yields have not remained within traditional limits, we believe that using a reasonably compressed time frame (16 weeks) is a more realistic and meaningful approach than either the spot return on equity of Public Service Company witness Bumpus, or the 18 month average of AMAX witness Marcus. Accordingly, for purposes in this proceeding, we find the dividend yield to be 10%.

Dr. Rettenmayer testified that Public Service's growth experience had been quite mixed. Dividend earnings and book value grew very nearly at the same rate until about 1973, after which time they diverged. Earnings have experienced negative growth over the last five year and ten year periods, while book value per share has leveled off to a growth rate of near zero in recent years. By contrast, dividends have increased fairly rapidly since 1975. Dr. Rettenmayer stated that he did not believe that potential investors in Public Service were likely to think that so rapid a dividend growth could be sustained in the future in the face of such a negative earnings pattern. Accordingly, he stated that it was doubtful that investors would expect a growth rate of more than four percent and that even a lower growth rate might be anticipated when Public Service's past performance was considered. Accordingly, Dr. Rettenmayer stated, and we agree, that investors reasonably can expect a growth rate of three to four percent. Adding the dividend yield to the growth rate would, in Dr. Rettenmayer's judgment, bring about a current investor discount rate and a cost of equity capital between 13 and 14 percent. So far, the Commission is in agreement with Dr. Rettenmayer's judgment, and so finds.

Next Dr. Rettenmayer made an adjustment to avoid dilution so as to maintain the stock price far enough above book value to avoid sales with net proceeds below book value. In order to do so Dr. Rettenmayer allowed for a flotation cost and market pressure effect, if any, of five percent on yield. Thus he divided Public Service's dividend yield of ten percent by .95 to give an adjusted yield of 10.5 percent, which added to the growth rate of 3.5 percent (mid point in his 3 - 4% range) gives an estimated adjusted cost of new equity of 14 percent.

We agree with Dr. Rettenmayer that the flotation cost and market pressure effect adjustment should be applied only to the dividend yield component, and not to both the dividend yield and growth components.

However, we do not believe that a five percent adjustment in today's financial markets realistically measures the flotation and market pressure effects, and the current attrition. Accordingly, rather than apply a five percent adjustment factor, as did Dr. Rettenmayer, the Commission believes that the appropriate adjustment is more realistically pegged at ten percent. Thus, we divide Public Service's ten percent yield by .90 which gives an adjusted yield of 11.1% which when added to a growth rate of 3 - 4 percent would give an estimated adjusted cost of new equity a range of between 14.1% and 15.1%. We adopt the mid point of this range, or 14.6%, as the reasonable cost of equity which would be commensurate with those of investments in utilities of comparable risk.

We might comment briefly that, in our opinion, the approach suggested by Public Service witnesses Bumpus and Meyer would amount almost to a guarantee rather than an opportunity. It is understandable that Public Service would desire that any new issues of stock could be sold at book value at all times, that it could have a 9.5% dividend yield on book, and that its pay-out ratio would be in the range of 60-65%. The revenue requirement of Public Service cannot and should not be set at a level which constitutes a guarantee, or almost a guarantee, of such a financial result.

By the same token, we are of the opinion that AMAX witness Marcus's framework of analysis failed to recognize certain of the financial realities with which Public Service presently is faced, which financial realities are not likely to abate. Public Service currently is not even earning enough (with or without AFUDC) to cover its stated $1.60 dividend, and its stock offerings in recent years have been sold below the book value of its stock. Sales at a price below book value results in the dilution of the investment of Public Service's current stockholders and, if continued, may deter potential investment in Public Service. As stated above, we are not convinced that an extended period of time within which to measure dividend yield is realistically relevant at the present time. If dividend yields, and financial

circumstances were relatively stable, as they were over a decade ago, Dr. Marcus's longer range approach would be more acceptable. Additionally, we are no longer confident, as is Dr. Marcus, that utilities presently represent less of an investment risk than do industrial stocks. It is true that the market price of a stock will include the investor's judgement of the relative risk of that stock. Dr. Marcus believes that even attrition is taken into account by market price. However, we do not share Dr. Marcus's certainty that this is necessarily the case.

In sum, in our judgment, Dr. Rettenmayer's analysis is the most realistic assessment of the cost of equity presented in these proceedings.

VII

REVENUE REQUIREMENT

In order to determine the revenue requirement, it is necessary to determine the required net operating earnings based upon Public Service's rate base. We have found that the proper rate of return on rate base is 9.53%, and the proper return on equity is 14.6%. This means that the required total authorized net operating earnings for Public Service are: $124,726,703 ($1,308,779,676 times 9.53% = $124,726,703).

It is necessary to subtract the net operating earnings of Public Service in the test year from the required net operating earnings in order to determine the indicated net earnings deficiency. Certain adjustments to determine the net operating earnings of Public Service for the test year have been proposed, which proposed adjustments are discussed below.

Depreciation Rate

In December, 1978, the Company increased the composite book depreciation rate for electric-steam production facilities to 3.5% from 3.2% to reflect increasing investment in pollution control facilities and a reduction in the estimated useful life of those facilities (Exh. B. p. 11). The depreciation study used as a basis for this change

was submitted to the Commission's engineering staff, which, by letter dated March 5, 1979, agreed with the change (See Exh. No. 38). As a result of this change, the depreciation expense for the electric department was increased by an amount of $1,206,967 for ratemaking purposes (Exh. B. p. 11). No evidence was presented questioning the propriety of the reason for the increase in the depreciation rate or the amount of the increase, and the pro forma adjustment to depreciation and amortization expense should accordingly be approved.

Gas Research Institute (GRI)

Public Service, in this proceeding, has made a pro-forma out-of-period adjustment to its test year administrative and general expenses to annualize, at the rate of 5.0 mills per Mcf of purchased gas, the Gas Research Institute (GRI) charge by Colorado Interstate Gas Company. During the hearing, Exhibit 61 was admitted. Exhibit 61 is a copy of FERC Opinion No. 64, issued October 2, 1979. In Opinion No. 64, FERC authorized interstate pipeline companies under its jurisdiction to file an adjustment to their GRI adjustment clauses increasing the GRI charge from 3.5 to 4.8 mills per Mcf, effective January 1, 1980, for the calendar year 1980.

The Staff adjusted Public Service's pro-forma adjustment by the amount of $175,170, to reflect the inclusion of the GRI charge at a level of 3.5 mills per Mcf (which was the level during the calendar year 1979) rather than 4.8 mills per Mcf (the level of charge for the calendar year 1980). It should be remembered that the test period in this rate proceeding is the calendar year 1978. The GRI charge per Mcf during 1978 was 1.2 mills per Mcf. Therefore, both the 3.5-mill-level (which was recommended by Staff) applicable during the calendar year 1979 and the 4.8-mill-per-Mcf level (recommended by Public Service) are out-of-period. Although the 3.5-mill-per-Mcf level is out-of-period, it was known and measurable during the test 1978 period. See FERC Opinion No. 30, issued on September 21, 1978 in Docket No. RP78-76.

The Colorado Supreme Court in Mountain States Telephone and Telegraph Company v. Public Utilities Commission, 182 Colo. 269, 275-276, 513 P.2d 721 (1973), wrote with respect to the Commission's obligation to consider and allow, or consider and not allow, out-of-period adjustments for ratemaking purposes:

> "The relationship between costs, investments and revenue in the historic test year is generally a constant and reliable factor from which a regulatory agency can make calculations which formulate the basis for fair and reasonable rates to be charged. These calculations obviously must take into consideration in-period adjustments which involve known changes occurring during the test period which affect the relationship factor. Out-of-period adjustments must be also utilized for the same purpose. An out-of-period adjustment involves a change which has occurred or will occur, or is expected to occur after the close of the test year. An increase in the public utility taxes effective after the test year is a good example of such an adjustment. Wages and salary increases which have been contracted for and which will take effect after the test year must also be analyzed in the process of calculations. Such wage and salary increases may not exceed to any large extent the usual consequent increase in the productivity of the employees. If they do, which is generally the case in periods of uncontrolled inflation, then such out-of-period adjustments must be reckoned with in the rate fixing procedure. These are matters which must of necessity be of substantial concern to a rate fixing regulatory agency of the government when it considers all of the evidence and all the factors available to it in a rate case.

In Mountain States Telephone and Telegraph Company v. Public Utilities Commission, ____Colo. ____, 576 P.2d 544 (1978), the Court had before it on appeal the issue whether the Commission in the Mountain Bell rate proceeding abused its discretion by disallowing an out-of-period adjustment to debt made by Mountain Bell. The Supreme Court, after quoting the above quotation from its 1973 opinion, stated as follows:

> The foregoing quotation clearly emphasizes that only out-of-period adjustments, which are contracted for during the test year period but do not take effect until after the conclusions of the test year period should be considered . . . Here, the debt issue which Mountain Bell wished to make the subject of an out-of-period adjustments which can properly be considered by the PUC according to that case, do not include this out-of-period adjustment.

Id. at 552. (Emphasis added.) It is, therefore, clear from the ruling of the Supreme Court that this Commission need not consider in this rate proceeding an out-of-period adjustment subsequent to the 3.5 mill per Mcf GRI charge.

Even if the 4.8 mill level legally could be considered by this Commission in this proceeding, the Commission would still opt for the 3.5 mill level. No evidence was introduced in this proceeding to demonstrate what benefits, if any, have been or will be derived by the natural gas consumers in the State of Colorado as a result of their payment for the GRI charge.

Although the Commission's position with respect to the GRI matter is well known to Public Service, it may not be known to other parties to this proceeding. Accordingly, a review of what has transpired previously in Colorado with respect to the GRI may be in order.

Public Service Company, and three other natural gas companies in Colorado, filed applications with the Commission in 1978 (Application Nos. 31010, 31011, 31486 and 31517) for authority to flow the GRI charge through as part of their gas cost adjustment tariffs, or purchased gas adjustment tariffs. The majority of the Commission, after hearing in said application proceedings, denied to these applicants the right to flow through the GRI charge as part of their GCA or PGA tariffs. See Decision No. C79-907.

As the Commission stated in said decision, GRI was formed by a large number of interstate pipeline and distribution companies in the natural gas industry in the United States to continue research and development activities of the American Gas Association. Funding for AGA research and development had in the past been provided by natural gas companies that were members of AGA. Payments to AGA by gas utilities, which were under the jurisdiction of this Commission, were subject to review

for allowance or disallowance for ratemaking purposes. Funding for GRI, however, has been structured by the natural gas companies forming GRI so that this Commission's legal power to allow or disallow research and development expenditures for ratemaking purposes is limited solely to the "intrastate" natural gas area. See Decision No. C79-907. Although membership and direct voting control of GRI is limited to companies in the natural gas industry, these same companies provide none of the funding for GRI's research and development activities. The consumers of natural gas, on the other hand, are required to provide all of the funding for GRI's research and development activities.

During the early formation period of GRI, and its recognition by the FERC, all of the natural gas companies, including Public Service Company of Colorado, took the position that natural gas consumers should provide all of the funding for GRI's research and development budget and that the natural gas company stockholders should provide none of the funding, a position endorsed by FERC in Docket No. RP78-76. Although the structure of GRI guarantees that the consumers will provide all of the research and development funding for GRI, the structure does not provide these same gas consumers with control as to how their money is to be expended, neither as to the type of research and development, nor the level of spending therefor. The natural gas companies, which control GRI, the research and development programs that will be pursued, the level of funding therefor, bear none of the monetary risks generally associated with such control. The natural gas consumers, thus, are forced to assume all of the monetary risks associated with research and development, without being afforded the ability to control or minimize these risks. See Decision No. C79-907. If a research and development project is discontinued before completion, or fails to prove economically feasible when complete, only the natural gas consumers will suffer an investment loss.

In addition, as pointed out by the Commission in Decision No. C79-907, there exists the fundamental question of whether it should be

the obligation of natural gas consumers to fund, in advance, research and development projects for natural gas producers (which include some of the largest corporations in the United States) natural gas applicance manufacturers, (which also includes some of the largest corporations in the United States) synthetic gas manufacturers, solar energy equipment manufacturers, etc. The Commission, in said decision, stated that it was its opinion that it was not their obligation.

Another matter to which the Commission took exception in its decision was the scope of the research being conducted by GRI. The scope of research being conducted by GRI runs the gamut from the manufacture of synthetic natural gas, to a vast array of gas-fired residential, commercial and industrial equipment and appliances, to electrical generating plants fueled by gas fuel cells, to the production of hydrogen. As stated by the Commission in Decision No. C79-907, the Commission intended to pursue the matter involving GRI before the FERC in its 1980 proceeding.

As can be seen from Exhibit No. 61, (FERC Opinion No. 64), the Commission pursued this matter before the FERC without success. The Commission, however, intends to pursue the matter further in the Courts of the United States. In the meantime, and until evidence is presented to this Commission that the natural gas consumers in Colorado are indeed receiving benefits commensurate with their involuntary funding of GRI, this Commission intends to scrutinize closely any claims by Colorado utilities for reimbursement of the GRI charge.

Advertising

Public Service witness, Mr. Hock, presented the advertising categories established by the Commission in previous decisions, the advertising expenses incurred with respect to each category and copies of the print and media advertising included for rate-making purposes. The test period advertising expenses included for rate-making purposes by Public Service amounted to $1,291,966. Mr. Hock testified that, in his opinion, the advertising included for rate-making purposes was informative and beneficial

to the customers and therefore satisfied the criteria established by the Commission in the previous proceedings. In addition, Public Service witness, Mr. Andrew, testified concerning the value of conservation advertising.

Staff witness, Mr. Jorgensen, proposed that advertising expense amounting to $239,899 be excluded. This represents advertising expense in the cost of service ($178,743) and energy supply ($61,156) categories. Public Service witnesses, Mr. Hock and Mr. Ranniger, believed such advertisements were justifiable because Public Service has a responsibility as a good corporate citizen to communicate with customers on such matters. In previous decisions, the Commission has allowed such advertisements to be charged to the ratepayers when the Commission was of the opinion that such advertisements were objective, informative and of benefit to the ratepayers. Mr. Jorgensen was of the opinion that many of the advertisements in the cost of service category primarily were directed to a comparison of what a Public Service customer would pay and what utility customers in other cities would pay and the reasons for the increase in customer bills. Although such advertising may correctly show that Public Service customers are better off than utility customers in other cities, we do not see why this information is particularly beneficial to Public Service's ratepayers, nor do we see the direct benefit that Public Service ratepayers receive with respect to advertisements classified as energy supply dealing with new power plants, coal supply, gas storage facilities, etc. In fact, such advertisements seem to counteract the urgency of other specific Public Service advertising dealing with conservation, insulation and weather stripping.

We are not saying that all future advertising in the cost of service and energy supply categories necessarily would be disqualified for above the line treatment. However, Public Service failed to specify the particular cost of advertisements which gave hard information on energy. Thus the Commission has no alternative but to disallow the entire category.

Public Service may be well advised to identify more specifically the cost of each of its advertisements so that the Commission would have the opportunity of rendering a more precise judgment in this area in future cases.

ACORN and CEAO urged that all advertising, except that relating to safety be eliminated. ACORN and CEAO did not present persuasive evidence which would justify this rather extreme result, and accordingly, their position (except as hereinabove discussed) is not adopted. Rather the Commission will accept for purposes of this proceeding the cost of service and energy supply advertising category adjustments proposed by the Staff.

The Commission also notes that Public Service's expenses for advertising concerning political or promotional messages have not been included by Public Service for above the line treatment in this docket. These expenses are being absorbed by Public Service stockholders rather than its ratepayers. CEAO and ACORN raised the fact that $41,928 of the dues which Public Service pays to the Edison Electric Institute (EEI) is used by the EEI for political and promotional advertising. We agree with CEAO and ACORN that the portion of Public Service's dues payment to EEI in the amount of $41,928 (which is used by EEI for advertising) should be paid for by Public Service's stockholders rather than its ratepayers and thus accorded below the line treatment.

The Commission's treatment of advertising in this docket is in accord with Section 113(b)(5) of the Public Utility Regulatory Policies Act of 1978 (PURPA) which states that:

> "No electric utility may recover from any person other than shareholders (or other owners) of such utility any direct or indirect expenditure by such utility for promotional or political advertising as defined in Section 115 (h)."

Payments to Other Associations and Lobbying Expenses

CEAO and ACORN challenged the inclusion, for above the line treatment, of $4,000 dues paid by Public Service to the American Nuclear Council, $1,500 dues paid to the Institute of Gas Technology and $1,584 paid to the Utilities Communications Council. We agree that these amounts should be placed below the line and absorbed by Public Service's stockholders rather than its ratepayers. The American Nuclear Council's principal activity appears to be lobbying in Washington, D.C. The Institute of Gas Technology is primarily concerned with coal gasification and not natural gas, and so its programs would appear to be duplicative of those of GRI. The Utilities Telecommunications Council deals with the Federal Communications Commission, mainly in a political way, and these expenses should not be paid for by the ratepayers.

Related matters include the Company's payments through Edison Electric Institute (EEI) to the Electric Power Research Institute (EPRI) and its expensing for ratemaking purposes of the annual payment (accrued although not actually paid) for the Liquid Metal Fast Breeder Reactor (LMFBR) in the amount of $167,000. The benefit to the customers resulting from the EPRI programs, including the specific benefit to ratepayers in Colorado, was thoroughly discussed by Mr. Walker. Participation in the LMFBR project, which may result in the development of a revolutionary concept for producing electric power, is likewise in the public interest. It is also noteworthy that the LMFBR payment is a direct credit to the Company's financial obligation to EPRI and that without this item, the Company's dues to EPRI would simply be increased by $167,000. Public Service's financial obligation to EPRI is contractual and cannot be discontinued. This ten-year obligation is now in its eighth year.

It is true that no utility in Colorado is considering a fast breeder reactor at this time. However, it must be recognized that Public Service has obtained the benefits of research in the past regarding a

gas cooled reactor which many other public utilities around the country participated in even though these other utilities have not directly benefited by such research. In other words, energy research by utilities in this nation is not conducted on a provincial basis which is balkanized by state lines.

Finally, with respect to the direct dues payments to the American Gas Association (AGA) and EEI (which aggregate some $202,000), the Company's customers benefit significantly from its membership in these organizations, which provide programs and information that enable the Company to serve its customers in a more efficient manner than would otherwise be the case. In addition, AGA certification of gas burning appliances, together with the surveillance of their quality, is of direct benefit to gas consumers everywhere.

For the foregoing reasons, the Commission shall allow as test year operating expenses the Company's expenditures in connection with its dues payments to AGA and EEI (except for the elimination of $41,928 in connection with advertising described above), its payments to EPRI for research and the expensing of the $167,000 due in connection with the LMFBR project, all of which are reasonable and are beneficial, directly or indirectly, to the consumer.

The great bulk of Public Service's lobbying expenses were initially placed below the line (meaning such expenses would be absorbed by stockholders rather than rate payers) at the time Public Service filed its case. By stipulation, an additional amount of $1710 was removed for lobbying activities of Mr. Bryant O'Donnell and $4565 was removed relating to lobbying activities of Ms. Kaye Johnson.

Conservation Programs

Conservation is the cheapest source of supply and the Company's involvement in conservation matters will reduce the costs to it, and ultimately to its customers, of providing service. The Commission

believes, as it did in Decision No. C78-1018, that the Company's continued involvement in conservation programs is appropriate and its operating expenses in connection therewith should be allowed. Further, the Company's activity in such matters as energy audits and arranging for the installation of appropriate conservation devices is mandatory under the National Energy Conservation Policy Act of 1978 (NECPA) and the implementing regulations promulgated by the Department of Energy.

Under Section 212(c) of the NECPA the governor of each state, or any state agency specifically authorized to do so under state law, may submit to the Secretary of Energy a proposed Energy Conservation Plan not later than 180 days after promulgation of rules by the Secretary of Energy. In Colorado the Governor has designated the Colorado Office of Energy Conservation as the appropriate state body to develop the Colorado State Residential Energy Conservation Plan.

In Decision No. C78-1018 in discussing the SHEIP program, the Commission made it clear that it expected safe and cost effective retrofit programs to be developed. However, in this proceeding it became clear this was not the case. Although delays may occur, either because of lack of data, federal mandate or some other reason, the Commission expects to be kept abreast of such developments and expects Public Service to do so in the future.

Adminstrative and General Expenses

During the testimony of Mr. Jorgensen, it was noted that the Company's general and administrative expenses had increased by over 30% per customer between 1977 and 1978, although Mr. Jorgensen did not recommend any adjustment on that account. In response, Mr. Hock testified that the overwhelming amount of the increase resulted from an accounting change which became effective in 1978 and which had the effect of collecting under the labor and pension benefits category the indirect amounts attributable to lost time such as vacations, jury duty, sick leave, etc. These amounts previously had been spread out throughout various functional categories.

In light of Mr. Hock's clarification, the percentage increase is found to be reasonable and no adjustment is necessary.

Fort St. Vrain Purchased Power Expense

AMAX witness, Mr. Knudsen recommended that an amount of $4.8 million of purchased power expense incurred in connection with Fort St. Vrain during 1978 be disallowed as a non-recurring expense and that the plant account be increased by that amount.

In accordance with accounting procedures prescribed by the Uniform System of Accounts and adopted by this Commission, generation from a plant which has not yet gone into commercial operation is treated as purchased power and charged at the systemwide production cost. At the same time, operation, maintenance and fuel expenses are capitalized.

As a result, the $4.8 million referred to by Mr. Knudsen was in fact the increase in the 1978 amount of $7.2 million over the 1977 amount of $2.4 million. Mr. Knudsen had improperly looked at only one segment of the overall accounting treatment required by the Uniform System, which included the capitalization during the test period of some $9 million in operation, maintenance and fuel expenses. Thus, under Mr. Knudsen's recommendation, it would be necessary to increase test year operating expenses by approximately $9 million, which would have a corresponding impact on the Company's revenue requirements, and we believe that it is contrary to the best interests of the ratepayers.

Aircraft Use

CEAO and ACORN were critical of what they believed was the lack of a definable policy of Public Service with respect to the use of its aircraft, and in particular the transportation of non-company passengers on its aircraft without reimbursement. Inasmuch as no evidence with respect to the actual use of the aircraft was presented, the Commission is not in a position to make specific adjustments in this area. However, the Commission does believe that Public Service should develop, if it has not already done so, a definable policy with respect to use of its

aircraft, and that it should give serious consideration to including within that policy the matter of reimbursement for use by non-company personnel who are not on company business. The Commission recognizes, of course, that company business may be involved even though passengers may not be employees of the Company. Under these circumstances above the line treatment is justifiable. However, when non-company personnel fly on a space available basis and their travel is not company related, it may well be that reimbursement in whole or in part would be indicated.

Executive Salaries

Although certain intervenors made conclusionary statements with respect to the level of salaries paid to Public Service's top management as being excessively high, no evidence was presented by any party which would indicate that salaries paid to Public Service's top management people was not comparable to salaries paid corporate managers in similar type utilities. In the absence of a definitive showing that Public Service's management has abused its discretion with regard to setting of executive salaries and compensation, the Commission does not make any adjustment in this regard.

Income Tax and FERC Adjustments

The foregoing adjustments to Administrative and General Expense produce offsetting adjustments to State and Federal Income Taxes in the amounts of $229,062 ($87,422 for the Electric department and $141,340 for the Gas department), respectively. The required adjustment as a result of other adjustments to FERC jurisdictional revenue for the Electric Department is $690,306.

Summary of Earnings Deficiencies and Revenue Requirement

In view of the foregoing discussion with respect to certain proposed operating adjustments, we state and find that the earnings

deficiencies, based upon the test year, are as follows:

	Electric	Gas	Steam	Total
Authorized Net Operating Earnings	$104,214,857*	$19,949,837*	$562,009*	$124,726,703
Actual Net Operating Earnings for the Test Period	88,225,114	15,327,052	329,705	103,881,871
Net Operating Earnings Deficiencies	$ 15,989,743	$ 4,622,785	$232,304	$ 20,844,832

Income tax requirements make it necessary to increase each dollar of net operating earnings for the Electric Department by $1.949318 to produce an additional $1.00 in net operating earnings to increase each dollar of net operating earnings for the Gas Department by $1.897419 to produce an additional $1.00 in net operating earnings, and to increase each dollar of net operating earnings of the Steam Department by $1.940967 to produce an additional $1.00 in net operating earnings. Accordingly, a total increase of $31,169,094 in retail electric revenues (7.65%), a total increase of $8,771,360 in retail gas revenues (5.28%), and a total increase of $450,894 in steam revenues (11.26%) are required with regard to the above earnings deficiencies. Therefore, the total revenue requirement increase for electric, gas and steam departments is $40,391,348 (6.95%).

The rates and charges as proposed by Public Service in the tariffs accompanying Advice Letter No. 760-Electric, Advice Letter No. 761-Electric; Advice Letter No. 277-Gas, Advice Letter No. 278-Gas; Advice Letter No. 19-Steam, and Advice Letter No. 20-Steam, under investigation herein, would

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* Figures herein reflect 9.49% rate of return for the Electric Department, 9.53% rate of return for the Steam Department, 9.73% rate of return for the Gas Department and 9.53% rate of return overall. The differential rate of return among the departments is based upon the varying risks of those departments.

under the test-year conditions, produce additional electric revenues of $52,938,239 (12.99%) annually, additional gas revenues of approximately $10,999,162 (6.62%) annually, and additional steam revenues of $507,433 (12.66%) annually. To the extent the revenue produced by such rates and charges would therefore exceed Public Service Company's revenue requirements as found above, such rates and charges are not just and reasonable.

VIII

RATE DESIGN AND SPREAD OF THE RATES

Having determined that Public Service requires a total gross increase in its revenues of $40,391,348 ($31,169,094 for electric, $8,771,360 for gas, and $450,894 for Steam) it is necessary to spread the revenue requirement among its rate payers.

Electric Rates

Average and Excess Demand Methodology

As in previous rate cases, Public Service continued the practice of allocating costs among its customer classes by use of the average and excess demand (AED) methodology. Public Service also spread the indicated increases to the residential (R) and residential heating (RH) rates by application of a uniform percentage figure to all blocks. Reblocking and other changes made in non-residential rates were designed to continue the Company's past efforts to make these rates more cost tracking. Public Service also proposed to consolidate their three existing rate areas into one because of service area and system developments and in order to decrease PURPA reporting requirements. Public Service also proposed to increase the amount of fuel costs contained in the base rates from 50 cents to 85 cents per million Btu.

Public Service's AED methodology was supported by CF&I and opposed by CEAO and ACORN. The results of the AED methodology are

depicted on Public Service Exhibit No. 116. Eugene Coyle, witness for CEAO and ACORN, proposed the adoption of what he described as a "variation" of the AED methodology, wherein the excess demand portion of demand costs would be allocated on the basis of class contribution to system peak. In Dr. Coyle's view, the use of the coincident peak was appropriate because it measures directly the burden the class places on the system at the time of the peak. Public Service's use of non-concident peak to measure the "excess" was, according to Dr. Coyle, a "very poor proxy." A second method recognized (and inferentially endorsed) by Dr. Coyle was the monthly peak responsibility (MPR) method of demand allocation which uses the twelve monthly peaks as the collective variable in cost allocation thereby reflecting the operation of the system year-round and reflecting both the peak dimension and the energy dimension.

The Commission notes that there was considerable divergence between Dr. Coyle and Mr. Ranniger, Public Service's witness, with respect to demand allocation methodology. Be that as it may, the Commission notes that Dr. Coyle did not perform cost of service studies for Public Service using either the coincident peak or the MPR variation of the AED methodology. Accordingly, at this time, the Commission does not have the benefit of hard data on which to base an evaluation of where Dr. Coyle's coincident peak or his MPR variation of the AED methodology would lead us. In these circumstances, the Commission will adopt the AED method proposed in this docket by the Company for allocating costs related to the Electric Department. However, in future rate cases Public Service should develop alternate cost of service studies which will embody the coincident peak variation and the MPR variation of the AED methodology which were discussed by Dr. Coyle. In that way the Commission will have hard data reflecting more than one methodology from which it can make its judgment as to which methodology would be the most appropriate one to be used in allocating costs among Public Service's various classes of customers.

Electric Heating

The originally filed increase for RH (electric heating) residential customers was 28%. As a result of the scaling down of the overall revenue requirement by the Commission in Phase I of this proceeding, the proposed increase for electric heating customers is 21.8%. The Commission recognizes the fact that the percentage increase for electric heating customers is significantly greater than that proposed for other electric rate classes. The Commission, however, believes that it must implement rates which are reflective of costs. There was no evidence submitted by any party or witness which disputed Public Service's cost of service study with regard to electric heating rates.

Electric heating rates, when initially instituted, were promotional. Thus it is understandable that electric heating customers who came on the system at the time electric heating rates were promotional are not pleased with the steep increases with which they are now faced. However, we note that at least two-thirds of the electric hearing customers that are presently on the system came on the system after promotional electric heating rates were no longer in effect. The proportion of electric heating customers who came on the system at the time electric heating rates were promotional has continually declined.
It is not appropriate, especially at times such as the present when both the level and the rate of increase in costs is high, to have a general body of rate payers subsidize a particular class at rates which do not fully reflect that class's cost. Accordingly, the Commission will make no adjustment to the proposed percentage increase for electric heating customers.

Street Lighting

Some municipalities, particularly Denver, have taken issue with the Company's proposed street lighting rates. While the City of Arvada and the Colorado Municipal League appeared initially to have some

uncertainty concerning (1) the Company's proposal to substitute, over the next ten years, high pressure sodium lights for mercury vapor lights and (2) the differences in rates between various lighting categories, those concerns were allayed during the hearings. Public Service stated its intention to cooperate fully with the affected municipalities in making the conversion to sodium lights and to file for rates, upon request, for any commercially available sodium lights desired by municipal customers. We agree with the City of Arvada that the conversion to high pressure sodium lighting represents a major step for municipal customers as well as for Public Service, and that this conversion presents also a unique opportunity to modify lighting levels and achieve uniformity for purposes of safety, appearance, and efficiency. We would anticipate that Public Service will take a positive leadership role in helping the necessary agencies design such lighting systems and that this leadership role will include the preparation and analysis of lighting standards, pole location safety standards, and cost effectiveness of various lighting alternatives.

Insofar as Denver's concerns are premised on the level of the street lighting increase proposed by the Company, the explanation is rather simple: Thirty seven percent (37%) of Denver's lighting is ornamental, as opposed to twelve percent (12%) on the balance of the Company's system, and ornamental lighting received a relatively large increase based on the cost factors involved. Denver's principal objection, however, seems to be that it, with assertedly older street lighting facilities than, for instance, those in the suburbs, is charged with depreciation based on the Company's total street lighting investment and "to rub salt in the wound" Denver several years ago sold Public Service, at depreciated cost, a large number of street lighting facilities, which the City is allegedly being charged for today at inflated rates. While superficially attractive, neither of Denver's objections withstands scrutiny.

In the first place, the information necessary to substantiate Denver's claim that the Company's investment in street lighting facilities used in Denver is relatively smaller than its investment in street lighting facilities to serve other municipalities simply does not exist. Public Service does not keep a record of its investment in street lighting on a municipal-by municipal basis. It maintains that although it theoretically could maintain such information in an aggregate form prospectively, the substantial administrative expense which would be required to do so would not be justified. We also note that recording investment, and basing rates thereon, on a municipal-by-municipal basis would run counter to the trend of consolidating, rather than fragmenting, Public Service's system for rate purposes.

Although one might at first glance conclude that, because it may be older than some of the surrounding suburbs, Denver's position would have validity to it, the mere fact of age is more than offset by the fact that a large percentage of Denver's street lighting bill results from lighting on freeways and other major arterials which have been rebuilt, and widened, with the result that new lighting facilities have been installed in recent years. Furthermore Denver has embarked on a substantial upgrading program as evidenced by, for example, its new street lighting in the Capitol Hill area, alleys, etc. Moreover, while Denver did sell facilities to the Company in 1967, the price was based on 1967 costs depreciated. Denver thus recognized an economic advantage at that time and is not now disadvantaged because its rates are based, in part, on the Company's additional investment in street lighting facilities resulting from that transaction.

With the foregoing in mind, the Commission adopts Public Service's proposals in this docket with respect to street lighting.

Application of Customer Service and Informational Expenses

In I&S Docket No. 1200 the Commission stated that it did not agree with Public Service that its advertising expenses should be

allocated on a per customer basis. In our decision No. C78-1018 (Page 32), dated August 1, 1978, we stated that we believed that advertising expenses should be allocated on a per kilowatt hour basis.

In this docket Public Service allocated its customer service expenses, as well as its advertising expenses, on a per kilowatt hour, rather than a per customer, basis. AMAX objected to the allocation of customer service expenses and informational expenses on a per kilowatt hour rather than a per customer basis. Public Service's witness, Mr. Ranniger, stated that although he personally would prefer to allocate on a per customer rather than on a per kilowatt hour basis, he recognized that this was a matter upon which reasonable judgments could be made either way. It is difficult for us to conceive that the customer service expenses incurred by Public Service would be the same for a large industrial customer as it would be for a small residential homeowner. By the same token, we are not so naive as to believe that the customer service expenses incurred by Public Service are directly and precisely proportional to usage. It must be recognized that whether a per customer or a per kilowatt hour methodology is used for assigning customer service and informational expenses, the allocation necessarily will be imprecise. However, on balance, we believe that the per kilowatt hour basis represents the more reasonable methodology of the two with respect to the entire body of Public Service rate payers. Additionally, the record is devoid of what the results would be if a per customer methodology in lieu of a per kilowatt hour methodology were used. Thus, both the record and our own judgment support the use of a per kilowatt hour basis in the allocation of customer service and informational expenses.

Customer Service Charges and Flat Rates

CEAO and ACORN advocated the utilization of a flat energy rate and the elimination of a declining block rate structure and the elimination of customer service charges. Public Service has proposed a uniform percentage increase in all residential electric blocks.

The Commission does not adopt the elimination of the minimum customer service charge inasmuch as we believe it captures utility-incurred expenses such as meter reading and billing, which exist irrespective of whether any energy is consumed or not. Thus, we believe the customer service charge is appropriate. We do not agree that a declining block rate structure for electric usage should be eliminated at this time. However, rather than adopt Public Service's proposal for a uniform percentage increase in all electric blocks, we believe it would be more appropriate to increase all blocks by a uniform amount per kilowatt hour for the residential general and residential heating classes. By doing this, the increase in electric rates will have a lesser impact upon small users.

Summary of Electric Rate Structures

Premises considered, we find the following percentage increases, by customer category, to allow the increased electric revenue of $31,169,094, are just and reasonable:

CUSTOMER OR CLASS	REVENUE INCREASE	PERCENT INCREASE
Res General	$11,890,615	9.61
Res Heating	1,315,533	21.84
Res Demand	369,390	22.66
Total Residential	13,575,538	10.34
General Commercial Lighting	-553,426	-2.89
Small Lighting & Power, General Lighting & Power, General Secondary Power	8,184,348	6.23
Total Commercial	7,630,922	5.07
Large Lighting & Power	6,176,291	12.01
Irrigation Power	142,947	5.28
Special Primary Power	14,129	13.63
Henderson	436,900	7.02
Climax	549,755	8.62
CF&I-Firm	656,894	10.65
CF&I-Control	321,971	7.31
Subtotal	978,865	9.26
Total Industrial	8,298,887	10.72

CUSTOMER OR CLASS	REVENUE INCREASE	PERCENT INCREASE
Energy Research & Development Adm.	142,393	7.09
Denver Water Board	176,806	12.66
General Services Adm.	68,305	8.07
Municipal Building Service	200,079	15.09
School Power & Lighting	23,564	4.60
Municipal Power	360,366	41.08
School Cooking	89	5.00
Air Raid Warning	155	37.53
Total Public Authority	971,757	13.95
Street & Area Lighting	691,990	6.91
Traffic Signal Lighting	0	0.
Total Lighting	691,990	6.48
Other Revenue	0	0.
Total	$31,169,094	8.24

Gas Rate Structure

Cost Allocation

In Decision No. 87640, dated October 21, 1975, the Commission ordered Public Service to complete a refined gas cost of service study and file it with the Commission as soon as possible. The Commission in Decision No. 87640 modified Public Service's declining block gas rate structure by flattening and shortening the blocks. In Decision No. C78-1018, dated August 1, 1978, the Commission adopted a customer service charge with a flat commodity charge to be used for all gas per 100 cubic feet.

As a result of the gas load research undertaken by Public Service and described by its witness, Mr. Heckendorn, Public Service was for the first time in a position to conduct a detailed cost of service study relevant to its gas service. This study was presented by Mr. Ranniger and was based on an allocation of 50 percent of the fixed cost to the commodity rate and 50 percent to demand, as in the traditional Seaboard methodology adopted by the Federal Power Commission in Opinion No. 225, dated April 25, 1952.* However, Public Service stated that it had no basic objection to the

* Re Atlantic Seaboard Corporation, et al., 94 PUR N.S. 235 (1952)

so-called United variation of the Seaboard methodology which allocates 75 percent of the cost to the commodity and 25 percent of the cost to demand.** Public Service did express its concern that as gas prices approach those of alternate fuels, the United methodology could force industrial customers off the system, leaving the remaining customers to absorb the fixed costs currently absorbed by the industrial customers. The fixed costs absorbed by industrial customers is $6.2 million, based on the Seaboard methodology, and $8.8 million based on the United variation. However, there is no hard information in the record which would indicate a likelihood that an adoption of the United methodology would drive industrial customers from Public Service's system. Public Service also has stated that it has no objection to implementation of either the Seaboard or the United methodology. The United methodology would result in a smaller increase to residential customers.

CEAO and ACORN, through their witness, Dr. Power, proposed that the Commission adopt, or at least move toward, a totally volumetric structure in which rates would reflect commodity volume consumption regardless of the time consumed. Dr. Power was also critical of the Seaboard 50-50 allocation methodology for the further reason that such an allocation would forgive one-half of the cost to interruptible industrial customers since demand responsibility for them is set at zero. CEAO and ACORN indicated their support for the adoption of a United methodology for gas allocation as a means of moving toward the fully volumetric approach advocated by Dr. Power.

The Commission hereby finds and concludes that the adoption of the United formula as presented by the Staff and endorsed by CEAO and ACORN and calculated by Public Service is appropriate in the circumstances of this case.

** The so-called United formula was adopted In Re: United Gas Pipeline Company by the Federal Power Commission in Opinion No. 671 on October 31, 1973, 3 PUR 4th 491.

FERC uses the United formula for allocation purposes for Public Service's interstate supplier, Colorado Interstate Gas Company. Public Service itself also has stated that the demand factor declines in importance where deliveries are limited by the amount of natural gas supplies available instead of the capacity, and that a United allocation tends to give greater protection to the human need customers vis-a-vis the industrial users. We agree with this reasoning.

In view of the foregoing discussion, we do not believe it is appropriate at this time to require Public Service to change its present costing methodology, except as indicated in the foregoing discussion of the United formula, concerning demand responsibility for interruptible customers.

Volumetric Marginal Pricing

CEAO and ACORN's witness, Dr. Power, also proposed a volumetric pricing of energy based upon the marginal or replacement costs to Public Service for that energy. Inasmuch as the volumetric pricing of energy at the marginal cost would result in excess revenues to the Company, Dr. Power advocated a refund of the excess revenues on a per meter basis, which would not vary with the amount of energy consumed by a particular utility customer. Thus in Dr. Power's methodology, if the average cost of gas were $2 per Mcf and the marginal cost of gas were $3 per Mcf and Customer A used 100 Mcf and Customer B used 25 Mcf, Customer A would pay $300 (including $100 in excess revenues); Customer B would pay $75 (including $25 in excess revenues). Under Dr. Power's methodology the excess revenues of $125 would be divided equally between Customers A and B, that is, $62.50 each.

Dr. Power argues that pricing energy at marginal cost will reduce consumption of a scarce resource. However, we agree with the Home Builders Association that it is also likely to increase the number of meters used to record energy consumption, inasmuch as a customer would get a larger refund if he has more metering devices. A more serious problem, of course, is that

two customers who use identical amounts of gas could ultimately incur greatly disparate costs in obtaining that gas. We believe the scheme advanced by Dr. Power results in preferential treatment and thus is contrary to both statutory and case law in Colorado.*

Line Extensions

CEAO and ACORN witness, Dr. Power, proposed that Public Service's additional costs of extending service to new suburban housing developments should be paid by new suburban customers as a line extension fee in order to avoid subsidization of new suburban additions to the Company's gas system by existing residential households. Public Service's present tariffs provide that the costs of line extensions which exceed one and one-half times the annual revenues of the customer must be paid for by that customer. It also should be noted that line extensions are not included the Company's rate base. Thus, we find no persuasive reason to alter Public Service's present policy with regard to line extensions nor has substantial evidence been introduced to substantiate the contention that existing residential customers subsidize the costs of extending service to new suburban housing developments.

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* Colorado Revised Statutes 1973, 40-3-106;
Mountain States Legal Foundation vs. PUC, ___Colo. ___, 590 P2d 495(1979).

Summary of Gas Rate Structure

Premises considered, the Commission will hereinafter order Public Service to file gas rates, using the Public Service version of the United methodology, to recover additional gas revenues in the amount of $8,771,360, in accordance with the foregoing discussion. The percentage increases are as follows:

CUSTOMER OR CLASS	REVENUE INCREASE	PERCENT INCREASE
AREA A		
Residential	$3,992,798	4.84%
Commercial	820,339	1.60
Interruptible	3,492,011	18.75
Gas Lighting	4,387	37.98
Subtotal	8,309,535	5.46
AREA B		
Residential	0	0
Commercial	34,584	1.05
Interruptible	71,000	36.72
Gas Lighting	399	37.97
Subtotal	105,983	1.68
AREA C		
Residential	277,004	7.32
Commercial	36,144	1.64
Interruptible	23,534	5.89
Gas Lighting	2,853	37.98
Subtotal	339,535	5.21
AREA D		
Residential	8,312	2.03
Commercial	4,071	1.64
Interruptible	3,924	12.32
Subtotal	16,307	2.37
RECAPITULATION		
Total Residential	$4,278,114	4.82
Total Commercial	895,138	1.58
Total Interruptible	3,596,469	18.89
Total Gas Lighting	7,639	37.98
TOTAL COMPANY	$8,771,360	5.29%

Steam Rate Structure

The Commission adopts Public Service's recommended structure with respect to steam rates which provides for an across the board increase of 11.29%. We shall hereinafter order that Public Service file steam rates to recover additional revenue requirement in the amount of $450,894 on that basis.

Fuel Cost Adjustment Roll-In

Public Service has requested that it be permitted to roll into its base rates for electric an additional 35¢ per million BTU of fuel cost and for steam an additional 90¢ per million BTU of fuel cost. These requests are proper and should be authorized.

IX

SPECIAL COMMENTS

Wage and Price Guidelines

In a statement of policy issued March 1979, the Commission indicated that utilities subject to its jurisdiction would be expected to demonstrate compliance with the price guidelines established by the President's Council on Wage and Price Stability or show why they were entitled to an exception from those guidelines. The gross margin standard applicable to the Company is found at 6 Code of Federal Regulations 705.45, reproduced at the fourth page of Exhibit 70. This standard provides that:

> A compliance unit complies with the gross-margin standard if its gross margin in the second program year does not exceed its gross margin in the base year by more than 13.5% plus any positive percentage growth in physical volume over the same period.

We find that the revenue increase granted herein is in compliance with the gross-margin standard set forth above. We also find that the wage increases granted to Public Service Company employees is also in compliance with the wage guidelines established by the President's Council on Wage and Price Stability.

Test Year Methodology

For many years the Commission has utilized the historical test year, as adjusted for known out-of-period changes and in-period changes, as the appropriate methodology for measuring the revenue requirement of a utility. Inasmuch as a past historical test year methodology has been unable, in the past several years, to avoid some of the attrition caused by inflationary trends and

regulatory lag, the Commission also has adopted such direct or indirect attrition-alleviating measures as the use of a year-end rate base, the recognition of CWIP "slippage," adjustment to the bare cost of equity, and in this docket the inclusion of an AFUDC offset credit to the income statement of only 60 percent of the construction costs in connection with Pawnee, thereby enabling Public Service to earn currently on 40 percent of the CWIP related to Pawnee.

Another attrition-alleviating methodology is, of course, the use of a future test year. The Commission is not, at this time, disposed to endorse the use of a future test year or partial future test year. However, we believe that it may be appropriate for Public Service, in its next rate case, to present its case on a partial (six-month) future test year coupled with a partial historical (six-month) test year. Public Service should concurrently in its next rate case file on the basis of the traditional full historical test year methodology with which it is familiar.

A partial future year methodology could also cure the so-called "mismatch" referred to by Mr. Marshall and discussed above under "Year End Rate Base."

As indicated above, the Commission is not endorsing a full future test year, nor is it necessarily endorsing a partial future test year. We shall examine the data in Public Service's next rate case presented on both (1) a historical test year; and (2) a partial historical-partial future test year basis as outlined above. It should be understood, of course, that the Commission cannot bind itself to the utilization of either methodology by this Decision.

Miscellaneous Issues and Requests

To the extent other issues have been raised, or other requests made, by any of the parties which are not addressed by the Decision and Order herein, the Commission finds and concludes that such issues or requests are without merit in this proceeding.

X

SUMMARY FINDINGS OF FACT

1. The proper test period in this proceeding is the calendar year ending December 31, 1978.

2. Public Service's combined year-end electric, gas, and steam rate base for the test year ending December 31, 1978 is $1,308,779,676.

3. The current capital structure of Public Service is not unreasonable.

4. A fair and reasonable return on Public Service's combined electric, gas and steam rate base is 9.53%.

5. A rate of return to common equity of 14.6% is fair and reasonable, sufficient to maintain financial integrity and to attract equity capital in today's market, and commensurate with rates of return on investments in other industries having corresponding risks.

6. The total required gross increase of electric revenues is $31,169,094.

7. The total required gross increase of gas revenues is $8,771,360.

8. The total required gross increase of steam revenues is $450,894.

9. To obtain increased electric revenues of $31,169,094 rates for electric customers, where applicable, should be increased in accordance with the discussion and revenue increase specifications above in Summary of Electric Rate Structures.

10. All gas base rates should be increased in accordance with the discussion under Summary of Gas Rate Structure.

11. All steam rates should be increased by 11.29%.

12. Additional fuel cost is in the amount of 35¢ per million BTU for electric and 90¢ per million BTU for steam should be rolled into electric and steam base rates, respectively.

XI

CONCLUSIONS ON FINDINGS OF FACT

Based upon all the evidence of record in this proceeding, the Commission concludes that:

1. The existing retail electric, gas and steam rates for Public Service do not, and will not, in the foreseeable future, produce a fair and reasonable rate of return.

2. Such rates presently in effect are not, in the aggregate, just and reasonable or adequate, and, based upon the test year ending December 31, 1978 the overall revenue deficiency for Public Service is $40,391,348.

3. Public Service should be authorized to file new electric, gas and steam rates and tariffs that would, on the basis of the test year conditions, produce additional revenues equivalent to the revenue deficiencies stated above, spread among its ratepayers in the manner set forth above under "Rate Design and Spread of the Rates."

4. The rates and tariffs, as ordered herein, are just and reasonable.

O R D E R

THE COMMISSION ORDERS THAT:

1. The electric tariff revisions accompanying Advice Letter No. 760-Electric filed by Public Service Company of Colorado on June 20, 1979, shall be suspended permanently.

2. The electric tariff revisions accompanying Advice Letter No. 761-Electric filed by Public Service Company of Colorado on June 20, 1979, shall be suspended permanently.

3. The gas tariff revisions accompanying Advice Letter No. 277-Gas filed by Public Service Company of Colorado on June 20, 1979, shall be suspended permanently.

4. The gas tariff revisions accompanying Advice Letter No. 278-Gas filed by Public Service Company of Colorado on June 20, 1979, shall be suspended permanently.

5. The steam tariff revisions accompanying Advice Letter No. 19-Steam filed by Public Service Company of Colorado on June 20, 1979, shall be suspended permanently.

6. The steam tariff revisions accompanying Advice Letter No. 20-Steam filed by Public Service Company of Colorado on June 20, 1979, shall be suspended permanently.

7. Public Service Company of Colorado shall file new electric rates in accordance with Summary Finding of Fact Nos. 9 and 12 above.

8. Public Service Company of Colorado shall file new gas rates in accordance with Summary Finding of Fact No. 10 above.

9. Public Service Company of Colorado shall file new steam rates in accordance with Summary Finding of Fact Nos. 11 and 12 above.

10. The rates and tariffs provided for in paragraphs 7, 8 and 9 of the Order herein shall be filed by Public Service Company of Colorado on or before the 10th day following the effective date of this Order, to be effective upon filing. Filing of all the new rates and tariffs provided for herein shall reflect the effective date of the various tariffs and the authority for filing under this Decision.

11. Unless otherwise subsequently ordered by the Commission, the tariffs authorized pursuant to Ordering Paragraph No. 9 of Decision No. C79-1821, dated November 21, 1979, shall continue in effect until the effective date of the Decision and Order herein.

12. All pending motions not previously ruled upon by the Commission or by the Order herein are denied.

This Decision shall be effective on February 12, 1980 unless stayed by applicable law..

DONE IN OPEN MEETING THE 22nd day of January, 1980.

(S E A L)

ATTEST: A TRUE COPY

Harry A. Galligan, Jr.
Executive Secretary

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

EDYTHE S. MILLER

SANDERS G. ARNOLD

DANIEL E. MUSE

Commissioners

E X H I B I T S

APPENDIX A

I&S 1330
PHASE I

Public Witness Exhibits	Title and Description
	Statement of Public Witness Jeanne (Jan) Sauer
Public Witness 1	Letters presented by Pricilla Salazar Martinez (Statement of Public Wintess Alyce Chavez
	(Statement of Public Witness Pete Cordova
	(Statement of Public Witness Frank Duran
	(Statement of Public Witness Aguinaldo Contu
	(Statement of Public Witness Margaret Cantre
	(Statement of Public Witness Thomas Jackson
	(Statement of Public Witness Yolanda Leyan de Ortiz
	(Statement of Public Witness Faustin Madril
	(Statement of Public Witness Trinidad Medina
	(Statement of Public Witness Sanday Mondragon
	(Statement of Public Witness Angela Montoya
	(Statement of Public Witness Chris Mora
	(Statement of Public Witness Dorothy Mora
	(Statement of Public Witness Joe P. Mora
	(Statement of Public Witness Dana Mora
	(Statement of Public Witness Theresa Naranjo
	(Statement of Public Witness Dennis Ortiz
	(Statement of Public Witness Jacquelyn Trujillo
	(Statement of Public Witness James Trujillo
	(Statement of Public Witness Zocarias Trujillo
	(Statement of Public Witness Constancia Valdez
	(Statement of Public Witness Frances Valdez
Public Witness 2	Petition for Restriction of Winter Shutoffs
Public Witness 3	Petition for Restriction of Winter Shutoffs
Public Witness 4	Statement of Larimer-Weld Area Agency on Aging
Public Witness 5	David Milburn-Lauer - Represent Neighbor to Neighbor, Inc. of Fort Collins

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Public Witness Exhibits	Title and Description
Public Witness 6	Statement of Public Witness Judy McKenna
Public Witness 7	Presented by Public Witness Thomas McKenna Utility Fact Sheet - Prepared by D. Bruce Coles and Ronald J. Binz for Adams County Improvement Association
Public Witness 8	Statement of Public Witness A. C. Parks
Public Witness 9	Statement of Public Witness
Public Witness 10	Statement of Public Witness
Public Witness 11	Resolution of City Council of Denver Opposing Utility Rate Increase proposed by PSCo.
Public Witness 12	Statement of Public Witness George Samaras
Public Witness 13	Background Paper on No Winter Shut-Off of Utility Service Policy - Sponsored by Colorado Energy Advocacy Office Written by W. S.
Public Witness 14	Statement of Senator Barbara S. Holme
Public Witness 15	Statement of Public Witness Maxine H. Anderson
Public Witness 16	Statement of Gladys Miller, Public Witness
Public Witness 17	Statement of Colorado Committee for Economic Survival
Public Witness 18	ACORN Member statement
Public Witness 19	Petitions obtained by ACORN opposing rate hike
Public Witness 20	Colorado Committee for Economic Survival Statement "No More Rate Hikes!"
Public Witness 21	Survey of Senator Dennis Gallagher - re Cheap Energy is a Thing of the Past
Public Witness 22	Public Witness Song - Heat in the Sky (Adapted by Senator Gallagher)
Public Witness 23	Testimony of Public Witness Paul Fairchild
Public Witness 24	Petitions for Restrictions of Winter Shutoffs of Utility Service
Public Witness 25	Statement by Letter - Rev. Lawrence St. Peter
Public Witness 26	Statement of Public Witness Jack Anthony
Public Witness 27	Statement of Public Witness Don Abbott

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Exhibit	Title and Description
A	Testimony of Richard F. Walker
B	Testimony of D. D. Hock
C	Testimony of J. H. Price, Jr.
D	Testimony of J. H. Ranniger
E	Testimony of R. E. Kelly
F	Testimony of M. Andrew
G	Testimony of E. W. Meyer
H	Testimony of J. N. Bumpus
I	Testimony of Matityahu Marcus With Schedules MM-1 through MM-16
J	Testimony of Thomas E. Knudsen With Schedules TEK-1 through TEK-4
K	Testimony of Dr. John W. Rettenmayer With Schedules JWR-1 through JWR-3
L	Testimony of Robert L. Marshall With FEA Exhibits RLM-1 and RLM-2
M	Testimony of Victor Perlo
N	Testimony of Eric L. Jorgensen
O	Testimony of Anthony F. Karahalios
P	Testimony of Garrett Y. Fleming
Q	Testimony of David D. Charles With Exhibits BOMA 1 through BOMA 4
R	Testimony of William Schroer
S	Testimony of David Milburn-Lauer
T	Testimony of Craig Merrell
U	Testimony of James A. Richards
V	Testimony of Michael F. Hanzlick

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Exhibit	Title and Description
1 through 18	Exhibits to testimony of Richard F. Walker
19 through 24	Exhibits to testimony of D. D. Hock
25 through 29	Exhibits to testimony of J. H. Price, Jr.
30, 31	Exhibits to testimony of J. H. Ranniger
32, 33	Exhibits to testimony of M. Andrew
34	Exhibit to testimony of E. W. Meyer
35	Exhibit to testimony of J. N. Bumpus
36	Estimated Capital Expenditures Report dated 1 Dec. 1978 (12 page report)
37	PSCo. Presentation before the New York Society of Security Analysts, dated February 14, 1979
38	GSA Exhibit - PSCo. Study of Electric Steam Production Depreciation Rate
39	Reconciliation of Effect on Capital Budget Resulting from Deferral of Southeast Project
40	Kidder, Peabody & Co. Analysis of Factors Affecting the Relationship of Market Price to Book Value of Utility Stocks, dated September 14, 1979.
41	Selling Cost of New Capital During Periods of Market Decline
42	Page 353 B of Public Service Company of Colorado Annual Report dated December 31, 1978
43	Zuni Steam Plant - Allocation of Property to Steam Heat, December 31, 1978
44	Zuni Station - Allocation of Property to Steam Heat (I&S 747 Exh. 15)
45	Federal Power Commission Order No. 555 in Docket No. RM 75-13, Issued 11-8-76
46	Summary re Conservation Efforts (1 page)
47	Believability of Company Statements
48	Summary re Conservation Efforts (4 pages)
49	Section IV - Advertising and Communications
50	Public Service Company of Colorado (Corporate) Capital Requirements and Tentative Financing Plan (Schedule 2 - Revised - see Exhibit 35)

E X H I B I T S

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Exhibit	Title and Description
51	Public Service Company of Colorado Rate of Return on Total Capital Needed to Achieve a 3.50X before Tax Interest Coverage
52	PSCo.'s Answer to AMAX Inc.'s Second Set of Interrogatories (1 Page)
53	Page 12 of PSCo.'s Annual Report - 1978 Showing Construction Expenditures and Financing
54	PSCo.'s Answer to AMAX Inc.'s First Set of Interrogatories (2 pages)
55	PSCo.'s Responses to Certain Requests for Information and Documents by AMAX Inc. During Cross-Examination of Company Witnesses on October 4 and 11, 1979
56	PSCo.'s Responses to Certain Requests by Colorado Energy Advocacy Office and Colorado ACORN during Cross-Examination of Company Witnesses on October 3, 4, 10 and 11, 1979
57	PSCo.'s Responses to Certain Requests by CF&I Steel Corporation during Cross-Examination of Company Witnesses on October 4, 1979
58	PSCo.'s Responses to Certain Requests by Building Owners and Managers Association, First of Denver Plaza, Lincoln Center, and Energy Center I during Cross-Examination of Company Witnesses on October 10, 1979
59	PSCo.'s Responses to Certain Requests by Home Builders Association of Metropolitan Denver during Cross-Examination of Company Witnesses on October 4, 1979
60	PSCo.'s Responses to Certain Requests by the Commissioners and their Attorney during Cross-Examination of Company Witnesses on October 5, 10 and 12, 1979
61	Opinion No. 64 issued October 2, 1979 by the Federal Energy Regulatory Commission in the Gas Research Institute matter
62	Order approving Settlement Issued October 9, 1979 By Federal Energy Regulatory Commission ER78-507
63	New York Stock Exchange Common Stock Indexes 1965-1979 (to date - Industrial - Utility)
64	Data Response - Dr. M. Marcus - 11-2-79
65	Net Operating Earnings - Electric, Gas, Steam Combined - Pro Forma Adjustments (5 pages) ELJ

E X H I B I T S

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PHASE I

Exhibit	Title and Description
66	PSCo.'s Annual Report - Pages 572, 572A Research and Development Activities
67	Return on Equity Discounted Cash Flow (2 pages) Staff Witness AFK
68	Calculation of Compliance to Gross Margin (GYF)
69	Letter from NARUC dated Oct. 16, 1979, Re: Quarterly Reports to COWPS on State Implementation of Anti-Inflation Standards
70	Excerpt - Federal Register Vol. 44, No. 192, Tuesday, October 2, 1979, Rules and Regulations Pages 56904 - 56910
71	PSCo. Calculation of Compliance to Gross Margin Standard Based on Revised Guidelines for 1980
72	Average Hourly Steam Sendout (12 months ending 12-31-78) (BOMA 1)
73	Zuni Steam Plant Allocation of Property to Steam Heat (BOMA 2)
74	Redetermined Earnings for test year 1978 (BOMA 3)
75	Redetermined Test Year, Net Original Cost Rate Base (Year End) (BOMA)
76	Residential Market Survey (3 pages)
77	Commercial - Industrial Market Survey (4 pages)
78	Chart #1-A - 68% Improvements Since Audit
79	Chart #1 - Improvements - Home Energy Audit
80	Customer Advances for Construction (WCM)
81	Rate Base - Net Original Cost - Electric Department (WCM)
82	Rate Base - Net Original Cost - Gas Department (WCM)
83	Rate Base - Net Original Cost - Steam Department (WCM)
84	Rate Base - Net Original Cost - Combined Departments (WCM)
85	Determination of Revenue Requirement (3 pages) (JAR)
86	Ratio of Earnings to Fixed Charges (JAR) (S.E.C. Method - Pro Forma 12-31-78)

E X H I B I T S

Exhibit	Title and Description
87	Computation of Electric Department Slippage (JAR) 2 pages, 12-31-78 (Based upon Staff's Recommended Case)
88	Determination of Revenue Requirement (3 pages) (JAR) Based upon a 14.2% overall return on equity and allowing earnings on Pawnee
89	Determination of Revenue Requirements (3 pages) (JAR) Based upon a 15% overall return on equity and allowing earnings on Pawnee
90	Determination of Revenue Requirements (3 pages) (JAR) Based upon 16% overall return on equity and allowing earnings on Pawnee
91	Determination of Revenue Requirements (3 pages) (JAR) Based upon a 14.2% overall return on equity and NOT allowing earnings on Pawnee
92	Determination of Revenue Requirements (3 pages) (JAR) Based upon a 16% overall return on equity and NOT allowing earnings on Pawnee
93	Ratio of Earnings to Fixed Charges (S.E.C. Method) (JAR) Pro Forma 12-31-78 (2 pages)
94	PSCo 1979 Gross Construction Expenditures
95	PSCo 1980 Gross Construction Expenditures
96	Psco 1981 Gross Construction Expenditures
97	Excerpt PSCo Annual Report 12-31-78 (2 pages) Electric Operation and Maintenance Expenses (pages 419 and 420)
98	Excerpt PSCo Annual Report 12-31-78, Page 531 Gas Operation and Maintenance Expenses
99	Excerpt NARUC Bulletin No. 45-1979, 11-5-79 Pages 8, 9, 10
100	Federal Register, Part II, Wed., November 7, 1979 Department of Energy - Residential Conservation Service Program (10 CFR Part 456)
101	Residential Conservation Service, Automatic vent damper (PSCo)
102	New York Stock Exchange Common Stock Indexes
103	Bond Issues
104	Dividend and Earnings Data - 16 Western Utility Companies
105	Dividend Study for AA Electric Utilties
106	PSCo Market Fluctuations

E X H I B I T S

Exhibit	Title and Description
W	Testimony of J. D. Heckendorn
X	Testimony of J. H. Ranniger
Y	Testimony of Thomas M. Power, Ph.D.
Z	Testimony of Dr. Eugene P. Coyle
AA	Testimony of William E. Wells
BB	Testimony of Ronald Binz
CC	Testimony of Donald W. Orendorff
107	Survey Summary (132 pages) submitted by J. D. Heckendorn - electric customers
108	Average and excess demand customer information (1 page) (JDH)
109	Survey Summary - gas customers - (42 Pages) (JDH)
110	Survey Summary - industrial gas (14 pages) (JDH)
111	Gas cost of service - 12 months ended December 31, 1978 (JDH) (1 page)
112	Proposed electric tariff sheets submitted by J. H. Ranniger
113	Proposed gas tariff sheets (JHR)
114	Proposed steam tariff sheets (JHR)
115	Electric Dept. average and excess demand (JHR)
116	Demand Allocation Methods (JHR)
117	Rate comparisons - Electric Department (JHR)
118	Proposed increases and rates of return Electric Department (JHR)
119	Electric Department Spread Sheets (JHR)
120	Summary of proposed rate revenue impact (JHR)
121	Gross distribution plant allocations (JHR)
122	Gas Department - rate comparisons (JHR)
123	Gas Department proposed increases and rates of return (JHR)

E X H I B I T S

Exhibit	Title and Description
124	Gas Department Spread Sheets (JHR)
125	Steam Department rate comparisons (JHR)
126	Steam Department Spread Sheets (JHR)
127	"Attachment 47" includes testimony by Ronald D. Stinson on behalf of PSCo. in a Colorado Interstate Gas case before FERC (Submitted by Bruce Coles, attorney for CEAO and Colorado ACORN)
128	Title 18, Part 101, Code of Federal Regulations - Conservation of Power and Water Resources (AMAX)
129	Curtailment History of Interruptible Customers (1972-1979) (JHR-16)
130	Rate Schedule R-1, Load Factors (Dr. Coyle)
131	Page 414, Public Service Company Annual Report - 1978 (Dr. Coyle)
132	PSCo Electric Department - Contribution to System Peak, July 25, 1978 3-4pm (PSCo supplied to Dr. Coyle)
*	
134	Gas Usage Levels by Income Range (4 pages) (R. Binz)
135	PSCo Proposed Increases and Rates of Return w/PUC Financial Adjustments (Staff DWO)
136	Gas Cost Allocations Proposed Percentage Increases (PSCo-JHR)
137	Allocation by Average and Excess Demand Method Using Individual Excess Demands at Time of System Peak to Allocate System Excess Demand (PSCo - JHR)
Late Filed	
*133	Utilities Usage and Cost Findings - City and County of Denver (R. Binz)
138	Allocation by Average & Excess Demand Method (Dr. Eugene Coyle)