(Decision No. C81-1999)

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. 826 - ELECTRIC, ADVICE LETTER NO. 324 - GAS, AND ADVICE LETTER NO. 27 - STEAM.	)	INVESTIGATION AND SUSPENSION DOCKET NO. 1525 DECISION AND ORDER OF THE COMMISSION PHASE I

December 1, 1981

P R E C I S

PUBLIC SERVICE COMPANY OF COLORADO AUTHORIZED TO INCREASE, ELECTRIC, GAS AND STEAM RATES TO PROVIDE ON A TEST YEAR BASIS ADDITIONAL REVENUE OF $120,156,000 ABOVE REVENUES AUTHORIZED IN INVESTIGATION AND SUSPENSION DOCKET NO. 1425. RATE OF RETURN ON COMBINED RATE BASE (INCLUDING PAWNEE GENERATING STATION) OF 10.75% AND 15.70% RATE OF RETURN ON EQUITY AUTHORIZED.

Appearances: Kelly, Stansfield and O'Donnell by
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
William H. McEwan, Esq.,
Denver, Colorado, for
AMAX, Inc.;

Richard L. Fanyo, Esq., and
Randall J. Feuerstein, Esq.,
Welford, Dufford, Cook and Brown
Denver, Colorado, for
CF&I Steel Corporation;

Debra Knapp, Esq., and
Kathleen Mullen, Esq.,
Legal Aid Society of Metropolitan Denver;
Denver, Colorado, for
Wade and Zadie Blackburn, Imelda Marquez and
Zella Shearer;

Daniel C. Kogovsek, Esq.
Denver, Colorado, for
Colorado Office of Consumer Services;

Christopher Lane, Esq.
Denver, Colorado, for
Union Oil Corporation;

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;

Brian Muldoon, Esq.,
Denver, Colorado, for
Exxon Company USA;

Elbridge Burnham, pro se
Denver, Colorado;

Steven H. Denman, Esq., and
Suzanne A. Schiro, Esq.,
Denver, Colorado, for
the Staff of the Commission;

John E. Archibold, Esq.,
Denver, Colorado, for
The Commission.

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I N D E X

BY THE COMMISSION:

I

HISTORY OF THE PROCEEDINGS

On May 18, 1981, Public Service Company of Colorado (hereinafter "Public Service", or "Company", or "Respondent") filed with the Commission three advice letters, one pertaining to electric rates, one pertaining to gas rates, and one pertaining to steam rates. The three advice letters are as follows:

1. Advice Letter No. 826 - Electric, which is accompanied by 2 tariff sheets pertaining to Colorado, P.U.C. No. 5 - Electric;

2. Advice Letter No. 324 - Gas, which is accompanied by 2 tariff sheets, pertaining to Colorado P.U.C. No. 4 - Gas;

3. Advice Letter No. 27 - Steam, which is accompanied by 2 tariff sheets pertaining to Colorado P.U.C. No. 1 - Steam.

With respect to the filing made pursuant to Advice Letters No. 826-Electric, No. 324-Gas, and No. 27-Steam, Public Service requested the Commission immediately to suspend the same and establish procedural and hearing dates in order that rates resulting from these respective filings become effective at as early a date as possible.

The increases initially requested by Public Service in this docket for electric, gas and steam rates are as follows:

Operations	($) Increase	(%) Increase
Electric	$162,813,000	27.26%
Gas	28,584,000	6.70%
Steam	330,000	4.69%
Total	$191,727,000*	18.60%*

*

By letter of June 26, 1981, Public Service identified certain errors in its original filing, which reduced its electric, gas and steam rate increase request to the following:

Public Service simultaneously filed together with the foregoing advice letters its so-called "direct case" consisting of the testimony of four witnesses together with accompanying exhibits with respect to its revenue requirements, to wit:

J. H. Ranniger
H. P. Blichmann
R. R. Midwinter
J. N. Bumpus

As in the past, Public Service requested that the revenue requirements and rate design phases of hearings be separated into two separate phases and the revenue increases resulting from an order in Phase I be allowed to become effective immediately upon the completion of Phase I and such increase be in the form of uniform percentage riders applicable to all classes of service pending resolution of any rate design issues.

On May 19, 1981, the Commission entered Decision No. C81-890 wherein it set the tariff revisions filed by Public Service with respect to its Advice Letters No. 826-Electric, No. 324-Gas, and No. 27-Steam for hearing to commence on July 8, 1981 and established Investigation and Suspension Docket No. 1525 (hereinafter I&S 1525).

Pursuant to the provisions of CRS 1973, 40-6-111(1), the effective date of the tariffs filed with the above-mentioned advice letters by Public Service was suspended until January 18, 1982, or until further order of the Commission.

Also by Decision No. C81-890, the Commission determined that the proceedings would be conducted in two phases: Phase I would consider the revenue requirement of the Company and Phase II would consider the appropriate spread of the rates. For purposes of Phase I of this proceeding, the Commission determined it would accept the test year in this docket

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* (Continuation of foot note from preceding page)

Operations	($) Increase	(%) Increase
Electric	$160,207,000	26.82%
Gas	28,084,000	6.58%
Steam	316,000	4.49%
Total	$188,607,000	18.29%

proposed by Public Service upon which the proposed rate increases are calculated on a forecasted test year ending December 31, 1981. However, the Commission ordered Public Service to file with the Commission information showing on a pro forma basis the revenue requirement for the 12 months ended June 30, 1981, said revenue requirement to be determined by using actual data for the last six months of 1980 and projected data for the first six months of 1981. The Commission also ordered Public Service to file information showing on a pro forma basis the revenue requirement for the 12 months ended June 30, 1981, using actual historical data. The Commission further ordered Public Service to file information showing on a pro forma basis its revenue requirement for the 12 months ended December 31, 1981, using actual historical data. The Commission ordered the first filing to be made in June of 1981, the second filing to be made in August of 1981 and the third filing to be made in February of 1982.

Decision No. C81-890 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 June 12, 1981, and serve a copy thereof on Public Service or its attorney or attorneys of record.

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

CF&I Steel Corporation (CF&I)
AMAX, Inc. (AMAX)
Home Builders Association of Metropolitan Denver (HBA)
Office of Consumer Services (OCS)
General Services Administration for the Federal Executive Agencies (GSA)
Ideal Basic Industries, Inc. (Ideal Basic)
Colorado Municipal League (League)
Wade and Zadie Blackburn, Imelda Marquez and Zella Shearer (Consumer Intervenors)
Colorado Energy Advocacy Office (CEAO)
Exxon Company USA
Union Oil Company
Elbridge Burnham

Public Service filed a "Motion for Interim Relief" on June 15, 1981 and on June 17, 1981 filed a "Supplement to Motion for Interim Relief." In said Motion, Public Service requested interim relief as follows:

Breakdown of Requested Interim Request

Operations	($) Increase	(%) Increase
Electric	$ 39,669,010	5.31%
Gas	9,221,054	2.18%
Steam	232,011	3.70%
Total	$ 49,122,075	3.76%

Responses to the Motion for Interim Relief were filed on behalf of OCS, and CEAO in opposition to, and by HBA in support of, the Company's motion. On July 7, 1981, the Commission entered an order (Decision No. C81-1187) denying the Motion and Supplement to Motion for Rate Relief filed by Public Service thereby denying Public Service's interim request.

Public testimony was received by the Commission at the following times and places:

Hearing Room of the Commission at Denver, Colorado, July 8, 1981 at 12:00 Noon and 7:00 P.M.

Sterling, Colorado, July 14, 1981 at 5:00 P.M.

Pueblo, Colorado, July 15, 1981, at 11:00 A.M.

Alamosa, Colorado, July 15, 1981 at 5:00 P.M.

Grand Junction, Colorado, July 16, 1981 at 12:00 Noon

The summary of direct testimony and the cross examination of Public Service witnesses commenced on August 19, 1981 and continued on August 20 and 21, 1981.

During the course of the hearing, on August 21, 1981, counsel for Public Service made an oral motion to permit the Company to present the testimony of J. K. Fuller as part of its case in chief on the issue of whether the Company's Pawnee Generating Station (Pawnee) would be in service by the end of the 1981 test year. Pawnee is the name of Public Service's largest coal fired power plant which is currently under construction. Counsel for various intervenors and the Staff of the Commission raised objections concerning the propriety of allowing Mr. Fuller to testify during the Company's case in chief, inasmuch as Mr.

Fuller was not one of the four witnesses whose testimony had been prefiled by the Company on May 18, 1981.

The Commission ruled from the bench that Public Service could submit to the Commission the testimony of Mr. Fuller in written form on August 24, 1981, with copies to all parties. The Commission also reserved the day of September 8, 1981 for possible cross examination of Mr. Fuller. Briefs were filed on the issue of the propriety of allowing Mr. Fuller to testify during the Company's case in chief.

On August 26, 1981, the Commission ruled from the bench that the Company would be permitted to introduce Mr. Fuller's direct testimony which had been submitted on August 24, 1981 with cross examination of the same on September 8, 1981. The Commission also ruled from the bench that any intervenor testimony relating to the so-called Pawnee issue could be late filed on or before September 21, 1981.

On September 1, 1981, the Commission entered Decision No. C81-1519 in which it granted the oral motion made by counsel on behalf of Public Service and set the day of September 8, 1981 for the introduction of the direct testimony of Mr. Fuller and cross examination with respect to the same. On September 8, 1981, the direct and cross examination of Mr. Fuller was heard by the Commission.

On September 11, 1981, direct testimony and exhibits of the following staff members were filed:

Robert L. Ekland	Philip A. Temmer
William Loehr	Eric L. Jorgensen
Carl E. Hunt	Garrett Y. Fleming

On September 14, 1981, the direct testimony of Michael D. Dirmeier and Jamshed K. Madan was filed on behalf of AMAX.

On September 14, 1981, the direct testimony and exhibits of Ben Johnson was filed on behalf of CEAO, OCS and Consumer Intervenors.

On September 14, 1981, the direct testimony and exhibits of Robert L. Marshall, John Rettenmayer and David Kelley was filed on behalf of GSA.

On September 14, 1981, supplemental direct testimony of Ben Johnson was filed. On the same day, the direct testimony and exhibits of the following Staff members were filed:

George Parkins
J. Michael Summers, and
J. Tate Profilet.

On September 21, 1981, the direct testimony and exhibits of Robert Bruce Parente was filed on behalf of OCS.

On September 30, October 1, 2, 7, and 9, the Commission heard direct testimony and cross-examination of all witnesses who had filed testimony on behalf of the Staff of the Commission, or party intervenors.

On October 14, 1981, Richard J. Blatnik was called as a witness in rebuttal on behalf of Public Service. Also called in rebuttal by Public Service were witnesses Fuller, Ranniger, Bumpus and Blichmann. On that date Public Service also called as a rebuttal witness, Neal B. Hitzig, who is employed by Arthur Young and Company and retained by Public Service to appear in this docket. On October 14, 1981, witness Parente was called in rebuttal by OCS and Consumer Intervenors.

Cross examination of witnesses Blatnik, Fuller, Ranniger, Parente and Hitzig was held on October 14, 1981.

Cross examination of the following Public Service witnesses was held on October 15, 1981: Witnesses Blichmann, Midwinter, (who was called by Public Service in rebuttal) Hitzig and Bumpus.

The hearings were concluded on October 15, 1981 and the matter was taken under advisement by the Commission.

On or before November 2, 1981, the following parties submitted post-hearing Statements of Position.

GSA
AMAX
OCS
Staff of the Commission
Consumer Intervenors
Public Service

GSA filed proposed findings of fact with its Statement of Position.

Reply Statements of Position were filed on or before November 9, 1981 by the following:

Public Service
Staff of the Commission
Consumer Intervenors
AMAX
GSA

In addition to the Statements of Position and Reply Statements of Position which were filed as indicated above, the following post-hearing motions with respect to Phase I were also filed: On November 2, 1981, the Staff filed a "Motion to Correct Transcript." Likewise on November 2, 1981, Public Service filed a pleading entitled "Proposed Transcript Corrections of Public Service Company of Colorado." On November 5, 1981, Public Service filed a "Motion to Reopen Record" which motion was accompanied by the affidavit of Mr. R. R. Midwinter wherein he makes "necessary corrections" to the record concerning the impact on overall revenue requirements and cash flow resulting from the allowance or disallowance of the normalization specified by the Economic Recovery Tax Act of 1981 as a condition to being able to take advantage of the accelerated cost recovery provided by the Act." On November 6, 1981, AMAX filed a "Motion to Strike Portion of Opening Statement of Position Submitted by Commission Staff," wherein AMAX requests that the Commission disregard and strike a portion of the Staff's Opening Statement of Position with respect to the statement therein that the Staff's audit of the forecasted revenues and expenses (of Public Service) showed that revenues and expenses matched at year-end 1981. On November 6, 1981, OCS filed a "Motion to Strike" relating to Public Service's Opening Statement of Position concerning Pawnee and on November 16, 1981, OCS filed a "Second Motion to Strike" which relates to Public Service's Reply Statement of Position concerning Pawnee. On November 13, 1981, the Staff filed a "Response to AMAX's Motion to Strike a Portion of Staff's Opening Statement."

Each of the foregoing motions was granted by the Commission pursuant to Decision No. C81-1956, dated November 24, 1981.

Phase I - Final Decision and Order

As indicated above, the Commission in its Decision No. C81-890 issued May 19, 1981, stated its intention to hear Public Service's rate request in two phases, a practice employed by the Commission in previous dockets. In Investigation and Suspension Docket No. 1330 (hereinafter I&S 1330), at the conclusion of Phase I, the Commission issued Decision No. C79-1821 on November 21, 1979, to become effective November 23, 1979, wherein it established the Phase I revenue requirement and authorized Public Service to file interim rates, on a uniform percentage basis, to be effective no earlier than November 26, 1979, pending the Commission's Decision in Phase II in that Docket. The suspension period in I&S 1330 extended until February 15, 1980; the Commission issued its final order in I&S 1330 on January 22, 1980.

In the next general rate case following I&S 1330, namely in Investigation and Suspension Docket No. 1425 (hereinafter I&S 1425) the Commission recognized that it would not be possible in that docket to conclude the hearings in the Phase II spread of the rates aspects and enter a decision with respect thereto before the expiration of the suspension period in I&S 1425 on January 7, 1981. Accordingly, unlike I&S 1330, the Commission in Phase I in I&S 1425 authorized Public Service to place into effect, in order to have the opportunity to meet its revenue requirement as found in Phase I, final rates rather than interim rates. Final Phase I rates were authorized by Decision No. C80-2346 on December 12, 1980 in I&S 1425. Accordingly, the Phase I revenue requirement decision in I&S 1425 was considered final and it was so designated for the purposes of the procedural provisions of CRS 1973, 40-6-114 and 40-6-115.

In I&S 1525, we have decided to follow the same basic procedure that was first adopted in I&S 1425 approximately one year ago. That is, hereinafter in this Phase I decision we shall authorize Public Service to place into effect rate riders which will enable Public Service to have the opportunity to meet its revenue requirement. The rate riders shall be final for purposes of the procedural provisions of CRS 1973, 40-6-114 and

40-6-115. Although the rate riders as authorized in this decision are designated as final rate riders subject to the foregoing mentioned procedural provisions of the Public Utilities Law, it should be recognized that a portion of the revenue generated by the rate riders are subject to refund in accordance with the specific provisions relating thereto which are set forth later in this Decision.

Submission

The herein instant matter has been submitted to the Commission for decision. Pursuant to the provisions of the Colorado Sunshine Act of 1972, C.R.S. 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 an open meeting of the Commission. At an open 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 over 100 incorporated cities and towns and in various other communities and rural areas through Colorado. The Company also sells electric power and energy at wholesale for resale to six municipal electric utilities, Home Light and Power Company, Colorado-Ute Electric Association, Inc., and Southern Colorado Power Division of Central Telephone 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 approximately 35,000 customers.

The Company also owns all of the common stock of 1480 Welton, Inc., basically a real estate company which owns Public Service's central office building, and of Fuel Resources Development Company (Fuelco), a subsidiary primarily engaged in exploration, development, and production of natural gas and oil. In addition the Company owns all the common stock of Bannock Center Corporation, which is a company recently organized by Public Service to engage in real estate transactions. 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 September 30, 1981 had 776,521 electric customers and 670,612 gas customers. Generally, these customers are broadly classified as residential, commercial, and industrial. As of September 30, 1981, the Company had 72,181 shareholders holding common stock in the Company (30,485 of whom own 100 shares or less) and 6,018 shareholders owning preferred stock in the Company. Common shareholders who live in the State of Colorado comprise 26,815 of the total number thereof.*

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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.

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 electric cost adjustment (ECA) clauses will, generally speaking, tend to mitigate the frequency of general rate case filings.** Public participation in rate making process before the Commission also has increased in the past several years.

** The Commission in 1977 investigated the GCA and the Fuel Cost Adjustment (FCA) clauses 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 and PGA 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 utilities, followed by an investigative hearing to encompass present and projected market requirements for gas service, and projected supplies of gas available to meet those requirements, and 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 was heard on March 6, 1980 and resulted in Decision No. R80-1062 dated May 30, 1980. Said decision was remanded by the Commission to Examiner Trumbull by Decision No. C80-1593. Decision No. R80-1710 was subsequently entered September 2, 1980.

A more specific methodology hearing based on the third and fourth quarters of 1979 was held on February 14, 1980 in Application No. 31896 with Decision No. C80-1327 being entered therein on July 1, 1980. An errata notice was entered July 8, 1980.

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.

** (Continuation of footnote from preceding page)

Application for rehearing was filed to said Decision No. C80-1327 and subsequently denied by Decision No. C80-1495 entered July 29, 1980. Thereafter quarterly reports were filed by Public Service and accepted by Decision No. R80-1542 entered on August 8, 1980 and Decision No. R80-2087 entered on November 5, 1980.

On September 13, 1977, the Commission entered its Decision No. 91290 in Case 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 (August 2, 1978), R78-1464 (November 9, 1978), R79-252 (February 26, 1979), R79-710 (May 14, 1979), R79-1150 (July 26, 1979), R79-1680 (October 26, 1979), R80-168 (January 28, 1980), R80-850 (May 2, 1980), R80-1541 (August 6, 1980) and R80-2088 (November 5, 1980). On September 23, 1980, by Decision No. C80-1817, in Application No. 32603, the Commission authorized Public Service to combine its PPA and FCA into an electric cost adjustment (ECA). The ECA also is the most recent mechanism used by Public Service to recover, in addition, transportation costs related to fuel, and purchased power costs. Subsequent Public Service quarterly reports, with regard to the ECA, have been approved by the Commission by Decision Nos. R81-446 (March 13, 1981) and R81-1136 (June 29, 1981).

It first must be emphasized that rulemaking 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 vs. 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 the 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 filing period 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 for utilities which are not electric cooperatives, 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 rate or rates in the docket.

In the simplest terms, the Commission must determine and establish just and reasonable rates. In order to make this determination, the Commission generally answers 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 ratepayers. 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

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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, as amended by House Bill 1444 (1981). House Bill 1444 also provides that rates filed by electric cooperatives are not subject to suspension by the Commission.

a considerable degree of judgment and, to the best of its ability, be as fair as possible to the different parties and positions that 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. As stated above, the rates established by this decision are based upon the Company's current rate structure and its found revenue requirement. Adjustments, if any, to Public Service's current rate structure will be determined in Phase II in this docket.

Decision No. C80-890 entered on May 19, 1981, set for hearing the proposed electric, gas and steam tariffs filed by Public Service, and suspended their effective date until January 18, 1982, or until further order of the Commission. The Decision herein is the Order which effectively establishes electric, gas and steam rate increases for Public Service by tariff riders.

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 I&S 1330, the Commission indicated it might be appropriate for Public Service to present its then next rate case on a partial (six months) future test year coupled with a partial historical (six months) test year. As a result of what the Commission indicated in I&S 1330, Public Service in its next rate case subsequent (I&S 1425) did file on a partial six month future test year coupled with a partial historical (six months) test year.

In I&S 1525, the proposed rate increases of Public Service are calculated on a forecasted test year ending December 31, 1981. Although a test year ending December 31, 1981 filing might sometimes be denominated as a "future test year" filing, perhaps a more precise description is that it is a "current test year" filing. In other words, the test year proposed by the Company coincides with the current year in which its general rate case is heard. Thus a current test year filing is distinguished from a "historic test year" filing which would have used the full historic test year ending December 31, 1980 or a "full future test year" filing which would have used a test year ending December 31, 1982. The term "forecasted test year" is applied both to a "current test year" filing and a "full future test year" filing. The term as used in this decision refers to Public Service's "current test year" filing and not to a "full future test year" filing inasmuch as the latter type of filing was not proposed for this docket by any of the parties.

In Decision No. C81-890, dated May 19, 1981, in which the Commission set for hearing and suspended the effective date of Public Service's tariff filings, the Commission stated that it would accept Public Service's test year (ending December 31, 1981) in this docket. In that Decision, we also ordered Public Service to file with the Commission information showing on a pro forma basis the revenue requirement for the twelve months ended June 30, 1981, with the said revenue requirement to be determined by using actual data for the last six months of 1980 and projected data for the first six months of 1981. We also ordered Public Service to file with the Commission information showing on a pro forma basis the revenue requirement for the twelve months ended June 30, 1981 using actual historical data. We also ordered Public Service to file with the Commission information on a pro forma basis indicating its revenue requirement for the twelve months ending December 31, 1981, using actual historical data with the first filing to be made in June of 1981, the second filing to be made in August of 1981, and the third filing to be made in February of 1982.

OCS and Consumer Intervenors oppose use of a forecasted or current test year ending December 31, 1981. To the contrary, they advocate using a historic test year ending December 31, 1980, or a historic test year ending June 30, 1981. AMAX, although using the forecasted test year ending December 31, 1981, did express a number of concerns with respect to using a totally forecast test year. Perhaps, inferentially, it can be presumed that one or more of the concerns expressed by AMAX with respect to a full future test year, or what it calls a "totally forecast test year" would be applicable, at least in part, to a "current test year" filing as well.

It is certainly true that no forecasting methodology is immune from criticism. Public Service's forecasting methodology was subjected to severe criticism in this docket by the Staff and intervening parties.

Boiled down to its essentials, OCS contends that Public Service's forecasting basically reflects the judgment of individuals or group of individuals without any supporting data as to the exact nature of the judgments or the timing of the judgments. OCS contends that Public Service's forecasting substituted judgment for analysis. Likewise, the Staff was critical of the Public Service methodology in that it failed to supply historical information which thereby made the process of evaluation difficult. The Staff was also critical of the Public Service methodology in not explaining where substantial deviations from past history had occurred. Furthermore, the Staff criticized the Public Service methodology in deriving its revenue requirement because one of the key pieces of information that was missing was per unit price. The Staff contended that without a per unit price, the number of customers and average use per customer cannot be translated into sales operating revenue. Nor can total usage by class of customer be translated into sales operating revenue without a per unit price. The Staff also was critical of the Public Service methodological failure to provide data in support of the derivation of its forecasted operating revenue reductions. It was also not clear, according to the Staff, when Public Service used an econometric model and when other forecasting methods were used. In addition to some of the foregoing technical criticisms of the Public Service methodology, Staff witness Hunt also offered several conceptual criticisms regarding the use of a forecasted test year, including (1) rates being based on estimates rather than on actual experience, (2) forecasts often translating into budgets, and (3) forecasts tending to become self-fulfilling prophecies which reduce incentives for efficiencies as forecasted amounts are routinely met.

Although Staff witness Hunt did acknowledge certain conceptual problems in the use of a forecasted test year, and although he further identified certain technical difficulties with the Public Service methodology used in this docket, nevertheless, he analyzed Public Service's forecast results (which must be distinguished from Public Service's forecasting

methodology) and found that the forecast results were, in fact, reasonable. Public Service's forecast results can be analyzed either by an appraisal of its forecasting methodology, or by a comparison of its forecast results to other forecasts. Staff witness Hunt concluded, and we so find, that Public Service's forecast results fell within the range of other estimates and are therefore reasonable estimates of revenue requirements.

While OCS critizes the time series analysis used by Dr. Hunt to produce customers and sales forecasts, Dr. Hunt testified, and we agree, that this analysis forecasts fairly well in the short run as a low cost method, and does not have severe data restrictions. Furthermore, the size and sophistication of a model are not necessarily a good barometer of the worth or predicting ability of a model. We also agree with Dr. Hunt that the time series analysis produced better statistical results than the econometric technique which he used to verify Public Service's forecast. OCS also claims that Dr. Hunt did not corroborate other production expense and revenues. Although Dr. Hunt did not analyze each expense, he did verify the total expenses forecasted by Public Service by comparing them to several estimates he had made using different techniques.

William Loehr, another witness for the Staff, testified that his forecast of sales was 0.5% lower than Public Service's and that in his opinion this is not a significant difference.

OCS concludes that Dr. Loehr's testimony provides no validation of the Company's forecast methodology or results. We believe that this conclusion misapprehends the purpose of Dr. Loehr's testimony. His estimates of customers and sales, using econometric techniques, are bases for the revenue forecast and various portions of the expense forecast. They provide validation for a critical ingredient in Public Service's forecast results and were also used by Dr. Hunt to produce estimates of revenues and expenses which validated Public Service's forecast results.

Dr. Loehr's forecast of customers and sales was also criticized by OCS because of his implied acceptance of almost all of the assumptions used by the Company. However, the assumptions used by Dr. Loehr are set forth in his Exhibit 93 and nowhere does the record show that these are the same assumptions that were used by Public Service. OCS further critizes Dr. Loehr for collapsing all of the complexities and differences in various types of residential electric consumption (general consumption plus residential heating, etc.) into a single equation. OCS also contends that the marginal price of electricity and natural gas would produce a better forecast than Dr. Loehr's use of average price. However, there is no expert opinion or other evidence in the record that the econometric model developed by Dr. Loehr is deficient in the respects claimed by OCS. In summary, we conclude that the minor criticisms offered by OCS do not support its conclusion that the testimony and exhibits presented by Dr. Hunt and Dr. Loehr cannot provide support or validation to Public Service's forecasts in even a limited way.

It is reasonably certain that there will be variances between projections and actual experience, but we find on the whole that the recent forecasts of Public Service have been accurate. For example, Exhibits 45 and 46 show that pro forma net operating earnings (electric) for the twelve months ending June 30, 1981, varied only by $940,000 (0.7%) when determined on the basis of 12 months actual data as opposed to 6 months actual and 6 months forecast data. Similarly, Exhibits 56 and 138-40 show that the variances between forecasts and actuals for the test period have been relatively unsubstantial at the bottom line (even unadjusted) and to a considerable extent have been sales related. Moreover, some of these variances have resulted from warmer rather than forecasted "normal" weather. It also must be recognized that in a general rate case proceeding, such as I&S 1525, base rates are at issue. Thus, expenses that vary directly with sales, such as fuel for generation and gas purchased for resale, are to a large degree recovered through the respective adjustment clauses rather

than through base rates. Weather related variances and other factors which cause sales to be greater or lesser than anticipated do not have a great impact on the accurancy of the "bottom line" projected for general rate increase purposes. Thus, as Public Service witness Blichmann testified if the GCA and ECA related revenue and expenses were eliminated, the variance between forecasted and actual expenses was less than 0.8% for the first six months of 1981.

Premises considered, the Commission finds that a forecasted test year in this docket is based upon reasonable data and that such a year will operate as an attrition alleviating tool. Accordingly, the forecasted test year ending December 31, 1981, as initially adopted in Decision No. C81-890, dated May 19, 1981, is affirmed for use herein.

It should be understood that general rate case requirements evolve over time as economic and other conditions change. The Commission, at this time, is reasonably comfortable with the concept of the type of forecasted or current test year as used in this docket. That is, the forecasted test year in this docket coincided with the year in which the hearings were held, rather than with the full year subsequent to the year in which the hearings were held. Public Service, on page 2 of its Opening Statement of Position, apparently endorsed for future general rate cases, the use of a full future test year as the preferred approach in dealing with what it describes as the "ever present problem of attrition." Public Service describes the December 31, 1981 test period (current year) as "but another step along the way." The Commission interprets these remarks as meaning that in the event Public Service were to file a general rate case in 1982, Public Service would not propose a then current test year ending December 31, 1982, but rather a full future test year ending December 31, 1983. The Commission, in this decision, neither endorses nor rejects Public Service's proposal that subsequent general rate cases adopt a full future test year. The Commission, of course, cannot preclude Public Service from filing on the basis of a "full future test year."

However, if Public Service in general rate cases subsequent to the one involved in this docket chooses to propose a full future test year, it also should present, at a minimum, data developed on a "current test year" basis as defined above. Whether or not the Commission would accept or reject a full future test year will depend, of course, upon the facts and circumstances existing at the time of and the record made in the case.

Another issue involving forecasting, at least insofar as future rate cases is concerned, is the information to be presented to the Commission and procedural requirements with respect to the same. Public Service, in Exhibit 133 in its rebuttal case, submitted a proposal for information that would be "made available" when a rate proceeding is based upon a forecasted test year. The Staff believes, and we agree, that in the event Public Service files a future general rate case on the basis of a forecasted test year (whether current or full future), it should file its forecasted test year data simultaneously with its filing of its proposed tariffs. Since such forecasted test year information is likely to be voluminous, it will be appropriate for Public Service to file that information with the Commission in six copies so that such information may be utilized by intervenors and the public who desire to examine that information at the offices of the Commission.

In the event Public Service files a forecasted test year rate case in the future, it should file with the Commission the following forecasted test year information:

1. Detailed estimates of revenues and costs for the forecasted test year for each department (electric, gas, steam).

2. Estimates of revenue and costs should be supported by workpapers showing the calculations used to derive and/or support the exhibits.

3. Exhibits which:

a. Are arranged in an orderly sequence, appropriately indexed and legible.

b. Describe the methodology used to estimate the data.

c. Show derivation, including the specification of any equations used, of each estimate.

d. Explain result and how it was reached where judgment is involved in estimation.

e. List all assumptions that have consequent effects necessary for the derivation of each individual estimate and show or explain how each assumption was used in each estimate.

f. Show at least ten years' historical data to support estimates derived from an historical base.

g. Describe the management analysis and approval procedures.

4. Revenue estimates which have at least the following exhibits as backup for each department by customer classification.

a. Number of customers
b. Sales per customer
c. Total sales
d. Relevant unit prices
e. Revenues

5. Estimates of operating expenses by category including per unit costs where costs vary directly with changes in output.

6. Estimates of major capital expenditures should be separated into specific categories with ten years' historical and ten years' forecasted data.

The above described forecasted test year information to be filed is a good starting point. If the Company, the Staff, or any intervenor has suggested changes in format the Commission will consider them.

V

RATE BASE

A. 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. R78-675, affirmed by the Commission June 5, 1978, in Investigation and Suspension Dockets No. 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.

We stated in I&S Docket No. 1330, in Decision No. C80-130 dated January 22, 1980, that Public Service had continued to suffer attrition even though the use of the year-end rate base had been in effect for several years, and that a reversal of the year-end rate base approach would contribute to further deterioration of Public Service's financial condition.

In Decision No. C80-2346, in I&S 1425, the Commission continued the use of year-end rate base as a partial offset to attrition. In this docket, both Public Service and the Staff favor a continuation of the use of a year-end rate base as a partial offset to attrition. GSA, AMAX, and Consumer Intervenors recommended the use of an average rate base in this docket, or, alternatively, using a year-end rate base for the period ending June 30, 1981.

AMAX witness Dirmeier recommended the use of an average rate base principally on the grounds that a year-end rate base results in a mismatch of investment, expenses and revenues and that any guidelines

offered by Public Service with respect to when it believes a year-end rate base should be used are totally arbitrary. AMAX witness Madan and GSA witness Marshall pointed out that this is the first docket in which Public Service proposed to use a forecasted test year and a year-end rate base. It was their view that the problem of attrition has largely been alleviated by such regulatory mechanisms as the new ECA clause, as well as the use of a forecasted test year in this docket. It was also pointed out that the financial health of the Company had become substantially stronger over the past year resulting in improved cash flow and cost recovery, and an internal funds generated to construction ratio of 54.9%, a level expected to improve even further with revised line extension policies. It was also pointed out that projections indicate that earnings to fixed charges and internal funds to construction are surpassing levels of the past ten years.

Public Service witness Midwinter testified that the use of a year-end base was still appropriate because of continued earnings attrition, notwithstanding the use of a forecasted 1981 test year. Staff witness Fleming also recommended the use of a year-end rate base in this docket as a specific attrition offset since the 1981 forecasted test year will not completely eliminate regulatory lag and since construction costs are rapidly escalating. Mr. Fleming cautioned that it is erroneous to assume that inflationary factors will cease eroding the rate of return earned during the first year the new rates are in effect. Of course, the decision of whether to use year-end rate base is a judgmental one and requires an analysis of all factors that may impact on earnings erosion in the period when rates will be in effect. For example, if growth in plant exceeds growth in sales, there would be an erosion in the return on rate base. Year-end rate base treatment would help to compensate for this attrition. Staff witness Fleming examined growth in rate-base and growth in sales over the last ten years and as projected by Public Service for 1981. He also reviewed the construction budgets and projected revenues for 1982. It was his conclusion that both rate base

growth and sales growth would substantially decline in varying proportions although he did not make any precise quantification. It was his conclusion, one with which the Commission agrees, that the decline in rate base growth will not keep pace with the decline in sales growth thus justifying the continued use of year-end rate base in this docket as a partial attrition offsetting regulatory mechanism. Although a forecasted test year ending 1981, the revised ECA, and the anticipated revision in the line extension policies will assist in alleviating attrition, these mechanisms, by themselves, probably will not eliminate it. Accordingly, we find that continued use of a year-end rate base in this docket is justified.

B. Pawnee Generating Station

In terms of revenue impact, the issue of rate base treatment of Public Service's Pawnee Generating Station (Pawnee) is the singular major issue in this docket. Pawnee represents the largest single addition (500 megawatts plus (MW+)) to the Company's generating capacity.

In I&S 1330, Public Service proposed that the Commission make a significant adjustment to its policy with regard to allowance for funds used during construction (AFUDC). In that docket, Public Service requested that the 1978 year-end expenditures with regard to Pawnee in the amount of $121 million be included in the rate base without an offset credited to the income statement. In I&S 1330 authorization of current earnings on construction work in progress (CWIP) without an AFUDC offset with respect to Pawnee was opposed by the Staff of the Commission, AMAX, and certain other consumer intervenors. The Commission, in that docket, authorized Public Service to earn currently on 40% of CWIP related to Pawnee.

In the general rate docket subsequent to I&S 1330, that is, in I&S 1425, the Staff proposed and the Commission agreed to continue

its 40% non-AFUDC treatment pertaining to the CWIP related to Pawnee. However, in Decision No. C80-2346, in I&S 1425, the Commission stated at page 20 thereof,

> "Because our treatment of Pawnee CWIP is premised on the cash flow problems of the Company, and not because of an endorsement of a regulatory treatment, we believe that Public Service is obligated to do everything in its power to make sure that Pawnee is completed and placed into service without delay. Pawnee, according to the Company, is scheduled to go into service during the fall of 1981. The Commission would state that in the event Pawnee is not on line by January 1, 1982, the 40% CWIP Pawnee treatment adopted herein will cease."

In view of the foregoing statement by the Commission in I&S 1425, one of the most hotly contested factual issues in this docket was whether or not Pawnee would be in service by January 1, 1982. Public Service, the Staff, and OCS put forth three different approaches in dealing with rate base treatment for Pawnee. Since the Commission is adopting a year-end 1981 rate base, in this docket Public Service takes the position that Pawnee should be included in the rate base as of the time of the Commission's Phase I order in this docket inasmuch as the likelihood is strong that Pawnee will be on line before January 1, 1982.

Staff witness Parkins has recommended that Pawnee be considered used and useful to the ratepayers and given rate base treatment on the in-service date in which Pawnee has completed 24 hours of continuous operation at rated capacity with all necessary supporting systems operating normally. For such purposes, the Staff considers any output greater than 500 megawatts (MW) as acceptable since Pawnee's nameplate rating is 527 MW and the generator is guaranteed for at least 507 MW. Staff witness Summers estimated the in-service date of Pawnee by comparing the time from steam blow to full load for Pawnee and nine similar units throughout the country. Of the nine comparable units, on the average it took 16½ weeks from steam blow to full load. Steam blow was started at Pawnee on Sunday, September 13, 1981, or during the week of September 7, 1981. Adding the average 16½ week period necessary to achieve full load would result in an in-service

date for Pawnee of December 13, 1981. Mr. Summers constructed a range around that date, and concluded that aside from any major problems, Pawnee should be in service between December 15, 1981 and January 15, 1982.

Staff witness Profilet estimated that Pawnee, absent any major problems, would achieve full load four to eight weeks after turbine roll. If turbine roll occurred during the last week of October 1981, as scheduled, then Pawnee's full load would be achieved by late December 1981, according to Mr. Profilet's analysis. The Staff contends, however, that it is impossible to predict with a reasonable degree of engineering certainty whether a plant such as Pawnee will encounter any major problems before the end of 1981. Thus the Staff believes that it is impossible to predict with certainty when the plant will be in service. The Staff belives that if Pawnee has not completed 24 hours of continuous operation at rated capacity with all necessary supporting systems operating normally by the date the Phase I order is entered in this docket, Pawnee should be excluded from rate base in determining the revenue requirement in Phase I. However, Staff witness Parkins did recommend that Public Service be authorized to place Pawnee in rate base and have tariffs go into effect for the associated Pawnee revenue requirement on less than thirty days notice when Pawnee has gone on line. The Staff believes that Dr. Parkins's proposal benefits both the ratepayers and Public Service. The ratepayers are benefitted because they are assured that they are only paying for Pawnee when it actually goes in service. The Company also is benefitted because it would avoid the problem of delay associated with filing an entirely new rate case. A rider would recover revenues associated with Pawnee with almost no regulatory lag if allowed to go into effect upon less than thirty days' notice.

In its rebuttal case, Public Service maintained that the Phase I order should authorize revenues which include Pawnee in the rate base whether or not Pawnee is actually in service at the time of the Phase I order. However, Public Service made two additional suggestions:

First, the new rate riders should go into effect on one (1) day's notice upon the issuance of the Phase I decision, and second, Public Service would be willing to make refunds from the effective date of the Commission's Phase I order to the extent that the Commission moves the revenue requirement downward if it is determined as a result of any subsequent hearing held with respect to Pawnee that circumstances do not entitle Pawnee to full rate base treatment from the date of this Phase I decision or as a result of action on an application for reconsideration involving a non-Pawnee issue.

OCS maintained that Pawnee should be required to pass both a "necessary" test and also a "sufficient" test before Pawnee is considered used and useful to the ratepayers and entitled to rate base treatment. OCS witness, Dr. Parente, recommended that Pawnee be required to demonstrate a gross capability of 500 MW or more for a 24 hour period in order to pass the "necessary" test. Dr. Parente's "sufficient" test was that Pawnee operate at a 70% capacity factor for at least six of its first nine months of operation.

OCS contends that the combined "necessary" and "sufficient" tests of Dr. Parente have one major advantage over the test proposed by Staff witness Parkins. OCS contends that the Parente tests are objective, numeric tests which do not require any subjective judgments. If the Commission were to adopt the Parente test, OCS says, it could verify that the tests were passed or failed by simply referring to the Company's generation logs which would show when Pawnee demonstrated capability of 500 MW or more, or whether Pawnee averaged a 70% capacity factor for the six best months of its first nine months of operation. According to OCS, applying the Parkins test would require a subjective judgment on whether Pawnee, in fact, had qualified. In other words, a subjective judgment would have to be made on whether all the necessary supporting systems had operated normally for twenty-four hours which, OCS contends, may lead to confusion and uncertainty.

A significant portion of the hearing time in this docket was taken up with the issue of whether or not Pawnee, in fact, was likely to go on line (that is demonstrate capability at the 500 MW or more level for a 24 hour period) on or before December 31, 1981. No useful purpose would be served by an extended discourse on the conflicting evidence presented to the Commission by the various parties on this issue. Suffice it to say the conflicting evidence requires this Commission to make its best judgment in light of the evidence presented to it. Unfortunately, the failure of Public Service to anticipate the importance of the Pawnee issue at the time it filed its proposed rates and its evidentiary case in May of this year increased the procedural burdens of the Commission and other parties which otherwise would have been avoided. Nevertheless, as we stated in our September 1, 1981 decision (Decision No. C81-1519) this Commission does have the duty to ascertain necessary facts enabling it to reach a reasoned conclusion, and in a ratemaking proceeding it acts legislatively rather than judicially.

Based upon the record in this case, and more specifically upon the rebuttal testimony of Public Service witness Blatnik, it is our judgment and finding that it is more likely than not that Pawnee will be on line, in accordance with the criteria set forth by Staff witness Parkins and agreed to by Public Service witness Fuller, on or before the end of 1981. Neither Public Service nor this Commission can be guarantors of such eventuality, nor is there any legal doctrine which requires either the Company or this Commission to assume such a role. It is true, of course, as pointed out by Staff witnesses Profilet and Summers, and OCS witness Parente, that things can go wrong and that Pawnee, in fact, may not go on line on or before the last day of 1981. Although we cannot deny the possibility as an abstract proposition that Pawnee will not be on line before the end of 1981, we were not persuaded by the evidence presented in this docket that such is likely to be the case.

It should also be noted that Public Service has made the offer to make appropriate refunds in the event the "Pawnee-being-on-line-before 1982" scenario does not take place in fact. Beyond that, Public Service has made the further offer to make refunds in the event there is a downward adjustment in rates involving some issue other than Pawnee. In view of the fact that we expect Pawnee to be on line before the end of 1981, and in view of the fact that Public Service has offered to make refunds both on any adjustment related to Pawnee and any adjustment not related to Pawnee, we find that Public Service's proposal in this regard is reasonable and provides full protection to its ratepayers.

We are aware of the legal position taken by OCS to the effect that this Commission has no authority to authorize rates subject to refund. The Commission does not agree with that position. In fact, the concept of a particular rate being subject to refund is not novel either with this Commission or other utility regulatory bodies. A well known example, which has been used by this Commission for a number of years, is the situation in which the Commission authorizes a retail utility to charge a higher rate, subject to the provision that a refund would be made in the event that retail utility's supplier is required, ultimately, to reduce its rate to the retail utility as a result of final action by the Federal Energy Regulatory Commission.

This Commission has a general responsibility to protect the public interest regarding utility rates and practices. It is the result reached, and not the method employed, which determines whether a rate is just and reasonable. Colorado-Ute Electric Association v. Public Utilities Commission, 198 Colo. 534, 602 P.2d 861, (1979). It must be recognized that ratemaking is not an exact science but a legislative function involving many questions of judgment and discretion. Id. Thus, when one or more equally responsible courses of action are open to the Commission, neither intervenors, the Company itself, or a court can substitute its judgment for that of this Commission in

selecting the appropriate alternative. It must also be recognized that in fulfilling our function of utility regulation, this Commission has "broadly based authority to do whatever it deems necessary or convenient to accomplish the legislative functions delegated to it." Mountain States Tel. and Tel. Co. v. Public Utilities Commission, 195 Colo. 130, 135; 576 P.2d 544, 547 (1978).

As indicated above, we believe that the general proposal by Public Service to include Pawnee in year-end 1981 rate base, subject to appropriate refund, is the most reasonable alternative that has been presented to the Commission, and we will adopt it.

It now remains necessary to set forth how the Public Service refund proposal should be implemented. Generally, in a Phase I decision, the Commission orders the utility to file appropriate riders to reflect, on a percentage increase basis, the revenue increase authorized. The percentage increase riders remain in effect pending the final determination of spread-of-the-rates issues in Phase II of the particular docket. In Phase I of this docket, we shall order Public Service to file rate increase riders for its electric, gas and steam departments, respectively, with regard to the revenue increases authorized herein.

Within three business working days after Pawnee has operated for 24 continuous hours at a capacity of 500 MW or more, with all necessary supporting systems operating normally, Public Service shall file with this Commission, with copies to all parties herein, an affidavit to said effect signed by the appropriate operating vice president of the Company who is in charge of Pawnee. Presumably, this would be Public Service's vice president for operations, Mr. Fuller. The affidavit should be accompanied by the Company's generation logs which will indicate when Pawnee demonstrated capability at 500 MW or more. The affidavit, of course, is to be sworn and subscribed before a notary public. The last day upon which Pawnee can demonstrate capability of 500 MW or more in 1981 is December 31st. Accordingly, the deadline for receipt of the Public Service

affidavit is 5 p.m., Wednesday, January 6, 1982, which is the third business day subsequent to demonstration if such occurs in 1981.

In the event that the Public Service affidavit with respect to a Pawnee demonstration on or before December 31, 1981, is received by the Commission on or before January 6, 1982, its Electric Department rider may continue in effect until such time as the spread-of-the-rates issues are determined in Phase II of this docket. In the event, however, that the Public Service affidavit with respect to Pawnee demonstration in 1981 is not received on or before January 6, 1982, or in the event any party to this proceeding has probable cause to believe that the Public Service affidavit is inaccurate, then the Commission will hold a hearing with respect to the matter of the 1981 Pawnee demonstration in order to determine whether or not Pawnee demonstrated in 1981, and if not, the appropriate amount of refunds and interest thereon to be made and the methodology therefor.**

** Public Service, with regard to its Electric Department rider, should maintain appropriate records to isolate the revenue increases into two parts; (1) the revenue increase attributable to all issues involved in I&S 1525 other than the 100% inclusion of Pawnee in rate base, and (2) the revenue increase attributable to all issues in I&S 1525 including the 100% inclusion of Pawnee in rate base less the revenue increase in (1). In calculating part (1), the slippage treatment of Pawnee to be included should be based on the Commission's traditional pre-I&S 1330 treatment, to wit, slippage based on (a) not compounding interest on previously - accrued AFUDC interest, (b) recognizing, if applicable, delay on a booking basis of the capitalization of AFUDC, (c) recognizing the slippage which occurs from difference between the new authorized rate of return and the rate at which AFUDC had been capitalized to construction and (d) not capitalizing AFUDC on small construction work.

The revenue derivation, on the foregoing two part basis, should be maintained so that in the event it becomes necessary, Public Service can make volumetric-based refunds for the requisite number of days which the Commission hereafter may order.

That hearing will be held on Wednesday, January 20, 1982 at the Commission. It should be understood by all the parties in this docket that the January 18, 1982, expiration of the suspension period with regard to the rates filed by Public Service on May 18, 1981, becomes inoperative and of no effect by virtue of the entry of this decision which permanently suspends the filed tariffs. The tariff revisions filed by Public Service on May 18, 1981 were suspended until January 18, 1982, or until further order of this Commission. Accordingly, this decision is the further order of the Commission which effectively determines the just and reasonable rates and terminates the further operation of the January 18, 1982 suspension date. In other words, the rates initially filed by Public Service on May 18, 1981 are being suspended permanently by the decision and order herein, and Public Service is being authorized to file appropriate tariff riders reflecting both the revenue increase authorized herein relating to non-Pawnee issues, and the revenue increase authorized herein relating to the inclusion of Pawnee in rate base. The procedural provisions regarding finality set forth in CRS 1973, 40-6-114 and 40-6-115 will be made applicable to the tariff riders.

C. Cash Working Capital

One of the most vigorously contested rate base issues in this docket was the issue of cash working capital (CWC) and its inclusion, or exclusion, from rate base. Rate base, of course, represents the amount of capital provided by investors in order to purchase assets for use in utility service and upon which the utility is provided an opportunity to earn a fair rate of return.

CWC, as a component of rate base for rate regulation purposes, has been defined as:

> The "allowance for the sum which the Company needs to supply from its own funds for the purpose of enabling it to meet its current obligations as they arise and to operate economically and efficiently." (Barnes, The Economics of Public Utility Regulation (1942) 495.) Since it is normally contemplated that all operating expenses will eventually be paid for out of revenues received by the Company, the need for working capital arises largely from the time lag between payment by the Company of its expenses and receipt by the Company of payments for service in respect of which the expenses were incurred.

(Emphasis Court's) Alabama-Tennessee Natural Gas Co. v. Federal Power Commission, 203 F.2d 494, 498 (3rd. Cir. 1953). See also, City of Pittsburgh v. Pennsylvania Public Utility Commission, 370 Pa. 305, 88 A.2d 59, 61-65 (1952); Boise Water Corporation v. Idaho Public Utilities Commission, 97 Idaho 832, 555 P.2d 163, 166 (1976); People's Counsel v. Public Service Commission, 399 A.2d 43 (D.C. App. 1979); New England Telephone and Telegraph Co. v. Public Utilities Commission __ Me. ___, 390 A.2d 8, 50-53 (1978). Inclusion of CWC in rate base is necessary when the utility demonstrates that investors have been required to provide the funds needed to operate the business between the rendering of utility service and the payment therefor by customers. By including CWC in rate base, the investor earns a return on the CWC funds at whatever rate is earned on investment in plant. As explained by the Court in Boise Water Corporation v. Idaho Public Utilities Commission, supra:

> Cash flow problems often confront a utility which must pay for expenditures prior to the time revenues therefor have been collected. To the extent that such amounts exceed the revenue collected, it is supplied by the owners of the utility as a portion of their investment and thus becomes a part of the rate base. Thus, cash working capital is a recognition of the sum which the utility needs to supply from its own funds (rather than the ratepayer's) to meet current obligations as they arise due to the time lag between payment of expenses and collection of revenues. Alabama-Tennessee Gas Co. v. Federal Power Commission, 3 Cir., 203 F.22 494 (1953). Such allowances by the Commission are not guaranteed as a matter of course; the utility carries the burden of showing by competent evidence that the need exists.

> Application of Wilmington Suburban Water Corp., 203 A.2d. 817. 829 (Del. 1964). Traditionally, such a showing was made by producing data from the utility's actual experience showing the need resulting from the time lag in collection of revenue, i.e., from a lag study. (555 P.2d at 166)

As stated in the Boise Water case, the burden of demonstrating that there should be an allowance for CWC in rate base is upon the utility requesting it. This allowance is demonstrated by means of a lead-lag study.

> A lead-lag study reflects the lag in the number of days between the payment of operating expenses . . . and the receipt of payment from customers for service rendered.

Gas Service Company v. State Corporation Commission, 4 Kan. App. 2d. 623, 609 P.2d 1157, 1164 (1980). The lead-lag study was explained in New England Telephone and Telegraph Co. v. Public Utilities Commission. supra:

> As indicated earlier, the utility's receipt of revenues or customer payments for services provided often tends to lag behind the date upon which the utility incurred expenses with respect to the provision of such services. Thus, the utility requires a "cash advanced for expenses" working capital allowance to cover expenses during those lag days. The calculation of the utility's "net lag" involves the subtraction of its average expense lag from its average revenue lag. Revenue lag is simply the time span over which revenues lag behind expenses.

390 A.2d. at 51. The lag, however, may work in favor of the utility, as well as against the utility. See Alabama-Tennessee National Gas Co. v. Federal Power Commission, supra where the Court wrote:

> But there are time lags which work in favor of the Company as well as those which work against it. The Company no more pays immediately every liability accrued than do its customers.

203 F.3d. at 498. Or as the Court wrote in the New England Telephone and Telegraph Co., case, 390 A.2d. at 51: "On the other hand, expense lag involves the converse situation, where the utility's expense payments lag behind the date upon which the utility receives the products or services for which it is paying." Lead-lag studies also study these expense lags and use them as offsets to revenue lags to arrive at net cash working capital:

> In determining the need for working capital, the Commission may quite reasonably and properly take into account factors which reduce the need as well as those which increase it.

Alabama-Tennessee Natural Gas Co. v. Federal Power Commission supra, at 498.

One of the earliest and most cited opinions on the subject of CWC is City of Pittsburgh v. Pennsylvania Public Utility Commission, supra. The purpose of CWC how it is calculated and, whether it should be allowed, etc., is discussed in said opinion:

> Cash working capital ordinarily is the amount of cash required to operate a utility during the interim between the rendering of service and the receipt of payment therefor. It is the blood stream that gives life to the physical plant and facilities of the enterprise. It can readily be seen that initially, at the commencement of operation, capital supplied by investors must, in order that the Company can function, include such working cash in addition to the amount required for physical plant and facilities. Its allowance as an element of fair value for rate making purposes has been approved by decisions of both the Superior and Supreme Courts of this State and of the appellate courts of other jurisdictions. Almost invariably however, its allowance has been determined by the actual necessity therefor existent when disputed rates of an established and going concern are before the Commission. The determination of the dollar amount of cash working capital is based on the time lag between the service rendered and the payment therefor by the consumer.

> The fair value of a utility for rate making purposes is the value fixed at the time rates are established. To the extent that the customers are providing revenues before the utility pays its costs, the investors are not supplying the funds to carry on. Whether cash working capital should be allowed as an element in determining the fair value of a utility's used and useful property as a rate base, and if allowed the extent of such allowance, depends upon the factual situation in each case. If the financial situation of an operating company shows that sufficient funds are readily available to bridge the gap between rendition of and payment for services, no cash working capital is required and none should be allowed by the Commission.

As indicated above, a lead-lag study examines various elements of income and expense in order to determine the net lead or the net lag with respect to CWC. For a number of years, the Commission has used a so-called formula approach to determine the CWC component of the rate base. The formula approach previously approved by this Commission generally allows the utility to include in rate base that part of working capital represented by 45/365ths of operating and maintenance expenses plus 15/365ths of the cost of purchased power less the average property tax liability and 1/3 of the accrued Federal income taxes. In the last general rate case, I&S 1425, neither Public Service nor the Staff of the Commission recommended any change in the formula approach. The Company's request in I&S 1425 for $15,552,635 in CWC was criticized by witnesses for certain intervenors in that docket. The principal criticism was the lack of a lead-lag study. AMAX witness Madan, in I&S 1425, recommended a balance sheet analysis in order to provide a limitation on CWC to be included in rate base. In that docket, the Commission rejected the balance sheet approach as recommended by Mr. Madan and reaffirmed the formula approach for determining CWC. Nevertheless, the Commission did state in Decision No. C80-2346, dated December 12, 1980 (page 22), that Public Service should conduct "an up-dated lead-lag study prior to its next general rate case in order to test the validity of the current formula." In compliance with the

foregoing decision, Public Service in this docket analyzed the leads and lags in those elements of the net operating earnings statement which the Commission had been using in its working capital formula and proposed that some adjustments to the formula were appropriate. As modified by Public Service's analysis of the various elements included in the Commission's traditional lead-lag formula, the amount of CWC proposed on a pro forma basis in this docket was reduced from the old formula basis of $24,148,000 to $16,018,000. Broken down among the three utility departments, Public Service proposed zero CWC for the Electric Department (when the tax effect of proposed revenue increase is accounted for), $16,018,000 CWC for the Gas Department, and zero CWC for the Steam Department.

The three parties in I&S 1525, other than the Company, that presented evidence with respect to the issue of CWC were the Staff, AMAX and GSA. Interestingly enough, for diverse reasons, these three parties came to differing conclusions on the issue of CWC. The Staff recommended that no CWC be included in rate base because, in its view, the lead-lag study conducted by the Company was so flawed and statistically invalid that the Company had failed adequately to test the validity of the current formula for calculating CWC. Without being able to accept the revenue lag study, the Staff proposed the CWC be set at zero for the Electric, Gas and Steam Departments.

Among the problems identified by Staff witness Ekland were Public Service's use of the "ratio-estimate method" to determine revenue lag when no previously known revenue lag was available, the omission of 6.54 percent of the 1980 revenue in determining the revenue lag, and three flaws in the random sampling methodology. In addition, Staff raised the possibility that the sampling technique might be tilted toward a predetermined result. During its rebuttal case, Public Service presented Neal D. Hitzig, a statistician employed by Arthur Young & Company, who explained in detail the sampling technique used for the revenue lag study and who responded

to certain of the criticisms made by Mr. Ekland. One of the telling points made by Mr. Hitzig was the fact that the sample (set forth in Exhibit 58) was originally designed by Arthur Young & Company for other auditing purposes, but was used by Public Service in performing the lead-lag study.

We find that the sampling technique used by Public Service was not designed in order to effect a certain result or near result with regard to lead-lag. Rather, it sufficiently appears to us that the random sampling, initially designed by Arthur Young and later used by Public Service in its lead-lag study, was reasonable under the circumstances. It should also be noted that subsequent to the testimony of Mr. Hitzig in this docket, the Staff and Public Service entered into a stipulation to the effect that the explanation by Mr. Hitzig of his calculation method for the revenue lag differed from the understanding of the Staff and that the Staff had not conducted an audit of Mr. Hitzig's calculation method or his application of the ratio estimate method and was not able to do so prior to the conclusion of the hearings in this docket. Interestingly enough, although AMAX and GSA were critical of the CWC proposed by the Company, AMAX and GSA did not disagree with Public Service that a 43.4 day revenue lag was reasonable.

We agree that Mr. Hitzig adequately answered the Staff's concerns about the lack of stratification and a larger sample in his rebuttal testimony. Mr. Hitzig also answered certain criticisms of the Staff with regard to lack of inclusion of unmetered revenues, problems arising from customers multiple meters, or customers making partial payments. In fact, these particular concerns were corrected and the results presented by Mr. Hitzig in his rebuttal testimony. As adjusted, the average revenue lag day only changed by .1 days in the margin of error and the 90% confidence level changed to 4.7 days from 5.2 days. Thus, the Commission is satisfied that as far as the revenue lag is concerned the 43.4 day revenue lag has good evidential support and we accept it for purposes of our continued discussion of the CWC issue.

Although AMAX and GSA did not disagree with Public Service's 43.4 day lag, AMAX and GSA both criticized the Company's lead-lag analysis for failing to include therein calculations of customer-provided CWC which exceeds the Company's CWC needs. For example, both AMAX and GSA criticized the Company for failing to reflect expense lags for operations and maintenance (O&M) expense. O&M amounts to over 25 percent of the total electric expense, and it consists primarily of wages, salaries and materials and supplies which are expensed. AMAX and GSA both contend that failing to reflect O&M lags in the computation results in a serious mis-statement of working capital. AMAX and GSA also criticized the fact that Public Service ignored interest expense on long term debt despite the fact that Public Service precollects dollars from ratepayers until such time as interest payments are required to be made to bondholders. In addition, AMAX and GSA criticized the fact the Company ignored the lag of payments of additional state, franchise and federal taxes which would be precollected from ratepayers. AMAX, but not GSA, also criticized the Company's ignoring dividends, retained earnings and certain non-cash items in its working capital requirement despite the fact the Company precollects dollars from ratepayers until such time as these items are required to be paid. AMAX, but not GSA, also criticized what it believes to be Public Service's disregard of unbilled revenues.

AMAX witness Madan, and GSA witness Marshall both endorsed the concept that if the CWC formula arrives at a negative number, such negative CWC should be recognized for ratemaking purposes. Staff witness Ekland, on cross examination, also endorsed the concept of negative CWC for ratemaking purposes should the CWC analysis establish a negative amount. By way of contrast, Public Service witness Midwinter testified that if the CWC formula arrived at a negative number, a zero CWC requirement should be reflected.

Public Service in its initial post-hearing statement of position states that if a comprehensive lead-lag study is to be conducted, the approach adopted by AMAX witness Madan is conceptually correct except for the inclusion of dividends and unbilled revenues.

With regard to the question of unbilled revenues, AMAX witness Madan described them as the value of service that has been provided the customers between the service date and the date of billing. By comparing December 1981 revenues to December 1980 revenues, Mr. Madan arrived at a difference of $27,523,000. By utilizing an unbilled service period of 21.25 days, Mr. Madan calculated unbilled revenues in the amount of $19,089,000. He proposed that these unbilled revenues be accounted for in one of three ways: adjust revenues upward for unbilled revenues; adjust downward the expenses related thereto; or include an adjustment in the working capital calculation.

The rebuttal testimony by Public Service witness Midwinter with regard to the question of unbilled revenues was no model of clarity. This is because much of the cross examination was intermingled with concepts of forecasting, booking practices, and billing cycles. Nevertheless, it is still clear that forecasted revenues and expenses, unlike booked revenues and expenses, are based upon the same forecast input of customers and volumes. Since this is so, there is no mismatch. Accordingly, we find that it is inappropriate to compute the unbilled revenues, in the CWC analysis, for this docket.

The Commission finds that Public Service has complied with Decision No. C80-2346, issued approximately one year ago in I&S 1425, in conducting an up-dated lead-lag study based upon the traditional formula. As a result of that study, Public Service arrived at zero CWC for its Electric Department, $16,018,000 CWC for the Gas Department, and zero for the Steam Department. We find that these figures, when adjusted by the pro forma changes we have accepted in this docket, which changes the CWC requested for the Gas Department from $16,018,000 to $15,887,000, are the correct CWC figures to be used in this docket.

Although we adopt the Public Service CWC figures (as adjusted by pro forma changes) for this docket, nevertheless we endorse the concept of negative CWC as a proper ratemaking concept. We also believe that the traditional formula approach, although up-dated for this proceeding by Public Service, in accordance with Decision No. C80-2346, may not be a realistic surrogate in measuring the amount of CWC that is supplied by the Company vis-a-vis the amount of CWC which is available from other sources. Accordingly, for future rate cases we also endorse the concept of a comprehensive CWC study. We note that the concept of a comprehensive CWC study is favored not only by AMAX and GSA, but also by Public Service itself even though these three parties may differ as to some of the elemental details thereof.

In this docket, the Commission (although endorsing the concepts of negative CWC and a comprehensive CWC study) does not adopt either of the specific CWC results advanced by AMAX or GSA. First of all, as indicated above, Public Service complied with Decision No. C80-2346 in updating the traditional CWC formula that has been used for many years. It would be unfair to tell a utility to do a study in a certain way, have the utility comply with what the Commission had previously ordered for this docket, and then switch to another methodology. Second, even if the question of fairness were not present, the Commission cannot accept either AMAX's or GSA's negative CWC figures, because both resulting sets of figures, respectively, flow from expense figures as adjusted by those two parties. The record does not disclose what the negative CWC figures would have been in the absence of expense adjustments respectively made by AMAX and GSA. Accordingly, on the record as made, the Commission could not make a finding as to what the appropriate negative CWC should be unless the Commission were to adopt, as well, the expense adjustments of either AMAX or GSA.

In summary, the Commission finds that for purposes of this docket we should adopt the CWC figures of zero CWC for Electric, $15,887,000 for Gas, and zero for Steam Departments, respectively, as developed by Public

Service pursuant to Commission ordered up-dated lead-lag study. In future proceedings, as hereinabove discussed in this decision, the Commission endorses the concepts both of negative CWC (if such can be shown to exist) and a comprehensive CWC analysis.

As indicated above, we agree that Public Service conducted lead-lag study resulting in a 43.4 day revenue lag has been substantiated. However, we believe that the expense components to be measured in the future comprehensive CWC analyses should include the following components for total department expenses:

EXPENSES:

Gas for Generation
Other Fossil Fuel and Freight
Purchased Power
Gas Purchased for Resale
Purchased Steam
General Labor
Management Labor
Other O & M Expenses
Federal Income Taxes
State Income Taxes
Deferred Income Taxes
Investment Tax Credit Generated
Investment Tax Credit Amortized
Property Tax
Federal Insurance Contribution Act (FICA) Tax
Franchise Fees
Federal Unemployment Tax Act (FUTA)
State Employment Security Act (SESA)
Occupational Tax
Depreciation
Major Medical
Use Tax
Auto License

Of the expense items listed above, those which are non-cash items such as investment tax credit generated, investment tax credits amortized, and depreciation should be both included and excluded. In other words the CWC analyses should be conducted both ways with respect to those non-cash items.

CAPITAL STRUCTURE ITEMS:

Long Term Debt Interest
Preferred Stock Dividends
Common Stock Dividends
Current Retained Earnings
Deferred Taxes

Likewise, capital structure items such as long term debt interest, preferred stock dividends, common stock dividends, current retained earnings, and deferred taxes should be both included and excluded in the future CWC analyses.

D. Compensating Bank Balances

Public Service placed $1,950,000 in compensating bank balances in rate base for its combined Electric, Gas and Steam departments. Compensating bank balances are those deposits that Public Service maintains at certain banks to insure lines of short term credit but that pay no interest. Staff witness Temmer recommended that compensating bank balances be omitted from the Electric, Gas and Steam rate bases in the respective amounts of $1,657,000, $285,000, $8,000 and in the total rate base amount of $1,950,000.

Mr. Temmer gave two reasons for excluding compensating bank balances from rate base. First, they are intrinsically a cost of short-term debt, which is disallowed by the Commission for ratemaking purposes. Short-term interest costs are highly volatile, and short-term debt is replaced by permanent financing, the costs of which the utility is allowed to earn upon through the rate of return. Second, short-term debt obtained through compensating bank balances is primarily used to finance the Company's construction requirements. Public Service already earns currently upon a portion of funds used for construction through "slippage." In addition, Public Service witness Bumpus testified on cross-examination that compensating bank balances are maintained in some "country banks" in lieu of bank line commitment fees as a community service. Moreover, Mr. Bumpus agreed that compensating bank balances are a more expensive way to finance credit than commitment fees. In fact, the record in this docket indicates that it took $426,000 of compensating bank balances to obtain credit of $19,500,000, which is a ratio of 45 to 1. By way of contrast, bank line commitment fees in the

amount of $876,000 were sufficient to obtain credit of $102,800,000, which is a ratio of 117 to 1. Thus, it is evident that compensating bank balances are over two and one-half times more expensive as a means of obtaining bank credit than are bank line commitment fees.

Dues paid to community social organizations are below-the-line expenses for ratemaking because ratepayers have no choice of which organizations receive those dues or contributions. Similarly, ratepayers have no choice in which banks Public Service retains the more expensive compensating bank balances. For the foregoing reasons, the Commission finds that no persuasive reasons have been shown to change our policy, initially established in I&S Docket No. 1116, in 1977, of excluding compensating bank balances from rate base.

E. Construction Work In Progress: Southeast and 345 KV San Luis Line

Public Service, in this docket, proposed including preliminary expenditures in the amount of $15,255,000 in construction work in progress (CWIP) related to the Southeast Power Plant (Southeast Project) and $144,000 for preliminary expenditures related to a 345 kilovolt (KV) San Luis Valley Transmission Line. The Staff, AMAX and GSA all recommended that expenditures for these facilities be removed from CWIP. Two basic reasons were advanced for the exclusion of the preliminary expenditures related to the Southeast Power Plant and the 345 kilovolt (KV) San Luis Valley Transmission Line from CWIP in rate base. First it was alleged that there has been no request by Public Service for a certificate of public convenience and necessity for either of these projects nor any determination by the Commission that these projects are in the public interest. Secondly it is stated that the Uniform System of Accounts, if properly applied, precludes these expenditures from being charged to CWIP. Public Service has suggested that if the Commission is to exclude preliminary expenses (prior to construction) from CWIP, that such a result be accomplished through a rulemaking proceeding rather than in this docket.

The issue of whether Public Service is required, pursuant to CRS 1973, 40-5-101(1) to obtain certificates of public convenience and necessity for the Southeast Project and the San Luis Valley 345 KV Transmission Line is not before us in this docket. Accordingly, we decline to make any determination herein with respect to the issue of certification of these two projects.

We find, however, that Public Service is required to maintain its books of account in accordance with the Uniform System of Accounts as set forth in Rule 27 of the Commission's Rules of Practice and Procedure. Account 183, Preliminary Survey in Investigation Charges, provides as follows:

> A. This account shall be charged with all expenditures for preliminary surveys, plans, investigations, etc., made for the purpose of determining the feasibility of utility projects under contemplation. If construction results, this account shall be credited and the appropriate utility account charged. If the work is abandoned, the charge shall be made to account 426.5, other deductions, or to the appropriate operating expense account.

Public Service witness Midwinter testified that during the Spring of 1980, Public Service decided to postpone indefinitely construction of the Southeast Project. Capital expenditures on the Southeast Project have been indefinitely postponed by Public Service pending improved financial conditions. According to Exhibit 50, introduced in this docket, spending through 1981 on the Southeast Project is for plant site location and environmental studies, acquisition of land and water rights, design and engineering. Public Service witness Midwinter, on cross-examination, agreed that under the literal language of Account 183 of the Uniform System of Accounts, preliminary survey and investigation charges on the Southeast Project should not be charged to CWIP until after construction of the plant is begun. Mr. Midwinter also agreed that Public Service and Plains Electric G&T of New Mexico are investigating the construction of the 345 KV transmission line between the San Luis Valley of Colorado and Taos, New Mexico. Mr. Midwinter agreed that the language of Account 183 could be construed to require the expenditures for "investigating" this transmission line and should be included as a preliminary investigation charge in Account 183.

Public Service rebuttal witness Fuller testified that before Public Service applies for a certificate of public convenience and necessity, preliminary expenditures are made on such items as plant location, preliminary engineering, land and water acquisition, and environmental analysis. Mr. Fuller confirmed that these are preliminary expenditures which are made before construction begins.

Although Mr. Fuller dislikes the loss of AFUDC earnings on such preliminary expenditures and suggests that less information would be available in certificate of public convenience and necessity proceedings as a result, the fact still remains that under the Uniform System of Accounts such preliminary expenditures on proposed construction should not be in CWIP and should not be accruing any AFUDC.

In summary, we find that the Uniform System of Accounts precludes the inclusion of preliminary expenditures, prior to construction, in a CWIP account. Accordingly, the amounts of $15,255,000 with respect to the Southeast Project and $144,000 with respect to the San Luis Valley 345 KV transmission line will be excluded from CWIP and accordingly from rate base, in this docket.

F. Summary of Year-End Rate Base

Premises considered, we find that year-end rate base for Public Service's Electric Department totals $ 1,590,864,000 and is comprised of the following items and amounts:

December 31, 1981 Electric Year-End Rate Base

Utility Plant in Service	$ 2,020,217,000
Utility Plant Held For Future Use	1,519,000
Construction Work in Progress	49,336,000
Common Utility Plant in Service Allocated	48,349,000
Prepayments	2,811,000
Utility Materials and Supplies	92,513,000
Customer Advances for Construction	(19,964,000)
Year-End Gross Original Cost Rate Base	$ 2,194,781,000
Less:	
Reserve for Depreciation and Amortization	466,896,000
Rate Base Allocated to FERC Jurisdictional Sales	137,021,000
Year-End Net Original Cost Rate Base	$ 1,590,864,000

Premises considered, we find that year-end rate base for Public Service's Gas Department totals $ 250,817,000 and is comprised of the following items and amounts:

December 31, 1981 Gas Year-End Rate Base

Utility Plant in Service	$	322,032,000
Utility Plant Held for Future Use		142,000
Construction Work in Progress		4,049,000
Common Utility Plant in Service Allocated		35,149,000
Prepayments		484,000
Utility Materials and Supplies		4,194,000
Cash Working Capital Requirements		15,887,000
Customer Advances for Construction		(6,512,000)
Year-End Gross Original Cost Rate Base	$	375,425,000
Less:		
Reserve for Depreciation and Amortization		124,608,000
Year-End Net Original Cost Rate Base	$	250,817,000

Premises considered, we find that the year-end rate base for Public Service's Steam Department totals $ 6,458,000 and is comprised of the following items and amounts:

December 31, 1981 Steam Year-End Rate Base

Utility Plant in Service	$	9,798,000
Construction Work in Progress		91,000
Common Utility Plant in Service Allocated		20,000
Prepayments		14,000
Utility Materials and supplies		625,000
Customer Advances for Construction		(8,000)
Year-End Gross Original Cost Rate Base	$	10,540,000
Less:		
Reserve for Depreciation and Amortization		4,082,000
Year-End Net Original Cost Rate Base	$	6,458,000

We find that the combined year-end rate base of the Electric, Gas, and Steam departments totals $ 1,848,139,000 and is comprised of the following items and amounts:

December 31, 1981 Combined Year-End Rate Base

Utility Plant in Service	$	2,352,047,000
Utility Plant Held for Future Use		1,661,000
Construction Work in Progress		53,476,000
Common Utility Plant in Service Allocated		83,518,000
Prepayments		3,309,000
Utility Material and Supplies		97,332,000
Cash Working Capital Requirements		15,887,000
Customer Advances for Construction		(26,484,000)
Year-End Gross Original Cost Rate Base	$	2,580,746,000
Less:		
Reserve for Depreciation and Amortization		595,586,000
Rate Base Allocated to FERC Jurisdictional Sales		137,021,000
Year-End Net Original Cost Rate Base	$	1,848,139,000

VI.

RATE OF RETURN

A. Capital Structure

This Commission in the past has utilized for ratemaking purposes the capital structure of Public Service existing at the end of the test period. In this docket, Public Service has proposed the use of a capital structure as of December 31, 1981. The Staff likewise has recommended the use of a December 31, 1981 capital structure.

The Staff proposed several adjustments to the capital structure submitted by Public Service. First, the Staff reduced the amount of long-term debt by $15,000,000 to reflect the retirement of $15,000,000 of debt which was scheduled for October of 1981. Public Service has agreed that this adjustment is proper.

Second, the Staff recommended an adjustment to common equity in the amount of ($3,662,881) to annualize projected dividend payments of $1.68 per share at the Staff adjusted level of shares outstanding. In 1981, Public Service raised its dividends from $1.60 to $1.68 per share but did not reflect that entry in its projections.

Third, the Staff recommended an adjustment to common equity of $248 to reflect the actual dividend rate on the preferred stock.

Fourth, the Staff proposed an adjustment to common equity of ($1,872) to reflect subsidiary dividends at the current rate. This adjustment is proper since Public Service has no plans to issue additional subsidiary equity in 1981.

Fifth, Staff proposed an adjustment of ($3,021,450) to reflect the actual net proceeds of the June 25, 1981 sale of common stock. Public Service had projected the sale at $16 per share but actually received $15 per share. The Staff contends that its adjustment is proper because the actual net proceeds were known and measurable at the time of the hearing. See In Re Mountain States Telephone and Telegraph Company, I&S Docket No. 1400, Decision No. C80-1784 at 31-32 (September 16, 1980). Public Service objects to this adjustment because it believes it leads to distortions in updating actuals but not updating for revised estimates. Further, Public Service contends that the Staff did not make any adjustments to other parts of the Company's forecasts to substitute actual figures for estimated figures. Public Service claims that while it may be useful to look at variances between actual and estimated data to the extent possible, that absent compelling circumstances for a contrary result forecast data should be used for ratemaking purposes. We agree with the Staff that if actual figures are available, and are known and measurable at the time of the hearing, such figures, rather than estimated figures, should be used.

Staff witness Fleming also proposed an adjustment to reduce the estimated sale of common stock through the employee stock ownership plan (ESOP). Mr. Fleming adjusted the amount of common stock outstanding to reflect actual sales rather than projected sales for the first six

months of 1981. However, Mr. Fleming agreed during cross-examination that this adjustment should not be accepted if the sales of common stock through the ESOP were postponed from the first part of 1981 to the second part of 1981 and were in fact made during the second half of 1981. Public Service witness Bumpus testified that employee stock option plans sales are made subsequent to the filing of Public Service's tax return, that its tax return was filed in the second half of the year as a result of an extension of time being granted, and that said sales of common stock were made shortly thereafter. In view of this testimony, the Staff has withdrawn its proposed ESOP adjustment. Premises considered, the Staff has recommended, and we so find, that the year-end 1981 capital structure for Public Service should be as follows:

	Capitalization	Ratio
Long-term Debt	$ 822,038,000	45.58%
Preferred Stock	229,400,000	12.72%
Common Equity	654,545,587	36.29%
Common Equity (1981 issue)	50,458,550	2.80%
Deferred Taxes	47,139,346	2.61%
Total	$1,803,581,483	100.00%

B. Cost of Long-Term Debt and Preferred Stock

No party challenged the costs assigned by Public Service to long-term debt and preferred stock in the amounts of 8.02% and 7.45% respectively. Accordingly, those respective costs are adopted by the Commission in this docket.

C. 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 recommended returns on equity ranged from 15.20% to 16.26% on old equity and 16.82% on new equity.

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 10.75% and a rate of return of 15.70% on equity is fair and reasonable, sufficient to maintain financial integrity, to attract equity

capital in today's market, and comensurate with rates of return on investments of other enterprises having corresponding risks.

As in the past, the Commission finds and concludes that the "Discounted Cash Flow" (DCF) methodology is an acceptable one for deriving a fair rate of return on common equity. The Commission does recognize that there are other methodologies for arriving at a fair return on equity, at least two of which, comparable earnings and earnings/price ratio, were presented herein for our consideration. While we do not reject these methods, from the evidence presented in this proceeding, they appear to afford less rather than more certainty to the process of ascertaining a fair rate of return on equity to be allowed for Public Service. This is particularly true when it is noted that Mr. Johnson relied on Standard & Poors' 400 Industrials in his comparable earnings analysis. These industrials reflect a wide range of different kinds of companies which simply are not comparable to gas and electric utilities. As GSA witness Rettenmayer stated, a comparison of rates of return being earned by other companies or a group of companies does not tell the required rate of return for Public Service.

Therefore, we have relied upon the results of the DCF methodology in reaching the conclusions expressed above.

As has been customary in past proceedings, the conclusions of the several witnesses applying the DCF analysis were not in agreement. The bare cost of equity found by the various witnesses is as follows:

WITNESS	YIELD	GROWTH	BARE COST OF EQUITY
Rettenmayer	12.%	3.0-4.0%	15.0-16.0%
Flemimg	11.9%	3.0-4.0%	14.9-15.9%
Johnson	11.2-12.9%	2.5-3.5%	13.7-16.4%
Bumpus	11.16%	4.28-5.28%	15.44-16.44%
Bumpus (rebuttal)	12.25%	" "	16.53-17.53%

Public Service witness Bumpus's DCF yield analysis of 11.16% was based on a 16 week stock pure average ending March 26, 1981. On rebuttal Mr. Bumpus updated his 16 week average yield to 12.25% based on the period ending October 9, 1981. For growth Mr. Bumpus relied almost entirely on the growth in dividend yield.

Each of the witnesses suggested that an adjustment should be made to the bare cost of equity by reason of the issuance of new shares. The purpose of any adjustment is to protect the Company against a reduction in proceeds on the sale of new shares by reason of selling expenses and market pressure, if any there be. Public Service witness Bumpus was incorrect when he applied an adjustment for market pressure to all of the outstanding equity of the Company as well as the new equity. Staff witness Fleming rejected the notion of market pressure, but he did allow for a reduction in proceeds for issuing expenses which he calculated to be 30 basis points or .30% on equity.

Mr. David E. Kelley, testifying on behalf of GSA concerning the issues of market pressure and flotation costs, presented a study of market pressure which was specifically related to Public Service. Mr. Kelley also presented an overall utility market study concerning flotation costs. Mr. Kelley concluded that there was evidence to support an indication of market pressure in the area of minus 2.2% and that the best estimate of future flotation costs was 4.5%. These adjustments, as used by Mr. Kelley, were applicable only to new equity.

For purposes of this docket, we find that the testimony of Staff witness Fleming most nearly approximates a realistic range with respect to cost of equity. Adding the .30% adjustment for selling expenses to Mr. Fleming's bare cost of equity range of 14.9 to 15.9%, Mr. Fleming arrives at a return on equity in the range of 15.2 to 16.2%. The mid point of this range is 15.70% which we find, as indicated above, to be a realistic cost of equity.

Staff witness Fleming derived a return on common equity for Public Service primarily through the DCF analysis of selecting comparable companies, Moody's 24 Utilities Group and Public Service. In selecting companies comparable to Public Service, Mr. Fleming used five criteria: (1) the percentages of revenues derived from gas sales; (2) the Standard and Poors (S&P) Bond Ratings; (3) the Moody's Bond Ratings; (4) the S&P Stock Ratings; and (5) the Value Line Safety Factors. Each criteria is determined following analysis of numerous risk factors. Hence, together they represent the best barometer of the risk of an investment in the common stock of these companies. While it is impossible to find companies with identical risks, a composite of the risk of Mr. Fleming's comparable companies will be similar to the risk of Public Service.

In measuring current dividend yield, Mr. Fleming used a sixteen week yield, a twenty-six week yield, and a fifty-two week yield for the periods ending August 21, 1981, for each of the comparable companies. For Moody's 24 Utilities Group, he used three month, six month and twelve month yields for periods ending July 31, 1981. Mr. Fleming concludes that, while the yield varies with the period measured, the yield has remained fairly constant over the last year. Mr. Fleming's analysis used yields that are equivalent to the average of the yields for the three period study, which deliberately placed more weight on recent yields which better reflects the current inflationary expectations of investors. He found a yield of 13.25% reasonable for the twenty comparable companies, while a yield of 12.50% was reasonable for Moody's 24 Utilities Group. Mr. Fleming determined that a dividend yield of 11.90% was representative of current investor expectations for Public Service common stock, and he used that yield to calculate the bare cost rate of equity for Public Service.

During rebuttal, Public Service witness Bumpus updated his DCF study to show that the sixteen week yield on Public Service's common stock as of October 9, 1981 is 12.25%. Mr. Bumpus used that yield to offer an opinion that the current cost of new equity capital is in the range of 17.49% to 18.49% with a mid point of 17.99%. The Commission favors Mr. Fleming's analysis over Mr. Bumpus's update of his sixteen week yield. By using sixteen, twenty-six, and fifty-two week periods to determine dividend yield, Mr. Fleming took into account a longer period of time which is more representative of investor expectations. In any event since dividend yields have remained fairly constant over the period of study by Mr. Fleming, we find that investor expectations have stabilized over the last year. Furthermore, Mr. Bumpus's rebuttal yield is based solely on one 16 week period which is not as representative of investor expectations as Mr. Fleming's yield. Unlike I&S 1330 and I&S 1425, when markets were volatile, thus justifying greater reliance on shorter time periods, as indicated above, the market situation currently is comparatively more stable. Accordingly, the yield of 11.90% proposed by the Staff is fair and reasonable under current circumstances.

In determining the growth component used in his DCF analysis, Mr. Fleming initially examined historic growth in book value per share, earnings per share, and dividends per share. He calculated the historic growth in these three variables for both a ten-year and a five-year period, using both exponential growth rate and compound growth rate. He determined that the anticipated growth rate for Moody's 24 Utilities is in the range of 2.5 to 3.5 percent, and the anticipated growth rate for the twenty comparable companies is in the range of 1.75 to 2.75 percent.

Mr. Fleming gave slightly more weight to historic growth in dividends than to growth in earnings per share or growth in book value. First, growth in dividends was more consistent over the two periods Mr. Fleming selected in making his measurements. Second, growth in dividends is immediately apparent to the investor because an increase

in dividends increases his quarterly dividend check. Mr. Fleming verified his growth rate analysis through a study of retention rates.

Based upon his analysis and by applying his independent judgment, Mr. Fleming determined that the investor expects a growth rate for Public Service in the range of 3 percent to 4 percent. He based that determination primarily on two factors: (1) the yield on Public Service stock has dropped in relation to other utilities; and (2) using a 3 percent to 4 percent growth rate, the bare cost rate on equity for Public Service is more in line with the bare cost rate on equity for the comparable companies. Mr. Fleming's growth recommendation of 3 percent to 4 percent for Public Service is superior to the Company's proposed growth rate of 4.28 percent to 5.28 percent because the latter is based solely on the historic growth of dividends. The growth in book value per share and earnings per share and the current retention rates -- all of which were studied by Mr. Fleming in addition to dividend growth -- all indicate that continuation of a large growth in dividends recently experienced by the Company is unrealistic. The investor would recognize this fact in determining his current yield requirements.

Mr. Fleming determined a bare cost of equity of 14.9 percent to 15.9 percent for Public Service. His recommendation is supported by the bare cost of equity of 15 percent to 16 percent derived using his DCF analysis of twenty comparable companies and Moody's 24 Utilities Group. Moreover, Mr. Fleming verified his bare cost of equity range by conducting an earnings/price analysis.

In deriving the cost of equity capital, it is necessary to adjust the bare cost of equity to allow the Company to recapture the selling costs incurred when issuing additional stock. These selling costs decrease the net proceeds of a stock sale received

by the Company. Any flotation cost adjustment must be based upon the amount of new stock issued rather than upon stock outstanding, in order to insure that the Company is not overcompensated.

As indicated above, the Staff recommended an adjustment for flotation (or selling) costs of .30 percent. Mr. Fleming's derivation of the flotation costs adjustment is significantly different than the methods used by Public Service witness Bumpus and GSA witness Kelley. Mr. Fleming examined historic Public Service stock issues over a ten year period, which can be considered to be over a complete construction cycle. Both Mr. Bumpus and Mr. Kelley used the 1981 Public Service stock issue. Mr. Fleming used a cost approach to calculate the flotation cost adjustment while Mr. Bumpus used a price approach. Mr. Fleming's adjustment of .30 percent is adequate to protect the Company from erosion under normal market conditions. Moreover, his adjustment more accurately reflects cyclical flotation costs than do Public Service's or GSA's because his adjustment is based upon stock issues over a ten-year period, that is, over one complete construction cycle.

Mr. Fleming did not adjust the bare cost of equity for market pressure because he was not satisfied by the Company's exhibit 33 that market pressure exists. As a general principle, market pressure should be measured over both declining and ascending markets. Any adjustment based solely on declining markets, such as in Public Service exhibits 33 and 130, would compensate the utility for the worst possible case. Such an adjustment would overcompensate the utility for market pressure in stable and ascending markets which in essence, would guarantee the net receipts from the stock issue. It is not the purpose of regulation, nor the responsibility of this Commission, to guarantee a utility's net receipts from stock sales.

Mr. Fleming testified that he was aware of no study that conclusively demonstrates the existence of market pressure. The market pressure studies performed by Messrs. Bumpus and Kelley would appear to confirm Mr. Fleming's statement.

Mr. Kelley made a Public Service specific market pressure recommendation of -2.2 percent. However, his company specific market pressure is based upon only five observations which are too few observations to provide any confidence in the results. Mr. Bumpus's original market pressure study in exhibit 33, pp. 5-6, has two defects. First, the 2.8 percent adjustment is based only on declining markets. Second, the study incorrectly applies variance analysis in comparing the Company pricing index with the New York Stock Exchange utility index.

Both Messrs. Bumpus and Kelley conducted "all markets" market pressure studies for 1980. Mr. Kelley found average market pressure of -.5 percent (exhibit 104, p. 6). Mr. Bumpus on rebuttal testified that the 1980 "all markets" market pressure was -1.362 percent (tr. v. XIII, 10/15/81, p. 126). There are seven stock issues that are common to both the Bumpus and Kelley 1980 "all markets" studies, but there are substantial differences in market pressure for these issues found by each witness:

Issue	Offering Date	Bumpus Exh. 130 1980 Market Pressure	Kelley Exh. 104, p. 6 1980 Market Pressure
Pacific Power & Light	1/16/80	- 2.296%	+0.300%
Carolina Power & Light	2/13/80	- 7.602%	+3.000%
Arizona Public Service	3/5/80	- 4.373%	-3.300%
Kansas City Power & Light	3/19/80	+ 0.204%	-6.200%
El Paso Electric	8/6/80	+ 3.449%	+2.100%
Middle South Utilities	10/14/80	- 1.804%	+2.500%
UGI Corp.	12/1/80	+13.283%	+6.500%
Average		+ 0.123%	+0.700%

Moreover, in his company specific market pressure study in exhibit 101, Mr. Kelley found market pressure of -7.0 percent for the 2/26/80 Public Service issue, while in exhibit 130 Mr. Bumpus found -5.765 percent. For the 9/9/80 Public Service issue, Mr. Kelley found +1.1 percent market pressure in exhibit 101, while Mr. Bumpus found -1.440 percent market pressure in exhibit 130.

Given these great variances in market pressure found by Messrs. Bumpus and Kelley for the same 1980 stock issues, there is no evidence that conclusively shows market pressure for Public Service in this docket. Accordingly, in this docket we are not making a specific adjustment to the bare cost of equity for market pressure. The Staff contends, and we agree, that two factors will adequately compensate the Company for any market pressure that may exist: (1) the additional compensation provided by applying the markup for flotation costs to a rate base that exceeds capitalization due to the use of a year-end rate base; and (2) the Commission's policy of not reducing rate base by deferred investment tax credits.

In summary, we find that Staff's bare cost of equity range of 14.9 to 15.9 percent is reasonable, that its .30 percent adjustment for flotation cost is reasonable, and that its overall rate of return on equity range of 15.2 to 16.2 percent is reasonable. As indicated above, the midpoint of that range is 15.70 percent, which we find to be a reasonable rate for which Public Service should have an opportunity to earn a return on its equity.

D. Composite Cost of Capital

Determination of the composite cost of capital (when the fair rate of return on equity has been set) is easily derived from Public Service's capital structure and the cost of long term debt, preferred stock and common stock. We find the composite cost of capital for Public Service is 10.75 percent derived as follows:

		RATIO %	COST %	COMPOSITE %
Long Term Debt	$ 822,038,000	45.58	8.02	3.66
Preferred Stock	229,400,000	12.72	7.45	.95
Common Equity	705,004,137	39.09	15.70	6.14
Deferred Taxes	47,139,346	2.61	0	0
Total	$ 1,803,581,483	100.00		10.75

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 that rate base is 10.75 percent, and the proper return on equity 15.70 percent. This means that the required total authorized net operating earnings of Public Service are: $ 198,675,000 ($ 1,848,139,000 times 10.75 percent = $ 198,675,000).

It is necessary to subtract the pro forma net operating earnings of Public Service in the test year, as adopted herein, from the required net operating earnings in order to determine the indicated net earnings deficiency. Certain adjustments to determine the pro forma net operating

earnings of Public Service for the test year have been proposed, which proposed adjustments are discussed below.

A. Advertising

Consumer Intervenors contend that the Commission should only allow $58,810 of Public Service's advertising costs, instead of $653,000 requested by the Company. Consumer Intervenors take the position that this Commission can allot only those costs incurred by Public Service for the advertising actually submitted by the Company as Exhibit 19. Public Service witness Midwinter testified that Exhibit 19 was a copy of all the ads in the above-the-line categories previously established by the Commission, for the first three months of 1981. The Commission has examined each one of these ads and finds them to be proper in accordance with the criteria pertaining to above-the-line advertising expense previously established by this Commission.

Inasmuch as these ads are representative of the ads which would run throughout the remainder of the 1981 test year, we find that the test year expense with respect thereto in the amount of $653,000 as proposed by Public Service, is proper and should be allowed.

Consumer Intervenors also take the position that this Commission should disallow as a ratemaking expense $9,900 (rounded to $10,000) associated with Public Service's Communications Program. The Public Service Communications Program appears to be a public relations gambit for the Company. In this program Public Service employees give lectures on such subjects as "Woodworking as a Hobby", "Prisons Today", "Teens Encounter Christ", "Taking Care of your Body", etc. It is quite clear, of course, that this Commission has no authority to forbid Public Service or its employees from engaging in communications of the kind described above. However, it is equally clear that this Commission does have the authority to make sure that the expense

associated with such lectures is not borne by the ratepayers of the Company. Accordingly, we agree with the Consumer Intervenors that $9,900 (we round to $10,000) associated with Public Service's Communications Program should be removed as an above-the-line operating expense.

B. Construction Work in Progress and the Appropriate AFUDC Rate

In determinating how to treat CWIP, the Commission must balance the interests of the ratepayers with those of 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 costs necessary to finance that construction 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 benefits of new construction until the property is placed in service. Therefore, the argument is made that the ratepayers should not be required to provide the investor a return on the construction dollars advanced by the investors to finance the construction until the construction 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 ratepayers 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, in effect takes into account the associated costs of financing the construction incurred during the construction period by including allowance for funds used during construction (AFUDC) in CWIP. This increases the size of the investment based upon which the Company can earn a return and recover depreciation costs in the future as the construction work is placed in service.

To prevent the investor from earning a current return on the construction costs supplied by them 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 a return on the construction dollars provided by the investor until the plant is placed into service. It should be noted, however, that to the extent the rate of return authorized for the utility is in the 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 capitalization on small construction work; and to the extent that AFUDC is not capitalization on previously accrued AFUDC, there is an imbalance or "slippage" which in fact requires current ratepayers to pay some return on the investor provided construction dollar for future plant. The fact that a return on a portion of the needed construction expenditures advanced by the investor is being paid for by current customers (that portion being measured by "slippage") enhances the cash flow position and resulting financial strength of the utility, and may result in lower financing costs to all ratepayers, current and future.

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

In I&S 1425 the Commission determined that 10.19 percent was the appropriate rate of return on rate base. In this docket Public Service has applied the 10.19% rate to the AFUDC "add-back" even though it has requested a higher rate of return on rate base, namely 12.09% for the future. Public Service's methodology in applying the current rate base rate of return to the AFUDC "add-back" is in accord with Commission policy. When a new rate of return on rate base is authorized, as it will be by this decision and order, Public Service will use the new rate of return on rate base as the correct rate to be applied to the AFUDC "add-back" from the effective date of this decision forward.

GSA witness Marshall suggested that it would be appropriate to increase Public Service's AFUDC "add-back" to reflect the 11.54% Public Service FERC-AFUDC rate. However, since the overall rate of return on rate base of 10.75%, as authorized herein, is less than the 11.54% FERC rate, GSA's proposal in this regard have the effect of eliminating that portion of slippage which reflects the difference in the rate of return authorized for the utility and the AFUDC "add-back" rate which is charged to construction. As a matter of fact, Public Service does not adjust the AFUDC rate as a result of each general rate case. However, the adjustment is one rate case behind, rather than one rate case ahead, and to the extent that such a practice produces some slippage, thereby enhancing the case flow position and resulting financial strength of the utility, both the utility and its ratepayers are benefited.

AMAX witness Dirmeier adjusted AFUDC income to be reflected in this case taking into account rate base adjustment which he proposed and also recommending that the AFUDC rate to be used in the future should be at the presently authorized rate of 10.19%. Mr. Dirmeier was of the opinion that if Public Service is permitted to accrue AFUDC at the higher rate authorized in this proceeding, it would result in a double recovery. We find that this assumption by Mr. Dirmeier was incorrect. Whether recovery is current (which would be the difference between the authorized rate of return and the rate applied to AFUDC "add-back") or the return is deferred to the future through capitalization of CWIP at the authorized rate of return, there is only <u>one</u> recovery, not a double recovery as incorrectly claimed by AMAX.

Premises considered, we find that neither GSA nor AMAX presented evidence or argument which would persuade us to deviate from our traditional policy with respect to slippage which has been articulated above, and which has been applied to CWIP.

C. AFUDC Normalization

Public Service has recommended that the Commission normalize the tax effect of the debt component of AFUDC. As a general proposition Public Service favors the normalization of book-tax timing differences, a principle which recently has been upheld by the FERC in its Order No. 144, issued May 6, 1981. Public Service contends that with specific reference to AFUDC, the normalization of the debt component spreads the benefits resulting from the tax deductibility of interest over the life of the plant with respect to which AFUDC has accrued. It is Public Service's view that normalization of AFUDC not only does away with the anamoly, under flow through, of negative revenue requirements attributable to a facility during its construction, but allocates to the ratepayers who are paying for the property through depreciation and return on rate base the tax deductibility benefits.

The Staff and other intervening parties opposed any change in the Commission's policy of flowing through the debt component of AFUDC. The effect of Public Service's normalization of AFUDC would be to increase the deferred income tax expense by a total of $6,640,000 for the combined departments, which is offset by decreasing the depreciation expense by $95,000. The associated rate base adjustments would increase rate base by $5,337,000.

One of the effects of normalization, of course, is to increase cash flow to the Company. Public Service's construction requirements, at least in the immediate future, will be reduced because Pawnee is nearing completion, and the Company has indefinitely postponed building its Southeast Project. Existing cash flow mechanisms include normalizing both deferred taxes arising from accelerated depreciation and amortization, and normalizing the tax savings from investment tax credits. These normalization treatments result in increased costs to present ratepayers and decreased costs to future

ratepayers. In contrast, the flow through of AFUDC will result in decreased costs to current ratepayers and increased costs to future ratepayers. We believe that by retaining the flow through of AFUDC, but continuing the other normalization treatments described above, a proper balance is struck between costs to be borne by current ratepayers vis-a-vis future ratepayers. Accordingly, in this docket, we will not adopt Public Service's proposal to effect a normalized treatment of the debt component of AFUDC in either rate base or income statement calculations.

D. Interest Expense Synchronization

The synchronization of interest expense was again an issue of controversy. Although Public Service proposed a year end rate base for revenue requirement purposes, the Company computed its interest expense on the basis of an average rate base. This methodology has the effect of decreasing the interest deduction for income tax purposes, which in turn, decreases net operating earnings and leads to a greater revenue requirement. AMAX suggested that the interest expense be synchronized with whatever rate base (year end or average) was adopted by the Commission in this proceeding. AMAX witness Dirmeier basically contended that ratepayers should not be required to contribute revenues to the Company on the basis of a year end revenue requirement when the Company does not provide the ratepayers with the full benefit of the interest deduction by calculating the same on the basis of an average rate base. In short, AMAX contends that this inherent mismatch is one sided in favor of the Company. GSA witness Marshall also recommended that the level of interest expense be synchronized with the rate base adopted by the Commission in this case.

Both Public Service witness Midwinter and Staff witness Jorgensen used average rate base in the composite cost of debt. We agree with Public Service and the Staff in this regard since the use of

year end rate base clearly is an attrition alleviating allowance and is not used on any pretext that in so doing one appropriately matches revenues, expenses and investment. In determining the interest annualization, one is interested in the match between the average investment and the tax deductibility of the interest expense incurred in connection with that average investment. Thus it is clearly appropriate to use average rate base for interest annualization purposes even though year end rate base is used for revenue requirements purposes.

Staff witness Jorgensen's interest annualization calculation also eliminated what was referred to as a "double-FERC," or an inadvertent failure by Public Service properly to account for an allocation to FERC jurisdictional business. Public Service has no objection to this correction, and it will be adopted by the Commission herein. Accordingly, the Commission finds that the interest annualization, as calculated by Staff witness Jorgensen, is correct and should be adopted.

E. Franchise Taxes

The Staff has recommended that the Commission continue its current practice of surcharging franchise taxes. Franchise taxes, like sales taxes, are a function of sales revenue. Since sales taxes are surcharged by the Commission, we find that the same treatment should be given to franchise taxes. Surcharging a revenue based tax has the advantage of eliminating pro forma adjustments for ratemaking purposes. In order to surcharge franchise taxes, Public Service's franchise tax adjustments to operating revenues and taxes other than income must be reversed in each department. In the Electric Department, the amount of $10,589,000 must be subtracted from operating revenue and from taxes other than income; in the Gas Department the amount to be subtracted is $8,831,000; and in the Steam Department the amount to be subtracted is $185,000. Public Service witness Midwinter agreed that there is no

effect on the net operating earnings when franchise taxes are removed from both operating revenues and operating expenses. However, the removal of franchise taxes will simplify the revenue to gross multiplier calculation in the Steam Department. We adopt the Staff recommendation with regard to franchise taxes.

F. Hook-Up Charge

Staff witness Jorgensen pointed out in his direct testimony that the Company's filing had overlooked the annualized revenue effect of the customer hook-up charge which became effective in December of 1980. As a result, Mr. Jorgensen adjusted other revenues by a total of $3,552,000. Public Service has agreed that its revenues should be adjusted by including that amount in its revenues. Accordingly, the Commission finds that the annualized revenue effect of the customer hook-up charge in the amount of $3,552,000 should be included as part of Public Service's test year revenues.

G. Payroll Adjustment

Public Service represented that its 1981 projected payroll expense is $124,927,000. Public Service then proposed to increase its payroll levels by $8,748,825 over and above the projected test year levels because of a wage increase scheduled to go into effect during December of 1981. GSA witness Marshall opposed the 8.5% upward adjustment based on the theory that the projected test year should reflect the Company's projected payroll expense -- not a level 8.5% over and above projected expense. Mr. Marshall further objected to the proposed 8.5% adjustment because at the time of the hearing, the 1981 Public Service wage increase was pure conjecture and cannot be described as a "known and measurable change." Finally, Mr. Marshall stated that Public Service's position was improper in attempting to calculate wage levels through November 1982, while revenues and sales are not even brought to year end 1981 levels.

Mr. Marshall also discovered that Public Service's operating payroll expense starting point of $111,056,000 (the 1980 operating payroll expense) was overstated in that the Company's 1980 FERC Form 1 indicated that total O&M salaries and wages for all utility departments amounted to $102,152,458 which is approximately $10,000,000 less than the $111,056,000. In summary, GSA witness Marshall contended that Public Service's payroll base was overstated by approximately $10,000,000, and that it is reasonable and appropriate to set payroll levels as projected by the Company rather than 8.5% in excess of the projected payrolls of the Company.

In rebuttal, Public Service witness Midwinter indicated that Mr. Marshall was indeed correct that the Company should have based its wage adjustment on the amount shown on FERC Form 1 for the year 1980. However, the inference drawn by Mr. Marshall that Public Service's oversight carried over into adjustments for FICA taxes and pension plan contribution was incorrect. We find that Mr. Midwinter adequately explained that these adjustments were not affected by the error in the 1980 payroll data starting base.

Even though we agree with GSA witness Marshall, as does Public Service, that Public Service's payroll base should be the $102,152,458 figure as shown in FERC Form 1 for the year 1980, we do not agree with Mr. Marshall's assertion that a pro forma adjustment of the type made by Public Service (calculated on the correct base) is inappropriate. There is no serious doubt whatsoever that wages will be increased before the end of 1981 and that those increased wages will be in effect during the time when increased rates resulting from this docket are in effect. We agree that although the precise amount of the increase is not known, the 8.5% level used by Mr. Midwinter is clearly reasonable. In fact, the 8.5% increase used by Mr. Midwinter for the December 1981 wage increase may be too low. Accordingly, for purposes of calculating the payroll adjustment in this docket, we shall substitute the $102,152,458

figure as the starting point instead of the $111,056,000 figure used as a starting point in the Company's filing. This reduces the payroll adjustment proposal by the Company by $720,000.

H. Rate Case Expense

Public Service projected 1981 rate case expense as the cost for 1980 rate case plus a 12% escalation. Accordingly, Public Service multiplied its 1980 rate case expense of $717,000 by 1.12 to arrive at an estimated 1981 rate case expense of $803,000. In 1980, Public Service's two rate cases before the Commission were Investigation and Suspension Docket No. 1420 (I&S 1420) and I&S 1425. I&S 1420 was the so-called emergency case and I&S 1425 was the general rate case. GSA witness Marshall proposed to remove the I&S 1420 rate case expenses before application of the 12% upward adjustment since he claimed there were no similar extensive hearings in 1981. However, it was shown by Public Service witness Midwinter on rebuttal that the expense incurred in connection with I&S 1420 was analogous to that involved with a motion for interim relief in this docket. In any event, the number of hearing days scheduled per year in the future, is not likely to diminish. The Commission finds that the rate case expense, as projected by Public Service, is reasonable and should be allowed.

I. Summary of Effect of Changes in Revenue and Expense Adjustments on Net Operating Earnings

In summary, the Commission makes the following operating revenue and expense adjustments to the Public Service request in the following amounts:

Revenue Adjustment		
Customer hookup and reinstitution of service charge		$ 3,552,000
Expense Adjustments		
Flow through of tax effect of debt component of AFUDC:		
Depreciation and amortization	$ 95,000	
Deferred Income taxes	(6,640,000)	
Reduction of payroll expense	(720,000)	
Elimination of speakers' bureau	(10,000)	
Additional income tax expense on interest adjustment	(1,849,000)	
Income taxes other than interest adjustment	2,085,000	
Total of expense adjustments		$ (7,039,000)
Change in Net Operating Revenue		10,591,000
Change in AFUDC offset associated with rate base eliminations		(915,000)
Additional changes to FERC jurisdictional net operating earnings due to above changes		(495,000)
Total change to net operating earnings		$ 9,181,000

J. Summary of Earnings Deficiencies in 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	$ 171,018,000	$ 26,963,000	$ 694,000	$ 198,675,000
Actual Net Operating Earnings for the Test Period	119,678,000	16,733,000	624,000	137,035,000
Net Operating Earnings Deficiencies	$ 51,340,000	$ 10,230,000	$ 70,000	$ 61,640,000

Income tax requirements make it necessary to increase each dollar net operating earnings $1.949318. Accordingly, a total increase of $100,078,000 in retail electric revenues, a total increase of $19,942,000 in retail gas revenues and a total increase of $136,000 in steam revenues are required to recover the above deficiencies. The total revenue requirement increase for electric, gas and steam departments is $120,156,000.

The rates and charges proposed by Public Service in its tariffs accompanying Advice Letter No. 826-Electric, Advice Letter No. 324-Gas, and Advice Letter No. 27-Steam, as later adjusted on the record, under investigation herein would, under test year conditions, produce additional electric revenues of $160,207,000 annually, additional gas revenues of approximately $28,084,000 annually, and additional steam revenues of $316,000 annually. To the extent the revenue produced by such rates and charges would exceed the revenue requirements as found above, such rates and charges are not just and reasonable.

VIII. SPECIAL COMMENTS

A. Attrition

In this docket, Public Service has proposed that a 1.1% attrition allowance be added to the composite cost of capital of 10.99%, resulting in a requested rate of return on rate base of 12.09%. The 1.1% attrition allowance converts to a return of 19.1% on old and new equity. Moreover, the 1.1% attrition allowance is added to rate base before application of the factor to gross multiplier set forth on Exhibit 17. Accordingly, the 1.1% attrition allowance converts to approximately a 2.2% return on rate base when determined in the revenue requirement.

Staff witness Fleming set forth three problems with the methodology used by Public Service witness Bumpus in his Exhibit 37 in deriving the 1.1% attrition allowance:

1. In deriving the rate of return for the twelve months succeeding the institution of new rates, Public Service did not totally eliminate a portion of earnings and rate base attributable to FERC jurisdictional sales;
2. In determining earnings erosion, Public Service used unadjusted book figures to derive a rate of return during the first year the rates were in effect; and
3. In calculating the attrition allowance, Public Service failed to take into account such attrition alleviating practices adopted by the Commission in recent years as the adoption

> of year end rate base for electric, gas and steam departments, the allowance of interim rate relief in I&S 1330, the allowance of emergency rate relief in I&S 1420, the allowance of a firm purchased power adjustment clause, a more up to date gas cost adjustment clause, the allowance of an ECA clause that more accurately tracks the cost of purchased power, fuel for generation, and fuel transportation costs, and the allowance of a test year which was partially projected at the time of filing to reduce regulatory lag in I&S 1425.

In addition, Staff witness Fleming pointed out the existence of additional possible causes of attrition such as management inefficiency which are within the Company's control. Moreover, Public Service has projected a decrease in its construction budget in the near future which should help to minimize attrition. Finally, Staff witness Fleming pointed out that during the first seven months of 1981, Public Service's erosion in return on equity and return on rate base has decreased significantly and that the Company's financial indicators have dramatically improved for 1980 and 1981. The Commission agrees with the foregoing observations of Staff witness Fleming.

It should also be pointed out that another significant attrition alleviating device has been used in this docket, namely the use of a forecasted test year coinciding with the year of the hearing. Although several intervenors have strongly recommended that the Commission return to using an average rate base (in view of the adoption of the forecasted

test year) the Commission, for reasons stated above, is still utilizing the year end rate base as an attrition alleviating mechanism. Finally, as we said in I&S 1425 and repeat today, investors realistically can expect a certain amount of attrition. To attempt to eradicate all attrition, through regulatory devices such as the proposed attrition allowance, is tantamount to guaranteeing a rate of return to investors. The amount of attrition experienced by a utility company is, to some extent, within the control of management. Management must continually attempt to alleviate attrition through improved efficiency and productivity. Accordingly, we do not adopt Public Service's proposed 1.1% attrition allowance.

B. Economic Recovery Tax Act of 1981

The Economic Recovery Tax Act of 1981 (ERTA) provides, inter alia, that the accelerated cost recovery system (ACRS) of depreciation is applicable to property placed in service after 1980. Use of the ACRS constitutes a change from the method of depreciation currently being used by Public Service. Under ERTA, public utility property placed into service after 1980 will not qualify for certain tax benefits of the ACRS unless the tax benefits are normalized in setting the rates charged by the utility to its customers. The normalization required under ACRS is slightly different from that approved by this Commission in I&S 1116. For example, it includes the difference between book and tax lives. Normalization under ACRS must be authorized by a state regulatory body, such as this Commission, in the first rate order involving applicable property, which rate order is issued subsequent to August 13, 1981. If the Commission does not approve ACRS normalization in this docket, Public Service will be required to utilize straight line depreciation for tax purposes. This would result in Public Service having to pay approximately $17,000,000 more in Federal taxes for 1982, causing a dollar for dollar reduction in cash flow to the detriment of Public

Service and its customers. Accordingly, Public Service's only options are ACRS normalization or straight line depreciation; the flow through to ratepayers of the tax benefits of accelerated depreciation is not an available option under ERTA. However, ERTA does not extend the normalization concept beyond the taxed depreciation to which it currently applies. Accordingly, ERTA does not mandate normalization of the debt component of AFUDC.

We find that Public Service should be authorized to take advantage of the ACRS normalization provided by ERTA for past 1980 property.

IX. CONCLUSION

This docket has been one of the most complex proceedings before this Commission, in which a wide variety of issues have been raised by various parties. To the extent that specific issues have been raised by parties which are not addressed specifically in this decision, the Commission states and finds that the particular treatment advanced with respect thereto by one or more of the parties does not merit adoption by this Commission in this docket. Having found that Public Service is entitled to an overall revenue increase in the amount of $120,156,000, we conclude that the tariffs filed by Public Service on May 18, 1981, pursuant to its Advice Letter No. 826-Electric, Advice Letter No. 324-Gas, and Advice Letter No. 27-Steam, which would produce revenues in excess of the revenue increase found herein necessary, should be suspended permanently. We further conclude that the revenue increase found herein should be implemented by tariffs which increase present rates by across-the-board percentage increases subject to possible refund. We further conclude that the rates portion of the decision herein should be a final decision and subject to the provisions of CRS 1973, 40-6-114 and 40-6-115. We further conclude that the docket herein should be continued for the

purpose of entering into hearings on Phase II, or spread of the rates, issues.

An appropriate Order will be entered.

O R D E R

THE COMMISSION ORDERS THAT:

1. The tariff sheets filed by Public Service Company of Colorado, pursuant to Advice Letter No. 826-Electric, dated May 18, 1981, and filed on May 18, 1981, be, and the same hereby are, permanently suspended.

2. The tariff sheets filed by Public Service Company of Colorado pursuant to Advice Letter No. 324-Gas, dated May 18, 1981, and filed on May 18, 1981, be, and the same hereby are, permanently suspended.

3. The tariff sheets filed by Public Service Company of Colorado, pursuant to Advice Letter No. 27-Steam, dated May 18, 1981, and filed on May 18, 1981, be, and the same hereby are, permanently suspended.

4. Public Service Company of Colorado be, and hereby is, authorized to file appropriate tariff sheets to reflect a general rate schedule adjustment in the total amount of 16.76% and applicable to electric rate schedules. The said general rate schedule adjustment shall not apply to charges determined by the electric cost adjustment provision of Colorado PUC No. 6-Electric tariff sheet No. 140C. Said general rate schedule adjustment shall indicate therein that the same is subject to refund with interest, in whole or in part, as a result of any order or orders issued by this Commission subsequent to the effective date of said general electric rate schedule adjustments.

5. Public Service Company of Colorado be, and hereby is, authorized to file appropriate tariff sheets to reflect a general rate schedule adjustment in the total amount of 4.67% and applicable to gas rate schedules. The general rate schedule adjustment shall not apply

to charges determined by the gas cost adjustment provision of Colorado PUC No. 5-Gas tariff sheet No. 130C. Said general rate schedule adjustment shall indicate therein that the same is subject to refund with interest, in whole or in part, as a result of any order or orders issued by this Commission subsequent to the effective date of said general gas rate schedule adjustment.

6. Public Service Company of Colorado be, and hereby is, authorized to file appropriate tariff sheets to reflect a general rate schedule adjustment in the total amount of 1.93% and applicable to steam rate schedules. The general rate schedule adjustment shall not apply to charges determined by the fuel clause associated with Colorado PUC No. 1-Steam tariff Sheet Nos. 4 and 6. Said general rate schedule adjustment shall indicate therein that the same is subject to refund with interest, in whole or in part, as a result of any order or orders issued by this Commission subsequent to the effective date of said general steam rate schedule adjustment.

7. The tariffs filed by Public Service Company of Colorado pursuant to Ordering Paragraphs 4, 5 and 6 above shall set forth an effective date no earlier than one day subsequent to the effective date of the decision herein, and shall make reference to the decision number herein.

8. Any motion which is pending be, and hereby is, denied.

9. Public Service Company of Colorado be, and hereby is, authorized to apply normalized depreciation in accordance with the accelerated cost recovery system set forth in the Economic Recovery Tax Act of 1981 with respect to property placed in service subsequent to December 31, 1980.

10. Public Service Company of Colorado shall submit to the Commission, with copies mailed or delivered to all parties herein, within three (3) business working days after the Pawnee Generating Station has operated for twenty-four (24) continuous hours at a

capacity factor of 500 megawatts or more, with all necessary supporting systems operating normally, an affidavit to said effect, sworn and subscribed by its operating vice president in charge of Pawnee, together with copies of appropriate generation logs which indicate said operation of Pawnee.

11. Public Service Company of Colorado shall file with the Commission, on or before February 1, 1982, ten (10) copies of all its prepared written direct testimony and supporting exhibits with respect to Phase II (spread of the rates) in this Docket.

12. All parties in this proceeding, except Public Service Company of Colorado, shall complete all requests for discovery, with respect to Phase II, on or before February 8, 1982, and discovery with respect to Phase II is to be completed on or before February 24, 1982. Public Service Company of Colorado shall complete all its requests for discovery on or before five (5) business days (Monday-Friday) following the submission to the Commission of Staff and any intervenor written or prepared testimony, respectively. All responses to discovery requests by Public Service Company of Colorado shall be satisfied in accordance with the time limit set forth in the Colorado Rules of Civil Procedure, but in no event later than five (5) business days prior to the commencement of testimony by any witness on behalf of a party to whom the discovery request is directed.

13. The within matter be, and hereby is, set for hearing on the summary of direct examination and cross-examination of Public Service Company of Colorado witnesses, with respect to Phase II (spread of the rates) as follows:

DATE: March 3, 4 and 5, 1982

TIME: 10:00 a.m.

PLACE: Fifth Floor Hearing Room
500 State Services Building
1525 Sherman Street
Denver, Colorado

The dates of March 10, 11 and 12, 1982, shall be reserved on the Commission calendar for hearing, if necessary.

14. The Staff of the Commission and each intervenor who wishes to present direct testimony in Phase II (spread of the rates) of the Docket herein shall file with the Commission, on or before April 12, 1982, ten (10) copies of its prepared written direct testimony and supporting exhibits with respect to Phase II.

15. The summary of direct examination and cross-examination of Staff and intervenor witnesses with respect to Phase II (spread of the rates) and submission of rebuttal testimony, if any, by Public Service Company of Colorado shall be as follows:

DATE: May 12, 13, and 14, 1982
TIME: 10:00 a.m.
PLACE: Fifth Floor Hearing Room
500 State Services Building
1525 Sherman Street
Denver, Colorado

The dates of May 19, 20, 21 and 26, 27, and 28, 1982, shall be reserved on the Commission calendar for hearing, if necessary.

16. Any person or party, including the Staff of the Commission, responsible for filing with the Commission written or direct testimony and exhibits shall, in addition thereto, mail or deliver copies of the same to all parties of record in this proceeding and to the Chief of Fixed Utilities Section of the Public Utilities Commission. The Staff of the Commission is not required to mail or deliver copies of the same to the Chief of the Fixed Utilities Section.

17. The procedural directives herein may be modified, as appropriate, by subsequent order or orders of the Commission.

18. Further procedural directives or modifications thereto will be issued, as appropriate, by subsequent order or orders of the Commission.

19. The Commission retains jurisdiction in this docket to enter such further order or orders as may necessary or appropriate from time to time.

20. The decision and order herein, with the exception of ordering paragraphs 11 through 18 and ordering paragraph 21 herein, shall be considered a final decision subject to the procedural provisions of CRS 1973, 40-6-114 and 40-6-115.

21. This Order shall be effective forthwith.

DONE IN OPEN MEETING the 1st day of December, 1981.

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

_____

_____
Commissioners

COMMISSIONER L. DUANE WOODARD CONCURRING
IN PART AND DISSENTING IN PART

COMMISSIONER L. DUANE WOODARD CONCURRING IN PART AND DISSENTING IN PART:

I concur with the decision herein with the exception of the Commission's continued flow through treatment for the debt component of AFUDC. I agree that the normalization of book tax-timing differences principle, which has recently been upheld by the FERC in its Order No. 144, issued May 6, 1981, should be adopted by this Commission. Normalization is a generally accepted accounting principle which has the benefit of leveling tax-timing differences between present and future ratepayers, whereas flow through treatment (though benefitting present ratepayers) sharply increases the ultimate burden to future ratepayers. Further, I am of the opinion that it was the intent of Congress that normalization

would be used as a mechanism to provide utilities with an extra source of funds (by tax normalization) which would enable utilities to have more internal funds available for capital investments, thus easing pressure on capital markets. Accordingly, I would have agreed to the Company's position that normalization and debt component of AFUDC is an idea whose time has come and should have been adopted in this docket.

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

_____
Commissioner

APPENDIX A
DECISION NO. C81-1999

E X H I B I T S

I&S 1525
PHASE I

Title and Decription

A. Direct Testimony of J. H. Ranniger

B. Direct Testimony of Harvey P. Blichmann

C. Direct Testimony of R. R. Midwinter

D. Direct Testimony of J. No. Bumpus

E. Direct Testimony of J. K. Fuller

F. Direct Testimony of OCS/Consumer Intervenor Witness Rovert Bruce Parente

G. Direct Testomony of Staff Witness James M. Summers

H. Direct Testimony of Staff Witness Tate Profilet

I. Direct Testimony of Staff Witness George Parkins

J. Direct Testimony of Legal Aid/OCS Witness Ben Johnson

K. Direct Testimony of Staff Witness William Loehr

L. Direct Testimony of Staff Witness Carl E. Hunt

M. Direct Testimony of AMAX Witness Jamshad K. Madan

N. Direct Testimony of AMAX Witness Michael D. Dirmeier

O. Direct Testimony of Staff Witness Eric Jorgensen

P. Direct Testimony of Staff Witness Robert L. Ekland

Q. Direct Testimony of GSA Witness John W. Rettenmayer

R. Direct Testimony of GSA Witness David E. Kelley

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	Title and Decription
S.	Direct Testimony of GSA Witness Robert L. Marshall
T	Direct Testimony of Staff Witness Philip Temmer
U	Direct Testimony of Staff Witness Garrett Y. Fleming
V	Rebuttal Testimony of J. K. Fuller
W	Rebuttal Testimony of J. H. Ranniger
X	Rebuttal Testimony of R. R. Midwinter

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Title and Decription

1	Public Service Company of Colorado (PSCo) General Rate Schedule Adjustment (Rider No. 3) Electric, Gas and Steam (JHR)
2	PSCo. Forecasting Process, Schematic Overview (HPB)
3	PSCo. Graphs re electric and gas use (HPB) 11 pp.
4	PSCo. Graph re customers and sales forecasts (HPB)
5	PSCo. Comparative Graphs - 3 pages (HPB)
6	PSCo. Table -Customer and Sales Report (HPB) 2 pages
7	PSCo. Report of Estimates (HPB) 3 pages
8	Chart of Electric Dept. showing fuel used in generation expense (HPB) 1 page
9	Chart of Electric Dept. Purchased Power Expense (HPB) 1 page
10	Chart of Gas Dept. Gas Purchased for Resale Expense (HPB) 1 page
11	Chart of Capital Expenditures Management System (HPB) 1 page
12	Chart of Human Resource Planning (HPB)
13	Graph of Financial Forecast (HPB)
14	Table of Net Operating Earnings for Electric Gas and Steam Departments for 1981 per Financial Forecast (HPB)
15	Rate Base Tables (RRM) 10 pages
16	Net Operting Earnings Tables (RRM) 18 pages
17	Determination of Revenue Requirements (RRM) 3 pp.
18	Cash Working Capital (RRM) 2 pages
19	Advertising allowable for ratemaking purposes (RRM) 27 pages
20	PSCo. Consolidated Financial Indicators 1971-1981

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	Title and Decription
21	PSCo. Consolidated Moody's 24 Utilities, Standard & Poor's 400 Financial Indicators-Dividend Payout Rates, Internal Funds/ Construction, SEC Bond Coverage 1971-1980
22	PSCo. Consolidated Allowance for Funds Used During Construction As a Percent of Net Income and Earnings Per Share
23	PSCo. Consolidated Earnings Per Share, Earnings Per Share, Earnings Per Share less AFDC and Dividends Per Share
24	New Electric Utility Common Stock Sales - Offering Price
25	PSCo. Common Stock Offerings Since 1972 and Resulting Dilution of Book Value Per Share
26	PSCo. Corporate Summary of Available Credit
27	Yield Differential-Moody's Outstanding Public Utility Bonds
28	PSCo. Corporate Moody's 24 Utilities and the Electric Utility Industry Capital Structure
29	PSCo. Cost of Long Term Debt and Ratio of Earnings to Fixed Charges (SEC Method)
30	PSCo. Corporate Debt Capital 1981
31	PSCo. Corporate Cost of Preferred Stock and the Consolidate Rate of Earnings to Interest and Preferred Stock Dividend (SEC Method)
32	PSCo. Corporate Preferred Stock Capital
33	PSCo. Calculation of 16 Week Average Dividend Yield for the Period December 5, 1980-March 20, 1981
	Discounted Cash Flow Analysis
	PSCO Common Stock Flotation Study
	PSCo Common Stock Pressure Study

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Title and Decription

34 Case Studies Reflecting Changes in Sales, Fuel Costs, and Other Operating Expenses and the Effect on Attrition

Alternate Case Study Assumptions

35 Case Study Reflecting the Attrition Caused By the Use of an Historic Test Year vs. Projected Test Year Period

Case Study Reflecting Inclusion of Attrition Allowance

36 PSCo. Growth in Sales, Rate Base, Fuel Costs and Other Operating Expense 1979-1980 and 1980-1981

37 PSCo. Historical Rate Case Information

38 PSCo. Consolidated Earnings Available for Common and Year End Return on Equity on an Actual Adjusted (13.9% ROE) Basis

39 PSCo. Cost of Capital 12-31-81

39 Revised PSCo. Cost of Capital

40 Original Estimate v. Rate Filing for year 1981 Electric Dept. (HPB) 1 page

41 Original Estimate v. Rate Filing for year 1981 Gas Dept (HPB) 1 page

42 Original Estimate v. Rate Filing for year 1981 Steam Dept (HPB) 1 page

43 AMAX Data Requst 13 - dates and time period during which rate base, revenue, sales and expense forecasts filed in this case were prepared. 1 page

44 Monthly Capital Expenditures 1980, 1981 - 2 pp.

45 Electric Dept. Net Operating Earnings 6-30-81 (6 mos. actual, 6 mos. forecast) 1 page

46 Electric Dept. Net Operating Earnings 6-30-81 12 mos. actual) 1 page

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No.	Title and Decription
47	Comparison of Original Estimates to Actual 1978-80 (2 pages)
48	AMAX Question 19 Internal Generation of Funds, Construction Expenditures - Exhibit 73, I&S 1425 (Not admitted)
49	Historical demand projections and reserve based on these projections - 1 page
50	PSCo. Operating and Financial Forecast 1981-1985 - 7 pages
51	PSCo. Capital Expenditures Report as of end of each month 23 pages
52	Shale Oil Forecast 1990 - 2000 1 page (dated 1-26-81)
53	Rate Base - Net Original Cost 12 mos. ended 6-30-81 19 pages Electric Dept. (Projected)
54	Elec. Dept. Rate Base - Net Original Cost 12 months ended 6-30-81 19 pages (Per Books)
55	Electric Sales and Revenue Estimates for 1981 3 pages
56	Rate Filing Estimates v. Actual for 6 mos. ended 6-30-81 1 page
57	Illustration of Workings of Exonometric Model 1 page
58	Lead Lag Study - Revenue Lag 2 pages
59	June 1981 bill insert 2 pages
60	August 1981 bill insert 2 pages
61	Electric Dept., rate base - net original cost 12 mos. ended 12-31-81 1 page
62	PSCo. electric - 6 mos. ending 6-30-81 (1 page) Comparison Budget, Actural, Actual less than Budget
63	Response 34 - Investment costs are not allocated to subsidiaries. 1 page
64	Response 61 - specific computation of the impact of working capital from the tax effect of proposed revenue increases 1 page

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No.	Title and Decription
65	Response 46 - Re mail and bank float treatment
66	Electric working capital 12 mos. ending 12-31-81 1 page
67	PSCo. Response to Supplemental Data request of AMAX 3 pages
68	Response 45 - re franchise information 7 pages
69	Electric Working Capital Development of % Factors 1 page (Response to Request 42)
70	Staff Data Request - Response 13
71	Exerpt Request 42 - Gas Commercial, Electric Commercial 1 page
72	AMAX Request #1, Question 43 (a) and (b) re First Mortgage Bonds, Interest, etc.
73	UPDATE Advertising PSCo. Expenses Jan-June 1981
74	Effect of Compensating Bank Balance and Bankline Commitment Fees
75	Comparative financial and operating statements January 1980 - July 1981 56 pages (Not admitted)
76	FERC Report of examination 1-1-74 thru 12-31-77 Licensed Project No. 2351 20 pages
77	Planning Guidelines & Strategic Objectives for 1981 2 pages
78	Key Financial Ratio Characteristics for Electric Utilities in the 1980's 1 page
79	Internal Funds from Operations to Construction 1971-1980
80	Salomon Brothers Industry Analysis Aug. 3, 1981 31 pages
81	Historical Demand Projections and Reserve Based on these Projections 3 pages
82	Excerpts From Richard I. Walker's in I&S 1425 Testimony regarding Exhibit RIW-9 2 pages
83	Schematic drawing of a steam electric generating station 1 page

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No.	Title and Decription
84	Comparison of completion dates between Comanche Untis No. 1 and No. 2 and Pawnee 1 page
85	Comanche Experience: Synchronization to Demonstration
86	Company's Start-Up Schedule Pawnee Unit #1
87	Start-Up Alternatives Pawnee Unit #1
88	Power Plant Survey (Sponsored by Staff witness Summers)
89	Steamblow to Full Load (Sponsored by Staff witness Summers)
90	Exhibits accompanying written direct testimony of Legal Aid/OCS witness Johnson
91	Stipulation between Legal Aid and PSCo
92	Equations Used on Estimating kwH (Loehr)
93	Assumptions Used in Estimation (Loehr)
94	Relevant Data for 1980 and 1981 (Loehr)
95	Comparison of kwH Sales Estimates (Loehr)
96	Schedules sponsored by AMAX witnesses Madan and Dirmeier
97	Income Statement Exhibit Sponsored by Staff Witness Jorgensen - Year End Rate Base
98	Income Statement Exhibits Sponsored by Staff Witness Jorgensen - Average Rate Base
99	Exhibit Accompanying Testimony of Staff Witness Ekland
100	Exhibits Accompanying Testimony of GSA Witness Rettenmayer
101	Exhibit (DEK-1) Accompanying Testimony of GSA Witness Kelley
102	Exhibit (DEK-2) Accompanying Testimony of GSA Witness Kelley

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No.	Title and Decription
103	Exhibit (DEK-3) Accompanying Testimony of GSA Witness Kelley
104	Exhibit (DEK-4) Accompanying Testimony of GSA Witness Kelley
105	Exhibit (DEk-5) Accompanying Testimony of GSA Witness Kelley
106	Exhibit (DEK-6) Accompanying Testimony of GSA Witness Kelley
107	Exhibit (DEK-7) Accompanying Testimony of GSA Witness Kelley
108	Exhibit (DEK-8) Accompanying Testimony of GSA Witness Kelley
109	Exhibit (RLM-1) Accompanying Testimony of GSA Witness Marshall
110	Exhibit (RLM-2) Accompanying Testimony of GSA Witness Marshall
111	Exhibit (RLM-3) Accompanying Testimony of GSA Witness Marshall
112	Exhibit (RLM-4) AccompanyingTestimony of GSA Witness Marshall
113	Year End Rate Base Exhibit (6 pages) Accompanying Testimony of Staff Witness Temmer
114	Average Rate Base Exhibit (6 pages) Accompanying Testimony of Staff Witness Temmer
115	Alternate Revenue Requirements
116	Exhibit Accompanying Testimony of Staff Witness Fleming consisting of 8 Schedules
117	Exhibit Accompanying Testimony of Staff Witness Fleming consisting of 2 Schedules
118	Exhibt Accompanying Testimony of Staff Witness Fleming Consisting of 2 Schedules
119	Exhibit Accompanying Testimony of Staff Witness Fleming Consisting of 2 Schedules

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No.	Title and Decription
120	Analysis of Attrition Recommendations
121	Pawnee No. 1 Unit - Comparison Dr. Parente's Schedule and Actual Schedule
122	Stearns-Rogers Experience
123	Table 1966-1981 of Declared Dividends, Earingings, Book Value, Ret. Rate Roab, Internal Growth (JWR-1)
124	Energy Cost (RBP-4)
125	Start-Up Alternatives, Pawnee Unit #1
126	PSCo. Current Market condition (JNB-1)
127	Rebuttal Exhibit (JNB-2) Attrition (3 pages)
128	Copy of Exerpt from Public Utilities Fortnightly Sept. 10, 1981, p. 39 Financial News & Comment Economic Recovery Tax Act - 3 pages
129	Adjustment to Common Equity PSCo. (JNB-4)
130	PSCo. Market Pressure Study (JNB-6) 2 pages
131	ROE and Market-to-Book (JNB-5) 5 pages
132	PSCo. Monthly Actual v. Forecast Income (1 page)
133	Info. to be made available in rate proceedings based on a future test year.
134	PSCo. Revenue Lag Analysis (5 pages)
135	PSCo. Revenue Lag Illustration (1 page)
136	PSCo. Sample Evaluations (1 page)
137	PSCo. Capital Expenditures Report as of 8-31-81 (2 pages)
138	PSCo. 1981 Elec. Dept. Monthly Variance Rate Estimates to Actuals (3 pages) August
139	PSCo. 1981 Elec. Dept. Montly Variance Rate Estimates to Actuals - September (3 pages)
140	PSCo. Report No. 6466 - Actual thru Aug. 1981 Budget Estimate Sept. thru Dec. 1981. (3 pages) Electric, Gas and Steam