

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

IN THE MATTER OF THE PROPOSED)	INVESTIGATION AND SUSPENSION
INCREASED RATES AND CHARGES)	DOCKET NO. 1640
CONTAINED IN TARIFF REVISIONS)	
FILED BY THE PUBLIC SERVICE)	
COMPANY OF COLORADO, UNDER)	PHASE II DECISION AND ORDER OF
ADVICE LETTER NO. 900 - ELECTRIC)	THE COMMISSION REGARDING COST
ADVICE LETTER NO. 375 - GAS)	OF SERVICE AND RATE DESIGN
ADVICE LETTER NO. 33 - STEAM.)	

August 13, 1985

P R E C I S

AED NON-COINCIDENT PEAK METHOD ADOPTED FOR ALLOCATING GROSS
ELECTRIC PLANT; UNITED METHOD ADOPTED FOR ALLOCATING FIXED GAS COSTS:
OTHER ELECTRIC AND GAS COST OF SERVICE AND RATE DESIGN PRINCIPLES
ADOPTED: FURTHER STUDIES ORDERED.

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BY THE COMMISSION:

I. HISTORY OF THE PROCEEDINGS

On November 18, 1983, Public Service Company of Colorado (Public Service or Respondent or Company) filed with the Commission six advice letters, concerning electric rates, gas rates, and steam rates. The Phase I decision and order (Decision No. C84-598, entered on May 22, 1984) pertains only to the following three of the six advice letters:¹

1. Advice Letter No. 900-Electric, which is accompanied by one tariff sheet pertaining to Colorado PUC No. 6-Electric.

2. Advice Letter No. 375-Gas, which is accompanied by one tariff sheet pertaining to Colorado PUC No. 5-Gas.

3. Advice Letter No. 33-Steam, which is accompanied by one tariff sheet pertaining to Colorado PUC No. 1-Steam.

The increases sought by Public Service are as follows:

¹ Also on November 18, 1983, Public Service filed Advice Letter No. 899-Electric requesting a 3.47 percent across-the-board increase in electric rates, Advice Letter No. 374-Gas requesting a 2.78 percent across-the-board increase in gas rates, and Advice Letter No. 32-Steam requesting a 15.8 percent across-the-board increase in steam rates. The combined effect of these three advice letters is to produce an increase in annual revenues of \$43.0 million based upon a test year ended March 31, 1983. Public Service stated that: (1) the tariffs filed pursuant to Advice Letters No. 899-Electric, No. 374-Gas, and No. 32-Steam, would produce one-half of a "make whole" case, (2) accordingly, there was no basis under the Public Utilities Law, as amended, for suspension of the accompanying tariffs, and (3) the tariffs should be permitted to become effective on a 30-day statutory notice, on December 18, 1983. The \$43 million filing, as requested by Public Service under Advice Letter No. 899-Electric, Advice Letter No. 374-Gas, and Advice Letter No. 32-Steam, is not in addition to the \$123.4 million filing represented by Advice Letter No. 900-Electric, Advice Letter No. 375-Gas, and Advice Letter No. 33-Steam; rather Public Service sought to obtain \$43 million of the \$123.2 million on December 18, 1983, without suspension. Public Service further stated that if the \$43 million filing were permitted to become effective without suspension, it would assume the burden of proof, not only with respect to the aggregate \$123.2 million concurrent filing, but also with respect to the \$43 million filing for which it sought non-suspension, and Public Service further stated that if the revenue increase which is ultimately approved is less than \$43 million, Public Service would agree to the Commission's authority to order it refunded. The tariffs filed by Public Service on November 18, 1983, pursuant to Advice Letters No. 899-Electric, 374-Gas, and 32-Steam went into effect by operation of law on December 18, 1983, without suspension.

<u>Operations</u>	<u>(\$)</u> Increase	<u>(%)</u> Increase
Electric	\$ 95,400,000	12.47%
Gas	26,400,000	4.77%
Steam	<u>1,400,000</u>	<u>22.18%</u>
Total	<u>\$123,200,000</u>	<u>9.29%</u>

In Advice Letter No. 900-Electric, Advice Letter No. 375-Gas, and Advice Letter No. 33-Steam, Public Service requested that the Commission promptly suspend them only for the initial 120-day suspension period provided in § 40-6-111, C.R.S., and establish a procedural schedule with a view toward beginning hearings in February 1984. Public Service stated that it would file and serve its direct evidence in support of its request within ten days of the expiration of the period established for intervention.

As in the past, Public Service has suggested that the revenue requirements and rate design phases of hearings be separated into two phases, that the revenue increases resulting from an order in Phase I be allowed to become effective upon the completion of Phase I and that the Phase II proceeding be held to address interclass rate base and expense allocations and rate design matters. Final rate designs and attendant charges would then replace the respective percentage increase riders resulting from Phase I.

The Commission has determined that the procedural methodology previously used in Investigation and Suspension Docket No. 1425 (I&S 1425) and I&S Docket No. 1525 would be used in the current general rate case. That is, Decision No. C84-598, entered May 22, 1984, the Phase I revenue requirements order, was designated as a final order, subject to Commission review upon motions for reconsideration, reargument, or rehearing and for judicial review purposes in accordance with §§ 40-6-114 and 40-6-115, C.R.S. The increase in Public Service's revenue requirement found to be appropriate was to be spread on a uniform percentage basis to the various classes of service pending resolution of rate design issues.

Public Service proposed using a historic test year ending March 31, 1983. The Commission has accepted this test year in this docket.

On December 6, 1983, the Commission entered Decision No. C83-1816 setting the tariff revisions filed by Public Service with its Advice Letters No. 900-Electric, No. 375-Gas, and No. 33-Steam for hearing to begin on January 24, 1984, and established I&S No. 1640.

Pursuant to § 40-6-111(1), C.R.S., the effective date of the tariffs filed with these advice letters by Public Service was suspended until April 16, 1984, or until further order of the Commission. By Decision No. C84-429, dated April 10, 1984, the Commission further suspended the effective date until July 15, 1984, or until further order of the Commission.

Also by Decision No. C83-1816, the Commission determined that Phase I of the proceeding would consider the revenue requirement of the Company and Phase II would consider the appropriate spread of the rates. This decision further provided that anyone desiring to intervene as a party would be required to file a pleading with the Commission on or before December 19, 1983, and serve a copy on Public Service or its attorney of record. In Decision No. C84-598, the Commission also set forth certain procedural directives for Phase II (or the spread-of-the-rates phase) of this docket.

The hearings in Phase I (the revenue requirement phase) of Docket 1640 began on January 25, 1984, and were concluded on March 16, 1984. The matter was taken under advisement by the Commission. Subsequently, various post-hearing initial statements of position and post-hearing reply statements of position were filed by various parties in Phase I of Docket I&S 1640.

On May 22, 1984, the Commission entered its Decision and Order in Phase I which was set forth in Decision No. C84-598.

In Phase I, the Commission found that the earnings deficiencies of Public Service, based upon a historic test year ending March 31, 1983, were as follows:

	Electric \$	Gas \$	Steam \$	Total \$
Authorized Net Operating Earnings	\$168,916,863	\$26,353,264	\$962,510	\$196,232,637
Actual Net Operating Earnings for the Test Period	<u>247,307,264</u>	<u>17,480,743</u>	<u>400,733</u>	<u>165,188,740</u>
Net Operating Earnings Deficiencies	<u>\$21,609,599</u>	<u>\$8,872,521</u>	<u>\$561,777</u>	<u>\$31,043,897</u>

Income tax requirements make it necessary to increase each dollar net operating earnings by a composite factor of \$1.95140352.² Accordingly, a total increase of \$42,169,071 in retail electric revenues and a total increase of \$17,313,872 in retail gas revenues and a total increase of \$1,096,227 in steam revenues are required to recover the deficiencies. The total revenue requirement increase for electric, gas, and steam departments is \$60,579,170.

On June 13, 1984, Application for Reconsideration, Reargument, or Rehearing directed to Decision No. C84-598 was filed on behalf of the cities of Denver, Littleton, Commerce City, Boulder, Aurora, and Brighton.

² Electric Factor to Gross Revenue 1.9514046
Gas Factor to Gross Revenue 1.9514039
Steam Factor to Gross Revenue 1.9513561

The standard factor to gross revenue for each department of 1.94318 has been modified to compensate for the simultaneous effect of the revenue deficiency taxes on cash working capital and interest expense synchronization.

On June 22, 1984, by Decision No. C84-723, the Commission denied that application.

The Commission decided to have the parties prefile direct testimony, rebuttal testimony, and surrebuttal testimony in advance of the Phase II oral hearings. These hearings began on March 6, 1985, and continued March 7-8, March 13-15, and March 20-21. At the conclusion of the hearings on March 21, 1985, pending motions were taken under advisement by the Commission.

A list of the witnesses that appeared for each of the parties together with a designation of the prefiled testimony and exhibits of the particular witness, and a list of all other exhibits is appended to this decision as Appendix A.

Initial statements of position with regard to Phase II were filed on April 12, 1985 by:

- AMAX, Inc. (AMAX)
- Colorado Interstate Gas Company (CIG)
- Cities of Aurora, Boulder, Commerce City and the
City and County of Denver (Cities)
- Federal Executive Agencies (FEA)
- Multiple Intervenors
- Office of Consumer Counsel (OCC)
- Public Service
- Staff of the Commission
- Union Oil Company (Union)

Reply statements of position initially were to have been filed on or before April 22, 1985, but the Commission extended the filing date to and including April 29, 1985. Reply statements of position were filed by that date by the following:

- AMAX
- FEA
- OCC
- Public Service
- Staff of the Commission
- Union

Phase II - Final Decision and Order

The Commission on May 22, 1984, authorized Public Service to place into effect new rates based upon its then current rate structure and the revenue requirement as found in Phase I. The Commission considered those rates as final rates for administrative and judicial review purposes. Rates which we shall order, as a result of the Phase II hearings, shall reflect the overall revenue requirement initially found in Phase I. These rates also shall be considered final for the purposes of the procedural provisions of §§ 40-6-114 and 40-6-115, C.R.S.

Submission

This matter has been submitted to the Commission for decision. Pursuant to the provisions of the Colorado Sunshine Act of 1972, C.R.S., 24-6-401, et seq., and Rule 32 of the Commission's Rules of Practice and Procedure, a discussion of this proceeding was held on June 4, 1985, and a decision entered at an open meeting of the Commission on August 13, 1985.

II. PRELIMINARY REMARKS

Public Service's electric, gas, and steam customers presently are subject to base rates established in I&S 1525. By Decision No. C84-598, dated May 22, 1984, the Commission authorized riders in the amount of 5.51 percent for electric, 3.12 percent for gas, and 17.9 percent for steam rate schedules.

The purpose of Phase II in I&S 1640 is to translate the revenue requirement previously found in Phase I of this docket into an appropriate spread of the rates among Public Service's various classes of customers for its various commodities (electricity, gas, and steam). Both cost allocation methodologies and rate design methodologies were controverted issues among the parties in Phase II. In addition, Public Service raised, by Motion to Strike, the important legal issue of whether or not this Commission had jurisdiction to order Public Service to wheel electric power over its lines, electric power which certain federal government agencies desire to purchase from the Western Area Power Administration (WAPA).

In the succeeding portions of this Decision, the Commission will discuss some of the controverted issues which require resolution in Phase II of this docket.

III. SETTLED MATTERS

Phase II of this docket involved a large number of issues. The Commission has changed its procedures to allow parties more opportunity to discuss and settle issues. This encouragement for settlement has a number of benefits. Parties understand their differences more fully after discussing them outside the hearing room. More creative and flexible responses are to be found in the settlement discussions than in the contested adversarial proceeding of the hearings. Thus, even when issues are not settled, settlement discussions have benefitted the hearing process. The Commission will continue to encourage settlement as a means not only to improve the hearing process but as a means to reduce the cost of the process. A number of issues were resolved by settlement and stipulation in this case. These settled issues saved time and expense for both the Commission and the parties in this proceeding.

First, it was agreed among the parties that tax depreciation would be allocated on the basis of total book depreciation and that other tax deductions would be allocated on the basis of total net plant. Tr. 3/6/85, p. 27. In addition, Public Service and Staff agreed to a further joint investigation of the items contained in Account No. 587 of the Uniform System of Accounts in order to attempt to resolve how that account should be allocated in the future. Id. Furthermore, Staff and Public Service entered into an agreement (Exhibit 224) by which they withdrew their testimony on the demand elasticity adjustment proposed by the Company and agreed to work together toward a mutually agreeable method for determining demand elasticity by November 1, 1985. Similarly, Public Service entered into stipulations with AMAX (Exhibit No. 239) and OCC (Exhibit No. 343), which were accepted by the Commission. Tr. 3/13/85 at 38; Tr. 3/15/85 at 99. These agreements resolved issues relating to pro forma adjustments to test period consumption by AMAX and its opposition to the on-peak and off-peak demand ratchets and, in the case of OCC, to the issue of the maximum cost per Kwh for the SG rate class. The Commission finds these stipulations to be in the public interest. They are adopted.

In this proceeding, Public Service proposed no time-of-day energy differential and elimination of the shoulder period in the calculation of time-of-day rates. The Staff agreed with these proposals and no other party took a position opposing with respect to either proposal. Accordingly, the Commission finds that Public Service's proposals should be adopted.

Where more than one type of meter is used for a class, Public Service has developed a minimum unit, customer-accounting expense and metering investment for the class and calculated a service and facility charge for the minimum-size meter. This is consistent with Public Service's practice in the past which the Commission has accepted. Staff witness Wendling had developed an average cost in his approach, but during cross examination indicated his support for Public Service's approach. Since no other party addressed this point, the Public Service proposal to add fixed costs of meter investment to the service and facility charges is accepted.

Also, a number of proposals were set forth by Public Service which were not contested by any party. Among those are the following: uniform increase to various rates within the street and area lighting rates; restructuring of the traffic signal light rate; shifting recovery of specific wheeling charges for the AMAX Henderson mine from the energy to the customer charge; and income tax deductions. We find these uncontested proposals made by Public Service to be in the public interest and they are accepted by the Commission. To the extent that any of the foregoing stipulations, settlements, and uncontested proposals of Public Service have been embodied in exhibit form, which have been received into evidence in Phase II of this Docket, we find them to be proper and acceptable and the parties shall be bound by the respective terms thereof.

IV. TEST YEAR

Public Service's revenue requirement established in Phase I of this docket was based on a test year ending March 31, 1983. For Phase II the Company used a test year ending December 31, 1983. Both AMAX witness Eicher and OCC witness Peterson suggested that the Company not be permitted in future cases to use different test years for Phase I and Phase II. The OCC, in fact, opposed the company switching test years between Phase I and Phase II because of a potential over collection in its authorized revenues.

Public Service argues that using a more current test period for Phase II than was used in Phase I allows the Company to use the most recent data available to perform a more accurate analysis of cost allocation and of design of rates. Public Service asserted that by using a more updated test year, the rates established by the Company's cost allocation methodology would provide a more accurate price signal since it would better track the actual cost of providing service. While both AMAX and the OCC contend that there is the potential for over-recovery by using two different test periods for Phase I and Phase II, there is no evidence in the record to support this claim or that an over-recovery actually occurred.

Phase I hearings, which took place during 1984 and established the rate of return and revenue requirement for Public Service Company, were based on an already stale test year. To use a March 31, 1983, test period, in fact, would not have allowed the Commission to establish rates for individual classes of customers properly because of the outdated test period. Therefore the Commission finds that for purposes of establishing rates in Phase II of hearings in I&S Docket No. 1640 we will use the updated test year ending December 31, 1983, as proposed by Public Service.

V. COST OF SERVICE - ELECTRIC

A. Production Plant - Cost Allocation Method

Public Service has proposed the continued use of the average and excess demand (AED) method with the excess allocated on the basis of non-coincident peak demand. This AED cost allocation method has been used by the Company and approved by this Commission in nine consecutive rate cases extending back to the early 1970s. Although the Commission is aware that there are numerous electric cost allocation methodologies, the Commission generally has recognized that the AED method with the excess allocated on the basis of non-coincident peak demand takes into account system peak-load, individual class peak-load, and degree of use (the load factor) for each class of service.

We further recognize that the AED methodology avoids the free rider problem of customers who have no load at the time of the system peak. More specifically, the AED method recognizes and gives appropriate weighting to all three factors which must be considered in determining the appropriate allocation methodology for a specific system. First, AED recognizes the non-coincident maximum demand. Second, AED recognizes the system peak. The difference between the system peak and the system average is the total excess demand, which is allocated to individual rate classes. Also, by definition, the sum of the AED demand of all rate classes is the system peak. Third, AED recognizes load factor or duration of use of the system. Through this recognition, AED considers the power supply system by allocating more to the high-load-factor classes, which require the higher cost base-load units, and less to low-load-factor classes, which can be served with less expensive peaking units.

AMAX proposed an AED Method which would use the average of the summer and the winter coincident peaks to allocate the excess demand. This Method originally surfaced before the Commission in I&S Docket No. 1425, about four years ago, as the twin-peak method. However, the Commission did not adopt this Method in that docket and the Commission is not persuaded that deviation from the non-coincident peak method is appropriate. Even

under a twin coincident peak method, it is possible for certain customers to get a free ride if they are not on the system at the time of either the summer or the winter peaks. The Cities also proposed a two-coincident peak allocator using the peak summer and the peak winter coincidental demands; this is similar to that proposed by AMAX, indicated above, with the difference that, under the AMAX Method, the average of the two-coincident peaks was the basis for allocating the excess.

Unquestionably, the most extensive electric allocation cost proposal which deviated from the Commission's previously authorized and accepted AED method was that proposed by the Staff. The Staff's principal witness on this subject was Arthur Breipohl, who developed what came to be known as the Arthur Breipohl Costing Method, or the ABC Method. Stated simply, the ABC Method breaks down the test year into 8,760 hours and assigns embedded costs on an hourly basis by functionalizing production costs by the use of each production unit in the system. Although the ABC Method was vigorously attacked by most of the parties in this Docket, the Commission would commend the Staff for bringing this Method to its attention. The fact that the AED method has been around a long time and has been used by the Commission in the past should not mean serious attention should not be given to new cost allocation methods which may, in fact, more accurately reflect the true incurrence of costs than the AED Method.

ABC uses detailed production records and detailed load research data for the customer classes to produce a unique allocation of production fixed and variable costs. ABC is based upon three premises:

1. The purpose of a cost allocation study is to classify the embedded costs of the test year.
2. A cost allocation is more precise if the functionalization upon which the allocation is based is more precise. ABC recognizes that base load units have a different function than peaking units or cycling units.

3. A cost allocation method should be the result of certain fairness assumptions as opposed to the cost allocation method itself being assumed. The three fairness assumptions ABC uses are as follows:

a. All customers that use electricity during a given hour should be charged the same cost rate in dollars per megawatt hour for that hour.

b. Each megawatt of a given production unit shares the same portion of the yearly fixed cost of that unit.

c. The fixed cost attributed to each megawatt of each unit should be shared equally by each hour in which that unit or plant is used.

ABC spreads fixed and variable production costs to 36 typical days of 24 hours each, which matches Public Service's customer load research data (peak day, average weekday, average weekend day, for each month). These typical days are assumed to represent all 8760 hours of the test year. If correctly applied, ABC conceptually would be more precise in allocating fixed and variable production costs. If used consistently, this method would indicate to the Commission, Public Service, and the customers where actual costs were incurred. These actual costs can be analyzed by time of use to more correctly determine the demand differential for rate design. If it were possible to implement ABC fully to conform to the concept, embedded costs would be allocated to the customer classes which cause them more fairly than does AED. This was the essence of Dr. Breipohl's testimony and not refuted at a conceptual level by any other witness. However, the Commission finds that ABC had certain implementation difficulties which preclude the Commission from adopting it in this Docket.

Public Service was able to show by one of its exhibits (Exhibit 377 which is a variation of Dr. Breipohl's figure 3 on page 11 of Exhibit R) that customer D winds up paying higher rates when he shifts part of his load off peak. Dr. Breipohl recognized this problem under ABC and his responses were threefold. In the long term, Dr. Breipohl contended that the customer will receive his reward. It was his view that the problem

caused by a customer shifting off the system peak would not have occurred if the system was initially built with less capacity and no customer caused the need for an additional 20 megawatts of power. In any event the perversity, according to Dr. Breipohl, could be corrected by time-of-day (TOD) rates.

With respect to Dr. Breipohl's first response, dealing with the receipt of rewards in the long-run, customers do not as a rule operate totally within such a long-run time frame. If short-term disincentives are given to customers who shift off the system peak, the customer will not shift and the system planner will have to recognize that the 20 megawatts of unused capacity in the illustration will not disappear. As for the second response, the Commission is not setting rates only for a system yet to be built over the long run, but mainly is setting rates for the immediate future and for the system already in place. Accordingly, disincentives offered to a customer, such as customer D in the illustration in Exhibit No. 377, cannot be ignored. Finally, we do not agree with Dr. Breipohl that the disincentive problem can be corrected by using TOD rates. It would be a perverse form of regulation to manipulate rate forms such as TOD for the purpose of correcting what appear to be difficulties in the ABC Method as proposed in this Docket.

Another area of Commission concern is the apparent lack of sensitivity in the results under ABC to changes made to correct errors. ABC's apparent lack of sensitivity is not limited to changes as a result of errors, however minor. It is also present when there are changes in load patterns, such as customers increasing or decreasing maximum demands or shifting usage into the on-peak period. Under ABC, the results do not appear to reflect the significance of the changes.

Another concern with the ABC Methodology, at this time, is the unavailability of certain data deemed proprietary unless the affected customers consent to release or are adequately protected in any order requiring release. Lacking such data, ABC will continue to lump together

arbitrarily certain disparate classes, resulting in inappropriate allocations to some members of the class. Finally, a related issue is the proprietary nature of the ABC Method itself which has been designed by Dr. Breipohl. The purchase price for Dr. Breipohl's program is \$10,000, and the price rises in conjunction with the need of Dr. Breipohl's services in implementing the program. The practical effect of this, of course, may be that only the most sophisticated and financially established intervenors will be able to participate meaningfully in Phase II electric cost allocation issues.

In summary, although the non-coincident peak AED Method proposed by Public Service in this Docket is a tried and true method that has been accepted by this Commission for many years, we do not believe it is appropriate to foreclose our future consideration of other methods which might be superior. Notwithstanding certain problems which we have identified with ABC in this Docket, we believe that the ABC Method may offer some potential in proving itself to be a superior cost allocation method. This is by no means certain, however, and, in any event, this Commission will keep an open mind, in future dockets, as to whether the ABC, or any other electric cost allocation proposal is the most appropriate for adoption. If Staff is able to address the problems with ABC that we have identified, we would encourage its continued development of the method for presentation in a future docket. In light of this discussion, we find that for purposes of this Docket the continuation of the AED Method with non-coincident peak proposed by Public Service is appropriate and should be adopted.

B. Other Plant Allocations

1. Transmission-Central System. Public Service proposed to allocate its central transmission system on the basis of AED, assigning no excess demand to interruptible and curtailable customers. The Staff and the Federal Executive Agencies were in agreement with that position. The Cities proposed to allocate on the basis of two coincident peaks, and AMAX proposed to use AED with two coincident peaks to allocate

the excess kilowatt hours. It should be stated at the outset that all plant allocations are subject to prudential judgment, and we are persuaded that there is no reason to deviate from the allocation proposed by Public Service and so find.

2. Transmission - Other. Public Service proposed to allocate Other Transmission on primary and secondary systems with no excess demand allocated to interruptible and curtailable customers. The Staff proposed to allocate on the basis of separate AED with no excess for interruptible and curtailable customers. The Cities proposed a two coincident peak allocation, and AMAX proposed AED with a two coincident peak for the excess KW. We find that the Staff's method, as set forth in Schedule H of Exhibit No. 381, sponsored by Staff witness Wendling, is the most precise method and should be adopted.

3. Distribution Substations. We find that distribution substations should be allocated in the same manner as Transmission Other.

4. Distribution Primary and Secondary. Public Service proposed to allocate the primary system on the same AED basis as other transmission and secondary systems. Staff witness Wendling used an adjusted non-coincident peak with respect to primary and secondary which is found in column 1 of Schedule H of Exhibit 381, and Staff witness Wendling proposed an adjusted non-coincident peak with respect to secondary systems which is found at column 1, Schedule K of Exhibit 381. We find that the Staff's proposal more closely represents the functions of the particular customers to be served and should be adopted.

C. Rate Base Items

1. Materials and Supplies. Public Service proposed to allocate materials and supplies, including fuel stocks, and cash working capital on the basis of total net plant. Staff witness Wendling proposed to allocate cash working capital based upon its individual components and, after segregating fuel stocks from materials and supplies, to allocate fuel stocks on an energy basis. We find that it is appropriate to allocate

materials and supplies on a disaggregated basis, as proposed by Staff witness Wendling, and that fuel stocks should be allocated on the basis of adjusted kilowatt hours and the Other account allocated on the basis of total net plant.

2. Cash Working Capital. We also find that it is appropriate to allocate cash working capital based upon a factor derived from individual allocations of the seven components of cash working capital as described by Staff witness Wendling. The seven components of cash working capital are: (1) energy expense, (2) O&M expenses, (3) federal income tax, (4) state income tax, (5) tax on other than income taxes, (6) franchise taxes, and (7) sales taxes. Cash working capital in Phase I was determined by a weighting of factors applied to energy expenses, operation and maintenance (O&M) expenses, income tax, and other taxes. These weighting factors are positive on energy costs, O&M expense, and sales tax while they are negative on the other expenses. To track correctly the responsibility for requiring cash working capital, we find that the formula for deriving cash working capital should be used in deriving an allocator for assigning cash working capital.

D. Operating Expenses

1. Purchase Demand. Public Service has proposed to allocate purchase demand operating expenses in the same manner as it does gross production plant, namely the AED with non-coincident peak method. Inasmuch as the Commission, for this Docket, has adopted Public Service's proposed AED with non-coincident peak method for gross production plant, we agree and find that the same method should be used to allocate purchase demand operating expenses.

2. Other Production Operation and Maintenance (O&M).

In Decision No. C82-1271, dated August 17, 1982, the Commission said:

The allocation of other production O&M, whether the allocation is all to energy, as proposed by Public Service, or is split between demand and energy on a 60-40 percent basis, is arbitrary inasmuch as neither method is

precise. On balance, we find that it is not appropriate to change the allocation of other production O&M expenses from the method presently used by Public Service which allocates these expenses to energy. However, the Commission does believe it would be appropriate for Public Service, in its next rate case, to allocate other production O&M expenses on an energy only basis and on a demand and energy basis which reflects allocations which may be appropriate for its system for those production O&M expenses which are fixed and do not vary with plant output.

In this Docket, Public Service continues to advocate the allocation of other production O&M expenses on an all energy basis. However, in response to Decision No. C82-1271 in 1982, Public Service did submit a "Plant Managers' Study." The Company's plant managers classified 70 percent to 80 percent of other production O&M expenses as demand related. As AMAX correctly points out, the Plant Managers Study and the FERC Method (which, over all, results in allocation of 60 percent to demand and 40 percent to energy) are very close to each other except for accounts 510, 512, 513, 528, and 553. As AMAX points out, even with those differences both the Company's plant managers' method and the FERC Method would classify at least 60 percent of Public Service's other production O&M expense as demand related.

For the present, we agree with the position of Public Service, the Staff, and the OCC that it is appropriate to continue to allocate non-fuel production O&M expense on an energy basis. One advantage of this Method is that it is a continuation of the existing method of allocation of these costs and is thus not disruptive. As Staff witness Wendling said, current cost allocation methods which have been in place for decades are presently undergoing intensive review. It is possible that the National Association of Regulatory Utility Commissioners will be making recommendations on a preferred approach sometime in the not too distant future. If the Commission were to change methods now, only to change again in Public Service's next rate case for a preferable method, the goal of rate continuity would be undermined. We find that the FERC

Method which allocates separate accounts either entirely on the basis of demand or entirely on the basis of energy is a technique created from various compromises reached in cases which have been settled before the FERC.

As for the Plant Managers' Study, we find that even though the study was conducted by Public Service itself, even Public Service, in this docket, did not endorse it. As an example of the subjective nature of the Plant Managers' Study, the managers of the Pawnee and Cherokee units classified maintenance on boiler plant account as 80 percent demand and 20 percent energy with respect to Pawnee and 20 percent demand and 80 percent energy with respect to Cherokee. The differences between these two plant managers were even more glaring in their classification of the maintenance of an electric plant account in which 95 percent demand and 5 percent energy was the allocation with respect to Pawnee, and 20 percent demand and 80 percent energy was allocated with respect to Cherokee. Accordingly, we find that other production O&M should be allocated on an energy basis, as it has been in the past.

3. Distribution Operation and Maintenance (O&M).

Public Service proposes to allocate distribution O&M on the basis of total net plant. The Staff believes, and we concur and so find, that the Uniform System of Accounts provides for greater detail in the allocation of the investments and expenses in those accounts and provide for a clearer cost responsibility. Accordingly, the Staff proposed the following allocation by account:

Operations:

580 Supervision	Distribution operation supervision and engineering
581 Load Dispatch	Total Gross Distribution Plant
582 Station Equipment	Gross Distribution Substations
583 Overhead Lines	Gross Overhead Distribution Plant
584 Underground Lines	Gross Underground Distribution Plant
585 Street Lighting	Gross Lighting Plant
586 Meters	Gross Metering Plant
587 Customer Installation	Total Gross Distribution Plant
588 Miscellaneous	Distribution Expenses
589 Rents	Total Gross Distribution Plant

Maintenance:

590 Supervision	Distribution Maintenance Excluding 590 & 598
591 Structures	Gross Distribution Substations
592 Station Equipment	Gross Distribution Substations
593 Overhead Lines	Gross Overhead Distribution Plant
594 Underground Lines	Gross Underground Distribution Plant
595 Transformers	Gross Transformers
596 Street Lighting	Gross Lighting Plant
597 Meters	Gross Metering Plant
598 Miscellaneous	Total Gross Distribution Plant

We find this allocation of distribution O&M expense accounts will provide greater detail of investments and expenses and clearer cost responsibility than any of the other proposed methods.

4. Customer Accounts. Operating expenses with respect to customer accounts involve such matters as meter reading, customer records, uncollectible accounts, miscellaneous accounts, and supervision of the foregoing. Public Service has utilized a special study to make specific assignments with respect to these expenses and we find no reason to deviate from Public Service's proposal in this regard.

5. Customer Services and Information Expense. The Commission finds appropriate the continuation of allocation of customer service expense on an energy basis, as approved by the Commission in I&S Docket No. 1425. We agree with OCC witness Makul who testified that to the extent the dissemination of information on conservation programs reduces the rate of energy use, system-wide savings occur which inure to the benefit of all customers, not just to those who use the information. Mr. Makul stated that an allocation based upon energy reflects this wider and longer range perspective.

The Commission has considered, but does not believe it should adopt, the proposal by AMAX to allocate customer services and informational expenses on a weighted customer basis. The theoretical underpinning of the AMAX proposal is that usable weighted factors could be developed by directly assigning customer service expenses to each class and then dividing by the number of customers in the class. Whatever appeal this approach might have must vanish with the revelation

that only one million dollars out of a total customer service expense of four million dollars is directly assignable. Of the remaining three million dollars of customer service expense, two million is in account 608.1, Customer Assistance Other. The level of detail in that account does not permit a determination of even which rate group is responsible for these costs. Thus, whatever class cost responsibility is presumed by analysis of the one million dollars of directly assignable costs may be unraveled by inconsistent cost responsibilities in other accounts.

6. Expense Subtotal. With respect to the expense subtotal, Public Service proposed to include transmission O&M, distribution O&M, customer accounting, property tax, and property insurance. The Staff proposed to include production O&M, transmission O&M, distribution O&M, customer accounting, and customer service. The Cities proposed to include within the expense subtotal the same items as proposed by the Staff but also both fuel and wheeling expenses. However, Cities witness Hoppe admitted that neither of these components is related directly to A&G expense. An increase or decrease in either fuel or wheeling expense will not result in a corresponding change in A&G expense. Accordingly, the Commission does not agree that the Cities' proposal should be adopted. Furthermore, it is particularly inappropriate to include wheeling expense in an expense subtotal. The majority of Public Service's wheeling expense is assigned to AMAX. This expense represents the wheeling charges paid by Public Service to another utility to wheel Public Service power to AMAX's Henderson Mine. Increases or decreases of this expense bear no relationship to the Company's overhead (A&G expense). This wheeling expense is in the nature of a pass-through cost. Accordingly, we find there is no justification for the Cities' proposal to include wheeling expense in the expense subtotal used to allocate A&G expense. We adopt the expense subtotal proposed by the Staff.

7. Administrative and General (A&G) Expenses. There is no disagreement with Public Service's proposal to allocate property insurance expenses on the basis of total net plant or all other accounts on the basis of an expense subtotal. However, Public Service also proposed to allocate account 925 (injuries/damages), account 926 (pensions/benefits), account 931 (rents), and account 932 (general plant maintenance) on the basis of an expense subtotal. The Staff proposed to allocate injuries and damages, pensions and benefits on the basis of labor wages. We agree with the contention that approximately half of the A&G expense are, in fact, pensions and benefits which are closely related to labor wages. We also agree with the Staff that rents should be allocated on the basis of total gross plant and that general plant maintenance should be allocated on the gross plant subtotal. We believe these allocations are more precise than the expense subtotal allocation proposed by Public Service and so find.

8. Other Taxes. Public Service proposed to allocate property tax on the basis of total net plant. There is no disagreement on this point. However, we agree with the Staff that miscellaneous taxes should be disaggregated into payroll taxes and then allocated on labor wages; the remaining miscellaneous taxes should be allocated on total gross plant.

9. Other Revenues. The Staff was concerned with Public Service's proposal to mix other revenue (Accounts 450, 451, 454, and 456) into an offsetting allocation of expense to A&G expense. It was the Staff's position, with which we agree and so find, that the Uniform System of Accounts provides detail that could be used to accurately track the sources of this revenue. By allocating this revenue individually among the classes, the potential for cross subsidization can be minimized thus providing clearer cost and revenue responsibility.

E. Jurisdictional Split

Public Service proposed to use the 12-coincident peak method to allocate between jurisdictional and non-jurisdictional expenses. This is the method which is used by the FERC. The Staff proposed a combination of ABC and AED allocators for production plant, purchase demand, and selected plant and expenses. Inasmuch as the Commission has adopted Public Service's AED Method, rather than the ABC Method, in this Docket, we find it is appropriate to continue also with the 12-coincident peak method to effect the proper jurisdictional split as proposed by Public Service.

F. Limits on Class Revenue Increases

Public Service proposed limiting rate increases to the R class and RD class to 7.5 percent. Public Service also proposed to limit the RTS class, the IP class, the SL and AL classes to 15 percent and to bring all other classes to a uniform rate of return.

The Staff proposed that no class receive more than a 15 percent rate increase, except for street lighting and area lighting, and that no class receive a decreased rate and that all other classes be brought to a uniform rate of return.

The OCC suggested that the residential classes should be subject to a lower rate of return requirement since the residential classes are less risky for the utility to serve, since change in total service requirements net of customer turnover in that class is low and has less impact on overall service requirements.

The FEA proposed a rate of return indexing technique used to spread increases so that all classes move closer to the system average rate of return. The Cities also proposed that all classes be brought to a uniform system average rate of return but in rebuttal accepted the

criteria proposed by the Staff, provided that street lighting and area lighting were included in the 15 percent upper limit. AMAX proposed to limit increases to twice the system average percent increase with no decreases. The Multiple Intervenors originally proposed bringing all classes to a uniform system average rate of return, but as a secondary position they proposed three alternative proposals for consistent increase criteria.

Generally speaking, the Commission believes that the rate of return for each class should be the same and inter-class subsidization should be avoided. However, the Commission is also of the opinion that circumstances may arise justifying deviation from the above goals. The entire subject is one where judgment is an integral part of the process.

The Commission also believes that rate stability and the policy of gradualism must be recognized. Although uniform rates of return for all classes are an ideal, the abrupt accomplishments of such a goal would result in rate shock to certain classes. Other factors also influence the Commission's determination not to arrive at a uniform system rate of return for all classes in an abrupt fashion. For example, there has been an identified and significant change in the group load factor in the SG class from that used in Public Service's previous rate increase docket, I&S 1525, resulting in a revenue requirement shift heavily impacting the R, RD, and RTS classes. Similarly, the SL and AL classes have been affected by a significant conversion program from mercury vapor lamps to sodium vapor lamps. This switchover from a less efficient to a more efficient lighting method reduced consumption demand by SL and AL customers. To exclude them from a gradual rate increase philosophy would send the signal to maintain existing mercury lamps and possibly reverse the trend toward more efficient sodium vapor lamps. The large revenue requirement impact upon street and area lighting classifications is the result of the higher investment cost of sodium vapor lamps. Because this

transition from sodium lights is a one-time occurrence, as Public Service witness Keyser indicated, the lighting classifications would reach full cost of service (even given Public Service's own cost allocations) within the next several general rate filings by the Company.

Accordingly, we find that the Staff proposal to place an upper limit on all classes of 15 percent, including in that 15 percent limit the SL and AL classes as proposed by the Cities in their cross-rebuttal, is consistent with the Commission's policy of gradualism and rate stability, and should be adopted.

VI. RATE DESIGN - ELECTRIC

A. Service and Facility Charge

In designing its service and facility charge, Public Service uses cost allocation and revenue requirement factors. These factors are based upon minimum unit customer-accounting expense and metering investments for the particular classes involved. Separate charges are designed for all transmission customers.

The OCC argues that customer charges for residential electric and gas service are too high and that the service charge should not reflect indirect charges. However, as Public Service's rebuttal evidence established, the Company incurs indirect or overhead costs in all aspects of its business and it is therefore proper to reflect them in the service charge as well as other charges. The Commission also notes that the service charge is probably understated since it does not reflect the cost related to service laterals, which are incurred irrespective of either demand or commodity requirements of the customer. As indicated above, in a situation where more than one type of meter is used for a class, Public Service has developed a minimum-unit accounting expense and metering investment for the class in calculating the service and facility charge for the minimum size meter. This is consistent with Public Service's practice of the past which the Commission has accepted. The Staff initially developed an average service and facility charge, but during the hearings the Staff indicated its support for Public Service's

approach. Accordingly, we find that Public Service's proposal with respect to service and facility charges is reasonable and should be adopted.

B. Energy Charges

With respect to energy charges the Staff proposed that they include energy-related variable costs and fixed costs associated with fuel supplies in that portion of the cash working capital component associated with fuel supplies. We find that this Staff proposal is reasonable and should be adopted.

C. Demand Charge

Public Service proposed that all costs allocated on the basis of AED should be recovered in the demand charge using customer monthly-maximum KW as the billing parameter. The Staff supported the Public Service approach. The OCC proposed that fixed costs for the excess portion only of AED should be recovered through the demand charge using the customer monthly-excess demand as the billing parameter. We find that the Public Service approach is appropriate and should be adopted. We also accept the stipulation that was entered into between Public Service and the OCC that the SG demand charge limit would be 12 cents per Kwh.

D. Demand and Energy Differentials

In I&S 1425, the Commission instituted time-of-day (TOD) rates in Colorado for large customers with the anticipation that such rates would result in load shifting from potential on-peak to off-peak and also curtail future load growth. The Commission selected three rating periods consisting of shoulder, peak, and off-peak periods, respectively. The Commission also selected two seasonal rating periods per year which, coupled with the three daily time periods, represents a balancing of both the cost characteristics of Public Service's load curve and reasonable simplicity and understanding. For purposes of review, the seasonal periods and the daily rating periods adopted in I&S 1425 were as follows:

I&S 1425

SUMMER

(April 15 through October 14)

Peak Hours:

11 a.m. - 6 p.m. - weekdays

Shoulder Peak Hours:

8 a.m. - 11 a.m. and 6 p.m. -
10 p.m. weekdays

Off-Peak Hours:

10 p.m. - 8 a.m. weekdays and all
hours on weekends and holidays

WINTER

October 15 through April 14

Peak Hours:

4 p.m. - 10 p.m. weekdays

Shoulder Peak Hours:

8 a.m. - 4 p.m. weekdays

Off-Peak Hours:

10 p.m. - 8 a.m. weekdays and all
hours on weekends and holidays.

In I&S 1425, the Commission used the base-intermediate-peak (BIP) method in order to determine the differentials in demand charges. The Commission also adopted a Staff-proposed energy cost differential based upon the following formula:

$$\begin{array}{l} \text{Energy Cost Differential} \\ \text{Shoulder/Off-Peak} \end{array} = \frac{(1/3 \text{ base} + \text{intermediate})}{1/3 \text{ base}}$$

$$\begin{array}{l} \text{Energy Cost Differential} \\ \text{Peak/Off-Peak} \end{array} = \frac{(1/3 \text{ base} + 1/2 \text{ intermediate} + \text{peaking})}{1/3 \text{ base}}$$

In Public Service's next rate case, I&S Docket No. 1525, the Commission adopted certain refinements, proposed by the Staff, to the BIP methodology for determining the demand and energy differentials for TOD rates in its energy cost determination.³

³ The Staff-proposed refinements in I&S 1525 resulted in demand and energy differentials which are higher than those which were originally adopted in I&S 1425. The Commission found that these differentials would provide appropriate price signals to TOD customers and an incentive for shifting load off-peak, with the resulting potential for conservation of capital and benefits to all customers of the Company.

In this latest docket, Public Service has proposed no TOD energy differential and has also proposed elimination of the shoulder period in the calculation of TOD rates. The Staff is in agreement with Public Service's proposals and no other party has taken an opposing position to either of these two Public Service proposals. The Commission finds that those proposals of Public Service are just and reasonable and should be adopted. Accordingly, the I&S 1640 seasonal and daily rating periods for summer (Apr. 15 - Oct. 14) and winter (Oct. 15 - Apr. 14) are as follows:

<u>Peak Hours:</u>	8 a.m. - 10 p.m - weekdays
<u>Off-Peak Hours:</u>	10 p.m. - 8 a.m. weekdays and all hours on weekends and holidays

Public Service is proposing differential demand charges between on-peak and off-peak of 1.28, whereas Staff witness Wendling proposed a differential of 1.64. We acknowledge that Mr. Wendling did make certain changes in the modified BIP method which was adopted in I&S 1525. For example, one major change was Staff witness Wendling's assignment of 120 megawatts at Pawnee generation from base load to peaking. Another Staff adjustment was the deduction of the non-firm load at the time of the system peak from the base load rather than from the system peak. A third Staff adjustment was the shifting of a portion of the firm purchases from base load to peaking. While we acknowledge that there is room for disagreement as to whether or not these adjustments are appropriate, we find that they are based upon actual Company records, that they more properly reflect the imposition of demand for the system, and as such they are reasonable and should be adopted. Accordingly, the Commission accepts and adopts the Staff proposed differential demand charges on-peak and off-peak of 1.64.

VII. OTHER ISSUES - ELECTRIC

A. Interruptible and Curtailable Rates

The Staff has proposed that Public Service, the Staff, and other interested parties be charged with the analysis and development of a framework for the treatment of costs and benefits that accrue because of the controllability or interruptibility of a particular rate class or customer load and that a study be completed and presented in Phase II of Public Service's next general rate case. Public Service opposes this proposal on the basis that further analysis in this area would be beneficial only if the ABC Method were adopted. Even though the ABC Method has not been adopted in this Docket the Commission is not adverse to giving it serious consideration in the future provided the problems identified with it can be eliminated or minimized. Accordingly, we find that the Staff's recommendation for an analysis and development of a joint study to consider the benefits and costs of having interruptible and curtailable loads on Public Service's system should be adopted.

B. Data Availability

The Commission appreciates that Public Service has furnished information to the Commission about ongoing regulatory concerns. The Commission is interested in hourly data on generator unit utilization and purchases, and Public Service should provide this information to the Commission and its Staff on a continuing basis in a machine-readable form.

The Commission is also interested in receiving load research data with respect to special contract customers. To the extent that the provision of this information may involve the submission of confidential or proprietary information, the Commission stands ready and able to work with Public Service in establishing appropriate mechanisms to assure that the submission of confidential or proprietary information to the Commission and its Staff will not be compromised. We believe the provision of this load research data will assist the Commission and its Staff in the ECA procedure as well as on the further evaluation of the ABC method and may assist the more precise development of a cost-of-service study using that method.

C. Optional Time-Of-Day Rates

The Staff has recommended that Public Service be required to file optional TOD rates for the R, RD, C, SG, PG, and TG classes within 60 days of the Commission's final order in this Docket. The Commission acknowledges that the record is not overwhelmed with factual justification for this proposal. However, the Commission does believe that it would be appropriate for Public Service to file optional TOD rates, not for all of the classes which have been recommended by the Staff, but at least for the RD, SG, PG, and TG classes. This, of course, would preclude the R and the C classes from optional TOD rates at this time. If TOD rates are placed into effect, on an optional basis, for the RD, SG, PG, and TG classes, some conservation benefits may be attained. While the Commission cannot predict this with certainty, we do believe that the option should be available to customers within those classes who may be able to benefit from TOD rates. We want to enhance the Commission's policy of conservation of capital and capacity costs which perhaps may be avoided in the future. Although we are not including the R and C classes at this time, as proposed by the Staff, we believe this to be the next logical step in the gradual phase-in to other customer classes of the TOD rates which are currently available only to large customers. The Commission will monitor the progress of the implementation of TOD rates for additional customer classes to determine whether this concept should be expanded to all of Public Service's customers in the future. Public Service should offer the optional TOD rates and adequately explain them to the classes for whom we shall order that optional TOD rates be made available.

D. Availability of the C Rate

Public Service has proposed to eliminate the single phase restriction for the C (or commercial) rate subject to a 10 KW limitation. This will permit certain customers who have three-phase service to qualify for the C rate rather than the SG (secondary general) rate. Although the

various parties agreed with Public Service in eliminating the single-phase restriction for the C rate, the OCC was opposed to placing a 10 KW limit on the C rate. However, the Commission recognizes that if there were no limit the C and SG rates would essentially be the same rate. Accordingly, we find that Public Service's proposal in this regard should be adopted.

E. Wheeling

The Federal Executive Agencies (FEA) through direct and surrebuttal testimony of Witness Kiburz recommended that the Commission institute a proceeding in which the Commission would determine whether the public interest requires Public Service to wheel power to some of its Colorado jurisdictional customers. Mr. Kiburz recommended specifically that the Commission require Public Service to provide wheeling service to its TT rate customers. Public Service took the position in its Motion to Strike Mr. Kiburz's testimony, in its statement of position and in its response statement of position that Federal law preempts the Commission from delving into the issues of mandatory wheeling. Public Service has argued that this Commission lacks jurisdiction to order mandatory wheeling. Public Service alleges that the FEA concedes that the Commission may not order Public Service to wheel over the Company's interconnected transmission grid. The FEA contends, however, in Docket No. I&S 1640 that it is only seeking consideration of a separate proceeding where the question of the Commission's jurisdiction regarding wheeling on Public Service distribution lines can be addressed. The FEA further argues that the question of this Commission's jurisdiction has not been sufficiently briefed and argued at this time and needs to be addressed in detail in a further proceeding. Both Public Service and the FEA, in their statements of position and in their reply statements of position, cite specific and contrasting case law which would argue that there may or may not be Federal preemption with regard to state commission interstate wheeling jurisdiction.

The Commission has examined the legal arguments set forth both by Public Service and the FEA with regard to the jurisdictional issue, and our preliminary view is that the Commission's jurisdiction with respect to wheeling in intrastate commerce has not been preempted by the Federal Energy

Regulatory Commission. We are not convinced that Federal jurisdiction over all the utility's transmission facilities, even if tied in any way to an interstate grid, has been preempted by the Federal Government. For example, the case of Federal Power Commission v. Florida Power and Light Company, 404 U.S. 453 (1972), did not deal with the jurisdiction of the Federal Power Commission (jurisdictional predecessor to the FERC) over specific transmission facilities, but rather with the FPC's jurisdiction over a utility for purposes of requiring compliance with the Uniform System of Accounts. Although the Supreme Court found that interconnection with the interstate grid resulted in Federal jurisdiction over the utility involved, it did not extend Federal jurisdiction over local distribution facilities. In our opinion, the question of whether transmission facilities are subject to FERC jurisdiction depends upon whether the facilities involved are for the transmission of interstate power in bulk or whether they are used for the local distribution of power to retail customers.

Notwithstanding our preliminary view that this Commission has not been preempted with respect to the jurisdictional regulation of the transmission of power in intrastate commerce, we do not here determine whether or not the Commission would order wheeling of electric power by Public Service were that the result sought by FEA or by any entity which wished to have non-Public Service power wheeled over Public Service's lines.

In any event, the Commission finds that Phase II of a rate case is not the appropriate forum in which to fully address and decide the issue of wheeling. If a party wants to have power wheeled over Public Service's transmission or distribution lines, or both, that entity may file an appropriate complaint with this Commission in the event Public Service is unwilling to wheel. In the complaint proceeding, the Commission would be obliged to consider the jurisdictional issue fully, and, if jurisdiction is found to exist, to resolve the merits of the request for wheeling.

F. Contract Period for Interruptible Rates

Public Service has proposed that its interruptible rates be under a minimum five-year contract with the provision that a customer may choose to receive future service on a firm rate at the end of the first year of service. If, at the end of the one-year period, the customer does not elect to switch from an interruptible rate to a firm rate, that customer will be expected to remain on an interruptible rate for the subsequent four years. The present tariffs of Public Service provide a minimum one-year contract period for interruptible rates. We find that Public Service's proposal will enable it to plan firm power resources in a more accurate manner well into the future.

While the Multiple Intervenors did not oppose Public Service's proposal, they did request that the Commission order the Company to provide existing and prospective interruptible electric customers with information regarding the specific criteria used by the Company for interruptions and annually update forecasts, for the entire contract period, of the overall likely duration and frequency of potential interruptions. The Multiple Intervenors desire that the requirement for this type of information be included in Public Service's tariffs. The Commission has previously recognized that interruptible rates, if significantly used, would benefit Public Service and all of its customers in terms of load management and conservation of capital for generation facilities. Accordingly, the Commission is concerned that customers be provided with sufficient information in order to determine whether to take interruptible service. While sensitive to these concerns, the Commission is not convinced that the provisions requested by the Multiple Intervenors should be made part of the tariff requirements of the Company. As pointed out by Public Service, sufficient disclaimers would be necessary in order to protect the Company with respect to estimates that eventually turned out to be incorrect. The Commission believes that it is more appropriate to direct Public Service to file a tariff which will indicate that it will provide prospective customers with the necessary information to the extent that it is possible to do so.

The type of information submitted to prospective customers including the specific criteria for interruptions and forecasts updated annually of the likely duration and frequency of potential interruptions should also be provided to the Staff of the Commission.

VIII. GAS - COST ALLOCATION

A. United v. Seaboard

Beginning with I&S Docket No. 1330, the Commission ordered Public Service to use the so-called United Method for allocating fixed costs to its gas customers. That method allocates 25 percent of the fixed costs based on demand and 75 percent of the fixed costs based on commodity. In this Docket, Public Service proposes to change to the so-called Seaboard Method. This Method allocates 50 percent of the fixed costs based on demand and 50 percent of the fixed costs based on commodity. The Seaboard Method was adopted by the Federal Power Commission in Re Atlantic Seaboard Corporation et. al., 94 PUR NS 235 (1952). The United Method was adopted by the Federal Power Commission in Re United Gas Pipe Line Company, 3 PUR 4th 491 (1973). Whether to use the United Method or the Seaboard Method was argued before the Commission in Public Service's last rate case in I&S Docket No. 1525. In I&S 1525 the Commission continued with its use of the United Method.⁴

Once again in this Docket, the appropriate methodology for allocating fixed costs related to gas was an issue in Phase II. Public Service together with most industrial intervenors and large users favored the use of the Seaboard Method.⁵ Public Service essentially contends that the FERC has moved away from the United formula in recent years in allocating even more fixed costs away from the commodity rate.

⁴ See Decision No. C82-1271, dated August 17, 1982, pages 31-34.

⁵ Public Service contended that it would be even more appropriate for the Commission to use the so-called modified fixed variable allocation utilized by the FERC in Texas Eastern Transmission Company, 29 FERC para. 61, 144 (1985). In the 1985 Texas Eastern case, the FERC allocated only about 30 percent of the pipeline's fixed costs to the commodity rate, compared with the 50 percent and 75 percent which would be allocated to commodity under the Seaboard and United Methods, respectively. Public Service is only asking that the Commission take the half step of authorizing the use of the Seaboard Method.

Public Service witness Schantz set forth six reasons for the determination of the Federal Power Commission (FPC), the predecessor to the FERC, to adopt the United Method:

1. A natural gas system supply shortage;
2. Substantial curtailment of service;
3. Inability to meet peak-day requirements;
4. Under utilization of system on both a peak and annual basis due to gas supply shortage;
5. Annual use of system more important than peak usage; and
6. Desire to get low-priority industrial loads off the system.

Public Service witness Hassoldt, who is Public Service's Vice President of Gas Operations, testified that none of the foregoing six circumstances currently exists in connection with Public Service's gas system. Public Service further showed that it had suffered a severe erosion of industrial sales -- to the tune of about 30 percent -- between the test periods for I&S 1525 and the current proceeding. Public Service contends that while the reason for the loss of each Mcf of industrial sales gas cannot be pinpointed as between fuel switching, conservation, economic factors, etc., that it certainly would be true, that all other things being equal, use of the Seaboard Method over the recent past could only have improved the industrial sales situation inasmuch as it unloads the commodity rate, thereby making gas more marketable for industrial end users.

Thus it appears one of the principal rationales advanced for using Seaboard is to increase, or at least retain, industrial gas sales thereby spreading the fixed costs of the system among a greater number of Mcf of gas sold. In fact, Public Service intends that the additional cost to residential users would be almost minimal, approximating 12 cents per month, and in the long run will be positively beneficial to all customers of the system.

We are persuaded that the FPC and the FERC have allocated fixed costs to the demand commodity components using a wide variety of methods primarily for purposes that are virtually unrelated to cost tracking. In fact, the allocation of joint costs cannot be accomplished with precision. Assigning more fixed costs to the commodity component will have the tendency of getting low priority industrial users off the system, and the United formula which was designed to do this was used during a period of natural gas shortages. It now appears, that the FERC is moving away from its previous assignment of a large share of fixed costs to the commodity function in order to improve gas marketability in a period where there is a so-called gas supply "glut." It is true, that Public Service witness Moore contended that Seaboard or a fixed-variable (FV) method more accurately allocates costs on the theory that, "fixed costs are fixed, they don't vary with the amount of Mcf that flow through the pipeline, and on that basis they should be charged on a demand-type basis." However, that philosophy is inconsistent with what has been a fundamental gas cost allocation principle since Seaboard. Fixed costs for a pipeline are incurred for both peak use and annual use; to achieve equitable results these costs must be apportioned to both demand (peak use) and commodity (annual use). See: Seaboard, supra, at 245-47. Fixed costs, which are incurred mainly to provide the capacity necessary to supply peak demand volumes, also benefit those customers who make use of capacity at times other than peak periods.

The arguments of proponents of Seaboard or modified fixed variable, insofar as their cost-tracking nature are concerned, lack practical and logical force in view of the operational realities of the Public Service system. These realities are:

1. Interruptible customers have not been interrupted since February 1979.
2. During the test year peak day, interruptible customers took 95,065 Mcf.
3. Interruptible customers are served throughout the year, including on peak days.

4. Interruptible customers, under the present system, already pay lower rates than firm customers. These lower rates are directly attributable to use of United (25% of fixed costs allocated only to firm customers).
5. Interruptible customers are served by the Leyden storage facility in lieu of being curtailed, and this situation will continue in the future.
6. In view of the present gas surplus and the continuing physical ability of Public Service and CIG to deliver gas, it is highly unlikely that interruptible customers will be curtailed in the foreseeable future even on peak days.

With the exception of paying lower rates (due to United) and having what has proven to be only a hypothetical interruptible status, interruptibles are indistinguishable from firm customers. It cannot be disputed that interruptible customers are using (and benefiting from) the system in the same manner as firm customers. Likewise, it cannot be disputed that, from an operational standpoint, interruptible customers are imposing costs upon the system in the same manner as firm customers.

Since I&S 1525, where United was used, it cannot be said that interruptible customers are imposing less costs upon the system, or that firm customers are imposing more. For this reason, a shift to Seaboard, thereby reducing cost responsibility of interruptibles, is clearly not cost-tracking. In addition, a shift to Seaboard would increase demand costs and charges. According to proponents of a shift from United, a demand charge is mainly a charge for reserving system capacity on the peak day. However, the demand charge has lost some of its vitality in reserving peak day capacity since no one is being interrupted even on peak days. Therefore, it is not cost-tracking to increase the demand component when it is not serving its intended use from the standpoint of operational reality.

The record established in this Docket does not support a contention that United is less cost-tracking than Seaboard or an FV method. To the contrary, it would be less cost-tracking to abandon United in view of how the system is actually used (and will continue to be used) by firm and interruptible customers.

Finally, this Commission believes that if a gas surplus exists and market forces operate as claimed, the level of gas prices should decline for all customers, rather than using rate design to lower the level of gas prices to certain customers who have the ability to alternatively switch fuel while at the same time leaving the vast majority of customers who do not have that ability unaffected. Accordingly, we find that a change from United to Seaboard is inappropriate in this Docket.

B. Purchased Demand Cost Allocation

Public Service has proposed to assign all of the purchased demand costs charged by its pipeline suppliers to the Company's firm customers. Currently these charges are treated as fixed costs and are allocated accordingly, which results in some of these costs being recovered from interruptible industrial customers. Public Service takes the position that its suppliers' purchased demand costs are based upon their maximum daily obligations to Public Service. Public Service does not contract with its suppliers with a view towards being able to serve its interruptible industrial customers on peak day and, by definition, these customers have no right to service at any time the Company lacks either adequate supplies or capacity. Accordingly, Public Service contends that interruptible customers should not be allocated any of the costs incurred by Public Service for the guaranteed supply of a certain amount of gas on any day of the year.

We do not agree with Public Service that the peak nomination benefits only firm customers and is a cost incurred only for firm classes. This argument, of course, is equivalent to the argument that capacity costs of a pipeline are incurred only for peak day requirements which is not true. We find that interruptible customers benefit from the peak nomination (and therefore purchased demand costs incurred by the Company) anytime throughout the year that Public Service is able to take gas for interruptible customers use without exceeding its peak nomination. This is so, since the peak nomination imposes minimum

monthly charges upon Public Service. Whenever Public Service's gas takes for firm use are less than the nominated peak demand, Public Service is able to take additional gas for interruptible use without incurring additional demand charges. Similarly, the Company is able to take gas for future use by interruptible customers whenever the daily gas usage by firm customers is less than the nominated peak demand. Public Service's Leyden storage facilities are used to serve interruptible customers in lieu of curtailing them. The nominated peak demand virtually guarantees gas availability to Public Service's interruptible customers every day of the year except for peak days. In fact, Public Service's peak nomination was never exceeded during the test year and interruptible customers were served even on the peak day.

Even with a reduced nomination by Public Service to its gas supplier, it is still not likely that interruptible customers will be curtailed in the foreseeable future. The projected curtailment by Public Service was based upon the coldest weather experienced in the last 50 years. If such extreme weather did not occur, interruptions would be substantially less or non existent. Public Service witness Hassoldt said that there might be curtailments of 10,000 Mcf if weather was normal. The interruptible demand on the 1983 peak day was 95,065 Mcf. Furthermore, we could expect Public Service to attempt to buy gas under different tariffs before interrupting customers. In view of the present gas surplus, and the fact that there is no gas shortage expected in the foreseeable future, gas is likely to be available under some tariff. Finally, we would expect Public Service to use its Leyden storage facility before interrupting customers. The Company can withdraw up to 285,000 Mcf per day from Leyden. Since Public Service and its supplier, Colorado Interstate Gas Company (CIG) will have the same physical capability to deliver gas, we find that it is unlikely that Public Service would refuse to make an interruptible sale simply because its nomination may be exceeded. Accordingly, we find there should be no change in the present method of allocating purchased demand costs, and Public Service's proposal to place all purchased demand costs on firm customers is rejected.

C. Class Revenue Increases

Because we have agreed with the Staff that the United allocation method should be used, we find that there should be no increases to classes earning over an 8.37 percent return, that the decrease to the interruptibles should be held to 8.52 percent, that all other classes should be increased to 8.37 percent, and transportation should be increased to an 8.52 percent return.

D. Gas Transportation

In order to keep certain interruptible industrial customers from switching to alternate fuels, Public Service has agreed to transport gas purchased by them from sources other than Public Service. At the present time, this service is not regulated by the Commission and the price charged by Public Service is set by contract. However, the price charged is intended to reflect Public Service's margin for interruptible industrial sales. The gas transportation contracts between Public Service and the various transportation customers were voluntarily entered into by those customers, presumably after their determination that doing so was in their best interests.

In fact, gas transportation service is relevant in Phase II only because certain costs must be allocated to transportation service in order to determine the cost to be recovered through services rendered subject to this Commission's jurisdiction. This allocation was done by Public Service witness Moore on the basis of including as transportation customers the two customers which actually received transportation service during the test period.

The Multiple Intervenors proposed a pro forma adjustment for gas transportation customers which would have included in the cost of service study ten other gas transportation contracts, service pursuant to which commenced subsequent to the test year in this Docket. The rates charged the two customers vis-a-vis the ten transportation customers differ. The Multiple Intervenors contend that this disparate treatment of similarly situated customers will continue on an interim basis until the end of the next Public Service general rate case. The Multiple Intervenors further liken the pro forma adjustment proposed by them to the AMAX out-of-period

adjustment which was accepted by the Commission. The Commission recognizes, of course, that transportation rates are determined by contracts entered into between Public Service and each of its transportation customers. Given the limited reason for even showing gas transportation service in the cost-of-service study, to determine the cost properly allocable to the jurisdictional sales rendered by Public Service, we find that it was not arbitrary for Public Service to include as transportation service only the two customers who had signed contracts through the first quarter of 1984. We further find that the Multiple Intervenors reliance on the AMAX pro forma adjustment is misplaced for the simple reason that an adjustment was accepted by the Commission as a part of a settlement rather than ordered following litigation.

IX. SUMMARY OF FINDINGS OF FACT

1. Public Service is a gas, electric, and steam utility subject to the jurisdiction of this Commission.

2. The total revenue requirement increase for electric, gas, and steam departments is \$60,579,170 as found in Phase I of this Docket.

3. The following settlements are reasonable and are accepted by the Commission:

a. Tax depreciation should be allocated on the basis of total book depreciation and other tax deductions should be allocated on the basis of total net plant.

b. A further joint investigation of the items contained in Account No. 587 of the Uniform System of Accounts is appropriate in order to attempt to resolve how that account should be allocated in the future.

c. Staff and Public Service should work together toward a mutually agreeable method for determining demand elasticity by November 1, 1985.

d. The agreement between Public Service and AMAX relating to pro forma adjustments to test period consumption by AMAX and setting its opposition to the on-peak and off-peak demand ratchets.

- e. The agreement between Public Service and the OCC pertaining to the issue of maximum cost per Kwh for the SG class.
4. The following non-contested proposals are acceptable and are adopted.
 - a. The elimination of the shoulder period in the calculation of time-of-day rates.
 - b. Public Service's calculation of a service and facility charge for the minimum size meter.
 - c. Uniform increase to various rates within the street and area lighting rates.
 - d. Restructuring of the traffic signal light rate.
 - e. Shifting recovery of specific wheeling charges for the AMAX Henderson mine from the energy to the customer charge.
 - f. Income tax deductions for calculation of federal and state income tax.
5. The appropriate test year for establishing rates in Phase II is the updated test year ended December 31, 1983.
6. The use of the average and excess demand method with the excess allocated on the basis of non-coincident peak demand should be used to allocate production plant.
7. Although the non-coincident peak AED Method is being used in this Docket, it is not appropriate to foreclose future consideration of other methods which might be superior.
8. Notwithstanding certain problems with ABC identified in this Docket, the ABC Method may offer some potential in proving itself to be a superior cost allocation method.
9. Transmission general should be allocated on the basis of AED assigning no excess demand to interruptible and curtailable customers.
10. Transmission other should be allocated on the basis of separate AED with no excess for interruptible and curtailable customers.
11. Distribution substations should be allocated in the same manner as transmission other. Distribution primary and secondary should be allocated on the basis of an adjusted non-coincident peak for primary

and secondary, which is found in column 1 of Schedule H of Exhibit 381, and by use of an adjusted non-coincident peak for secondary systems, which is found in column 1, Schedule K of Exhibit 381.

12. Materials and supplies should be allocated on a disaggregated basis as proposed by Staff witness Wendling.

13. Fuels stock should be allocated on the basis of adjusted kilowatt hours.

14. The "other account" under materials and supplies should be allocated on the basis of total net plant.

15. Cash working capital should be allocated based upon a factor derived from allocations of 7 components of cash working capital as described by Staff witness Wendling.

16. Purchased demand operating expenses should be allocated by the AED with non-coincident peak method.

17. Non-fuel production O&M expense should be allocated on the basis of energy.

18. Distribution O&M should be allocated on the basis of the uniform system of accounts as proposed by the Staff.

19. Customer accounts should be allocated on the basis of the Public Service Special Study which made specific assignments for those expenses.

20. Customer services and information expense should be allocated on the basis of energy.

21. The Staff proposed expense subtotal including production O&M, transmission O&M, distribution O&M, customer accounting, and customer service is reasonable and should be adopted.

22. The Staff proposal to allocate injuries and damages, pensions and benefits on the basis of labor wages is reasonable and should be adopted.

23. Rents should be allocated on the basis of total gross plant.

24. General plant maintenance should be allocated on the gross plant subtotal.

25. The Staff allocation of Administrative and General expenses is more precise than the expense subtotal allocation proposed by Public Service.

26. Property tax should be allocated on the basis of total net plant, but miscellaneous taxes should be disaggregated into payroll taxes and then allocated on labor wages; the remaining miscellaneous taxes should be allocated on total gross plant.

27. The Uniform System of Accounts, as proposed by the Staff, can more accurately track the sources of other revenue.

28. Public Service's proposal to mix other revenue (Accounts 450, 451, 454, and 456) into an offsetting allocation expense to A&G expense is not adopted.

29. The 12-coincident peak method to allocate between jurisdictional and non-jurisdictional expenses is adopted.

30. No class should receive more than a 15 percent rate increase, no class should receive a decreased rate, and all other classes should be brought to a uniform rate of return. Public Service's service and facility charges for its electric customers are reasonable and are adopted.

31. Energy-related variable costs and fixed costs associated with fuel supplies and that portion of the cash-working-capital component associated with fuel supplies should be included in energy charges.

32. All costs allocated on the basis of AED should be recovered in the demand charge using customer monthly-maximum KW as the billing parameter.

33. It is reasonable that there be no time-of-day (TOD) energy differential and it is also reasonable to eliminate the shoulder period in the calculation of TOD rates.

34. Peak hours should be 8 a.m. to 10 p.m. on weekdays.

35. Off-peak hours should be 10 p.m. to 8 a.m. on weekdays and all hours on weekends and holidays.

36. The differential in demand charges between on-peak and off-peak of 1.64 is reasonable and proper.

37. Public Service, the Staff, and other interested parties should be charged with the analysis and development of a framework for the treatment of cost benefits that accrue because of the controllability or interruptibility of a particular rate class or customer load, and such a study should be completed and presented in Phase II of Public Service's next general rate case.

38. Public Service should provide hourly data on generator-unit utilization and purchases to the Commission and the Staff on a continuing basis in a machine-readable form.

39. Public Service should also provide the load research data for special contract customers.

40. Public Service should file optional TOD rates for at least the RD, SG, PG, and TG classes.

41. The Public Service proposal to eliminate the single-phase restriction for the C rate subject to a 10 KW limitation is reasonable and should be adopted.

42. The issue of wheeling of electric power should not be addressed in I&S 1640.

43. The contract period for interruptible rates should be five years, but Public Service, by tariff, should indicate that it will provide prospective customers with the necessary information relative to possible interruptions to the extent that it is possible for Public Service to do so.

44. The allocation of fixed costs to gas customers should be accomplished by the United Method.

45. No change in the present method of allocating purchase-demand costs is appropriate, and Public Service's proposal to place all purchase-demand costs on firm customers is rejected.

46. There should be no increases to gas customers earning over 8.37 percent return.

47. The decrease to interruptible gas customers should be held to 8.52 percent return.

48. All other gas classes should be increased 8.37 percent return

49. Gas transportation should be increased to 8.52 percent return.

50. Public Service's allocation of costs to gas transportation service is reasonable and should be adopted for purposes of this Docket.

51. Public Service should file tariffs embodying the cost of service and rate design principles enumerated here.

X. CONCLUSION

Phase II of I&S 1640 was very comprehensive and touched upon a wide variety of cost-of-service and rate-design issues as well as a number of ancillary matters which we have discussed in this Decision.

We recognize, of course, that cost-of-service and rate-design issues cannot be settled once and for all. However, it is our hope that the policies set forth in this Decision will guide the conduct of the Company and its customers for a period of time longer than merely the immediate future. In the meantime, we would anticipate that the gathering and processing of data will continue on an increasingly sophisticated basis which may make the resolution of cost-of-service and rate-design issues in the future more precise.

To the extent that specific issues have been raised by the parties which are not addressed specifically in this Decision, the Commission finds that the particular treatment advanced by one or more of the parties does not merit adoption by the Commission in this docket.

THEREFORE THE COMMISSION ORDERS THAT:

1. Public Service Company of Colorado shall file appropriate tariff sheets to reflect and implement the cost-of-service and rate-design principles set forth in this Decision at the revenue level found in Phase I of this Docket for the Gas, Electric, and Steam Departments, respectively. The tariffs shall be filed with the Commission on or before the 60th day subsequent to the effective date of this Decision and Order, and shall set forth an effective date no earlier than 30 days subsequent to filing. The tariffs shall make reference to this decision number. Any one or more of the tariff sheets shall be subject to the further order of the Commission.

2. The tariff riders filed by Public Service Company of Colorado pursuant to ordering paragraphs 4, 5, and 6 of Decision No. C84-598, dated May 22, 1984, shall be continued in effect until the effective date of the tariffs filed pursuant to ordering paragraph 1, subject, however, to further order of the Commission.

3. Public Service Company of Colorado, within 60 days of the effective date of this Decision and Order, shall file with the Commission proposed tariffs to implement the offering of optional time-of-day electric rates for RD, SG, PG, and TG classes.

4. Public Service Company of Colorado shall comply with Section VII, subsection B, as set forth above in this Decision pertaining to the provision to the Commission and its Staff of generator unit utilization and purchases in machine-readable form and load research data with respect to special contract customers. To the extent there is any disagreement between Public Service Company of Colorado and the Staff of the Commission about compliance with this ordering paragraph, Public Service Company of Colorado or the Staff of the Commission, as the case may be, shall submit an appropriate pleading to this Commission requesting specific clarification or enforcement of the provisions of this ordering paragraph.

5. This Decision and Order shall be considered to be a final decision subject to the procedural provisions of §§ 40-6-114 and 40-6-115, C.R.S.

6. Motions, if any, relating to attorneys' fees and expert witness fees shall be filed with complete time and charges, documentation, and justifications, on or before September 20, 1985. The motions will be subject to such disposition as the Commission subsequently may order.

7. The 20-day time period provided for pursuant to § 40-6-114(1), C.R.S., within which to file an application for rehearing, reargument, or reconsideration shall begin to run on the first day following the mailing or serving by the Commission of this decision.

8. This Order shall be effective 30 days from the date of this order, unless stayed by applicable law.

DONE IN OPEN MEETING THE 13th day of August 1985.

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

EDYTHE S. MILLER

RONALD L. LEHR

Commissioners

COMMISSIONER ANDRA SCHMIDT CONCURRING
IN PART AND DISSENTING IN PART.

COMMISSIONER RONALD L. LEHR CONCURRING ON AN ADDITIONAL, SEPARATE GROUND:

I agree with the retention of the United Method for gas demand cost allocation for the reasons stated in the Order. In addition to these reasons, I see another justification for refusing to adopt the Seaboard or modified fixed variable methods.

Testimony in this case showed that the Federal Energy Regulatory Commission (FERC) presently applies United to CIG. Since CIG supplies the overwhelming majority of Public Service Company's gas from the wholesale level, to achieve the often repeated request of parties who advocated the adoption of Seaboard or modified fixed variable for a consistent price signal from the wellhead to the burner tip, I believe that the Colorado Commission should await the FERC's action in changing from the United Method before considering favorably any request to change the method within the Colorado jurisdiction.

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

RONALD L. LEHR

Commissioner

COMMISSIONER ANDRA SCHMIDT DISSENTING IN PART:

"As a general proposition, rates, to the extent possible, should be cost tracking in providing service." Decision No. C79-1111, Page 108, Colorado PUC.

The Colorado Public Utilities Commission, at least since 1979, has established rates for Colorado utilities that track costs as far as possible while avoiding rate shock or discontinuities. Although the quotation above was contained in a discussion of electric rates, the Commission has repeatedly stated that the more cost tracking any allocation method is, the more appropriate the rate design can be. A rate is cost tracking that assigns the fixed costs to a set demand charge, and variable costs to a commodity charge whose unit cost is constant but varies with the number of units consumed. Because consumers respond to price signals over the long term by the level and pattern of their consumption, consumers should be given the proper price signals through cost-tracking rate designs. Moreover, non-cost-tracking rates result in inappropriate consumption decisions by consumers, causing market dislocations.

The Seaboard Method for gas cost allocation, approved by the Federal Power Commission (FPC), was in use for over 30 years, both at the national level and in Colorado, and provided a more cost-tracking method than United. In 1973 the FPC found it appropriate, because of the gas supply, to assign a greater portion of fixed costs on a commodity rather than a demand basis and instituted the United Method. In the early 1980's, with the gas supply improving, the Federal Energy Regulatory Commission, the successor to the F.P.C., in many cases returned to the Seaboard Method and, recently, has begun to assign even more than 50 percent of the fixed costs to the demand component rather than to the commodity component.

When the United Method was used, the FPC indicated that there were six reasons for the use of this Method as stated in today's full Decision. Witness Hassoldt, in unrefuted testimony, indicated that none of these six conditions currently exists. In addition, Witness Schantz

testified that 50 percent of the gas being marketed today is unregulated. The other half of the natural gas sold today is subject only to ceiling prices and often sells under the ceiling price. The Colorado PUC said in Decision No. C82-1281, discussing its change to the use of the United method:

The underlying justification for the current level of prices is an assumed scarcity. The price has been set so as to give customers a price signal concerning gas in order to influence their usage. It is important that a consistency in the signal sent to consumers be maintained. If it is appropriate to set the level of prices based upon an assumed scarcity, then it is also appropriate that the cost allocation methodology adopted also reflect that principle. The level of rates and their designs should be sending similar price signals to the consumer. The consumer should not be confronted with inconsistent signals, one with respect to the level of prices and another with respect to the cost allocation. The utilization of the United cost allocation methodology should therefore be continued. (Emphasis added.)

It is obvious from this quotation that this Commission began using the United Method because of the administration of prices following a perceived gas shortage, not because United better tracked costs. Neither the full administration of gas prices nor a gas shortage any longer exist. The current gas supply in Colorado is more than adequate for both peak day and annual requirements and Public Service Company has been fully able to supply all current customers' needs and prospects for expansion.

In addition, the increase in transportation by Public Service Company to certain customers of bargain natural gas indicates that a surplus exists in the natural gas market. It is clear that, due to the surplus, there is currently a weakening of the monopoly pricing at the wellhead. Although gas prices are still administered to some degree at present, it is evident today that oversupply is increasingly dictating a more competitive market.

When the FERC rejected the continued use of the United Method it wrote:

[T]he factors upon which the Commission based its [prior] decision are no longer present. Gas supply is adequate to meet demand. Natural [Gas Pipeline Company of America] is no longer curtailing its customers because of an inadequate gas supply and never curtailed its customers on a peak day. The large gap between the price of natural gas and the price of alternative fuel no longer exists. Large volume industrial users no longer receive price "discounts". 25 FERC at Page 61, 481.

The Office of Consumer Counsel and the Staff, who are the only opponents to the Seaboard Method, have virtually nothing to say in favor of the United Method beyond the fact that its use brings lower prices to residential customers. Multiple Intervenors point out in their statement of position that the increased cost to Public Service Company's gas customers, under Seaboard, is an illusion. They say that the contention is mistaken in two key respects:

(1) If sufficient interruptible sales are retained or recaptured by Public Service Company, the cost charged to firm customers would decrease rather than increase, and

(2) Even if interruptible sales are not improved, the increased cost of the average residential gas customer is only 12 cents per month or less than \$1.50 per year from a shift to Seaboard.*

* In 1979, in I&S No. 1330, Public Service Company presented its first detailed cost-of-service study for gas service to this Commission and there they suggested a 50-50 split between demand and commodity. While Public Service Company did not object to the United Method in that case, though proposing Seaboard Method, Public Service Company did express "... concern that if gas prices approached those of alternate fuels, the United Method could force industrial customers off the system leaving the remaining customers to absorb the fixed costs currently absorbed by industrial customers." Colo. PUC No. C80-130. In I&S 1640, Public Service Company claims that their prediction has come true. Public Service Company, however, did not demonstrate that the loss of industrial sales was due specifically to the use of the United Method. Before Public Service's argument can be given serious weight the argument must be accompanied by irrefutable evidence. Therefore, I do not base my dissent on that argument.

In today's decision we have spoken with approval of the concept, though not the implementation, of the ABC cost allocation method for electric cost of service because it may more appropriately track costs than the current AED Method. We should also choose a natural gas cost allocation method which is more cost tracking. Five witnesses in this case, including Staff witness Orendorff, agreed that Seaboard is more cost-tracking than United. No one has contended that a 12 cents-a-month increase would cause rate shock.

The Seaboard Method gives equal consideration to peak day and annual usage and therefore, more precisely tracks the cost of providing service to in use customers. There is no longer a reason to impose a penalty upon consumption by assigning rates which have 75 percent of the fixed costs allocated to the commodity portion of the rate. I agree with Decision No. C82-1281 that price signals must be sent to all consumers to encourage conservation and avoid waste. Those signals must be sent, however, to all customers without discrimination, so long as rate shock and customer confusion are avoided.

It is important to note that the Seaboard Methodology is not an extreme or new one. It is the method used by this Commission for 30 years. It is in the middle ground between the United Method and a modified-fixed-variable method, also proposed in this proceeding, which allocates as little as 30 percent of the pipeline company's fixed cost to the commodity. Seaboard can be seen as a compromise between these two methods.

Because I believe that a price signal should reflect actual market conditions and be given to all consumers of natural gas, without favor to either residential or industrial customers, and because gas is neither in short supply nor fully administered as to price, I believe it is appropriate to re-institute the Seaboard Method at this time.

Therefore, I respectfully dissent from that part of the decision concerning the use of United Method for gas allocation.

(S E A L)



THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

ANDRA SCHMIDT

Commissioner

ATTEST: A TRUE COPY

Harry A. Galligan, Jr.
Harry A. Galligan, Jr.
Executive Secretary

INVESTIGATION AND SUSPENSION DOCKET NO. 1640

EXHIBIT LIST

PHASE II

Received into evidence March 6, 1985

A	Direct Testimony of James A. Ranninger
A-1	Rebuttal Testimony of James A. Ranniger
201,202,203,213	Exhibits of James A. Ranniger
B	Truncated Testimony of M. E. Giddings (Replaces prefiled testimony)
B-1	Rebuttal Testimony of M. E. Giddings - Truncated
B-2	Affidavit of M.E. Giddings adopting his truncated testimony Exhibits of M.E. Giddings
C	Direct Testimony of Jerry E. Sanders
204	Exhibit of Jerry E. Sanders with revised pages
205	Exhibit of Jerry E. Sanders
C-1	Rebuttal Testimony of Jerry E. Sanders
C-2	Rebuttal Testimony of Jerry E. Sanders (ABC methodology) Rebuttal Testimony of F. M. Farina
D	Direct Testimony of Richard A. Keyser
D-1	Rebuttal Testimony of Richard A. Keyser
D-2	Rebuttal Testimony of Richard A. Keyser (ABC methodology)
206 through 209	Exhibits of Richard A. Keyser
216	Exhibit of Richard A. Keyser
217	Exhibit of Richard A. Keyser
223	Exhibit of Richard A. Keyser
224	Agreement between PSCo and PUC Staff
225	PSCo Electric Department - Rate Comparison (4 pages)

INVESTIGATION AND SUSPENSION DOCKET NO. 1640

EXHIBIT LIST

PHASE II

226	PSCo Gas Dept. - Rate Comparison (2 pages)
227	PSCo reports FERC forms - 1982 (8 pages)
228	PSCo reports FERC forms - 1983 (8 pages)
229	Index FERC Rate Schedules (2 pages)
230	P.S.C.W. Volume No. 6 Tariff Sheets (2 pages)
	Large Commercial and Industrial Service
231	Nondisclosure Agreements (Staff exhibit?)
232	7th Page of document prepared by PSCo (Production of O&M correlation study)
Received into evidence 3-7-85	
233	Public Service Co. Sample of Secondary General Service Customers
E	Testimony of S. D. Atkinson
	Rebuttal Testimony of S. D. Atkinson
218 through 222	Exhibits of S. D. Atkinson
F	Testimony of John H. Moore
F-1	Rebuttal Testimony of John H. Moore
210 through 212	Exhibits of John H. Moore
234	PSCo.-Residential Sales Change I&S 1525 to I&S 1640 (12/83)
235	PSCO.-12 Gas Transportation Contracts.
G	Testimony of John M. Hassoldt
G-1	Rebuttal testimony of John M. Hassoldt

INVESTIGATION AND SUSPENSION DOCKET NO. 1640

EXHIBIT LIST

PHASE II

March 8, 1985

236 Northwest Pipeline, August 3, 1984 letter
to its customers.

March 13, 1985

239 AMAX - PSC
240 AMAX - PSC (settlement rates - original)
241 AMAX - PSC settlement rates - results

242 AMAX - PSC settlement rates - refined.
243 PSC Production Expense Allocation Study
H Testimony of Max E. Kiburz
H-1 Surrebuttal Testimony of Max E. Kiburz
237 Exhibit of Max E. Kiburz
238 Exhibit of Max E. Kiburz
I Testimony of Dennis R. Eicher
I-1 Rebuttal Testimony of Dennis R. Eicher
I-2 Cross-Rebuttal and Surrebuttal Testimony of
Dennis R. Eicher (filed 1-29-85)
I-3 Rebuttal Testimony on ABC methodology (filed
2-12-85)
244 thru 268 Exhibits of Dennis R. Eicher
269 Federal Register, Vol. 47, 168 pp. 38187-89
270 Set of Nondisclosure agreements for PSC.

INVESTIGATION AND SUSPENSION DOCKET NO. 1640

EXHIBIT LIST

PHASE II

March 14, 1985

J	Testimony of Radford L. Schantz
271 thru 284	Exhibits of Radford L. Schantz
285	Copy of FERC Decision -Texas Eastern Transmission Corporation case
K	Direct Testimony of Raymond E. Makul
K-1	Amendments to Direct Testimony of Raymond E. Makul
K-2	Rebuttal Testimony of Raymond E. Makul
286	WITHDRAWN
287	Exhibits of Raymond E. Makul (REM-1, REM-2, REM-3 REM-4)
L	Direct Testimony of Donald W. Orendorff
288 thru 295	Exhibits of Donald W. Orendorff
L-1	Surrebuttal Testimony of Donald W. Orendorff
296	Exhibit of Donald W. Orendorff entitled "Gas Issues to be Considered in Phase II."

March 15, 1985

M	Testimony of Jan W. Michael
M-1	Surrebuttal Testimony of Jan W. Michael
M-2	Surrebuttal Testimony of Jan W. Michael
M-3	Cross-Rebuttal Testimony of Jan W. Michael
297 thru 331	Exhibits of Jan W. Michael (308 Qualifications)
N	Testimony of David E. Peterson

INVESTIGATION AND SUSPENSION DOCKET NO. 1640

EXHIBIT LIST

PHASE II

O Testimony of Jeff N. Hoppe
333 thru 340 Exhibits of Jeff N. Hoppe
O-1 Cross-Rebuttal Testimony of Jeff N. Hoppe
341-342 Exhibits of Jeff N. Hoppe.
P Testimony of Suhas P. Patwardhan
332 Exhibit of Suhas P. Patwardhan
343 Revised Stipulation between OCC and PSC.
 (Replacement of Exhibit 286)

Received into Evidence March 20, 1985

Q Direct Testimony of Vinson Snowberger
Q-1 Rebuttal Testimony of Vinson Snowberger
344 Exhibit of Vinson Snowberger (VCS-5)
R Direct Testimony of Arthur M. Breipohl
R-1 Surrebuttal Testimony of Arthur M. Breipohl (1-2-85)
R-2 Surrebuttal Testimony of Arthur M. Breipohl (3-1-85)
S Prefiled Testimony of James M. Summers
S-1 Direct Testimony of James M. Summers.
S-2 Rebuttal Testimony of James M. Summers.
345 through 371 Exhibits of James M. Summers
372 Jan. 1, 1983 map showing principal transmission
 lines in the Western United States and Northwestern
 Canada.

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- 373 Composite Other Class for Peak Day January 1983.
- 374 A Time Differentiated Method of Classifying the
Cost of Electric Service by Breipohl, Larson and
Welch.
- 375 Breipohl Blackboard Diagram No. 1
- 376 Contract between Breipohl and the PUC
- 377 Modified Figure 3, Page 11 Adjusted, from Direct
Testimony of Breipohl
- 378 Comparison of Cost Allocation Factors for Flat and
Varying Load Classes (Modified Exhibit No. 27 of
James M. Summers)
- 379 Initial Output of Load Data Used on Surrebuttal
GGCC Quality Control
- 380 Comparison of Maximum Peak Demand as Filed by the
Company Versus Staff ABC Analysis (Surrebuttal
version)
- 380-Revised AMAX Energy Management Program for the Henderson
and Climax Mines.(late-filed March 29, 1985)
- Received in evidence March 21, 1985
- T Direct Testimony of Warren L. Wendling
- 381 through 392 Exhibits of Warren L. Wendling
- T-1 Surrebuttal Testimony of Warren L. Wendling
- 393 List of the Company's Interruptible Industrial Gas
Customers by Customer Number.
- 394 PSC Summary of Sales Lost to Alternate Sources by
Industrial Customers

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- 395 Late-filed exhibit (PSC update of Exhibit 393)
- 396 PSC Determination of Service & Facility Charges
Alternative Time of Day Rates
- 397 Service and facility charge Comparison 12 mos.
ended Dec. 1983
- 398 Gross Generation Plant Investment (Wendling's
Workpapers
- 399 Wendling's Partial Work Papers
- 400 Blackboard Diagram of Warren Wendling

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