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BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

CASE NO. WR-88-5

In the matter of St. Louis County Water Company, St. Louis, Missouri, for authority to file tariffs to increase water service provided to customers in the Missouri service area of the company.

APPEARANCES: Richard T. Ciottone, Vice President & General Counsel, 535 North New Ballas Road, St. Louis, Missouri 63141, for St. Louis County Water Company.

Douglas M. Brooks, Public Counsel, P.O. Box 7800, Jefferson City, Missouri 65102, for Office of the Public Counsel and the Public.

Andrew J. Snider and William K. Haas, Assistant General Counsels, P.O. Box 360, Jefferson City, Missouri 65102, for Staff of the Missouri Public Service Commission.

HEARING EXAMINER: Beth O'Donnell

REPORT AND ORDER

Date Issued: May 27, 1988

Dated Effective: June 8, 1988

St. Louis County Water Company

Case No. WR-88-5

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Procedural History

On July 10, 1987, St. Louis County Water Company (Company) of St. Louis, Missouri, submitted to this Commission tariffs reflecting increased rates for water service provided to customers in its Missouri service area. The proposed tariffs are designed to produce an increase of approximately 13.45% ($7,078,356) in charges for water service. By Order issued August 5, 1987, the Commission suspended these tariffs for 120 days to December 8, 1987. By Order issued August 28, 1987, the Commission suspended these tariffs for a further six months to June 8, 1988, established an intervention deadline for proper entities and set a procedural schedule.

By Order issued October 9, 1987, the City of Kirkwood, Missouri was granted its request for intervention status herein.

Pursuant to the Order of the Commission a prehearing conference was convened February 22, 1988, continuing to February 26, 1988, in which Company, the Commission's Staff (Staff) and the Office of the Public Counsel (Public Counsel) participated. The City of Kirkwood was not present and did not participate. The parties participating in the prehearing conference produced a hearing memorandum setting forth, among other things, the matters at issue. The hearing memorandum was executed by the three parties participating in the prehearing conference and sponsored by them as Joint Exhibit 1.

The matters at issue in this case were heard at the Commission's hearing room March 7-11, 1988. At the hearing the Commission granted the motion of its Staff to dismiss City of Kirkwood from participation in this case pursuant to the Commission's rule, 4 CSR 240-2.090(5).

Pursuant to the briefing schedule established by the Hearing Examiner, simultaneous initial briefs were filed April 25, 1988, and simultaneous reply briefs were filed May 5, 1988.

During the course of the Commission's deliberations the parties were requested to calculate and submit to the Commission reconciliations based upon hypothetical resolutions of the issues litigated in this case. The Commission's request and the submissions filed in response to it have been marked as late-filed exhibits and received into the record.

Findings of Fact

The Missouri Public Service Commission, having considered all the competent and substantial evidence upon the whole record, makes the following findings of fact.

The effect on the revenue requirement of the Commission's decisions on the issues litigated herein can be found in Exhibit 73 which contains an update of Exhibit 71.

I. Test Year and True Up

The parties have agreed to use a test year ending September 30, 1987, updated for known and measurable changes to December 31, 1987. Company requested a true-up audit and hearing only if it was unable to present to the Commission evidence of costs imposed by the government subsequent to January 1, 1988. In this regard, Company presented evidence in this case of the postal increase which became effective April 3, 1988.

The Commission finds the agreed upon test year as updated for known and measurable changes to be reasonable.

II. Rate Base Issues

A. Materials and Supplies-Stores

The Commission's Staff contends that an adjustment should be made to exclude from rate base amounts representing 1,063 out of 2,500 miscellaneous items kept in Company's stores which had no usage in the 12 months of the test year ending September 30, 1987, and 754 of such items having no usage for the 24 months ending September 30, 1987, for a total of 1,534 unused items. Staff admits that Company has made progress in management of its stores through the use of its automated inventory control system. Staff has recommended the Commission recognize in Company's revenue requirement in this case the expense for this automated inventory control system in the amount of $313,991.

Staff believes that Company has only partially utilized this system and, therefore, Staff recommends this adjustment to encourage Company to realize the additional savings it believes are possible through full implementation of the automated inventory control system. Staff decided, in deference to Company's management prerogatives and experience, to recommend allowing in rate base a safety margin of three units of each unused item.

Company argues that this adjustment is improper because the allowance of three units of an item is arbitrary and unrepresentative of the number of units of an item needed for a single occurrence. For example, Company points out that pipe comes in lengths of 12 feet to 20 feet long and one 3 foot length of pipe is useless. Company further contends that such pipe may not be used for years but will be needed immediately if a main fails. Company points out that Staff concedes that 30% of items unused during the test year of the last rate case were used in the test year of this rate case. Finally Company argues that operating decisions should be made by the Company's management not the Commission's Accounting Staff.

The Commission determines that the Company has shown that these items should be included in rate base. Company has persuaded the Commission that, under these circumstances, the decision as to whether these unused stores are needed is best left to the experience of Company's management. Since the automated inventory control system was not fully operational during the test year the Commission feels it is appropriate to leave the decision with management as to which regularly unused items should remain in stores in readiness for the unusual occurrence requiring an immediate response.

The Commission notes that Company's automated inventory control system is fully operational now or should become fully operational very soon. Given this fact, in future rate cases filed by Company the Commission expects to see Company supporting its stores inventory in greater detail based upon the objective analysis provided by its fully implemented inventory control system.

B. Materials and Supplies-Chemicals

Staff contends that an adjustment should be made to exclude from rate base amounts of chemical inventories held by Company in excess of a 30-day supply. To arrive at its adjustment Staff calculated a 30-day supply for each of the chemicals using a 13 month average level of storage and the average 30-day chemical usage during the test year. Staff contends that it used this approach because Company failed to use its automated inventory control system and because Company failed to delineate for Staff its specific chemical needs other than to respond that Company uses a general 30-day measure of adequate supply.

Company argues that it should be permitted to maintain the chemical inventory necessary for the varying water conditions which can and do arise and not be penalized for maintaining more than the chemical inventories actually used for the average of conditions materializing in the test year. Company points out that it has a responsibility for safe and adequate service at all times which requires that it store sufficient chemicals to meet "worse-case" conditions for which averages are valueless in determining the 30-day minimum supply needed.

Company cites two examples of chemicals which it contends must be kept in inventory at levels greater than Staff has allowed. Company states that Staff has allowed in inventory only enough ferric sulfate for 7 days should unusual conditions of high turbidity occur given normal river flow and considering the amount of delivery time which this chemical can require. However, Company has experienced periods of high turbidity lasting up to 10 days.

Another chemical specifically addressed by Company is activated carbon. Company states that, should an unusual problem with taste and odor occur, Staff has allowed less than one day's supply of activated carbon given an average level of river flow. However, Company has experienced periods of a week or more of unusual problems with taste and odor. The delivery lag for activated carbon is 3 to 6 days.

The issue here is whether there are circumstances under which normalization of chemical stores is inappropriate in setting rates for a water company. The Commission believes there are situations where the capability of a company to maintain the quality of its water service is dependent on the maintenance in stores of chemicals unused or little used during the test year. In this category are chemicals used in high quantities during unusal events which have a delivery lag outrunning the expected length of the unusual event, such as ferric sulfate and activated carbon. Under these circumstances the maintenance of chemicals above the normalized level may be necessary for the provision of safe and adequate service. When this occurs the Commission is of the opinion that rates should reflect these abnormal levels of chemicals provided the level of such chemicals reflected in rate base can be reasonably supported.

In view of the foregoing the Commission determines that the Company has shown evidence of the need for higher than normal levels in inventory of chemicals stores. However, the Commission notes that in future rate cases it expects Company to support its level of chemical stores in greater detail based upon the objective analysis provided by its fully implemented, automated inventory control system.

C. Cash Working Capital

Staff contends that the cash working capital included in rate base should be reduced by the amount of funds precollected from ratepayers to pay long-term debt obligations. Staff believes this treatment is appropriate because the funds are supplied by the ratepayers and the Company has the use of the funds before payment to bondholders. Staff points out that this approach is consistent with the long-standing policy of the Commission.

The Company argues that bond interest should not be considered in determining the requirements for cash working capital. However, if bond interest is considered for these purposes Company contends that all items "below-the-line" should be netted against one another and then considered in establishing the requirements for cash working capital. Consistent with this approach Company contends that payment of preferred stock dividends and net operating income available to common stockholders should be considered in establishing the requirements of cash working capital.

Company further argues that Staff's position of including only bond interest for consideration in cash working capital is an extreme position favoring ratepayers over shareholders. Company contends that the Commission should reconsider its policy in this regard.

Company believes that Staff's position is further exaggerated by incorrectly using synchronized interest rather than pro forma interest in calculating the offset from cash working capital for bond interest. Company argues that synchronized interest is a fictitious amount that overstates the actual interest that Company will pay bondholders through a calculation that multiplies the weighted cost of debt times rate base.

Staff responds that the synchronized interest used in calculating the offset for bond interest deducted from cashing working capital is exactly the same amount of interest dollars that the Company actually collects from ratepayers and is therefore not fictitious in its effect upon the ratepayer.

The Commission determines that the offset to cash working capital recommended by Staff is reasonable and should be accepted. This approach is consistent with the Commission's long-standing policy. The Commission considers net operating income an inappropriate addition to cash working capital since it does not require a cash outlay by Company. Further, the Commission has recognized a distinction between debt interest and shareholder earnings. The Commission has viewed bondholders as creditors and shareholders as owners and has avoided including preferred dividends in considering cash working capital since these dividends represent earnings. In re: Kansas City Power and Light Company, 23 Mo. P.S.C. (N.S.) 474, 488 (1980). In re: Missouri Public Service Company, 24 Mo. P.S.C. (N.S.) 1, 9 (1980). In re: Kansas City Power and Light Company, 24 Mo. P.S.C. (N.S.) 386, 418 (1981). Company has not advanced any arguments in support of its position here which have not been considered and rejected in previous Commission cases with the exception of the argument as to synchronized interest.

The Commission determines that Staff's approach of using a synchronized interest calculation to arrive at the offset from cash working capital is reasonable because this represents the actual amount of interest collected from ratepayers. Due to the effect of investment tax credits (ITC) taken by the Company in the past, Company earns, in effect, a return on the revenue collected from the ratepayers to pay interest to bondholders since the ratepayers are required to provide funds to the Company as if the ITC does not exist. It is appropriate, therefore, that the offset to cash working capital for funds pre-collected to pay long-term debt obligations reflect this reality.

III. Rate of Return

Staff and Company agree that Company's capital structure consists of 43.40% common stock equity, 0.21% preferred stock and 56.39% long-term debt. Staff and Company further agree that the embedded cost of Company's long-term debt is 9.44% and the weighted cost of Company's preferred Stock is 0.01%. Staff and Company disagree on Company's cost of equity. Public Counsel took no position on Company's capital structure.

Both Company and Staff used the discounted cash flow analysis (DCF) to arrive at a recommended cost of common equity. The Commission has adopted the DCF model in previous cases as a reasonable method for determining the return on equity for a public utility company. In re: Arkansas Power and Light Company, 28 Mo. P.S.C. (N.S.) 433, 472 (1986). The DCF analysis estimates the required return on common equity by dividing the stock's expected dividend by the stock's current price to produce a yield which is then added to its expected growth rate. However, there are some differences between Company and Staff as to the data on which the DCF analysis should be based.

Since Company's stock is not publicly traded both parties chose eight water companies with publicly traded stock to determine the growth rate and yield factors in the formula. Staff's witness Kemp recommended a range for rate of growth from 6.2% to 6.5%. These growth rates were based on the historical dividends per share of the eight companies analyzed. Company appears to take no real issue with this result.

Kemp recommends a range for dividend yield of 5.8% to 6.7%. The low point of the range, 5.8%, is based upon the monthly average dividend yields of the eight-company composites for July through September, 1987. The high point of the range, 6.7%, is based upon the monthly average dividend yields of the eight-company composite for October through December, 1987.

Kemp believes that the yields rose during the period October through December because of the correction that occurred in the stock market in October, 1987. However, Kemp argues that the pre-correction yields should be retained in calculating the yield portion of the DCF formula because he views the events of October as an over-correction and believes that the yields will seek their pre-October level relatively quickly. Kemp supports this view by pointing out that yields in February averaged 6.3% and yields in the first week of March averaged 6.23% compared to a January average of 6.68%. Therefore, Kemp argues that the yields are falling to their pre-October average of 5.8%.

Based on his DCF analysis, Kemp recommends a range for return on equity of 12% to 13.2%. Kemp reveals no preferred return within his range but Kemp observes that both the growth rate and the yield factors are declining for the eight water companies analyzed. Kemp further recommends that the return selected be applied to a rate base valued at the original cost of $139,687,793.

It is with the yield element of Staff's DCF analysis that Company takes issue. Company points out that if the pre-correction yield average is dropped from Staff's analysis, Staff's recommended range for cost of equity changes to 12.9% to 13.2%. Company notes that if the more recent yields occurring in January and February, 1988 (6.68% average yield for January and 6.30% average yield for February) are inserted in place of the pre-correction data, Staff's recommended cost of equity ranges from 12.8% to roughly 13.2%. Company argues that these two approaches are more representative of current, post-correction conditions in the market.

In addition, Company argues that all but the high point of Staff's recommended return on equity is insufficient to maintain Company's interest coverages at the level Company contends is required by Federal Power Commission v. Hope Natural Gas Company, 320 U.S. 591 (1944). Hope requires a return "sufficient to assure confidence in ... (the Company's) financial integrity ... (and) maintain its credit...."

Company states that its 1986 level of fixed charge coverage was 2.08 which would drop to 2.03 at Staff's recommended mid-range of return on equity. Staff responds that the pre-tax interest coverage associated with its recommended return on equity (from 2.55 to 2.71) is well above the requirement of Company's indentures. The evidence is undisputed that Company's indentures require a 2.00 pre-tax interest coverage. The Commission notes that Company's figures for fixed charge coverage refer to after-tax figures which are not exactly comparable to Staff's figures for pre-tax interest coverage. Staff's figures for pre-tax interest coverage are comparable to the 2.00 requirement in Company's indentures.

Company defines its "fixed-charge coverage" as the number of times the annual interest on all forms of debt, and preferred dividends on all classes of preferred stocks are exceeded by the dollars of operating income available to pay such interest after payment of all operating costs, including among others income taxes and the annual charge for depreciation.

Staff further argues that because interest coverages fluctuate with the financial operations of Company, the issue is not whether interest coverages are maintained at previous levels but rather whether the return is sufficient to assure confidence in Company's financial integrity and maintain its credit as required by the Supreme Court's decision in the Hope case. Staff maintains that the return is sufficient for these purposes.

Another area of disagreement between Company and Staff concerns the significance of the current difference between the market and book values of the stocks of the eight water companies chosen as surrogates to develop Company's cost of equity. Company contends that it is necessary to make a market-to-book ratio adjustment to the yield portion of the DCF equation in order to obtain the appropriate cost of equity to be allowed on book values of common equity. Company argues that this adjustment is necessary because the current values of the publicly traded stock of these eight water companies indicate that their market value is in excess of their book value. Given this circumstance, Company argues that a return based upon book value will guarantee returns to Company below those being earned by the surrogate water companies resulting in the price of Company's stock being driven down to its book value. As a result of its market-to-book adjustment, Company argues that a return on equity of 14.25% is reasonable when applied to its rate base valued at an original cost of $139,687,793.

Staff argues that this adjustment is inconsistent with the goal of establishing just and reasonable rates as required by Section 393.150, RSMo 1986. Staff contends that the market-to-book adjustment sponsored by Company is designed to maintain high market-to-book ratios resulting in returns greater than the actual cost of equity thereby providing shareholders with excessive returns.

As an alternative to its market-to-book adjustment of the DCF-derived return on equity, Company argues that a DCF-derived return on equity, unadjusted for market-to-book differences, could reasonably be applied to a rate base valued to reflect the fair value of its common equity component. Company argues that either the return on equity or the rate base must reflect the current value of common equity.

Company argues that the law in Missouri requires that the Commission take into consideration the fair value of rate base in establishing a rate of return for Company. Company contends that the Commission has a policy for evaluation of rate base which only gives lip service to that requirement. Company believes it has provided the Commission with an opportunity to give the fair value component of rate base meaningful consideration.

The Commission's Staff agrees that the law in Missouri requires that the Commission consider the fair value of rate base in establishing a rate of return for Company but contends that fair value is only one of the elements the Commission must weigh in doing so. Staff contends that the Commission has done this in previous cases and need not change its approach here to satisfy this requirement.

Staff further argues that a valuation of Company's rate base at current levels is inappropriate because all appreciation in the value of the utility plant over book value is treated as equity in Company's approach. Staff points out that Company's fair value equation ignores investments in the rate base by customers through contributions in aid of construction and would require customers to pay shareholders a return on the appreciated value of utility plant provided by the customers. Staff further argues that it is not necessary to use either a trended capitalization rate base or a market-to-book adjustment because investors know that their return will be based on assets valued at original cost by the regulators.

Finally, Staff argues that if the return on equity is applied to a fair value rate base it should be adjusted so as to return the same dollar amounts as would have been obtained by applying Staff's recommended return on equity to an original cost rate base.

The case law in Missouri requires that the Commission, in setting just and reasonable rates, must consider the "fair 'value of the [utility's] property'" as a relevant factor in its proper relationship to all other facts having a material bearing upon the establishment of rates. State ex rel. Missouri Water Company v. Public Service Commission, et al., 308 S.W.2d 704 (Mo. 1957). State ex rel. Joplin Water Works Company v. Public Service Commission, 495 S.W.2d 443 (En banc 1973). The Commission has a policy of considering the fair value of a utility's rate base as part of the process of establishing just and reasonable rates. In re: Verona Telephone Company, 17 Mo. P.S.C. (N.S.) 62 (1972). In re: Kansas City Power and Light Company, 28 Mo. P.S.C. (N.S.) 228, (1986). The Commission will continue this policy in this case.

The Commission determines that neither of Company's "current value" options is necessary in establishing a reasonable return on equity for Company. As Staff has pointed out, investors are aware that the returns on equity for regulated companies are based on assets valued at original cost and they take this factor into account in their investment decisions.

Company's alternative approach of adjusting the DCF-derived return on equity for market-to-book differences is unreasonable. As pointed out by Staff's witness Kemp a utility earning book return greater than its cost of equity will have a market value higher than book value. Customers in that instance are providing a greater return to the Company than is required. Kemp points out that it is appropriate to apply the DCF analysis unadjusted for market-to-book differences because in doing so share price will be driven to book value thereby preventing customers from providing excessive returns to shareholders. This approach balances the interests of shareholders and ratepayers.

Thus, the Commission believes that Company has not shown that the DCF analysis which the Commission has adopted in previous cases as a reasonable method for determining the cost of equity is inappropriately applied in this case. In re: Arkansas Power and Light Company, supra.

Therefore, the Commission determines that the appropriate return on equity for Company in this case should be the DCF-derived return applied to its rate base valued at original cost.

The Commission finds that it is reasonable to adopt the growth element calculated by Staff in its DCF analysis. There is no real argument between the parties as to the reasonableness of this element of the DCF calculation performed by Staff. However, the Commission determines that the Company's criticism is well taken as to the low point of Staff's yield element in its DCF calculation. This low point represents data from the yields of the eight surrogate water companies prior to the October market correction. The Commission believes that it is more reasonable to base the yield element of the DCF calculation on yield data gathered subsequent to the market correction of October. Therefore, the Commission will base Company's return on equity on the average yield for the eight surrogate water companies based on data from October, 1987, through February, 1988. Using Staff's range of growth factors (6.2% to 6.5%) and adding to them the average post-correction yield factor of 6.6% the Commission determines that the appropriate range for return on equity for Company is 12.8% to 13.1%.

As Staff observed, the growth rates for dividends of the eight surrogate water companies have been declining over the last ten years. Further, the yield factor for the eight-company composite has been declining rapidly since January, 1988, from a high of 6.68% to a low in the first week of March of 6.23%. Thus, the Commission is of the opinion that Company's return on equity should be at the low end of the range the Commission has found reasonable.

In view of all the foregoing, the Commission determines that Company's return on equity should be 12.85% resulting in an overall rate of return of 10.91%.

IV. Operating Expenses

A. Postage

Company desires to include in its operating expenses the postage increase which went into effect April 3, 1988. Company argues that this is merely a price increase to be applied to postage expenses occurring during the test year to facilitate proper matching of revenues and expenses for the year in which rates will become effective. Company notes that the postage rates will be in full effect prior to the effective date of the rates set herein.

Staff opposes including in rates the postage increase because the increase occurs outside of the test year ending September 30, 1987, and outside of the period providing for known and measurable changes which ends December 31, 1987.

Public Counsel argues that this additional expense would create a mismatch since it occurs outside the test period while ignoring all other revenue, expense and rate base changes that have taken place during the same period.

The Commission determines that the postage increase should be considered in setting rates in this case because the increase is an expense that the Company will actually be experiencing at the time the rates established herein go into effect. The amount in question is known and measurable. Ordinarily adjustments to test year expenses are confined to those permitting a matching of revenues and expenses.

However, when such known and measurable increases in expenses occur it is more equitable to allow such an expense to be reflected in the revenue requirement than to disallow it for the sole reason that corresponding revenues may be lacking. In re: Citizens Electric Corporation, 24 Mo. P.S.C. (N.S.) 450, 457 (1981).

B. Rate Case Expense

Company proposes to include in its cost of service not only the amount of $27,197 representing the rate case expenses incurred in previous cases but also its estimate of the expense for its current rate case.

Staff argues that the cost of the current rate case should be disallowed and that the revenue requirement should reflect rather the total rate case expense on Company's books minus amortizations of previous cases which expired December 31, 1987. Staff argues that this approach reflects the on-going level of rate case expenses considering the Company's actual rate-case activity over the last 10 years. Staff contends that this approach conforms to the Commission's policy as reflected in its decision in In re: Kansas City Power & Light Company, 26 Mo. P.S.C. (N.S.) 104, 114 (1983).

Public Counsel argues that rate case expense should be equally shared by ratepayers and shareholders. Public Counsel further argues that the bulk of Company's rate case expense in recent cases, including this one, has been incurred for the retention of outside consultants to testify on the need for a higher rate of return than that recommended by Staff. Public Counsel concludes that higher rates of return benefit shareholders more than ratepayers. Finally, Public Counsel urges that the Commission decide this issue with reference to its holdings in the KCPL and APL cases. In re: Kansas City Power & Light Company, 28 Mo. P.S.C. (N.S.) 228 (1986). In re: Arkansas Power & Light Company, 28 Mo. P.S.C. (N.S.) 435 (1986).

In the KCPL case the Commission rejected Public Counsel's sharing proposal for rate case expense because it adopted its normalization proposal. The Commission indicated it would continue to evaluate in the future the concept of sharing rate case expense. In the APL case the Commission adopted the sharing proposal.

The Company argues that Staff's approach is inappropriate because Company has been requesting rate relief annually and expects to continue do so. Company asserts that Staff's approach is unrealistic because water utilities are capital intensive with limited offsetting technological efficiencies. Company believes future revenue requirements will probably increase due to the 1986 amendment of the Safe Drinking Water Act.

Company also argues that sharing of rate case expenses by shareholders is unwarranted since the present situation is distinguishable from the APL case.

The Commission determines that Staff's approach is appropriate for establishing the revenue requirement in this case. As Staff notes, Company's estimate of its rate case expense for this case is not a known and measurable amount. Assuming that Company is correct in its prediction of filing yearly rate cases in the future, it can recover the cost of this and subsequent cases in future normalizations of rate case expense.

The Commission does not believe that this is an appropriate case for adopting Public Counsel's concept of sharing rate case expense between the ratepayers and the shareholders. This case is clearly distinguishable from the APL case where the Commission found that APL had exceeded reasonable bounds by filing four rate cases in a period of nine months.

C. Dues, Donations and Miscellaneous Expenses

Staff argues that certain miscellaneous expenditures should be excluded from operating expenses. These expenditures fall into two broad categories. The first involves expenses for items given to Company's employees including flowers, gifts and picnics as well as meals provided to Company's employees required to attend meetings held outside of business hours.

The second category includes payments to outside organizations such as the American Association of Retired People and the National Association of Manufacturers as well as donations to charitable causes. The Staff argues that these expenditures violate the Commission's long-standing policy of allowing in operating expenses only those expenditures shown to benefit ratepayers directly.

Company argues that these expenditures are necessary in order to provide safe and adequate service. Company contends that some of the expenses are necessary to purchase good will for Company in a community where Company must acquire easements and occasionally dig up properties. Company states that other expenditures are a form of compensation for employees which help keep the employees' morale high and turnover low thereby maintaining the quality of service for the ratepayers. In the case of the meals provided at mandatory meetings the Company views these meals as payments to employees in lieu of overtime since the meetings are held outside business hours. Company holds these meetings outside business hours so that employees will not be diverted by such meetings from the pursuit of rendering quality water service.

The Commission determines that the expenditures benefitting Company's employees should not be included in the cost of providing service since there is no convincing evidence of direct benefit to the ratepayers. In re: Missouri Public Service Company, 25 Mo. P.S.C. (N.S.) 139, 146 (1982) quoting In re: Kansas City Power and Light Company, 24 Mo. P.S.C. (N.S.) 386, 400 (1981). In re: Union Electric Company, 25 Mo. P.S.C. (N.S.) 194, 199 (1982).

As to the payments to outside organizations and charitable concerns, it is doubtful that Company will be unable to acquire easements and dig up properties without paying dues to the Missouri Historical Society or making contributions to the League of Women Voters. Ratepayers should not be made unwitting contributors to the charitable concerns preferred by Company. Nor did Company maintain that any of these organizations promote the industrial development of its service area. In re: Missouri Public Service Company, 17 Mo. P.S.C. (N.S.) 95, 100 (1972).

The issue here is not the worthiness of the charitable organizations to which the Company contributed, but rather the fact that ratepayer dollars are flowed through to any charitable organization, whether the individual ratepayer would have chosen to make that contribution or not. A utility customer should not be made an unwilling contributor, through payment of utility rates, to a charity which he or she might not personnally support. The Company may find it appropriate and desirable to contribute shareholder dollars to charitable causes in the community which Company serves. However, the Company's rates should not include such contributions.

The Commission notes that the Company made a contribution to the Missouri Council on Economic Education in the amount of $1,500 to help fund the program known as the Balancing Act. It is the purpose of the Balancing Act to educate Missourians about utility regulation. This contribution was made March 16, 1988, and therefore represents an isolated, out-of-period adjustment.

The Commission is of the opinion that programs such as the Balancing Act directly benefit the ratepayers since they foster an understanding of how utility companies are regulated. Accordingly, the Commission believes that this expense should be included in Company's cost of service. Although this expense represents an isolated out-of-period adjustment, when such a known and measurable expense occurs it is more equitable to allow it to be reflected in the cost of service than to disallow it for the sole reason that corresponding revenues may be lacking. In re: Citizens Electric Corporation, supra.

D. Office Building Rental Expense

Staff argues that Company's revenue requirement should be reduced to reflect the amount by which Staff believes Company should increase what it charges its parent corporation, Continental Water Company (CWC), for occupying part of the building Company rents for its offices. Staff argues that Company's allocation of building space between CWC and itself is unfair to the ratepayers because CWC is not charged for common areas without which its employees would have no access to their offices and bathrooms. Further Staff argues that under Company's approach CWC pays nothing for two offices occupied by employees who work for both companies.

Company admits that there are inequities in the allocation of rent between itself and CWC but that these inequities offset one another and do not disadvantage Company's ratepayers. Company suggest that if Staff wishes to allocate to CWC common areas used by CWC, Staff should likewise adjust jointly used areas now fully allocated to CWC under the Company's present approach.

The Commission determines that Company has shown that its allocation is a reasonable method by which to charge CWC for the space it occupies. Thus, the Commission believes that Company's approach is not unfair to ratepayers. As Company points out CWC pays for a vacant office within the area assigned and pays entirely for a reception area occupied by the only secretary for Company's legal department. CWC also pays for hallways adjacent to the area assigned it which are used by Company's employees.

In view of the foregoing, the Commission finds that Company's revenue requirement should reflect the amount questioned by Staff.

E. Amortization of Roof Repair

Staff argues that Company's revenue requirement should be reduced to reflect an amortized amount expensed on Company's books during the test year for roof repairs made to Company's previous office building which was sold at a gain of $132,336 in 1983. Staff contends that the rate case in which the Commission decided to amortize the expenditure for this roof repair contains no guarantee that the Company realize all amortized amounts. Staff argues that ratepayers derive no benefit from a building the Company no longer owns. Staff asserts that the purpose of amortization is to allow recovery of an expenditure over the beneficial life of the expenditure.

Company argues that the amount should be recognized in rates because it represents an incomplete amortization of an unusual one-time maintenance expense. Company contends that the amount does not represent an amortization of a capital investment in the value of the building to be recovered from the gain realized in the sale. In support of its viewpoint Company points out that the Commission did not authorize rate base treatment of this expense in its order amortizing the expense.

The Commission determines that the Staff's recommended disallowance is reasonable and should be adopted. Although the Commission did not authorize rate base treatment for this expense it did authorize amortization of the expense over the useful life of the asset. In re: St. Louis County Water Company, 23 Mo. P.S.C. (N.S.) 63, 65 (1979). The Commission explicitly stated that the depreciation basis for this adjustment would not be binding in other proceedings. Once sold the beneficial life of the asset ceased for Company and its ratepayers.

F. Payroll

1. Employee Levels

Company wishes to reflect in its cost of service salaries for all jobs authorized and budgeted before December 31, 1987 thereby including in rates payroll costs associated with positions unfilled by the close of Staff's audit. The period selected in this case for known and measurable adjustments to the test year ends December 31, 1987.

Staff opposes including the cost for these unfilled positions in rates because of the length of time before Company plans to fill these positions and because Company has shown a history of filling these positions at salaries different from the amounts budgeted for the positions. Therefore Staff argues that the amounts in question are not only outside the period of Staff's audit but are not known and measurable and are unmatched with revenue and rate base elements for the period in question.

Company argues that these positions should be included in its cost of service because the positions were authorized by the Board before the end of 1987 and there is a high certainty that these positions will be filled.

The Commission determines that the four unfilled additional positions shown in Staff's Exhibit 52, Schedule 3-7 should not be reflected in Company's revenue requirement because the amount to be paid to prospective employees is not now known and measurable. However, the Commission believes that Company's revenue requirement should reflect the positions already filled by Company because the amount to be paid these employees is now known and measurable.

2. Handheld Meter Reading Devices

Staff argues that Company's revenue requirement should be reduced to reflect labor savings associated with placing in service a new, handheld meter reading device. Staff argues that, since Company is taking the expense of these handheld devices as a cost of service adjustment occurring outside the test year and the period of adjustment for known and measurable items, it must also recognize the out of period labor savings associated with its implementation.

Company responds that these labor savings should be offset against increases in labor costs which would show that there is no net labor savings. Company contends that no positions will be eliminated as a result of the handheld devices although it admits that some labor hours may be redirected to other activities. Company also argues that the alleged labor savings should not be considered in calculating Company's cost of service because they would not occur until after December 31, 1987, which is the end of the known and measurable period.

The Commission determines that this adjustment to Company's revenue requirement should not be adopted because the labor savings in question are merely an estimated savings. If Company files a rate case in the coming year as it has stated it will, the extent of these savings, if any, will be known and can be reflected in Company's revenue requirement.

3. Overtime

Staff and Company disagree on how overtime hours should be reflected in the rates to be set in this case. Company contends that test year overtime hours are normal and representative of what is likely to occur in the year during which rates will be in effect. Staff normalized Company's overtime hours by using a 3 year average. Staff then subtracted from that average 781 hours representing the lack of overtime work during the test year in four of Company's departments.

In support of its position Company states that it has experienced an increase in overtime over the past few years which indicates a trend of increasing overtime. Company attributes this trend to increased economic development in part of its service area. The construction activities associated with this development result in Company's crews having to repair Company's own facilities during overtime hours. Company does not foresee a reduction of overtime activity in the future.

Company also opposes Staff's subtraction of 781 hours from the normalized overtime figure. Company notes that Staff rejected the test year figures in favor of a normalized figure. Company contends that it is illogical to then reduce the normalized figure by actual test year experience.

Staff notes that Company provides no testimony to support its contention that growth in construction and development will persist. Staff asserts that such activity varies based on market conditions. Rather than attempt to forecast future market conditions Staff believes normalization of historical overtime hours is the better approach. Staff used normalization because the level of overtime experienced by Company in the last few years has fluctuated.

The Commission determines that Staff's normalization is the more reasonable of the two approaches offered for predicting the level of overtime hours. Company has not established that a continuing trend of development will occur.

However, the Commission believes that it is inconsistent to normalize the test year as unrepresentative and then use data from the test year to adjust the normalization.

In view of the foregoing, the Commission will adopt the Staff's recommendation to normalize the test year overtime levels without its final step of subtracting 781 hours.

4. <u>Salary Increases Granted to Non-Union Employees and Officers</u>

Company granted a salary increase to non-union employees of 4.1% December 1, 1986, and a salary increase of 6.32% to Company's officers April 1, 1987, as well as an increase in salary of 4.5% to non-union employees December 1, 1987. Company wishes to include these expenses in its cost of service.

Staff adjusted the salary increases granted by Company to its non-union employees to reflect a 3.5% increase during the test year and a 3.5% increase during the period of adjusting for known and measurable changes to the test year.

Staff argues that a wage increase above 3.5% for non-union personnel, including Company's officers, should not be reflected in Company's cost of service because Company provided no support for the level of increase chosen. Staff notes that Company has no formal plan for salary administration nor does it contemplate formulating one. Staff contends that Company's decision on the appropriate salary increase is based on personal evaluations by Company's president of the state of the Company and the economy as well as his evaluations of salary levels outside the Company based on personal contacts and informal evaluations of news sources. Staff argues that this system is inappropriate for the largest water company in the state with approximately 500 employees.

Staff is not reassured by the salary surveys which Company has provided as support for these wage increases. Staff doubts the usefulness of these surveys which were prepared solely for the purpose of this rate case and did not form the basis for the decision by the Company on the amount of the wage increases. Staff states that the surveys themselves constitute no support for the salary increases given the variance between the characteristics of the surveyed companies and the characteristics of St. Louis County Water.

In the absence of what it believes to be meaningful evidence to support the amount of the salary increases and with no showing by Company of problems with turnover, Staff chose to recommend that Company's cost of service only reflect a wage increase for non-union personnel, including officers, of 3.5%. Staff adopted a salary increase level of 3.5% as a surrogate figure in lieu of the figures set forth by Company for which there was no justification. Staff states that it did not possess the resources to conduct its own salary study. The surrogate figure is based upon the wage increase granted the Company's union employees as a result of arms-length negotiations with their union.

Company argues that it need not justify its salary increase but need only show that the resulting salary levels are just and reasonable. Company contends that the studies it provided show that the non-union salaries are just and reasonable because they are within a reasonable range of the median salary levels for similar positions in the companies included in the surveys. Company further contends that the variance between the characteristics of the companies represented in the study and its own characteristics is meaningless given that Company draws its prospective employees from the business community in general. Company argues that it is important for its employees to have decent salaries to avoid turnover which could have a negative impact upon the quality of service it offers to its ratepayers.

Company asserts that Staff's use of the union wage increase as a surrogate for the appropriate salary increase is unreasonable because it is the product of a give-and-take negotiation where nonwage items of value such as insurance are considered resulting in a final increase in wages which may not reflect the full value given.

The Commission determines that Company's wage increase should be reflected in its cost of service. The Commission's policy in regard to such salary adjustments was articulated in the Union Electric case which states that the salary adjustments must be reasonable and that the salary study by which the adjustments are justified must be reliable. The salary study is deemed reliable if it is objective and attempts to reach a reasonable goal. Staff of the Missouri Public Service Commission v. Union Electric Company, Case No. EC-87-114 at 17 (Dec. 21, 1987).

Company's salary increases were shown to be reasonable since the resulting salaries were demonstrated to be reasonable by the five studies provided by Company. Although the five salary studies were not perfectly matched to Company's characteristics, they were sufficiently comparable to provide a reliable standard of comparison. Two of the studies were national in scope, one surveyed companies in the State of Missouri and two surveyed salaries in the St. Louis area. Businesses in general were the subject of the surveys. Although few utilities were represented therein, this is not a disqualifying defect since Company obtains its personnel from the business community in general. Significant efforts were made by Company to match the job descriptions in the study with the comparable positions in Company. Since these studies were performed by outside organizations having no intent to justify Company's wage increases, the studies can be considered objective.

Largely using the Bureau of Labor Statistics (BLS) wage study, it can be seen that the November, 1987 non-union salaries of the Company in general were approximately 5% below the mean and median and 18.1% below the high point of the salaries collected in the survey. Therefore, assuming that the companies in the study received no further salary inceases, Company's increase of 4.5% on December 1, 1987, was still less than the mean and median of the March, 1986 data in the BLS study utilized by Company.

Largely using the 1987 AAIM Management Association Executive Compensation Survey of nonmanufacturing concerns in St. Louis, it can be seen that the officers' salaries studied by Company in February, 1988, were 13.2% below the median and 6.2% below the mean of the base salaries of the equivalent positions within the companies surveyed.

In view of the foregoing, the Commission determines that Company's revenue requirement should reflect the amount associated with these salary increases.

The Commission notes that Company's witness, Turner, testified that Company has no formal salary management plan. The Commission is of the opinion that a Company of St. Louis County's size would benefit from such a plan. A formal process by which salaries are set and increased might make it unnecessary in the future to litigate issues such as this one.

5. Market Level

Company contends that there should be included in the payroll expense special raises granted to the occupants of certain positions in addition to the regular raises granted non-union personnel. The salaries for these positions were considered by Company to be too out of balance with the market level of salaries for these positions. Company argues that this payroll expense should be included in operating expenses because the salary adjustments were made to avoid turnover. Although Company states it presently has no turnover problem it contends that turnover should not be allowed to develop because retaining experienced employees is necessary to render quality water service to the ratepayers.

Staff argues that the Company's cost of service should not include the expense of the additional raises to bring these positions to the market level because, other than referring to the aforementioned salary surveys, Company has provided no support for the need to raise these positions to market level or even any evidence as to what the market levels might be.

The Commission determines that Company's cost of service should reflect these increases to market level. Company's support for these increases were the aforementioned salary studies which the Commission has already found to be sufficiently reliable and objective to serve as support for the reasonableness of these increases. Therefore, the Commission finds that Company's revenue requirement should reflect the costs associated with these increases.

G. Outside Administrative Services

1. Phantom Stock

Phantom Stock is a fictitious share of stock in Continental Water Company (CWC), Company's parent corporation, awarded to key employees of Company as additional compensation. The plan provides that a share of Phantom Stock when awarded is equal to the consolidated book value of CWC but the employee gains no vested interest in the share for 5 years and receives payment of the stock 10 years after the award. If the employee leaves the Company voluntarily he forfeits all non-vested shares.

The Commission's Staff argues that the expenses associated with the Phantom Stock plan should not be recognized in Company's cost of service. Staff contends that the amounts being paid under the plan do not benefit the Company's ratepayers because the decision to award the stock comes from CWC and the amount being paid is based on the earnings of CWC not St. Louis County. Staff contends that compensation based upon the earnings of another company does not foster efficient operations of this Company.

Company responds that the Phantom Stock plan does foster the efficient operation of St. Louis County thereby benefiting its ratepayers because the value of CWC's stock depends on CWC's efficient operation which in part depends on the efficient operation of St. Louis County Water Company which is CWC's largest subsidiary. Company further argues that the Phantom Stock plan benefits St. Louis County's ratepayers because the services of key employees are thereby retained without an increase in salary by means of a promise not payable for 10 years.

There is evidence that salaries were not adjusted because of the award of phantom stock.

The Commission determines that Staff's adjustment reflecting disallowance of costs associated with the Phantom Stock plan is reasonable and should be adopted. The Commission's policy in regard to management incentive plans such as the Phantom Stock Plan was articulated in Case No. EC-87-114 et al. The Commission stated therein:

> At a minimum, an acceptable management performance plan should contain goals that improve existing performance, and the benefits of the plan should be ascertainable and reasonably related to the incentive plan. <u>Staff v. UE</u>, <u>supra</u> at 18.

Union Electric's plan contained specific and detailed goals for improving existing performance within Union Electric. Those goals had to be achieved before awards were earned by management. In this case Company's plan is based on no specific goals for improving performance within the Company and the benefits of the plan for St. Louis County and its ratepayers are difficult if not impossible to ascertain. Therefore, the Commission determines that Company's management incentive plan does not meet the standard which Company itself recognizes as applicable.

2. Public Relations Expense

The Commission's Staff argues that Company's revenue requirement should be reduced to reflect disallowance of certain public relations expenses. These expenses include an annual retainer to public relations consultants in the amount of $12,000 and expenses of $11,740 associated with mailing a water quality brochure to the Company's customers. Staff recommends the disallowance of these expenses occurring in the test year because they are in the nature of image enhancement and Company failed to show any specific benefits from these expenditures for ratepayers.

Public Counsel opposes including in the cost of service the retainer for the public relations consultants because Public Counsel believes that these services could have been provided by in-house personnel and that the services in question do not promote the provision of safe and adequate service to ratepayers. Public Counsel does not oppose including the water quality chart in the cost of service.

Company argues that the public relations services are necessary to assure that the public is not victimized by sensationalism in the media about water quality and that accurate information is disseminated by Company in times of crises. As an example, Company stated that its spokesman on lead, Mr. Gloriod, had received interview training from the public relations firm by the time the lead issue arose and was thus prepared for his appearance on television addressing that subject. Company argues that the retainer to the public relations firm is cost effective because the Company could not hire a public relations professional for the amount of $12,000 a year.

The Company defends its water quality chart as containing valuable information which the public has a right to know and which is uniquely important because water companies are the only utilities that sell a product that is consumed internally. Company quotes previous decisions of this Commission approving inclusion in cost of service of expenses for advertising that provide information of substantial benefit to the consumer in the use of the product or services sold or in promoting customer-company relations.

The Commission determines that Staff's recommended disallowance is reasonable as to the retainer for the public relations firm and should be adopted. Company seeks to support its expenditure for the public relations firm primarily by means of a promotional brochure from the public relations firm outlining services available under the retainer. These services include image enhancement and, for the most part, the evidence does not show which of these services were utilized during the test year. The evidence does show that one of the services provided is a recommended public relations plan which includes information on winning the Commission's approval for a rate increase.

The only specific example of services provided by the public relations firm to Company which could possibly be construed as providing any benefit to the ratepayers was the training of Mr. Gloriod, among others, in media relations. Company's witness, Mr. Norman, testified that Mr. Gloriod performed well in a televised interview on the lead issue as a result of techniques learned in this training session. It appears from the evidence that this training was an additional service not included under the retainer.

Since the Company provided no costs associated with this training session the Commission is unable to consider the reasonableness of reflecting this expense in the revenue requirement.

The Company's water quality chart meets the standard of substantial benefit to the consumer. This advertising is informational in nature, designed to allay the customers' concerns about the quality of their drinking water. This is particularly important in the present climate of heightened concern about water quality. Where, as here, the information can be shown to be of substantial benefit to the ratepayers, the expense should not be excluded from operational expenses because the advertisements in question may result also in a better image for Company. In re: Missouri Power and Light Company, 25 Mo. P.S.C. (N.S.) 388, 398-399 (1982).

In view of the foregoing the Commission determines that Company's revenue requirement should reflect the costs for the water quality chart.

H. Deferred Compensation

The Commission's Staff argues that payments under deferred compensation contracts to the widows of two retired employees of Company should be excluded from Company's operating expenses because there is no showing that the widows have provided any service to the Company.

Company states that these payments are required by promises made to former employees to induce them to render full-time work prior to retirement, to serve in an advisory capacity for a period of time after retirement and to promise not to compete. Company argues that it is to its benefit and that of its ratepayers to obtain such services via deferred compensation because employees are thereby induced to stay longer with the Company resulting in a more efficiently run company today and the economies of deferred compensation in the past. Company contends that it would prefer to recognize the costs of such deferred compensation as the costs accrue but that in the past the Commission's Staff insisted that the cost of such deferred compensation only be recovered when paid. Company states that Staff's position condemns the principal of deferred compensation since it has opposed including its cost in operating expenses when accrued and now recommends disallowing its costs when paid.

The Commission's Staff responds that it has not condemned the principal of deferred compensation because it has recognized the expenses associated with payments of deferred compensation in this rate case where the employees so benefiting are available to provide services to the Company and its ratepayers.

The Commission determines that Company should be allowed to recover in operating costs the amounts in question. The deferred compensation expenses at issue were required under the contracts of employment negotiated with the individuals while they were active employees of the Company. These expenses were part of the compensation package entered into by the Company for services rendered by the employees principally while they were employed as full time employees of the Company. The Company and the ratepayers obtained the benefit of these services in exchange for the contractual promise of management to make these payments at death or retirement. Since the Company was not allowed to recover these amounts when they accrued, it is appropriate and reasonable to allow recovery in rates now that the expenses have been paid.

I. Unbilled Revenue

The Tax Reform Act of 1986 (TRA) requires that utility companies pay taxes on unbilled revenue. Unbilled revenue represents the revenue owed by customers to the utility for services already rendered but not yet billed and paid. The TRA permits a 4-year phase-in to ameliorate the effect of this change upon utility companies which previously elected to pay taxes only on billed revenue. Utility companies in this category which bill quarterly, including the company in this case, were required to pay taxes in 1987 and will be required to pay taxes in the following 3 years on 12 months and 3 weeks of revenue (¼th of a 3-month quarter).

Company wishes to include in its cost of service the expense associated with this adjustment. Company argues that while it must pay taxes on 12 months and 3 weeks of revenue it will receive only 12 months of revenue.

The Staff argues that there is no need to reflect in Company's cost of service amounts associated with the adjustment in taxation of unbilled revenues. Staff contends that Company's unbilled revenue for 1986 was billed and collected in 1987. Because Staff calculates in each rate case a match between revenue, expenses and rate base, the amount of 1986 unbilled revenue billed and collected in 1987 included revenue sufficient to pay taxes due on that amount. Staff asserts that for the four years (1987-1990) over which the TRA allows the Company to make the adjustment to paying the income tax in the same year in which the service is provided, and for the years thereafter, Company's unbilled revenue will continue to include revenue sufficient to pay the taxes on unbilled revenue but the revenue will not be billed and collected until the following year.

Staff contends that lead/lag studies will determine any cashflow concerns caused by a timing difference in the payment of taxes by Company and the collection of money to pay those taxes from ratepayers. Staff argues that the income tax offset to rate base is an integral part of the cash working capital concept and was calculated in this case for income tax as well as other factors.

Public Counsel argues that the TRA merely eliminated a timing difference that had benefited shareholders heretofore. Public Counsel contends that in the first year of operations for any utility company rates were set on an annualized 12-month basis but that taxes were paid on less than one year's revenue. Public Counsel believes that it is at that point the tax timing advantage began for shareholders.

Public Counsel notes that St. Louis County Water Company is the only Missouri utility company supporting the inclusion in cost of service of the effects of this provision of the TRA. Public Counsel points out that in the Commission's docket investigating the revenue effects upon Missouri utilities of the TRA (AO-87-48) the only company which included the effect in its cost of service of the TRA's provision taxing unbilled revenues was Missouri Public Service Company which in a previous rate case had flowed through to ratepayers the benefit of the tax timing difference. Public Counsel states that there is no evidence in the last 10 years that St. Louis County has flowed through the benefit of the tax timing difference to ratepayers.

Company feels that Public Counsel is wrong in contending that there is a tax timing advantage for shareholders. Company argues that actual revenue recorded in the first year of operations would be less than that projected in ratemaking because of the lag between delivery of water service and the issuance of the fourth quarterly bills. Company further contends that before the TRA, income tax would have been paid on the amount billed and, therefore, amounts collected from the ratepayers for taxes in that first year of regulation would equal amounts paid by Company for income taxes that first year. Thus, no timing advantage would have been experienced.

Company argues that its rates were set on its billed revenue because it only booked billed revenue unlike other companies which booked unbilled revenue resulting in rates set on both billed and unbilled revenue. Company notes that now it will book unbilled revenue because it must pay taxes on unbilled revenue. However, Company argues that during the phase-in of this TRA provision it is caught in a tax disadvantage the cost of which must be reflected in Company's operational expenses.

Finally, Company argues that the booking of unbilled revenue itself produces no revenue so a cash deficiency will develop when the tax liability is due. Therefore, Company argues that disallowing this tax expense requires shareholders to pay the tax out of their return on equity which is confiscatory. Company flatly denies that Staff has recognized this cash deficiency in its cash working capital calculation in this case. Even so Company does not believe that it is in the best interest of ratepayers to account for this cash deficiency in cash working capital because to do so would require the ratepayers to pay a rate of return on the amount in question.

The Commission determines that the disallowance recommended by Staff and Public Counsel is reasonable and should be adopted. The Commission establishes rates based on usage of the service as demonstrated through sales and deliveries to the system. Therefore, prior to the TRA, rates were set as though income tax on unbilled revenue was due in the year in which the service was provided even for companies not paying such tax until the following year. With the advent of TRA rates will continue to be set in that manner. The only difference as a result of the TRA is that all companies will pay the income tax on unbilled revenue in the year the service was provided. Any lag between payment of those taxes by the Company and collection from ratepayers of the revenue to pay those taxes is addressed like any other lag in the calculations for cash working capital.

V. Revenue Normalization

A. Kirkwood-Rate D

Rate D provides, in pertinent part, that the City of Kirkwood must pay a monthly minimum charge which shall be doubled for the succeeding 12-month period if the Company uses water during peak hours in the peak months of June, July, August, September and October or uses more than one million gallons in 24 hours during the same peak months. The tariff took effect July 3, 1987, and the billing period in question ran from June 11, 1987 through July 12, 1987.

Company took the actual level of usage by the City beginning July 3, 1987, through July 12, 1987, and prorated that same level of usage by the City for the rest of the billing period running from June 11, 1987. Company prorated the usage on the theory that the effects of the tariff should not be felt prior to its July 3 effective date. Company argues that to apply the tariff literally during this transitional period would be unfair especially since the minimum usage provision is in the nature of a penalty to discourage peak use and has no relationship to the cost of providing the service. Company states that the transitional nature of the problem is demonstrated by the fact that the City has controlled its usage since then so as not to trigger the increased minimum charge.

Staff recommends that Company's revenue requirement not reflect the amount "waived" by Company from payments Staff claims are due from Kirkwood under Rate D. The Staff argues that the Company's tariff does not provide for such an adjustment and to reflect this adjustment in the Company's revenue requirement is to encourage Company to disregard its own tariffs.

The Commission determines that the Company applied its tariff reasonably and that the disallowance recommended by Staff should be rejected. Rate D provides that usage above a certain level by the City shall be penalized. Service taken prior to the effective date of the tariff should not be utilized to invoke the penalty not yet in effect. Therefore the Company's behavior did not constitute a waiver of an effective tariff but rather a reasonable application of the tariff to a transitional period where the billing period did not correspond to the effective date of the tariff. Since the penalty has no relationship to the cost of providing the service, the rejection of Staff's adjustment will not cause other ratepayers to absorb the cost of the service provided to Kirkwood.

B. Weather Normalization

Staff and Company disagree on how to normalize test year usage of the residential, wholesale and commercial classes. The first area of disagreement concerns the statistical method whereby abnormal usage of water associated with variation in the weather is removed from the test year data in order to establish for ratemaking purposes a relatively normal level of usage by these three classes. Company accepts that Staff's regression analysis is "somewhat statistically superior" to the analyses that Company originally proposed except that Company disagrees with Staff's final calculation which includes residual variation in the normalized usage. Company believes that Staff's final calculation including residual variation in the results of the regression analysis is statistically invalid. Because the causes of the random variation are unknown Company argues that Staff's final calculation is no more statistically appropriate than rolling dice and calling the result normal usage.

Staff contends that its residual variation calculation is necessary to reflect in the normalization factors other than weather which have an impact on water usage in the test year. Staff believes that one such factor is the economy. Staff argues that eliminating the final calculation would ignore the increasing trend in water usage indicated by the data.

The Commission determines that Staff's final calculation in the regression analysis is inappropriate for establishing normal usage. The overwhelming weight of the evidence shows that including residual variation in the regression analysis is statistically invalid and produces an unreliable result. Since the exact character of the residual variation has not been isolated its effect on water usage is unpredictable. If the residual variation does not exhibit systematic characteristics, it should be discarded as random error. If the residual variation does exhibit systematic characteristics, doubt is cast on the current regression analysis.

Therefore, the Commission is of the opinion that Staff should either have omitted its final calculation or performed another regression analysis controlling for specific variables in addition to weather variation.

In view of the foregoing, the Commission determines that Staff's regression analysis without the inclusion of residual variation should be adopted for use in establishing normal usage for the residential, wholesale and commercial classes.

The second area of disagreement between Company and Staff concerns the weather variables to be isolated by the regression analysis in establishing normal usage for the wholesale class of customers. Staff originally controlled for the variables of heat and precipitation in all three classes. Company objected to the use of both variables in the wholesale and commercial classes stating that usage by the commercial class did not vary with changes in temperature and usage by the wholesale class did not vary with changes in precipitation. Staff partially agreed with Company's observation and submitted a new calculation normalizing use by the commercial class on the basis of the variation in precipitation only. Staff did not agree with Company's observation as to the wholesale class and retained both variables in analyzing the usage of the wholesale class. Staff argues that both variables should be used in analyzing the wholesale class because the wholesale class resells primarily to residential customers whose usage responds to both weather variables.

Company argues that precipitation is not an appropriate variable for predicting wholesale usage because the wholesale class also resells to industrial and commercial customers which do not respond to variation in precipitation. Company argues further that the use of the precipitation variable had not been found to be statistically significant. Staff responds that the significance level of the coefficient for precipitation would be relevant only if the regression analysis were based on a sample from the population rather than on the population itself.

The Commission determines that Staff's use of both variables in establishing the normal usage of the wholesale class is reasonable. Since data from the entire population were used the significance level of the coefficient for the precipitation variable is not critical for determining the validity of the analysis. The Commission finds that Company did not show that the industrial and commercial customers to whom the wholesale class resells have a sufficient impact on the usage of the wholesale class to make that usage unresponsive to the variation in precipitation which influences the usage of the residential buyers.

In view of the foregoing the Commission determines that Company's revenue requirement should be increased to reflect the use of Staff's regression analysis without its final calculation in establishing the normal level of use by the residential, wholesale and commercial classes. The Commission also determines that Company's revenue requirement should be reduced to reflect the use of both the temperature and precipitation variables in determining the usage of the wholesale class.

C. Rate J

To qualify for service pursuant to Rate J customers must use in excess of 60,000 cubic feet of water per month or 15,000 gallons of water per day and have a relatively uniform pattern of use throughout the year. Company states that Rate J customers fall into two patterns of actual usage. The "large" users which for the last twelve years have sustained usage over 350,000 gallons per day and the "other" users which use 40,000 gallons per day.

Company states that there are 28 "large" users whose usage is more or less uniform except for the significantly increased usage exhibited over the last four years by Chrysler Corporation. Company proposes to normalize usage in this category by averaging the water usage of the 28 "large" users over the last four years.

Company states that the "other" category fluctuates in numbers but appears to be growing. Company argues that it gains some and loses some customers in this category each year causing the average to fluctuate because of the mix of customers. Company proposes to normalize usage in this category by determining the annual mean log usage per customer per day for the last 13 years.

Staff argues that actual usage during the test year by the industrial class as a whole is the appropriate method of projecting usage for ratemaking purposes. Staff contends that the usage of the industrial class need not be adjusted because the usage for both the "large" and "other" categories in this class has increased systematically each year since 1982. Therefore, Staff believes that the best predictor of any one year is the previous year.

Staff criticizes Company's normalization of Rate J customers because it results in projections derived, for the most part, from the water usage in years preceding the test year rather than adjusting actual usage in the test year. Staff asserts that although Company admits that Rate J customers are weather insensitive Company contends that these customers are subject to other influences causing abnormal variations in usage which must be normalized even though Company has not been able to isolate the variables involved. Finally, Staff argues that Company's normalization results in significantly lower usage than that occurring in the test year without reference to any cause.

Company responds that Staff's approach ignores the reality of usage shown by the data on Rate J customers. Company notes that the number of customers in the "other" category has increased by 42% since 1975. Company contends that the size of each of these new customers added to the "other" group has a significant impact causing fluctuation in usage per customer. Company further contends that use of its mean log average attenuates the extremes of this fluctuation. Although Company admits that usage has increased among "other" users since 1982 Company contends that this increase is determined largely by the usage levels of the new customers. If the new customer's usage falls above the previous average the new average is increased and if the new customer's usage falls below the previous average the new average is decreased.

Finally Company criticizes Staff's approach because it combines the usage patterns exhibited by the two categories of users producing an average normalized revenue per customer in the test year of $22,085. Company's method of separating the Rate J users into "large" and "other" categories produces an average normalized revenue for each "large" user of $98,535 and an average normalized revenue for "other" customers of $12,510. Company states that use of Staff's combined figure of $22,085 to determine revenue from customer growth will lead to an inaccurate estimate since the only category of Rate J customers experiencing any growth is the "other" category.

The Commission determines that Company has not shown that the "other" category fluctuates with the addition of each new customer to that category. Rather, the data indicate a steady growth in that category from 1982 to the present. The Commission is of the opinion that Staff's approach of using the figures from the test year updated for known and measurable changes is the more reasonable method for predicting usage in the "other" category during the period when the rates will go into effect.

The usage in the "large" category is less predictable than that in the "other" category. Although usage in the entire category has increased from 1982 to the present only two of the "large" users show a steady increase in use from 1982; eleven show an increase in usage in 1987 over 1982 but with fluctuations in the intervening years; fifteen show a decrease in usage from 1982 to 1987. There is no probative evidence indicating the reason this category fluctuates in this manner.

Since the usage characteristics of the two categories appear so different the Commission determines that it is appropriate to consider the usage of the two categories separately. Since no cause has been isolated for the fluctuation within the "large" category, the Commission determines that normalization is appropriate. Therefore, the Commission finds it is more reasonable to normalize the usage of the "large" category by means of an average of the last four years.

VI. Rate Base - Revenue Requirement

The Commission finds that the rate base used for purposes of this case shall be the Company's net original cost rate base valued at $139,687,793. Applying the rate of return found reasonable in this case of 10.91% results in a net operating income requirement of $15,239,938. The net income available is $13,294,318. Considering the additional income tax required and adjusting for the bad debt factor, the Commission finds that the Company's gross revenue requirement is $3,059,401. These calculations are based upon Exhibit 73.

VII. Rate Design

There is no issue among the parties as to rate design and, therefore, the prefiled testimony of Staff's witness, Wess A. Henderson, (Exhibit 63) and Company's witness, Dan Simpson, (Exhibit 46) as they pertain to rate design were accepted into evidence without cross-examination. Mr. Henderson's testimony as contained in late-filed Exhibit 64 also addresses rate design.

The Commission finds the agreed upon rate design reasonable and adopts it for purposes of this case.

Conclusions of Law

The Missouri Public Service Commission has arrived at the following conclusions of law.

Company is a public utility subject to the jurisdiction of this Commission pursuant to Chapters 386 and 393, RSMo 1986, as amended.

Company's tariffs herein were suspended pursuant to authority vested in this Commission by Section 393.150, RSMo 1986, as amended, which places upon Company the burden of proof to show that the proposed increase in rates is just and reasonable.

Pursuant to Section 393.270(4), RSMo 1986, as amended, the Commission may consider all facts which in its judgment have any bearing upon a proper determination of the price to be charged for water service with due regard, among other things, to a reasonable average return upon capital actually expended.

Based upon the revenue requirement found reasonable herein the Commission concludes that St. Louis County Water Company shall be allowed to file revised tariffs designed to increase revenues exclusive of gross receipts and franchise taxes by $3,059,401 on an annual basis.

It is, therefore,

ORDERED: 1. That pursuant to the findings and conclusions in this Report and Order the proposed tariffs filed by St. Louis County Water Company of St. Louis, Missouri, in this case are disapproved hereby and St. Louis County Water Company is authorized to file in lieu thereof, for the approval of this Commission, tariffs designed to increase gross revenues exclusive of gross receipts and franchise taxes by the amount of $3,059,401 on an annual basis over the currently effective rates.

ORDERED: 2. That the tariffs authorized herein shall reflect the rate design agreed to by the parties.

ORDERED: 3. That the tariffs to be filed pursuant to this Report and Order shall become effective for service rendered on and after June 8, 1988.

ORDERED: 4. That late-filed Exhibits 64, 67, 70, 71, 72, 73 and 74 hereby are received into evidence. These Exhibits are described in Appendix A attached hereto and incorporated herein by reference.

ORDERED: 5. That any objections not heretofore ruled upon are overruled hereby and any outstanding motions are denied hereby.

ORDERED: 6. That this Report and Order shall become effective on the 8th day of June, 1988.

BY THE COMMISSION

Harvey G. Hubbs

Harvey G. Hubbs
Secretary

(S E A L)

Steinmeier, Chm., Musgrave, Mueller, and Fischer, CC., Concur and certify compliance with the provisions of Section 536.080, RSMo, 1986.
Hendren, C., Absent.

Dated at Jefferson City, Missouri, on this 27th day of May, 1988.

LATE-FILED EXHIBITS RECEIVED INTO EVIDENCE

Exhibit 64	Rate Design Schedules of Wess A. Henderson
Exhibit 67	Company's filing as to a Postage Rate Increase
Exhibit 70	Company's filing as to a Contribution to the Balancing Act
Exhibit 71	Revised Reconciliation
Exhibit 72	Letter from Examiner O'Donnell dated May 20, 1988 requesting informational updates based upon a hypothetical decision on the issues
Exhibit 73	Response of Company and Staff to request for informational updates based upon the hypothetical
Exhibit 74	Confirmation from Company of concurrence with figures filed in response to the hypothetical