COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

PROPOSED ADJUSTMENT OF THE WHOLESALE WATER SERVICE RATES OF THE CITY OF PIKEVILLE, KENTUCKY	)))	CASE NO. 2002-00022

O R D E R

The city of Pikeville, Kentucky (Pikeville) proposes to adjust the rate of wholesale water service to Mountain Water District (Mountain District) from $1.31 per 1,000 gallons to $1.90 per 1,000 gallons, an increase of 45 percent. By this Order, we deny the proposed rate adjustment and authorize Pikeville to assess a wholesale rate of $1.44 per 1,000 gallons to Mountain District.

COMMENTARY

Pikeville is a city of the third class[1] that owns facilities providing water and sanitary sewer service. Pikeville provides retail water service to 2,766 customers and wholesale water service to Sandy Valley Water District, Southern Water and Sewer District, and Mountain District.[2] On January 12, 1987, Pikeville and Mountain District executed a water purchase contract that requires Pikeville to provide Mountain District with a daily maximum of 1.5 million gallons of water at a rate of $1.31 per 1,000 gallons. The water purchase contract has a term of 40 years.

[1] KRS 81.010(3).

[2] The Prime Group, LLC, Cost of Service Study for the Test Year Ended June 30, 1997 Prepared for City of Pikeville Municipal Water Utility (Dec. 1998) (Cost-of-Service Study) at Exhibit 8.

PROCEDURE

On December 21, 2001, Pikeville filed a proposed revision to its existing rate for wholesale water service to its wholesale customers. Upon Mountain District s objection to the proposed rate and after finding that further proceedings were necessary to determine the reasonableness of the proposed rate, the Commission suspended the proposed rate until June 20, 2002 and established a procedural schedule. The Commission further granted Mountain District leave to intervene in this proceeding.

Following the suspension of the proposed rate, the parties conducted limited discovery in this proceeding and agreed by stipulation to incorporate the record of Case No. 2000-00540[3] into the record of this proceeding.[4] The following persons submitted written testimony: Kenny Blackburn, Pikeville City Manager; Sue Varney, Pikeville Finance Director; Randall J. Walker, principal, The Prime Group, LLC; and, Carlos Miller, professional engineer, Kenvirons, Inc. The parties waived an evidentiary hearing in this matter. Following the parties submission of written briefs, this matter stood submitted for decision on September 6, 2002.

TEST PERIOD

Pikeville proposes, and the Commission finds reasonable, the use of the 12-month period ending June 30, 1997 (Fiscal Year 1997) as the test period for determining the reasonableness of the proposed rate. The Commission s adjustments

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[3] Case No. 2000-00540, Proposed Adjustment of the Wholesale Water Service Rates of the City of Pikeville, Kentucky (Ky. PSC Oct. 8, 2001).

[4] The present case represents the second time that the Commission has considered a proposed adjustment in Pikeville s wholesale water service rate to Mountain District. In Case No. 2000-00540, the Commission considered a similar request. Following extensive discovery and an evidentiary hearing in that proceeding, the Commission on October 8, 2001 denied Pikeville s proposed adjustment. We found that the Pikeville City Council had not authorized the proposed rate. Without such authorization, we concluded, the municipality utility s filing must be considered void. Such a filing has no legal standing and cannot be considered as an official action of the city. Case No. 2000-00540, Order of October 8, 2001 at 3.

to test-year revenues and expenses are discussed below. Pikeville s adjusted test-year operating statement is set forth in Appendix A.

REVENUES AND EXPENSES

Operating Revenues

Pikeville reports test-year operating revenue from water sales of $2,245,494. It proposes to deduct $147,484 from this amount to reflect a write-off adjustment that resulted from the Commission s decision in Case No. 1995-00296.[5] The adjustment represents the difference between the rate of $1.77 per 1,000 gallons that Pikeville billed to Mountain District during a dispute over its wholesale rate and the contract rate of $1.31 per 1,000 gallons.[6] Pikeville made this adjustment after the Commission denied its claims that its unilateral adjustment of the wholesale rate to $1.77 was proper and that Mountain District was liable for any amounts billed in excess of contract rate. Based on this adjustment, the Commission finds that Pikeville's test-period normalized revenue from water sales is $2,098,010.

Operating Expenses: General

The Commission has separated Pikeville s operating expenses into two categories: 1) Directly Assignable to Utility Operations; and 2) General Government Expenses Allocable to Utility Operations.

Expenses identified as directly assignable to utility operations represent test-year expenses incurred by Pikeville solely for the operation of its water and sewer divisions.

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[5] Case No. 1995-00296, City of Pikeville, Kentucky v. Mountain Water District (Ky.PSC April 8, 1996).

[6] Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Item 47(d).

Total expenses directly assignable to the water and sewer divisions for the test period were $2,639,055.[7] Of this amount, Pikeville attributed $1,735,137 to the water division.

General government expenses allocable to utility operations represent the portion of general government expenses that Pikeville proposed to allocate to the water division to determine its operating costs. These expenses totaled $108,922.

Operating Expenses: Directly Assignable to Water Operations

Maintenance Materials. Pikeville reports test-period maintenance and materials expense of $12,322. This expense includes $4,571 for the repair of a sewer jetter.[8] The Commission finds that this cost is related to sewer division operations and should be eliminated from the water division s test-period expenses. Test-period maintenance and materials expense also includes $2,061[9] for the water division s share of the purchase cost of a new copy machine and $5,616[10] for the purchase of a leak detector. We find that these amounts should be capitalized and included in our adjustment to test-year depreciation.

Utilities and Office Expense. Pikeville reports test-year expenses of $12,111 for water, gas and garbage collection service.[11] Pikeville also includes as office expenses $6,471 for telephone services provided by BellSouth Telecommunications, Inc.[12] The record shows that, while these expenses were common to both divisions, Pikeville did

[7] Id., Item 12 at 73.

[8] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 14 at 8.

[9] Id., Item 14 at 4.

[10] Id., Item 14 at 2.

[11] Cost-of-Service Study at Exhibit 3, Line 20.

[12] Id. at Exhibit 3, Line 22.

not allocate any of these expenses to its sewer division.[13] The Commission finds unreasonable the implication that Pikeville s sewer division did not incur any of these expenses. We further find that, in the absence of direct allocation information, these expenses should be allocated based on the number of sewer customers to total water and sewer customers.[14] This allocation results in a reduction of these two expenses by $5,504 and $2,941, respectively.[15]

Repairs and Maintenance, Office Expense, and Insurance. To compile the expenses shown in its cost-of-service study, Pikeville used its water and sewer expenditure ledger and its combined financial statements for Fiscal Year 1997. During this compilation, Pikeville discovered that its audit report included operating expenses totaling $15,887[16] more than those reflected in its water and sewer revenue and expenditure ledgers. It then allocated $13,253 of this amount to repairs and maintenance expense and $2,634 to office expense.[17]

Pikeville fails to demonstrate adequately the nature of these expenses or explain why these amounts should be allocated to repairs and maintenance expense or to office expense. It acknowledges that these amounts are not recorded in its water and sewer

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[13] Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Item 17; Transcript of May 3, 2001 Hearing at 63-64.

[14] Allocation Factor = 2,314 sewer customers / 5,092 total customers = .4544. For the source of the allocation factor, see Cost-of-Service Study, Exhibit 3 at 5.

[15] City Utilities Expense Reduction = $12,111 x .4544 = $5,504.
Telephone Expense = $6,471 x .4544 = $2,941.

[16] The discrepancy between Pikeville s water and sewer expenditure ledger and its combined financial statements for Fiscal Year 1997 is actually $21,646. In its cost-of-service study, Pikeville has allocated a portion of this amount to Pikeville s sewer division. It allocated approximately $15,887 to its water division.

[17] Cost-of-Service Study, Exhibit 3 at 3a; Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 18.

expenditure ledger, but are merely reconciliation adjustments.[18] When requested to furnish a detailed breakdown of the amounts in a general ledger format, Pikeville provided general ledger entries that relate to debt service fees totaling $16,937. In view of Pikeville s inability to support or explain these expenses, we find that they should be disallowed.

Our review of the water and sewer expenditure ledger and the cost-of-service study also indicates that Pikeville understates its insurance expense by $3,525. This amount represents an audit entry made to write-off prepaid insurance. We find that this adjustment is appropriate and that test-year insurance expense should be increased by this amount.

Repairs and Maintenance. We find that repairs and maintenance expense should be decreased by $46,528 to reflect the capitalization of certain assets that Pikeville recorded as an expense[19] and that a corresponding adjustment should be made to test-year depreciation. We further find that an expense of $1,299 that Pikeville incurred to replace a rail at the sewer lift station should be removed from test-year repairs and maintenance expense.[20] An additional $5,711 was eliminated from this account that represented costs incurred for sewer repairs.[21]

[18] Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Item 13.

[19]

4 Compound Meter	$ 2,749
1,400 Feet of 6-inch Main	7,299
Installation Cost of 6-Inch Main	9,545
A/C Unit at Island Creek,	2,200
Raw Water In-take Facility	23,530
2-inch Compound Meter	1,205
Total	$46,528

[20] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 13.

[21] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 15.

Freight and Postage. Pikeville reports water division postage expense of $2,238 for mailing water and sewer billing cards but no such expense for its sewer division. The Commission finds that a portion of this expense should be allocated to Pikeville s sewer division and that such allocation should be based upon the number of sewer customers to total customers. This allocation results in a reduction of test-year expenses by $1,017.[22]

Engineering. Pikeville reports test-year contracted engineering fees of $17,002 for its water division and no such fees for its sewer division. After reviewing invoices that Pikeville provided in support of its test-year expenses,[23] we find that of the test-year amount that Pikeville charged to its water division, $1,539 is directly attributable to water operations, $12,825 is related to sewer operations, and the remaining $2,638 is for engineering of other miscellaneous projects. We further find that test-year expenses should be reduced by $15,463 to reflect only expenses assignable to the water division.

Professional Services. Pikeville includes in test-year professional services payments of $2,578 to Titan Inc.,[24] an indemnity company involved in a lawsuit between Todd Simpson and Gas and Go, Inc.[25] Pikeville has presented no evidence describing the nature of this expense or its relationship to Pikeville s water division. In the absence of such evidence, the Commission finds that this payment should be removed from Pikeville s test-year operations.

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[22] $2,238 x (2,314 sewer customers / 5,092 total customers) = $1,017.

[23] See Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 12.

[24] Case No. 2000-00540, Pikeville s Response to the Commission s Order of December 19, 2000, Item 4 at 28.

[25] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 10, at 8.

Banking Expenses. Pikeville reports test-year banking expenses of $1,705, which it allocated entirely to its water division. Of that amount, $1,442 relates to the accounting treatment of depositing returned checks. This debit balance is merely an offset to cash and sales entries used to record sales to customers whose checks were returned. Proper accounting treatment of such items results in entries made to accounts receivable and cash. It is not an actual expense and has therefore been eliminated.

The majority of the remaining $263 represents bank service charges. The record indicates that the water and sewer divisions cash accounts are commingled. The service charges should, therefore, be allocated between the two divisions. The Commission finds that a reduction of $120 is required to reflect this allocation.[26]

Professional Services Group. During the test year, Professional Services Group (PSG)[27] billed Pikeville $1,242,026 for services related to the management of Pikeville s water division.[28] Pikeville proposes to include these expenses in its test-year expenses. While PSG s invoices do not detail specific expenses or services, Pikeville has allocated these charges to expense categories for purposes of its cost-of-service study based upon PSG s proposed test-year budget.[29]

Mountain District raises several objections to this proposal. First, it contends that Pikeville has failed to demonstrate that its decision to enter a management services contract with PSG or that the provisions of that contract with PSG are reasonable.

[26] $120 = $263 x (2,314 Sewer Customers/5,092 Total Customers).

[27] PSG is now known as U.S. Filter.

[28] Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Item 15.

[29] Cost-of-Service Study, Exhibit 3 at 4.

Second, Mountain District contends that Pikeville has not identified the individual components of the contract or presented any evidentiary support of the actual costs of the services that PSG provides. Finally, it contends that, by contracting for the management services, Pikeville seeks to circumvent the regulatory review of its operations by presenting the Commission with a *fait accompli*.

Pikeville s decision to contract with PSG for the operation and management of its water division is a management decision. Management decisions are presumed to be reasonable. West Ohio Gas Co. v. Ohio Pub. Util. Comm n, 294 U.S. 63 (1935); Pa. Publ. Util. Comm n v. Phila. Elec. Co., 561 A.2d 1224 (Pa. 1989). This presumption operates until it is shown that:

> (1). . . the questioned outlays represent 'inefficiency' or 'improvidence' or (2) managerial discretion has been abused, or (3) the action taken has been 'arbitrary' or 'inimical to the public interest,' or (4) there has been 'economic waste,' or (5) such outlays were not legitimate operating expenses because they were in excess of just and reasonable charges.

Hindsight cannot be used in evaluating the prudence of management's actions. Management must be judged on what was known or should have been known at the time of its decision. Pa. Pub. Util. Comm'n v. Phila. Elec. Co., supra. The burden of overcoming the presumption of managerial good faith falls on the party challenging it. Once this burden is met, however, management must demonstrate that its actions were reasonable and prudent. Re Central Vermont Public Service Corp. 83 PUR4th 532 (Vt. PSB May 15, 1987).

Our review of the record fails to indicate that Pikeville s initial decision to enter a management services agreement with PSG was unreasonable. Concerned about the qualifications of its employees to operate and manage its new water treatment plant, Pikeville in 1985 began investigating the feasibility of outsourcing of its water treatment and distribution services.[30] The Big Sandy Area Development District and a consulting engineering firm assisted in the investigation.[31] It solicited the qualifications of firms interested in assuming managerial and operational responsibility for the plant. From a group of the eight responding firms, it requested proposals from the three best firms. Following receipt of these proposals, Pikeville received a study from the Big Sandy Area Development District that indicated the use of a private firm to operate its water and wastewater plants would increase its expenses by $184,364, or 7.1 percent, in the 2-year period ending June 30, 1988.[32] Pikeville ultimately selected PSG[33] and executed a management services contract with that firm on March 26, 1987.

The initial management services contract provided for the operation and maintenance of Pikeville s wastewater treatment plant, water pumping station, and

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[30] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 6 at 12. In a memorandum to the Pikeville City Commission, Pikeville s City Manager discussed the problem:

> We need more professional operation of our treatment plants, especially when we are going to spend $6 million plus on our new Water Treatment Plant. We can t afford to spend that kind of money and operate it with personnel who do not have a supervisor who has not had a technical (engineering?) education and enough plant operational experience to know his way around a complex chemical and mechanical treatment operation as we will have by 1987. This is not to take away from the job our current personnel are doing treating our water and giving us a high quality water to drink. Still, even when Girl Scout troops tour our existing plant, their leaders are frightened by the explanations that this control or that gauge doesn t work. The plant is 26 years old so we can expect some breakdowns but . . . visitors get the impression that our operators get the water treated by as much dumb luck as by technical knowledge of what they are doing and why it works (or doesn t work) the way it does.

[31] Id. at 29.

[32] Id. at 23.

[33] Id. at 29.

water treatment plant.[34] Pikeville agreed to pay a management fee of $610,625, which represented direct costs of $555,000 and a base fee $55,625 (10 percent of cost).[35] This fee is $101,275, or 19.9 percent, greater than Pikeville had originally estimated.[36]

The Commission finds no evidence to suggest that Pikeville acted unreasonably in its decision. It conducted an extensive search for a private firm. Outside governmental agencies and private consultants assisted in this search. While the management fee that was ultimately negotiated exceeded Pikeville s original estimates, no party has suggested that Pikeville failed to negotiate aggressively. Those preparing the original estimates, moreover, have questioned the reliability of those estimates.[37] Finally, the presence of highly skilled and experienced personnel managing and operating Pikeville s system is a factor that is not easily quantified. As we demand that all water utilities under our jurisdiction have competent personnel to operate their systems, we find no fault with Pikeville placing an emphasis on obtaining such persons.

The Commission finds no merit to Mountain District s contention that the lack of individual cost components in its management services contract with PSG renders the expenses unreasonable or unfit for recovery through rates. Pikeville s payments are the result of an arms-length transaction and have been documented by separate invoices. While Pikeville s use of contractor services is more extensive than that of most utilities, the use of such services is not uncommon. Kentucky law provides for no special

[34] Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Item 8 at 13.

[35] Id., Item 8 at 17.

[36] Id., Item 6 at 25. The record does not conclusively show that this cost estimate assumed that the private firm would also operate the water pumping station.

[37] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 6 at 22.

scrutiny of such contracts when they are the result of arms-length negotiations; nor has this Commission required a significantly higher level of scrutiny for them.

We are also unconvinced that the lump sum fee arrangement contained in Pikeville s management services agreement with PSG presents a serious obstacle to the accurate allocation of expenses or threatens our ability to review Pikeville s expenses. Based upon our review of the budgeting process, we find that Pikeville s proposal to allocate PSG s charges to expense categories based on PSG s annual budget is generally a reasonable approach to the issue of cost allocation. Moreover, we have supplemented this approach by a thorough review of Pikeville s records.

While the Commission does not find that the present management services agreement between PSG and Pikeville is unreasonable, we have some concerns. First, the record indicates that Pikeville failed to solicit or encourage bids from PSG s competitors when the initial term of the management services agreement expired.[38] Second, Pikeville has not conducted any study or analysis since 1986 to determine the benefits and costs of the management arrangement presently used for its water operations.[39] Third, Pikeville is performing only a limited review of PSG s budget.[40]

The Commission encourages Pikeville to become more active in the administration of the management services agreement and in the review of PSG s proposed budgets. Moreover, we place Pikeville on notice that in future rate

[38] Case No. 2000-00540, Transcript of May 3, 2001 Hearing at 36 37.

[39] Id. at 37.

[40] Id. at 36 and 66.

proceedings we will more closely scrutinize PSG s direct expenses[41] and will expect Pikeville to provide independent supporting documentation of all PSG costs.[42]

We further find that some adjustments to the PSG payment for rate-making purposes are required. During the test period, PSG made a billing adjustment of $20,951[43] for repair and maintenance overages from the prior year. Pikeville allocates $5,378 of this amount to the water division. As the $5,378 represents an expense from a prior period, it should not be included in test-year operations and has been eliminated for rate-making purposes.

PSG s services include the reading of water meters. Neither Pikeville nor PSG can readily determine the cost of this service. In its cost-of-service study, Pikeville estimates that, based upon the average number of meters read during the test year and the annual average cost of reading a water meter, annual cost of meter reading is $22,186.[44] The Commission finds that this estimate is a reasonable amount for meter reading services for a utility of Pikeville s size and customer density. Pikeville s sewer division, however, should be allocated a portion of these costs since Pikeville s sewer

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[41] We especially view with concern the significant escalation in PSG s profit margin. Pikeville s initial agreement with PSG provided PSG with a profit margin of 10 percent of direct operating costs. Our review of Pikeville s cost-of-service study indicates that, depending on actual overhead charges, PSG s profit margin may have reached 19 percent.

[42] Section 2.3 of the Agreement For Operations, Maintenance and Management Services, which PSG and Pikeville executed on July 1, 1997, provides: PSG shall maintain all records and documents concerning the operation of the Project such that they may be inspected by CITY upon reasonable notice. See Case No. 2000-00540, Pikeville s Response to Mountain Water District s Data Request No. 1, Item 11.

[43] Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Item 15 at 14.

[44] Cost-of-Service Study, Exhibit 3 at 4; Transcript of May 3, 2001 Hearing at 157.

service charges are based on water usage.[45] The Commission finds that the sewer division s portion of test-year meter reading cost is $10,081[46] and that this amount should be eliminated from the water division s test-year operations.

Under normal conditions, an adjustment to the PSG charges related to meter installation costs would also be required. PSG installs all water meters for Pikeville. The costs related to these installations are reported in test-year expenses.[47] Generally accepted rate-making practices for public utilities require the cost of a meter installation to be capitalized as utility plant in service and depreciated over its useful life. The tap fee collected for the installation is then recorded as a contribution in aid of construction that is sometimes amortized depending on the applicable Uniform System of Accounts (USoA).

In this instance, the Commission finds that an adjustment related to these charges should not be made. To make such an adjustment would require Pikeville to restate its financial statements for all prior periods to comply with traditional utility accounting practices which may otherwise be necessary to properly and accurately calculate its rates for the city. Moreover, Pikeville s present method for accounting for this expense and for its tap fees appears to be revenue neutral. Its tap fees are cost-based,[48] represent only the expense of meter installation, and are reported as revenues. The expense amount included in the revenue requirement is thus offset by the inclusion of tap fees as normal recurring revenue.

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[45] Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Item 19.

[46] Allocation to Sewer Division = $22,186 x (2,314 Sewer Customers / 5,092 Total Customers).

[47] Transcript of May 3, 2001 Hearing at 58.

[48] Id. at 33.

As a result of our adjustments, we find the pro forma PSG fee is $1,226,567. To determine Pikeville s cost to serve Mountain District, we have allocated this amount to expense categories based on PSG s test-year budget.[49] This allocation is shown at Table IV of Appendix B.

Amortization of Rate Case Expense. Pikeville estimates a total rate case expense of $115,540. This amount includes $29,782 for the cost-of-service study[50] and $85,758 for legal and other consulting services.[51] The Commission finds that, given the length of time since Pikeville last adjusted its wholesale rate to Mountain District, these expenses should be amortized over a 5-year period and that such amortization will increase test-year expenses by $23,108.[52]

Depreciation   Water Assets. Pikeville reports test-year depreciation for water plant of $282,478. We find that this expense should be increased by $4,293 to reflect recovery of the items capitalized for rate-making purposes.[53]

Depreciation - Common Use Utility Assets. In its cost-of-service study, Pikeville allocates the depreciation of assets commonly used by its water and sewer divisions

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[49] See Cost-of-Service Study, Exhibit 3 at 4.

[50] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 5.

[51] Pikeville s Brief at 27.

[52] $23,108 = $115,540 ÷ 5 years.

[53] The table below reflects this adjustment:

Asset	Cost	Useful Life	Annual Expense
Leak Detector	$ 5,616	5	$1,123
4-inch Compound Meter	2,749	10	275
1,400 Feet of 6-inch Main Installed	16,844	40	421
Raw Water In-take Facility	23,530	10	2,353
2-inch Compound Meter	1,205	10	121
Total Increase			$4,293

based on the amounts of directly assignable plant. This methodology results in the allocation of $9,666, or 50.02 percent of $19,325 total depreciation expense, to the water division.[54] Based upon our review of Pikeville s depreciation schedules,[55] we find that $2,071 of this amount is related to the depreciation on the bio-system and sewer manhole covers, should be allocated directly related to sewer operations, and should not be included in the allocation of common depreciation.

We further find that depreciation expense common to Pikeville s water and sewer divisions should be equally allocated between those divisions. While actual usage factors should generally be used to allocate common assets, Pikeville lacks this information and instead uses an allocation factor based on directly assignable plant. While this expense could be properly allocated based on the number of customers per division, such an approach does not yield a material difference from that yielded by the proposed factor. Using Pikeville s proposed factor, we find that test-year expense should be reduced by $1,039.[56]

Operating Expenses: General Government Expenses Allocable to Utility Operations

In its cost-of-service study, Pikeville allocates certain general government expenses considered common to all of its operations. With the exception of payroll expenses related to customer billings and depreciation expense, it allocates general government expenses based on divisional directly assignable operation and maintenance expenses excluding PSG payroll, divided by its total operating expenses.[57]

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[54] Cost-of-Service Study, Exhibit 3 at 3, Line 31.

[55] Case No. 2000-00540, Pikeville s Response to the Commission s Order of December 19, 2000, Item 9.

[56] $1,039 = (($19,325 - $2,071) x .5) - $9,666.

[57] Cost-of-Service Study, Exhibit 3 at 5.

While some general government expenses may warrant allocation to Pikeville s water division, Pikeville has failed to demonstrate any relationship between the directly assignable expenses of these other divisions and the nature and occurrence of the general government expenses. Appropriate and reasonable allocation factors must consider the nature of the expense and its relationship to utility operations.

For the purposes of allocating general expenses in this case, the Commission has developed two allocation factors: a personnel allocation factor of .042656 and a facilities allocation factor of .0631754. The personnel allocation factor represents the percentage of the general government payroll allocable[58] to the water division to total general government personnel costs.[59] The facilities allocation factor is a weighted percentage of depreciation taken on general plant allocable to the water division as discussed in the allocated depreciation adjustment.[60]

Personnel. Pikeville reports general government payroll costs as $401,115. It attributes $92,565 of this amount to billing services for Pikeville s water, sewer, gas, and

[58] The Commission determined general government payroll allocable to the water division by comparing the salaries of those employees included in general government personnel costs with Pikeville s estimates of employee time devoted to the water division. For the list of the employees whose salaries are included in general government personnel costs, see Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 19. For the estimates of employee time devoted to water division operations, see Case No. 2000-00540, Pikeville s Response to the Commission s Order of December 19, 2000, Item 7. We found total general government payroll allocable to the water division to be $17,110.

[59] .042656 = $17,110/$401,115. For general government personnel costs, see Cost-of-Service Study, Exhibit 3 at 5, Line 1.

[60] The facility factor was calculated as follows:

	Total Depreciation	Percent To Total	Allocated To Water	Percent Allocated	Weighted Average
City Hall	$34,517	86.94677%	$1,472	4.26457%	3.70790%
Other	5,182	13.05323%	1,036	19.99228%	2.60964%
Total	$39,699	100%	$2,508		6.31754%

sanitation divisions. Of the $92,565, Pikeville allocates $29,271 to the water division based on the number of customers.[61] Pikeville allocates $42,967 of the remaining $308,550 to the water division based on directly assignable expenses. Our review of the evidence indicates that only $17,110 should be allocated to the water division[62] and that general government payroll expense should be decreased by $55,128.[63]

Vehicle Expenses. Pikeville reports total general government vehicle expenses as $1,139 and allocates $159 of this amount to its water division. The $159 represents fuel and car repair.[64] The Commission finds that the allocation of certain transportation costs to the water division is reasonable as general employees use city government vehicles to carry out duties related to the water division. Allocating the test-year amount based on the Commission s payroll factor results in a decrease of the test-year amount by $110.[65]

Utilities. Pikeville reports power and heat expense for general government facilities as $6,705. The Commission finds that this amount should be allocated based on the general government facility allocation factor. The result is a decrease to test-year expenses of $510.[66]

Telephone. The Commission finds that telephone expense for City Hall should follow payroll as general employees usage of the telephone for the water division

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[61] Cost-of-Service Study, Exhibit 3 at 5.

[62] See supra note 57.

[63] ($55,128) = $17,110 ($29,271 + $42,967).

[64] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 20 at 2 - 4.

[65] $110 = ($1,139 x .042656) - $159.

[66] $510 = ($6705 x .0631754) - $934.

should correlate with employee time allocated to the water division and that test-year allocation should be decreased by $749.[67]

Repairs and Maintenance. Pikeville reports general repairs and maintenance expenses of $27,248 of which it allocates $3,794 to the water division. The Commission finds that $5,281 of the test-year amount relates to building maintenance and the remaining $21,967 relates to office equipment maintenance.[68] As the allocation of building maintenance follows other building costs, we have applied the general government facility factor. We find that the maintenance of office equipment should be allocated using the general government personnel allocation factor. The test-year allocation should be reduced by $2,523.[69]

Office Expense and Freight and Postage. Pikeville reports test-year office expenses for general government of $23,831 and freight and postage of $4,289. It allocates $3,319 and $597 of these amounts, respectively, to the water division. These expenses were incurred as a result of general employees performing their routine business duties. The allocation of this expense, therefore, should follow general personnel costs. We find that test-year office expenses should be decreased by $2,303[70] and test-year freight and postage $414.[71]

Insurance. Pikeville reports test-year insurance expense of $71,204 of which it allocates $9,915 to the water division. Our review of Pikeville s general government

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[67] $749 = ($7,745 x .042656) - $1,079.

[68] See Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 20.

[69] $2,523 = (($5,281 x .0631754) + ($21,967 x .042656)) - $3,794.

[70] $2,303 = ($23,831 x .042656) - $3,319.

[71] $414 = ($4,289 x .042656) - $597.

expenditures general ledger indicates that the majority of this expense relates to insurance held on Pikeville s real estate.[72] We find that the general government facility factor should be used to allocate this expense and that this application will reduce test-year expenses by $5,417.[73]

Miscellaneous Expenses. Pikeville reports general government miscellaneous expenses of $2,041 of which $284 are allocated to the water division. The total amount consists of $500 for Christmas lights for two fire stations, $913 in returned checks, and $628 for flowers, food for Christmas dinners and other functions, and employee gifts. None of these amounts relate to water division operations and, therefore, should not be allocated to it. The Commission finds that test-year expenses should be decreased by $284.

Professional Services. Pikeville reports general professional services expenses of $14,787 that relate to audit work involving all city operations. It has allocated $2,059 of this amount to its water division. We find Pikeville s allocation factor, which is based on test-year expenses, reasonable since the auditor's review of each of Pikeville s operations should coincide with its size and complexity as represented by the operation s budget. Accordingly, we have not adjusted the test-year allocation of accounting fees.

Pikeville s general government expenditures general ledger indicates legal fees of $18,152.[74] Of this amount, Pikeville has allocated $2,528 to its water division. Based upon our review of the entries to this account, we find that the total amount allocated to

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[72] See Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 20.

[73] $5,417 = ($71,204 x .0631754) - $9,915.

[74] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 20 at 22 24.

the water division should be disallowed for rate-making purposes. This account includes fees for non-legal services whose precise nature cannot be ascertained. Of those fees that clearly relate to legal services, none appear to support water division operations. While we have excluded all allocated test-year legal expenses from test-year operations, directly assigned test-year legal fees are reported on the water division s income statement.

Pikeville reports fees of $13,685 for engineering services and allocates $1,906 of these fees to its water division. The Commission finds that engineering fees that relate to the water division have been directly assigned. We further find that the fees included in the present allocation are unrelated to water division operations and should be eliminated.

Pikeville reports training expenses of $2,824 of which it allocates $393 to its water division. The Commission finds that, as some Pikeville employees perform specific functions for the water division, a portion of the employee training should be allocated to the water division and that the allocation of these fees should follow the payroll allocation. Accordingly, the test-year allocation should be decreased by $273.[75]

Travel. Pikeville reports test-year travel expense of $5,930 for employee travel of which it allocates $826 allocated to the water division. We find that the personnel allocation factor should be used to allocate this expense and that use of this factor results in a decrease of $573 to the test-year allocation.[76]

Banking Expenses. Pikeville reports bank service charges in the amount of $88 of which $12 was allocated to the water division. The water division maintains its own

[75] $273 = ($2,824 x .042656) - $393.

[76] $573 = ($5,930 x .042656) - $826.

bank accounts for which service charges have already been included in test-year operations. Accordingly, the Commission finds that this expense is unrelated to water division operations and should be eliminated.

Depreciation. Pikeville proposes to allocate to its water division depreciation common to general government operations. The allocation totals $8,879 and includes amounts for Pikeville City Hall, office equipment, public works and storage buildings, and gas tanks and pumps. Pikeville allocates this depreciation expense based upon water plant assets to total proprietary fund assets.[77]

The Commission finds that the proposed allocation method is unreasonable. Allocation of common use assets should be based on usage. A utility should maintain usage information to permit proper allocations of such assets. In this instance, Pikeville has not maintained such information. Accordingly, we must develop an allocation factor that reflects actual usage.

Pikeville s City Hall is used for several different functions.[78] Test-year depreciation of City Hall s building and office equipment totaled $34,517 of which $7,398 was allocated to the water division. None of Pikeville s employees who are located in and work out of City Hall are assigned to a specific division or operation. In the absence of a more accurate method, the Commission finds that depreciation of City Hall s building and office equipment should be allocated using the personnel allocation factor and that use of this factor requires a reduction of $5,926 in test-year expenses.[79]

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[77] Cost-of-Service Study, Exhibit 1 at 2.

[78] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 17.

[79] $5,926 = ($34,517 x .042656) - $7,398.

Pikeville reports test-year depreciation on the public works building, storage building, and gas pumps of $5,182 of which it allocated $1,481 to the water division. The public works divisions that PSG operates and manages jointly use these facilities.[80] In the absence of a more accurate method, the Commission finds that depreciation of these facilities should be allocated evenly among these public works divisions (water, sewer, streets, gas, and solid waste) and that use of this allocation method requires a reduction of $445 in test-year expenses.[81]

The Commission finds that test-year allocated expenses should be adjusted by $412[82] to reflect the water division s portion of the new copy machine as capitalized in the maintenance materials adjustment. The allocation of this expense follows the allocation of actual test-year copier maintenance expense.[83]

Interest Income

Pikeville has adopted the generally recognized rate-making practice of setting off revenue requirements with interest income from investments.[84] We find that this practice should be used to determine Pikeville s rate for wholesale service. Because Pikeville s water and sewer divisions prepare combined financial statements, the direct assignment of any portion of the interest income is not possible. Pikeville reported combined interest income of $178,726 for the test year. As allocation of interest income based upon each division s cash balances is not possible due to the lack of such information,

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[80] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 17.

[81] $445 = ($5,182 ÷ 5) - $1,481.

[82] $412 = Water Division s Allocation ÷ Machine s Useful Life = $2,061 ÷ 5 years.

[83] Case No. 2000-00540, Transcript of May 3, 2001 Hearing at 59 - 62.

[84] See Pikeville Ordinance No. 0-98-013, Section 18(b)(ii).

the Commission finds that such income should be allocated based on test-year water and sewer service revenues and that the use of this allocation method results in the allocation of $129,050 to the water division.[85]

REVENUE REQUIREMENTS

Pikeville requests that the Commission use the utility approach to calculate its revenue requirements. Under this approach a return factor is applied to utility rate base to determine allowable income. Pikeville calculates its rate base as $9,625,163[86] and requests net operating income of $626,968. The resulting overall return on rate base is 6.51 percent.[87]

Pikeville proposes to allocate $3,690,256 of its rate base to inside the city customers and set the return on rate base for those customers equal to its weighted cost of debt of 4.96 percent. The resulting net operating income required from inside the city customers is $183,037. Pikeville allocates the remaining rate base of $5,934,907 and the requested return of $443,931 to its outside the city customers. It seeks a return on rate base from its outside the city customers of 7.48 percent.[88]

Pikeville calculates its weighted cost of capital using an assumed capital structure consisting of 50 percent debt and 50 percent equity. It requests a 10 percent

[85] $129,050 = Combined Interest Income x (Water Service Revenue/Combined Water And Sewer Service Revenue = $178,726 x ($2,245,494 / $3,109,858).

[86]

Plant in Service	$13,250,014
Accumulated Depreciation	(3,933,593)
Working Capital (45 day method)	192,879
Construction Work in Progress	115,863
Total	$9,625,163

[87] .0651 = $626,968 ÷ $9,625,163.

[88] .0748 = $443,931 / $5,934,907. See Cost-of-Service Study, Summary at 2.

return on common equity from its outside the city customers. The resulting weighted cost of capital is 7.482 percent.[89]

Pikeville advances three reasons for its use of the utility approach and its claim for a higher rate of return from outside the city customers.[90] First, inside the city customers play a customer-owner role and therefore should be entitled to earn a fair and reasonable return on their investment. Second, by serving customers beyond the city boundaries, Pikeville and its inside the city customers bear all risks associated with the ownership and operation of the water system while outside the city customers bear none. Therefore, Pikeville argues, they should be treated in the same manner as shareholders of an investor-owned utility and be permitted a fair return on their investment in recognition of bearing such risks. Third, such rate treatment rewards Pikeville for its efforts to expand water service outside its boundaries and provides an incentive for further expansion into areas that currently do not have water service.

Critical to the use of the utility approach is the establishment of a reasonable and reliable utility rate base. Pikeville s present accounting practices, however, do not allow for this action. Pikeville does not maintain its plant records in accordance with the USoA for Investor Owned Water Utilities, which, inter alia, governs the recording of plant additions and retirements.[91] Moreover, it has not retained nor can it present documentary evidence on the original cost of its plant in service.[92] Generally accepted

[89] Cost-of-Service Study, Exhibit 4 at 1.

[90] Case No. 2000-00540, Brief for the City of Pikeville at 5 6.

[91] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 7.

[92] Pikeville s accountant states that retention of such documents for a period in excess of 10 years is unreasonable. See Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 7.

regulatory standards require the retention of such information for a minimum period of 50 years or 6 years after the plant s retirement when certain detailed ledger information is not maintained.[93]

Of particular concern is the absence of information regarding contributed plant. Pikeville does not record plant costs of contributed property as utility plant in service.[94] The USoA, however, requires that all plant in service be recorded at original costs as determined when first dedicated to public service and that any contributed plant be recorded with a corresponding entry to Contributions in Aid of Construction. This identification is especially important when the utility approach is used to determine utility rates. The utility approach grants a return to investors only on the capital that they have invested. Capital invested or contributed by others is generally excluded from utility rate base.

The record suggests that a portion of Pikeville s water treatment plant is contributed plant. The municipal bond ordinance that authorized the sale of revenue bonds refers to $1,812,800 of grant funds from several governmental entities as part of the package to finance the plant s construction.[95] None of Pikeville s witnesses were involved in the financial transactions that led to the water treatment plant s construction or have personal knowledge of them. Pikeville has advised the Commission that its auditors have in their review of Pikeville s records found no grants recorded in its books

[93] See Committee on Accounts, National Association of Regulatory Utility Commissioners, Regulations to Govern the Preservation of Records of Electric, Gas and Water Utilities (Rev. ed. May 1985) at 34.

[94] Case No. 2000-00540, Pikeville s Response to PSC Hearing Request, Item 3.

[95] Pikeville Ordinance No. 17 at 2. See also Case No. 2000-00540, Pikeville s Response to the Commission s Order of December 19, 2000, Item 5 at 4.

and records for the purchase of assets devoted to the provision of water service.[96] In light of the clear and explicit language in the municipal bond ordinance and the lack of any record specifically showing the source of funding for the water treatment plant, we are not persuaded and find that Pikeville s rate base cannot be determined with sufficient reliability.

Pikeville s use of the utility approach also suffers from the lack of any meaningful basis to set a return on equity. A return on equity calculation requires the formation of an appropriate proxy group. A proxy group is a selection of companies whose operations are similar enough in nature to that of the company being analyzed that comparisons of returns required by investors can be reasonably made. In the absence of a properly formulated proxy group, any cost of equity calculation is arbitrary and of questionable reliability.

Pikeville fails to provide a meaningful proxy group upon which to establish a return on equity level. It provides a list of returns established in various rate proceedings involving gas and electric utilities.[97] None of these utilities are water utilities or municipal utilities or involve a business organization similar to a municipal utility. Pikeville presents no evidence to demonstrate that the risks associated with these gas and electric investor-owned utilities are the same as those of a municipal utility. Given the nature of gas and electric industries and the vast differences in those industries from the water industry, we find Pikeville s use of such utilities inappropriate.

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[96] Case No. 2000-00540, Pikeville s Response to the Commission s Order of December 19, 2000, Item 1.

[97] Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Item 40.

The record reveals little effort on Pikeville s part to develop a proxy group consisting of municipal or other governmental utilities with risk characteristics similar to Pikeville.[98]

Given the lack of evidence to establish Pikeville s rate base and the lack of meaningful proxy group to establish a meaningful return on equity level, we find that use of the utility approach to establish Pikeville s rate is inappropriate and unreasonable. Our action, however, should not be interpreted as a rejection of the utility approach to establish a municipality s wholesale service rate. The Commission acknowledges that several authorities have urged the use of the utility approach in those instances in which a governmental-entity provides service outside its boundaries and that their arguments have merit.[99] Those seeking to employ the utility approach must, however, first meet the prerequisites for its use. Pikeville has not.

To determine Pikeville s debt service coverage requirement, the Commission relies upon the provisions of a 1998 Revenue Bond Ordinance[100] which requires Pikeville to have net revenues of at least 1.30 times the maximum principal and interest payment due in any given fiscal year to be eligible to issue parity bonds. Net revenues is defined as gross income, including, but not limited to, income from investments, connection and disconnection charges, less all operating expenses exclusive of depreciation.

[98] Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Items 41 and 42.

[99] See, e.g., American Water Works Association, Principles of Water Rates, Fees, and Charges (AWWA M1) (5th ed. 2000) at 6 - 7.

[100] Pikeville Ordinance No. 0-98-013, Section 18(b)(ii). See Case No. 2000-00540, Pikeville s Response to the Commission s Order of December 19, 2000, Item 5.

To determine Pikeville s maximum annual debt payment we assigned the following long-term bonds and notes to the water division:[101]

Description	Balance 12/31/97
1985 Series A Revenue Bonds at 5% for the construction of new water treatment facility	$2,962,000
1985 Series A Revenue Bonds at 6.625% for the construction of new water treatment facility	2,213,000
1976 Revenue Bonds[102]	285,000
4.643% KIA 20-year note for water distribution system at Yorktown, Cedar Gap Water Tank, and Island Creek Tie	405,858
2.9% KIA 20-year note for water distribution system at Yorktown, Cedar Gap Water Tank, and Island Creek Tie	757,112
1.7% KIA 20-year note for water distribution system and sewer system including Thompson Road Sewer Extension[103]	272,902
TOTAL	$6,895,872

The maximum payment for the assigned long-term debt occurred in 1999. This, along with the water division s portion of the computer lease payments,[104] totals

[101] This assignment is based upon our review of all outstanding Pikeville bond ordinances related to Pikeville s water and sewer division and of Pikeville s Combined Financial Statements for the year ending June 30, 1997. See Case No. 2000-00540, Pikeville s Response to the Commission s Order of December 19, 2000, Item 5; Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Item 12 at 15.

[102] Bond documents do not describe the facilities which the bonds proceeds financed. The Commission s review of depreciation schedules, however, shows major water plant additions in 1976 and 1977 that we assume were financed with these proceeds.

[103] The record does not contain any details about the specific uses of the proceeds. We, therefore, have allocated 50 percent of proceeds to water facilities and 50 percent to sewer facilities.

[104] The city leased a computer for general use. The annual lease payment is $9,325. The water division was allocated $398 ($9,325 x 4.2656 personnel factor). The specific uses of the computer are not included in the record. The Commission has found no means of allocating this computer expense that is more appropriate than the general government personnel allocation factor. The personnel allocation factor is calculated in the discussion of the payroll expense adjustment as included in operating expenses allocated to the water division.

$568,315.[105] We calculated the long-term note payments using the stated interest rates, number of remaining principal payments, and outstanding balances as of December 31, 1997.

Based upon the debt service coverage standard, we determined Pikeville s revenue requirement as follows:

Operating Expenses	$ 1,669,060
Plus: Debt Maximum Annual Debt Payment, 1999	568,315
30 percent debt coverage	170,495
Total Revenue Requirement	2,407,870
Other Operating Revenues	(10,974)
Tap Fees	(22,108)
Interest Income	(129,050)
Revenue Required From Rates	2,245,738
Less: Normalized Water Sales	(2,098,010)
Required Revenue Increase	$ 147,728

In determining Pikeville s revenue requirements, the Commission has included depreciation expense. While Pikeville s Ordinance states that depreciation need not be included, we find that Kentucky law affords such inclusion. See Public Service Commission v. Dewitt Water District, Ky., 720 S.W.2d 725, 731 (1986) (The Commission is required by statute to treat depreciation as an operating expense to provide an adequate fund for renewals, replacement and reserves.) Moreover, it is

[105]

Bonds	
1976 Revenue Bonds	$84,520
1985 Series A Revenue Bonds at 5%	198,550
1985 Series A Revenue Bonds at 6.625%	168,220
Notes	
4.643% KIA 20-year note	37,017
2.9% KIA 20-year note	60,991
1.7% KIA 20-year note	18,619
Lease Payment	398
Total	$568,315

generally recognized that depreciation is a real part of the cost of operating a utility, whether government or investor owned. American Water Works Association (AWWA), Manual M1, Principles of Water Rates, Fees and Charges (5th ed. 2000) at 3.[106]

We determined the total revenue requirement of Pikeville to be $2,407,870 as compared to Pikeville s request of $2,471,024. The revenue requirement from rates of $2,245,738 has been used as the basis to establish a wholesale rate for Mountain District.

COST-OF-SERVICE STUDY

To support its proposed wholesale rate, Pikeville presents a cost-of-service study. This study uses a three stage process. First, costs are assigned to major functional groups. Then they are classified into demand, commodity, and customer components. Finally, they are allocated to the various customer groups. Pikeville s study, which it describes as a fully allocated cost of service study, [107] is loosely based on the generally recognized commodity-demand method.[108]

Our review of Pikeville s study raises several concerns about its methodology. First, the study does not use actual test-period expenses. Pikeville lacked such information and instead based its study on budgeted expenses. Since variances between budgeted operations and actual operations may have occurred, the study s assignment of costs is open to question.

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[106] See also Case No. 1998-00283, Proposed Adjustment of the Wholesale Water Service Rates of the City of Owenton, Kentucky (Ky. PSC Feb. 22, 1999).

[107] Testimony of Randall J. Walker at 5.

[108] For a general description of the commodity demand method, see AWWA, Principles of Water Rates, Fees, and Charges, supra, at 57 - 59.

Second, we find the study s findings regarding line loss or unaccounted for water to be very questionable. The study reports that Pikeville s unaccounted-for water is 2.24 percent of its total production. This amount, according to the study, represents the water used for city facilities and line flushing and water lost through main breaks. Mr. Miller, Mountain District s witness, testified that such a factor is suspect. He noted that an extremely good percentage for leakage alone is 6   10 percent.[109] Our experience shows that most water utilities experience unaccounted for water in excess of 10 percent of water produced and purchased. Given the mountainous topography that Pikeville serves, a lower percentage is not likely. A questionable unaccounted for water level reduces the accuracy of the study s other findings.

Third, we find that the study has not properly functionalized Pikeville s power costs. In the study, Pikeville allocates all power costs to the water production function. Given that power costs are incurred in the transmission, distribution, and customer functions, we find that a portion of electrical power costs should be allocated to the commodity or treatment function as these costs are directly related to the amount of water treated.

Fourth, we find that Pikeville has incorrectly assigned bad debt expense to supply, transmission and distribution classification. Mountain proposed to move this expense to the customer function.[110] Pikeville agreed that bad debt expense should not

[109] Case No. 2000-00540, Testimony of Carlos Miller, Pikeville/Mountain Water District - Wholesale Water Rate Determination for Mountain Water District at ¶ 4.

[110] Id. at ¶ 7.

be allocated to the wholesale customers.[111] We have reassigned this expense, as well as banking expense, to the customer function.

Fifth, we find that administrative and general expense should be allocated based on the percentage of all other expenses, excluding commodity expenses. None of these expenses are related to the commodity function, and they do not vary with the amount of water produced.

Sixth, Pikeville s cost-of-service study fails to adequately consider the demand that Mountain District places upon Pikeville s treatment and distribution system. A fully allocated cost-of-service study based on the commodity-demand method requires the preparation of a demand study to determine the maximum day and maximum hour demands that various customer classifications placed on the subject system. In the event that a complete demand study is cost prohibitive, then meter readings should be taken, at a minimum, on a daily basis on the meters used by large users such as wholesale customers. As a last resort, factors from demand studies of like systems may be used.

Pikeville has taken none of these actions. Its study assumes that wholesale customers place the same demand on Pikeville's system as the retail customers served outside the city limits.[112] Pikeville uses a demand factor for inside city customers of 1.52 and a demand factor of 1.62 for outside city and wholesale customers. Pikeville did not engage in any study to ascertain the daily or hourly usage patterns of its wholesale or

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[111] Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Item 9.

[112] Pikeville s Cost-of-Service Study, Exhibit 7 at 1.

out of city customers.[113] The study s author testified that no attempt was made to determine the number of storage tanks in Mountain District s system.[114]

We also take exception to Pikeville s contention that its estimated maximum demands were derived using a methodology described in the AWWA Manual M1.[115] Pikeville ignores the effect of Mountain District s storage facilities. The study s author testified that Mountain District s storage facilities were not significant.[116] The AWWA Manual M1, however provides that the [n]umber, location, and size of distribution storage reservoirs operated by the wholesale purchaser is a relevant factor affecting a wholesale water customer s relative demand.[117] It further provides that by [a]llowing storage tank elevation to rise or fall with demand of end use customers, the wholesale customer's demand profile may more resemble that of a large industrial customer and can actually result in reducing the maximum hour demand placed on the water supplier. [118]

We find little evidence in the record to support the assumptions that underlie Pikeville s cost-of-service study. It offers no demand studies from other utilities that would support its assumption that wholesale customers place the same demand on the

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[113] Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Item 45(e) and (f).

[114] Case No. 2000-00540, Transcript of May 3, 2001 Hearing at 177.

[115] Case No. 2000-00540, Pikeville s Response to Commission Staff s Interrogatories and Requests for Production of Documents, Item 49(a).

[116] Case No. 2000-00540, Transcript of May 3, 2001 Hearing at 177.

[117] AWWA, Principles of Water Rates, Fees, and Charges, supra, at 235.

[118] Id. at 234.

system as outside city customers.[119] It provides no evidence to support its assumption that outside city customers placed a greater demand on Pikeville s system than inside city customers.

Finally, the Commission has concerns about the methodology used to allocate transmission and distribution costs. Mountain District urges the use of its inch-mile methodology to establish Pikeville s wholesale rate because certain water mains are not being used to serve Mountain District. It asserts that storage tanks, lines and pump stations in Pikeville's system, which it installed, benefit Pikeville's customers. It further argues that, as a result of these pump stations, the pressures in that pump zone prevent water from entering the transmission system and supplying water to Mountain District.[120] Mountain District has presented a hydraulic analysis of Pikeville's system that tends to support its claims.[121]

Pikeville opposes the use of Mountain District s inch-mile methodology. It maintains that all transmission lines 8 inches and above should be included in the allocation of costs to Mountain District.[122] It notes that Mountain District s proposed methodology inappropriately seeks to classify as jointly used facilities that were constructed solely for the purpose of serving Mountain District.[123]

[119] In other proceedings, we are have previously been presented with demand studies that contradict this assumption. See, e.g., Kentucky-American Water Company, Case No. 2000-120 (Ky.PSC Nov. 27, 2000); Kenton County Water District No. 1, Case No. 94-056 (Ky.PSC. Jan 27, 1995).

[120] Case No. 2000- 00540, Transcript of May 3, 2001 Hearing at 215 227.

[121] Case No. 2000-00540, Mountain District s Response to Pikeville s Data Request, Item 16.

[122] Case No. 2000-00540, Transcript of May 3, 2001 Hearing at 180.

[123] Pikeville Brief at 19.

We find that that Mountain District s proposed methodology is the more accurate and correct methodology. We have deducted Mountain District lines that Pikeville jointly uses from the inch-mile calculation. Our action results in a reduction of 49.46 inch miles. When allocating depreciation expense to Mountain District, however, we have included these lines. We have also accepted Pikeville s proposal to include all loop lines in the inch-mile calculation. We agree that the mains completing a loop add pressure to a system and provide additional reliability. We have included 56.81 inch-miles of line that loop Pikeville s system in the inch-mile ratio calculations.

Using the inch-mile methodology and making the adjustments discussed above, the Commission finds that Pikeville s cost to provide wholesale service to Mountain Water District is $1.44. Appendix B to this Order sets forth our calculations to derive this rate.

SUMMARY

Having considered the evidence of record and being otherwise sufficiently advised, the Commission HEREBY ORDERS that:

1. Pikeville s proposed wholesale water service rate of $1.90 is denied.

2. The rate of $1.44 per 1,000 gallons is approved for wholesale water service that Pikeville provides to Mountain District on and after the date of this Order.

3. Within 30 days of the date of this Order, Pikeville shall file a revised tariff sheet reflecting the approved rate.

Done at Frankfort, Kentucky, this 18th day of October, 2002.

By the Commission

ATTEST:

Executive Director

APPENDIX A
APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION
IN CASE NO. 2002-00022 DATED

ADJUSTED OPERATING STATEMENT

Water Sales	2,245,494	(147,484)	2,098,010
Other Operating Revenues	10,974		10,974
Tap Fees	22,108		22,108
Total Operating Revenues	2,278,576	(147,484)	2,131,092
Operating Expenses			
Directly Assignable to Water Division			
Operation and Maintenance			
Maintenance Materials	12,322	(4,571)	
		(2,061)	
		(5,616)	74
Retirement	12,000		12,000
Utilities	12,111	(5,504)	6,607
Repairs and Maintenance	88,036	(13,253)	
		(46,528)	
		(1,299)	
		(5,711)	21,245
Office Expense	11,130	(2,941)	
		(2,634)	5,555
Freight and Postage	2,238	(1,017)	1,221
Insurance	8,345	3,525	11,870
Engineering	17,002	(15,463)	1,539
Rents and Leases	889		889
Professional Services	4,649	(2,578)	2,071
Bad Debt Expenses	30,540		30,540
Banking Expenses	1,705	(1,442)	
		(120)	143
Professional Services Group	1,242,026	(5,378)	
		(10,081)	1,226,567
Amortization of Rate Case Expense		23,108	23,108
Depreciation			
Water Assets	282,478	4,293	286,771
Allocation of Common Use Utility Assets	9,666	(1,039)	8,627
Total Expenses Directly Assignable to Water	1,735,137	(96,310)	1,638,827
Allocated to the Water Division			
Operation and Maintenance			
Payroll Expenses	72,238	(55,128)	17,110
Vehicle Expenses	159	(110)	49

Allocated to the Water Division			
Operation and Maintenance			
Payroll Expenses	72,238	(55,128)	17,110
Vehicle Expenses	159	(110)	49
Utilities	934	(510)	424
Telephone	1,079	(749)	330
Repairs and Maintenance	3,794	(2,523)	1,271
Office Expense	3,319	(2,303)	1,016
Freight and Postage	597	(414)	183
Insurance	9,915	(5,417)	4,498
Miscellaneous Expenses	284	(284)	-
Professional Services	6,886	(2,528)	
		(1,906)	
		(273)	2,179
Travel	826	(573)	253
Banking Expenses	12	(12)	-
Depreciation	8,879	(5,926)	
		(445)	
		412	2,920
Total Expenses Allocated to Water Division	108,922	(78,689)	30,233
Total Operating Expenses	1,844,059	(174,999)	1,669,060
Net Operating Income	434,517	27,515	462,032
Plus: Interest Income		129,050	129,050
Income Available to Service Debt	434,517	156,565	591,082

APPENDIX B
APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION
iN CASE NO. 2002-00022 DATED

TABLE I

WATER PRODUCED AND SOLD		
Pikeville	412,832,000	
Mountain Water District	489,142,000	
Mud Creek Water District	108,509,000	
Sandy Valley Water District	155,056,000	
Total Sales	1,165,539,000	
Treatment Plant Use	18,300,000	
Unaccounted For Water	58,851,000	
Total Produced	1,242,690,000	
Treatment Plant Use	18,300,000	1.47%
Total Produced	1,242,690,000	
Unaccounted for Water	58,851,000	4.74%
Total Produced	1,242,690,000	
Total Plant Use and Unaccounted		6.21%

Source for Plant Use and Unaccounted For Water: Case No. 2000-00540, Pikeville s Response to the Commission s Order of December 19, 2000 Item 18.

TABLE II

INCH MILE DATA			
Size	Feet	Miles	Inch-Miles
2	14,400	2.73	5.46
3	12,800	2.42	7.26
4	16,800	3.18	12.72
6	121,600	23.03	138.18
8	126,800	24.02	192.16
10	33,200	6.29	62.90
12	23,200	4.39	52.68
16	10,900	2.06	32.96
Total Inch Miles			504.32

Mountain Water District Lines Used Jointly by Pikeville			
Size	Feet	Miles	Inch-Miles
8	4,400	0.83	6.64
10	10,600	2.01	20.10
16	7,500	1.42	22.72
Total Inch Miles			49.46

Pikeville Lines Used Jointly by Mountain Water District			
Size	Feet	Miles	Inch-Miles
8	21,700	4.11	32.88
10	26,100	4.94	49.40
12	21,800	4.13	49.56
16	10,900	2.06	32.96
Total Inch Miles			164.80

Loop Lines that Loop System Together	
8" Island Creek Line that completes loop to 10" Cedar Creek line - jointly used	9.09
10" Cedar Creek line from interior of city to 8 inch Island Creek line - jointly used	15.15
Other loop lines	32.57
Pikeville Lines Used Jointly by Mountain Water District	164.80
Loop Lines used jointly by Mountain Water District	56.81
Jointly Used Inch Miles	221.61
Less: MWD lines used by Pikeville	(49.46)
Total Jointly Used Inch Miles	172.15
Inch Mile Ratio = 172.15 / 504.39	0.3414

TABLE III

WHOLESALE ALLOCATION FACTORS					
					Multiplier
Line Loss Percentage	4.74%				
Plant Use	1.47%				
Total Plant Use & Line Use	6.21%				
Pikeville Production Multiplier	1	/	1 - .0621	=	1.0662
Wholesale Inch Mile Ratio	172.15	/	504.3	=	0.3414
Wholesale Share of Line Loss	0.3414	x	0.0474	=	0.0162
Joint Share of Plant Use & Line Loss	0.0162	+	0.0147		0.0309
Production Multiplier	1	/	1 - .0309		1.0319
Production Allocation Factor	$\frac{489{,}142{,}000}{1{,}165{,}539{,}000}$	x	$\frac{1.0319}{1.0662}$		0.4062
Pipeline Transmission Factor	$\frac{489{,}142{,}000}{1{,}165{,}539{,}000}$	x	0.3414		0.1433
Commodity Factor	489,142,000	/	1,165,539,000		0.4197

TABLE V

ALLOCATION OF OPERATION AND MAINTENANCE EXPENSE					
Expense	Total	Commodity	Supply and Treatment	Trans. and Dist.	Customer
Salaries	*$440,429*		*$198,391*	*$200,673*	*$41,365*
401 K	*8,212*		*3,397*	*3,937*	*878*
Pension	*16,424*		*6,793*	*7,874*	*1,757*
Health and Dental	*82,345*		*34,066*	*39,476*	*8,803*
Long Term Disability	*1,919*		*794*	*920*	*205*
Workmans Comp	*18,466*		*7,638*	*8,853*	*1,976*
Life Insurance	*2,423*		*1,002*	*1,162*	*259*
Payroll Taxes	*38,783*		*16,041*	*18,593*	*4,150*
Chemicals	*68,101*	*68,101*			
Utilities	*196,814*	*123,363*	*50,935*	*22,516*	
General Maintenance	*163,241*		*27,669*	*135,572*	
Vehicles	*37,870*		*2,531*	*35,339*	
Other Expenses	*77,514*		*25,693*	*51,822*	
Project Support	*54,063*		*30,256*	*23,807*	
Bad Debt expense	30,540				30,540
Banking expense	143				143
Subtotal	$1,237,287	$191,464	$405,206	$550,544	$90,076
Percentages - less commodity	1,045,823		0.3875	0.5264	0.0861
Outside Services	*$ 10,134*		*$ 3,927*	*$ 5,335*	*$ 873*
Office Expenses	*6,494*		*2,516*	*3,418*	*559*
Food and Travel	*3,324*		*1,288*	*1,750*	*286*
Retirement	12,000		4,650	6,317	1,033
Payroll	17,110		6,630	9,007	1,473
Repairs and Maintenance	22,527		8,729	11,858	1,940
Office Expense	5,555		2,153	2,924	478
Freight and postage	1,404		544	739	121
Maintenance materials	74		29	39	6
Vehicle	49		19	26	4
Telephone	330		128	174	28
Office Expense	1,016		394	535	87
Travel	253		98	133	22
Utilities	7,031		2,725	3,701	605
Insurance	16,368		6,343	8,616	1,409
Engineering	1,539		596	810	133
Rents and Leases	889		344	468	77
Professional services	4,250		1,647	2,237	366
Subtotal	$1,347,634	$ 191,464	$447,966	$ 608,631	$ 99,576
Depreciation - Water Supply	$ 168,415		168,415		
Trans & Dist	111,523			111,523	
Meters and Services	18,380				18,380
Amortization of Rate Case expense	23,108				
Total Operation and Maintenance	$1,669,060	$ 191,464	$616,381	$ 720,154	$117,956
Items in italics are from PSG budget.					

TABLE VI

WHOLESALE RATE				
Expense	Total	Allocation Factor	Amount to Mountain	Rate to Mountain
Commodity	$191,464	0.4197	$80,357	$0.1643
Supply and Treatment	447,956	0.4062	181,960	0.3720
Transmission and Distribution	608,625	0.1433	87,216	0.1783
Customer	99,579	0	-	
Depreciation				
Supply and Treatment	168,415	0.4062	68,410	0.1399
Trans. and Distribution	111,523	0.1574	17,554	0.0359
Customer	18,380	0	-	
Debt Service				
Supply and Treatment	586,677	0.4062	238,308	0.4872
Trans. and Distribution	151,615	0.1433	21,726	0.0444
Customer	517			
Rate Case	23,108	0.3300	7,626	0.0156
Total Revenue Requirement	$2,407,859		$703,157	$1.44
Less: Other Operating Revenues	(10,974)			
Tap Fees	(22,108)			
Interest Income	(129,050)			
Revenue Required From Rates	$2,245,727		$703,157	$1.44

Depreciation allowed on lines contributed by Mountain