

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

NOTICE OF ADJUSTMENT OF THE RATES )  
OF KENTUCKY-AMERICAN WATER COMPANY ) CASE NO. 89-348  
EFFECTIVE ON JANUARY 28, 1990 )

TABLE OF CONTENTS

	<u>Page</u>
ANALYSIS AND DETERMINATION .....	2
Test Period .....	2
Valuation Method .....	3
Kentucky River Station No. 2 .....	3
Working Capital .....	5
Extension Deposits .....	7
Deferred Taxes - Excess Plant .....	7
Other Adjustments .....	9
Revenues and Expenses .....	9
Weather Normalization .....	10
Allowance For Funds Used During Construction ("AFUDC") .....	11
Payroll Expense .....	11
Payroll Related Expenses .....	14
Employee Related Expenses .....	14
Service Company .....	15
Miscellaneous Payments .....	16
Pension Administration Expense .....	19
Sanitary Sewer User Charge .....	20
Credit Line Fee .....	20

Cost-of-Service Study .....	21
Costs Related to the Feasibility of Acquiring	
Small Water Utilities .....	22
Rate Refund Cost .....	24
Cost of Serving New Customers .....	26
Land Study .....	27
Amortization of Negative Acquisition Adjustment .....	27
Taxable Customer Advances .....	28
Toyota Main Depreciation .....	30
Amortization Period of Taxes on CIAC	
and Customer Advances .....	31
Additional Taxable Interest .....	33
Amortization of Kentucky River Station No. 2 .....	34
Amortize Deficiency of Deferred State Income Tax .....	35
Interest Synchronization .....	35
Uncontested Matters .....	35
Income Taxes .....	36
RATE OF RETURN .....	36
Capital Structure .....	36
Cost of Debt .....	37
Return on Equity .....	38
Rate of Return Summary .....	39
AUTHORIZED INCREASE .....	39
OTHER ISSUES .....	40
Assistance to Low-Income Customers .....	40
Least Cost/Comprehensive Planning .....	41

<b>RATE DESIGN</b> .....	<b>42</b>
<b>Billing Analysis</b> .....	<b>42</b>
<b>Cost-of-Service Study</b> .....	<b>43</b>
<b>Rate Design</b> .....	<b>44</b>
<b>SUMMARY</b> .....	<b>46</b>

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

NOTICE OF ADJUSTMENT OF THE RATES )  
OF KENTUCKY-AMERICAN WATER COMPANY ) CASE NO. 89-348  
EFFECTIVE ON JANUARY 28, 1990 )

O R D E R

On December 28, 1989, Kentucky-American Water Company ("Kentucky-American") filed its notice with the Commission seeking to increase its rates and charges effective January 28, 1990. The proposed rates would produce an annual increase in revenue of \$3,287,360, an increase of approximately 15.55 percent over existing revenues.<sup>1</sup>

In order to determine the reasonableness of the request, the Commission suspended the proposed rates and charges for 5 months after the effective date and scheduled a public hearing for May 1, 1990. The hearing was held on May 1 and 2, 1990 at the Commission's offices in Frankfort, Kentucky. The Utility and Rate Intervention Division of the Attorney General's Office ("AG") and the Lexington-Fayette Urban County Government ("LFUCG") intervened in this matter and participated in the hearings.

Witnesses for Kentucky-American prefiling testimony and appearing at the hearing were Robert A. Edens, Vice President and General Manager of Kentucky-American; Chris E. Jarrett, Vice

---

<sup>1</sup> Notice, page 2.

President and Treasurer of Kentucky-American; Roy L. Ferrell, Assistant Treasurer of Kentucky-American and Director of Rates and Revenues for American Waterworks Service Company ("Service Company"); Edward J. Grubb, Assistant Director - Rates and Revenues, Service Company; Thomas G. McKitrick, Director - Special Rate Studies, Service Company; John S. Young, System Director - Engineering Design, Service Company; Charles F. Phillips, Professor of Economics at Washington and Lee University; and Richard H. Moser, Vice President - Water Quality, Service Company. Appearing on behalf of the AG/LFUCG was Thomas C. DeWard, a Certified Public Accountant and Senior Regulatory Analyst for Larkin and Associates.

This Order addresses the Commission's findings and determination on issues presented and disclosed in the hearing and investigation of Kentucky-American's revenue requirements. The Commission has granted rates and charges to produce an annual increase of \$2,529,944.

#### ANALYSIS AND DETERMINATION

##### Test Period

Kentucky-American proposed and the Commission has accepted the 12-month period ending October 31, 1989 as the test period in this proceeding.

## Valuation Method

Kentucky-American proposed a net investment rate base at October 31, 1989 of \$77,553,938.<sup>2</sup> The Commission has accepted the proposed rate base with the following exceptions:

Kentucky River Station No. 2. Kentucky-American included as part of its rate base \$1,490,618 in construction work in progress ("CWIP") for preliminary expenditures relating to the Kentucky River Station No. 2 ("Station No. 2"). The design work on this project is approximately 98 percent complete.<sup>3</sup>

In August 1988, Kentucky-American applied to the Department of Natural Resources ("Natural Resources") for an increase in one of its two existing permits to withdraw water from the Kentucky River. In May 1989, Natural Resources issued a revised permit but limited the amount of withdrawals to maintain a minimum flow in the Kentucky River. Since this minimum flow had not always been maintained in the past, Kentucky-American suspended additional work on Station No. 2 while it considered its supply options and undertook an aquatic study to determine what impact flows below the minimum imposed by Natural Resources would have on the aquatic life in the river.<sup>4</sup>

In view of these developments, the AG/LFUCG stated that it would be inappropriate to include the planning and design

---

<sup>2</sup> Exhibit No. 3, Schedule 2.

<sup>3</sup> Rebuttal Testimony of John S. Young, Jr., page 5.

<sup>4</sup> Rebuttal Testimony of John S. Young, Jr., pages 6-7.

expenditures for Station No. 2 in rate base.<sup>5</sup> In its rebuttal testimony, Kentucky-American stated that of the \$1,490,618, approximately 35 percent or \$520,000 of the design work can be utilized for the future expansion of the Richmond Road Station and should remain in rate base.<sup>6</sup> However, Kentucky-American agreed to remove from rate base the remaining \$970,618 and proposed to amortize it over a 5-year period.<sup>7</sup>

At the hearing Kentucky-American stated that the expansion of the Richmond Road Station will take place regardless of the outcome of the aquatic study<sup>8</sup> and that based upon discussions with the Division of Water, the construction of Station No. 2 would have been both prudent and cost effective.<sup>9</sup> Kentucky-American further stated that Division of Water issued Kentucky-American a letter, prior to the policy change, indicating that the water would be available to it once the facilities were in place.<sup>10</sup> Therefore, Kentucky-American believes that, although the project has essentially been abandoned,<sup>11</sup> the expenditures for Station No. 2 were incurred in good faith.

---

5 Prefiled Testimony of Thomas C. DeWard, page 9.

6 Rebuttal Testimony of John S. Young, Jr., page 8.

7 Rebuttal Testimony of Chris E. Jarrett, page 7.

8 Transcript of Evidence ("T.E."), Vol. I, page 205.

9 T.E., Vol. I, page 202.

10 T.E., Vol. I, page 45.

11 T.E., Vol. I, page 201.

Kentucky-American is a private, investor-owned utility. These investors are compensated in part for the acceptance of risk. This includes the risk of operating in an environment where natural resources once thought to be inexhaustible, have become limited and restricted. However, Kentucky-American also has an obligation to its customers to provide a safe and reliable supply of water. Reasonable expenditures incurred to provide that service are legitimate rate-making expenses and properly charged to customers. Further, the Commission's continuing encouragement of Kentucky-American to be a regional supplier of water, could potentially place an additional burden on Kentucky-American's supply sources.

The Commission finds that the expenditures incurred in connection with Station No. 2 were reasonable and prudent under the circumstances. Therefore, it is reasonable for the Commission to adopt Kentucky-American's proposal that this cost be shared between shareholders and customers by amortizing the related \$970,618 over a 5-year period while excluding any return on the unamortized portion. Since the Richmond Road Station construction is not dependent upon Kentucky-American's aquatic study and design work for this expansion is continuing, the related \$520,000 currently in rate base should remain.

Working Capital. Kentucky-American proposed a cash working capital allowance of \$1,538,000<sup>12</sup> based on 1/7 of its pro forma operations and maintenance expenses. The AG/LFUCG stated that the

---

<sup>12</sup> Exhibit 3, Schedule 3.



working capital allowance should be based on the balance sheet approach and that the working capital allowance should be reduced by \$890,619.<sup>13</sup>

Kentucky-American's rate base exceeds its capitalization by approximately \$1.2 million. Kentucky-American states this difference is due primarily to using accumulated interest payable to supplement its short-term debt requirement.<sup>14</sup> This use was taken into consideration when Kentucky-American adjusted its test-period capitalization to include a \$10 million post test-period financing to replace its short-term debt with permanent financing. As a result pro forma rate base and capitalization are approximately equal.

The AG/LFUCG disagrees with this reconciliation and asserts that the difference is due to an overstatement of working capital.<sup>15</sup> However, the AG/LFUCG did not support this assertion with its own calculation of working capital. Rather, the AG/LFUCG merely subtracted the test-period capitalization from the proposed rate base and concludes that the difference is attributable to working capital.<sup>16</sup> The Commission finds that the AG/LFUCG's calculation of working capital is totally without merit.

---

<sup>13</sup> Prefiled Testimony of Thomas C. DeWard, pages 9-12.

<sup>14</sup> Prefiled Testimony of Roy L. Ferrell, pages 3-5.

<sup>15</sup> Prefiled Testimony of Thomas C. DeWard, page 12.

<sup>16</sup> Id., Schedule 4.

The 1/7 formula proposed by Kentucky-American is based on the results of a lead/lag study performed by Kentucky-American. This is the same methodology accepted by the Commission in several of Kentucky-American's previous rate proceedings and should be accepted in this instance. However, the Commission has reduced Kentucky-American's cash working capital allowance by \$80,608 to reflect the Commission's adjustments to the proposed operations and maintenance expenses.

Extension Deposits. The AG/LFUCG proposed to decrease Kentucky-American's rate base by \$154,771 of extension deposits payable. The AG/LFUCG stated that this is a continuing source of cost-free capital which should be used to reduce rate base.

In Case No. 10481, the Commission rejected the same proposal upon finding that "Kentucky-American has incurred a liability to the extent of the customer advance which may be refunded and that the ratepayers receive the benefit associated with the increased number of customers."<sup>17</sup> The evidence presented by the AG/LFUCG is unpersuasive. The Commission reaffirms the finding on this issue as set forth in Case No. 10481. Therefore, the proposed adjustment is denied.

Deferred Taxes - Excess Plant. In the calculation of deferred income taxes, Kentucky-American included an adjustment to remove deferred taxes related to excess plant that had been

---

<sup>17</sup> Case No. 10481, Notice of Adjustment Of The Rates Of Kentucky-American Water Company Effective On February 2, 1989, Order dated August 22, 1989, page 12.

removed from rate base. The AG/LFUCG proposed to add these taxes back, which would result in a decrease to rate base. The AG/LFUCG is of the opinion that the ratepayers should benefit from these deferred taxes and that when the excess plant was initially removed from rate base, the ratepayers may have paid higher rates due to an overstated revenue requirement. The excessive revenue requirement would have resulted from the overstated deferred tax expense created when book depreciation exceeded tax straight-line depreciation.<sup>18</sup>

In its rebuttal testimony, Kentucky-American contends that the AG/LFUCG's adjustment was based on incomplete information. The AG/LFUCG merely assumed that deferred income tax expense was overstated since depreciation on excess plant was disallowed without a related adjustment being made to deferred income taxes. If an adjustment had been made to decrease deferred income tax expense, an additional adjustment would have been necessary to decrease tax depreciation in the then current tax expense calculation. As a result of these offsetting adjustments there would have been no impact on the revenue requirement and the ratepayers would not have had to pay higher rates.<sup>19</sup>

The Commission finds that it was appropriate for Kentucky-American to exclude deferred taxes associated with excess plant

---

<sup>18</sup> Prefiled Testimony of Thomas C. DeWard, pages 13-14.

<sup>19</sup> Rebuttal Testimony of Edward J. Grubb, pages 17-18.

from rate base. Accordingly, the adjustment proposed by the AG/LFUCG is denied.

Other Adjustments. Adjustments to increase deferred debits and deferred income taxes have been included herein and are discussed in subsequent sections. The net effect of these adjustments is to decrease net investment rate base by \$129,899.

The Commission, therefore, has determined Kentucky-American's net investment rate base at October 31, 1989 to be as follows:

Utility Plant in Service	\$111,017,835
Construction Work in Progress	4,655,001
Deferred Maintenance, Net	963,835
Deferred Debits	518,172
Prepayments	104,824
Materials and Supplies	347,200
Working Capital	1,457,392
Subtotal	<u>\$119,064,259</u>

Less:

Reserve for Accumulated Depreciation	13,658,069
Reserve for Accumulated Amortization	6,215
Utility Plant Acquisition Adjustment	1,234,748
Contributions in Aid of Construction	7,625,212
Deferred Income Taxes	6,817,132
Unamortized Investment Tax Credit	236,828
Customer Advances for Construction	13,113,242
Subtotal	<u>42,691,446</u>

Net Investment Rate Base \$ 76,372,813

Revenues and Expenses

Kentucky-American reported test-period utility operating income of \$6,352,985.<sup>20</sup> In order to normalize current operating conditions, Kentucky-American proposed several adjustments to its

---

<sup>20</sup> Exhibit No. 4, Schedule 1.

test-period revenues and expenses which resulted in adjusted utility operating income of \$6,432,504.<sup>21</sup> The Commission finds that the proposed adjustments are reasonable and acceptable for rate-making purposes with the following exceptions:

Weather Normalization. The AG/LFUCG proposed to increase Kentucky-American's test-period revenues by \$822,098 and its operating expenses by \$136,088 to reflect a weather adjusted level of test period sales.<sup>22</sup> The proposed sales adjustment was based upon the assumption that test-year sales should have been at least equal to the level achieved in 1988.

No analysis was presented to demonstrate the correlation between weather and water sales, the AG/LFUCG did not quantify any specific variables that would impact a weather normalization adjustment nor did they demonstrate any measurable and verifiable relationship between such variables and sales volume. Fluctuations in the amount of rainfall, temperature, and conservation efforts have an impact on the amount of water sold during a 12-month period. However, without the ability to quantify and verify these relationships, and absent any generally accepted standards for this determination, any weather normalization adjustment would not be based on either

---

21 Id.

22 Prefiled Testimony of Thomas C. DeWard, pages 15-19.

weather-related variables or the impact of conservation. Therefore, the AG/LFUCG's proposed adjustment is arbitrary and denied.

The Commission notes that, in theory, it is receptive to the idea that Kentucky-American's revenues and expenses be normalized to reflect historic weather conditions. However, a weather normalization adjustment that fails to demonstrate the correlation between weather and water sales, and further fails to reflect variations in rainfall, humidity, and conservation, will not be acceptable.

Allowance For Funds Used During Construction ("AFUDC"). Kentucky-American proposed an adjustment to include an AFUDC of \$98,199 in test-year operating revenues. Based on the rate of return found appropriate herein, the Commission has recalculated this adjustment to be \$96,211. This results in a decrease to operating revenues of \$1,988 and a decrease to net operating income of \$1,195.

Payroll Expense. Kentucky-American proposed several adjustments to its test-period payroll expense, resulting in a net increase of \$333,475.<sup>23</sup> These adjustments included two prorated union wage increases, an increase for non-union and salaried employees, and allowance for additional employees hired subsequent to the test-period. The Commission finds these adjustments reasonable except as discussed below:

---

<sup>23</sup> Exhibit 4, Schedule 3.

Kentucky-American proposed to use a prorated wage expense based upon the wage rates which will be in effect as of July 1, 1990. Kentucky-American chose this period since it will be the time the new rates resulting from this proceeding will go into effect. Pursuant to union contracts, there was a wage increase effective November 1, 1989 and December 17, 1989. A wage increase for non-union and salaried employees will go into effect July 1, 1990.

The AG/LFUCG proposed to base the wage annualization on the increases granted through November 1, 1989.<sup>24</sup> The AG/LFUCG stated that the inclusion of wage increases as far in advance of the test period as July 1990 would significantly distort the matching of revenues and expenses. The Commission agrees with this assessment with respect to the July 1, 1990 increase but will allow the additional \$16,324 wage increase that became effective December 17, 1989 due to its proximity to the end of the test year.<sup>25</sup> This results in a net reduction to Kentucky-American's pro forma wages of \$88,584.

The AG/LFUCG further proposed to exclude the salary of the community relations trainee, stating that Kentucky-American failed to justify the necessity for this employee. In its rebuttal

---

<sup>24</sup> Prefiled Testimony of Thomas C. DeWard, page 20.

<sup>25</sup> Rebuttal Testimony of Edward J. Grubb, page 2.

testimony, Kentucky-American stated the duties and responsibilities of this individual and that the community relations manager routinely works 12-hour days.<sup>26</sup> The Commission finds that Kentucky-American has satisfactorily justified the hiring of this individual and, therefore, denies the AG/LFUCG's proposed adjustment.

In addition to the above adjustments, the AG/LFUCG proposed to reduce test-period overtime wages by 2.5 percent or \$57,259.<sup>27</sup> The AG/LFUCG proposed this adjustment stating that the nine new employees hired by Kentucky-American during the test period should reduce the amount of overtime required. In its brief, Kentucky-American stated that one of the new employees would reduce overtime by 348 hours, at an annual reduction to wage expense of \$6,363. However, in its rebuttal testimony, Kentucky-American stated that some of the new employees would be charging their time to construction projects, some would have no effect on the amount of overtime wages paid in their departments because they are salaried employees, and, in other departments, overtime would simply not be reduced.<sup>28</sup>

In proposing the adjustment, the AG/LFUCG admitted that the 2.5 percent reduction was an estimate and not based on any

---

<sup>26</sup> Rebuttal Testimony of Robert A. Edens, pages 3 and 4.

<sup>27</sup> Prefiled Testimony of Thomas C. DeWard, page 22.

<sup>28</sup> Rebuttal Testimony of Edward J. Grubb, page 3.



detailed analysis.<sup>29</sup> Therefore, based on Kentucky-American's response and the AG/LFUCG's failure to adequately document its proposal, the Commission hereby denies this adjustment, except for the \$6,363 reduction in overtime wages as discussed in Kentucky-American's rebuttal testimony.

The net effect of the adjustments discussed herein will reduce Kentucky-American's pro forma payroll expense by \$94,947 and increase net operating income by \$57,495.

Payroll-Related Expenses. Based upon the pro forma payroll expense allowed herein, the Commission has reduced Kentucky-American's FICA tax by \$5,195. This results in an increase to net operating income of \$3,146.

Employee-Related Expenses. The AG/LFUCG proposed to exclude \$31,923 of employee-related expenses incurred for employee parties, gifts, retirement luncheons, and various service and safety awards. Kentucky-American contends that the amount of this expense is not excessive, occurs in every properly run business, and is in line with comparable expenses allowed in other regulated utilities.<sup>30</sup> The Commission agrees with this assessment and will allow the recovery of these expenses with the following exceptions. This amount includes \$3,955 for Christmas gifts and \$7,622 for picnic expenses incurred for Kentucky-American's employees. While these expenses may benefit employer/employee

---

<sup>29</sup> T.E., Vol. I, pages 159-160.

<sup>30</sup> Brief of Kentucky-American, page 31.

relations, the Commission finds that the customers should not bear these costs. Accordingly, the Commission has excluded these expenses for rate-making purposes. Also excluded is the \$1,153 expense incurred as a result of the United Way breakfast held for Kentucky-American's employees.

The remaining expenses, totaling \$19,193, are for employee recognition awards and dinners. The Commission finds that these expenses are reasonable and should be allowed. Based on the Commission's revisions to Kentucky-American's proposed employee-related expenses, an adjustment has been made to decrease this expense by \$12,730. This results in an increase to net operating income of \$7,709.

Service Company. The AG/LFUCG proposed to reduce Kentucky-American's test-period charges from its service company by \$73,584. The AG/LFUCG stated three major reasons for this reduction: 1. Kentucky American provided no detailed trial balance showing the service company's total charges and how these charges are allocated to the various operating companies; 2. The salary of the new Regional Vice President is excessive; and 3. Data processing charges increased by over 63 percent despite Kentucky-American having spent over \$30,000 on its own internal computer network. The AG/LFUCG proposed to allow a 5 percent increase in the administrative, accounting, and data processing expense allocations over the 1988 levels.<sup>31</sup>

---

<sup>31</sup> Prefiled Testimony of Thomas C. DeWard, pages 24-25.

In its rebuttal testimony, Kentucky-American stated that the actual increase in total charges from the service company from 1988 to 1989 was only 4.7 percent.<sup>32</sup> At the hearing Kentucky-American stated that it has the ability to use outside consultants rather than utilizing service company personnel;<sup>33</sup> that the charges are reviewed by the general manager, the business manager, the operations manager, and the engineering manager, to determine their reasonableness;<sup>34</sup> and that it is good standard business practice to review the service company charges the same as any other bill.<sup>35</sup> Kentucky-American also stated regulatory oversight provided an additional incentive to keep the wages paid by the service company competitive.<sup>36</sup>

The Commission finds that Kentucky-American has presented sufficient evidence in this proceeding to demonstrate that adequate review controls are in place to assure that the service company charges are reasonable and not excessive or unnecessary. Therefore, the Commission denies the AG/LFUCG's adjustment.

Miscellaneous Payments. The AG/LFUCG proposed to decrease test-year expense by \$19,418 for several miscellaneous expenditures.

---

<sup>32</sup> Rebuttal Testimony of Chris E. Jarrett, pages 8 and 9.

<sup>33</sup> T.E., Vol. I, page 103.

<sup>34</sup> T.E., Vol. I, page 47.

<sup>35</sup> T.E., Vol. I, page 49.

<sup>36</sup> T.E., Vol. I, pages 100-101.

A decrease of \$2,800 was proposed to eliminate an expenditure paid to Chuck Buechel for consulting services. The AG/LFUCG's position is that the ratepayers received no benefit from this expense and should not be required to bear the cost.

An adjustment was proposed to decrease miscellaneous expense by \$2,223 for payment made to the Kentucky Department of Fish and Wildlife. The AG/LFUCG contends that this payment was in the form of a fine or penalty and should have been included as a below the line expense.

Adjustments were proposed to eliminate expenditures for T-shirts and rulers, toothbrushes, sponges and magnets in the amounts of \$2,021 and \$4,374, respectively. It is the AG/LFUCG's position that these expenses were more for image-building and had no direct benefits to the customers.

The final adjustment proposed by the AG/LFUCG was to disallow a payment made to A. L. Roark for a meter reading study. Subsequent to completion of the initial work, the project was dropped because Kentucky-American could not justify the cost to complete the study. The AG/LFUCG is of the opinion that Kentucky-American should have been aware of the total estimated cost before making the initial payment of \$8,000.<sup>37</sup>

Mr. Buechel's services were retained in connection with the least cost concept related to a proposed treatment plant.

---

<sup>37</sup> Prefiled Testimony of Thomas C. DeWard, pages 39-41.

Kentucky-American stated that Mr. Buechel's participation assisted management in making more prudent and beneficial business decisions. Therefore, the Commission finds this expense reasonable and allowable.

The AG/LFUCG referred to the payment to Fish and Wildlife as a fine or penalty. The expense was actually for the restocking of a stream that resulted from an overflow of effluent created by a routine main cleaning operation. Kentucky-American contends that restocking expenses are routine and will recur in the normal course of business as a result of main breaks and other main cleaning operations. The Commission agrees that this is a reasonable, normal business expense.

The AG/LFUCG proposed to reduce test-year expenses by \$4,374 which was attributable to the rulers, toothbrushes, sponges, and magnets. Kentucky-American distributed these items to encourage water conservation in the community. Each item contains language thereon which encourages some type of water conservation measure. These expenses are part of Kentucky-American's demand management plan and are designed to promote water conservation even though they may contribute to image-building. The Commission finds that these expenditures are reasonable and should be included for rate-making purposes.

The 685 T-shirts purchased for \$2,021 were distributed to students who participated in the Fayette County School Science Fair. In its rebuttal testimony Kentucky-American states that as a result of this annual fair, the community has received direct benefits by becoming more educated and aware of such matters as

the importance of water conservation, among others. The Commission finds sufficient support for Kentucky-American's position to include this expense in rate-making purposes.

Kentucky-American's position with regard to the meter reading route study is that the expense should be allowed. The project was discontinued because Kentucky-American realized, after the initial review, that the anticipated results would not be worth the expense. Preliminary studies such as this are necessary for Kentucky-American to pursue more cost-effective procedures.<sup>38</sup>

With regard to the expense for the meter reading route study, the Commission agrees with Kentucky-American in that it should be allowed to perform preliminary studies for potentially cost-effective measures. However, since this particular expense is not likely to recur, the Commission included an adjustment to amortize the \$8,000 over 3 year period resulting in a decrease of \$5,333.

Based on the aforementioned discussion, the Commission finds that the AG/LFUCG's proposed adjustments to miscellaneous payments should be denied but this account should be decreased \$5,333 to reflect the amortization of the meter reading study. This results in an increase to net operating income of \$3,230.

Pension Administration Expense. Kentucky-American included \$44,761 of administrative and legal fees for the pension fund in its test-period expenses. The AG/LFUCG proposed to eliminate this

---

<sup>38</sup> Prefiled Rebuttal Testimony of Robert A. Edens, pages 6-9.

expense stating that this fee was previously charged against the earnings of the pension fund and should not be shifted to the ratepayers.

The pension fund is currently over-funded, thus requiring no additional deposits until some unknown future date. While this over-funding may not continue forever, it is unfair to request the ratepayers to pay for administrative costs that can be paid out of the proceeds earned by the pension fund itself. It is not appropriate to require customers to be charged for payments for a fully, or in this case, over funded pension plan. Therefore, the Commission finds this expense unreasonable and has excluded these fees for rate-making purposes. This results in an increase to net operating income of \$27,105.

Sanitary Sewer User Charge. For the test year Kentucky-American reported sanitary user charge expense of \$1,394. An adjustment was proposed to increase this expense by \$14,806 to reflect a normalized test-year expense of \$16,200. During the hearing the normalized test-year expense was revised to a total of \$13,836. Accordingly, the Commission has decreased operating expenses by \$2,364. This results in an increase to net operating income of \$1,432.

Credit Line Fee. Kentucky-American paid \$47,770 of credit line fees during the test period to its source of short-term credit, First Security National Bank and Trust Company. The AG/LFUCG proposed to eliminate these fees since Kentucky-American has replaced its short-term debt with permanent financing and because they believe Kentucky-American has overstated AFUDC.

The line of credit fee is based on the monthly amounts of short-term debt outstanding. If no monthly amount is outstanding, then there is no fee for that month. While Kentucky-American states that it expects to continue to borrow short-term debt in the future, it has elected to propose a capital structure which excludes short-term debt as a component. It is inappropriate and unreasonable to include in Kentucky-American's operations a cost of a debt component that Kentucky-American proposes to eliminate from its capital structure. Therefore, the Commission has eliminated the credit line fee of \$47,770 for rate-making purposes. This results in an increase to net operating income of \$28,927.

It is the AG/LFUCG's position that Kentucky-American has overstated AFUDC by basing its calculation on the overall cost of capital, rather than on the cost of short-term debt. The Commission rejects this position. AFUDC should be based on the cost of the permanent financing that supports the capital expenditure, not on temporary interim financing. The Commission finds that Kentucky-American has employed the correct methodology in determining AFUDC.

Cost-of-Service Study. The AG/LFUCG proposed to exclude from operating expenses the amortization associated with Kentucky-American's cost-of-service study in the amount of \$29,615. The basis for this adjustment was that the study was not ordered by the Commission and many of the results of the study were not used



in this filing.<sup>39</sup> Kentucky-American, however, asserts that it is not necessary for the Commission to order a study such as this and that such studies should be performed on a somewhat regular basis to ensure rational and reasonable rates for the utility.

A review of the cost-of-service study indicates that Kentucky-American has substantially improved its cost-of-service methodology since the filing of its last cost-of-service study. Kentucky-American has instituted several data collection systems to improve its data collection and measurement capabilities for several customer classes. In terms of allocating costs, it is appropriate to treat fire service as a customer class rather than a function of the system as the previous study did. It is appropriate to allocate embedded costs on an historical basis. However, determination of allocations of future embedded plant must consider the changing customer demand patterns. The Commission will not be bound by conventional cost-of-service methodologies in the future given its emphasis on the least cost planning concept and its intent to use rate design as an economic incentive system to support that concept. Therefore, the adjustment proposed by the AG/LFUCG should be denied.

Costs Related to the Feasibility of Acquiring Small Water Utilities. The AG/LFUCG proposed to eliminate the amortization of expenses incurred by Kentucky-American in attempts to acquire the

---

<sup>39</sup> Prefiled Testimony of Thomas C. DeWard, page 32.

Winchester and Georgetown water districts. The AG/LFUCG stated that it was inconsistent to recommend conservation measures while attempting to obtain existing companies which could deplete Kentucky-American's source of supply. Further, the AG/LFUCG argues that ratepayers should not be required to pay for unsuccessful attempts to acquire other water companies.<sup>40</sup>

Kentucky-American stated that, to the extent the attempted acquisition of these systems did not go through is evidence of Kentucky-American's unwillingness to enter into an agreement to the detriment of its existing ratepayers.<sup>41</sup> Kentucky-American further stated several reasons why other water utilities seek to be acquired by Kentucky-American: (1) compliance with the safe drinking water act and regulations in general; (2) economies of scale provided by Kentucky-American; (3) failure of sources of supply; and (4) the economics of serving parts of their systems.<sup>42</sup>

Kentucky-American states that as a regional supplier of water it has an obligation to consider requests for service from those on the periphery of its system. While the addition of each customer places an additional strain on its system, that should not prevent them from providing service to those without a dependable supply of potable water.<sup>43</sup>

---

<sup>40</sup> Prefiled Testimony of Thomas C. DeWard, page 35.

<sup>41</sup> Rebuttal Testimony of Chris E. Jarrett, page 6.

<sup>42</sup> Id.

<sup>43</sup> Brief of Kentucky-American, pages 28 and 29.

The Commission has and will continue to encourage Kentucky-American to become a regional supplier of water for the very reasons stated above. Accordingly, the Commission agrees with Kentucky-American and finds that a reasonable level of expense incurred in this effort should be allowed for rate-making purposes. Therefore, the AG's adjustment should be denied.

Rate Refund Cost. Kentucky-American included in its operating expenses \$6,763 which represents the 2 year amortization of the cost Kentucky-American incurred in issuing a refund to its customers for over-collections in Case No. 10481. The AG/LFUCG proposes to reduce Kentucky-American's operating expenses by this amount.

In support of its position, the AG/LFUCG states that it was Kentucky-American that chose to put the full amount of the proposed rates into effect at the end of the statutory suspension period in that proceeding. The AG/LFUCG argues that Kentucky-American should have known that the rate increase would not be granted in toto and that if something less than the proposed rates had been placed into effect, it's possible that no refund would have been required.<sup>44</sup>

Kentucky-American stated that it did not have the statutory authority to place into effect any rates other than the one

---

<sup>44</sup> Prefiled Testimony of Thomas C. DeWard, pages 38 and 39.

proposed.<sup>45</sup> Further, it was concerned that a continued erosion of its earnings would have a detrimental impact on the financing package that was being put together at that time.<sup>46</sup>

Kentucky-American exercised its statutory right to place the proposed rates into effect at the end of the suspension period. However, the Commission is unconvinced that failure to place those rates into effect would have had a permanent detrimental effect on Kentucky-American's financing package or that "ultimately its financial stability might be jeopardized."<sup>47</sup> Kentucky-American stated what the impact of an increase in interest rates of 10 basis points would have had on its revenue requirement,<sup>48</sup> but did not address how far and for how long its earnings would have to erode to produce that effect. Further, Kentucky-American failed to address other relevant factors, such as the anticipated rate Order.

The Commission finds that Kentucky-American failed to establish the reasonableness of requiring its ratepayers to bear the cost of refunding the revenues that were collected in excess of those ultimately found to be just and reasonable. Therefore,

---

<sup>45</sup> Brief of Kentucky-American, page 33.

<sup>46</sup> Rebuttal Testimony of Edward J. Grubb, page 7.

<sup>47</sup> Brief of Kentucky-American, page 32.

<sup>48</sup> Rebuttal Testimony of Edward J. Grubb, page 7.

this expense has been eliminated for rate-making purposes. This adjustment increases net operating income by \$4,095.

Cost of Serving New Customers. Kentucky-American proposed to increase test-period operating expenses by \$50,505 to reflect the cost of providing service to the year-end number of customers. Kentucky-American used a ratio of pro forma operation and maintenance expenses, less labor and labor related expenses, to present rate revenues and applied this to the revenue annualization adjustment to arrive at the additional cost. The AG/LFUCG states that this adjustment should be denied because it is not known and measurable.

Kentucky-American's application proposed an increase in test-period revenues to reflect serving new customers. Failure to adjust the operating expenses to reflect serving these new customers would result in a mismatch between revenues and expense. While the Commission would prefer that individual expense items be adjusted for this calculation, a ratio that demonstrates a consistent correlation between revenues and expenses is acceptable. The ratio utilized by Kentucky-American has varied in the past five years from a low of 28.64 percent in 1986 to a high of 31.02 percent in 1988. The five year average is 29.60 percent. This appears to be a relatively stable relationship and the ratio currently being used by Kentucky-American, 29.085 percent, is well within the historic figures. Therefore, this adjustment will be allowed but should this ratio become volatile in the future, Kentucky-American will have to further document its reliability.

Land Study. During the test period Kentucky-American updated its land records at a cost of \$36,292. The AG/LFUCG proposed to amortize this expense over a 3-year period. Kentucky-American does not object to the amortization if the unamortized portion is included in rate base.<sup>49</sup> This treatment is reasonable and consistent with that afforded in previous rate proposals for similar costs incurred by Kentucky-American for legal services, least-cost planning study, etc., in that it is infrequent in nature and directly tied to the operations of the utility. Therefore, the Commission will amortize this cost over a 3-year period and allow the unamortized portion in rate base. This adjustment reduces operating expenses and increases rate base by \$24,195. Net operating income is increased by \$14,651.

Amortization of Negative Acquisition Adjustment. As ordered by the Commission in Case No. 10481,<sup>50</sup> Kentucky-American reported the amortization of a negative acquisition in the amount of <\$151,194> as an above the line item. However, this was included as an increase to operating revenues. The Uniform System of Accounts for Class A & B Water Companies prescribes that the amortization of utility plant acquisition adjustments be recorded as an operating expense and be debited or credited to Account 406. Accordingly, the Commission finds that operating revenues should

---

<sup>49</sup> Brief of Kentucky-American, page 31.

<sup>50</sup> Order dated August 22, 1989, page 31.

be decreased by \$151,194 and operating expenses decreased by the same amount to properly account for the amortization of the negative acquisition adjustment. This adjustment increases net operating income by \$671.

Taxable Customer Advances. The AG/LFUCG proposed to decrease depreciation expense by \$60,690 to eliminate depreciation on utility plant funded by taxable customer advances. The AG/LFUCG stated that prior to the Tax Reform Act of 1986 ("TRA of 1986") customer advances were treated as non-taxable income, but were used to offset or reduce the tax basis of the applicable asset. When the TRA of 1986 was implemented customer advances became taxable in the year received and were no longer used as an offset to the taxable basis. The AG/LFUCG contends that customer advances are a form of cost-free capital and that allowing depreciation would cause the ratepayers to fund or pay for these advances over time which would result in a windfall to Kentucky-American that should be eliminated.<sup>51</sup>

The AG/LFUCG noted that it is unfair to allow Kentucky-American to earn a return on the deferred taxes attributable to customer advances and also recover depreciation expense on the utility plant funded by the advance.<sup>52</sup> Kentucky-American stated that there is no correlation between the two concepts and that it is entitled to earn a return on the

---

<sup>51</sup> Brief of the AG and LFUCG, page 15.

<sup>52</sup> Direct Testimony of Thomas C. DeWard, page 44.

deferred taxes attributable to the customer advance while recovering depreciation expense on the utility plant funded by the advance.<sup>53</sup> The Commission agrees with Kentucky-American that the two concepts are separate and distinct issues.

As noted by the AG/LFUCG, the TRA of 1986 requires that for tax purposes customer advances are treated as taxable income and depreciated over a predetermined tax life. However, for rate-making purposes, the customer advance is not included in the taxable income of the utility but depreciation expense on the customer advance is included in the revenue requirement determination.

Deferred taxes arise when there is a difference between tax accounting and rate-making accounting. The difference arising from the recognition of customer advances as taxable income result in a debit to deferred income tax. In Administrative Case No. 313,<sup>54</sup> the Commission recognized that this debit to deferred income tax represented an investment of capital and directed that it be included as a component of rate base.

The difference between rate-making accounting and tax accounting is reduced over time as the associated deferred tax is amortized. Therefore, tax accounting and rate-making accounting

---

<sup>53</sup> Brief of Kentucky-American, page 15.

<sup>54</sup> Administrative Case No. 313, The Effects of The Tax Reform Act of 1986 On Contributions In Aid of Construction And Customer Advances, page 7.



equal in the end, and the utility recovers only its carrying charge for the tax investment.

Customer advances are cost-free capital and they are deducted from rate base to ensure that the investment supported by this cost-free capital does not earn a return. However, Kentucky-American has a potential liability for 10 years to refund a customer advance and, thus, depreciation on customer advances is included in the revenue requirement calculation. This treatment of depreciation of customer advances has been consistently applied to Kentucky-American prior to and after the enactment of the TRA of 1986. The Commission finds that the aforementioned AG/LFUCG's adjustment should be denied.

Toyota Main Depreciation. The AG/LFUCG proposed to decrease depreciation expense and increase the reserve for accumulated depreciation by \$60,596.<sup>55</sup> This represents the test-period depreciation on the customer advance received from the Commonwealth of Kentucky for construction of the main to serve the Toyota Plant.

The AG/LFUCG contends that the construction to Toyota is unique in that it can be tracked separately; however, all customer advances can be tracked separately. Consequently, the advance for Toyota is no different than any other customer advance. The Commission finds that this adjustment should be denied for the same reasons stated in the prior discussion of depreciation on customer advances.

---

<sup>55</sup> Prefiled Testimony of Thomas C. DeWard, pages 41-43.

Amortization Period of Taxes on CIAC and Customer Advances.

The AG/LFUCG proposed to decrease deferred tax expense and increase the accumulated deferred tax balance by \$75,290. This adjustment reflects the amortization of deferred taxes attributable to customer advances and CIAC over the depreciable book life. The AG/LFUCG contends that if Kentucky-American is allowed to amortize the deferred taxes over the depreciable tax life, a mismatch would occur between current and deferred taxes and the ratepayers would be required to support an inappropriate level of income tax expense.<sup>56</sup>

Kentucky-American stated that the unamortized balance of its deferred income taxes attributable to customer advances and CIAC is included in rate base. The amortization of the accumulated deferred income tax is used as an offset to current income tax expense over the tax life of the assets as they are depreciated. Kentucky-American contends that the treatment of deferred income taxes conforms to the normalization rules contained in the Internal Revenue Service Ruling 87-82 ("IRS Ruling 87-82").<sup>57</sup>

Administrative Case No. 313 required that Class A and B water utilities pay the tax associated with the CIAC or customer advance rather than the contributor. The Commission then excludes the CIAC property from rate base and associated depreciation expense from the cost of service. IRS Ruling 87-82 maintains that this

---

<sup>56</sup> Direct Testimony of Thomas C. DeWard, pages 48 and 49.

<sup>57</sup> Brief of Kentucky-American, page 40.

method of regulatory accounting (the non-inclusion method) is equivalent to including CIAC as income in the year received and depreciating it in its entirety in the same year. Accordingly, for purposes of the normalization rules and to be consistent with the non-inclusion method, IRS Ruling 87-82 considers that the regulated tax expense was computed by depreciating the related CIAC property in the year received.

The prepayment of tax resulting from depreciating CIAC property entirely in the year it was received results in a debit to accumulated deferred income tax. Since the theoretical book depreciation life is 1 year, the accumulated deferred income tax is amortized over the applicable tax life.

Property funded by customer advances is excluded from Kentucky-American's rate base, but depreciation of the customer advance is included in its cost of service. Since depreciation expense is included in Kentucky-American's cost of service, the non-inclusion method does not apply. Accordingly, the AG/LFUCG is correct in that the deferred taxes attributable to customer advances should be depreciated over the depreciable life and not the tax life.

The Commission finds that deferred taxes resulting from CIAC should be amortized over the depreciable tax life while deferred taxes resulting from customer advances should be amortized over book life. However, since Kentucky-American reported its deferred taxes attributable to CIAC and customer advances in the same account, there is no evidence to support an allocation. Accordingly, the Commission finds that the AG/LFUCG's adjustment

should be accepted. This decrease to income tax expense results in a increase to net operating income of \$75,290. Therefore, rate base should be increased by \$75,290.

Additional Taxable Interest. In its application Kentucky-American included an adjustment to increase taxable income by \$76,063 to account for additional taxable interest. The additional interest is the result of differences in the rules used to calculate book AFUDC and tax AFUDC. The book AFUDC rate is applied only to projects funded by Company funds. The tax AFUDC rate is applied to all projects. Kentucky-American included book AFUDC as operating revenue for rate-making purposes. However, since tax AFUDC exceeded book AFUDC, to compute Kentucky-American's tax liability it was necessary to add the difference between book AFUDC and tax AFUDC to taxable income.<sup>58</sup>

The AG/LFUCG proposed to disallow this increase in taxable income and decreased federal and state income tax expenses by \$29,501. The AG/LFUCG based this adjustment on two factors. First, Kentucky-American reflected higher book AFUDC than was recorded for tax purposes for 1988. This indicated that no additional taxable interest existed at that point in time. Secondly, the difference between tax AFUDC and book AFUDC is a timing difference, whereas Kentucky-American reflected it as a permanent difference. The AG/LFUCG contends that any difference between the calculations of AFUDC should be treated as an additional tax asset and be depreciated over its tax life.

---

<sup>58</sup> Rebuttal Testimony of Edward J. Grubb, page 10.

Accordingly, any taxes associated with that additional interest would be recovered over the tax life of the asset.<sup>59</sup>

Kentucky-American stated that in the past the Commission has approved both the annualization of book and tax AFUDC based on the level of CWIP at the end of the test year and the flow-through of the tax effects of the additional taxable interest.<sup>60</sup>

The Commission finds no merit in the AG/LFUCG's proposed adjustment. Irrespective of Kentucky-American's level of book and tax AFUDC for 1988, the tax AFUDC exceeded book AFUDC for the test year. In addition, Kentucky-American correctly calculated tax and book AFUDC by reflecting the differences as permanent rather than merely timing differences.

In conformity with prior Commission policy, Kentucky-American has appropriately accounted for the additional taxable interest. Accordingly, the Commission denies the adjustment proposed by the AG/LFUCG and has included additional taxable interest in the calculation of income tax expense.

Amortization of Kentucky River Station No. 2. The five year amortization of the \$970,618 reduction to rate base discussed above results in an increase to Kentucky-American's operating expenses of \$194,124 and a decrease to net operating income of \$117,552.

---

<sup>59</sup> Prefiled Testimony of Thomas C. DeWard, pages 49-50.

<sup>60</sup> Rebuttal Testimony of Edward J. Grubb, page 11.

Amortize Deficiency of Deferred State Income Tax. The AG/LFUCG proposed to decrease federal taxes by \$6,856 to reflect the savings that Kentucky-American will incur because of the deficiency in the state deferred taxes.<sup>61</sup> Kentucky-American stated that the deficiency affects deferred federal taxes rather than current federal taxes. Thus, Kentucky-American amortized the tax effect over the remaining life of the assets as mandated by the TRA of 1986.<sup>62</sup>

The Commission agrees with Kentucky-American and finds that the AG/LFUCG's adjustment should be denied.

Interest Synchronization. Kentucky-American proposed interest expense for tax purposes of \$4,467,107 based on the proposed rate base and weighted cost of debt. The Commission has recalculated this expense to be \$4,437,260 based on the rate base and weighted cost of debt found appropriate herein. This results in a decrease to net operating income of \$11,773.

Uncontested Matters. The AG/LFUCG proposed five adjustments to Kentucky-American's operations which Kentucky-American has accepted.<sup>63</sup> All five adjustments are reasonable. Therefore, the Commission has adjusted Kentucky-American's operations as follows:

---

61 Prefiled Testimony of Thomas C. DeWard, page 51.

62 Rebuttal Testimony of Edward J. Grubb, page 12.

63 Brief of Kentucky-American, pages 3-4.

Insurance Expense	<\$24,830>
Bellville Lab Expense	<\$ 1,250>
Amortization of Deferred Maintenance Expense	<\$ 4,476>
Depreciation Expense	<\$ 9,427>
Deferred Federal Income Tax Liability	<\$78,804>

These adjustments result in a decrease to Kentucky-American's net investment rate base of \$78,804, a decrease to its operating expenses of \$39,983, and a decrease of \$78,804 to income tax expense. This results in an increase to net operating income of \$103,016.

Income Taxes. The Commission has increased Kentucky-American's income tax expense by \$15,826 to reflect the effects of the new state income tax rate. This rate has been taken into consideration in determining the net income effect of the adjustments addressed above.

#### RATE OF RETURN

##### Capital Structure

Kentucky-American proposed a capital structure of 59.36 percent long-term debt, 4.56 percent preferred stock, and 36.08 percent common equity based on an adjusted end-of-test-year capital structure. Kentucky-American adjusted the actual end-of-test-year capital structure to include the issuance of 79 percent of additional long-term debt of \$8,000,000 and additional common equity of \$2,000,000 in December 1989; to remove all short-term debt of \$6,715,000 which was refinanced in December 1989; to reflect unamortized issuance expenses associated with long-term debt and preferred stock; and to reflect sinking fund payments due after the end of the test period.

The AG/LFUCG proposed a capital structure of 60.03 percent long-term debt, 4.54 percent preferred stock, and 35.43 percent common equity. The AG/LFUCG proposed to include 100 percent of the December 1989 issuances of long-term debt and equity, and proposed that the company's adjustment for unamortized issuance expenses and for sinking fund payments in May 1990 and September 1990 be rejected.<sup>64</sup>

The Commission finds that the adjusted capital structure as recommended by Kentucky-American is reasonable with certain exceptions. The Commission agrees with the AG/LFUCG that 100 percent of the December 1989 issuance of \$8,000,000 in long-term debt and \$2,000,000 in common equity should be included in the capital structure. The Commission also finds that the adjustments to reflect sinking fund payments in May 1990 and September 1990 should be rejected as they occur seven months and eleven months, respectively, beyond the end of the test period. Therefore, for rate-making purposes the capital structure for Kentucky-American should be as follows:

	<u>Amount</u>	<u>Percent</u>
Long-Term Debt	\$46,248,212	59.92
Preferred Stock	3,469,585	4.49
Common Equity	27,471,990	35.59
TOTAL	<u>\$77,189,787</u>	<u>100.00</u>

Cost of Debt

Kentucky-American proposed a cost of long-term debt of 9.71 percent and a cost of preferred stock of 7.23 percent. The

---

<sup>64</sup> Testimony of Dr. Carl G. K. Weaver, pages 23-25.



AG/LFUCG proposed a cost of long-term debt of 9.69 percent and a cost of preferred stock of 7.19 percent.

Based upon the adjustments to long-term debt herein, the Commission finds that the cost of long-term debt should be 9.70 percent. The Commission further finds that the cost of preferred stock should be 7.23 percent.

#### Return on Equity

Kentucky-American recommended a return on equity ("ROE") in the range of 13.24 to 13.26 percent.<sup>65</sup> Kentucky-American's recommendation was based on a discounted cash flow ("DCF") analysis of five water companies using both a 52-week and a 1-month high/low price average for dividend yields and an historic, compound growth rate in dividends per share for the period 1983-1988.

The AG/LFUCG recommended an ROE in the range of 11.00 to 11.50 percent, based on a DCF analysis of five water companies, three of which were included in the DCF analysis prepared by Kentucky-American's witness. The most significant difference between the DCF analyses of the AG/LFUCG and that of Kentucky-American was the estimate of dividend growth, which the AG/LFUCG estimated to be in a range of 3.5 to 4.0 percent, and Kentucky-American estimated to be 5.97 percent.

The Commission has traditionally used the DCF model in estimating ROE. Although one cannot rely on a strict

---

<sup>65</sup> Testimony of Dr. Charles Phillips, page 15.

interpretation of the DCF model, the Commission finds that the DCF approach based on dividend growth will provide the best estimate of an investor's expected ROE. Further, the Commission finds that the historic, compound growth rate of 5.97 percent proposed by Kentucky-American overstates the growth rate of dividends expected in the future.

The Commission, having considered all of the evidence, including current economic conditions, finds that the cost of common equity is within a range of 12.2 to 13.2. Within this range an ROE of 12.70 percent will best allow Kentucky-American to attract capital at a reasonable cost and maintain its financial integrity to ensure continued service and to provide for necessary expansion to meet future requirements, and also result in the lowest possible cost to ratepayers.

#### Rate of Return Summary

Applying rates of 9.70 percent for long-term debt, 7.23 percent for preferred stock, and 12.70 percent for common equity to the recommended capital structure approved herein produces an overall cost of capital of 10.65 percent. The Commission finds this overall cost of capital to be fair, just, and reasonable.

#### AUTHORIZED INCREASE

The required net operating income found fair, just, and reasonable herein is approximately \$8,133,705.<sup>66</sup> To achieve this level of operating income, Kentucky-American is entitled to

---

<sup>66</sup> \$76,372,813 x 10.65% = \$8,133,705

increase its rates and charges to produce additional revenues on an annual basis of \$2,529,944 determined as follows:

Net Operating Income Found Reasonable	\$ 8,133,705
Less Adjusted Net Operating Income	6,612,925
Operating Income Deficiency	\$ 1,520,780
Gross-Up Factor <sup>67</sup>	<u>x1.6635836686</u>
Revenue Increase Required, Inclusive of Income Taxes, PSC Fee, and Uncollectibles	<u>\$ 2,529,944</u>

#### OTHER ISSUES

##### Assistance to Low-Income Customers

In this case the AG/LFUCG raised the issue of the impact of Kentucky-American's conservation programs on their low-income customers. The Commission shares the intervenors' concerns about this group of customers. Through its emphasis on the least cost planning concept, the Commission has tried to force reevaluation of traditional methods of meeting increased customer demand. The goal of least cost planning is to benefit all customers in the long run.

The Commission will continue to apply the least cost planning concept to Kentucky-American. The Commission welcomes any input and recommendations the intervenors may have on activities that could be incorporated into the Commission's future efforts to provide policy direction to Kentucky-American that could assist the low income customers.

---

<sup>67</sup> State income tax has been factored in at the new rate of 8.25 percent.

### Least Cost/Comprehensive Planning

During his testimony Mr. Edens described the environmental policy factors that have affected the company's decisions with regard to Station No. 2. The Commission recognizes the evolving nature of environmental policy in the state, specifically with regard to the multitude of source of supply problems associated with the Kentucky River. However the Commission is charged with the obligation to ensure that utilities provide adequate, efficient, and reasonable service as required by KRS 278.030(2).

In Case No. 9696,<sup>68</sup> Kentucky-American filed the Least Cost/Comprehensive Planning Study. That study projected that Kentucky-American would be in a deficit position by 1990 given its currently installed system delivery capacity. Although Kentucky-American's brief acknowledges that any proposed expansion of the Richmond Road treatment plant will require a Certificate of Convenience and Necessity, Kentucky-American has not filed such a case.<sup>69</sup> To ensure that Kentucky-American meets its responsibilities under KRS 278.030(2), the Commission directs Kentucky-American to update the Least Cost/Comprehensive Planning Study and to file the updated study with the Commission by no later than the filing of Kentucky-American's next rate case. The updated study should include an evaluation of the effectiveness of the least cost planning concept as applied to a water company.

---

<sup>68</sup> Case No. 9696, Kentucky American Water Company Least Cost/Comprehensive Planning Study, page 88.

<sup>69</sup> Brief of Kentucky-American, page 8.

This evaluation should address, but not be limited to, the following questions:

How has the application of this concept affected decision-making with regard to traditional capital investment planning?

Is it appropriate to use historical demand to plan for the future if conservation programs are being effective?

How effective have the non-conventional methods discussed in the Least Cost/Comprehensive Planning Study been in reducing demand?

How effective has the change in the state plumbing code been in reducing demand in Kentucky-American's service territory?

How should traditional cost-of-service study allocation methods be handled with changing consumption trends by customer class?

Should the Commission reevaluate its role in encouraging Kentucky-American to serve as a regional water supplier given the source of supply problem with the Kentucky River?

What are effective methods of rewarding the residential class of customers for conservation?

How should the state's environmental policy be incorporated into Kentucky-American's Least Cost Planning for the future?

The updated study is to be performed by Kentucky-American, with the advice and consultation of the Commission Staff. The intervenors are invited to similarly participate in this project. No later than August 1, 1990, Kentucky-American should contact the Commission to schedule an informal conference to initiate the updated study.

#### RATE DESIGN

Billing Analysis. Kentucky-American provided a billing analysis which showed test-year actual, normalized, and proposed

revenues. The Commission accepts Kentucky-American's billing analysis as filed; therefore, the rates granted in this case are based on the billing analysis as filed by Kentucky-American.

Cost-of-Service Study. Kentucky-American performed a cost-of-service study in order to determine the cost of serving each customer classification. A comparison of revenue production by customer class shows that, based on the cost-of-service study, residential and public fire service revenues would be decreased while all other customer classifications would receive an increase.<sup>70</sup> Kentucky-American made adjustments to its cost-of-service study and filed rates based on the adjusted and unadjusted study.

Kentucky-American based its cost-of-service study on the Base Capacity Extra Demand Method of assigning costs. This method takes into consideration the peak or maximum demands imposed on a system as well as the volume of usage. Kentucky-American proposed to raise the residential maximum day factor for maximum day to equal that of the other water utility customer classifications and to increase all maximum day ratios by approximately 11 percent.<sup>71</sup> Kentucky-American cited the unusually wet summer experienced during the test year as one justification for these adjustments.

---

<sup>70</sup> Direct Testimony of Thomas G. McKittrick, Schedule 3.

<sup>71</sup> Direct Testimony of Thomas G. McKittrick, page 5.

The AG/LFUCG disagrees with the adjustment made to the residential maximum day factor and states that Kentucky-American's justifications for these adjustments are not persuasive.<sup>72</sup> This disagreement is based in part on the fact that Kentucky-American has a conservation program which could account for the lower residential demands on the system.

The Commission finds that both the assumptions of Kentucky-American and the AG/LFUCG have merit, however, there is insufficient evidence to determine which assumption if either is the sole cause of the low maximum day factor. The Commission recognizes the importance of a cost-of-service study as a tool to be used in determining cost allocations which assist in producing rates that are fair to all customer classifications. In analyzing the results of a cost-of-service study, the Commission must consider the impact of full implementation on each classification of customers and attempt to minimize the harmful effects that may otherwise result from the acceptance of a cost-of-service study alone. Therefore, the Commission finds that Kentucky-American's adjustments to the maximum day factors should not be considered in this case.

Rate Design. Kentucky-American's current rate design consists of a service charge based on meter size and a 3-step, declining block rate schedule applicable to water usage. This design was based on a previous cost-of-service study with

---

<sup>72</sup> Brief of AG/LFUCG, page 22.

subsequent rate adjustments made so as to maintain the level of revenue distribution found appropriate by that study.

The cost-of-service study filed in this case produced an inverted rate design wherein the middle rate increment is higher than the first and third increment. Kentucky-American proposed to eliminate the second rate increment and to shift revenues to the residential and public fire protection classifications in order to minimize the impact of the rate increase on its other customer classifications.

The Commission agrees with the AG/LFUCG that there is insufficient justification to increase the public fire service rates above the cost-of-service rates in order to minimize the increase to other classifications. The Commission has accepted the fire service rates as shown in the cost-of-service study.

The Commission accepts Kentucky-American's proposal to eliminate the second step in its rate design due to the limitations of an inverted rate increment. Kentucky-American bills part of its customers on a quarterly basis which would negate any impact on water conservation resulting from an inverted rate design. The implementation of an inverted rate increment can additionally lead to decreasing load factors, increasing unit costs, and revenue shortfalls.

The elimination of the second rate increment necessitates the shifting of revenues to other rate increments. The Commission has increased the service charges and volumetric rates above the rates shown in the cost-of-service study in order to recover this revenue. However, in moving toward the allocations set out in the



cost-of-service study, the residential and public fire service classifications have received a decrease in rates.

The Commission finds that the rate design resulting from the adjusted cost-of-service study is appropriate and should remain the basis for the next rate case filed with the Commission.

#### SUMMARY

The Commission, after consideration of the evidence of record and being advised, finds that:

1. The rates proposed by Kentucky-American should be rejected.

2. The rates approved herein will permit Kentucky-American to cover its operating expenses, pay its interest, and provide a reasonable dividend and surplus for equity growth.

3. The rates in Appendix A, attached hereto and incorporated herein, are the fair, just, and reasonable rates to be charged for water service by Kentucky-American on and after June 28, 1990, the expiration of the 5-month suspension period.

IT IS THEREFORE ORDERED that:

1. Kentucky-American's proposed rates be and they hereby are denied.

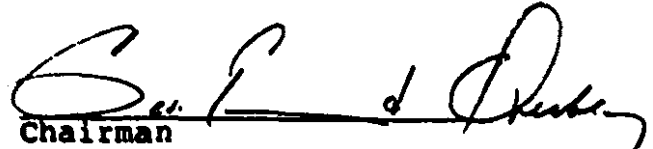
2. The rates in Appendix A be and they hereby are approved for services rendered on and after June 28, 1990.


3. Kentucky-American shall update the Least Cost/Comprehensive Planning Study and shall file the updated study with the Commission by no later than the filing of Kentucky-American's next rate case.

4. Within 30 days of the date of this Order, Kentucky-American shall file its revised tariff sheets setting out the rates approved herein.

Done at Frankfort, Kentucky, this 28th day of June, 1990.

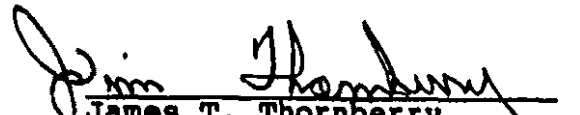
PUBLIC SERVICE COMMISSION

  
Chairman

  
Vice Chairman

DISSENTING OPINION OF COMMISSIONER JAMES T. THORNBERRY

I concur with the decision in all respects except the determination of rate of return which, in my judgment, is too high.

  
James T. Thornberry  
Commissioner

ATTEST:

  
Executive Director

**APPENDIX A**

**APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE  
COMMISSION IN CASE NO. 89-348 DATED 6/28/90**

The following rates and charges are prescribed for the customers in the area served by Kentucky-American Water Company. All other rates and charges not specifically mentioned herein shall remain the same as those in effect under authority of this Commission prior to the effective date of this Order.

**CLASSIFICATION OF SERVICE  
SERVICE CLASSIFICATION NO. 1**

**METER RATES**

The following shall be the rates for consumption, in addition to the service charges provided for herein:

	<u>1000 Gallons Per Month</u>	<u>Rate Per 1000 Gallons</u>	<u>100 Cubic Feet Per Month</u>	<u>Rate Per 100 Cubic Feet</u>
For the first	600	\$1.648	800	\$1.236
For all over	600	1.289	800	.967

	<u>1000 Gallons Per Quarter</u>	<u>Rate Per 1000 Gallons</u>	<u>100 Cubic Feet Per Quarter</u>	<u>Rate Per 100 Cubic Feet</u>
For the first	1,800	\$1.648	2,400	\$1.236
For all over	1,800	1.289	2,400	.967

SERVICE CHARGES

All metered general water service customers shall pay a service charge based on the size of meter installed. The service charge will not entitle the customer to any water.

<u>Size of Meter</u>	<u>Service Charge</u>	
	<u>Per Month</u>	<u>Per Quarter</u>
5/8 inch	\$ 4.92	\$ 14.76
3/4 inch	7.36	22.08
1 inch	12.27	36.81
1 1/2 inch	24.54	73.62
2 inch	39.25	117.75
3 inch	73.60	220.80
4 inch	122.67	368.01
6 inch	245.35	736.05
8 inch	392.56	1,177.68

CLASSIFICATION OF SERVICE  
SERVICE CLASSIFICATION NO. 3

RATES

<u>Size of Service</u>	<u>Rate Per Month</u>	<u>Rate Per Annum</u>
2 inch diameter	\$ 3.06	\$ 36.72
4 inch diameter	12.23	146.76
6 inch diameter	27.52	330.24
8 inch diameter	48.93	587.16
12 inch diameter	110.10	1,321.20
14 inch diameter	149.85	1,798.20

CLASSIFICATION OF SERVICE  
SERVICE CLASSIFICATION NO. 4

RATES FOR PUBLIC FIRE SERVICE

	<u>Rate Per Month</u>	<u>Rate Per Annum</u>
For each public fire hydrant contracted for or ordered by Urban County, County, State or Federal Governmental Agencies or Institutions	\$19.08	\$228.87

RATES FOR PRIVATE FIRE SERVICE

For each private fire hydrant contracted for by Industries or Private Institutions	\$27.52	\$330.24
--	---------	----------