

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

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In the Matter of:

THE APPLICATION OF MONTGOMERY COUNTY)
WATER DISTRICT #1, OF MONTGOMERY COUNTY,)
KENTUCKY, FOR (1) A CERTIFICATE OF)
PUBLIC CONVENIENCE AND NECESSITY,)
AUTHORIZING AND PERMITTING SAID WATER)
DISTRICT TO CONSTRUCT A WATERWORKS) CASE NO. 8775
CONSTRUCTION PROJECT, CONSISTING OF)
EXTENSIONS, ADDITIONS, AND IMPROVEMENTS)
TO THE EXISTING WATERWORKS SYSTEM OF THE)
DISTRICT; (2) APPROVAL OF THE PROPOSED)
PLAN OF FINANCING OF SAID PROJECT; AND)
(3) APPROVAL OF THE INCREASED WATER)
RATES PROPOSED TO BE CHARGED BY THE)
DISTRICT TO CUSTOMERS OF THE DISTRICT)

O R D E R

The Montgomery County Water District #1 ("Montgomery County") filed an application on February 23, 1983, for approval of adjustments to its water service rates, authorization to construct a \$605,000 waterworks improvements project and approval of its financing for this project. Montgomery County's financing includes \$5,000 from applicants for service in the project area, a grant of \$169,000 from the Appalachian Regional Commission ("ARC") and a loan of \$431,000 from the Farmers Home Administration ("FmHA") at 5 percent annual interest. Montgomery County will issue waterworks revenue bonds as security for this loan. The repayment period will be 40 years. The proposed improvements will provide a new pipeline for bringing purchased water to Montgomery County, replace some other lines and extend service to approximately 29 customers.

Plans and specifications for the proposed improvements as prepared by Kennoy Engineers, Inc., of Lexington, Kentucky, ("Engineer") have been approved by the Division of Water of the Natural Resources and Environmental Protection Cabinet.

A hearing was held in the offices of the Public Service Commission, Frankfort, Kentucky, on May 3, 1983. There were no intervenors, and no protests were entered.

Test Period

Montgomery County proposed and the Commission has accepted the 12-month period ending December 31, 1982, as the test period in this matter.

REVENUES AND EXPENSES

Montgomery County experienced a net operating loss of \$958 for the test period as reflected in Exhibit P of the application. A review of Exhibit P revealed that depreciation expense of \$3,002 had erroneously been deducted from net operating expenses rather than included, thus increasing the test period net operating loss to \$3,960. Furthermore, when comparing Exhibit P with Montgomery County's 1982 Annual Report on file with the Commission, it was found that amortization of capitalized organizational expenses and payroll taxes totaling \$881 was inadvertently overlooked. Therefore, Montgomery County's actual net operating loss for the test period was \$4,841.

In order to reflect normal operating conditions subsequent to the completion of the proposed construction

project and the addition of 29 new customers, Montgomery County proposed numerous pro forma adjustments to its test year expenses, the majority of which were the result of interconnecting with Mt. Sterling's water system for its supply of treated water and the closing of its own water treatment facilities. As a result of these adjustments, Montgomery County has a projected net operating loss of \$19,463.

The Commission finds Montgomery County's proposed adjustments to be generally proper and has accepted them for rate-making purposes with the following exceptions:

Purchased Water

Montgomery County proposed purchased water costs of \$18,703 based on projected annual water purchases of 26,341,900 gallons, including unaccounted for water of 15 percent above projected water sales. The Commission has determined the appropriate level of annual water purchases to be 28,166,918 gallons including unaccounted-for water of 15 percent of water purchased based on water sales of 23,941,880 gallons as determined in a later section of this Order. Applying Mt. Sterling's current tariffs to this projected level of purchases, the Commission has determined the appropriate purchased water costs to be \$19,927, an increase of \$1,224.

Water Sales Revenue

For the test period, Montgomery County had water sales revenue of \$36,308. In order to properly match revenues and expenses, water sales revenue has been increased by \$4,138 to

reflect projected water sales of 23,941,880 gallons applying Montgomery County's current tariffs.

Other Matters

Montgomery County's shift from a water production utility to a water purchasing utility will require substantial changes in its day to day operations. The pro forma adjustments proposed by Montgomery County identified the most significant changes, and they have been accepted by the Commission with certain modifications. However, the magnitude of the changes will require Montgomery County to re-evaluate its entire operations as to its needs and priorities, particularly in areas not known and measurable at the hearing date. Montgomery County must yet make decisions such as what will be done with its old treatment plant, whether it will be held for standby or abandoned, whether any of the plant can be salvaged and how any action will affect customer rates. Although these decisions may require further refinement to Montgomery County's pro forma level of expenses when they become known and measurable, the Commission is of the opinion that any adjustments at this time would be arbitrary. However, the Commission wishes to advise Montgomery County that if its treatment plant is abandoned or otherwise disposed of, the original cost should be removed from plant in service in its financial records in accordance with the Uniform System of Accounts for Water Utilities.

Therefore, the Commission finds that Montgomery County's adjusted test period operations are as follows:

	<u>Montgomery County's Adjusted</u>	<u>Commission Adjustment</u>	<u>Commission Adjusted</u>
Operating Revenues	\$ 36,308	\$ 4,138	\$ 40,446
Operating Expenses	<u>54,890</u>	<u>2,105</u>	<u>56,995</u>
Net Operating Income	<u>\$ <18,582></u>	<u>\$ 2,033</u>	<u>\$ <16,549></u>

REVENUE REQUIREMENTS

The Commission has used the debt service coverage ("DSC") method to determine appropriate revenue requirements for Montgomery County. Montgomery County's pro forma average debt service for the next 5 years, including financing of the proposed construction project, is \$31,301. The Commission is of the opinion that Montgomery County's pro forma net operating loss is clearly unfair, unjust and unreasonable. Montgomery County's proposed increase of \$49,801 will produce net operating income of \$33,252 and a DSC of 1.06X, which the Commission finds to be sufficient for Montgomery County to service its debt, to insure its financial stability and to provide reliable and adequate service to its customers.

BILLING ANALYSIS

The income statement filed by Montgomery County shows "estimated" water sales of 27,181,000 gallons producing revenue of \$36,308 for the test period. The billing analysis ^{1/} shows water sales of 21,672,000 gallons producing revenue of \$37,049 for the same period. In order to reconcile these differences, Montgomery County was requested to file the work papers from which the billing analysis was derived. ^{2/} Examination of the work papers and testimony at the hearing ^{3/} indicated that the method used to assign bills to the various usage levels produced

an overlap of the rate schedule usage blocks.^{4/} In addition, the total bills assigned to each usage level were divided by 12 and rounded to arrive at the average number of customers per month at each usage level, and, in some instances, the number of customers and usage were combined at the higher usage levels. The number of customers was then multiplied by the usage level to obtain the total monthly usage at each level. These totals were combined according to both the present and proposed rate schedule blocks and applied to the respective rates to determine the revenue. Montgomery County's reasons for using this method were FmHA requirements and compatability with its computer.^{5/} No evidence was presented to show that this is required by FmHA or that data arrived at by a different method is incompatible with Montgomery County's computer system.

Commission staff has calculated usage of 22,616,000 gallons for the test year which should have produced revenue of \$37,697. Montgomery County's income statement showed "estimated" usage of 27,181,000 gallons. Further, in Montgomery County's last rate case, Case No. 8185, ^{6/} the billing analysis showed usage of 24,703,000 gallons. Based on that usage, the Commission allowed rates which should have produced annual revenues of \$43,530.

The discrepancies in the usage and revenue figures submitted in this case and the apparent failure to realize the revenue allowed by Case No. 8185 raise serious doubts as to the accuracy of the billing analysis and the validity of the

methodology employed in its preparation. The Commission is of the opinion, however, that further delay in setting rates would jeopardize the proposed construction and financing and the financial viability of the utility. The test year usage and revenue have been adjusted to coincide with staff findings from the work papers submitted by Montgomery County. Twenty-nine applications for service through the proposed extension have been signed. An adjustment for these customers was made to the test year usage based on average monthly usage of 3,810 gallons for a projected annual usage of 23,941,880 gallons. The rates granted herein are based on that usage. However, Montgomery County is hereby advised that the Commission will not consider in the future filings based on "estimated" usage and that any billing analyses should be prepared according to standard Commission procedure as shown in Appendix B to this Order.

RATE DESIGN

Montgomery County's present rate design consists of four rate steps ranging from a minimum usage of 2,000 gallons to an over 10,000-gallon usage level. Montgomery County proposed to change its rate design by reducing the minimum usage to 1,000 gallons and increasing the number of rate steps to seven. In response to the Commission's Order of March 8, 1983, Montgomery County stated that the rate schedule was set arbitrarily to be fair to all customer usage groups and that

the minimum was changed to 1,000 gallons so that the bare minimum user was not unnecessarily penalized. ^{7/} No studies, surveys or comparisons were performed.

A comparison of the present and proposed rates based on various usage levels indicates a wide variance in the amount of increase to the customers' bills. For example, a customer using 1,000 gallons per month would have a 50 percent increase, a customer using 5,000 gallons would have a 130 percent increase and a customer using 50,000 gallons would have a 115 percent increase. The average user (3,810 gallons per month) would experience a 121 percent increase. In a rate step by rate step comparison, the increases applied to each rate block vary even more.

Mr. William C. Babbington, Financial Consultant, Kennoy Engineers, testified that there are approximately 40 customers whose usage is less than 1,000 gallons per month.^{8/} The billing analysis and work papers indicate approximately 225 customers whose monthly usage is between 1,000 and 5,000 gallons and 72 customers using approximately 10,000 gallons per month. The proposed rate design would benefit some 40 low users; however, it does not provide for an equitable distribution of the required increase to the majority of Montgomery County's customers.

Due to the Commission's concern with the accuracy of the billing analysis and the lack of other evidence upon which to rely in determining an appropriate rate design for Montgomery County, the Commission is of the opinion that any

change in the rate design at this time should be denied. Should Montgomery County choose to propose changes in its rate design in the future, it will be necessary to provide reliable and convincing evidence of the feasibility and benefits relating to both the utility and its customers.

The financial data filed by Montgomery County show that an increase of \$49,801 in revenue is required, resulting in an increase of approximately 123 percent. The rates granted herein are designed to spread the required increase equally to customers at all usage levels.

SERVICE CONNECTION CHARGES

Montgomery County proposed to increase its service connection charge for service provided through 5/8-inch X 3/4-inch meters from \$125 to \$275. Service connections for service provided through larger meters are proposed to be installed at cost.^{9/} Cost data filed by Montgomery County show that \$275 is the reasonable rate to be charged and should be approved for service connections using a 5/8-inch meter. However, in Case No. 8185, the Commission found that service connection fees for service provided through meters 1-inch or smaller should be based on average cost with service connections using meters larger than 1-inch installed at cost. Montgomery County should file tariff sheets showing charges based on average costs for service connections using meters 1-inch or smaller and appropriate cost justification therefor.

FINDINGS AND ORDERS

The Public Service Commission, after consideration of the application and evidence of record and being advised, is of the opinion and finds that:

1. Public convenience and necessity require that the construction proposed in the application and record be performed and that a certificate of public convenience and necessity be granted.

2. The proposed construction includes extending an 8-inch line from the western extremity of Montgomery County's system to provide for the purchase of water from the City of Mt. Sterling, a 200,000-gallon water storage tank, and miscellaneous appurtenances thereto. The low bids received for the proposed work totaled \$351,181 which will require about \$605,000 after allowances are made for fees, contingencies and other indirect costs, and the additional construction recommended in finding number 3 herein.

3. Montgomery County has approximately 5,550 feet of 2-inch dead-end lines which are not in compliance with 807 KAR 5:066, Section 11(2a). These lines should be replaced with appropriate size lines based on proper hydraulic substantiation by the Engineer. The Engineer has estimated that approximately \$102,000 in construction funds will be available for use after the proposed construction is completed. These additional funds should be used to replace

the above-referenced 2-inch lines as well as to extend service to new customers. Approval from this Commission will be necessary prior to performing this work.

4. Any deviations from the construction herein approved which could adversely affect service to any customer should be subject to the prior approval of this Commission.

5. The proposed borrowing of \$431,000 is for lawful objects within the corporate purposes of Montgomery County, is necessary and appropriate for and consistent with the proper performance of services to the public by Montgomery County, will not impair its ability to perform these services and is reasonably necessary and appropriate for such purposes.

6. The financing secured by Montgomery County for this project will be needed to pay for the work herein approved and recommended. Montgomery County's financing plan should, therefore, be approved.

7. Montgomery County should file with the Commission duly verified documentation which shows the total costs of construction and all other capitalized costs (engineering, legal, administrative, etc.) within 60 days of the date that construction is substantially completed.

8. Montgomery County's contract with its Engineer should require the provision of full-time resident inspection under the general supervision of a professional engineer with a Kentucky registration in civil or mechanical engineering. This supervision and inspection should insure that the

construction work is done in accordance with the contract plans and specifications and in conformance with the best practices of the construction trades involved in the project.

9. Montgomery County should require the Engineers to furnish a copy of the record plans and a signed statement that the construction has been satisfactorily completed in accordance with the contract plans and specifications within 60 days of the date of substantial completion of this construction.

10. A 5/8-inch X 3/4-inch meter should be the standard customer service meter for all new customers and should be installed at all points of service unless the customer provides sufficient justification for the installation of a larger meter.

11. Montgomery County should file with the Commission a copy of all contractual agreements for the provision of services or the purchase of services which are subject to the approval of this Commission.

12. The change in rate design and the rates proposed by Montgomery County are unfair, unjust and unreasonable and should be denied upon application of KRS 278.030.

13. Montgomery County should file tariff sheets showing connection charges based on average cost for service provided through meters 1-inch or smaller along with appropriate cost justification therefor.

14. The rates and charges in Appendix A are fair, just and reasonable in that they will produce annual revenue under projected operating conditions of \$90,249.

15. Any billing analyses filed with future rate cases should be prepared according to Commission procedure in Appendix B.

IT IS THEREFORE ORDERED that Montgomery County be and it hereby is granted a certificate of public convenience and necessity to proceed with the waterworks improvements project set forth in the plans and specifications of record herein.

IT IS FURTHER ORDERED that any deviations from the approved construction which could adversely affect service to any customer shall be subject to the prior approval of this Commission.

IT IS FURTHER ORDERED that Montgomery County shall obtain the approval of this Commission prior to proceeding with the work as stated in finding number 3 herein.

IT IS FURTHER ORDERED that Montgomery County's plan for financing its construction work in the amount of \$605,000, including a 40-year loan of \$431,000 at 5 percent interest from FmHA, be and it hereby is approved.

IT IS FURTHER ORDERED that Montgomery County shall file with the Commission duly verified documentation which shows the total costs of construction herein certificated including all capitalized costs (engineering, legal, administrative, etc.) within 60 days of the date that construction is substantially completed.

IT IS FURTHER ORDERED that the contract between Montgomery County and its Engineer shall require the provision of full-time resident inspection under the general supervision of a professional engineer with a Kentucky registration in civil or mechanical engineering. This supervision and inspection shall insure that the construction work is done in accordance with the contract plans and specifications and in conformance with the best practices of the construction trades involved in the project.

IT IS FURTHER ORDERED that Montgomery County shall require the Engineer to furnish to the Commission a copy of the record plans and a signed statement that the construction has been satisfactorily completed and done in accordance with the contract plans and specifications within 60 days of the date of substantial completion of the proposed construction.

IT IS FURTHER ORDERED that a 5/8-inch X 3/4-inch meter shall be the standard customer service meter for all new customers and shall be installed at all points of service unless the customer provides sufficient justification for the installation of a larger meter.

IT IS FURTHER ORDERED that Montgomery County shall file with the Commission a copy of all contractual agreements for the provision of services or for the purchase of services which are subject to the approval of this Commission.

IT IS FURTHER ORDERED that the change in rate design proposed by Montgomery County be and it hereby is denied.

IT IS FURTHER ORDERED that the rates proposed by Montgomery County be and they hereby are denied upon application of KRS 278.030.

IT IS FURTHER ORDERED that the rates in Appendix A be and they hereby are approved for service rendered on and after the date of this Order.

IT IS FURTHER ORDERED that the service connection charge in Appendix A be and it hereby is approved for service rendered through 5/8-inch X 3/4-inch meters for connections on and after the date of this Order.

IT IS FURTHER ORDERED that, within 30 days of the date of this Order, Montgomery County shall file revised tariff sheets setting out the rates and charges approved herein.

IT IS FURTHER ORDERED that, within 30 days of the date of this Order, Montgomery County shall file revised tariff sheets showing service connection charges for service provided through meters 1-inch or smaller based on average cost with appropriate cost justification for each.

IT IS FURTHER ORDERED that billing analyses filed in future rate cases shall be prepared according to the procedure in Appendix B.

Nothing contained herein shall be deemed a warranty of the Commonwealth of Kentucky, or any agency thereof, of the financing herein authorized.

Done at Frankfort, Kentucky, this 7th day of July, 1983.

PUBLIC SERVICE COMMISSION


Chairman


Vice Chairman


Commissioner

ATTEST:

Secretary

FOOTNOTES

1. Exhibit "O".
2. Response filed April 4, 1983, per Commission Order dated March 8, 1983.
3. Transcript of Evidence ("T.E."), May 3, 1983, pp. 65-70.
4. Bills for usage from 0-2,499 gallons were assigned to the 2,000 level, from 2500-3499 gallons to the 3,000 levels, etc.
5. T.E., pp. 67,71.
6. Case No. 8185, Notice of Montgomery County Water District Number One of an Adjustment of Water Rates and Charges on May 1, 1981.
7. Response filed April 4, 1983, Item B.
8. T.E., p. 65.
9. T.E., p. 74.

APPENDIX A

APPENDIX TO AN ORDER OF THE PUBLIC SERVICE
COMMISSION IN CASE NO. 8775 DATED JULY 7, 1983

The following rates are prescribed for the customers served by Montgomery County Water District No. 1. All other rates and charges not specifically mentioned herein shall remain the same as those in effect under authority of the Commission prior to the effective date of this Order.

GALLONAGE BLOCK

RATE

First	2,000 gallons	\$13.40 (minimum)
Next	3,000 gallons	2.35 per 1,000 gallons
Next	5,000 gallons	2.20 per 1,000 gallons
Over	10,000 gallons	1.65 per 1,000 gallons

CONNECTION CHARGE

5/8-inch X 3/4-inch	\$275
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APPENDIX B

APPENDIX TO AN ORDER OF THE PUBLIC SERVICE
COMMISSION IN CASE NO. 8775 DATED JULY 7, 1983

BILLING ANALYSIS

The billing analysis is the chart reflecting the usage by the customers as well as the revenue generated by a specific level of rates. A billing analysis of both the current and proposed rates is mandatory for analysis of a rate filing. The following is a step-by-step description which may be used to complete the billing analysis. A completed sample of a billing analysis is also included.

a. Usage Table (Usage by Rate Increment)

Information needed to complete the usage table should be obtained from the meter books or other available usage records. The usage table is used to spread total usage into the proper incremental rate step. Initial recording of usage should be in 100 gallon increments. Where there are only a few very large users or contract customers, actual usage should be used. Usage between 0-100 gallons should be shown as 100, between 101-200 as 200, etc. The usages and customers are then combined for purposes of the usage table as follows:

Column No. 1 is the incremental steps in the present or proposed rate schedule for which the analysis is being made. Column No. 2 is the number of bills in each incremental rate step. Column No. 3 is the total gallons used in each incremental rate step. Column Nos. 4, 5, 6, 7, 8 and 9 are labeled to correspond to the incremental rate steps shown in Column No. 1 and contain the actual number of gallons used in each incremental rate step.

Example for completing Usage Table is as follows:

Column No. 1 is incremental rate steps.

Column Nos. 2 and 3 are completed by using information obtained from usage records.

Column Nos. 4, 5, 6, 7, 8, and 9 are completed by the following steps:

Step 1: 1st 2,000 gallons minimum bill rate level
432 Bills
518,400 gallons used
All bills use 2,000 gallons or less,
therefore, all usage is recorded in
Column 4.

- Step 2: Next 3,000 gallons rate level
 1,735 Bills
 4,858,000 gallons used
 1st 2,000 minimum x 1,735 bills = 3,470,000
 gallons - record in Column 4
 Next 3,000 gallons - remainder of water over
 2,000 = 1,388,000 - record in Column 5
- Step 3: Next 10,000 gallons rate level
 1,830 Bills
 16,268,700 gallons used
 1st 2,000 minimum x 1,830 bills = 3,660,000
 gallons - record in Column 4
 Next 3,000 gallons x 1,830 bills = 5,490,000
 gallons - record in Column 5
 Next 10,000 gallons - remainder of water over
 3,000 = 7,118,700 gallons - record in
 Column 6
- Step 4: Next 25,000 gallons rate level
 650 bills
 15,275,000 gallons used
 1st 2,000 minimum x 650 bills = 1,300,000
 gallons record in Column 4
 Next 3,000 gallons x 650 bills = 1,950,000
 gallons record in Column 5
 Next 10,000 gallons x 650 bills = 6,500,000
 gallons - record in Column 6
 Next 25,000 gallons - remainder of water over
 10,000 gallons = 5,525,000 gallons - record
 in Column 7
- Step 5: Over 40,000 gallons rate level
 153 bills
 9,975,600 gallons used
 1st 2,000 minimum x 153 bills = 306,000
 gallons - record in Column 4
 Next 3,000 gallons x 153 bills = 459,000
 gallons - record in Column 5
 Next 10,000 gallons x 153 bills = 1,530,000
 gallons - record in Column 6
 Next 25,000 gallons x 153 bills = 3,825,000
 gallons - record in Column 7
 Over 40,000 gallons - remainder of water over
 25,000 = 3,855,600 gallons - record in
 Column 8
- Step 6: Total each column for transfer to Revenue
 Table.

b. Revenue Table (Revenue by Rate Increment)

Revenue Table is used to determine the revenue produced from the Usage Table. Column No. 1 is the incremental rate steps in the rate schedule for which the analysis is being made. Column No. 2 indicates the total number of bills. Column No. 3 is the number of gallons accumulated in each rate increment (Totals from Columns 4, 5, 6, 7 and 8 of the above usage table). Column No. 4 is the rates to be used in determining revenue. Column No. 5 contains revenue produced.

Example for completing Revenue Table is as follows:

Complete Column Nos. 1, 2 and 3 using information from Usage Table.

Complete Column No. 4 using rate either present or proposed.

Column No. 5 is completed by first multiplying the bills times the minimum charge.

Then, starting with the second rate increment, multiply Column No. 3 by Column No. 4 and total.

Revenue from Rates

Test Period from 1-1-81 to 12-31-81

Water Used by Rate Increment

Class: Residential

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Bills	Bills	Gallons	1st 2,000	Next 3,000	Next 10,000	Next 25,000	Over 40,000	Total
2,000 Minimum Bill	432	518,400	518,400	1,388,000				518,400
3,000 Gallons	1,735	4,858,000	3,470,000	5,490,000	7,118,700			4,858,000
10,000 Gallons	1,830	16,268,000	3,660,000	1,950,000	6,500,000	5,525,000		16,268,000
25,000 Gallons	650	15,275,000	1,300,000	459,000	1,530,000	3,825,000		15,275,000
40,000 Gallons	153	9,975,600	306,000					9,975,600
Total	4,800	46,895,700	9,254,400	9,287,000	15,148,700	9,350,000	9,350,000	46,895,700

Revenue By Rate Increment

(1)	(2)	(3)	(4)	(5)
Bills	Gallons	Rate	Revenue	Revenue
2,000 Minimum Bill	4,800	9,254,400	\$5.00 Min.	\$24,000.00
3,000 Gallons		9,287,000	2.50	23,217.50
10,000 Gallons		15,148,700	2.00	30,297.40
25,000 Gallons		9,350,000	1.25	11,687.50
40,000 Gallons		3,855,600	.75	2,891.70
				\$92,094.10 Total Revenue