

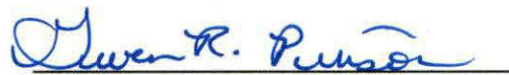
COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF CAWOOD WATER DISTRICT     )   CASE NO.  
FOR AN ALTERNATIVE RATE ADJUSTMENT     )   2017-00309

NOTICE OF FILING OF COMMISSION STAFF REPORT

Notice is hereby given that, in accordance with the Commission's Order of August 18, 2017, the attached report containing the findings of Commission Staff regarding the Applicant's proposed rate adjustment has been filed in the record of the above-styled proceeding. Pursuant to the Commission's August 18, 2017 Order, Cawood Water District is required to file written comments regarding the findings of Commission Staff no later than 14 days from the date of this report.



Gwen R. Pinson  
Executive Director  
Public Service Commission  
P.O. Box 615  
Frankfort, KY 40602

DATE NOV 14 2017

cc: Parties of Record

STAFF REPORT  
ON  
CAWOOD WATER DISTRICT  
CASE NO. 2017-00309

Cawood Water District (“Cawood District”) is a water utility district, organized pursuant to KRS Chapter 74, that owns and operates a water distribution system through which it provides retail water service to approximately 1,621 customers residing in Harlan County, Kentucky.<sup>1</sup> On July 21, 2017, Cawood District tendered an application (“Application”) to the Commission requesting to increase its water service rates pursuant to 807 KAR 5:076. After curing deficiencies, Cawood District’s Application was accepted for filing on August 1, 2017. To ensure the orderly review of the Application, the Commission established a procedural schedule by Order dated August 18, 2017.

Cawood District based its requested rates on a historical test period that coincides with the reporting period shown in its most recent Annual Report on file with the Commission at the time it filed the Application, the calendar year ended December 31, 2015, as required by 807 KAR 5:076, Section 9.

The rates requested by Cawood District would increase the monthly bill of a typical residential customer<sup>2</sup> by \$10.15, from \$34.40 to \$44.55, or approximately 29.50 percent, for its Cawood General Service Area and, by \$2.94, from \$41.61 to \$44.55, or approximately 7.06, percent for its Pathfork Service Area. Cawood District presented

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<sup>1</sup> *Annual Report of Cawood Water District to the Public Service Commission for the Calendar Year Ended December 31, 2015 (“Annual Report”)* at 12 and 53.

<sup>2</sup> A typical residential customer purchases 4,000 gallons of water per month through a 5/8-inch x 3/4-inch meter.

financial exhibits in the Application that show how Cawood District calculated the amount of the requested increase in rates. The exhibits are summarized below in condensed form.

Pro Forma Operating Expenses	\$ 928,374
Plus: Average Annual Principal and Interest Payments	106,030
Additional Working Capital	<u>10,600</u>
Overall Revenue Requirement	1,045,004
Less: Other Operating Revenue	(87,615)
Interest Income	<u>                    </u>
Revenue Required from Rates	957,389
Less: Pro Forma Present Rate Service Revenues	<u>(712,136)</u>
Required Revenue Increase	<u>\$ 245,253</u>
Percentage Increase	<u>34.44%</u>

To determine the reasonableness of the rates requested by Cawood District, Staff performed a limited financial review of Cawood District's test-year operations. The scope of Staff's review was limited to determining whether operations reported for the test year were representative of normal operations. Known and measurable changes to test-year operations were identified and adjustments were made when their effects were deemed to be material. Insignificant and immaterial discrepancies were not necessarily pursued or addressed.

Staff's findings are summarized in this report. Ariel Miller reviewed the calculation of Cawood District's Overall Revenue Requirement. Eddie Beavers reviewed Cawood District's reported revenues and rate design.

## Summary of Findings

1. Overall Revenue Requirement and Required Revenue Increase. By applying the Debt Service Coverage (“DSC”) method, as generally accepted by the Commission, Staff found that Cawood District’s Overall Revenue Requirement is \$925,257 and that a \$134,850 revenue increase, or 18.58 percent, to pro forma present rate revenues is necessary to generate the Overall Revenue Requirement.

2. Water Service Rates. In the Application, Cawood District proposed to unify its rates between the Cawood General Service Area and Pathfork Service Area and change its rate design without a cost-of-service study (“COSS”). In response to Staff’s First Request for Information (“Staff’s First Request”), Cawood District chose to not perform a COSS, but rather to change its proposed rates and rate structure.<sup>3</sup>

Cawood’s amended rates removed the change in rate design, but still proposed to unify the rates between the two service areas. An Informal Conference was held October 11, 2017 to further discuss issues related to this proposed rate design. Staff and Cawood District discussed that normally, the Commission would not authorize a utility to change its rate design outside of a rate case in which a COSS had been performed. Staff suggested that Cawood wait for the issuance of the Staff Report and address the rate design in its response.<sup>4</sup>

The Commission has previously found that the allocation of a revenue increase evenly across the board to a utility’s current rate design is appropriate when there has been no evidence entered into the record demonstrating that this method is

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<sup>3</sup> Staff’s First Request, Item 1.

unreasonable. Staff has increased all of Cawood District's monthly water service rates across the board by 18.58 percent and allocated the \$134,850 revenue increase Staff found warranted.

The monthly water service rates calculated by Staff are shown in the Attachment to this report. These rates will increase a typical residential customer's monthly bill by \$6.42, from \$34.40 to \$40.82, or approximately 18.7 percent for its Cawood General Service Area, and by \$7.74, from \$41.61 to \$49.35, or approximately 18.6 percent, for its Pathfork Service Area.

3. Non-recurring Charges In the Application, Cawood District proposed to increase the non-recurring charges for Tap-On Fees and Connection/Turn-On Charge and to establish new non-recurring charges for a Meter Re-Read Charge, a Meter Re-Setting Charge, and a Meter Test Charge. It supported the requested charges with cost-justification worksheets provided in the Application. Staff has reviewed the charges and the cost-justification worksheets provided, as well as explanations of the charges that Cawood District provided in response to Staff's First Request. Staff finds that the requested increases and the establishment of the new non-recurring charges are reasonable. Shown in the Attachment to this report are the requested non-recurring charges

4. Depreciable Lives. In this report, Staff finds that the current depreciable lives assigned to some of Cawood District's assets should be revised for ratemaking purposes. Any depreciable lives approved by the Commission in this proceeding for ratemaking purposes should be used by Cawood District for all future accounting and

reporting purposes. No adjustment to accumulated depreciation or retained earnings should be made to account for the effect of this change in accounting estimate.

Pro Forma Operating Statement

Cawood District's Pro Forma Operating Statement for the test year ended December 31, 2015, as determined by Staff, appears below.

	Test Year	Adjustment	(Ref.)	Pro Forma
Operating Revenues				
Sales of Water	\$ 712,136	\$ 21,184	(A)	
		(7,468)	(B)	\$ 725,852
	82,615	(21,184)	(A)	
Other Water Revenues	<u>                    </u>	<u>2,940</u>	(C)	<u>64,371</u>
Total Operating Revenues	<u>794,751</u>	<u>(25,712)</u>		<u>790,223</u>
Operating Expenses				
Operation and Maintenance Expenses				
Salaries and Wages - Employees	229,952	(38,108)	(D)	191,844
Salaries and Wages - Commissioners	8,300	(8,300)	(E)	-
Employee Pensions and Benefits	71,018	(23,504)	(F)	47,514
Purchased Water	35,306	(10,959)	(H)	24,347
Purchased Power for Pumping	63,397	(19,678)	(H)	43,719
Chemicals	30,638	8,481	(G)	
		(12,143)	(H)	26,976
Materials and Supplies	44,008	(8,481)	(G)	35,527
Contractual Services	28,750			28,750
Insurance	29,900			29,900
Bad Debt Expense	16,356			16,356
Miscellaneous Expense	<u>112,937</u>			<u>112,937</u>
Total Operation and Maintenance Expenses	670,562	(74,584)		557,870
Taxes Other Than Income	19,064	(3,550)	(I)	15,514
Depreciation	<u>227,970</u>	<u>(8,627)</u>	(J)	<u>219,343</u>
Total Operating Expenses	<u>917,596</u>	<u>(86,761)</u>		<u>792,727</u>
Net Operating Income	(122,845)	61,049		(2,504)
Interest Income	<u>184</u>			<u>184</u>
Income Available to Service Debt	<u>\$ (122,661)</u>	<u>\$ 61,049</u>		<u>\$ (2,320)</u>

(A) Water Sales Revenue. In the test year, Cawood District included in non-operating revenue \$21,184 in water sales revenue. Staff reclassified these amounts to water sales revenue to properly account for actual water sold.

(B) Billing Analysis Adjustment. Cawood District provided a billing analysis that based the water usage and water sales revenue for the entire 12-month test year with its application. Staff has reviewed Cawood District's billing analysis provided in the Application and finds that the water sales revenues determined by the billing analysis of \$725,852 for all customers is an accurate representation of normalized test-year revenue from water sales; therefore, staff has decreased water sales revenue by \$7,468

(C) Other Water Sales Revenue. Staff has reviewed Cawood District's request to increase non-recurring charges, specifically, the requested increase in the Connection and Reconnection Charges, and finds that the other water sales revenues should be increased by \$2,940

(D) Salaries and Wages - Employees. During the test year, Cawood District reported \$229,952 in wages paid to its employees. Subsequent to the test year, Cawood District's general manager resigned. Cawood District is currently seeking to fill the general manager position, but until someone is hired, one of Cawood District's operators has been promoted to the role of plant manager. To reflect the current changes to staffing levels, Staff recalculated pro forma wages based on hours worked for the year 2016, with the exception of the general manager's hours, at the current wage rates paid to Cawood District's employees. This resulted in a decrease to Salaries and Wages of \$38,108.

	Current Pay Rate	Regular Hours	Overtime Hours (x1.5)	Pro Forma
<b>Office Employees</b>				
Financial Officer/Office Manager	12.75	2,080		\$ 26,520
Part Time Clerk	10.00	1,014		10,140
<b>Field Employees</b>				
Plant Manager	15.25	2,080		31,720
Operator	10.87	2,080	271	27,028
Operator	10.00	2,080	361	26,215
Operator	10.00	2,080	165	23,275
Operator	8.50	2,080	301	21,518
Operator	8.00	2,080	385	21,260
Part Time Meter Reader	8.00	521		<u>4,168</u>
Pro Forma Wages				191,844
Less: Test Year				<u>(229,952)</u>
Decrease				<u>\$ (38,108)</u>

(E) Salaries and Wages – Commissioners. During the test year, Cawood District reported \$8,300 in payments to its Board of Commissioners. Staff requested that Cawood District provide a copy of the fiscal court minutes authorizing the payment of the commissioner fees. According to KRS 74.020(6) the commissioner fees:

. . . shall be fixed by the county judges/executive with the approval of the fiscal court; in multicounty districts, it shall be fixed by the agreement between the county judges/executive with the approval of their fiscal courts.

Cawood District was unable to provide the required approval from the judge/executive and the fiscal court in Harlan County, Kentucky. For this reason, Staff reduced operating expenses by \$8,300 to eliminate the commissioner fees.

(F) Employee Pensions and Benefits – Health Insurance Premiums. Cawood District reported \$71,018 for test-year health insurance premiums paid on behalf of its employees. Cawood District currently pays 100 percent of monthly premiums for health insurance for its full time employees. As shown below, Staff annualized the most recent



health insurance premiums being paid on behalf of Cawood District's employees at the time of Staff's review.<sup>5</sup>

Current Premium for Full-time Employees	\$ 3,960
Times: 12 Months	<u>12</u>
Annualized Premium	47,514
Less: Test Year	<u>(71,018)</u>
Decrease	<u>\$ (23,504)</u>

(G) Chemicals. In its Annual Report, Cawood District reported \$30,638 for chemicals purchased to treat water. During Staff's review, it was discovered that \$8,481 of chemicals expense had been misclassified to Cawood District's Materials and Supplies account. Staff reclassified this amount back to the Chemicals account in pro forma operations.

(H) Expenses Attributable to Water Loss. In its Annual Report, Cawood Water District reported water loss of 46.04 percent.<sup>6</sup> 807 KAR 5:066, Section 6(3), limits water

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<sup>5</sup> Upon review of Cawood District's total compensation package, no adjustment to health insurance benefits was made.

<sup>6</sup>

Water Produced and Purchased	153,294,000
Less: Water Sold	(80,499,258)
Water Treatment Plant Use	(377,000)
Wastewater Plant	(24,000)
Water Used for Flushing	(1,100,000)
Fire Department Use	(657,000)
Other	<u>(60,000)</u>
Water Loss	<u>70,576,742</u>
Water Loss Percentage	<u>46.04%</u>

loss to 15 percent for ratemaking purposes unless an alternative level is found reasonable by the Commission.<sup>7</sup> As shown below, Staff calculated the cost to purchase, pump, and treat excess water loss to be \$42,780.

	Test Year	Times: Excess Water Loss Percentage	Decrease
Purchased Water	\$ 35,306	-31.04%	\$ (10,959)
Purchased Power	63,397	-31.04%	(19,678)
Chemicals	39,119	-31.04%	(12,143)

Accordingly, Staff removed the amounts attributable to excess water loss in pro forma operations.

(I) Payroll Taxes. As discussed in Items (D) and (E), Staff determined that Cawood District's test-year employee wages will decrease due to changes made to employee staffing levels and to decrease Commissioner's Salaries. Cawood District's test-year FICA taxes will decrease because of these changes. As calculated below, Staff determined that the decrease to test-year FICA taxes will be \$3,550.

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<sup>7</sup> 807 KAR 5:066, Section 6(3), states: "Unaccounted-for water loss. Except for purchased water rate adjustments for water districts and water associations, and rate adjustments pursuant to KRS 278.023(4), for rate making purposes a utility's unaccounted-for water loss shall not exceed fifteen (15) percent of total water produced and purchased, excluding water used by a utility in its own operations. Upon application by a utility in a rate case filing or by separate filing, or upon motion by the commission, an alternative level of reasonable unaccounted-for water loss may be established by the commission. A utility proposing an alternative level shall have the burden of demonstrating that the alternative level is more reasonable than the level prescribed in this section."

Pro Forma Wages Subject to FICA Taxes	\$ 191,844
Times: FICA Tax Rate	<u>7.65%</u>
Payroll Tax Expense	14,676
Less: Test Year FICA Taxes	<u>(18,226)</u>
Decrease	<u>\$ (3,550)</u>

Accordingly, Staff decreased test-year Taxes Other Than Income by \$3,550.

(J) Depreciation. During the test year, Cawood District reported \$227,970 for depreciation expense. Staff agrees with the amounts reported for depreciation in the test year, with the exception of three items, the adjustments of which result in a net adjustment to depreciation expense of \$8,627, as shown in the table below.

Adjustment to Account for Changes to Depreciable Lives	\$ (8,632)
Adjustment to Remove Test-Year Depreciation Expense on Asset that Had Become Fully Depreciated	(578)
Adjustment for New Asset Placed into Service in 2015	<u>583</u>
Total Adjustment to Test-Year Depreciation Expense	<u>\$ (8,627)</u>

Accordingly, Staff adjusted depreciation expense to reflect the adjustment of these three items as explained in more detail below:

Change to Depreciable Lives

In its Application, Cawood District included a depreciation schedule that directly corresponded to the amount of depreciation that was expensed during the test year. Staff has reviewed the lives of the assets for each category for its reasonableness and has determined that only one asset was outside the ranges included in the National Association of Regulatory Utility Commissioners' ("NARUC") publication, titled "Depreciation Practices for Small Water Utilities," which has previously been found

acceptable by the Commission.<sup>8</sup> As shown in the table below, Staff recalculated pro forma depreciation expense for meters based on a 42.5-year life, which represents the midpoint of the NARUC range for meters and meter installations, and results in a total adjustment of \$8,632.

<u>Asset</u>	<u>Original Cost</u>	<u>Depreciable Life</u>	<u>Pro Forma Expense</u>	<u>Less: Test Year</u>	<u>Adjustment</u>
Meters	\$540,609	42.5	\$ 12,720	\$(21,352)	\$ (8,632)

Fully Depreciated Asset

Test-year depreciation expense reported on the asset listed below resulted in their full depreciation as of the end of the test year. As a result, depreciation expense will not accrue on this asset in future reporting periods. Accordingly, Staff removed its depreciation from Cawood District’s test-year expenses, resulting in a decrease to depreciation of \$578.

<u>Description Shown in Ledger</u>	<u>In Service Date</u>	<u>Test-Year Expense</u>
Ford Pickups (2)	06/03/08	\$ (578)

New Assets

During the test year, Cawood District placed into service two new assets. Because the date the assets were placed into service were in the middle of the test period, only a partial year of depreciation was recorded for the assets. Accordingly, Staff increased test-year depreciation by \$583 to recognize a full year of depreciation on these assets.

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<sup>8</sup> Case No. 2013-00154, *Application of Henderson County Water District for an Alternative Rate Filing* (Ky. PSC Nov. 14, 2013) at Appendix B.

<u>Asset</u>	<u>Original Cost</u>	<u>Staff Life</u>	<u>Current Depreciation</u>	<u>Less: Test Year</u>	<u>Adjustment</u>
Air Compressor	\$ 2,270	10	\$ 227	\$ (19)	\$ 208
Chlorine Analyzer	4,085	10	409	(34)	<u>375</u>
Total Adjustment for New Assets					<u>\$ 583</u>

### Overall Revenue Requirement and Required Revenue Increase

The Commission has historically applied a DSC method to calculate the Overall Revenue Requirement of water districts and water associations. This method allows for recovery of: 1) cash related pro forma operating expenses; 2) recovery of depreciation expense, a non-cash item, to provide working capital;<sup>9</sup> 3) the average annual principal and interest payments on all long-term debts, and 4) working capital that is in addition to depreciation expense.

A comparison of Cawood District's and Staff's calculations of Cawood District's Overall Revenue Requirement and Required Revenue Increase using the DSC method is shown below.

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<sup>9</sup> The Kentucky Supreme Court has held that the Commission must permit a water district to recover its depreciation expense through its rates for service to provide internal funds for renewing and replacing assets. See *Public Serv. Comm'n of Kentucky v. Dewitt Water Dist.*, 720 S.W.2d 725, 728 (Ky. 1986). Although a water district's lenders require that a small portion of the depreciation funds be deposited annually into a debt reserve/depreciation fund until the account's balance accumulates to a required threshold, neither the Commission nor the Court requires that revenues collected for depreciation be accounted for separately from the water district's general funds or that depreciation funds be used only for asset renewal and replacement. The Commission has recognized that the working capital provided through recovery of depreciation expense may be used for purposes other than renewal and replacement of assets. See Case No. 2012-00309, *Application of Southern Water and Sewer District for an Adjustment in Rates Pursuant to the Alternative Rate Filing Procedure for Small Utilities* (Ky. PSC Dec. 21, 2012)

	Cawood District	Staff	
Pro Forma Operating Expenses	\$ 928,374	\$ 792,727	
Plus: Average Annual Principal and Interest Payments	106,030	110,442	(1)
Additional Working Capital	10,600	22,088	(2)
	<hr/>	<hr/>	
Overall Revenue Requirement	1,045,004	925,257	
Less: Other Operating Revenue	(87,615)	(64,371)	
Interest Income		(184)	
	<hr/>	<hr/>	
Revenue Required from Rates	957,389	860,702	
Less: Pro Forma Present Rate Service Revenues	(712,136)	(725,852)	
	<hr/>	<hr/>	
Required Revenue Increase	\$ 245,253	\$ 134,850	
Percentage Increase	34.44%	18.58%	

(1) Average Annual Principal and Interest Payments. Cawood District currently has six outstanding bonds, all payable to the United States Department of Agriculture Rural Development ("RD"). In its Application, Cawood District requested recovery of its calculation of the average annual principal and interest payments on these loans of \$106,030. Staff finds, as shown below, that the average annual debt payment to be included in calculating Cawood District's Overall Revenue Requirement should be the five-year average of the annual principal and interest payments on these loans during the years 2018 through 2022, rather than the amount requested by Cawood District. This five-year average of \$110,442 will allow Cawood District recovery of the debt payments

that will be made during the anticipated life of the rates authorized by the Commission in this proceeding.<sup>10</sup>

<u>Five-Year Average of Debt Payments</u>	
Year	Annual Debt Payment
2018	\$ 108,709
2019	109,183
2020	111,026
2021	110,371
2022	<u>112,922</u>
Total	552,210
Divide by: 5 years	<u>5</u>
Average Annual Principal and Interest Payment	<u><u>\$ 110,442</u></u>

(2) Additional Working Capital. The DSC method, as historically applied by the Commission, includes an allowance for additional working capital that is equal to the minimum net revenues required by a district's lenders that are above its average annual debt payments. In addition to depreciation expense, Cawood District requested recovery of an allowance for working capital that is equal to 110 percent of its average annual debt payments.

RD requires that Cawood District charge rates that produce net revenues that are at least 120 percent of its average annual debt payments. Following the Commission's

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<sup>10</sup> Generally, the anticipated life of a utility's service rates is based on the frequency of the utility's previous rate case filings, but is no longer than five years, since rates tend to become obsolete due to changes that will likely occur to the utility's cost of service in a five-year period.

A review of the Commission's electronic docket system shows that Nebo District last adjusted its monthly water service rates pursuant to 807 KAR 5:001 Section 16, in 2007, in Case No. 2007-00081, or, approximately ten years ago. Therefore, Staff finds that the anticipated life of the rates approved in this proceeding is five years.

historic practice, Staff calculated Cawood District's allowance for additional working capital, based on a DSC ratio of 1.20, to be \$22,088, as shown below.<sup>11</sup> Staff included this amount in the calculation of Cawood District's Overall Revenue Requirement.

Average Annual Principal and Interest	\$ 110,442
Times: DSC Coverage Ratio	<u>120%</u>
 Total Net Revenues Required	 132,530
Less: Average Annual Principal and Interest Payments	<u>(110,442)</u>
 Additional Working Capital	 <u>\$ 22,088</u>

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<sup>11</sup> Inclusion of the additional working capital in Cawood District's revenue requirement is not necessary for it to earn revenues that meet the minimum DSC ratio required by its lenders. As depreciation is a noncash item, it is excluded from the ratio calculation, which is actually a measure of cash flow. As shown below, Cawood District's minimum DSC ratio is met with or without the inclusion of additional working capital.

	With Additional Working Capital	Without Additional Working Capital
Overall Revenue Requirement	\$ 925,257	\$ 903,169
Less: Operating and Maintenance Expense	(557,870)	(557,870)
Taxes Other Than Income	<u>(15,514)</u>	<u>(15,514)</u>
 Net Revenues	 351,873	 329,785
Divided by: Average Annual Debt Payments	<u>110,442</u>	<u>110,442</u>
 DSC Ratio	 <u>319%</u>	 <u>299%</u>



Signatures

*Ariel Miller*

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Prepared by: Ariel Miller  
Water and Sewer Branch  
Division of Financial Analysis

*Eddie Beavers*

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Prepared by: Eddie Beavers  
Water and Sewer Branch  
Division of Financial Analysis

ATTACHMENT

ATTACHMENT TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE  
COMMISSION IN CASE NO. 2017-00309 DATED **NOV 14 2017**

Monthly Water Rates

Cawood General Service Area

First	2,000 Gallons	\$24.38	Minimum bill
Next	8,000 Gallons	8.22	per 1,000 Gallons
Over	10,000 Gallons	5.86	per 1,000 Gallons

Path Fork Service Area

First	2,000 Gallons	\$27.81	Minimum bill
Next	8,000 Gallons	10.77	per 1,000 Gallons
Over	10,000 Gallons	8.40	per 1,000 Gallons

Non-Recurring Charges

Tap-On Fees	
5/8- x 3/4-Inch Meter	\$750.00
Connection/Turn-On Charge	35.00
Meter Re-Read Charge	35.00
Meter Re-Setting Charge	35.00
Meter Test Charge	50.00

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