

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE PETITION OF THE HARDIN COUNTY WATER)	
DISTRICT NO. 1 FOR A CERTIFICATE OF)	
CONVENIENCE AND NECESSITY; APPROVAL OF)	
FINANCING OF THE CONSTRUCTION AND THE)	CASE NO.
ISSUANCE OF BONDS; AND THE APPROVAL OF)	90-019
RATES TO BE CHARGED ITS RETAIL AND)	
WHOLESALE CUSTOMERS)	

O R D E R

On April 24, 1990, Hardin County Water District No. 1 ("Hardin District No. 1") filed an application for a Certificate of Public Convenience and Necessity to construct several waterworks improvement projects, authority to issue approximately \$4 million in waterworks revenue bonds to finance that construction, and authority to adjust its rates for service received on and after May 31, 1990. Hardin District No. 1 seeks increased annual revenues of \$539,618, an increase of 27.1 percent over present levels. By this Order, the Commission grants a certificate for the proposed construction, authorizes the issuance of \$3.775 million of waterworks revenue bonds, and establishes rates which will enable Hardin District No. 1 to obtain the requested increase.

The Commission granted motions to intervene filed by the Attorney General, by and through his Utility and Rate Intervention Division ("AG"); Hardin County Water District No. 2 ("Hardin District No. 2"); Ratepayers of Hardin County Water District No. 1

("Ratepayers"); Joseph Janes; and Kimberly Ann Nunn. The Commission suspended the proposed rate increase to investigate the reasonableness of the proposed rates. A public hearing was held in the Commission's offices in Frankfort, Kentucky on October 2-4, 9, and 11, 1990. Simultaneous briefs were submitted by December 4, 1990. All information requested during the hearing has been submitted.

COMMENTARY

Hardin District No. 1 is a water district organized in 1952 pursuant to the provisions of KRS Chapter 74. It provides retail water service to approximately 8,963 customers in Hardin and Meade counties. It is also the wholesale water supplier to Hardin District No. 2 and the city of Vine Grove, Kentucky ("Vine Grove"). Its principal service area is the city of Radcliff, Kentucky ("Radcliff"). A five-member board of commissioners oversees and supervises Hardin District No. 1's operations.

PROPOSED CONSTRUCTION

Hardin District No. 1 seeks a Certificate of Public Convenience and Necessity for 3 water works improvement projects. These projects involve the construction of 2 elevated water storage tanks, 11.6 miles of 6, 8, 10, 12, and 16-inch water transmission lines in the central area of Radcliff, and a 16-inch transmission main along Kentucky Highway 313.

Prior to construction of any facility to be used in providing utility service to the public, KRS 278.020(1) requires a utility to obtain a Certificate of Public Convenience and Necessity from this Commission. In order to obtain such a certificate, the

utility must demonstrate a need for the proposed facilities and an absence of wasteful duplication. Kentucky Utilities Co. v. Pub. Serv. Comm'n, Ky., 252 S.W.2d 885 (1952). Need is demonstrated by showing:

[A] substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed and operated.

. . . the inadequacy must be due either to a substantial deficiency of service facilities, beyond what could be supplied by normal improvements in the ordinary course of business; or to indifference, poor management or disregard of the rights of consumers, persisting over such a period of time as to establish an inability or unwillingness to render adequate service.

Id. at 890. "Wasteful duplication" is defined as "an excess of capacity over need" and "an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties." Id.

An applicant must also show that the proposed facilities are "feasible." Kentucky Utilities Co. v. Pub. Serv. Comm'n, Ky., 390 S.W.2d 168 (1965). A project is feasible if it is "capable of providing adequate service at reasonable rates." Id. at 175.

The Commission first turns to Hardin District No. 1's proposal to construct a 250,000 gallon elevated storage tank in the Whispering Hills area of south Radcliff and a 750,000 gallon elevated storage tank near Lincoln Trail Boulevard in west Radcliff. Hardin District No. 1 contends that these tanks are needed to comply with state regulations. Commission Regulation 807 KAR 5:066, Section 5(4), requires a water utility to have storage capacity at least equal to its average daily usage. The

Natural Resources and Environmental Protection Cabinet ("NREPC") has a similar requirement.¹ Hardin District No. 1's average daily water consumption is approximately 3.2 million gallons. Its current storage capacity is 1.74 million gallons.

Hardin District No. 1 further contends that the proposed storage tanks are necessary to stabilize water pressures. Its engineering consultant testified that the lack of storage capacity

causes wide fluctuations in pressure throughout the Radcliff system as water system varies during each day. The northern end of the system normally experiences high pressure of over 110 psi during lower usage periods of each day. At the same time, during the peak usage periods of each day, low pressures (30 psi and lower) are experienced in the south end of the system (particularly in the higher elevations of the Whispering Hills area).²

The proposed storage tanks will reduce these swings in pressure and bring water pressure into more reasonable ranges.

The proposed Whispering Hills storage tank, in particular, will remedy pressure problems in south Radcliff. Many portions of south Radcliff are at a higher elevation than the existing storage tanks.³ As a result, Hardin District No. 1 is unable to provide water service to that area at adequate pressures. It contends that low water pressures have prevented the construction of almost

¹ 401 KAR 8:020E, Section 3.

² Prefiled Testimony of Bob Smallwood, at 5.

³ The proposed Whispering Hills storage tank will be 20 feet higher than Hardin District No. 1's existing tanks. See Transcript of Evidence ("T.E."), Vol. I, at 23.

500 homes in the area. It further contends that the proposed storage will provide fire protection where none currently exists.⁴

Hardin District No. 1 contends that the construction of additional storage will also reduce pumping costs. Because of the lack of adequate storage capacity, its system's pumps must operate continuously or for long periods to ensure adequate pressure. Additional storage capacity would reduce the amount of time in which these pumps would operate, thus reducing operating expense.

Opposing the proposed construction, Ratepayers and Mr. Janes insist that Hardin District No. 1's overall consumption of water will decrease.⁵ They point to Hardin District No. 2's scheduled departure, decreasing water usage levels from 1986 to 1989, and proposed personnel reductions at the Fort Knox Military Reservation - one of the Radcliff area's largest employers. These factors, they submit, portend significant decreases in water usage which would eventually place Hardin District No. 1 in compliance with state regulatory standards.

The Commission finds the evidence to clearly show Hardin District No. 1 in violation of Commission and NREPC regulations relating to storage capacity. The Commission in particular has repeatedly cited Hardin District No. 1 for inadequate storage capacity. Whether future events will lessen Hardin District No. 1's daily water usage to place it within those regulations is

⁴ T.E., Vol. I, at 21.

⁵ Brief of Janes, at 7; Brief of Ratepayers, at 2-3.

uncertain. More importantly, the proposed storage tanks are needed to correct systemwide pressure problems and reduce inefficient use of system pumps. These problems will not gradually disappear. If the Radcliff area is to have a water distribution system capable of sustaining economic and population growth, Hardin District No. 1's storage capacity must be increased.

The second construction project involves the construction of approximately 11.6 miles of water transmission mains and is intended to "eliminate the existing hydraulic 'bottleneck' which currently limits north-south transmission through [Hardin District No. 1's] system."⁶ Hardin District No. 1's primary pressure zone conforms to the boundaries of Radcliff. Water is fed into this zone from the north by a 14-inch transmission main pump directly from its treatment plant at Muldraugh and from the south by a 12-inch main from Pirtle Springs. Because of the distance water must travel from the Pirtle Springs Treatment Plant, booster pumps are used to boost water pressure. Although the Pirtle Springs Treatment Plant is south of Radcliff, the transmission main loops around Radcliff to the west and connects to the distribution system at nearly the same point as the Muldraugh transmission main. However, no transmission mains larger than 6 inches exist to transport this water to south Radcliff. The result is a

⁶ Prefiled Testimony of Bob Smallwood, at 6.

hydraulic bottleneck in which water pressures in north Radcliff are extremely high and those in south Radcliff are extremely low.

To eliminate this bottleneck, Hardin District No. 1 proposes to lay larger water transmission mains throughout downtown Radcliff. These reinforcing mains will provide increased capacity and pressure capability to Vine Grove, connect the Pirtle Springs transmission main to the central distribution system, and produce increased transmission for fire protection.

The Commission finds that a need for the project exists. The proposed construction will eliminate the hydraulic bottleneck and will improve water pressure conditions throughout Hardin District No. 1's central distribution area. It will enable the water district to bring its system into compliance with fire protection standards of the American Waterworks Association and the Insurance Services Office.⁷ In its current state, Hardin District No. 1's fire protection capacity is inadequate.

The third project under consideration deals with the construction of 16-inch "outer loop" transmission main. Hardin District No. 1 proposes to construct a 16-inch transmission main which will follow the alignment of the new Kentucky Highway 313 by-pass and connect the proposed Lincoln Trail Storage Tank to the Water District's Longview Storage Tank. Hardin District No. 1 maintains that the proposed main "will reduce power costs from

⁷ T.E., Vol. I, at 22-25.

pumping and facilitate fire protection" and will "provide treated water to an area scheduled for significant development."⁸

The Ratepayers and Mr. Janes dispute the need for this project. They assert that no evidence has been presented to support the Water District's contention that the affected area is ripe for development. The Water District's witness on this issue, they further contend, was not qualified to testify on the potential for economic development in that area.

The Commission does not believe that the potential economic development of the by-pass area is a critical issue. A more important issue is whether the proposed transmission main is needed to correct existing deficiencies. The evidence suggests that it is. It will assist in the elimination of the hydraulic bottleneck by providing another route for bringing water to south Radcliff. It will greatly enhance the Water District's fire protection capacity for that area and produce savings in pumping costs.

The Commission has examined the computer hydraulic analyses submitted in support of the proposed construction projects. Unlike those submitted in support of Hardin District No. 1's previous application,⁹ these analyses appear reliable. The results of computer model of the system have been calibrated with actual field measurements. The field measurements have been

⁸ Application, Exhibit 3, V-3.

⁹ Case No. 10189, Application of Hardin County Water District No. 1.

gathered in an acceptable and reliable manner. The assumptions contained in the computer models reasonably reflect the actual operating conditions of Hardin District No. 1's system. After review of the submitted analyses, the Commission finds the proposed construction projects to be feasible.

Accordingly, the Commission finds that a Certificate of Public Convenience and Necessity should be granted to Hardin District No. 1 for its proposed construction projects. The Commission further finds that Hardin District No. 1 should be authorized to issue \$3.775 million in waterworks revenue bonds to finance the proposed construction.

TEST PERIOD

Hardin District No. 1 proposed the 12-month test period ending December 31, 1989 as the test period for determining the reasonableness of the proposed rates. No intervenor has objected. The Commission believes it is reasonable to use the 12-month period ending December 31, 1989 as the test period in this proceeding. In using this period, the Commission has given full consideration to appropriate known and measurable changes.

REVENUES AND EXPENSES

Hardin District No. 1 proposes test-year operating revenues of \$2,076,511 and utility operating expenses of \$1,624,189.¹⁰ It also proposes several adjustments to its test-year operations to normalize current operating conditions. The proposed adjustments

¹⁰ Application, Exhibit 6, Schedule 6.

are generally proper and acceptable for rate-making purposes with the following modifications.

Operating Revenues

Normalized Revenue. Hardin District No. 1's rates were adjusted during the test year.¹¹ Test-year operating income from water sales, therefore, has been normalized to reflect Hardin District No. 1's revenues had current rates been effective for the entire test year.

Hardin District No. 1's test-year revenue has also been reduced by \$130,493¹² to reflect the reduced purchases of Hardin District No. 2. Hardin District No. 2 has constructed its own water treatment facilities. Under the terms of the purchase water contract, Hardin District No. 2 will phase out its purchases over a 10-year period. The Water Districts have stipulated that Hardin District No. 2 will purchase approximately 396 million gallons in 1991.¹³ Based on these adjustments, the Commission finds that normalized test-year revenue from water sales is \$1,991,157.

Sewer Billing Revenue. Hardin District No. 1 reported sewer billing revenue of \$91,870 for the test year. An adjustment was

¹¹ Case No. 10189, Application of Hardin County Water District No. 1, Order dated June 5, 1989.

¹² Test Year Sales to HCWD #2 545,992,159 x \$0.87 = \$475,013
Future Year Sales to HCWD #2 396,000,000 x 0.87 = 344,520
Decrease in Revenue \$130,493

¹³ T.E., Vol. II, at 152.

proposed to increase this amount by \$3,530 based on a 3.84 percent increase in the number of sewer customers.¹⁴ The Commission finds this adjustment to be reasonable and has included it for rate-making purposes.

Penalties & Miscellaneous Service Revenues. Hardin District No. 1 reported miscellaneous operating revenues of \$65,930.70 for the test period. It proposed an adjustment to increase this revenue by \$54,370 to account for additional non-recurring charges.¹⁵ The proposed adjustment, however, does not reflect additional revenues, but is the adjusted test-year revenue.

The Commission concurs with Hardin District No. 1's calculation of pro-forma turn-on fees, return check fees, and miscellaneous charges and its proposed adjustment of <\$11,413> to reflect one-time Federal and State Disaster Aid funds received in 1989.¹⁶ As Hardin District No. 1 offers no evidence to support the proposed increases for other miscellaneous revenues, the Commission has included miscellaneous, customer penalties, and reconnect fee revenues at their test-year levels of \$4,676, \$25,306, and \$8,360, respectively. These adjustments result in a net increase to miscellaneous service revenues of \$10,911.

¹⁴ T.E., Hardin District No. 1's Exhibit 9.

¹⁵ Hardin District No. 1's Response to the Commission's Hearing Request, Item 5.

¹⁶ Hardin District No. 1's Response to Informal Conference Request (July 6, 1990), Item 30.

Operating Expenses

Pumping and Water Treatment Expenses. Based on projected decreases in water production resulting from Hardin District No. 2's reduced purchases, Hardin District No. 1 proposes a decrease in test-year operating expenses of \$46,989.¹⁷ It proposes to reduce chemical and purchased power expense because these accounts represented the most significant cost of production expenses. Hardin District No. 2 contends that larger decreases in these expenses will occur, but has offered no convincing evidence to support its contention.¹⁸ After a careful review of the proposed adjustment, the Commission finds it to be reasonable and has reduced test-year pumping and water treatment expense.

Depreciation Expense. Hardin District No. 1 reported test-year depreciation expense of \$237,191 which it proposed to increase by \$68,230¹⁹ to reflect the proposed construction projects. Since the proposed project will be constructed and placed in service outside of the test period, the proposed adjustment to depreciation expense has been denied.

Salaries and Wages Expense. Hardin District No. 1's test-year salary and wage expenses were \$418,375. No pro forma adjustments to this expense were proposed. The evidence of record indicates that Hardin District No. 1 increased salary levels

17 T.E., Hardin District No. 1's Exhibit 9.

18 Brief of Hardin District No. 2, at 15.

19 Hardin District No. 1's Response to Informal Conference Request (July 6, 1990), Attachment 2, Item 13.

during the test year.²⁰ After a review of these salary increases, the Commission finds that they are reasonable and are known and measurable. Accordingly, an adjustment has been made to normalize salaries and wages expense through an increase of \$97,096.

Social Security. Based on the increased level of salary expense, the Commission has made a related adjustment to increase test-year social security expense of \$30,987. An increase of \$8,447 has been included for rate-making purposes.²¹

Retirement Expense. Hardin District No. 1 reported retirement expense of \$18,732 for the test year. An adjustment was proposed to increase this expense by \$15,331 to include retirement benefits for all eligible employees. The Commission concurs with this adjustment, but has recalculated it to reflect increased salary levels. As a result, the Commission has increased retirement expense by \$18,841.²²

Contractual Services Expense. For the test year, Hardin District No. 1 reported contractual professional services expense

20 Hardin District No. 1's Response to the Commission's Hearing Request, Item 1.

21	Test Year Adjusted Salaries and Wages	\$515,471
	FICA Rate	x .0765
	Test Year Adjusted Social Security	\$ 39,434
	Less: Test Year Social Security Expense	30,987
	Total Increase	<u>\$ 8,447</u>

22	Allowed Base Salary (Excludes Overtime)	\$489,234
	Retirement Rate	x .0768
	Allowed Retirement Expense	\$ 37,573
	Test-Year Retirement	18,732
	Increase	<u>\$ 18,841</u>

of \$35,444.²³ Hardin District No. 2 suggests that certain professional expenses should be excluded from test-year operations.²⁴ After a review of these expenses and the adjusting journal entries, it appears that the professional services expenses have been accounted for properly. Accounting fees totalling \$3,555 and expensed during the test year, however, were for services performed in a prior rate case. These fees should not be included in the calculation of revenue requirements in this proceeding. Accordingly, the Commission has decreased test-year contractual services expense by \$3,555, to a level of \$31,889.

Rate Case Expense. Hardin District No. 1 reported amortization of rate case expense of \$626 for the test year. As of October 24, 1990, Hardin District No. 1 had incurred rate case expenses of \$24,825 for this proceeding. The Commission usually amortizes reasonable rate case expenses over a period of 3 to 5 years for rate-making purposes. Hardin District No. 1, however, proposes to include this expense as a component of the proposed construction cost. In effect, this expense will be recovered

23 A detailed analysis of professional services expenses shows that actual expenses exceeded reported test-year expenses. This occurred when Hardin District No. 1 properly capitalized a portion of these expenses and adjusted that expense account accordingly. See Hardin District No. 1's Response to Informal Conference Request (July 6, 1990), Attachment I, Item 16.

24 Brief of Hardin District No. 2, at 16.

through debt service rather than as an operating expense. Although this method of recovery is unusual, it is not unreasonable. The Commission will permit Hardin District No. 1 to use this method of recovery and make no adjustment to test-year rate case amortization expense.

Bad Debt Expense. For the test year, Hardin District No. 1 reports bad debt expense of \$37,519. Hardin District No. 1's actual level of bad debt expense for the test year was \$10,312.²⁵ Accordingly, the Commission finds that bad debt expense should be decreased by \$27,207.

Miscellaneous Expense - Abandoned Projects. Hardin District No. 1 includes the write-off of two abandoned projects in its test-year expenses. Although the Commission concurs with this write-off of \$20,911, it finds that for rate-making purposes, the write-off should be amortized over a period of 5 years. The resulting decrease to test-year expense of \$16,729 leaves a test year level of \$4,182.

Taxes Other Than Income Tax Expense. Test-year expenses, as reported by Hardin District No. 1, reflect taxes other than income tax expense of \$19,919. This amount includes Kentucky Sales and Use Tax of \$17,419. As Hardin District No. 1 merely serves as a collection agent for this tax, this amount should not be considered as an operating expense for rate-making purposes. The Commission has, therefore, reduced test-year expense by \$17,419.

²⁵ Hardin District No. 1's Response to the Commission's Order of May 25, 1990, Item 18.

Relocation of Kentucky Highway 144. Hardin District No. 2 contends that expenses incurred for the relocation of Kentucky Highway 144 may have been improperly included in test-period operating expenses.²⁶ After reviewing Hardin District No. 1's adjusting journal entries, the Commission finds that no additional adjustment relating to this project should be made to test-year expenses.

Other Income and Deductions. Hardin District No. 1 reported test-year miscellaneous non-utility expenses of \$<59,147>.²⁷ This expense reflects a non-recurring adjustment to correct the payable account to Radcliff for sewer billing.²⁸ As this adjustment is non-recurring, the Commission has removed it from test-period operations by increasing Other Income and Deductions by \$59,147.

Interest Expense. As a portion of other test-year expense, Hardin District No. 1 included interest on long-term debt of \$474,406. Long-term debt interest is not included as an operating expense when determining a revenue requirement based on debt service coverage. Test-year operations, therefore, have been decreased by that amount.

Loss from Disposition of Utility Property. Hardin District No. 1 included a loss from the disposition of utility property of \$137,566 in its test-period operations. Although the Commission

26 Brief of Hardin District No. 2, at 17.

27 Application, Exhibit 6, Schedule 6.

28 T.E., Vol. II, at 115.

has approved this write-off, this loss should be amortized over a 5-year period for rate-making purposes. Therefore, the Commission has determined that this expense should be decreased by \$110,053, resulting in a test-year adjusted expense of \$27,513.

Summary

Based on the adjustments to its revenues and expenses, Hardin District No. 1's test-year operations appear as follows:

<u>Test Year</u>	<u>Adjustments</u>	<u>Commission Adjusted</u>	<u>Commission Adjusted Test Year</u>
Operating Revenues	\$2,076,511	\$ 86,887	\$2,163,398
Operating Expenses	<u>1,624,189</u>	<u>12,976</u>	<u>1,637,165</u>
Operating Income	\$ 452,322	\$ 73,911	\$ 526,233
Add: Other Income/ Deductions	63,361	59,147	122,508
Less: Loss from Disp. of Utility Property	137,566	<110,053>	27,513
Interest Expense	<u>489,735</u>	<u><474,406></u>	<u>15,329</u>
Income Available for Debt Service	<u>\$ <111,618></u>	<u>\$ 717,517</u>	<u>\$ 605,899</u>

DETERMINATION OF REVENUE REQUIREMENT

The Commission has calculated Hardin District No. 1's average annual debt service to be \$923,488.²⁹ Based on the adjusted

29	<u>Current Debt Prin. & Int.</u>	<u>Proposed Debt Prin. & Int.</u>	<u>Total Proposed Debt</u>
1992	576,460	350,300	926,760
1993	576,045	349,505	925,550
1994	574,328	348,305	922,633
1995	573,147	346,690	919,837
1996	573,012	349,650	922,662
Total			<u>4,617,442</u>
			+ 5
5-Year Average Annual Debt Service			<u>923,488</u>

test-period operations, Hardin District No. 1's DSC is .66x.³⁰ Hardin District No. 1's proposed increase of \$539,618 provides a DSC of 1.24x³¹ and a net cash flow of \$511,365.³² The Commission finds that the cash flow generated will provide Hardin District No. 1 sufficient funds to meet its operating expenses, service its debt, and allow for future equity growth. Therefore, the Commission will allow Hardin District No. 1 to increase its revenues generated from rates by \$539,618 to provide annual revenues from water sales of \$2,530,775.

RATE DESIGN

Billing Analysis

Hardin District No. 1 submitted, and subsequently revised, a billing analysis showing test-year revenue, normalized revenue, and proposed revenue. The Commission finds this analysis to be seriously flawed. While the analysis shows total gallons sold as 1,185,412,857, Hardin District No. 1's annual report shows total sales to be 1,229,410,159 gallons. Hardin District No. 1's Acting Superintendent testified that several adjustments totalling

30 \$605,899 + \$923,488 = .66.

31 \$1,145,517 + \$923,488 = 1.24.

32	Income Available for Debt Service	\$	605,899
	Proposed Increase		539,618
	Add: Depreciation Expense		237,191
	Amortization Expense		52,145
	Less: Average Annual Debt Service		923,488
	Net Cash Flow		<u>\$ 511,365</u>

39,457,400 gallons had been made to consumption during the test year.³³ She further testified that these adjustments had not been included in the sales amount shown in the annual report.

In its prior applications for general rate adjustment,³⁴ Hardin District No. 1 had submitted billing analyses of questionable quality. Commission Regulation 807 KAR 5:001, Section 10(2)(b), requires a utility to submit an analysis of customers bills in such detail that revenue from both present and proposed rates can be readily determined. Despite receiving extensive assistance from Commission Staff in preparing these analyses, Hardin District No. 1 has continually failed to meet this requirement. The Commission hereby places Hardin District No. 1 on notice that in future rate proceedings, it will be expected to comply with this regulation and provide a complete and accurate billing analysis or face summary dismissal of its application.

The Commission has based Hardin District No. 1's adjusted rates on 589,246,100 gallons sold to retail customers, 58,202,000 gallons sold to Vine Grove, and 396,000,000 gallons to Hardin District No. 2.

³³ T.E., Vol. III, at 171-172. See also, Hardin District No. 1's Response to the Commission's Hearing Request, Item 3.

³⁴ Case No. 10189, Application of Hardin District No. 1; Case No. 9879, Application of the Hardin County Water District No. 1 for an Immediate Order Authorizing a General Rate Increase for Direct Implementation of its Rates on an Emergency Basis.

Cost-of-Service Study

Hardin District No. 1 submitted a cost-of-service study to support the various costs allocated among its retail and wholesale customers. This study is based on allocation methods advocated by Commission Staff in Hardin District No. 1's last rate case.³⁵ Based upon this study, it proposes a rate of \$1.3690 per 1,000 gallons for water furnished to Vine Grove and a rate of \$1.3267 per 1,000 gallons for service to Hardin District No. 2.

The Commission finds the record to be devoid of any evidence to support the reliability of this study. Its sponsor was unable to explain why various inputs or allocation factors were used. He was unfamiliar with accepted authorities on rate design and the basic principles to develop a cost-of-service study.³⁶ He did not collect the data used for the study nor was he able to explain how it was collected. Although his study made modifications to the cost-of-service study submitted by Commission Staff in Hardin District No. 1's previous rate case, he could not explain the rationale for such changes.³⁷

35 Case No. 10189, Application of Hardin County Water District No. 1, T.E., Commission Staff Report dated August 15, 1988.

36 During the hearing, for example, the sponsor testified that he was unfamiliar with a billing analysis. T.E., Vol. III, at 25.

37 As to changes in the study, the study's sponsor stated that he merely inputted numbers given to him by Hardin District No. 1 into a computer "spread sheet." He testified: "[T]he district's rationale for changing a parameter or investigating a scenario or whatever is their business. We simply ran the conclusions, ran the numbers for them and presented them with the tables and summaries of what those conclusions were." T.E., Vol. III, at 156-157.

None of Hardin District No. 1's other witnesses, furthermore, could explain the source of the data used in the cost-of-service study or why the Water District had ordered the study's preparer to use certain inputs and cost allocation factors.³⁸

Utility rates should not be based on a hunch and a prayer. The proponent of rates should be able to explain how its rate proposal was derived. Hardin District No. 1 cannot. Unable to assess the accuracy or reliability of the cost-of-service study, the Commission has no choice but to disregard it.

Faced with the task of setting rates, the Commission must explore other options. Hardin District No. 2 argues that its rate should be based on its water purchase contract with Hardin District No. 1. This contract allows the wholesale rate to be adjusted only upon changes in Hardin District No. 1's actual cost of performance within a contract year.³⁹ The contract also limits the adjustment of the debt service component of cost of service.⁴⁰ It allows for the cost of certain system improvements to be passed on to Hardin District No. 2 only upon its written agreement. The current contract rate is \$0.8798 per 1,000 gallons.⁴¹

The contract further provides that, once Hardin District No. 2 constructs another source of water, its water purchases from

38 See, e.g., T.E., Vol. III, at 180.

39 Brief of Hardin District No. 2, at 13-14.

40 Prefiled Testimony of Fraisor Reesor, Exhibit 1.

41 T.E., Hardin District No. 2's Exhibit No. 1.

Hardin District No. 1 will be phased out over a 10-year period. During the first year of the phase out period, Hardin District No. 2 must purchase a minimum of 25,000,000 gallons of water. This quantity decreases by 10 percent each year. At the end of 10 years, the contract and Hardin District No. 1's obligation to purchase terminates. The phase out period began in late 1990 when Hardin District No. 2 completed and placed into operation its own water treatment plant.

Hardin District No. 1 proposes to have its cake and eat it too. It wishes to base its rate to Hardin District No. 2 on the cost-of-service study, but require Hardin District No. 2 to honor the take-or-pay provisions of the water purchase contract. Hardin District No. 1 does not contest the validity of the contract or its pricing formula but contends that, because of conditions imposed upon it for storage and system improvements, the cost of such improvements should be borne systemwide.⁴² It, however, did not contact Hardin District No. 2 or obtain its consent for an increase in debt service.⁴³

The Commission finds that, since the water purchase contract provides for the phase out of Hardin District No. 2, it is a better tool to use in setting future rates to be charged to Hardin District No. 2. Accordingly, the rate proposed for Hardin District No. 2 is denied and the contract rate of \$0.8798 per

⁴² Brief of Hardin District No. 1, at 16.

⁴³ T.E., Volume VI, at 23.

1,000 gallons is approved for ratemaking purposes. Hardin District No. 1 should adjust its wholesale rate pursuant to the provisions of the water purchase contract currently on file with the Commission.

As to its current rate design for its retail customers, Hardin District No. 1's retail rates consist of three steps ranging from a minimum usage level of 2,000 gallons to an over 15,000 gallon increment. No change in this rate design was requested. The Commission has increased the first two rate increments by 32 percent and the over 15,000 gallon increment by 42 percent to arrive at the rates which will generate the required revenue. The last increment was increased by a greater percentage to ensure that this increment would cover Hardin District No. 1's cost per 1,000 gallons.

Other Issues

During this proceeding, Hardin District No. 1 suggested that water availability to its customers will increase as Hardin District No. 2's purchases are phased out.⁴⁴ This Order does not consider the effect of this phase out on Hardin District No. 1's sales to retail customers. However, the Commission is concerned that this phase out may lead to an increase in Hardin District No. 1's revenue from metered sales. Therefore, the Commission will closely monitor Hardin District No. 1's operations. As a part of

⁴⁴ Hardin District No. 1's Response to Janes' Information Request of August 2, 1990, Attachment I, Item 11.

monitoring, Hardin District No. 1 shall, beginning with the quarter ending March 31, 1991, file quarterly financial statements with this Commission.

SUMMARY

After review of the evidence of record and being otherwise sufficiently advised, the Commission finds that:

1. Public convenience and necessity require the construction of the projects proposed in Hardin District No. 1's application.

2. The issuance of \$3.775 million in waterworks revenue bonds is for the lawful objects within the corporate purposes of Hardin District No. 1, is necessary and appropriate for and consistent with the proper performance by Hardin District No. 1 of its service to the public, and will not impair its ability to perform that service.

3. The rates set forth in Appendix A, which is attached hereto and incorporated herein, will produce annual revenues of \$2,530,775 based on normalized test-year sales and are the fair, just, and reasonable rates for Hardin District No. 1 to charge for service on and after the date of this Order.

4. The rates proposed by Hardin District No. 1 are unjust and unreasonable and should be denied.

IT IS THEREFORE ORDERED that:

1. Hardin District No. 1 be and it hereby is granted a Certificate of Public Convenience and Necessity to proceed with the proposed construction project set forth in the drawings and specifications of record.

2. Hardin District No. 1 shall monitor the adequacy of the expanded water distribution system after construction. If the level of service is inadequate or declining, or the pressure to any customer is outside the requirements of 807 KAR 5:066, Section 6(1), Hardin District No. 1 shall take immediate action to maintain the level of service in conformance with Commission regulations.

3. Hardin District No. 1 shall obtain Commission approval before performing any additional construction not expressly addressed by this Order.

4. No deviations from the construction herein approved which could adversely affect service to any customer shall be made without prior Commission approval.

5. Hardin District No. 1 shall furnish duly verified documentation of the total costs of this project, including the cost of construction and all other capitalized costs (engineering, legal, administrative, etc.), within 60 days of the date that construction is substantially completed. These costs should be classified into appropriate plant accounts in accordance with the Uniform System of Accounts for Water Utilities prescribed by the Commission.

6. Hardin District No. 1 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, to ensure that the construction work is done in accordance with the contract drawings and specifications

and in conformity with the best practices of the construction trades involved in the project.

7. Hardin District No. 1 shall furnish within 60 days of the date of substantial completion of this construction a copy of the "as-built" drawings and a signed statement that the construction has been satisfactorily completed in accordance with the contract plans and specifications.

8. Hardin District No. 1 is authorized to issue \$3.775 million of Waterworks Revenue Bonds. The proceeds of this issuance shall be used only for the lawful purposes specified in Hardin District No. 1's application.

9. The rates set forth in Appendix A are approved for service rendered by Hardin District No. 1 on and after the date of this Order.

10. The rates proposed by Hardin District No. 1 are hereby denied.

11. Beginning with the 3-month period ending March 31, 1991 and continuing for each 3-month period thereafter, Hardin District No. 1 shall submit within 20 days of the close of that period a quarterly financial statement in the format set forth at Appendix B of this Order.

Nothing contained herein shall be deemed a warranty or finding of value of securities or financing authorized herein on the part of the Commonwealth of Kentucky or any agency thereof.

Done at Frankfort, Kentucky, this 21st day of February, 1991.

PUBLIC SERVICE COMMISSION


Chairman


Vice Chairman

ATTEST:


Executive Director

APPENDIX A

**APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE
COMMISSION IN CASE NO. 90-019 DATED 2/21/91**

The following rates and charges are prescribed for customers of Hardin 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 this Commission prior to the effective date of this Order.

RATES: Monthly

First 2,000 gallons	\$10.30 Minimum Bill
Next 13,000 gallons	2.74 per 1,000 gallons
Over 15,000 gallons	2.00 per 1,000 gallons
Hardin County Water District No. 2	\$0.8798 per 1,000 gallons
City of Vine Grove	1.3690 per 1,000 gallons

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE
 COMMISSION IN CASE NO. 90-019 DATED 2/21/91

____ QUARTER CALENDAR YEAR ____

COMPARATIVE OPERATING STATEMENT

ACCT. NO. (a)	ACCOUNT NAME (b)	REF. PAGE (c)	CURRENT QUARTER (d)
	UTILITY OPERATING INCOME		
400	Operating Revenues.....	30	\$
401	Operating Expenses.....	31	\$
403	Depreciation Expenses.....		
406	Amortization of Utility Plant Acquisition Adjustment.....		
407	Amortization Expense.....		
408.1	Taxes Other Than Income.....		
	Utility Operating Expenses.....		\$
	Utility Operating Income.....		\$
413	Income From Utility Plant Leased to Others.....		
414	Gains (Losses) From Disposition of Utility Property.....		
	Total Utility Operating Income.....		\$
	OTHER INCOME AND DEDUCTIONS		
415	Revenues From Merchandising, Jobbing and Contract Deductions.....		\$
416	Costs and Expenses of Merchandising, Jobbing and Contract Work.....		
419	Interest & Dividend Income.....		
420	Allowance for Funds Used During Construction.....		
421	Nonutility Income.....		
426	Miscellaneous Nonutility Expenses...		
	Total Other Income and Deductions...		\$
	TAXES APPLICABLE TO OTHER INCOME		
408.20	Taxes Other Than Income.....		\$
	Total Taxes Applic. to Other Income.		\$

_____ QUARTER CALENDAR YEAR _____

WATER OPERATING REVENUE

ACCT. NO.		BEGINNING QTR. NO. CUSTOMERS	QTR. END NUMBER CUSTOMERS	AMOUNTS
(a)	(b)	(c)	(d)	(e)
	Operating Revenues:			
460	Unmetered Water Revenue.....			\$
461	Metered Water Revenue:			
461.1	Sales to Residential Customers.....			\$
461.2	Sales to Commercial Customers.....			
461.3	Sales to Industrial Customers.....			
461.4	Sales to Public Authorities.....			
461.5	Sales to Multiple Family Dwellings....			
461.6	Sales through Bulk Loading Stations....			
	Total Metered Sales.....			\$
462	Fire Protection Revenue:			
462.1	Public Fire Protection.....			\$
462.2	Private Fire Protection.....			
	Total Fire Protection Revenue.....			\$
464	Other Sales to Public Authorities.....			\$
465	Sales to Irrigation Customers.....			
466	Sales for Resale.....			
467	Interdepartmental Sales.....			
	Total Sales of Water.....			\$
	Other Water Revenues:			
470	Forfeited Discounts.....			\$
471	Miscellaneous Service Revenues.....			
472	Rents from Water Property.....			
473	Interdepartmental Rents.....			
474	Other Water Revenues.....			
475	Provision for Rate Refunds.....			
	Total Other Water Revenues.....			\$
	Total Water Operating Revenues.....			\$