COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

* * * * *

In the Matter of:

AN ADJUSTMENT OF GAS RATES OF) THE UNION LIGHT, HEAT AND POWER) CASE NO. 9029 COMPANY)

ORDER

On May 4, 1984, The Union Light, Heat and Power Company ("ULH&P") filed an application with the Commission requesting authority to increase its rates and charges for gas service rendered on and after May 24, 1984. The proposed rates would increase ULH&P's annual gas revenues by approximately \$7.2 million, an increase of 10.2 percent. ULH&P cited increased operating costs and fixed charge requirements and the necessity to provide an adequate return to its security holders as the reasons for the requested rate increase.

The Commission suspended the proposed rate increase until October 24, 1984, in order to conduct public hearings and investigations into the reasonableness of the proposed rates. A hearing was scheduled for August 28, 1984, for the purpose of crossexamination of the witnesses of ULH&P and the intervenors. ULH&P was directed to give notice to its customers of the proposed rates and the scheduled hearing pursuant to 807 KAR 5:025, Section 7. A hearing to receive public comment and testimony was conducted on September 17, 1984, at the City/County Building in Covington, Kentucky. - 4

Motions to intervene in this matter were filed by the Consumer Protection Division in the Office of the Attorney General ("AG"), the City of Covington ("City"), the Kenton County Fiscal Court ("Kenton County"), and various Low-Income Residential Consumers ("LIRC"). These motions were granted and no other parties formally intervened.

The hearing for the purpose of cross-examination of the witnesses of ULH&P and the intervenors was held in the Commission's offices in Frankfort, Kentucky, on August 28, 1984, with all parties of record represented. Briefs were filed by September 24, 1984, and the information requested during the hearings has been submitted.

This Order addresses the Commission's findings and determinations on issues presented and disclosed in the hearings and investigation of ULH&P's revenue requirements and rate design and provides rates and charges that will produce an increase in annual revenues of \$4,777,543.

COMMENTARY

ULH&P operates as a public utility providing gas and electric service in Boone, Campbell, Gallatin, Grant, and Kenton counties. ULH&P distributes and sells natural gas to approximately 60,500 customers within those counties. ULH&P is a subsidiary of Cincinnati Gas and Electric Company ("CG&E"), and it obtains its wholesale gas supply from Columbia Gas Transmission, Inc. ("Columbia Transmission").

-2-



ULH&P proposed and the Commission has accepted the 12-month period ending December 31, 1983, as the test period for determining the reasonableness of the proposed rates. In utilizing the historic test period the Commission has given full consideration to appropriate known and measurable changes.

VALUATION

ULH&P presented the net original cost, capitalization and reproduction cost as the valuation methods in this case. The Commission has given due consideration to these and other elements of value in determining the reasonableness of the proposed rates. Net Original Cost

ULH&P proposed a jurisdictional net investment rate base devoted to gas operations of \$43,822,167. Generally, the proposed rate base was determined in accordance with the Commission's decision in ULH&P's most recent gas rate case; however, the proposed cash working capital of \$4,876,795 was not based upon the standard one-eighth formula calculation which the Commission has allowed in ULH&P's previous cases but was based on a "lead-lag" study similar to the study rejected by the Commission in ULH&P's most recent gas rate case, Case No. 8373, An Adjustment of Gas Rates of the Union Light, Heat and Power Company.¹ The study filed in this case, as the previous study, was limited in its application because it did not analyze all aspects of ULH&P's cash requirements. The study recognizes cash inflow lags but no inflow

¹ Commission's Order dated April 16, 1982, pp. 11-12.

leads and is based solely on the lag between the provision of service, payment to the gas supplier, and the receipt of payment from customers. Since the proposed lead-lag study reflects but one aspect of ULH&P's working capital requirements, the Commission finds it inappropriate for rate-making purposes.

Therefore, in accordance with its past policy, the Commission has reduced ULH&P's cash working capital by \$3,669,609 to \$1,207,186, to reflect the allowance of one-eighth of the adjusted operating expenses, less purchased gas expense, found reasonable herein.

ULH&P proposed to include a level of prepayments applicable to gas operations of \$6,383,076 in rate base, based upon the 13month average for the test year. The AG, through its witness, Dr. Carl Weaver of M.S. Gerber and Associates, Inc., proposed to use the 13-month average for the period ended April, 1984, and thereby calculated a prepayment balance of \$5,332,758 to reflect the change in the cost of gas since the end of the test period. The Commission, like Dr. Weaver, recognizes that the price of gas decreased from the end of the test year through April, 1984; however, the primary objective in the determination of a year-end rate base is to establish the value of investment in utility property at a specific point in time. In establishing the net investment rate base, capitalization and the adjusted level of operating revenues and expenses, the Commission must develop a proper matching of earnings and rate base. This is accomplished by adjusting the historical test year operations for appropriate known and measurable changes to arrive at a pro forma statement of

-4-

operations which coincides with the test-year-end rate base and capitalization. The Commission is of the opinion that it is inconsistent to adjust selected items of the rate base for changes occurring after the test year while other components of the rate base remain at year-end levels. It is the opinion of this Commission that to adjust the balance of prepayments as proposed by the AG would improperly update the year-end rate base and result in a mismatch of earnings, rate base and capitalization. Therefore, the adjustment proposed by the AG has not been accepted. However, the Commission is of the opinion that the use of a 13-month average in this instance is unreasonable since the balance in prepayments for the month of December, which is a high month, is Therefore, in this instance the Commission will included twice. include the 12-month average balance in prepayments to reflect a reasonable level of prepayments in rate base.

In its post-hearing brief, the LIRC recommended that ULH&P's rate base be reduced by the amount of customer deposits on hand at the end of the test year and that the interest paid on those deposits be treated as an operating expense for rate-making purposes. LIRC argued that these deposits represent cost-free capital which should be made to benefit the ratepayers who supplied it. Although LIRC questioned several of ULH&P's witnesses about its customer deposit practices, no indication was made prior to the filing of briefs that such rate-making treatment was being proposed. The Commission is of the opinion that the timing of this recommendation is such that its implementation could deny ULH&P's due process right to be informed of all the

-5-

issues being considered by the Commission before the issuance of this Order. Furthermore, such capital is not cost-free inasmuch as ULH&P pays interest to the customers who make the deposits. Therefore, the Commission has rejected the rate-making treatment for customer deposits proposed by the LIRC.

All other elements of the net original cost rate base have been accepted as proposed by ULH&P. Therefore, the Commission finds the appropriate jurisdictional net investment rate base devoted to gas operations to be as follows:

Gas Plant in Service Construction Work in Progress Total Utility Plant	\$51,214,593 <u>401,054</u> \$51,615,647
Add: Materials and Supplies Prepayments Cash Working Capital Subtotal	\$ 617,748 6,149,513 <u>1,203,397</u> \$ 7,970,658
Deduct: Reserve for Depreciation Customer Advances Accumulated Deferred Taxes 3 Percent Investment Tax Credit Subtotal	\$15,867,928 778,709 2,828,395 <u>196,067</u> \$19,671,099
Net Investment Rate Base	\$39,915,206

Capitalization

At the end of the test year, ULH&P had investor-supplied capital in the amount of \$97,137,940. In accordance with the decision made in ULH&P's most recent gas rate case, the Commission has reduced total company capitalization to reflect the abandonment of the Eagle Creek Aquifer ("Eagle Creek"). Through the end of the test year, \$262,500 of the approximate \$1.9 million

-6-

expected loss from abandonment had been recovered through amortization charges. Of the expected loss, \$1,317,926, or approximately 69.7 percent, represents ULH&P's capital investment in Eagle Creek on which no return shall be earned.² However, this amount has been reduced by \$183,041 to reflect the capital ULH&P has recovered through the end of the test year via amortization charges.³ Therefore, ULH&P's total company capitalization has been reduced by \$1,134,885 to \$96,003,055, to reflect both the abandonment and partial recovery of the investment in Eagle Creek as of the end of the test year.⁴

In ULH&P's past cases the Commission has generally allocated capital between electric and gas operations to determine the appropriate capital valuation for each type of utility service. Capital allocation by use of the net investment ratio has been the method most frequently employed by the Commission. While ULH&P and the Commission itself have expressed concerns about this method due to the effect of fluctuations in the volume of prepayments, the Commission if of the opinion that the use of this method is appropriate for rate-making purposes and, in conjunction with the use of the 12-month average for the calculation of prepayments, should minimize the effects of any fluctuations. Therefore, ULH&P's jurisdictional investor-supplied capital devoted to

\$97,137,940 - (\$1,317,926 - \$183,041) = \$96,003,055.

² ULH&P Exhibit No. 7, p. 1; Response to Commission's Order dated July 6, 1984, Item No. 1.

³ $$262,500 \times .6973 = $183,041.$

gas operations is 39.95 percent of total capitalization based on the ratio of gas operations rate base to total company rate base as determined in Appendix B. The resulting investor-supplied capital assigned to Kentucky gas operations is \$38,353,220.⁵

The Commission has increased this \$38,353,220 by \$2,113,119 which is the amount of Job Development Investment Tax Credit ("JDIC") applicable to gas operations.⁶ The JDIC has been allocated to each component of the capital structure on the basis of the ratio of each component to total capital excluding JDIC. The Commission is of the opinion that this treatment is entirely consistent with the requirement of the Internal Revenue Service ("IRS") that JDIC receive the same overall return allowed on common equity, debt and preferred stock. Therefore, ULH&P's total capitalization devoted to Kentucky jurisdictional gas operations is \$40,466,339.

Reproduction Cost

ULH&P presented a gas reproduction cost rate base of \$116,879,204. Therein ULH&P estimated the value of plant in service and construction work in progress ("CWIP") at the end of the test year. The Commission has considered this valuation method and others as prescribed by KRS 278.290. As in past proceedings, however, the Commission has given primary consideration to the net original cost and capital valuation methods.

⁵ \$96,003,055 X .3995 = \$38,353,220.

⁶ Response to Commission's Order dated April 27, 1984, Item No. 11.

REVENUES AND EXPENSES

ULH&P's jurisdictional net operating income from gas operations for the test period was \$1,825,083. To reflect current and anticipated operating conditions for Kentucky jurisdictional gas operations, ULH&P proposed several adjustments to revenues and expenses resulting in an adjusted net operating income of \$2,195,400. The Commission is of the opinion that the proposed adjustments are generally proper and acceptable for rate-making purposes with the following modifications:

Revenue Normalization

ULH&P proposed to increase operating revenues by \$506,625 to reflect normalized sales volumes and purchased gas cost escalations approved by the Commission through Case No. 8373-I, Purchased Gas Adjustment Filing of Union Light, Heat and Power Company. The LIRC objected to the portion of the sales volume normalization based on the decline in the number of year-end customers because it felt that ULH&P had not demonstrated either that the decline in customers was abnormal or that there was a reliable method of predicting the number of customers there would be in each rate class when the new rates become effective.

The Commission finds this objection to be unfounded. ULH&P has not attempted to demonstrate that the decline in customers is abnormal; in fact, ULH&P has argued that declining sales volumes due to the loss of customers is becoming a regular occurrence for a gas distribution company. Moreover, the Commission's use of a historical test year effectively precludes the use of adjustments associated with predicted customer levels and makes any such

-9-

prediction of little value. Therefore, the Commission has accepted the adjustment proposed by ULH&P. However, in future cases in which a loss of customers has occurred, the Commission will expect ULH&P to explain what steps it is taking to retain its customer load.

Normalized Cost of Gas

ULH&P proposed to decrease its test-year gas cost by \$96,072 to reflect normalized gas purchases and purchased gas cost escalations recognized by the Commission through Case No. 8373-I. Dr. Weaver recommended an adjustment to reduce gas expense by \$1,413 to eliminate the labor costs associated with the operation of the Erlanger Gas Plant since that plant was not presently being utilized. Mr. Richard Lonneman, a return analyst in CG&E's Rate and Economic Research Department, stated that these expenses were not recoverable through gas cost escalations and, therefore, they could only be recovered through base rates; furthermore, this amount represented an allocation of labor costs which are charged to other accounts when the Erlanger plant is not operational.⁷ The Commission concurs with Mr. Lonneman's assessment and has rejected Dr. Weaver's adjustment.

Gas Transmission Revenues

During and subsequent to the test year, ULH&P entered into contracts with three industrial customers for the transportation of gas purchased from other companies at a rate of 50 cents per

⁷ Transcript of Evidence ("T.E."), August 28, 1984, pp. 262-263.

Mcf. During the test year ULH&P transported 4,427 Mcf, thereby generating \$2,214 in revenues. For the period from January 1984 through July 1984, ULH&P transported an additional 59,687 Mcf which generated revenues of \$29,844. The AG proposed that these additional post-test-year revenues be included in the Commission's revenue requirements determination.

ULH&P indicated that its transportation revenues would be dependent upon the price of alternative fuels for these customers and that it could not predict how much gas it might transport in the future. However, ULH&P also indicated that its transportation revenues would benefit its other customers since those revenues would be used to recover fixed charges and expenses.

The Commission is of the opinion that ULH&P is entering into the transportation sales market with the anticipation of regaining some of the sales that have been lost to cheaper fuels in recent years. However, at this point in time, the amount of such sales is highly uncertain and any adjustment based on posttest-year sales volumes does not satisfy the known and measurable criterion the Commission normally applies. Therefore, the Commission has not accepted the AG's recommendation to increase ULH&P's revenues based on the level of transportation sales made after the test year. However, the Commission recognizes that the potential exists for a high level of future transportation sales which would generate post-test-year revenue. Consequently, for each transportation contract presently on file with the Commission and for each one subsequently filed, ULH&P should file a schedule showing the projected monthly volumes of gas to be transported

-11-



during the 12 months subsequent to the filing. The Commission will monitor these schedules along with ULH&P's monthly financial statements and take such action as may be appropriate.

Injuries and Damages

ULH&P proposed an adjustment of \$10,598 to increase its expense for injuries and damages to reflect the 10-year average expense exclusive of extraordinary occurrences. Such an adjustment is consistent with the Commission's decision in ULH&P's most recent gas rate case. LIRC proposed an alternative adjustment based on the exclusion of \$160,000 of reserves for pending claims incurred during the last 10 years which would reduce expenses by \$5,402.

In its brief ULH&P stated that the types of claims it has reflected for personal injury and property damage are common in the gas industry. ULH&P also contended that no evidence was introduced to show its expenses to be extraordinary or its reserve for injuries and damages to be unreasonable.

The Commission is of the opinion that the adjustment proposed by ULH&P is proper. Although LIRC contends that the reserves, and the associated claims, are not of a routine nature, it presented no evidence in support of this contention. The fact that reserves have been set aside does not confirm that extraordinary circumstances are involved. This Commission regulates many gas utilities which are subject to claims of injury or damage on a regular basis. Absent any evidence that the claims against ULH&P are unusual and non-recurring, the Commission has rejected LIRC's proposal and accepted the adjustment proposed by ULH&P.

-12-

Donations

ULH&P proposed an adjustment to increase operating expenses by \$16,657 to reflect, in its cost of service, the expense for donations made during the test year. Mr. Lonneman stated that these donations were necessary for ULH&P to function as a good citizen within its service area.⁸ Mr. Lonneman, however, did not present any substantive evidence that these donations benefit ULH&P's customers. The Commission has consistently denied the inclusion of donations as an operating expense for rate-making purposes and finds that ULH&P has presented no evidence in this proceeding to cause a departure from this policy. Therefore, the proposed adjustment has been denied.

Institutional Advertising

During the test year ULH&P incurred advertising expenses applicable to gas operations in the amount of \$43,375. In accordance with 807 KAR 5:016, ULH&P proposed to eliminate, for ratemaking purposes, \$24,983 of this amount for institutional advertising. The AG, through Dr. Weaver, recommended the elimination of the remaining \$18,392 of the advertising expense on the grounds that ULH&P had not shown such expense was for conservation advertising as had been claimed.

In previous cases the Commission has thoroughly analyzed ULH&P's expense for conservation advertising, both in magnitude and content, and found no fault therein. The amount reported for conservation advertising by ULH&P during the test year compares

⁸ Lonneman Prepared Testimony, p. 8.





favorably with the amounts of \$18,855 and \$17,893 reported respectively in the years 1981 and 1982, immediately prior to the test year. Therefore, in light of the Commission's previous analysis and absent any specific showing that the amounts claimed by ULH&P for conservation advertising were incurred for other purposes, the Commission has rejected the adjustment proposed by the AG and accepted ULH&P's adjustment to eliminate \$24,983 in expense for institutional advertising.

Allowance for Funds Used During Construction

During the test year ULH&P reported the capitalization of \$25,276 as an allowance for funds used during construction. ULH&P indicated that \$397,671 of its year-end balance of CWIP was eligible for allowance for funds used during construction ("AFUDC") treatment. However, \$163,260 of this amount represented plant which was completed and placed in service prior to the end of the test year although the related accounting entries were not made until after the test year.⁹

It is the policy of the Commission to calculate AFUDC for rate-making purposes using the year-end balance of CWIP and the overall rate of return found reasonable. In this instance ULH&P has asked the Commission to ignore both of these factors and make no adjustment to AFUDC. In responding to this request, the Commission reiterates its purpose in establishing a year-end rate base: to establish the value of investment in utility property at

⁹ Revised Response to Commission's Order dated June 12, 1984, p. 17.

a specific point in time. ULH&P has requested that the Commission recognize the post-test year reduction to CWIP without recognizing any additions thereto. Such recognition would be extremely selective and inconsistent with the Commission's adherence to the concept of a historical test year. ULH&P requested such adherence concerning the level of prepayments included in rate base but asks the Commission to ignore the self-same concept as regards the calculation of AFUDC. The Commission finds no basis for such action and, therefore, will adhere to its established policy.

Therefore, based on the overall rate of return found reasonable herein, the Commission has increased ULH&P's net operating income by \$22,329 to reflect pro forma AFUDC of \$47,605 for ratemaking purposes.

Residential Conservation Service Program

During the test year, ULH&P's residential conservation service ("RCS") program resulted in operating expenses of \$119,148 and generated revenues of \$17,055. Dr. Weaver recommended that the expenses associated with the RCS program be amortized over 5 years since they did not recur on a regular basis. In response to a data request made at the hearing of August 28, 1984, ULH&P filed an analysis of its actual revenues and expenses associated with the RCS program in 1983 and projected revenues and expenses for the years 1984 through 1986. The results of this analysis indicate that the test year expenses associated with the RCS program are significantly greater than the projected future amounts.

The Commission is of the opinion that an adjustment should be made to insure that ULH&P recovers the ongoing costs associated

-15-

with the RCS program, but which prevents any over-recovery that could result from reflecting an abnormal amount of expense in the adjusted test-year operating expenses. ULH&P recognized that the test year expense was extraordinary and in its post-hearing brief proposed an adjustment which amortized the test year revenues and expenses over 3 years while including the annual average revenue and expense projected for the years 1984 through 1986. The Commission is of the opinion that to allow the amortization of the test year expense would unfairly burden ratepayers by reflecting in rates an abnormal level of expense which will not be incurred prospectively. Therefore, the Commission has made an adjustment to reduce revenues by \$12,695 and expenses by \$90,948 to reflect the average RCS revenues and expenses for the years 1984 through 1986.

Wages and Salaries

In its original application ULH&P proposed an adjustment of \$201,318 to normalize wage and salary increases occurring during the test period and through April 1, 1984. Such increases, occurring during the test year and within 3 months of the end of the test year, resulted in increasing ULH&P's labor costs by approximately 5 percent. No intervenor objected to this adjustment and the Commission is of the opinion that the inclusion of such costs is reasonable and appropriate for rate-making purposes.

On August 17, 1984, ULH&P filed a supplemental adjustment to reflect wage increases which became effective in May and June, 1984, in the amount of \$269,257. These increases went into effect

-16-

approximately 5 months beyond the end of the test year. In filing this supplemental adjustment only 11 days prior to the hearing of this case, ULH&P did not increase its requested revenues but asked that the Commission consider this adjustment in determining revenue requirements. Mr. Lonneman stated that the delay in filing the adjustment was that it was easier for the Commission and ULH&P to wait until before the hearing.¹⁰

The Commission, in Case No. 8924, The Adjustment of Rates of Louisville Gas and Electric Company, established a policy of disallowing adjustments proposed after the filing of the original application. Therein, the Commission found that late filed adjustments hamper both the Commission's and intervenors' investigations of the case as well as raise the question of whether intervenors are afforded due process in instances such as these.

Supplemental adjustments such as these, submitted late in the proceeding, are becoming more frequent. Generally these adjustments reflect an addition to expense without a request for additional revenues or increased rates to cover these expenses. It is apparent that in many cases additional revenues are not requested because such a request would necessitate the filing of new rate schedules and would result in a new 5-month suspension period being imposed. It is, therefore, the Commission's opinion that ULHGP's decision not to increase its requested revenues by the amount of the supplemental expense adjustment precludes any

¹⁰ T.E., August 28, 1984, p. 84.

affirmative consideration of the adjustment. Furthermore, adjustments such as these which reflect changes occurring several months after the test year are not consistent with the concept of a historical test year and the matching of earning, rate base and capital. Therefore, the Commission has accepted ULH&P's original adjustment to wages and salaries expense but has denied the supplemental adjustment filed August 17, 1984.

Uncollectible Accounts

In this case, as in past cases, ULH&P included in its requested revenue increase a commensurate increase in its provision for uncollectible accounts based upon its test year provision for uncollectibles viewed as a percentage of total Dr. Weaver argued that the current economic recovery revenues. should cause a reduction in the percentage provision and eliminate the need for an adjustment such as this. However, Dr. Weaver performed no analysis of the condition of the economy in ULH&P's service area to support his conclusion. Therefore, the Commission has rejected his argument against any adjustment to the test year provision for uncollectibles. However, the Commission likewise has rejected ULHsP's adjustment on the grounds that the test year percentage of uncollectibles was abnormally high and, therefore, not representative for rate-making purposes. The test year provision for uncollectibles, as a percentage of total revenues, equaled 1.08 percent. The average for the 5 years preceding the test year is .76 percent, while for the 3 most recent calendar years, including the test year, the average is .92 percent. The 3-year average does reflect an upward trend in the provision for

-18-





uncollectibles and the Commission has accepted such an average in other cases;¹¹ therefore, the Commission will determine ULH&P's revenue requirement using .92 percent as the basis for the increase in uncollectible accounts.

Abandonment of Eagle Creek Aquifer

In ULH&P's last gas rate case, Case No. 8373, the Commission approved the abandonment of Eagle Creek at a projected cost of \$1,890,054, with said cost to be amortized over a period of 12 years. Due to the uncertainty of some of the projected costs, the Commission indicated that it would review the actual cost of abandonment in ULH&P's next general rate case.

At this time ULH&P has revised its estimates and is projecting a total cost of abandonment, to be incurred through the year 1987, of \$1,899,144, or \$9,090 above the previous estimate. ULH&P's witness, Mr. Lonneman, recommended that no change be made in the monthly amortization until the final costs are known with the difference between actual and estimated costs then being amortized over the remaining period of amortization.

Due to the fact that some costs continue to be estimates and since the revised estimates reflect such a small change from the previous estimate, the Commission is of the opinion that no change in the monthly amortization amount is necessary at this time. However, the Commission will review actual and projected costs of the abandonment during ULH&P's next gas rate case and

¹¹ Case Nos. 8429 and 8734, Adjustment of Rates of Kentucky Power Company ("Kentucky Power").



determine what adjustment, if any, may be appropriate at that time.

Interest Synchronization

ULH&P's interest expense applicable to Kentucky jurisdictional gas operations during the test period was \$1,396,213. Historically for rate-making purposes the Commission has imputed interest expense on the portion of JDIC assigned to the debt components of the capital structure and treated the interest as a deduction in computing federal income tax expense allowed in the cost of service. Mr. Lonneman questioned this practice and expressed his concern that such treatment could jeopardize the future availability of JDIC to ULH&P.

ULH&P is but one of several utilities which have disagreed with this rate-making treatment in recent years. One of these, Continental Telephone Company ("Continental"), has had two cases on appeal in the Kentucky Court of Appeals under Docket Nos. 82-CA-2657-MR and 83-CA-431-MR in which one of the issues was the Commission's treatment of JDIC. On April 13, 1984, the Court of Appeals issued contradictory opinions in the two cases and directed that the matter be pursued in the Kentucky Supreme Court. Those cases are now before the Supreme Court and a final decision is expected sometime next year. Having received contradictory opinions from the Court of Appeals, the Commission has reserved this matter in other cases pending a final judicial decision on this matter. The initial case in which such action was taken was Case No. 8734, Kentucky Power. In that proceeding, at the request of Kentucky Power to avoid any additional judicial review on this

-20-

issue, the Commission stated that should the final judicial opinion in the Continental cases be adverse to the Commission's position, it would then consider a rate adjustment to generate the revenues associated with the debt component of JDIC.

The Commission continues to be of the opinion that its past treatment of JDIC is proper and consistent with IRS regulations and such treatment will be continued in this proceeding. However, as in Case No. 8734, the provisions of this Order should eliminate the need for appeal of this matter at the judicial level. Therefore, ULH&P is hereby apprised that should the final judicial opinion in the case(s) of Continental be adverse to the Commission's position on interest associated with JDIC, the Commission, upon its receipt of an appropriate application by ULH&P, will order a rate adjustment to generate the associated revenues which have been denied herein.

At this time, in accordance with past practice, the Commission has applied the applicable cost rates to the JDIC allocated to the debt components of the capital structure. Using the adjusted capital structure allowed herein, the Commission has computed an interest adjustment of \$718,242 which results in a reduction to income taxes of \$353,662.

After applying the combined state and federal income tax rate of 49.24 percent to the accepted pro forma adjustments, the

-21-



Commission finds that operating income should be increased by \$576,854 to \$2,401,937.

ULH&P's adjusted net operating income is as follows:

	Test Year <u>Actual</u>	<u>Adjustments</u>	Test Year Adjusted
Operating Revenues Operating Expenses AFUDC Offset	\$70,283,919 68,484,112 25,276	\$493,234 <61,291> 329	\$70,777,153 68,422,821 47,605
Net Operating Income	\$ 1,825,083	\$576,854	\$ 2,401,937

CAPITAL STRUCTURE

Mr. James R. Mosley, Assistant Treasurer of CG&E and its subsidiaries, recommended using CG&E's consolidated end-of-testyear capital structure for the purpose of determining the overall cost of capital to ULH&P.¹² That capital structure contains 36 percent common equity, 11.8 percent preferred stock and 52.2 percent debt. Dr. Weaver also recommended using CG&E's consolidated end-of-test-year capital structure.¹³ The Commission is of the opinion that CG&E's consolidated end-of-test-year capital structure is reasonable.

RATE OF RETURN

Cost of Debt

Mr. Mosley proposed a 9 percent cost of preferred stock and a 10.01 percent cost of debt which were the embedded costs for

¹³ Weaver Prepared Testimony, p. 2.

¹² Mosley Prepared Testimony, p. 1.

consolidated CG&E.¹⁴ Dr. Weaver also recommended using a 9 percent cost of preferred stock and a 10.01 percent cost of debt.¹⁵ The Commission is of the opinion that the embedded costs are reasonable.

Cost of Equity

Mr. Mosley proposed a 19.4 to 20.9 percent return on equity for consolidated CG&E based on a discounted cash flow ("DCF") analysis and a risk premium analysis.¹⁶ He performed a DCF analysis for CG&E and for composites of BB and BBB rated electric utilities. Mr. Mosley then performed a risk premium analysis to check the reasonableness of his DCF calculations. He was of the opinion that ULH&P should be allowed to earn the same overall rate of return as CG&E because ULH&P is a virtually wholly-owned subsidiary of CG&E. In its brief, ULH&P stated that its relatively high risk was evidenced by its BBB bond rating.¹⁷ Applying Mr. Mosley's composite cost of capital, for consolidated CG&E, to ULH&P's capital structure produces a 17.3 to 18.4 percent return on equity.¹⁸

Mosley Prepared Testimony, p. 1.
Weaver Prepared Testimony, p. 26.
Mosley Prepared Testimony, p. 1.
ULH&P's brief, p. 30.
Mosley Prepared Testimony, p. 4.

The Commission has certain reservations regarding Mr. Mosley's cost of equity analysis. All of the BB rated electric utilities and a majority of the BBB rated electric utilities selected by Mr. Mosley are involved with nuclear projects.¹⁹ CG&E itself is involved with the Zimmer nuclear project. Mr. Mosley is using these utilities as a proxy for ULH&P, a gas and electric distribution utility. The Commission is not convinced that the risk associated with ULH&P is equivalent to the risk of CG&E with its nuclear involvement.

Mr. Mosley relied on an Ibbotson and Sinquefield study to determine the appropriate equity-debt risk premium.²⁰ However, Ibbotson and Sinquefield used historical earned returns on equity to develop their average equity-debt risk premium.²¹ If the earned return on common equity did not equal the investor's expected return, then the equity return used to calculate the equity-debt spread would be misstated. That would cause the calculated risk premium to be over or under-stated. The historical spread between common equity and bonds has been volatile. At the hearing, Mr. Mosley agreed that the risk premium

¹⁹ T.E., August 28, 1984, p. 37, and Moody's Public Utilities Manual, 1983, Volumes I and II.

²⁰ T.E., August 28, 1984, p. 41.

²¹ Ibid.



Dr. Weaver recommended a 14.9 to 15.9 percent return based on a DCF analysis of a group of six gas distribution utilities and $CG\&E.^{23}$ He checked those results for reasonableness with an earnings-price ratio analysis and a funds flow profile.²⁴ Dr. Weaver was of the opinion that ULH&P's gas operation was less risky than its parent, CG&E. In its brief, the AG stated that northern Kentucky gas customers should not be required to pay a cost attributable to electric operations.²⁵

In its brief, ULH&P criticized Dr. Weaver's selection criteria for the six gas distribution companies, because it was not risk oriented.²⁶ ULH&P also stated that the risk of a

²² Ibid., p. 42.

- 23 Weaver Prepared Testimony, p. 21.
- ²⁴ Ibid., p. 23.
- ²⁵ AG's brief, p. 4.
- ²⁶ ULH&P's brief, p. 24.



utility cannot be separated according to operations.²⁷ In other words, an investor does not separate the risk associated with ULH&P's gas operation from the risk associated with its electric operation. In general, ULH&P was of the opinion that Dr. Weaver's analysis understated the required return on equity.

In its brief, the LIRC recommended the low end of Dr. Weaver's proposed range of returns on equity as the appropriate return for ULH&P.²⁸

The Commission recognizes the flaws in Dr. Weaver's analysis. However, his approach is more reasonable than using electric utilities involved in nuclear projects as a proxy for ULH&P. Clearly, the market has assigned additional risk to such utilities, regardless of the condition of the nuclear projects. Mr. Mosley's approach overstates the investor required return for ULH&P. The Commission does recognize the higher risk associated with ULH&P's relationship to CG&E, as evidenced by its A-3 bond rating. Therefore, after considering all of the evidence, including current economic conditions, the Commission is of the opinion that a rate of return on common equity in the range of 15 to 16 percent is fair, just and reasonable. A return on equity in this range will not only allow ULH&P to attract capital at reasonable

- ²⁷ Ibid., p. 22.
- 28 LIRC's brief, p. 4.

-26-

costs to insure continued service and provide for necessary expansion to meet future requirements, but also will result in the lowest possible cost to the ratepayer. Within this range, a return on equity of 15.5 percent will best meet the above objectives.

Rate of Return Summary

Applying rates of 10.01 percent for debt, 9 percent for preferred stock and 15.5 percent for common equity to the capital structure approved herein produces an overall cost of capital of 11.87 percent. The additional revenue granted herein will provide a rate of return on net investment of 12.03 percent. The Commission finds this overall cost of capital to be fair, just and reasonable.

REVENUE REQUIREMENTS

The Commission has determined that ULH&P needs additional annual operating income of \$2,400,293 to produce an overall rate of return of 11.87 percent based on the adjusted historical test year. After the provision for taxes and increased uncollectibles there is an overall revenue deficiency of \$4,777,543 which is the amount of additional revenue granted herein. The net operating income required to allow ULH&P the opportunity to pay its operating expenses and fixed costs and have a reasonable amount for equity growth is \$4,802,230. To achieve this level of operating income, ULH&P is entitled to increase its annual revenues as follows:

-27-

يةعد



The additional revenue granted herein will provide a rate of return on the net original cost rate base of 12.03 percent and an overall return on total capitalization of 11.87 percent.

The rates and charges in Appendix A are designed to produce gross operating revenues, based on the adjusted test year, of \$80,445,339 which reflects the roll-in of all gas cost adjustments approved through October 1, 1984, in Case No. 8373-K, Purchased Gas Adjustment Filing of Union Light, Heat and Power Company.

RATE DESIGN

In rate schedule G.S., ULH&P proposed to change the customer charge for residential customers from \$3 per month to \$10 per month and the nonresidential customer charge from \$4 per month to \$10 per month for usage of 50 Mcf and under per month, and \$50 per month for usage over 50 Mcf per month. ULH&P also proposed to change the present one-step base rate to a two-step base rate for 50 Mcf or less and more than 50 Mcf. The proposed changes were not cost based. The AG and LIRC opposed the increase in the customer charge and objected to the two-step declining block rate The Commission is of the opinion that the requested structure. increase to the customer charge should be rejected. Changes of this nature have a great impact upon utility customers and are best done gradually. Therefore, the Commission is of the opinion that increases of \$1.50 to the residential customer charge and

-28-

\$2.00 to the nonresidential customer charge are justifiable in this case. The Commission also is of the opinion that at this time the proposed two-step declining block rate structure is not in the best interest of the customers of ULH&P. The two-step rate design as proposed by ULH&P increases the first 50,000 cubic feet from 10.99 cents per 100 cubic feet to 13.08 cents per 100 cubic feet, which is an increase of approximately 19 percent, while over 50,000 cubic feet increases from 10.99 cents per 100 cubic feet to 11.28 cents or an increase of approximately 2.6 percent. The LIRC recommended that rate schedule GS have only one commodity charge until such time as ULH&P proposes and supports commodity charges that adequately reflect and track cost of service differences for identifiable classes of customers. Therefore, the Commission is of the opinion that the declining two-step block rate structure should be rejected.

ULH&P proposed a Transportation Service tariff (T.S. tariff) with a charge of 50 cents per Mcf of transported gas. The T.S. tariff was available to customers of the Off Peak tariff (O.P. tariff) who were using or were preparing to use alternative fuels. The proposed T.S. tariff is subject to many of the rules and regulations of the O.P. tariff. In response to the Commission's questions at the hearing as to the difference in the cost of service between the O.P. rate of 46.8 cents per Mcf and the T.S. rate of 50 cents per Mcf, ULH&P filed information on September 11, 1984, that the cost to serve the O.P. customers, excluding the cost of gas, was 76 cents per Mcf, but that a

-29-

portion of this was recovered through the GPA provision that would apply to that tariff but not to the transportation tariff.

The Commission is concerned about the special marketing programs being developed by pipeline and distributing companies in today's competitive market. The T.S. tariff should not provide discounted transportation services that would result in unjustifiable preferential rates for industrial users. Therefore, the T.S. rate is set herein at 76 cents per Mcf pursuant to the information filed by ULH&P. The Commission additionally recognizes that it may be to the advantage of ULH&P to retain a customer by negotiating a lower rate for a period of time where circumstances justify. Therefore, if ULH&P wishes to negotiate or continue a contract rate at a level less than 76 cents per Mcf, ULH&P should submit the contract with justification to this Commission for The LIRC and AG objected to ULH&P's proposal of no approval. increase to the O.P. tariff and questioned some of the cost allocations used. This was not thoroughly developed in this case but does raise questions that should be pursued in the future. On the basis of these concerns, the Commission has increased the O.P. tariff base charge to 50 cents per Mcf and will investigate the matter further in future cases.

ULH&P filed an increase for the reconnect charge for gas customers from \$6 to \$15. ULH&P has combination charges for reconnect charges in the gas tariff and the electric tariff, which is stated as follows: "If both the gas and electric services are reconnected at one time the total charge shall be ten dollars (\$10.00)." ULH&P has proposed for the gas tariff only to be

-30-

changed to increase the reconnect charge for gas service to \$15, and the combination to be the sum of the gas reconnect charge and the electric reconnect charge or a total of \$21. If the Commission were to approve the tariff as ULH&P has requested, there would be a \$21 combination charge in the gas tariff and a \$10 combination charge in the electric tariff for identical services. The Commission is of the opinion that proposed gas and combination reconnection charges are reasonable and should be approved. Further, the combination reconnection charge in ULH&P's electric tariffs should be changed from \$10 to \$21 to be consistent with the gas tariffs.

ULH&P proposed a change to the Minimum Bill section of Rate Schedule G.S. whereby when any customer requests disconnection of service during the billing months of April through October, and subsequent reconnection within 12 months, ULH&P may apply the minimum monthly charge for the months that service has been disconnected plus the reconnection charge. The AG recommended that the Commission reject this change in the Minimum Bill section, as the effect of this provision is to push low usage customers off the system and keep them off. The Commission is of the opinion that this change to the Minimum Bill section is unjust to the customers of ULH&P and, therefore, rejects this change.

ULH&P proposed to cancel three tariffs, Summer Air Conditioning Service (R-ACS-1), (G-ACS-1) and Special Contract Firm Use (Rate F). The Commission is of the opinion that the R-ACS-1 and G-ACS-1 tariffs should be cancelled and the Rate F should remain as is. Additonally, ULH&P proposed an increase of

-31-





\$3 to the Bad Check Charge from \$5 to \$8. The Commission agrees that the cost to process a bad check should be the responsibility of the parties issuing the check, and is of the opinion that this increase should be approved.

Purchasing Practices and Gas Marketing

At the hearing held on August 28, 1984, in this case, ULH&P was not prepared to discuss gas supply and purchasing practices. Mr. John F. McCarthy, Director of Gas Supply and Budgets and Business Analysis of CG&E and its subsidiaries took the stand to answer gas supply questions. Mr. McCarthy testified that ULH&P had contracted for Phase II gas under a gas transportation program offered by Columbia Transmission and that ULH&P had also purchased some gas under the Incentive Sales Program offered by Columbia Transmission. Mr. McCarthy also stated that ULH&P did work with transportation customers to find gas and to assist in the movement of that gas.

Aside from taking advantage of these programs offered by its traditional supplier, intervening before the Federal Energy Regulatory Commission ("FERC") in Columbia Transmission matters, and purchasing lower cost LNG provided by that supplier, ULH&P has shown no initiative to find other sources of lower cost gas supply. At the same time, the parent company, CG&E has aggressively pursued and has found a lower cost supply. It appears that the joint management of ULH&P and CG&E is willing to accept ULH&P's status as a captive customer of Columbia Transmission while not being willing to accept that status for CG&E. With the existence of interconnections between CG&E and ULH&P and the close



proximity of less expensive sources of interstate gas, the Commission is curious about this seeming disregard for gas costs which ULH&P's customers must pay.

The Commission is concerned about ULH&P's efforts to seek innovative solutions to its ever rising wholesale cost of gas supply. As gas costs increase, sales volumes decline as alternative fuel customers abandon the system. The solution to this problem is not to merely increase the customer charge to cover all fixed costs, since that shifts all risk of operating a gas business onto the captive ratepayers. ULH&P must develop a plan and strategy to procure lower cost gas and consider engaging in an active marketing program for gas. The Commission is of the opinion that these issues are of the utmost importance to both ULH&P cannot sit by while ULH&P's stockholders and ratepayers. its gas sales volume and customer count erodes. Because of the importance of these issues, the Commission will initiate an investigation into ULH&P's gas procurement and marketing The investigation, to be established in a separate practices. docket, will require ULH&P to provide evidence on these issues within 90 days.

SUMMARY

The Commission, having considered the evidence of record and being advised, is of the opinion and finds that:

1. The rates in Appendix A are the fair, just and reasonable rates for ULH&P and will produce gross annual revenues of approximately \$80,445,339.

-33-

2. The rates of return granted herein are fair, just and reasonable and will provide for the financial obligations of ULH&P with a reasonable amount remaining for equity growth.

3. The rates proposed by ULH&P would produce revenue in excess of that found reasonable herein and should be denied upon application of KRS 278.030.

IT IS THEREFORE ORDERED that the rates in Appendix A be and they hereby are approved for service rendered on and after October 24, 1984.

IT IS FURTHER ORDERED that the rates proposed by ULH&P be and they hereby are denied.

IT IS FURTHER ORDERED that within 30 days from the date of this Order, ULH&P shall file with this Commission the necessary tariff changes to the electric tariffs to incorporate the combination reconnect charge of \$21.

IT IS FURTHER ORDERED that within 30 days from the date of this Order ULH&P shall file with the Commission its revised tariff sheets setting out the rates approved herein.





Done at Frankfort, Kentucky, this 24th day of October, 1984.

PUBLIC SERVICE COMMISSION

Chairman Vice Chairman Commissioner

 $z \neq z$

ATTEST:

- 5

.

Secretary



and the second second

APPENDIX A

APPENDIX TO AN ORDER OF THE PUBLIC SERVICE COMMISSION IN CASE NO. 9029 DATED OCTOBER 24, 1984

The following rates and charges are prescribed for the customers served by Union Light, Heat and Power Company. All other rates and charges not specifically mentioned herein shall remain the same as those in effect under authority of this Commission prior to the date of this Order.

RATE GS

GENERAL SERVICE

Customer Charge per month:	
Residential Service	\$4.50
Non-Residential Service	\$6.00

	Gas	
Base	Cost	Total
Rate	Adjustment	Rate

All gas used 14.46¢ plus 51.82¢ equals 66.28¢ per 100 cu. ft.

Minimum Bill: The minimum monthly charge shall be the customer charge as stated above.

The "Gas Cost Adjustment" as shown above, is an adjustment per 100 cubic feet determined in accordance with the "Gas Cost Adjustment Clause" set forth on Sheet No. 19 of this tariff.

RIDER R-ACS-1

SUMMER AIR CONDITIONING SERVICE

This tariff is hereby cancelled and withdrawn.

Service will be supplied and billed under the provisions of Rate GS.



RIDER G-ACS-1

SUMMER AIR CONDITIONING SERVICE

This tariff is hereby cancelled and withdrawn.

Service will be supplied and billed under the provisions of Rate GS.

RATE F

Special Contract - Firm Use

	Gas		
Base	Cost	Total	
Rate	Adjustment	Rate	

All gas used 7.97¢ plus 51.82¢ equals 59.79¢ per 100 cu. ft.

The "Gas Cost Adjustment" as shown above, is an adjustment per 100 cubic feet determined in accordance with the "Gas Cost Adjustment Clause" set forth on Sheet No. 19 of this tariff.

RATE OP

OFF PEAK

NET MONTHLY BILL Computed in accordance with the following charges:

(1) Firm Use shall be billed in accordance with Rate GS, General Service;

(2) Off Peak Gas (i.e., Gas in excess of Firm Use) shall be billed in accordance with the following:

	Gas	
Base	Cost	Total
Rate	Adjustment	Rate

All consumption 5.00¢ plus 51.82¢ equals 56.82¢ per 100 cu. ft.

The "Gas Cost Adjustment" as shown above, is an adjustment per 100 cubic feet determined in accordance with the "Gas Cost Adjustment Clause" set forth on Sheet No. 19 of this tariff.

CHARGE FOR RECONNECTION OF SERVICE

APPLICABLITY

Applicable to all customers in the Company's entire service area who are in violation of Rule 3, Company's Right to Cancel Service Agreement or to Suspend Service, of the Company's Gas Service Regulations.

CHARGE

The Company may charge and collect in advance the following:

- A. The reconnection charge for service which has been disconnected due to enforcement of Rule 3 shall be fifteen dollars (\$15.00).
- B. The reconnection charge for service which has been disconnected within the preceding twelve months at the request of the customer shall be fifteen dollars (\$15.00).
- C. If service is discontinued because of fraudulent use thereof, the Company may charge and collect in addition to the reconnection charge of fifteen dollars (\$15.00) the expense incurred by the Company by reason of such fraudulent use, plus an estimated bill for gas used, prior to the reconnection of service.
- D. If both the gas and electric services are reconnected at one time, the total charge shall be the sum of the charge stated above and the charge for electric service stated on Sheet No. 42 of the Company's electric tariff.

SERVICE REGULATIONS

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as provided by law.





BAD CHECK CHARGE

APPLICABILITY

Applicable to all customers in the Company's gas service area.

CHARGE

The Company may charge and collect a fee of \$8.00 to cover the cost of handling an unsecured check, where a customer tenders in payment of an account a check which upon deposit by the Company is returned as unpaid by the bank for any reason.

SERVICE REGULATIONS

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as provided by law.

RATE TS

TRANSPORTATION SERVICE

AVAILABILITY

Available in communities indicated on Sheet No. 2 of this tariff.

APPLICABILITY

Applicable to gas customers who have purchased natural gas pursuant to the rules and regulations of the Federal Energy Regulatory Commission and request the Company to transport such gas. Any such transportation service shall be accomplished through displacement and delivered on a "best efforts" basis and shall be subject to the terms and conditions set forth herein. The Company reserves the right to decline requests to initiate such service whenever, in the Company's judgment, rendering the service would be detrimental to the operation of the Company's system or its ability to supply gas to its customers receiving service under the provisions of its standard general service or off peak service tariffs.

 The customer must be receiving gas service pursuant to the provisions of the Company's Off Peak rate and the volume of Off Peak Gas specified in the written Service Agreement is the maximum volume to be transported by the Company; and,

RATE TS

TRANSPORTATION SERVICE (continued)

2. The customer must present to the Company an affidavit to verify that the customer has a source of supply of an alternative fuel which is lower in equivalent price, including transportation charges and taxes, than the Company's current gas charges, which reflect its base rate and applicable adjustments including the gas cost adjustment (GCA). The affidavit must be dated within thirty (30) days of the requested transportation service and may be verified by the Company within each subsequent twelve (12) month period.

NET MONTHLY BILL

Computed in accordance with the following charges:

The charge shall be \$0.76 per MCF of transported gas.

PAYMENT

Payment of the Net Monthly Bill must be received in the Company's office within twenty-one (21) days from the date the bill is mailed by the Company. When not so paid, the Gross Monthly Bill, which is the Net Monthly Bill plus 5%, is due and payable.

TERMS AND CONDITIONS

The Customer shall enter into a written agreement with the Company. Such agreement shall set forth specific arrangements as to volumes to be transported as well as any other circumstances relating to the individual customer.

The Customer shall be responsible to make all necessary arrangements and secure all requisite regulatory or governmental approvals, certificates or permits to enable the gas transported to be delivered to the Company's system.

The Company's "best effort" basis is defined as the right, at any time, to curtail or interrupt the delivery or transportation of gas under this tariff when, in the judgment of the Company, such curtailment or interruption is necessary to enable the Company to maintain deliveries to residential and other high priority customers or to respond to any emergency.

The term of contract shall be contained within the written Service Agreement.



RATE TS

TRANSPORTATION SERVICE (continued)

SERVICE REGULATIONS

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Rules and Regulations currently in effect, as filed with the Kentucky Public Service Commission, as provided by law.

GAS SERVICE

INDEX TO COMMUNITIES SERVED AND APPLICABLE RATE SHEETS

COMMUNITIES SERVED:

Alexandria Bellevue Boone County Bromley

Campbell County Cold Spring Covington Crescent Park

Crescent Springs Crestview Crestview Hills Crittenden

Dayton Dry Ridge Edgewood Elsmere

Erlanger Florence Fort Mitchell Fort Thomas

Fort Wright Gallatin County Glencoe Highland Heights

Independence Kenton County Kenton Vale Lakeside Park

Latonia Lakes Ludlow Newport Park Hills

Southgate Taylor Mill Villa Hills Walton

______ مى دىن دەمىرىسە، مەرىيە بار مىرەمىر يو

Warsaw Wilder Woodlawn





APPENDIX B

APPENDIX TO AN ORDER OF THE PUBLIC SERVICE COMMISSION IN CASE NO. 9029 OCTOBER 24, 1984

The net investment rate base of Union Light, Heat and Power Company's combined and gas operations at December 31, 1983, is as

follows:

	Company	<u> </u>
Gas Plant in Service	\$147,669,934	\$51,214,593
Construction Work in Progress	2,320,891	401,054
Cash Working Capital	2,226,996	1,189,836
Materials and Supplies	963,842	617,748
Prepayments	7,224,093	7,148,405
Subtotal	\$160,405,756	\$60,571,636
Less:		
Accumulated Provision for Depreciation	\$ 47,541,106	\$15,867,928
Customer Advances for Construction	778,709	778,709
Accumulated Deferred Taxes	9,281,970	2,828,395
Three Percent Investment Tax Credits	421,658	196,067
Subtotal	\$ 58,023,443	\$19,671,099
Net Investment Rate Base	\$102,382,313	\$40,900,537

Ratio of Kentucky jurisdictional gas operations to total operations: 39.95 percent

Note: Cash working capital was determined by taking 1/8 of actual operation and maintenance expenses less energy charges for the test period.