COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN ADJUSTMENT OF RATES OF COLUMBIA GAS OF KENTUCKY, INC.) CASE NO. 10201

INDEX

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN ADJUSTMENT OF RATES OF COLUMBIA GAS OF KENTUCKY, INC.) CASE NO. 10201

O R D E R

On April 21, 1988, Columbia Gas of Kentucky, Inc. ("Columbia") filed its notice with this Commission requesting authority to adjust its rates for gas service rendered on and after May 21, 1988. The rates proposed by Columbia would produce additional annual revenues of approximately $7.4 million, representing an increase of approximately 7.8 percent. As a basis for the requested increase, Columbia stated that it has determined that its present rates, established by Commission Order dated November 14, 1986 in Case No. 9554, An Adjustment of Rates of Columbia Gas of Kentucky, are no longer just and reasonable, and are no longer sufficient to permit Columbia to meet its statutory responsibility to provide adequate, efficient, and reasonable service.

In order to determine the reasonableness of the requested increase, the Commission, by its Order dated April 29, 1988, suspended the proposed rates and charges until October 21, 1988.

Motions to intervene in this proceeding were filed by the Utility Rate Intervention Division of the Office of the Attorney General and the Lexington-Fayette Urban County Government (referred to collectively as "AG"), Kentucky Industrial Utilities Customers ("KIUC"), and GTE Products Corporation ("GTE Products"). These motions were granted with no other parties requesting intervention. On August 18, 1988, a public hearing was held in this matter at the Commission's offices in Frankfort, Kentucky. Briefs were filed by September 16, 1988 and responses have been submitted to all requests for information.

In its decisions, as discussed further in later sections of this Order, the Commission has considered its findings and conclusions related to Case No. 9003, An Adjustment of Rates of Columbia Gas of Kentucky, Inc.; Case No. 9554, Notice of Adjustment of Rates of Columbia Gas of Kentucky, Inc.; Case No. 10127, The Application of Columbia Gas of Kentucky, Inc. for an Order Authorizing it to Amend Its Tariff and for Authority to Deviate from Commission Rules, in Order to Permit Company Ownership of Customer Service Lines; Case No. 8738, An Adjustment of Rates of Columbia Gas of Kentucky, Inc.; and Administrative Case No. 313, The Effects of the Tax Reform Act of 1986 on Contributions in Aid of Construction and Customer Advances.

This Order addresses the Commission's findings and determinations with regard to its investigation of Columbia's revenue requirements and rate design and establishes rates and charges that will produce additional annual revenues of $2,280,396 above normalized test year revenues, which represents an increase of 2.46 percent.

COMMENTARY

Columbia is one of six subsidiary distribution companies owned by the Columbia Gas System, Inc. ("Columbia System"). Columbia distributes and sells natural gas to approximately 110,941 customers in Central and Eastern Kentucky. Columbia System has headquarters in Columbus, Ohio, and shares most corporate officers with several other Columbia System distribution companies. The parent company also owns Columbia Gas Transmission Corporation ("Columbia Transmission") which is Columbia's primary source of supply.

TEST PERIOD

Columbia proposed and the Commission has accepted the 12-month period ending December 31, 1987 as the test period in this proceeding.

NET INVESTMENT RATE BASE

Columbia proposed a net investment rate base of $70,005,256. The AG proposed two separate rate bases; one of $51,681,613 to which Columbia's overall return is applied, and another of $5,913,224 consisting solely of nominated gas balances, to which the current prime interest rate is applied. Following is a discussion of the Commission's findings in this proceeding as they relate to rate base issues:

Prepayments

The AG proposed an adjustment of $1,483,841 to eliminate the portion of prepaid nominated gas balances supported by accounts payable on the basis that ratepayers should not be required to pay a return on investment supported by cost-free sources of capital.[1]

Columbia argued that the AG's proposal is conceptually invalid because accounts payable are already included as an offset to cash working capital in the one-eighth formula calculation, and that the AG is mistaken in his assumption that accounts payable associated with the nominated gas balances represent cost-free capital.[2]

The Commission agrees with the AG. In Columbia's last litigated case, Case No. 9003, the Commission reduced the prepaid nominated gas balance to the extent clearly identifiable in cost-free accounts payable in order to produce a proper matching of rate base and invested capital.[3] The proposal of the AG merely recalculates the adjustment based on the method established by the Commission in this prior case. Moreover, this balance is the result of an inter-company transaction. In Case No. 9003, the Commission placed Columbia on notice that it would bear its burden of proof for supporting and justifying all inter-company transactions.[4] The Commission is of the opinion that Columbia has not provided persuasive enough evidence to justify the reversal of the Commission's findings related to this issue in Case No. 9003. The Commission has, therefore, reduced Columbia's prepayment balance by $1,483,841.

Plant Held for Future Use

Included in Columbia's proposed net investment rate base calculation is $8,576 related to gas plant held for future use. Columbia argued that this is an appropriate component of rate base because it represents facilities which had been purchased at a lower cost at the time of purchase to fit into the overall future planning of its pipeline network.[5] During cross-examination, Columbia was unable to state whether any of the assets represented by this balance were placed in service subsequent to the test year.[6] Though the amount involved is minor, the Commission is of the opinion that Columbia's proposed net investment rate base should be decreased to eliminate the plant held for future use balance. These assets were not considered used and useful at the end of the test period, and Columbia has not demonstrated any resulting benefit to current ratepayers, therefore, no return on this investment is justified at this time.

Dual Rate Base Proposal

The AG proposed to establish the prepaid nominated gas component as a separate, stand-alone rate base which would earn a return based on the current prime interest rate, rather than Columbia's allowed overall rate of return. According to the AG it is evident that nominated gas is financed by short-term debt and return requirements should be consistent with the manner in which these balances are financed.[7]

Columbia argued that the AG's proposal should be denied because it is based upon an attempt to trace dollars and, moreover, is inconsistent with Commission rulings related to the same proposal.[8]

The Commission agrees with Columbia. The Commission is of the opinion that in this instance attempting to trace dollars violates economic and financial principles and is not practical. Furthermore, funds flow in and out of a firm constantly as revenues are collected, expenses are incurred, and securities are issued. From a practical standpoint, it is difficult to trace a dollar of capital from its source to its final use. Therefore, the Commission is of the opinion that the AG's proposal to require nominated gas component of rate base to earn a return based on the current prime rate, rather than the overall cost of capital, is inappropriate. The composite cost of capital is the proper return Columbia should be allowed to earn. Therefore, the AG's proposal is denied.

Deferred DIS Costs

Based upon the Commission's decision discussed elsewhere in this Order that Columbia's deferred DIS System costs should be capitalized and depreciated over a 15-year period, the Commission has increased Columbia's net investment rate base by $713,101 so as to allow it to earn a return on this unrecovered investment.

Cash Working Capital

The AG proposed that no provision for cash working capital be provided for in rate base because Columbia did not submit a lead/lag study, but rather merely included a computation of working capital using an "unacceptable" formula methodology.[9] The AG maintains that the one-eighth formula method is unacceptable in all circumstances.[10]

A cash working capital allowance is provided for in rate base in recognition of the fact that investor-supplied cash is needed to finance operating costs during the time lag before revenues are collected. The most accurate way to measure this need is a lead/lag study. However, these studies are costly and complex and, in this situation, perhaps inapplicable because of Columbia's business structure. In lieu of a lead/lag study, this and many other Commissions have used the one-eighth formula method. This method is based on 45 days of operating and maintenance expenses less purchased gas, and is a widely accepted surrogate for a lead/lag study. The Commission has used this method in innumerable proceedings and rejects the AG's claim that it is an "unacceptable" method.

As in the past, the Commission has determined Columbia's cash working capital allowance to reflect one-eighth of the adjusted operating and maintenance expense less purchased gas. Thus, a working capital allowance of $2,273,549 has been included in the Commission's determination of Columbia's net investment rate base.

Deferred Taxes

The AG proposed an adjustment to reduce rate base by $3,467,366 on the basis that deferred income tax debits associated with winter service represent a selective allocation of tax and book timing differences.[11] Columbia argued that this item is properly includable in rate base on the basis that Kentucky ratepayers finance the associated winter service prepayment, and because the AG's witness did not object to the inclusion of this deferred tax in Case No. 9554.[12]

Deferred income taxes normally serve to reduce rate base; however, due to the debit balance related to winter service in the rate base proposed by Columbia, deferred taxes serve to increase rate base. The winter service deferred tax was not generated as a result of the operations of Columbia, it originated because of the affiliation of Columbia and Columbia Transmission, and because of the filing of a consolidated tax return by the Columbia Gas System. Only through the filing of a consolidated return can the Columbia Gas System take advantage of this election.[13] Normally, according to Columbia, the deferred tax is a benefit to Kentucky ratepayers; however, because Columbia Transmission lowered its sales rate below cost, it incurred a loss on winter service sales. The deferral of this loss for tax purposes resulted in a taxable income that was greater than pre-tax book income, thus generating this deferred tax debit.

The Commission agrees with the AG on this issue. This is based upon an election at the Columbia Gas System level which, in this instance, resulted in a significant increase in the rate base of Columbia. The genesis of this deferred tax debit was, apparently, the decision of Columbia Transmission to sell below cost in order to remain competitive.[14] The Commission is hesitant to allow the winter service deferred tax if its balance is ultimately a direct result of the business decisions of Columbia Transmission.

The Commission is of the opinion that the potential future benefit that may result from this treatment of winter service deferred taxes is outweighed by the risk that would be shifted to Kentucky ratepayers. The continuation of Columbia Transmission's status, which requires it to sell at a loss in order to remain competitive, will only result in allocation of more deferred tax debits to Columbia. Given the arbitrary, elective nature of the treatment of this by the Columbia Gas System, the Commission is of the opinion that it is not an appropriate rate base item on which

Kentucky ratepayers should be required to pay a return. Therefore, the Commission accepts the AG's proposal and has reduced Columbia's proposed rate base by $3,467,366.

Contributions in Aid of Construction ("CIAC")

In supplemental testimony, Columbia proposed that rate base be increased to reflect the Commission's decision in Administrative Case No. 313, relating to rate-making treatment of CIAC. This testimony was filed subsequent to the Commission's final Order in Administrative Case No. 313. The Commission agrees with this proposal and accordingly has increased rate base by $19,200.

Accrued Construction Work in Process ("CWIP")

Included in Columbia's proposed CWIP balance is an accrual of $4,532,454 which represents the difference between the estimated cost of a project and the actual booked dollars for the construction project as of the end of the year. The AG proposed an adjustment to eliminate this accrual on the basis that it defeats the matching principle and the concept of a year-end rate base.[15] Columbia argued that it is appropriate to include this accrual in rate base because it represents investment in plant that was existing, in service, and resulted in sales during the test year.[16]

The Commission agrees with the AG that this accrual should not be included as a component of Columbia's test-year-end net investment rate base. First, the accrual is based on an estimate. So there is concern about the accuracy of the accrual.[17] Second, when the accrual is recorded, the credit is to Account No. 242, Miscellaneous Accrued Liabilities; Columbia has demonstrated no capital cost associated with this liability.[18] The accrual apparently is supported by a cost-free liability which is not a component of Columbia's capital structure. Third, the accrual, made on December 31, is reversed on January 1, thus, this accrual does not represent valid investment for inclusion in rate base. The Commission has, therefore, reduced Columbia's proposed rate base by $4,532,454.

Accumulated Depreciation

Columbia proposed an adjustment to decrease accumulated depreciation by $467,460 in order to reflect a reduction due to the use of revised depreciation rates applied to property as of December 31, 1987.[19]

The AG argued that Columbia's proposed adjustment should be denied because it compares depreciation expense calculated on end-of-year rate base with a hypothetical accumulated depreciation balance using end-of-year rate base and existing depreciation rates.[20]

Columbia's proposed adjustment is based on the difference between present and proposed depreciation rates multiplied by year-end plant in service balances. While mathematically this does produce a difference of $467,460, Columbia has not presented a clear argument as to why accumulated depreciation should be reduced by this amount. Columbia argued that if these lower rates had been in effect for 1987, the accumulated reserve would have been $467,460 less at the end of the test period.[21] While this may be true, Columbia did accrue depreciation at the higher rates during the test period and no adjustment should be made on the books to reflect the reduction in annual depreciation expense which will occur subsequent to the test year. The actual test year-end balance represents the recovered costs associated with plant in service.

Columbia additionally argued that since the impact in depreciation accrual rates upon rate base can be known and measured, the Commission should adjust rate base in this case to reflect the level of accumulated depreciation that will result when the new depreciation accrual rates are applied to the end of the test year investment.[22] The Commission agrees with this concept and so has adjusted test year-end accumulated depreciation by $135,481, which is the adjustment the Commission has made to depreciation expense and which reflects the prospective result of the new depreciation rates and test year-end investment. This adjustment represents the net amount of the following adjustments:

Columbia Adjustment	$39,081
Toyota CIAC	<82,719>
CWIP Accrual	<139,383>
DIS Adjustment	47,540
	$135,481

Based upon the foregoing discussion, the Commission has determined Columbia's net investment rate base to be as follows:

Gas Plant in Service	80,418,643
CWIP	14,299,290
Materials and Supplies	813,840
Fuel Stock Inventory	138,737
CIAC Adjustment	19,200
Prepayments	6,234,964
Deferred DIS System	713,101
Cash Working Capital	2,273,549
Subtotal	$104,911,324

LESS:	
Accumulated Depreciation	34,734,757
Retirement Work in Process	79,435
Customer Advances	6,821,977
Accumulated Deferred Taxes	2,951,276
Pre-Job Development Investment Tax Credits	144,861
Subtotal	$44,732,306
NET INVESTMENT RATE BASE	$60,179,018

CAPITAL STRUCTURE

Roger D. Vari, witness for Columbia, proposed a capital structure of 45.81 percent long-term debt, 3.57 percent preferred stock, 3.32 percent short-term debt, and 47.30 percent common equity based on the consolidated capital structure of Columbia System for the end-of-test-year period ending December 31, 1987.

Dr. James W. Freeman, witness for the AG, recommended a capital structure of 44.52 percent long-term debt, 3.65 percent preferred stock, 3.40 percent short-term debt, and 48.43 percent common equity. The differences in these ratios are due to Dr. Freeman reducing total capitalization by the $75 million Limited Recourse Loan Agreement ("LRLA"). Dr. Freeman recommended that the Commission omit this loan in calculating Columbia's cost of capital because of the high effective interest rate, the commitment fees on the large unused balance, and because the loan is an obligation of Columbia Transmission.[23]

The Commission believes that the end-of-test-year consolidated capital structure of Columbia System is an appropriate starting point in determining Columbia's capital structure. However, based on the arguments put forth by Dr. Freeman, the Commission is of the opinion that total capitalization should be reduced by the $75 million LRLA in calculating Columbia's capital structure. It is, therefore, the Commission's opinion that for rate-making purposes the capital structure for Columbia should be as follows:

	Amount	Percent
Long-Term Debt	26,791,699	44.52
Short-Term Debt	2,046,087	3.40
Preferred Stock	2,196,534	3.65
Common Equity	29,144,698	48.43
Total	60,179,018	100.00

REVENUES AND EXPENSES

Revenue Normalization

Columbia proposed a normalized level of sales revenues of $95,067,346, based on the rates in effect in April 1988, at which time this application was filed.[24] This amount consisted of $65,848,177 in gas cost revenues and $29,219,169 in base rate revenues. As gas costs are not an issue in this case, the following discussion addresses only base rate revenues; however, total revenues, based on the rates granted in this case, will include gas cost revenues reflecting Columbia's most recent gas cost adjustment.[25]

In normalizing its revenues, Columbia annualized the effects of customers transferring from one rate schedule to another during the test year and also reflected the impact of rate schedule transfers that would occur upon approval of its proposed increase to the General Service Interruptible Transportation Rate. In addition, Columbia increased its sales volumes by 612,724 Mcf to reflect its weather normalization adjustment and shifted 174,598

Mcf from fixed rate transportation sales to flex rate transportation sales.

The Commission has accepted Columbia's normalized revenues and sales volumes with certain modifications as explained in the following paragraphs. The effect of these modifications is to increase normalized base rate revenues by $311,524, to $29,530,693.

Sales to Toyota

The Toyota manufacturing plant in Georgetown, Kentucky, began taking gas from Columbia on October 31, 1987, 2 months prior to the end of the test year. For the last 2 months of the test year total throughput to Toyota was 74,424 Mcf, which is the level Columbia has used to normalize its revenues. Mr. Deward proposed to increase revenues by $162,934 based on estimated sales to Toyota of 537,000 Mcf during calendar year 1988, stating that an adjustment to reflect a pro forma level of sales to Toyota was necessary in order to match revenues, expenses, and capital recovery.[26]

Columbia offers four reasons for not adjusting revenues to reflect additional sales to Toyota. Columbia claims such an adjustment, based on estimated 1988 sales, does not meet the Commission's known and measurable criterion. Additionally, Columbia contends it is unfair to impute revenues for one customer when any number of customers' annual throughput could change subsequent to the test year. Thirdly, Columbia states that Toyota is not a special or unique customer which should be treated differently than other customers. Finally, Columbia argues that such an adjustment represents a departure from the Commission's long standing reliance on historical test year results and an attempt to use a projected test year.[27]

The Commission is of the opinion that the adjustment proposed by Mr. Deward is inappropriate as it is based solely on sales estimates, estimates for which no support was offered; however, the intent of the adjustment, to match revenues with expenses and capital recovery, is consistent with the Commission's established rate-making practices. Therefore, the Commission will make an adjustment to annualize Columbia's sales to Toyota based on the throughput during the last 2 months of the test year.

In making such an adjustment, the Commission is not singling out Toyota as a special customer that should be treated differently than other customers. We are, consistent with the matching concept previously discussed, adjusting Columbia's sales volumes to a level that is representative of Columbia's ongoing operations. The Commission has made such adjustments involving large industrial customers in past cases, including Columbia Case No. 8738. In that case, an adjustment was made to reduce sales by 1.1 million Mcf for an industrial customer that discontinued taking service after the test year. In this instance, sales are being added; in the previous case sales were lost. In both cases, however, the Commission's intent is the same: revenues should be adjusted to reflect changes in sales volumes due to the addition or loss of a major customer.

Annualizing Toyota's test year throughput of 74,424 Mcf results in annual throughput of 446,544 Mcf.[28] The Commission finds this level of sales to be known and measurable as it is based on test year volumes rather than estimated 1988 sales. This sales level, which results in a monthly average of 37,212 Mcf, is also supported by the sales level during the first 4 months of calendar year 1988. From January through April 1988, sales to Toyota ranged from 33,000 to 40,000 Mcf per month.[29] The 4-month total was 149,993 Mcf for a monthly average of 37,498. It is apparent that the level of sales to Toyota for the first 6 months it took service from Columbia supports the Commission's adjustment to annualize sales based on the volumes for November and December 1988.

Columbia has indicated that current and future throughput to Toyota will consist entirely of transportation volumes. At the test year-end transportation rate of $.3712 per Mcf, annualized throughput to Toyota would generate $165,757 in revenues, compared to revenues of $28,535 derived from the test year throughput of 74,424 Mcf. The Commission, therefore, has made an adjustment to increase revenues by $137,222 to reflect Columbia's annualized sales to Toyota.

Weather Normalization

As one component of its revenue normalization, Columbia proposed an adjustment to increase its sales volume by 612,724 Mcf to reflect normal weather and temperature conditions.[30] The effect of this adjustment was to increase revenue by $741,800 above the test year level.

Mr. Deward proposed two modifications to Columbia's adjustment by which he increased sales an additional 37,380 Mcf and increased base rate revenues by $57,183.[31] The first part of Mr. Deward's adjustment increases sales by 18,801 Mcf to correct an error he claims was made in Columbia's calculation of normalized sales for the months of July and August. The second modification, reflecting an adjustment to increase industrial sales based on normal temperatures, increases sales by 18,579 Mcf.

The Commission is of the opinion that Columbia's adjustment is proper, as proposed, and that neither of Mr. Deward's modifications is warranted. Columbia adequately explained and supported its use of the average monthly customer consumption for the months of August and September in determining the normalized load for July and August. Therefore, Mr. Deward's first modification is not necessary. The second modification is inappropriate because no base load for industrial sales was determined, which is a prerequisite for determining temperature-sensitive sales. Due to the nature of business cycles and changes in economic conditions, the determination of a base load for industrial customers would be difficult, a fact the Commission recognizes. However, the determination of a base load, with reasonable assurance of its accuracy, would be needed in order to make an adjustment for temperature-sensitive sales. Absent such a determination, the Commission will not accept Mr. Deward's adjustment.

Transportation Sales Revenue

Columbia proposed $1,683,299 in normalized revenue from transportation sales (delivery service) based on throughput of 3,764,630 Mcf at the fixed rate of $.3712 per Mcf and 1,844,328

Mcf throughput at flex rates ranging from $.10 to $.29 per Mcf.[32] This normalized throughput reflects a shift of 174,598 Mcf from test year fixed rate sales to flex rate sales.[33] The flex rates of $.15, $.10 and $.29 for Columbia's transportation customers A, B, and C, respectively, were the rates in effect at the time Columbia's application was filed.[34] Of the $1,683,299 in transportation revenues, fixed rate revenues account for $1,399,430, while flex rate revenues are $285,869. Columbia's test year transportation revenues were $1,944,599, of which $1,538,936 was from fixed rate sales and $405,663 was from flex rate sales.

The Commission is of the opinion that Columbia's adjustment to shift 174,598 Mcf in sales to customer B from fixed rate sales to flex rate sales is improper and should be denied. W. W. Burchett, Columbia's Director of Rates, filed a written response subsequent to the hearing which explained why these sales were billed at the fixed rate during the test year.[35] However, neither in that response nor at the hearing did Mr. Burchett explain why the test year conditions that caused Columbia to make those fixed rate sales should now be ignored or why it is correct to price those sales at a $.10 flex rate for rate-making purposes. In the absence of a persuasive argument in support of this shift of throughput volumes, the Commission will reflect the 174,598 Mcf as fixed rate sales. At the normalized fixed rate of $.3712 per Mcf this increases Columbia's normalized fixed rate revenues by $64,811.

Columbia priced its flex rate sales to customers A, B, and C at \$.15, \$.10, and \$.29, respectively, per Mcf, reflecting the rates in effect at the time this case was filed. While customer B's rate of \$.10 remained constant during the test year, customer A's flex rate ranged from \$.09 to \$.615 per Mcf during the test year and, on a monthly basis, changed 8 times during 1987.[36] Customer C's flex rate changed 7 times and averaged \$.5481 per Mcf during the test year.[37] When questioned about the merits of using rates for 1 month rather than for the full test year to normalize revenues, Mr. Burchett indicated that Columbia believes the April 1988 rates would be more representative of future conditions than the test year rates.[38]

The Commission finds nothing in the record to support this belief and, therefore, will normalize Columbia's flex rate revenues based on the actual test year rates adjusted to reflect the July 1987 rate reduction caused by the Tax Reform Act of 1986 ("Tax Reform Act"). In view of the frequent and, sometimes, dramatic fluctuations in flex rates, the Commission is of the opinion that rates over a longer period of time tend to equalize the extreme ends of the rate spectrum and provide a more reasonable level of normalized revenues. Adjusting test year revenues to reflect the July 1987 rate reduction requires that all sales made at rates in excess of the current maximum flex rate of \$.5568 per Mcf be reduced to the current maximum rate. The result of such an adjustment is to increase flex rate revenues by \$109,491 above the normalized level of \$285,869 proposed by

Columbia to $395,360, which is $10,303 less than test year flex revenues.

In this instance, the Commission has normalized flex rate revenues using actual test year rates adjusted to reflect the minor reduction that occurred midway through the test year. However, such pricing of flex rate transportation volumes for rate-making purposes will likely be short lived. The Commission's expectations for future flex rate pricing are discussed at length later in this Order.

Allowance for Funds Used During Construction ("AFUDC")

Columbia accrued test year AFUDC of $132,410. Neither Columbia nor the intervenors proposed an adjustment to AFUDC.

In keeping with past practice, the Commission has made an adjustment to AFUDC based on eligible CWIP of $1,229,437[39] and the allowed overall return. This results in an adjustment to reduce AFUDC by $42,856.[40]

Lost and Unaccounted For Gas

Mr. Deward proposed an adjustment to reduce Columbia's gas cost expense by $146,869 to correct a problem he perceived Columbia had in this area during the 12 months ended September 30, 1987.[41] Mr. Burchett explained that gas cost recovery is not a part of this general rate case but, rather, is a matter covered in Columbia's semi-annual gas cost adjustment filings.[42] Furthermore, Mr. Burchett explained why the comparison of unaccounted-for gas for a calendar year test year with the losses for periods ended in September is inappropriate.[43]

The Commission is familiar with the industry practice of analyzing unaccounted-for gas for a 12-month period ended in August, outside the heating season. Upon a thorough review of Columbia's lost and unaccounted-for gas for such periods over the past 4 years, and being well acquainted with the effects of weather conditions on calendar year line losses, the Commission is of the opinion that Columbia's level of unaccounted-for gas, at 1.58 percent of tariff volumes, is acceptable. If unaccounted-for gas was excessive, the Commission would address the matter in a gas cost adjustment case, not in a general rate case.

Customer Assistance Expense

Columbia proposed an adjustment to increase test-year operating expenses by $16,437 in order to reflect the projected increase in expenses associated with its Residential Conservation Service ("RCS") Program. Test year expenses associated with this program were $2,313. The RCS Program, which is administered by the Commission, offers residential customers low cost/in-home energy audits which identify measures and practices to help customers conserve energy. Columbia bases its adjustment on the projection that RCS audits will increase from the test year level of 23 to 250 in 1988. This projection is based on an estimated response rate of 0.25 percent to bill inserts announcing the program mailed in February 1988.[44]

The AG proposed that Columbia's total projected cost of $18,750 be reduced by 50 percent because it is questionable whether the projected levels will be achieved and whether they are recurring in nature.[45] This proposal would result in an adjustment to increase expenses by $7,062.

Columbia's adjustment was based on a projection of 250 audits per year,[46] or 20.8 per month. However, in the 5-month period subsequent to the program announcement in a February 1988 bill insert, Columbia performed only 16 audits.[47] This equates to an average of only 3.2 audits per month during the months immediately following the program announcement, which produces a projection of only 38 audits per year. This number of audits at a net cost of $60 per audit produces a projected expense of $2,850, which is approximately the level incurred during the test year. Therefore, the Commission is of the opinion that the adjustments proposed by Columbia and the AG should be denied.

<u>Promotional Advertising</u>

In accordance with 807 KAR 5:016, Section 4, Columbia proposed adjustments to eliminate test year expenses associated with advertising. However, in the course of processing this case, the Commission noted that a significant increase had occurred in expenses booked to Account No. 909, *Informational and Instructional* Advertising Expenses.[48] Columbia explained that this increase occurred as a result of advertising related to its "single family and multifamily programs," and high efficient space heating equipment advertising.[49] Columbia subsequently provided copies of the advertisements related to these advertising campaigns.[50]

The Commission's regulation, 807 KAR 5:016, Section 4, provides that any advertising for the purpose of encouraging any person to select or use the service or additional service of an energy utility, or the selection or installation of any appliance or equipment designed to use such utility's service, shall not be allowable as a cost to the utility for rate-making purposes. The Commission has reviewed the advertisements related to the advertising campaigns noted above and has concluded that they relate to the benefits of using gas appliances and attempt to encourage persons to purchase and use gas appliances. Upon cross-examination, Columbia indicated its agreement with the Commission's conclusion.[51] The Commission, therefore, is of the opinion that the costs associated with these advertising campaigns should be excluded for rate-making purposes and has, accordingly, reduced test-year operating expenses by $90,273.[52]

Lobbying Expenses

The AG proposed an adjustment to remove test-year expenses associated with lobbying activities, on the basis that it is inappropriate for ratepayers to pay for activities related to lobbying.[53] Columbia argues that these expenses should be permitted because its lobbying efforts enable Columbia and legislators to make informed business decisions for the benefit of all Kentucky citizens, including Columbia ratepayers.[54]

The Commission agrees with the AG's proposal and has taken this position in other proceedings. The legislative goals of Columbia guide its lobbying efforts, which may not agree with the legislative goals of an individual ratepayer or of ratepayers in general. The Commission does not believe gas customers should be compelled to pay for lobbying efforts through gas rates aimed at legislative goals which may not benefit them.

Based upon the above discussion, the Commission has made an adjustment of $4,751[55] to exclude all test-year lobbying expenses. Columbia should note that lobbying expenses such as these should be accounted for in Account No. 426.4, Expenditures for Certain Civic, Political and Related Activities, and begin accounting for such costs in this manner.

Country Club Fees

The AG proposed an adjustment of $5,400 to eliminate test-year expenses related to country club initiation fees on the grounds that these expenses are inappropriate for rate-making purposes and should be paid for by stockholders.[56]

Columbia argued that its payment of test-year country club initiation fees does benefit its ratepayers because it provides access to facilities for business meetings and opens communication lines between Columbia and community leaders.

The Commission agrees with the AG. While the initiation fee may provide access to business meeting facilities, it also provides access to recreational facilities and the amount of the fee is associated more with these amenities than access to a meeting room. The Commission believes there are less expensive methods of gaining access to meeting facilities. The Commission agrees with Columbia that a line of communication with community leaders is important but rejects the notion that membership in a country club is the only, or best, way to accomplish this objective.

The Commission has reduced test-year expenses by $5,400 to exclude test-year country club fees.

<u>Management Audit</u>

The AG proposed an adjustment of $106,043[57] to eliminate test year expenses associated with the amortization of Columbia's 1986 Management Audit, which was ordered by the Commission in accordance with legislation passed by the Kentucky General Assembly. The AG argued that since Columbia requested a 1 year write-off of the management audit expense in Case No. 9554 (which was settled) and since Columbia thought it appropriate to charge the ratepayers for the management audit over 1 year then, Columbia should not now be allowed to amortize the expense over 3 years.[58]

Columbia argued that since the settlement was not based upon resolution of individual issues, it is impossible to determine whether Columbia received rate recognition of all of this expense, none of it, or any part of it, in Case No. 9554.

The Commission agrees with Columbia. The argument advanced by Columbia is consistent with the Commission's general view of settlement agreements with respect to individual issues. The Commission further notes that the settlement in Case No. 9554 specifically provided that the stipulation "does [not] represent agreement on any specific theory supporting the appropriateness of any stipulated and recommended adjustments to Columbia's rates,"[59] and that the AG was a party to that settlement.

Columbia is not specifically requesting in this proceeding to amortize the management audit expense over 3 years. However, absent action by the Commission, the effect would be to recover the amount included in operating expenses annually over the period the rates are in effect. The management audit cost approved by the Commission was $323,625.[60] Columbia began amortizing this amount at the rate of $9,075 per month beginning in January 1987;[61] the precise amount amortized during the test year was $106,043.

Pursuant to KRS 278.255, the Commission must provide for recovery of the approved costs of the Management Audit. Under traditional theory of cost recovery, based upon test-year actual amortization, and 1988 amortization at a rate of $9,075 per month, Columbia has recovered $187,718 (106,043 + (9,075 x 9)) of these costs through September 30, 1988, leaving an unrecovered portion of $135,907. In consideration that the frequency between Columbia rate cases has been 2 years, the Commission is of the opinion that the unrecovered management audit costs of $135,907 should be amortized over 2 years, resulting in a provision of $67,954. Therefore, test year expenses have been reduced by $38,089.

Regulatory Commission Expense

Columbia proposed a net adjustment to increase regulatory commission expense by $23,841. This is based upon a proposed rate case expense of $27,627, which was the actual expense incurred in Case No. 9554,[62] and a $3,786 adjustment to reflect a decrease in the Commission's assessment fee.

The Commission will allow the estimated rate case expense as proposed by Columbia. However, since the span between cases is approximately 2 years, the Commission has amortized the expense over 2 years resulting in a rate case provision of $13,814.

Columbia's adjustment to decrease the Commission assessment fee expense is not consistent with the method used to arrive at this adjustment in Case No. 9003.[63] Columbia's method in this case is based upon the difference between the 1987 Commission assessment fee per books and the Commission assessment received and paid in July 1987. The method used in the last case was based upon the difference between the fee paid during the test year and the assessment applicable to revenues in the test year. In this case, the fee paid during the test year was $152,874. The July 1988 assessment of 1.351 mills applied to test year revenues of $96,506,855 results in an assessment of $130,381, thus, producing an adjustment of $22,493. During cross-examination Columbia was given the opportunity to present evidence to support why its method, rather than the method used in Case No. 9003, should be used.[64] Columbia was unable to provide a response at the hearing, but indicated it would respond subsequent to the hearing. However, a response was not provided. The Commission, therefore, can only conclude that Columbia does not contest the method of determining the annual Commission assessment used in Case No. 9003. Therefore, an adjustment has been made to reduce expenses by $22,493.

The net effect of the adjustment to increase rate case expense and the reduction to the annual Commission assessment is an expense reduction of $8,679.

Costs - Case No. 10127

The AG proposed an adjustment of $58,667 to eliminate two-thirds of $88,000 in test year expenses associated with Case No.

10127, currently pending before the Commission, on the basis that this is not a recurring and normal level of expense.[65] Case No. 10127 was filed January 4, 1988 and is now in the final disposition stage. The actual level of costs incurred by Columbia during 1987 was $86,415.[66] The Commission is of the opinion that these costs are nonrecurring and, further, were recovered by Columbia during 1987. The Commission has, therefore, made an adjustment to reduce test year expenses by $86,415.

Contribution - Council of State Governments

The AG proposed an adjustment to eliminate a $3,000 payment to the Council of State Governments on the basis that these expenses are inappropriate for rate-making purposes and should be paid for by the stockholders.[67] Columbia responded that this expense is appropriate because it produces the same type of benefits as its lobbying activities.[68] As noted elsewhere in this Order, the Commission is of the opinion that ratepayers should not be responsible for lobbying-type activities. Therefore, expenses have been reduced by $3,000 to eliminate this expense.

Liquid Propane Gas ("LPG") Expenses

The AG proposed an adjustment to decrease LPG expenses by $67,200 to reflect the amortization over a 5-year period of $84,000 expended by Columbia in connection with its LPG plant. The basis of the AG's proposal was that test year expenses incurred in connection with the LPG plant are significantly higher than expenses incurred in preceding years and, thus, would not be an appropriate level upon which to establish rates.[69]

LPG maintenance expenses are accounted for in Account No. 942, Maintenance of Production Equipment. Columbia has experienced significant increases in this account in recent years. Following is a 5-year analysis of charges to this account:[70]

Year	Expense
1987	$130,044
1986	45,896
1985	15,304
1984	16,051
1983	12,588

Columbia states that Account No. 742 increased approximately $84,000 in 1987 relative to 1986 due to several maintenance projects at the LPG storage facility. The Commission concurs with the position of the AG that 1987 expenses are extraordinarily high relative to previous years and that an adjustment should be made to reflect an appropriate ongoing expense level. The Commission is of the opinion that the adjustment should be based upon a 3-year average because this should provide a reasonable projection of the ongoing level of this expense. An average of the expenses incurred during 1985-1987 produces an expense for rate-making purposes of $63,748; therefore, the Commission has reduced test year expenses by $66,296 ($130,044 - 63,748).

Records and Collections

Columbia proposed an adjustment to increase cash records and collection expense by $249,508. This amount is comprised of a $221,387 adjustment to amortize over 3 years deferred costs of $664,101 associated with Columbia's newly installed Distribution Information System ("DIS"), and $28,121 to reflect the postage increase effective January 1, 1988.

The AG proposed an adjustment to increase this expense by $50,431. The AG's adjustment was based upon including the test year DIS expenses of $49,000 plus the deferred costs of $664,101, and amortizing this total over a 10-year period. Thus, the AG proposed an adjustment for DIS expenses of $22,310 [($664,101 + 49,000) + 10 - 49,000]. The AG did not disagree with Columbia's proposed postage adjustment.

The Commission likewise concurs with Columbia's proposed adjustment to reflect increased postage costs. However, the Commission is of the opinion that a longer amortization period should be applied to the deferred DIS costs and agrees with the AG concerning the proper treatment of DIS costs expensed during the test year. Columbia expects the DIS to last at least 15 years.[71] This being the case, the Commission finds that 15 years is the appropriate term over which to recognize this expense. The Commission sees no reason why today's ratepayers should bear the full cost of an asset that will benefit ratepayers 15 years from now. Additionally, there is no reason why these future ratepayers should not bear their fair share of the cost of this system when the time comes, as they will benefit from it. The Commission agrees with the AG's proposed treatment of test-year DIS costs that were expensed, because these costs relate to software development,[72] which indicates that the associated benefits will accrue for more than on 1 year. The amortization over 15 years of total deferred DIS costs of $713,101 ($664,101 + 49,000) results in DIS amortization of $47,540. Upon eliminating test-year DIS cost expense of $49,000 and adjusting for increased postage costs of $28,121, the Commission's total adjustment to records and collections expense is an increase of $26,661.

In consideration of the rate-making treatment accorded the DIS costs, the Commission is of the opinion that this asset should be capitalized to plant in service accounts in accordance with the provisions of the Uniform System of Accounts. Thus, in future rate proceedings, cost recovery of the DIS will be provided through depreciation expense. The Commission has adjusted rate base to reflect this treatment of the DIS.

Pension and Benefits

Columbia initially proposed an adjustment to increase employee pension and benefits by $43,677, from $1,513,696 to $1,557,373. This was based upon a projected pension level of $278,000.[73] However, Columbia subsequently modified its position to agree with the AG's proposal that this expense be based upon a pension level of $159,547 which results in a projected expense of $1,438,920.[74] The AG and Columbia agree on all other aspects of this adjustment. Therefore, the Commission has made an adjustment to reduce test year expenses by $74,776 ($1,513,696 - 1,438,920).

Injuries and Damages

Columbia proposed an adjustment to increase injuries and damages expense by $16,379 based on a 5-year average of actual settlements. This method of arriving at an adjustment is similar to the one that has been used in previous cases.

The AG proposed that test year expenses be reduced by $135,750 due to the significant increase in injuries and damages expense.[75] Account No. 925, Injuries and Damages, has increased significantly during the past several years. The following is a 3-year analysis of charges to this account:[76]

Year	Actual Account No. 925 Expense
1987	$329,480
1986	193,730
1985	100,584

The Commission is aware of the recent increases in liability insurance costs and that this has resulted in higher injuries and damages expense. However, Mr. DeWard has testified that insurance rates are softening and rate declines may occur in the near future. In consideration of this, Columbia was requested to file evidence that the test-year insurance level is representative of going-forward levels. The evidence provided in response to this request was the statement that, "Columbia believes that the test year level of insurance premiums is representative of a going-forward level."[77] Columbia did not even provide quotes of current insurance costs. The Commission finds this evidence to be insufficient.

Under the circumstances the Commission finds that a 3-year average, based upon the historical data in the above table, is an appropriate method of establishing a proper injuries and damages expense for rate-making purposes. This produces an allowable expense of $207,931, which requires an adjustment to reduce expenses by $121,549.

Uncollectible Accounts

Columbia proposed an adjustment to increase uncollectible accounts expense by $339,818. This adjustment is based upon a 5-

year arithmetic average of net charge-offs plus the amortization over 3 years of the arrearages of Johnson County Gas, Inc. ("Johnson County") and Martin Gas, Inc. ("Martin"), related to unpaid wholesale gas purchases. The Johnson County and Martin arrearages at the end of the test period were $186,224 and $168,411, respectively.

The AG proposed an adjustment to increase uncollectible accounts expense by $261,199. This amount represents Columbia's proposed adjustment reduced by $51,355 to remove the portion of the Johnson County and Martin arrearages that is related to late payment charges, and reduced by $27,264 to amortize recoveries from Johnson County which the AG believes were charged to rate-payers in Case No. 9554.[78]

The method proposed by Columbia for determining uncollectible accounts expense in this proceeding is not consistent with the method used by the Commission in Case No. 9003, which Columbia subsequently agreed is an appropriate method.[79] The method used in Case No. 9003 was based upon the historical ratio of net charge-offs to gross billed revenues.[80] Based upon the years 1984-1987, this ratio is 0.2726 percent, determined as follows:

Year	Gross Billed Revenues[81]		Net Charge-Offs[82]		
1984	$132,520,671		$ 464,989		
1985	119,698,895		309,135		
1986	107,765,281		416,703		
1987	96,034,720		52,432		
	$456,019,567	÷	$1,243,259	=	0.2726%

Applying this ratio to normalized gas sales revenues of $92,590,631 produces a normalized uncollectible accounts expense of $252,402, which requires an adjustment to increase the test year expense by $217,402.

The Commission is of the opinion that recovery of the Martin and Johnson County arrearages from general ratepayers is inappropriate at this time. In its Order in Case No. 10204 dated September 16, 1988, the Commission adopted Staff's amended report which contained recommendations that "will provide sufficient revenues to allow Martin to meet its operating expenses, provide for reasonable equity growth, and allow it to begin to make payments on the Columbia court judgment."[83] With regard to Johnson County, Columbia is currently a party to a bankruptcy settlement plan designed to extinguish the Johnson County arrearage. Moreover, Johnson County, under the reorganization plan, is now making payments on this debt.[84] Based upon the foregoing it is apparent that it cannot be established that the Martin and Johnson County arrearages are indeed uncollectible. Therefore, the Commission finds that no provision for the amortization of these arrearages should be made in the current case. Moreover, the Commission makes no finding concerning the dispute between the AG and Columbia relating to the appropriate treatment of late payment charges, as this point is now moot.

Wages and Salaries

Columbia proposed an adjustment to increase wages and salaries expense by $640,481. The proposed adjustment consists of two components: 1) an increase of $247,041 to normalize to year-end wage levels; and 2) an increase of $393,440 to reflect scheduled increases through December 1, 1988.

The AG proposed an adjustment to increase wages and salaries expense by $102,465. This adjustment was arrived at by eliminating the $393,440 post-test-year wage increase proposed by Columbia and reducing Columbia's proposed normalized expense by $144,576 to reflect a 3-year average of overtime wages and salaries.[85] Mr. DeWard stated that the post-test year adjustment is improper because this would produce an improper match of revenues and expenses, and that test-year overtime levels should be reduced because it is inappropriate to set rates based on a level which is significantly higher than prior years.[86]

Wages and salaries are generally comprised of several overlapping components: regular time, overtime, capitalized wages and salaries, and expensed wages and salaries. In Columbia's situation there are the additional components of "premium" wages and salaries, and allocated administrative and general salaries. The method of normalizing wages and salaries proposed by Columbia does not appear to maintain the relative proportional relationships of the above components. Moreover, the approach of factoring "Average Monthly Wages" into the calculation is inconsistent with the Commission's usual method which bases this adjustment on actual wages and salaries. The Commission has determined that the appropriate normalized wages and salaries expense level upon which Columbia's rates should be set is $9,746,660, which produces a required adjustment of $157,828. Following is a discussion of how these amounts were determined.

The Commission's adjustment begins with Columbia's proposed normalized "Direct" Wages and Salaries, which represents all base wages and salaries other than allocated administrative and general salaries. To this has been added Premium Wages and Salaries, at the test year percentage, to arrive at Total Direct Wages and Salaries Excluding Overtime. A provision for Overtime Wages and Salaries is determined based on 9.35 percent of Total Direct Wages and Salaries. The 9.35 percent is based upon the actual test year ratio of overtime wages and salaries to Direct Wages and Salaries Excluding Overtime. The resulting amount is Total Direct Normalized Wages and Salaries. Normalized Direct Wages and Salaries is then multiplied by the test-year actual ratio of wages and salaries expensed to Direct Wages and Salaries, to arrive at Adjusted Wages and Salaries Expense. Applying the actual ratio of Wages and Salaries to Direct Wages and Salaries accomplishes two things: first, it provides a provision for administrative and general salaries in the same proportion to Direct Wages and Salaries as occurred during the test year and, second, it eliminates capitalized wages and salaries at the test-year capitalization rate. Upon subtraction of the test-year actual wages and salaries expense, an adjustment of $157,828 is derived.

The AG proposed that an adjustment be made to reflect a 3-year average of overtime due to the recent increases in this expense. The AG is correct in this observation. However, the Commission also notes that the percent of wages and salaries expensed has decreased significantly during this same period. If an average is applied to the overtime component, there is a corresponding argument that an average should be applied to the expense ratio component. Rather than apply averages to any of the individual components, the Commission finds that this adjustment should be based on test-year actual levels and, therefore, the AG's proposal should be denied.

The Commission agrees with the AG's proposal that Columbia's post-test year adjustment to include wage increases through December 1, 1988 should be denied. In establishing the adjusted level of operating revenues and expenses, net investment rate base, and capitalization, 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 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 expense items for changes occurring after the test year while other revenue and expense items as well as components of the rate base remain at test year-end levels. It is the opinion of this Commission that wage and salary increases occurring during December 1988 are too far outside the end of the test period and to adjust this item as proposed by Columbia would improperly update the year-end expenses and result in a mismatch of earnings, rate base, and capitalization.

Columbia argued that the post-test year adjustment should be allowed because: it is obligated by contract to grant a 5 percent union wage increase December 1, 1988; the amount of the increase is known and measurable and will be tracked by nonunion and administrative and general wages; and the amount must be recognized to afford Columbia an opportunity to earn its authorized return.[87]

The Commission is of the opinion that Columbia's arguments do not outweigh the reasons cited above concerning why this post test-year adjustment is inappropriate and, therefore, the adjustment should be denied.

Additional AG Adjustments

At the public hearing the AG proposed several additional pro forma adjustments which had not been included in previous testimony. The Commission has typically disallowed such adjustments since there is not adequate time for all parties to fully explore the issues when they are not made until the formal hearing is underway. Therefore, the Commission believes it is appropriate to apply its typical treatment in this instance and exclude the AG's proposals.

Other Taxes

Columbia proposed an adjustment to increase other taxes by \$133,855; this adjustment consisted of increases of \$66,042 for property taxes and \$67,843 for FICA taxes.

The AG accepted Columbia's proposals with the exception that an adjustment was made to reflect a level of FICA tax consistent with the AG wage adjustment.

Columbia's proposed property tax adjustment was based upon an estimated assessment value and an estimated assessment rate of 0.936 percent. During the course of the proceedings the actual assessments became available, thus, the Commission has used the actual assessment values. Therefore, based upon the actual results of Columbia's 1988 Assessment of $50,000,000[88] and Columbia's estimated assessment rate of 0.936 percent,[89] the Commission has increased Columbia's test-year property tax expense by $49,042.

The Commission has reduced Columbia's proposed FICA tax adjustment by $36,247,[90] producing an adjustment to the test year expense of $31,596 ($67,843 - $36,247). Therefore, the Commission has made a total adjustment to other taxes expense of $80,638 ($49,042 + $31,596).

Depreciation Expense

Columbia proposed an adjustment to increase depreciation/amortization expense by $39,081. This adjustment is the net result of test-year plant additions and a decrease in the composite depreciation rate.

The AG proposed an adjustment to reduce Columbia's proposed depreciation expense by $82,719 to reflect the elimination of depreciation of assets associated with a $4.8 million customer advance from the Commonwealth of Kentucky associated with serving Toyota. The AG argued that it is inappropriate for such depreciation to be included in depreciation expense. The net adjustment proposed by the AG is to decrease test-year depreciation expense by $43,638 (82,719 - 39,081).

The Commission concurs with the AG's proposal to exclude depreciation associated with the Toyota advance for construction and has made an adjustment to reduce test year depreciation expense by $43,638. Additionally, as noted in the Rate Base Section of this Order, the Commission has excluded the test-year-end CWIP accrual of $4,532,454. As Columbia's proposed depreciation adjustment included this balance, the Commission has made an adjustment to exclude these amounts and has reduced Columbia's test-year depreciation expense by $139,383.[91] The combined adjustments result in a total adjustment to reduce depreciation expense of $183,021. It should be noted that the Commission's treatment of DIS costs also results in a depreciation adjustment; however, all aspects of that adjustment are contained in the "Records and Collections" section of this Order.

Income Taxes

Based upon its requested return and proposed statutory tax adjustments, Columbia proposed a total income tax expense of $4,694,382. The AG proposed several adjustments to the expense proposed by Columbia. Following is a discussion of the issues raised by the AG and other tax issues as they relate to the Commission's findings in this case:

Unbilled revenues: The AG proposed an adjustment to reduce Columbia's proposed income tax expense by $570,043,[92] on the basis that its proposal to include unbilled revenue amortization associated with the Tax Reform Act is inappropriate because it has no relevance for book purposes and because ratepayers have never benefited from the company's previous treatment of unbilled revenues.[93] Columbia argued that since a greater income tax liability will result from this Tax Reform Act rule, and because this is a cost of business, the tax payment should be recovered from ratepayers. The Commission agrees with the AG. Rates are set based upon book income tax expense. While this Tax Reform Act rule will increase tax return income, there will be no effect on pre-tax book income or book income tax expense. During cross-examination, Columbia agreed with these reasonings.[94] The Commission has, therefore, reduced Columbia's proposed income tax expense by $570,043.

Bad Debts Adjustment: The Tax Reform Act prescribed a rule for bad debts reserve similar to the rule related to unbilled revenues as described above. The AG proposed an adjustment to reduce Columbia's proposed expense by $36,506 to eliminate the effect of Columbia's proposed rate-making treatment of this Tax Reform Act rule. For the reasons described in the discussion related to unbilled revenues, the Commission agrees with the AG and has reduced Columbia's proposed income tax expense by $36,506.

Straight-Line Tax Depreciation: Columbia proposed an adjustment to reduce tax depreciation straight-line by $398,654 resulting in a reduction to income tax expense of $154,618. This proposal was subsequently amended to a reduction of $222,938.[95] The AG argued that this adjustment should be denied because, as Columbia is proposing to reduce its depreciation rates in this proceeding, it is unclear how a reduction in book depreciation can result in an increase in the difference between tax depreciation straight-line and booked. The Commission agrees with the AG. Columbia has not adequately addressed the discrepancy noted by the AG, nor has it adequately justified the appropriateness of this adjustment through its testimony or during cross-examination.

Therefore, the Commission has reduced Columbia's proposed income tax expense by $154,618.

State Deferred Taxes: The AG proposed an adjustment to reduce income tax expense by $20,428 to flow through to ratepayers the benefit of reduced federal income tax expense based on state income tax deferrals.[96] Columbia agreed with the AG that ratepayers should receive this benefit, but argued that the AG's adjustment is inappropriate because Columbia did factor this into its calculation of federal income tax expense.[97] Upon cross-examination, Columbia explained that it had considered and factored into its calculation the AG's concern on line 23 of Exhibit 42.[98] It is apparent from Exhibit 42 that Columbia did address the AG's concern in its tax calculation and that no further adjustment is necessary.

Interest Synchronization: Based upon the rate base, capital structure, and rate of return, the Commission has calculated an interest deduction for income tax purposes of $2,485,384.[99] Based upon this determination, Columbia's proposed income tax expense has been reduced by $228,600.[100]

Taxes on Return

The reduction to Columbia's proposed income tax expense related to the lower return has been computed by the Commission in the same manner as the AG did in DeWard Schedule 3, lines 13-20. The taxes on Columbia's return implicit in its filing is $3,304,402.[101] Based upon the net investment rate base and weighted cost of equity (Common + Preferred = 6.2 + .360 = 6.56) determinations of the Commission, the reduction to Columbia's income tax expense related to return requirements is $803,164. Following is the Commission's calculation of this amount.

Taxes on Return - Columbia		$3,304,402
60,179,018 x .0656 x .0725/.9275 =	308,584	
[308,584 + (60,179,018 x .0656)]		
x .34/.66 =	2,192,654	<2,501,238>
Reduction Related to Return		803,164

Normalized Taxes

Based on the foregoing income tax adjustments, Columbia's normalized income tax expense has been determined to be $2,471,234. Following is a reconciliation of this determination with Columbia's proposed income tax expense:

Columbia Proposed Income Tax Expense	$4,694,382
Adjustments	
Unbilled Revenue Adjustment	<$570,043>
Bad Debts Adjustment	<36,506>
SL Depreciation Adjustment	<154,618>
Interest Synchronization	225,635
Taxes on Return	<803,164>
Total Tax Provision	$3,355,686
Less: Taxes on increase	
2,280,396 x .38785	<884,452>
Normalized Taxes	$2,471,234

Based upon the foregoing adjustments, the Commission finds Columbia's adjusted test period to be as follows:

	Test Year Actual	Adjustment	Adjusted
Operating Revenues:			
Revenue from Sales	$96,415,324	<$3,824,693>	$92,590,631
Other Revenue/ Credits	265,936	<42,856>	223,080
Total Operating Revenues	$96,681,260	<$3,867,549>	$92,813,711
Operating Expenses:			
Purchased Gas	$67,244,792	<$4,184,854>	$63,059,938
Other O & M	18,431,057	<242,662>	18,188,395

Depreciation/ Amortization	3,008,492	<183,021>	2,825,471
Other Taxes	1,144,824	80,638	1,225,462
Income Taxes	2,405,472	65,762	2,471,234
Total Operating Expense	$92,234,637	<$4,464,137>	$87,770,500
Operating Income	$4,446,623	$596,588	$5,043,211

RATE OF RETURN

Cost of Debt

Mr. Vari proposed a cost of long-term debt of 8.91 percent, a cost of preferred stock of 9.86 percent, and a cost of short-term debt of 9.23 percent.

Dr. Freeman proposed a cost of long-term debt of 8.60 percent, a cost of preferred stock of 9.86 percent, and a cost of short-term debt of 9.23 percent. Dr. Freeman's calculations on long-term debt omitted the LRLA and also adjusted the Revolving Credit Agreement ("RCA") to reflect average costs rather than annualized costs. Dr. Freeman's reasons for omitting the LRLA have already been discussed. Dr. Freeman used average cost of the RCA because of its similarity to short-term debt in that the RCA does not have a fixed interest rate and the balance can fluctuate at Columbia System's option. Because of this similarity, Dr. Freeman felt the RCA should also reflect average cost just as the short-term debt component of total capitalization reflected average costs. This would result in an RCA average cost of 8.16 percent versus the annualized cost of 8.75 percent used by Mr. Vari.

The Commission is in agreement with Dr. Freeman in his treatment of the LRLA and the RCA. Given the Commission's prior finding that the LRLA should be omitted in determining capital structure, it is also of the opinion that the LRLA should be omitted in determining the cost of long-term debt. Since the RCA is very similar in most respects to short-term debt, the Commission is of the opinion that the average interest costs of the RCA should be used in determining long-term costs. Therefore, the Commission is of the opinion and finds that based on the exclusion of the LRLA and an RCA average cost of 8.16 percent, the cost of long-term debt should be 8.60 percent. The Commission further finds that the cost of short-term debt and preferred stock should be 9.23 percent and 9.86 percent, respectively.

Return on Equity

Mr. Vari recommended a return on equity ("ROE") of 15.0 percent and based his estimates on two approaches: the equity risk premium approach and the capital attraction approach. For comparison purposes, Mr. Vari also estimated ROE based on the DCF method, although he rejected this method as being too volatile and, therefore, unreliable.

Mr. Vari's risk premium estimate was based on a study done by Ibbotson Associates which examined the period from 1926-1986. A "risk premium" is the return on equity investors require above the return currently available on corporate bonds. Over this period, the study showed the total return on common stocks averaged 5.0 percent more than the total return on long-term corporate bonds.

This premium when added to the current "A" rated and "BBB" rated bond yields results in a 14.94 to 15.44 percent ROE.

A second method Mr. Vari used in estimating the ROE was the capital attraction method. "The capital attraction approach relates the return on common equity with the required pretax interest coverage ratio needed to assure access to capital markets."[102] A Standard & Poor's criterion for an "A" rating on long-term debt is a pretax interest coverage ratio of 3.0 to 4.0 times for gas distribution companies. Mr. Vari testified that in order for Columbia to achieve a 3.5 times ratio, the midpoint of Standard & Poor's criterion, Columbia would have to earn an ROE of 15.75 percent.[103] Mr. Vari's recommended ROE also included an allowance for flotation costs.

Dr. Freeman recommended an ROE of 12.25 percent based on his discounted cash flow ("DCF") analysis, taking into consideration the differences in risks associated with Columbia, a distribution company, and the Columbia System as a whole. Dr. Freeman testified that Columbia System's distribution operations contributed 100 percent toward Columbia System's earnings, although it only represented 25 percent of its assets.[104] Dr. Freeman further testified that the beta coefficients, which is a measure of risk for stock prices, are higher for Columbia System than for the average distribution company.

In his DCF analysis, Dr. Freeman used Columbia System's actual 1987 dividends of $1.70 rather than the $1.77 annualized dividends as of December 31, 1987 used by Mr. Vari. This resulted in a change in the dividend yield as of December 31, 1987 from Mr.

Vari's 7.95 percent to Dr. Freeman's 7.58 percent.[105] In estimating growth for the DCF model, Dr. Freeman testified that the model requires the use of dividend growth and not earnings growth. Dr. Freeman based his growth rates on Value Line estimates of Moody's Gas Distribution Companies.[106] This resulted in a range of 3.75 to 4.25 percent. Dr. Freeman also included an allowance for flotation costs in his recommended ROE.

Dr. Freeman also made his own estimates of ROE based upon a risk premium analysis. A major problem Dr. Freeman found with the risk premium approach is that it is highly sensitive to the time period over which it is calculated. Dr. Freeman demonstrated this in Exhibit 7 of his testimony which showed the risk premium ranged from -3.7 to +5.5 percent from 1958 to 1986. Based on this data, Dr. Freeman testified that a risk premium of 2.5 to 3.0 percent was very reasonable. Another criticism Dr. Freeman had on Mr. Vari's risk premium analysis was his use of "BBB" and "A" rated bonds. The Ibbotson study used the Salomon Brothers' High-Grade Long-Term Corporate Bond Index to determine yields and, therefore, it would have been more appropriate for Mr. Vari to have used "AA" rated corporate bonds.[107] After adjusting for issuance costs, this resulted in a cost of equity of approximately 13.0 percent. Dr. Freeman adjusted this figure down to 12.02 percent, because distribution companies have less risk than a company of average risk.[108]

In this case, witnesses for Columbia have asked the Commission to accept an ROE based on a risk premium and a capital attraction approach. The Commission is of the opinion that the risk premium approach is highly sensitive to the time period chosen over which a risk premium is calculated. Thus, an investor's current risk premium becomes very difficult to estimate. Therefore, the Commission is of the opinion that the risk premium approach is not very reliable in estimating ROE. Further, the Commission is of the opinion that the capital attraction approach presented by Mr. Vari is very narrow in its scope. First, there are many criteria that Standard & Poor's uses in determining bond ratings. Second, there are other factors that could increase the pretax interest coverage of a firm besides an increase in ROE, such as changes in a firm's capital structure, or changes in interest rates. The Commission is, therefore, of the opinion that the capital attraction approach as applied by Mr. Vari should be rejected.

The Commission has traditionally used the DCF model in estimating ROE. Although one cannot rely on a strict interpretation of the DCF model, the Commission is of the opinion that the DCF approach will provide the best estimate of an investor's expected ROE. Dr. Freeman used the DCF approach in estimating ROE. However, the Commission is of the opinion that Dr. Freeman has misapplied the model by using the past year's 1987 actual dividends of $1.70 rather than current year's annualized dividends of $1.77. It is current dividends upon which investors form expectations and the current annual dividend investors expect is $1.77. Therefore, the Commission is of the opinion that Dr. Freeman has understated investors' expected ROE.

In addition, while the Commission understands that investors may require a higher ROE in order to recover flotation costs incurred in public stock offerings, Columbia has been unable to specifically identify these costs. Furthermore, if these costs have been incurred, Columbia has neither demonstrated nor convinced the Commission that these costs have not been recovered as expense items. Therefore, the Commission is of the opinion and finds that no allowance should be made to ROE for the recovery of flotation costs.

Therefore, the Commission, having considered all of the evidence, including current economic conditions, is of the opinion that an ROE of 12.30 to 13.30 percent is fair, just, and reasonable. An ROE in this range would allow Columbia to attract capital at a reasonable cost and maintain its financial integrity to ensure continued service and to provide for necessary expansion to meet future requirements, and also result in the lowest possible cost to ratepayers. A return of 12.80 percent will best meet the above objectives.

Rate of Return Summary

Applying rates of 8.60 percent for long-term debt, 9.23 percent for short-term debt, 9.86 percent for preferred stock, and 12.80 percent for common equity to the recommended capital structure approved herein produces an overall cost of capital of 10.70 percent. The Commission finds this overall cost of capital to be fair, just, and reasonable.

REVENUE REQUIREMENTS

Based upon the Commission's findings and determinations herein, Columbia requires an increase in revenues of $2,280,396. Following is the Commission's calculation of this required increase:

	Net Investment Rate Base	$60,179,018
x	Rate of Return	10.7%
	Required Operating Income	6,439,155
-	Adjusted Operating Income	5,043,211
	Deficiency	1,395,944
x	Tax Gross : 1 + .38785 + (1 - .38785)	1.633586
	Required Increase	2,280,396

Following is a schedule reflecting the above determination in the format as presented by Columbia in its Exhibit 13:

O & M Expense	$81,248,333
Depreciation and Amortization	2,825,471
Other Taxes	1,225,462
Credits to Cost of Service	<223,080>
Return	6,439,155
Income Taxes	3,355,686
Total Cost of Service	94,871,027
Normalized Revenues - Sales	<92,590,631>
Deficiency	2,280,396

OTHER ISSUES

Cost-of-Service Study

Columbia presented an embedded cost-of-service study, as adjusted and allocated by rate schedule, for the 12 months ending December 31, 1987. All cost-of-service components have been allocated to the following rate schedules: General Service ("GS") for Residential, Commercial, and Industrial; Firm and Interruptible ("FI"); Interruptible Service ("IS"); Intrastate Utility Service ("IUS"); and Transportation Delivery Service ("DS"). The cost-of-service study's sponsor, William L. Payne, explained that the primary cost components of the income statement and original cost rate base, including distribution mains and mains expenses, were allocated among the classes of customers 50 percent on the basis of design day (peak demand) volumes and 50 percent on annual throughput (average demand) volumes.[109] Furthermore, Mr. Payne explained that, since distribution service lines required no increase in expenditures as throughput increased, all service-related costs were allocated on the basis of customers.[110]

Columbia's study indicates that, at proposed rates, GS-Commercial, GS-Industrial, FI, and IS customers are making a larger contribution to system costs than GS-Residential, IUS, and DS customers.[111] Specifically, their exhibit shows the following rates of return: overall company, 11.84 percent; GS-Residential, 6.78 percent; GS-Commercial, 26.9 percent; GS-Industrial, 19.12 percent; FI, 11.7 percent; IS, 12.0 percent; IUS, -5.75 percent; and DS, 8.48 percent.

KIUC's witness, Mr. Eisdorfer, criticized Columbia's cost-of-service study and presented an alternative study. KIUC contended that Columbia's study is deficient because (1) it improperly allocated distribution costs on the peak and average allocation methodology; and (2) it fails to classify a portion of distribution mains as being customer related.[112] KIUC argues that the peak and average methodology is inappropriate since distribution systems must be built to satisfy design day peak demand and not average demand. Mr. Payne agreed that a system designed to merely accommodate average daily throughput would normally be insufficient to satisfy peak day demand.[113]

The cost-of-service study prepared by Mr. Eisdorfer allocated distribution main costs to firm sales classes based solely on their respective design day demands. As for transportation customers, he contended that, because of their interruptibility, it is theoretically appropriate not to assign any distribution main costs to this class.[114] However, in recognition of the fact that transportation customers do use the distribution facilities, his study allocated distribution main costs to these customers based on their scheduled gas deliveries on Columbia's test-year peak day. Additionally, Mr. Eisdorfer's cost-of-service study reallocated land rights for distribution plant on plant excluding intangible and general plant as opposed to Columbia's study which utilized the peak and average method. These changes produced the following class rates of return at proposed rates: overall company, 11.84 percent; GS-Residential, 5.52 percent; GS-Commercial, 23.4 percent; GS-Industrial, 18.83 percent; FI, 19.69 percent; IS, 27.35 percent; IUS, -6.05 percent; and DS, 39.75 percent.[115]

Mr. Eisdorfer, as previously mentioned, maintained that interruptible transportation customers should not be responsible for distribution main costs. Mr. Payne, in responding to this assertion, raised the following issues. First, he contended that most of Columbia's interruptible transportation customers were previously interruptible or firm tariff customers, and Columbia's plant was partly designed to serve them as such.[116] Second, transportation service, which did not exist when the vast majority of mains were built, benefits from the design of existing facilities.[117] The Commission concurs with Mr. Payne's contention that these past factors had a role in the development of Columbia's current distribution system. Furthermore, the Commission believes that all users of a system must bear a relative portion of the costs of building, operating, and maintaining that system. The Commission is concerned that neither Columbia nor KIUC has appropriately determined the distribution main cost incurrence of transportation customers. Therefore, the Commission will require Columbia to address the allocation of distribution main costs to transportation customers in its next rate proceeding.

Mr. Eisdorfer stated that a zero-intercept methodology would permit a proper customer classification of a portion of distribution main costs.[118] The Commission is of the opinion that the zero-intercept methodology is an acceptable way to divide distribution main costs into demand-related and customer-related components. However, Mr. Payne has stated that Columbia's current accounting practice classifies the investment in new distribution mains of three inches and smaller into one category.[119] This practice will severely impair Columbia's ability to perform a zero-intercept study, as well as the alternative minimum-intercept study. The Commission is of the opinion that this accounting practice will unnecessarily obstruct the development of an objective methodology to perform an appropriate analysis of the demand-related and customer-related components of distribution main costs. The Commission is of the opinion and finds that Columbia should maintain the data necessary to accurately perform a zero-intercept study, as well as other commonly accepted cost-of-service methodologies and procedures.

Mr. Payne has stated that, given the imprecise nature of cost-of-service studies, multiple methodologies should be utilized in order to develop a cost-of-service range. The Commission is of the opinion that a well documented and carefully separated multiple-methodology approach to cost-of-service studies will provide it additional information for rate design. Therefore, Columbia is encouraged to submit cost-of-service studies of this sort in future rate proceedings.

Pursuant to the Joint Stipulation and Recommendation in Columbia Case No. 9554, the Commission is of the opinion and finds that the cost-of-service studies presented in this proceeding do not have a great bearing on rate design. Cost-of-service studies presented in future proceedings will be scrutinized more vigorously and will be accorded a greater weight.

Revenue Increase Allocation

Based on the settlement agreement from its last general rate case, Case No. 9554, Columbia proposed no rate design changes in this case that would result in shifting costs to the residential customer class.[120] The only rate design change proposed by Columbia, and addressed elsewhere in this Order, is an increase in the GS Interruptible Transportation Rate ("ITR"). As stated earlier, the two cost-of-service studies are being given limited consideration in this proceeding due to our concerns about the studies and due to the intent of the parties, GTE excepted, to adhere to the spirit of the settlement agreement from the prior case.

Aside from the GS Interruptible Transportation Rate, Columbia proposed to increase base rate revenues from all rate classes by approximately 25 percent, which was the overall percentage increase for base rate revenues.[121] The AG generally agreed with Columbia's allocation proposal while KIUC and GTE did not.

KIUC recommended that only the residential and transportation classes share in the first $960,665 of any reduction the Commission made to Columbia's requested increase.[122] This preferred treatment of the residential class would be in keeping with the spirit of the settlement agreement,[123] while the preferred treatment of the transportation class would be in the financial interests of KIUC's members. KIUC also recommended, based on the settlement, that any reduction in excess of $960,665 be distributed uniformly to all customer classes.[124]

GTE fully endorsed the cost-of-service study sponsored by KIUC, as it relates to GTE, and recommended that the Commission set Columbia's interruptible transportation rate at $.18 per Mcf,[125] or approximately one-half the current rate. In the alternative, GTE argued that the Commission should move rates for the transportation class closer to cost-based rates, as determined by KIUC, which would mean a reduced rate for GTE.[126]

For reasons previously discussed, the Commission's reliance on the cost-of-service studies sponsored by Columbia and KIUC for rate-setting purposes is minimal. With such limited reliance, and in keeping with the spirit of the settlement reached in Case No. 9554, it is the Commission's opinion that any increase should, with two exceptions, be allocated to all rate classes uniformly based on the approximate 7.1 percent increase in base rate revenues granted herein. Such allocation results in no additional shifting of costs to the residential customer class and is in keeping with the Commission's objective of maintaining rate continuity. The exceptions to this allocation of the increase are the wholesale ("IUS") customer class and the transportation class.

The IUS class, per either cost-of-service study, would produce a negative rate of return of approximately six percent under Columbia's proposed rates. The Commission will not exacerbate this condition by reducing the proposed rate and thereby cause the IUS class to fall farther away from providing a positive return to Columbia. Therefore, the full 25 percent increase, or 2.31 cents per Mcf, will be granted.

The test year-end rate for interruptible transportation service was 37.12 cents per Mcf compared to the interruptible rate for tariff sales of 39.42 cents per Mcf, a difference of 2.3 cents. Columbia, having stated its intent to eventually have transportation rates that approximate the mark-up over gas costs for tariff rates,[127] proposed a rate of 48.32 cents per Mcf for interruptible transportation and an interruptible tariff rate of 49.43 cents per Mcf, narrowing the difference to 1.11 cents per Mcf. Mr. Eisdorfer claims that Columbia's intent is improper as it ignores the differences in the cost of providing transportation service versus sales service.[128] These differences, per Mr. Eisdorfer, are due to the higher load factors and greater size of Columbia's transportation customers and to the non-gas costs Columbia incurs in providing sales service for items such as production plant.[129]

Contrary to Mr. Eisdorfer's assertions, the Commission finds considerable merit in Columbia's plan to bring transportation rates up to the level of tariff rates. As Mr. Payne explained, the load factor benefits of serving transportation customers are minimal compared to the benefits of making tariff sales to those customers.[130] Moreover, as Mr. Payne also noted, most of Columbia's transportation customers were previously tariff customers;[131] therefore, those customers' requirements were taken into consideration as part of Columbia's decisions to make investments in items such as production plant. For these reasons, the Commission is of the opinion that the increase allocated to the transportation class should be greater than Columbia's overall increase and should move the transportation rate closer to the tariff rate.

In this case the Commission learned that the amount of unaccounted-for gas reported by Columbia is based on its total throughput, which includes transportation volumes.[132] However, at present, the cost responsibility for unaccounted-for gas lies with Columbia's tariff customers through the gas cost component of Columbia's rates. While transportation volumes accounted for 23.3 percent of Columbia's test year throughput, none of the cost of unaccounted-for gas has been assigned to these customers. Mr. Eisdorfer calculated an incremental cost for transportation customers of six cents per Mcf for unaccounted-for gas.[133] He also stated that unaccounted-for gas could be reflected in a cost-of-service study;[134] however, he contended that under both the current and proposed rates the transportation class is subsidizing other customers in amounts many times in excess of the cost of unaccounted-for gas.[135]

As stated previously, the Commission has expressed certain concerns about the cost-of-service studies filed in this case. Because of those concerns, the Commission is not persuaded by Mr. Eisdorfer's claim that there are cost-of-service subsidies reflected in Columbia's current rate structure. Nor is the Commission persuaded that this claim should enter into the question of determining cost responsibility for lost and unaccounted-for gas. The Commission has no supporting calculations for the six cents calculation made by Mr. Eisdorfer; as such, we have no basis for either accepting or rejecting it, except to say that it appears reasonable based on our analysis of the test year throughput volumes and gas costs. At this time, however, due to our concerns about the cost-of-service studies, we do not find it appropriate to add six cents to the transportation rate. It is justified and proper, in our opinion, to consider this as another reason, an important reason, for allocating the transportation class a greater increase than the overall percentage increase with the result being to achieve Columbia's goal of having the interruptible transportation rate approximately equal the interruptible tariff rate. As a greater number of more sophisticated cost-of-service studies are filed in future cases, this issue will be addressed further.

Rate Design

Columbia's proposed rate design, like its revenue allocation, was limited in accordance with the settlement from the previous case. Accordingly, Columbia proposed across-the-board increases of approximately 25 percent for all base rate charges.[136] The settlement prohibited Columbia from proposing any further shifting of costs to residential customers. With its proposal to increase all charges by the same percentage increase, Columbia properly complied with the settlement terms.

The Commission, after analyzing the impact of Columbia's proposal, is of the opinion that a modification is required to better preclude any cost shift to residential customers. As Mr. Burchett acknowledged under cross-examination, based on average customer usages the customer charge is a larger component of a residential customer's bill than of a commercial or industrial customer's bill.[137] Therefore, an increase in customer charges would have a proportionately greater impact on residential customers compared to larger volume customer classes. The impact of this can be seen when comparing the percentage increases in revenues for all customer classes, based on total revenues including gas cost revenues. The residential class would receive the largest percentage increase of any tariff rate class, 8.1 percent, while the large usage tariff customers would receive overall increases of between 2.3 and 3.9 percent.[138] As Mr. Burchett explained, the residential and other general service customers receive the largest increase because they have the largest mark-up over gas costs.[139]

The Commission is of the opinion that the increase granted herein should be spread more evenly over the rate classes to insure the lower volume residential class receives an increase in total revenues no greater than the overall increase as a percentage of total revenues, including gas cost revenues. To accomplish this goal the Commission has increased customer charges by only 5 percent, compared to the overall base rate revenue increase of 7.7 percent. Accordingly, volumetric charges have been increased by a larger percent to recover the difference between the revenues generated by the 5 percent increase and the level of revenues that would have been generated by a 7.7 percent increase in customer charges. By this method, with more of the increase assigned to Mcf charges, the increase will be borne more evenly by high volume customers and the lower volume residential class.

Tariff Revisions

In addition to its proposed rate changes, Columbia proposed several wording changes in the text of its tariffs. Columbia proposed changes to the Delivery Service, Firm and Interruptible Service, Interruptible Service, and Alternate Fuel Displacement Service Rate Schedules.[140] Changes were also proposed for the billing and payment section of the tariffs specifically related to service to wholesale customers.[141] All changes not specifically addressed herein are approved as proposed by Columbia. Such changes were proposed to establish uniformity throughout the rate schedules and simplify the existing terminology contained in the tariffs. The approved tariff changes are shown in Appendix A.

GS Interruptible Transportation Rate

Columbia proposed to increase the ITR from $.3712 per Mcf to $.80 per Mcf as the first step in a proposed two-step elimination of the ITR. Mr. Burchett explained that the current two-part GS rate, firm and interruptible, was instituted in response to the Commission's decision in Administrative Case No. 297, An Investigation of the Impact of Federal Policy on Natural Gas to Kentucky Consumers and Suppliers, which required that utilities offer open transportation and was intended as an interim measure.[142] Columbia's intent is that transportation rates recover the approximate mark-up above gas cost that would be realized by tariff sales.[143] The ITR, at $.3712, does not recover the current GS base rate mark-up of $1.1752 per Mcf. Based on its requested GS tail block rate of $1.4856, Columbia proposed, as an interim step, to increase the ITR to $.80 at this time and eliminate it in the next rate case. This elimination would leave the customers presently served by the ITR on the GS firm transportation rate which does match the mark-up for tariff sales. The two-step increase proposed by Columbia was intended to reduce the rate shock the customers would experience if the ITR were eliminated now and their rate for transportation immediately increased from $.3712 to $1.4856 per Mcf.

The Commission is of the opinion that Columbia's proposal to eventually eliminate the GS ITR is sound from a rate-making standpoint and should be approved. However, the Commission does not endorse Columbia's goal of eliminating the ITR in the next rate case, but rather, envisions a three-step elimination over this case and the next two cases. This would further reduce the rate shock felt by the affected customers and, at the same time, would conform with the Commission's objective of maintaining rate continuity and gradualism in setting rates.

In this case, consistent with the roll-back the Commission has made to Columbia's proposed GS volumetric rates, it has rolled back the ITR from the proposed rate of $.80 per Mcf to a rate of $.65 per Mcf. In this manner, the ITR customers' rates will reflect a decrease from the rates proposed by Columbia that approximates the decrease to the other GS volumetric rates. The ITR will be within $.65 of the GS tail block, however, which is a lesser difference than had been proposed by Columbia.

IUS Collection Procedures

Columbia proposed three major changes to its tariff regarding collection procedures for delinquent IUS customers: (1) eliminate the provision whereby the delinquent customer would be required to establish an escrow account in order to pay Columbia, (2) in cases involving disputed bills, shorten, from 30 to 10, the number of days within which the customer must provide a surety bond guaranteeing payment to Columbia of the ultimate amount, and (3) eliminate the provision requiring that Columbia receive Commission approval prior to suspending delivery of gas. Mr. Burchett identified the problems Columbia has had with its wholesale customers and cited the recommendations of the 1986 management audit report by Theodore Barry & Associates as support for the proposed tariff revisions.[144]

The Commission recognizes the difficulties Columbia has experienced in this area and is of the opinion that the proposed changes would aid Columbia in its collection of delinquent accounts. However, the impact of termination on the retail customers which receive gas from the IUS customer is a matter of great concern to the Commission, and because of that concern, the Commission believes it has a responsibility to retain its authority, as currently contained in the tariff, to either grant or deny requests to suspend service. For that reason, the Commission will deny the third tariff change, as enumerated above, proposed by Columbia for collection of delinquent IUS accounts. The Commission will approve the other changes, as proposed, with the intention of speeding up the collection process and enabling Columbia to reduce its collection problems in the future. The changes to the tariff are shown in Appendix A.

Flex Rates - Costs and Benefits

In Case No. 9003, the Commission advised Columbia that it must document and fully support the necessity to charge a rate lower than the fixed transportation rate in future rate cases or the Commission would impute flex rate revenues at the fixed rate and Columbia's stockholders, not ratepayers, would be required to bear the difference.[145] In the instant case, Columbia has adequately supported the need to flex its rates during the test year. Accordingly, the Commission did not impute flex rate revenues at the fixed rate and Columbia's ratepayers, therefore, are bearing the difference between the fixed and flexed rate revenues.

While the Commission recognizes that retaining load by rate flexing is a benefit to Columbia's customers, rate flexing also benefits Columbia's shareholders, as stated by Mr. Burchett under cross-examination.[146] The Commission, therefore, is interested in a rate-making approach under which shareholders bear some of the costs of rate flexing. An approach offered by Mr. Burchett, which does not achieve this goal, would require Columbia to refund, or credit to customers, all amounts collected over some predetermined rate level while allowing Columbia to charge other customers the difference for all amounts collected below the predetermined rate.[147] Such an approach would be favorable to Columbia because it would always be made whole on its flex sales, regardless of how well or how poorly it managed those sales. Moreover, Columbia's customers would continue to bear the full cost of rate flexing while its shareholders would share in the benefits of flexing but bear none of the costs. Given the make-up of the Columbia system and that its gas costs cause transportation to be such an attractive alternative to Columbia's industrial customers, a rate-making approach that puts none of the costs of rate flexing on Columbia's shareholders is untenable and must be rejected out of hand.

One possible approach would be similar to Mr. Burchett's in that revenues would be imputed based on a predetermined rate level. However, Columbia would be allowed to retain all revenues collected above that rate level and required to absorb the difference for all amounts collected below that rate level. Such an approach would create an incentive to efficiently manage flex sales for the purpose of increasing earnings while protecting ratepayers from bearing the full cost of reduced revenues. The predetermined, or target rate, could be based on the flex rate revenue included herein, which would result in a rate of $.2368 per Mcf. The Commission recognizes that this issue may require consideration on a case-by-case basis, but this approach will be considered, along with other approaches, in Columbia's next general rate case.

Another concern of the Commission is whether the benefits of rate flexing are great enough to warrant the effort and expense involved in making such sales. The normalized flex rate revenue is $395,360. Spreading this amount over the adjusted tariff throughput of 18,377,000 Mcf produces a result of 2.15 cents per Mcf. This amounts to $.19 per bill for an average residential customer for an annual benefit of $2.30. The question that arises is whether sales made at prices below their cost-of-service are a benefit, either to Columbia or its ratepayers? These questions and concerns will need to be addressed in future cases.

SUMMARY

The Commission, after consideration of 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 Columbia and will produce gross annual revenues based on adjusted test year sales of approximately $94,871,027.

2. The rate of return granted herein is fair, just, and reasonable and will provide for the financial obligations of Columbia with a reasonable amount remaining for equity growth.

3. The rates proposed by Columbia 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:

1. The rates in Appendix A be and they hereby are approved for service rendered by Columbia on and after the date of this Order.

2. The rates proposed by Columbia be and they hereby are denied.

3. Columbia shall maintain the data necessary to accurately perform zero-intercept studies, minimum-intercept studies, as well as other procedures that will enable Columbia to present a well documented multiple-methodology comparison in its next cost-of-service study.

4. Within 30 days from the date of this Order, Columbia shall file with the Commission its revised tariff sheets setting out the rates approved herein.

Done at Frankfort, Kentucky, this 21st day of October, 1988.

PUBLIC SERVICE COMMISSION

Richard D. Heman Jr.
Chairman

Robert M. Davis
Vice Chairman

Commissioner

ATTEST:

Executive Director

FOOTNOTES

TO PUBLIC SERVICE COMMISSION ORDER
IN CASE NO. 10201 DATED OCTOBER 21, 1988

1 DeWard Prepared Testimony, pages 9-10.

2 Columbia Brief, page 7.

3 Case No. 9003, final Order dated October 18, 1984, page 4.

4 Ibid., page 3.

5 Response to the Commission Order dated May 26, 1988, Item No. 24(a).

6 Transcript of Evidence ("T.E."), Vol. I, page 32.

7 DeWard Prepared Testimony, page 11.

8 Columbia Brief, page 10.

9 DeWard Prepared Testimony, page 16.

10 Response to the Commission Order dated August 11, 1988, Item No. 4.

11 DeWard Prepared Testimony, page 12.

12 Columbia Brief, pages 11-12.

13 Columbia Exhibit 44, page 14.

14 Columbia Brief, page 11.

15 DeWard Prepared Testimony, page 15.

16 Columbia Brief, page 14.

17 Response to the AG Data Request dated June 20, 1988, Item No. 14.

18 Ibid.

19 Columbia Exhibit 17.

20 DeWard Prepared Testimony, page 13.

21 Columbia Brief, page 17.

22 Ibid., page 18.

23 Freeman Testimony, page 15.

24 Columbia Exhibit 20, revenue at rates in effect April 21, 1988 and at proposed rates.

25 Case No. 9554-C, Columbia Gas of Kentucky, Inc., Semi-Annual Gas Cost Adjustment, Order issued August 30, 1988. Normalized gas cost revenues equal $63,059,938 based on the current gas cost adjustment. Likewise, purchased gas expense has been normalized at $63,059,938.

26 Deward Prefiled Testimony, pages 17 and 18.

27 Columbia's Post-Hearing Brief, pages 18-20.

28 74,424 Mcf/2 months = 37,212 Mcf per month.
37,212 Mcf per month x 12 months = 446,544 Mcf.

29 Response to AG request dated May 19, 1988, Item 5.

30 Columbia Exhibit 10, Mcf blocking for the test year.

31 Deward Prefiled Testimony, pages 18 and 19.

32 Columbia Exhibit 20, revenue at rates in effect April 21, 1988, and at proposed rates.

33 Columbia's response to Commission Order of May 26, 1988, Item 38(b).

34 Columbia Exhibit 23, confidential data. For purposes of confidentiality, Columbia's flex rate customers are identified as customers A, B, and C.

35 Columbia's first response to hearing data requests, confidential material, Item 4.

36 Columbia's response to Commission Order of May 26, 1988, Item 38(b).

37 <u>Ibid</u>.

38 T.E., Vol. II, page 53.

39 Response to the AG Data Request dated May 19, 1988, Item No. 54.

40

Eligible CWIP	1,229,437
Return	10.7%
Adjusted AFUDC	131,550
Test Year AFUDC	174,406
Adjustment	<42,856>

41 Deward Prefiled Testimony, pages 22 and 23.

42 Columbia Exhibit 45, Burchett Rebuttal Testimony.

43 <u>Ibid</u>.

44 T.E. , Vol. I, page 102.

45 DeWard Prepared Testimony, page 28.

46 Response to the Commission Order dated May 26, 1988, Item No. 23.

47 Response to Hearing Data Request, T.E. , Vol. I, page 102.

48 Response to the Commission Order dated April 11, 1988, Item No. 18, Sheet 3, line 7.

49 Response to the Commission Order dated May 26, 1988, Item No. 28(h).

50 Response to the Commission Order dated June 16, 1988, Item No. 8.

51 T.E., Vol. I, page 223.

52 Response to the Commission Order dated May 26, 1988, Item No. 28.

53 DeWard Prepared Testimony, page 26.

54 Columbia Brief, page 40.

55 Response to the Commission Order dated April 11, 1988, Item No. 28.

56 DeWard Prepared Testimony, Schedule 17.

57 <u>Ibid</u>., page 25.

58 AG Brief, page 14.

59 Case No. 9554, Joint Stipulation and Recommendation, filed October 14, 1986.

60 T.E., Vol. II, page 5.

61 Response to the AG Data Request dated May 19, 1988, Item No. 32.

62 Response to the Commission Order dated April 11, 1988, Item No. 16, Sheet 29.

63 Case No. 9003, final Order dated October 14, 1984, page 24.

64 T.E., Vol. I, page 113.

65 DeWard Prepared Testimony, page 27.

66 Response to the Commission Order dated June 16, 1988, Item 8(c).

67 Ibid.

68 Columbia Brief, page 40.

69 DeWard Prepared Testimony, page 27.

70 Response to the Commission Order dated April 11, 1988, Item No. 18(b), Sheet 1, line 14.

71 Response to the Commission Order dated May 26, 1988, Item No. 21(f).

72 Ibid., Item No. 28.

73 Ibid., Item No. 22, Schedule 2.

74 T.E., Vol. I, page 123.

75 DeWard Prepared Testimony, page 26.

76 Response to the Commission Order dated April 11, 1988, Item No. 18.

77 Response to Hearing Data Request.

78 DeWard Prepared Testimony, Schedule 13.

79 Response to the Commission Order dated June 16, 1988, Item No. 3.

80 Case No. 9003, final Order dated October 18, 1984, pages 20-21.

81 Respective annual reports.

82 Response to the Commission Order dated May 26, 1988, Item No. 29.

83 Staff Report dated August 26, 1988, page 7.

84 T.E., Vol. I, page 95.

85 DeWard Prepared Testimony, Schedule 9.

86 Ibid., page 20.

87 Columbia Brief, page 28.

88 Response to Hearing Data Request.

89 Response to the Commission Order dated May 26, 1988, Item No. 25(a)(3).

90

Columbia Wage Adjustment	$640,481
Commission Wage Adjustment	157,828
Difference	$482,653
FICA Rate	X 7.51%
	$ 36,247

91 CWIP accrual $4,532,454

Composite Depreciation Rate:

$$\frac{2,988,448}{97,172,937} \quad x \quad \frac{3.075422\%}{139,383}$$

92 DeWard Prepared Testimony, page 20.

93 *Ibid*., pages 29-30.

94 T.E., Vol. I, page 182.

95 Columbia Exhibit 41.

96 DeWard Prepared Testimony, page 32.

97 Columbia Brief, pages 25-26.

98 T.E., Vol. I, page 190.

99

Rate Base	$60,179,018
% Debt	47.92%
Debt	$28,837,785
Cost of Debt	8.645%
Adjusted Interest	$2,493,027

100

Commission Interest	$2,493,027
Columbia Interest	3,074,786
Difference	581,759
Composite Tax Rate	.38785
Increase Income Taxes	$225,635

101 DeWard Schedule 3.

102 Vari Testimony, page 12.

103 *Ibid*., page 15.

104 Freeman Testimony, page 20.

105 *Ibid*., page 30.

106 Ibid., Exhibit 9.

107 Freeman Testimony, pages 24-25.

108 Ibid., page 26.

109 Ibid.

110 Cost Allocation Study, Schedule 1.

111 Eisdorfer Direct Testimony, page 2.

112 T.E., Vol. I, Pages 205-206.

113 Eisdorfer Direct Testimony, page 6.

114 Eisdorfer Direct Testimony, Schedule 4.

115 Payne Rebuttal Testimony, pages 3-4.

116 Ibid., page 3.

117 Eisdorfer Direct Testimony, page 5.

118 Payne Rebuttal Testimony, page 7.

119 Columbia Exhibit 31, Burchett Prefiled Testimony, page 3.

120 Response to Commission Request dated June 16, 1988, Item 14(a).

121 KIUC Exhibit 1, page 9.

122 Ibid., pages 8 and 9.

123 Ibid., page 8.

124 GTE Brief, page 4.

125 Ibid., pages 4 and 5.

126 Columbia Exhibit 31, Burchett Prefiled Testimony, page 13.

127 KIUC Exhibit 1, pages 7 and 8.

128 Ibid.

129 T.E., Vol. I, page 242.

130 Ibid., page 233.

131 T.E., Vol. II, pages 56 and 57.

132 _Ibid_., pages 117 and 118.

133 _Ibid_., page 117.

134 Response to Commission Request dated August 3, 1988, Item 1(b).

135 Response to Commission Request dated June 16, 1988, Item 14.

136 T.E., Vol. II, page 57.

137 Columbia Exhibit 7, Summary of Sales and Revenues.

138 T.E., Vol. II, pages 57 and 58.

139 Columbia Exhibit 4, Comparison of Currently Effective Rates With Proposed Rates.

140 _Ibid_.

141 Columbia Exhibit 31, Burchett Prefiled Testimony, pages 3 and 4.

142 Response to Commission Request dated May 26, 1988, Item 37(a).

143 Columbia Exhibit 31, Burchett Prefiled Testimony, pages 6 and 7.

144 An Adjustment of Rates of Columbia Gas of Kentucky, Inc., Order on Rehearing dated August 9, 1985.

145 T.E., Vol. II, page 55.

146 _Ibid_., page 54.

147 Payne Direct Testimony, page 4.

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 10201 DATED 10/21/88

The following rates and charges are prescribed for the customers served by Columbia Gas of Kentucky, Inc. 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.

CURRENTLY EFFECTIVE BILLING RATES

	Base Rate Charge $	Gas Cost Adjustment 1/ $	Total Billing Rate $
RATE SCHEDULE GS			
Customer Charge:			
Residential	4.20		4.20
Commercial or Industrial	10.50		10.50
Volumetric:			
First 2 Mcf/Month	1.3633	3.3895	4.7528
Next 48 Mcf/Month	1.3333	3.3895	4.7228
Next 150 Mcf/Month	1.3033	3.3895	4.6928
All Over 200 Mcf/Month	1.2733	3.3895	4.6628
RATE SCHEDULE FI			
Customer Charge:	105.00		105.00
Customer Demand Charge: Demand Charge times Firm Mcf Volume in Customer Service Agreement		6.6358	6.6358
Commodity Charge:	0.4282	3.3895	3.8177

RATE SCHEDULE IS

Customer Charge:	105.00		105.00
Commodity Charge	0.4282	3.3895	3.8177

RATE SCHEDULE IUS

For all Volumes Delivered each Month	0.1143	3.3895	3.5038

1/ The Gas Cost Recovery Rate, as shown, is an adjustment per Mcf determined in accordance with the "Semi-Annual Gas Cost Adjustment Clause" as set forth on Sheets 80 through 82 of this tariff. The Gas Cost Adjustment is detailed in the Appendix to the Order of the Public Service Commission in Case No. 9554 dated November 14, 1986.

RATE SCHEDULE GS

Base Rate

Customer Charge:
Residential $4.20 per delivery point per month
Commercial or Industrial $10.50 per delivery point per month

Commodity Charge:

First 2 Mcf per month @ $1.3633 per Mcf
Next 48 Mcf per month @ $1.3333 per Mcf
Next 150 Mcf per month @ $1.3033 per Mcf
All Over 200 Mcf per month @ $1.2733 per Mcf

RATE SCHEDULE FI - FIRM AND INTERRUPTIBLE GAS SERVICE

Availability of Service

This rate schedule is available in the territory served by the Seller to any Buyer having Normal Annual Volume Requirements of at least 25,000 Mcf at any location.

Base Rate

Customer Charge: $105.00 per delivery point per month

Commodity Charge:

$0.4282 per Mcf of all daily firm and interruptible volumes of gas delivered hereunder each billing month.

Minimum Monthly Charge

The minimum monthly charge shall be the customer charge of \$105.00 plus the customer demand charge based on the Buyer's daily firm volume times the average demand rate.

RATE SCHEDULE IS - INTERRUPTIBLE GAS SERVICE

Availability of Service

This rate schedule is available in the territory served by the Seller to any Buyer having normal annual usage of not less than 25,000 Mcf at any location.

Base Rate

Customer Charge: \$105.00 per delivery point per month

Commodity Charge:

\$0.4282 per Mcf of all volumes of gas delivered hereunder each billing month.

RATE SCHEDULE IUS - INTRASTATE UTILITY SERVICE

Base Rate

For all gas delivered each month \$.1143 per Mcf.

Minimum Monthly Charge

The Maximum Daily Volume specified in the Sales Agreement multiplied by \$.1143 per Mcf plus applicable gas cost.

RATE SCHEDULE DS - DELIVERY SCHEDULE

Availability of Service

This rate schedule is available to any customer throughout the territory served by the Company provided:

(a) Customer has executed a contract with the company for delivery service, and

(b) Customer has normal annual requirements of not less than 6,000 Mcf at any delivery point.

Rate

Firm

The rate shall be $1.2733 per Mcf for all gas delivered each billing month for any general service customer who elects to transport gas and does not have an alternate energy capability.

Interruptible

General Service: $0.6500 per Mcf for all interruptible gas delivered each billing month.

Firm and Interruptible Service: $0.4282 per Mcf for all gas delivered each month.

Interruptible Service: $0.4282 per Mcf for all gas delivered each month.

Flex Provision

When a customer with Normal Annual Volume Requirements of 25,000 Mcf annually can demonstrate to the Company that a lower rate is necessary to meet competition from that customer's alternate energy supplier, Columbia may transport gas at a rate lower than the fixed rate. Columbia may also, after receiving prior approval from the Kentucky Public Commission, transport gas at a rate lower than the fixed rate where the customer has demonstrated that its only alternative would be a shutdown or relocation of facilities, or that the lower rate is necessary to expand facilities.

Columbia may also transport gas to a customer at a rate greater than the fixed rate if such rate remains competitive with the price of energy from the customer's alternate energy suppliers. In no event shall the transportation rate exceed 150 percent of the fixed rate.

Pursuant to the preceding paragraphs, any customer may, at any time, request that the transportation rate be flexed. However, once the transportation rate for a customer is flexed, the customer must continue to pay the flex rate determined by Columbia each month and may not opt to revert to the fixed rate except as provided below.

STANDBY DELIVERY SERVICE

Rate Schedule GS

Interruptible:

This is available to General Service Transportation customers who (1) are not eligible to be served under Rate Schedule FI and (2) were being served as General Service Transportation customers on April 21, 1988. Customers eligible for transportation service under this provision may establish a Daily Firm Volume for that portion of load that is protected by an alternate energy source. This Daily Firm Requirement will allow the customer the right to purchase Company owned tariff volumes on any day up to the established volume. This Daily Firm Requirement is subject to a Demand Charge as shown on Sheet No. 2-A. A customer who elects not to establish a Daily Firm Volume does not have the right to purchase Company owned tariff volumes without prior approval of Columbia. Columbia has no obligation to serve tariff volumes to any customer who does not elect to establish a Daily Firm Volume.

RATE SCHEDULE AFDS

Availability

This rate schedule is available in the territory served by the Seller to any commercial, industrial or wholesale Buyer having normal annual usage of not less than 6,000 Mcf.

GENERAL TERMS AND CONDITIONS

Should Buyer fail to pay any bill as herein provided when such amount is due, a delayed payment penalty at the rate of one and one-half percent (1-1/2%) per month shall accrue on the unpaid portion of any bill of $2,000 or more from the due date of payment. If such failure to pay on the part of any Buyer under Rate Schedule IUS continues for thirty (30) days after payment is due, Seller may, after application to and authorization by the Public Service Commission, suspend further delivery of gas. Seller shall not be required to resume deliveries of gas until Buyer has paid all amounts owed Seller and has provided a cash deposit to secure payments of bills in an amount not to exceed two-twelfths (2/12%) of the Buyer's estimated annual bill.

However, if prior to the due date of payment the Buyer in good faith disputes the bill in part or total and pays to the Seller such amounts as it concedes to be correct and at any time thereafter within ten (10) days of a demand made by Seller, furnishes a surety bond in an amount and with surety satisfactory to Seller, guaranteeing payment to Seller of the amount ultimately found due upon such bills after a final determination which may be reached either by agreement or judgment of the courts, as may be the case, then Seller shall not be entitled to suspend further delivery of gas unless and until default be made in the conditions of such bond.