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March 23, 2004

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PUBLIC SERVICE COMMISSION

Mr. Thomas M. Dorman
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, KY 40602

RE: In the matter of: An Adjustment of the Electric Rates, Terms and Conditions of Kentucky Utilities Company (2003-00434)

Dear Mr. Dorman:

Enclosed for filing on the above docket are an original and eleven (11) copies of the direct testimony of Kevin C. Higgins for The Kroger Co.

Very truly yours,

David C. Brown

DCB:rdh

Enclosures

cc: Counsel of record

KR091:000KR:367495:1:LOUISVILLE

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PUBLIC SERVICE COMMISSION

Kentucky Utilities Company (2003-00434)

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Direct Testimony of Kevin C. Higgins was served by e-mail on counsel for the Applicant and by mailing a true and correct copy, by regular U.S. mail to counsel for the Applicant and all parties on this the 23rd day of March, 2004:

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KR091:000KR:367495:1:LOUISVILLE

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

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MAR 2 3 2004
PUBLIC SERVICE COMMISSION

In the Matter of:	)	
	)	
AN ADJUSTMENT OF THE GAS AND ELECTRIC RATES, TERMS AND CONDITIONS OF KENTUCKY UTILITIES COMPANY	))))	**CASE NO: 2003-00434**

DIRECT TESTIMONY OF
KEVIN C. HIGGINS
SPONSORED BY:
THE KROGER CO.

March 23, 2004

ORIGINAL

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

An Adjustment of the Electric Rates, Terms and Conditions of Kentucky Utilities Company : **Case No. 2003-00434** :

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MAR 2 2 2004

PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF KEVIN C. HIGGINS

Introduction

Q. Please state your name and business address.

A. Kevin C. Higgins, 39 Market Street, Suite 200, Salt Lake City, Utah, 84101.

Q. By whom are you employed and in what capacity?

A. I am a Principal in the firm of Energy Strategies, LLC. Energy Strategies is a private consulting firm specializing in economic and policy analysis applicable to energy production, transportation, and consumption.

Q. On whose behalf are you testifying in this proceeding?

A. My testimony is being sponsored by The Kroger Co. ("Kroger"). Kroger is one of the largest retail grocers in the United States, and operates 38 stores and one plant in the territory served by the Kentucky Utilities Company ("KU"). These facilities purchase approximately 94 million kWh annually from KU.

Q. Please describe your professional experience and qualifications.

A. My academic background is in economics, and I have completed all coursework and field examinations toward a Ph.D. in Economics at the University of Utah. In addition, I have served on the adjunct faculties of both the University of Utah and Westminster College, teaching undergraduate and graduate courses in economics from 1981 to 1995. I joined Energy Strategies in 1995, where I assist private and public sector clients in the areas of energy-related economic and policy analysis, including evaluation of electric and gas utility rate matters.

Prior to joining Energy Strategies, I held policy positions in state and local government. From 1983 to 1990, I was economist, then assistant director, for the Utah Energy Office, where I helped develop and implement state energy policy. From 1991 to 1994, I was chief of staff to the chairman of the Salt Lake County Commission, where I was responsible for development and implementation of a broad spectrum of public policy at the local government level.

Q. Have you previously testified before any utility regulatory commissions?

A. Yes. I have testified in over forty proceedings on the subjects of utility rates, terms, and conditions before state utility regulators in Arizona, Colorado, Georgia, Idaho, Indiana, Michigan, Nevada, New York, Ohio, Oregon, South Carolina, Utah, Washington, and Wyoming.

A more detailed description of my qualifications is contained in Higgins Exhibit 1, attached to this testimony.

<u>Overview and conclusions</u>

Q. What is the purpose of your testimony in this proceeding?

A. I have been asked to evaluate the merits of KU's proposal for a general rate increase and changes in terms and conditions. My evaluation places particular emphasis on the impacts on commercial-sized customers. I also have been asked to recommend any adjustments to the Company's proposal that might be necessary to ensure results that are just and reasonable. Given the wide scope of this general rate proceeding, I have concentrated my efforts on a limited number of significant issues. Absence of comment on my part regarding a particular issue does not signify support (or opposition) toward the Company's filing with respect to the non-discussed issue.

Q. What conclusions have you reached in your analysis?

A. (1) KU's proposal to add $19 million into rates to provide "merger savings" for the benefit of its shareholders should be rejected. The cost of this proposal comprises 35 percent of the Company's requested base rate increase of $58 million. The "merger savings" retention proposal artificially raises customer rates by $19 million. This amount, stipulated in a prior proceeding, is not based on known and measurable data. KU's proposal transfers to customers 100 percent of the risk associated with realization of the projected merger savings, and places 0 percent of the risk on the Company. In so doing, the Company's proposal wipes out any going-forward benefits to customers that would have accrued from the 2003 Settlement Agreement on the merger surcredit. KU's proposal is particularly unreasonable in the context of the Company's requested increase of 8.54 percent in base rates. Rejecting this aspect of the Company's request will reduce its requested revenue requirement by $18,968,825.

(2) KU's proposal to add $2.9 million into rates to retain Value Delivery Team savings for the benefit of its shareholders should be rejected. The Company's proposal is not reasonable in the context of a general rate case. A utility seeking a rate increase has the obligation to reduce unnecessary costs. It is neither necessary, nor sound public policy, to carry forward the type of reward being

sought by KU. Rejecting this aspect of the Company's request will reduce its requested revenue requirement by $2,895,000.

(3) KU's rate spread proposal ignores the results of the Company's own cost-of-service study and is fundamentally unreasonable. KU's cost-of-service analysis indicates that the most of its customer classes actually deserve a *rate decrease* – even at the Company's requested revenue requirement. Instead, the Company is proposing to raise the rates of these customers from 8 to 9 percent in order to perpetuate an inordinately large subsidy to the Residential and Lighting classes. I offer two alternatives to the Company's approach, either of which is better tied to cost-of-service results than the Company's proposal. My preferred alternative, Alternative 1, is to move each rate schedule 50 percent of the way between an equal percentage increase and cost-of-service rates. My second alternative is to keep rates constant for any rate schedule that is deserving of a decrease, and to recover any remaining revenue deficiency from those rate schedules that are below cost-of-service, in proportion to their respective cost-of-service deficiencies.

(4)While I disagree with the *level* of charges that KU proposes for the Combined Lighting & Power class, I fully the support the rate design changes that KU has proposed for the Large Power Service rates in that class. KU's proposed rate design recognizes that the current design penalizes high-load factor commercial customers for their more constant level of usage, rather than rewards them. By raising the demand charge and lowering the energy charge, the Company's unit charges more closely correspond to the results of its cost-of-service analysis, with respect to cost classification. To reconcile the lower revenue requirement that I am recommending (elsewhere in this testimony) with my support for KU's rate design changes, I am recommending that any reductions to the Company's proposed revenue requirement for the Large Power Service rates that are ordered by the Commission be applied on an equal percentage basis to the unit charges as proposed by KU in this proceeding.

(5) KU mandates time-of-use rates for customers with loads that are 5000 kw or greater. However, the Company neither has, nor proposes, any time-of-use options for customers with loads less than 5000 kw. This situation should change. Time-of-use rates should be made available to Combined Light & Power customers, so that these customers could better respond to price signals, as well as pay rates that are more closely aligned with the costs they cause. This price responsiveness is especially important as KU adds gas-fired combustion-turbines to its system. The Commission should order KU, as part of any compliance filing in this case, to file a voluntary time-of-use rate for Combined Light & Power customers that provides peak and off-peak energy prices that properly reflect time-of-use cost differences, using a design that is revenue-neutral for a customer with load profile that is comparable to the class average.

<u>**Treatment of "merger savings"**</u>

Q. What is KU's proposal with respect to the treatment of merger savings?

A. KU proposes to add $19 million into rates to provide "merger savings" for the benefit of its shareholders To achieve this result, KU proposes to adjust its expenses upward – and its net operating income downward (for regulatory purposes) – in the amount of $19 million.[1] This adjustment creates an artificial operating income shortfall, which, in turn, results in a requested revenue requirement increase of $19 million. This increase comprises 35 percent of KU's requested $58.3 million rate increase.

Q. What rationale does KU offer for this proposal?

A. KU offers very little rationale in its direct testimony, simply referencing the 2003 Settlement Agreement approved in Case No. 2002-00429.[2] Based on its responses to discovery questions, it is apparent that the Company is relying heavily on that agreement.

The gist of the Company's rationale is that the 1997 KU merger with Louisville Gas and Electric ("LG&E") is generating some amount of cost savings. KU maintains that it is entitled to retain half the savings attributed to its share of the merged system even after the adoption of new base rates, based on the prior treatment of these cost savings in previous cases.

Q. What is your understanding of the history of the treatment of the "merger savings"?

A. It is my understanding that KU and LG&E sought Commission approval for a merger of the two utilities in 1997. The Commission's decision in approving the merger led to the creation of a merger savings surcredit for customers, in which half the projected non-fuel savings from the merger was passed through to

[1] Rives Exhibit 1, p. 2, line 25.
[2] Pre-filed direct testimony of Valerie L. Scott, p. 9, lines 9-16.

customers and half was retained by the merging utilities.[3] At about the five-year mark, the merger surcredit was re-evaluated, in a proceeding dedicated to that re-evaluation. Parties to that case entered into a Settlement Agreement that provided for the merger surcredit to be continued for another five-year period in a stipulated amount. The settlement also provided that some customers would receive their credit dollars up-front, in the form of a discounted, lump-sum payment. In addition, the merged utilities were allowed to continue to keep half the stipulated merger savings, which was to be recognized as part of the calculation of each utility's Earning Sharing Mechanism. The Settlement Agreement was approved by the Commission on October 16, 2003.[4]

Q. Are you aware that the Settlement Agreement approved by the Commission provided that the shareholder "merger savings" would be recognized in a future general rate case?

A. Yes. Although Kroger was not a participant in that docket, nor was a party to the negotiations that led to the settlement, I am aware that Sections 3.1.2 and 3.2.2 of the Settlement Agreement among LG&E, KU, KIUC, LFUCG and the Attorney General provide for expense adjustments that would convey "merger savings" to shareholders in a general rate case. My testimony in this case explains why implementation of these settlement provisions would have an adverse impact on ratepayers – an impact that the Commission may not have fully appreciated when it approved the settlement last October. Although the Commission approved the Settlement Agreement in Case Nos. 2002-00429 and

[3] Kentucky PSC, Order, Case No. 97-0300, September 12, 1997.
[4] Kentucky PSC, Order, Case No. 2002-00429 and Case No. 2002-00430.

00430, and therefore, ostensibly, permitted the merger savings for shareholders when new base rates are set, the treatment of merger savings in a general rate case was not the fundamental issue in those cases. Instead, the major issue was the extension of the merger surcredit and the treatment of the merger savings adjustment under the Earnings Sharing Mechanism. Based on my regulatory experience, I do not construe the Commission's act of approving a settlement in one case as tying its hands in another, and precluding it from making the correct regulatory decision in a case of this importance. Therefore my testimony is based on the assumption that the Commission has the authority to reconsider the merger savings adjustment in this case if it leads to a result that is not fair, just and reasonable.

Q. What are your objections to the Company's proposed treatment of "merger savings" in this proceeding?

A. I have several objections that I would like to offer for the Commission's consideration. First, the "merger savings" that KU wishes to collect in rates are not known and measurable amounts. The "merger savings" in question are purely hypothetical, based on projections made at the time of the merger. KU admits that the amount of any actual merger savings is unknown. Further, the Company has made no attempt to identify or track any merger savings. In response to discovery, KU states:

> Although significant efficiencies were achieved as a result of the merger, as the Companies stated in Case No. 97-300, savings could not be specifically tracked once the merger was consummated. The difficulty of tracking actual merger savings was explained at the hearing by Mr. Van Den Berg when he testified that, "As you go forward as a merged company, it will get very gray as to how the

> savings are developed and where the savings occur, whether they are created, developed, or enabled." [Citation omitted.] This same point was confirmed by the Companies' witness, Mr. Ronald Willhite, when he said, "It is a dynamic operation. Once integration starts, once the two companies come together, all kinds of things are going on at that time. I don't see how you could track the savings. [T]o be able to go back and compare against what the estimated savings were, I think…would be impossible." [Citation omitted.] *The Companies have not tracked actual savings that were realized as a result of the merger.* [Emphasis added.] [5]

Pro-forma adjustments should be known and measurable amounts. KU's proposed adjustments for merger savings do not meet this standard. Raising rates to recover costs that are not known and measurable is not just and reasonable.

Q. What is your second objection to the Company's "merger savings" proposal?

A. A second, related objection is that the lack of knowledge about actual merger savings means that the Company's proposal to retain $19 million in "merger savings" transfers 100 percent of the risk associated with realization of the projected savings to customers, and places 0 percent of the risk on the Company. This reversal of risk is not reasonable.

Q. How does the Company's proposal to retain $19 million in "merger savings" transfer 100 percent of the risk associated with realization of the projected savings to customers?

A. To understand how this risk transfer occurs, it is necessary to analyze the mechanics of KU's general rate case proposal, and compare this to the operation of the current merger surcredit.

[5] KU Response to PSC Question No. 2.16-i. (1)

The current merger surcredit reduces previously-established rates by the amount of the credit. The benefit to customers is assured in the stipulated amount of $19 million per year[6] and does not depend on the realization of projected savings. Customer rates are clearly lower as a result of the credit. I view this as the sole benefit to customers of the 2003 Settlement Agreement.

In contrast, in the general rate case proposal, it is the *Company's* benefit that is assured. As I described above, for regulatory purposes, KU builds $19 million extra into its expenses, which increases the revenue requirement requested from customers by the same amount. Thus, KU is assured that its targeted merger benefit for shareholders is built into rates – whether or not the projected merger savings are ever realized.

Customers, on the other hand, only benefit if there have been actual merger savings in excess of the $19 million benefit the Company has reserved for itself. That is, under the Company's proposal, future merger-related savings would be realized by customers only to the extent that the costs reflected in the Company's general rate filing are lower by more than $19 million as a result of the merger. To illustrate, if annual merger savings really turned out to be the $38 million that was implied in the 2003 stipulation, then the costs shown in KU's general rate filing would be $38 million lower than would have been the case absent the merger; after the inflation of expenses by $19 million to provide the

[6] The settlement provides for a merger surcredit of $17.9 million per year for five years, plus $5.3 million in up-front payments to certain customers. For convenience of exposition, I will refer to the amount of this combined customer benefit as being $19 million per year.

Company' benefit, there would be another $19 million in benefit remaining that would be reflected in customers' rates.

Unfortunately, however, it is not known whether there really have been such savings. Under KU's general rate case proposal, to the extent that actual savings are less than what was projected, the full burden of the shortfall is absorbed by customers, while the Company's full benefit is assured in rates. This is what I mean when I state that the Company's proposal to retain $19 million in "merger savings" transfers 100 percent of the risk associated with realization of the projected savings to customers, and places 0 percent of the risk on the Company.

Q. Could you provide an example of how this transfer of risk occurs under KU's proposal?

A. Yes. Although the amount of merger savings is unknown, let us assume for a moment that actual merger savings in the KU system are in fact $25 million per year – not the $38 million that was projected. Under the 2003 settlement, customers receive an assured $19 million per year in savings. While KU is also entitled to $19 million of savings, if the Company fails to meet its target, the Company receives fewer benefits. This assignment of risk is fitting, as the merger was the Company's idea, and the Company, not customers, is in charge of its implementation. In this example, the Company would only receive $6 million in benefits, i.e., $25 million minus $19 million. [7]

[7] The Company's risk is partially mitigated by the Earnings Sharing Mechanism, but only at earnings below the deadband.

Now let us consider what happens in the context of KU's general rate case proposal. In this case, $19 million of benefit to KU (through higher rates) is built into the Company's revenue requirement. Customers, however, would only receive $6 million in benefits in this example, which would be realized through lower costs reflected in test year expenses. Relative to the terms of the 2003 settlement, customers would have been made worse off, as the risk associated with realization of the projected savings from the merger would have been transferred wholly to them.

Q. But doesn't the continuation of the merger surcredit ensure that customers will continue to receive a $19 million per-year benefit?

A. No. It is true that the merger surcredit is slated to continue under the Company's proposal. But in the context of a general rate case, the assurance of a $19 million benefit to customers is purely illusory.

Q. Please explain.

A. Within the mechanics of the general rate filing, the funding of the surcredit causes KU's revenues to be lower by the amount needed for surcredit funding.[8] Lower revenues, in turn, results in a greater revenue deficiency – dollar for dollar – and thus leads to a higher rate increase request. In other words, every dollar of the surcredit is funded by a dollar of rate increase. Once a general rate filing is implemented, the benefits from the merger are passed on to customers only through any *actual* lower costs of conducting business, as reflected in test year expenses. From an overall customer perspective, the merger surcredit

[8] See Seeyle Exhibit 13, p. 1.

mechanism becomes a wash. The only reason to keep it in place after new rates are implemented is to differentiate among those customers who received the credit in a lump-sum payment and those who did not. Once a general rate filing is implemented, the merger surcredit mechanism plays no meaningful role in reserving benefits for customers as a whole.

Q. **In your opinion, what is the impact of the Company's merger savings proposal on any benefits that customers receive pursuant to the 2003 Settlement Agreement?**

A. Adoption of the Company's proposal would wipe out any future benefits to customers from the 2003 settlement. The only parties that would benefit from the terms of the settlement would be KU and LG&E. In my opinion, such a one-sided outcome is not in the public interest.

Q. **How would adoption of the Company's proposal result in the elimination of any future benefits to customers from the 2003 settlement?**

A. As I stated above, the sole benefit to customers of the 2003 Settlement Agreement is the assurance that rates are truly reduced by the stipulated amount of $19 million, an assurance that does not depend on the realization of projected savings. Adoption of the Company's "merger savings" proposal would eliminate this assurance and make any customer benefit wholly dependent on the realization of projected savings in excess of $19 million. Thus, I conclude that KU's proposal would wipe out any future benefits to customers from the 2003 settlement, rendering it completely one-sided.

Q. But couldn't there continue to be a benefit from the settlement if sufficient merger savings exist?

A. No. *If* sufficient merger savings exist, that would be a benefit of the *merger*, not the settlement. Any merger savings would be reflected in test year expenses used in the establishment of rates. The settlement, as distinct from the merger, provided customers an *assurance* of $19 million in savings. As I have demonstrated above, KU's proposal in the general rate case eliminates this assurance, and consequently, eliminates any future benefits to customers from the settlement. The settlement becomes an empty shell, whose sole purpose is to serve as a vehicle to advance the Company's arguments to ensure that $19 million of shareholder benefits are to be included in rates.

Q. Do you have any other objections to the Company's proposal?

A. Yes. A final consideration is that the creation of merger savings does not entitle a regulated utility to a continuous premium in rates. With the filing of a general rate case that seeks to raise rates 8.54 percent, KU has a responsibility to operate as efficiently as possible. To the extent that the projections used in the merger approval hearing were accurate, the shareholders of the merged utilities would have already experienced a net benefit of $118 million from 1999-2003.[9] At some point, it is necessary to recognize that shareholders have had a reasonable opportunity to reap the benefits of the merger, and that it is not necessary or desirable to inflate future rates in order to ensure additional

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[9] Kentucky PSC, Order, Case No. 97-0300, September 12, 1997, p. 9 refers to projections of joint shareholder/ratepayer net savings of $236 million. $118 million is half this amount.

shareholder gain. The filing of this rate case is the appropriate time for such a determination.

Q. What is your recommendation to the Commission on this matter?

A. I recommend that the Commission not implement Sections 3.1.2 and 3.2.2 of the 2003 Settlement Agreement, as adoption of those provisions in the context of this general rate case would render the 2003 settlement completely one-sided. Instead, the Commission should reject KU's "merger savings" proposal and deny the $18,968,825 adjustment to operating expenses proposed by the Company in KU Reference Schedule 1.22.

<u>Value Delivery Team Adjustment</u>

Q. What is KU's proposal with respect to the treatment of Value Delivery Team Savings?

A. KU is proposing that 60 percent of the savings from its Value Delivery Team ("VDT") activities should be retained by shareholders in base rates. To achieve this result, KU proposes to adjust its expenses upward – and its net operating income downward (for regulatory purposes) – in the amount of $2.9 million.[10] This adjustment creates an artificial operating income shortfall, which, in turn, results in a requested revenue requirement increase of $2.9 million.

Q. What rationale does KU offer for this proposal?

A. As explained in the pre-filed direct testimony of Valerie L. Scott, the actions of the VDT have resulted in net cost savings, 40 percent of which have been passed on to customers through the VDT surcredit. KU asserts that the requested adjustment is necessary to reflect the shareholders' portion of the net savings from the VDT activities.

Q. What is your understanding of the basis for the VDT surcredit currently in rates?

A. My understanding is that the VDT surcredit was adopted as part of a Settlement Agreement that was approved by the Commission on December 3, 2001.[11] That agreement provided that 40 percent of the net savings from a workforce reduction was to be passed on to KU's customers through the VDT surcredit. At the same time, the settlement allowed KU to retain 60 percent of the net savings from the workforce reduction. The VDT surcredit was scheduled to continue until March 2006.

Q. What is your assessment of the Company's VDT proposal in the context of the general rate case?

A. The Company's proposal is not reasonable in the context of a general rate case and should be rejected. By its nature, a general rate case establishes new parameters for rates. Artificially inflating those rates in order to retain a reward to shareholders for past efficiency improvements is not appropriate. Whatever the merit of the VDT activities has been, it has not been enough to avoid the 8.54 percent increase being sought by the Company in this proceeding. A utility seeking a rate increase has the obligation to reduce unnecessary costs. It is neither necessary, nor sound public policy, to carry forward the type of reward being sought by KU.

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[10] Rives Exhibit 1, p. 2, line 23.

Q. What is your recommendation to the Commission on this matter?

A. The Commission should reject KU's VDT proposal and deny the $2,895,000 adjustment to operating expenses proposed by the Company in KU Reference Schedule 1.20.

Q. What is your recommendation concerning continuation of the VDT surcredit rider after new rates take effect pursuant to the general rate case?

A. The VDT surcredit rider should be discontinued. Similar to the merger surcredit discussed above, within the mechanics of the general rate filing, the funding of the VDT surcredit causes KU's revenues to be lower by the amount needed for surcredit funding. Lower revenues, in turn, results in a greater revenue deficiency – dollar for dollar – and thus leads to a higher rate increase request. In other words, every dollar of the VDT surcredit is funded by a dollar of rate increase. Once a general rate filing is implemented, the VDT surcredit mechanism becomes superfluous.

The VDT surcredit rider can be discontinued so long as KU's revenues are adjusted upward by the amount of the discontinued rider in the determination of the Company's revenue requirement. Note that this adjustment is distinct from my recommendation to deny the adjustment to operating expenses, discussed above. Even though eliminating the VDT surcredit rider would result in an *additional* reduction in KU's proposed base rates of $2.9 million(beyond the operating expense denial), this change would be revenue-neutral to both the Company and customers, because there would also be an offsetting elimination of

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[11] Kentucky PSC, Order, Case Nos. 2001-054, 2001-055, 2001-140, 2001-141, 2001-169, December 3, 2001.

the credit. Because elimination of the VDT surcredit rider would be revenue-neutral, this change is not included in my analysis of rate spread, discussed below.

Q. Do you have an alternative recommendation in the event your primary recommendation to reject the Company's adjustment is not accepted by the Commission?

A. Yes. In the event that the Commission does not adopt my primary recommendation, any VDT benefit that the Company is allowed to retain in rates should be in the form of a rider that will expire after March 2006, the scheduled end-date of the VDT surcredit. This approach is preferable to allowing base rates to remain $2.9 million higher than necessary for an indeterminate period, which is what would occur under the Company's proposal.

<u>Rate spread</u>

Q. What is KU's rate spread proposal?

A. KU is proposing an overall increase in base rates of 8.54 percent. The Residential class would see a rate increase of 9.56 percent, whereas most other classes would see an increase in the range of 8 to 9 percent.

Q. Do you believe the Company's rate spread proposal is reasonable?

A. No. KU's cost-of-service analysis indicates that *most of the Company's rate classes deserve a rate decrease* – even if the Company was awarded the full $58 million rate increase it is requesting in this proceeding. In contrast, KU's cost-of-service analysis indicates that the Residential class would require a 25.3 percent increase in rates to achieve the Company's requested return. However, KU has limited the Residential increase to be no more than one percent more than the overall average return. This decision by the Company forces the other customer classes to pay a substantial subsidy. The Company also builds in a substantial subsidy to the Lighting class. The extent of the subsidies can be seen in Table KCH-1 below, which was derived from Higgins Exhibit 2.

Table KCH-1
KU Cost-of-Service Results and KU Proposed Rate Spread
(Assumes $57.8 million revenue increase)

Customer class	Rate Change to reach COS	Rate Change proposed by KU	Subsidy payment proposed by KU
Residential	28.45%	9.56%	(18.89)%
General Service	1.86%	8.74%	6.88%
Combined Light & Pwr	(5.16)%	8.32%	13.48%
Commercial/Ind TOD	(2.54)%	7.99%	10.53%
Coal Mining Power	(13.49)%	8.49%	21.98%
Large Mine TOD	(7.67)%	8.49%	16.16%
Special Contracts	(11.24)%	(1.39)%	9.85%
Lighting	22.94%	8.80%	(14.14)%
All Electric Schools	(34.42)%	0.00%	34.42%
TOTAL	8.54%	8.54%	

Q. What is your assessment of the subsidies proposed by KU?

A. The subsidies proposed by KU are excessive. While the principle of gradualism can be employed to mitigate the rate shock to classes whose rates are well below cost-of-service, KU's proposed restriction to limit the residential increase to no more than 1 percent of the system average is unjustifiably narrow – particularly in light of the extreme divergence from cost-of-service apparent in current rates. Moreover, KU makes no attempt to move the Lighting class toward cost-of-service rates at all. This latter class, which cost-of-service analysis indicates would warrant a 23 percent increase, receives virtually the same increase as a range of business classes that are deserving of rate *decreases* ranging from 2.5 to 13.5 percent. Reflecting cost of service in rates is important from both an efficiency and equity perspective. In light of KU's own cost-of-service results, the Company's rate spread is fundamentally unreasonable.

Q. Why is it important from an efficiency standpoint to reflect cost of service in rates?

A. It is important to send price signals to customers that accurately reflect the costs to serve those customers. A subsidized class does not receive the right price signal to conserve as much as is necessary. Similarly, payment of subsidies can inefficiently influence behavior by distorting location and investment decisions. These are fundamental principles in economics.

Q. Why is it important from an equity standpoint to reflect cost of service in rates?

A. Fairness is a fundamental principle in regulation. An important manifestation of fairness is to assign costs to those customers who cause them to the fullest extent practicable.

Q. What alternative rate spread do you propose?

A. I offer two alternatives to the Company's approach, either of which is better tied to cost-of-service results than the Company's proposal. My preferred alternative, Alternative 1, is to move each rate schedule 50 percent of the way between an equal percentage increase and cost-of-service rates. Such an approach adheres to the principal of gradualism and mitigates the impact on the Residential class, while still reflecting cost-of-service considerations.

Q. Have you calculated the impact of spreading rates in a manner that moves each rate schedule 50 percent of the way to cost-of-service?

A. Yes, I have. This calculation is performed in Higgins Exhibit 3, page 1, which also incorporates my recommended revenue requirement adjustments, discussed above. These rate spread results are summarized in Table KCH-2, below.

Table KCH-2
Recommended Rate Spread w/ Kroger Revenue Adjustments
50% Movement Toward Cost-of-Service
(Assumes $36 million revenue increase)

Customer class	**Equal %**	**COS**	**50% to COS**
Residential	5.31%	24.09%	14.70%
General Service	5.31%	(1.56)%	1.87%
Combined Light & Pwr	5.31%	(7.54)%	(1.11)%
Commercial/Ind TOD	5.31%	(4.60)%	0.36%
Coal Mining Power	5.31%	(15.43)%	(5.06)%
Large Mine TOD	5.31%	(9.77)%	(2.23)%
Special Contracts	5.31%	(13.62)%	(4.16)%
Lighting	5.31%	17.31%	11.31%
All Electric Schools	5.31%	(35.80)%	(15.25)%

Q. How do you treat rate schedules that might be discontinued?

A. In Exhibit Higgins 3, I allocate costs to all current rate schedules. If a rate schedule is discontinued after the rate case is decided, the costs and revenues associated with the discontinued rate schedule should be allocated to the rate schedule(s) to which the customers will migrate, as part of any compliance filing required by the Commission.

Q. What is your second alternative rate spread?

A. Alternative 2 is to keep rates constant for any rate schedule that is deserving of a decrease, and to recover any remaining revenue deficiency from those rate schedules that are below cost-of-service, in proportion to their respective cost-of-service deficiencies. This approach would provide a subsidy from those rate schedules that deserved a rate decrease, but would not make them worse off than they are today. Those rate schedules that are below cost-of-service would move in the direction of cost-of-service rates.

Q. Have you calculated the impact of spreading rates in accordance with your second alternative?

A. Yes, I have. This calculation is performed in Higgins Exhibit 3, page 2, which also incorporates my recommended revenue requirement adjustments, discussed above. The rate spread results are summarized in Table KCH-3, below.

Table KCH-3
Alternative 2 Rate Spread w/ Kroger Revenue Adjustments
No Rate Change for Rate Schedules w/ Rates above COS
(Assumes $36 million revenue increase)

Customer class	COS	Alternative 2
Residential	24.09%	13.43%
General Service	(1.56)%	0.02%[12]
Combined Light & Pwr	(7.54)%	0.04%[13]
Commercial/Ind TOD	(4.60)%	0.00%
Coal Mining Power	(15.43)%	0.00%
Large Mine TOD	(9.77)%	0.00%
Special Contracts	(13.62)%	0.00%
Lighting	17.31%	13.92%
All Electric Schools	(35.80)%	0.00%

Q. How do you treat rate schedules that might be discontinued?

[12] Includes 1.76% increase for Electric Space Heating Rider 33. All other GS rate schedules at 0.00%.

A. As I indicated above, I allocate costs to all current rate schedules in Exhibit Higgins 3. If a rate schedule is discontinued after the rate case is decided, the costs and revenues associated with the discontinued rate schedule should be allocated to the rate schedule(s) to which the customers will migrate, as part of any compliance filing required by the Commission.

Rate design – Large Power Service

Q. What is KU's rate design proposal for the Large Power Service rate schedule?

A. The Large Power Service rate schedule being proposed by KU corresponds to the Combined Light and Power rate schedule in the current KU tariff. It is generally applicable to customers with monthly demands between 200 kw and 5000 kw. As explained in the direct testimony of KU witness William Steven Seelye, KU is modifying the rate design of this rate schedule by adding a customer charge, raising the demand charge, and lowering the energy charge.[14]

Q. What is your assessment of KU's proposed rate design changes?

A. While I disagree with the *level* of charges that KU proposes for the Large Power Service rate, I fully support the rate design changes that KU has proposed. KU recognizes that the current rate design penalizes high-load factor commercial customers for their more constant level of usage, rather than rewards them. By raising the demand charge and lowering the energy charge, the Company's unit

[13] Includes 13.85% increase for Water Pumping M. All other LP rate schedules at 0.00%.
[14] Pre-filed direct testimony of William Steven Seelye, p. 31, line 14 - p. 33, line 9.

charges would more closely correspond to the results of its cost-of-service analysis, with respect to cost classification.

Q. How should KU's improved rate design be applied to the lower revenue requirements for Large Power Service that you are recommending?

A. To reconcile the lower revenue requirement that I am recommending for Large Power Service with my support for KU's rate design changes, I am recommending that any reduction to the Company's proposed revenue requirement for the Large Power Service class that is ordered by the Commission be applied on an equal percentage basis to the unit charges as proposed by KU in this proceeding. For example, if instead of the 8.32 percent increase that the Company is requesting, the Commission ordered zero increase for Large Power Service, then the new rate should be designed by using the Company's initially-proposed unit charges and reducing each by 8.32 percent.[15] This would accomplish the rate design change proposed by the Company, while adjusting the revenue requirement to the Commission-determined level.

<u>Time-of-use rates</u>

Q. What is your assessment of the Company's approach to time-of-use rates?

A. KU requires time-of-use rates for customers with loads that are 5000 kw or greater. However, the Company neither has, nor proposes, any time-of-use options for customers with loads less than 5000 kw, even though non-residential

[15] The proposed customer charge could be rounded to the nearest whole dollar, with the difference incorporated into the other charges.

customers of this size represent nearly 30 percent of the retail energy consumed on the KU system.[16]

In my opinion, at a minimum, it would be beneficial for time-of-use rates to be available to Combined Light & Power customers, so that these customers could better respond to price signals, as well as pay rates that are more closely aligned with the costs they cause.

Q. Why is it important that improved price signals be available to Combined Light & Power customers?

A. Energy costs vary across the hours of the day, with the most expensive hours typically occurring from the late morning to early evening. Designing the energy price to end-use customers to reflect these variations in energy costs sends the proper signal to customers regarding the relative costs to operate the system during peak and off-peak hours. Customers would then use this pricing information to alter their discretionary patterns of usage, increasing efficiency and lowering the overall cost of energy to the system. This price responsiveness is especially important as KU adds gas-fired combustion-turbines to its system. These facilities are generally needed to meet peaking needs and have significantly higher energy costs than base-load coal units.

Commercial customers with loads below 5000 kw are certainly capable of responding to time-of-use rates. As Combined Light & Power customers represent a significant share of retail energy consumption on the KU system, the failure to offer time-of-use rates to them deprives the system of the benefit of a more

[16] Derived from Seeyle Exhibit 11, p. 1.

efficient load pattern that would result from their response to appropriate price signals. It also deprives this class of customers of the opportunity to save money by virtue of price-responsive behavior.

Q. Are there other reasons besides economic efficiency to make time-of-use rates available to Combined Light & Power customers?

A. Yes. Basic fairness dictates that customers whose patterns of energy consumption are less expensive to serve than the average in their class should see that lower cost reflected in their bills.

Q. Are time-of-use rates widely available for customers of comparable size to Combined Light & Power customers in other states in the region?

A. Yes. Time-of-use rates are widely available throughout the region for customers of comparable size to Combined Light & Power. Table KCH-4, shown on the next page, is a partial list of other utilities in the region that offer time-of-use rates to customers with billing demands of 5000 kw of less, comparable to Combined Light & Power service. Each of the utilities listed offers a time-of-use rate that differentiates between on-peak and off-peak energy, which is the type of rate design I am recommending here.

Q. How should a time-of-use rate for Combined Light & Power be implemented?

A. I recognize that with such a large class it is impractical to mandate an immediate change to time-of-use rates. Therefore, Combined Light & Power time-of-use rates should be made available for the upcoming rate-effective period on a voluntary basis. At a minimum, such a rate should be offered as part of a pilot program, which could be used to gather information on the price responsiveness and benefits derivable from expanding time-of-use rates more broadly to Combined Light & Power customers.

Table KCH-4
Utilities with Time-of-Use Rates for Customers with Billing Demands of 5000 kw or less

State	Utility	Type
Georgia	Georgia Power	Optional
Georgia	Savannah Electric	Optional
Illinois	Commonwealth Edison	Mandatory > 500 kw
Illinois	Commonwealth Edison	Optional < 500 kw
Illinois	Illinois Power	Mandatory
Indiana	PSI Energy	Optional
Missouri	Union Electric	Optional
North Carolina	Duke Power	Optional
Ohio	Columbus Southern	Optional
Ohio	Ohio Power	Optional
South Carolina	Duke Power	Optional
South Carolina	South Carolina E & G	Optional/Pilot
Virginia	Virginia Electric & Power	Optional

Q. How should such a rate be designed?

A. I recommend adopting a voluntary time-of-use option for Combined Light & Power that offers peak and off-peak energy prices that properly reflect time-of-use cost differences. The proper starting point would be to design the energy pricing to be revenue-neutral for a customer with a class average load profile, while reflecting the higher fuel costs incurred for the peak period and lower fuel costs for the off-peak period. I do not believe it is necessary to add the complexity of the two-tiered demand charge that the Company uses in other rate schedules, such as LCI-TOD.

Q. Instead of adopting a voluntary time-of-use rate now, should this issue simply be studied and adopted at some later time?

A. No. A general rate case is the best time to adopt a new time-of-use rate, as it allows for the full consideration of the revenue effects that accompany the creation of a new rate schedule. In addition, KU is facing increased gas price risk associated with the addition of 635 megawatts of gas-fired generation, with the attendant higher energy costs.[17] It is important to take appropriate rate design steps now, rather than delaying.

Q. What recommendation do you make to the Commission on the issue?

A. The Commission should order KU, as part of any compliance filing in this case, to file a voluntary time-of-use rate for Combined Light & Power customers that provides peak and off-peak energy prices that properly reflect time-of-use cost differences, using a design that is revenue-neutral for a customer with load profile that is comparable to the class average.

Q. Does this conclude your direct testimony?

A. Yes, it does.

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[17] The addition of new gas-fired generation is noted in the pre-filed direct testimony of Victor A. Saffieri, p. 7, lines 11-12.

VERIFICATION

STATE OF UTAH)
) SS
COUNTY OF Salt Lake)

The undersigned, Kevin C. Higgins, being duly sworn, states that he is a Principal in the firm of Energy Strategies, LLC, that he has personal knowledge of the matters set forth in the foregoing testimony, and that the answers contained therein are true and correct to the best of his information, knowledge and belief.

KEVIN C. HIGGINS

Subscribed and sworn to before me, a Notary Public in and for the aforesaid County and State, this the 19th day of March, 2004.

L. MICHELLE CARRILLO
Notary Public
STATE OF UTAH
My Comm. Expires May 29, 2005
263 West 600 North, Salt Lake City, UT 84103

NOTARY PUBLIC

My Commission Expires:

5/29/2005

KEVIN C. HIGGINS
Principal, Energy Strategies, L.L.C.
39 Market St., Suite 200, Salt Lake City, UT 84101
(801) 355-4365

Vitae

PROFESSIONAL EXPERIENCE

Principal, Energy Strategies, L.L.C., Salt Lake City, Utah, January 2000 to present. Responsible for energy-related economic and policy analysis, regulatory intervention, and strategic negotiation on behalf of industrial, commercial, and public sector interests. Previously Senior Associate, February 1995 to December 1999.

Adjunct Instructor in Economics, Westminster College, Salt Lake City, Utah, September 1981 to May 1982; September 1987 to May 1995. Taught in the economics and M.B.A. programs. Awarded Adjunct Professor of the Year, Gore School of Business, 1990-91.

Chief of Staff to the Chairman, Salt Lake County Board of Commissioners, Salt Lake City, Utah, January 1991 to January 1995. Senior executive responsibility for all matters of county government, including formulation and execution of public policy, delivery of approximately 140 government services, budget adoption and fiscal management (over $300 million), strategic planning, coordination with elected officials, and communication with consultants and media.

Assistant Director, Utah Energy Office, Utah Department of Natural Resources, Salt Lake City, Utah, August 1985 to January 1991. Directed the agency's resource development section, which provided energy policy analysis to the Governor, implemented state energy development policy, coordinated state energy data collection and dissemination, and managed energy technology demonstration programs. Position responsibilities included policy formulation and implementation, design and administration of energy technology demonstration programs, strategic management of the agency's interventions before the Utah Public Service Commission, budget preparation, and staff development. Supervised a staff of economists, engineers, and policy analysts, and served as lead economist on selected projects.

Utility Economist, Utah Energy Office, January 1985 to August 1985. Provided policy and economic analysis pertaining to energy conservation and resource development, with an emphasis on utility issues. Testified before the state Public Service Commission as an expert witness in cases related to the above.

Acting Assistant Director, Utah Energy Office, June 1984 to January 1985. Same responsibilities as Assistant Director identified above.

Research Economist, Utah Energy Office, October 1983 to June 1984. Provided economic analysis pertaining to renewable energy resource development and utility issues. Experience includes preparation of testimony, development of strategy, and appearance as an expert witness for the Energy Office before the Utah PSC.

Operations Research Assistant, Corporate Modeling and Operations Research Department, Utah Power and Light Company, Salt Lake City, Utah, May 1983 to September 1983. Primary area of responsibility: designing and conducting energy load forecasts.

Instructor in Economics, University of Utah, Salt Lake City, Utah, January 1982 to April 1983. Taught intermediate microeconomics, principles of macroeconomics, and economics as a social science.

Teacher, Vernon-Verona-Sherrill School District, Verona, New York, September 1976 to June 1978.

EDUCATION

Ph.D. Candidate, Economics, University of Utah (coursework and field exams completed, 1981).

> Fields of Specialization: Public Finance, Urban and Regional Economics, Economic Development, International Economics, History of Economic Doctrines.

Bachelor of Science, Education, State University of New York at Plattsburgh, 1976 (cum laude).

Danish International Studies Program, University of Copenhagen, 1975.

SCHOLARSHIPS AND FELLOWSHIPS

University Research Fellow, University of Utah, Salt Lake City, Utah 1982 to 1983.
Research Fellow, Institute of Human Resources Management, University of Utah, 1980 to 1982.
Teaching Fellow, Economics Department, University of Utah, 1978 to 1980.
New York State Regents Scholar, 1972 to 1976.

EXPERT TESTIMONY

"In the Matter of the Application of Idaho Power Company for Authority to Increase Its Interim and Base Rates and Charges for Electric Service," **Idaho** Public Utilities Commission, Case No. IPC-E-03-13. Direct testimony submitted February 20, 2004. Rebuttal testimony submitted March 19, 2004.

"In the Matter of the Applications of the Ohio Edison Company, the Cleveland Electric Illuminating Company and the Toledo Edison Company for Authority to Continue and Modify Certain Regulatory Accounting Practices and Procedures, for Tariff Approvals and to Establish Rates and Other Charges, Including Regulatory Transition Charges Following the Market Development Period," Public Utilities Commission of **Ohio**, Case No. 03-2144-EL-ATA. Direct testimony submitted February 6, 2004. Cross examined February 18, 2004.

"In the Matter of the Application of Arizona Public Service Company for a Hearing to Determine the Fair Value of the Utility Property of the Company for Ratemaking Purposes, To Fix a Just and Reasonable Rate of Return Thereon, To Approve Rate Schedules Designed to Develop Such Return, and For Approval of Purchased Power Contract," **Arizona** Corporation Commission, Docket No. E-01345A-03-0437. Direct testimony submitted February 3, 2004.

"In the Matter of Application of the Detroit Edison Company to Increase Rates, Amend Its Rate Schedules Governing the Distribution and Supply of Electric Energy, etc.," **Michigan** Public Service Commission, Case No. U-13808. Direct testimony submitted December 12, 2003 (interim request) and March 5, 2004 (general rate case).

"In the Matter of PacifiCorp's Filing of Revised Tariff Schedules," Public Utility Commission of **Oregon**, Docket No. UE-147. Joint testimony regarding stipulation submitted August 21, 2003.

"Petition of PSI Energy, Inc. for Authority to Increase Its Rates and Charges for Electric Service, etc.," **Indiana** Utility Regulatory Commission, Cause No. 42359. Direct testimony submitted August 19, 2003. Cross examined November 5, 2003.

"In the Matter of the Application of Consumers Energy Company for a Financing Order Approving the Securitization of Certain of its Qualified Cost," **Michigan** Public Service Commission, Case No. U-13715. Direct testimony submitted April 8, 2003. Cross examined April 23, 2003.

"In the Matter of the Application of Arizona Public Service Company for Approval of Adjustment Mechanisms," **Arizona** Corporation Commission, Docket No. E-01345A-02-0403. Direct testimony submitted February 13, 2003. Surrebuttal testimony submitted March 20, 2003. Cross examined April 8, 2003.

"Re: The Investigation and Suspension of Tariff Sheets Filed by Public Service Company of Colorado, Advice Letter No. 1373 – Electric, Advice Letter No. 593 – Gas, Advice Letter No. 80 – Steam," **Colorado** Public Utilities Commission, Docket No. 02S-315 EG. Direct testimony submitted November 22, 2002. Cross-answer testimony submitted January 24, 2003.

"In the Matter of the Application of The Detroit Edison Company to Implement the Commission's Stranded Cost Recovery Procedure and for Approval of Net Stranded Cost Recovery Charges," **Michigan** Public Service Commission, Case No. U-13350. Direct testimony submitted November 12, 2002.

"Application of South Carolina Electric & Gas Company: Adjustments in the Company's Electric Rate Schedules and Tariffs," Public Service Commission of **South Carolina**, Docket No. 2002-223-E. Direct testimony submitted November 8, 2002. Surrebuttal testimony submitted November 18, 2002. Cross examined November 21, 2002.

"In the Matter of the Application of Questar Gas Company for a General Increase in Rates and Charges," **Utah** Public Service Commission, Docket No. 02-057-02. Direct testimony submitted August 30, 2002. Rebuttal testimony submitted October 4, 2002.

"The Kroger Co. v. Dynegy Power Marketing, Inc.," **Federal Energy Regulatory Commission**, EL02-119-000. Confidential affidavit filed August 13, 2002.

"In the matter of the application of Consumers Energy Company for determination of net stranded costs and for approval of net stranded cost recovery charges," **Michigan** Public Service Commission, Case No. U-13380. Direct testimony submitted August 9, 2002. Rebuttal testimony submitted August 30, 2002. Cross examined September 10, 2002.

"In the Matter of the Application of Public Service Company of Colorado for an Order to Revise Its Incentive Cost Adjustment," **Colorado** Public Utilities Commission, Docket 02A-158E. Direct testimony submitted April 18, 2002.

"In the Matter of the Generic Proceedings Concerning Electric Restructuring Issues," **Arizona** Corporation Commission, Docket No. E-00000A-02-0051, "In the Matter of Arizona Public Service Company's Request for Variance of Certain Requirements of A.A.C. R14-2-1606," Docket No. E-01345A-01-0822, "In the Matter of the Generic Proceeding Concerning the Arizona Independent Scheduling Administrator," Docket No. E-00000A-01-0630, "In the Matter of Tucson Electric Power Company's Application for a Variance of Certain Electric Competition Rules Compliance Dates," Docket No. E-01933A-02-0069, "In the Matter of the Application of Tucson Electric Power Company for Approval of its Stranded Cost Recovery," Docket No. E-01933A-98-0471. Direct testimony submitted March 29, 2002 (APS variance request); May 29, 2002 (Track A proceeding/market power issues); and July 28, 2003 (Arizona ISA). Rebuttal testimony submitted August 29, 2003 (Arizona ISA). Cross examined June 21, 2002 (Track A proceeding) and September 12, 2003 (Arizona ISA).

"In the Matter of Savannah Electric & Power Company's 2001 Rate Case," **Georgia** Public Service Commission, Docket No. 14618-U. Direct testimony submitted March 15, 2002. Cross examined March 28, 2002.

"Nevada Power Company's 2001 Deferred Energy Case," Public Utilities Commission of **Nevada,** PUCN 01-11029. Direct testimony submitted February 7, 2002. Cross examined February 21, 2002.

"2001 Puget Sound Energy Interim Rate Case," **Washington** Utilities and Transportation Commission, Docket Nos. UE-011570 and UE-011571. Direct testimony submitted January 30, 2002. Cross examined February 20, 2002.

"In the Matter of Georgia Power Company's 2001 Rate Case," **Georgia** Public Service Commission, Docket No. 1400-U. Direct testimony submitted October 12, 2001. Cross examined October 24, 2001.

"In the Matter of the Application of PacifiCorp for Approval of Its Proposed Electric Rate Schedules and Electric Service Regulations," **Utah** Public Service Commission, Docket No. 01-35-01. Direct testimony submitted June 15, 2001. Rebuttal testimony submitted August 31, 2001.

"In the Matter of Portland General Electric Company's Proposal to Restructure and Reprice Its Services in Accordance with the Provisions of SB 1149," Public Utility Commission of **Oregon,** Docket No. UE-115. Direct testimony submitted February 20, 2001. Rebuttal testimony submitted May 4, 2001. Joint testimony regarding stipulation submitted July 27, 2001.

"In the Matter of the Application of APS Energy Services, Inc. for Declaratory Order or Waiver of the Electric Competition Rules," **Arizona** Corporation Commission, Docket No.E-01933A-00-0486. Direct testimony submitted July 24, 2000.

"In the Matter of the Application of Questar Gas Company for an Increase in Rates and Charges," **Utah** Public Service Commission, Docket No. 99-057-20. Direct testimony submitted April 19, 2000. Rebuttal testimony submitted May 24, 2000. Surrebuttal testimony submitted May 31, 2000. Cross examined June 6 & 8, 2000.

"In the Matter of the Application of Columbus Southern Power Company for Approval of Electric Transition Plan and Application for Receipt of Transition Revenues," Public Utility

Commission of **Ohio**, Case No. 99-1729-EL-ETP; "In the Matter of the Application of Ohio Power Company for Approval of Electric Transition Plan and Application for Receipt of Transition Revenues," Public Utility Commission of **Ohio**, Case No. 99-1730-EL-ETP. Direct testimony prepared, but not submitted pursuant to settlement agreement effected May 2, 2000.

"In the Matter of the Application of FirstEnergy Corp. on Behalf of Ohio Edison Company, The Cleveland Electric Illuminating Company, and the Toledo Edison Company for Approval of Their Transition Plans and for Authorization to Collect Transition Revenues," Public Utility Commission of **Ohio**, Case No. 99-1212-EL-ETP. Direct testimony prepared, but not submitted pursuant to settlement agreement effected April 11, 2000.

"2000 Pricing Process," **Salt River Project** Board of Directors, oral comments provided March 6, 2000 and April 10, 2000.

"Tucson Electric Power Company vs. Cyprus Sierrita Corporation," **Arizona** Corporation Commission, Docket No. E-000001-99-0243. Direct testimony submitted October 25, 1999. Cross examined November 4, 1999.

"Application of Hildale City and Intermountain Municipal Gas Association for an Order Granting Access for Transportation of Interstate Natural Gas over the Pipelines of Questar Gas Company for Hildale, Utah," **Utah** Public Service Commission, Docket No. 98-057-01. Rebuttal testimony submitted August 30, 1999.

"In the Matter of the Application by Arizona Electric Power Cooperative, Inc. for Approval of Its Filing as to Regulatory Assets and Transition Revenues," **Arizona** Corporation Commission, Docket No. E-01773A-98-0470. Direct testimony submitted July 30, 1999. Cross examined February 28, 2000.

"In the Matter of the Application of Tucson Electric Power Company for Approval of its Plan for Stranded Cost Recovery," **Arizona** Corporation Commission, Docket No. E-01933A-98-0471; "In the Matter of the Filing of Tucson Electric Power Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.," Docket No. E-01933A-97-0772; "In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona," Docket No. RE-00000C-94-0165. Direct testimony submitted June 30, 1999. Rebuttal testimony submitted August 6, 1999. Cross examined August 11-13, 1999.

"In the Matter of the Application of Arizona Public Service Company for Approval of its Plan for Stranded Cost Recovery," **Arizona** Corporation Commission, Docket No. E-01345A-98-0473; "In the Matter of the Filing of Arizona Public Service Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.," Docket No. E-01345A-97-0773; "In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona," Docket No.

RE-00000C-94-0165. Direct testimony submitted June 4, 1999. Rebuttal testimony submitted July 12, 1999. Cross examined July 14, 1999.

"In the Matter of the Application of Tucson Electric Power Company for Approval of its Plan for Stranded Cost Recovery," **Arizona** Corporation Commission, Docket No. E-01933A-98-0471; "In the Matter of the Filing of Tucson Electric Power Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.," Docket No. E-01933A-97-0772; "In the Matter of the Application of Arizona Public Service Company for Approval of its Plan for Stranded Cost Recovery," Docket No. E-01345A-98-0473; "In the Matter of the Filing of Arizona Public Service Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.," Docket No. E-01345A-97-0773; "In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona," Docket No. RE-00000C-94-0165. Direct testimony submitted November 30, 1998.

"Hearings on Pricing," **Salt River Project** Board of Directors, written and oral comments provided November 9, 1998.

"Hearings on Customer Choice," **Salt River Project** Board of Directors, written and oral comments provided June 22, 1998; June 29, 1998; July 9, 1998; August 7, 1998; and August 14, 1998.

"In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona," **Arizona** Corporation Commission, Docket No. U-0000-94-165. Direct and rebuttal testimony filed January 21, 1998. Second rebuttal testimony filed February 4, 1998. Cross examined February 25, 1998.

"In the Matter of Consolidated Edison Company of New York, Inc.'s Plans for (1) Electric Rate/Restructuring Pursuant to Opinion No. 96-12; and (2) the Formation of a Holding Company Pursuant to PSL, Sections 70, 108, and 110, and Certain Related Transactions," **New York** Public Service Commission, Case 96-E-0897. Direct testimony filed April 9, 1997. Cross examined May 5, 1997.

"In the Matter of the Petition of Sunnyside Cogeneration Associates for Enforcement of Contract Provisions," **Utah** Public Service Commission, Docket No. 96-2018-01. Direct testimony submitted July 8, 1996.

"Questar Pipeline Company," **Federal Energy Regulatory Commission**, Docket No. RP95-407. Direct testimony prepared, but withheld subject to settlement. Settlement approved July 1, 1996.

"In the Matter of Arizona Public Service Company's Rate Reduction Agreement," **Arizona** Corporation Commission, Docket No. U-1345-95-491. Direct testimony prepared, but withheld consequent to issue resolution. Agreement approved April 18, 1996.

"In the Matter of the Application of PacifiCorp, dba Pacific Power & Light Company, for Approval of Revised Tariff Schedules and an Alternative Form of Regulation Plan," **Wyoming** Public Service Commission, Docket No. 2000-ER-95-99. Direct testimony submitted April 8, 1996.

"In the Matter of the Application of Mountain Fuel Supply Company for an Increase in Rates and Charges," **Utah** Public Service Commission, Case No. 95-057-02. Direct testimony submitted June 19, 1995. Rebuttal testimony submitted July 25, 1995. Surrebuttal testimony submitted August 7, 1995.

"In the Matter of the Investigation of the Reasonableness of the Rates and Tariffs of Mountain Fuel Supply Company," **Utah** Public Service Commission, Case No. 89-057-15. Direct testimony submitted July 1990. Surrebuttal testimony submitted August 1990.

"In the Matter of the Review of the Rates of Utah Power and Light Company pursuant to The Order in Case No. 87-035-27," **Utah** Public Service Commission, Case No. 89-035-10. Rebuttal testimony submitted November 15, 1989. Cross examined December 1, 1989 (rate schedule changes for state facilities).

"In the Matter of the Application of Utah Power & Light Company and PC/UP&L Merging Corp. (to be renamed PacifiCorp) for an Order Authorizing the Merger of Utah Power & Light Company and PacifiCorp into PC/UP&L Merging Corp. and Authorizing the Issuance of Securities, Adoption of Tariffs, and Transfer of Certificates of Public Convenience and Necessity and Authorities in Connection Therewith," **Utah** Public Service Commission, Case No. 87-035-27; Direct testimony submitted April 11, 1988. Cross examined May 12, 1988 (economic impact of UP&L merger with PacifiCorp).

"In the Matter of the Application of Mountain Fuel Supply Company for Approval of Interruptible Industrial Transportation Rates," **Utah** Public Service Commission, Case No. 86-057-07. Direct testimony submitted January 15, 1988. Cross examined March 30, 1988.

"In the Matter of the Application of Utah Power and Light Company for an Order Approving a Power Purchase Agreement," **Utah** Public Service Commission, Case No. 87-035-18. Oral testimony delivered July 8, 1987.

"Cogeneration: Small Power Production," **Federal Energy Regulatory Commission**, Docket No. RM87-12-000. Statement delivered March 27, 1987, on behalf of State of Utah, in San Francisco.

"In the Matter of the Investigation of Rates for Backup, Maintenance, Supplementary, and Standby Power for Utah Power and Light Company," **Utah** Public Service Commission, Case No. 86-035-13. Direct testimony submitted January 5, 1987. Case settled by stipulation approved August 1987.

"In the Matter of the Application of Sunnyside Cogeneration Associates for Approval of the Cogeneration Power Purchase Agreement," **Utah** Public Service Commission, Case No. 86-2018-01. Rebuttal testimony submitted July 16, 1986. Cross examined July 17, 1986.

"In the Matter of the Investigation of Demand-Side Alternatives to Capacity Expansion for Electric Utilities," **Utah** Public Service Commission, Case No. 84-999-20. Direct testimony submitted June 17, 1985. Rebuttal testimony submitted July 29, 1985. Cross examined August 19, 1985.

"In the Matter of the Implementation of Rules Governing Cogeneration and Small Power Production in Utah," **Utah** Public Service Commission, Case No. 80-999-06, pp. 1293-1318. Direct testimony submitted January 13, 1984 (avoided costs), May 9, 1986 (security for levelized contracts) and November 17, 1986 (avoided costs). Cross-examined February 29, 1984 (avoided costs), April 11, 1985 (standard form contracts), May 22-23, 1986 (security for levelized contracts) and December 16-17, 1986 (avoided costs).

OTHER RELATED ACTIVITY

Participant, Oregon Direct Access Task Force (UM 1081), May 2003 to present.

Participant, Michigan Stranded Cost Collaborative, March 2003 to present.

Member, Arizona Electric Competition Advisory Group, December 2002 to present.

Board of Directors, ex-officio, Desert STAR RTO, September 1999 to February 2002.

Advisory Committee, Desert STAR RTO, September 1999 to February 2002. Acting Chairman, October 2000 to February 2002.

Board of Directors, Arizona Independent Scheduling Administrator Association, October 1998 to present.

Acting Chairman, Operating Committee, Arizona Independent Scheduling Administrator Association, October 1998 to June 1999.

Member, Desert Star ISO Investigation Working Groups: Operations, Pricing, and Governance, April 1997 to present. Legal & Negotiating Committee, April 1999 to December 1999.

Participant, Independent System Operator and Spot Market Working Group, Arizona Corporation Commission, April 1997 to September 1997.

Participant, Unbundled Services and Standard Offer Working Group, Arizona Corporation Commission, April 1997 to October 1997.

Participant, Customer Selection Working Group, Arizona Corporation Commission, March 1997 to September 1997.

Member, Stranded Cost Working Group, Arizona Corporation Commission, March 1997 to September 1997.

Member, Electric System Reliability & Safety Working Group, Arizona Corporation Commission, November 1996 to September 1998.

Chairman, Salt Palace Renovation and Expansion Committee, Salt Lake County/State of Utah/Salt Lake City, multi-government entity responsible for implementation of planning, design, finance, and construction of an $85 million renovation of the Salt Palace Convention Center, Salt Lake City, Utah, May 1991 to December 1994.

State of Utah Representative, Committee on Regional Electric Power Cooperation, a joint effort of the Western Interstate Energy Board and the Western Conference of Public Service Commissioners, January 1987 to December 1990.

Member, Utah Governor's Economic Coordinating Committee, January 1987 to December 1990.

Chairman, Standard Contract Task Force, established by Utah Public Service Commission to address contractual problems relating to qualifying facility sales under PURPA, March 1986 to December 1990.

Chairman, Load Management and Energy Conservation Task Force, Utah Public Service Commission, August 1985 to December 1990.

Alternate delegate for Utah, Western Interstate Energy Board, Denver, Colorado, August 1985 to December 1990.

Articles Editor, Economic Forum, September 1980 to August 1981.

KU Proposed Rate Increase Versus Class Cost of Service
at KU's Requested $57.8 Million Revenue Increase

Customer Class	Adjusted Revenues at Current Rates	Pro-Forma Rate of Return on Rate Base	KU's Proposed Revenue Increase	KU's Percent Increase	Pro-Forma Rate of Return on Rate Base with KU's Revenue Increase	Revenues Required to Produce Equalized RORs	Percent Change to Produce Equalized RORs	Equalized Rate of Return on Rate Base	KU's Proposed Class Subsidy (+)/ Payment (-)
Residential Rate RS	121,233,914	0.76%	10,917,610	9.01%	2.74%	30,691,852	25.32%	6.17%	16.31%
All Electric Residential Rate FERS	131,265,059	0.33%	13,171,979	10.03%	2.30%	39,723,321	30.26%	6.17%	20.23%
General Service Secondary GSS	63,054,554	5.46%	5,748,559	9.12%	7.70%	1,868,926	2.96%	6.17%	-6.15%
General Service Primary GSP	2,543,978	17.47%	(85,277)	-3.35%	16.05%	(678,799)	-26.68%	6.17%	-23.33%
Combined Light & Power LPS	155,583,000	8.00%	13,770,993	8.85%	10.96%	(8,013,150)	-5.15%	6.17%	-14.00%
Combined Light & Power LPP	35,121,686	8.91%	2,283,602	6.50%	11.26%	(2,640,311)	-7.52%	6.17%	-14.02%
Combined Light & Power LPT	805,360	19.44%	54,105	6.72%	23.56%	(173,945)	-21.60%	6.17%	-28.32%
Large Comm/ Ind TOD Primary LCIP	65,546,565	6.46%	5,384,879	8.22%	9.33%	(544,598)	-0.83%	6.17%	-9.05%
Large Comm/ Ind TOD Transmission LCIT	18,589,204	9.60%	1,340,808	7.21%	12.50%	(1,590,339)	-8.56%	6.17%	-15.77%
High Load Factor Secondary HLFS	12,248,661	8.50%	1,002,999	8.19%	11.68%	(732,885)	-5.98%	6.17%	-14.17%
High Load Factor Primary HLFP	22,475,294	6.73%	1,722,628	7.66%	9.44%	(357,958)	-1.59%	6.17%	-9.26%
Coal Mining Power Primary MPP	4,793,969	11.79%	405,257	8.45%	14.89%	(724,619)	-15.12%	6.17%	-23.57%
Coal Mining Power Transmission MPT	3,748,239	10.41%	319,850	8.53%	13.55%	(427,531)	-11.41%	6.17%	-19.94%
Large Power Mine Power TOD Primary LMPP	1,944,712	8.77%	165,746	8.52%	11.83%	(139,960)	-7.20%	6.17%	-15.72%
Large Power MinePower TOD Transmission LMPT	4,098,693	8.78%	347,607	8.48%	11.57%	(323,291)	-7.89%	6.17%	-16.37%
Combination Off- Peak CWH	414,205	-13.57%	96,148	23.21%	-12.34%	1,542,385	372.37%	6.17%	349.16%
All Electric School AES	3,955,547	30.69%	-	0.00%	30.69%	(1,361,682)	-34.42%	6.17%	-34.42%
Electric Space Heating Rider 33	668,127	4.34%	129,034	19.31%	9.93%	42,217	6.32%	6.17%	-12.99%
Water Pumping M	723,351	1.00%	51,236	7.08%	2.27%	207,363	28.67%	6.17%	21.58%
Street Lighting St Lt	5,402,425	-0.56%	512,748	9.49%	0.39%	3,646,087	67.49%	6.17%	58.00%
Decorative Street Lighting Dec St Lt	807,560	3.27%	76,631	9.49%	4.49%	182,249	22.57%	6.17%	13.08%
Private Outdoor Lighting PO Lt	6,293,268	8.82%	517,636	8.23%	10.71%	(729,110)	-11.59%	6.17%	-19.81%
Customer Outdoor Lighting C O Lt	893,164	6.76%	72,319	8.10%	8.41%	(25,733)	-2.88%	6.17%	-10.98%
Special Contracts	14,551,477	9.35%	(202,024)	-1.39%	8.96%	(1,635,439)	-11.24%	6.17%	-9.85%
Total	676,762,012	3.93%	57,805,073	8.54%	6.17%	57,805,073	8.54%	6.17%	0.00%

Customer Class	Adjusted Revenues at Current Rates	KU's Proposed Revenue Increase	KU's Percent Increase	Revenues Required to Produce Equalized RORs	Percent Change to Produce Equalized RORs	KU's Proposed Class Subsidy (-)/ Payment (+)
Residential (Includes all GWH Schedules)	252,913,178	24,185,737	9.56%	71,957,558	28.45%	-18.89%
General Service (Excludes CWH-GS)	66,266,659	5,792,316	8.74%	1,232,344	1.86%	6.88%
Combined Light & Power Service	226,957,352	18,885,563	8.32%	(11,710,886)	-5.16%	13.48%
Commercial/Industrial TOD	84,135,769	6,725,687	7.99%	(2,134,938)	-2.54%	10.53%
Coal Mining Power Service	8,542,208	725,107	8.49%	(1,152,150)	-13.49%	21.98%
Large Mine Power TOD	6,043,405	513,353	8.49%	(463,250)	-7.67%	16.16%
Special Contracts	14,551,477	(202,024)	-1.39%	(1,635,439)	-11.24%	9.85%
Lighting	13,396,417	1,179,334	8.80%	3,073,493	22.94%	-14.14%
All Electric Schools	3,955,547	-	0.00%	(1,361,682)	-34.42%	34.42%
Total Ultimate Customers	676,762,012	57,805,073	8.54%	57,805,073	8.54%	0.00%

KU Rate Increase Including Kroger's $21.9 Million Adjustment
Using Kroger's Alternative 1 Spread Methodology - 50% Toward COS

Customer Class	Adjusted Revenues at Current Rates	Pro-Forma Rate of Return on Rate Base	KU's Proposed Revenue Increase with Kroger Adjustments	Revenues Required to Produce Equalized RORs	Percent Change to Produce Equalized RORs	Equalized Rate of Return on Rate Base	Step 1. Equal 5.31% Spread of Revenue Increase	Percent 50% Proposed Revenues Under Kroger Alternative 1 Step 2. Move each rate class 50% towards COS	Percent Change Under Kroger Alternative 1
Residential Rate RS	121,233,914	0.76%	5,513,099	25,287,341	20.86%	6.17%	6,438,450	15,862,895	13.08%
All Electric Residential Rate FERS	131,265,059	0.33%	7,649,901	34,201,243	26.06%	6.17%	6,971,180	20,586,212	15.68%
General Service Secondary GSS	63,054,554	5.46%	3,549,602	(330,031)	-0.52%	6.17%	3,348,680	1,509,324	2.39%
General Service Primary GSP	2,543,978	17.47%	(132,283)	(725,805)	-28.53%	6.17%	135,105	(295,350)	-11.61%
Combined Light & Power LPS	155,583,000	8.00%	9,844,091	(11,940,052)	-7.67%	6.17%	8,262,649	(1,838,702)	-1.18%
Combined Light & Power LPP	35,121,686	8.91%	1,570,055	(3,353,858)	-9.55%	6.17%	1,865,231	(744,313)	-2.12%
Combined Light & Power LPT	805,360	19.44%	44,522	(183,528)	-22.79%	6.17%	42,771	(70,379)	-8.74%
Large Comm/ Ind TOD Primary LCIP	65,548,565	6.46%	4,002,705	(1,926,772)	-2.94%	6.17%	3,481,025	777,126	1.19%
Large Comm/ Ind TOD Transmission LCIT	18,589,204	9.60%	988,663	(1,942,484)	-10.45%	6.17%	987,229	(477,628)	-2.57%
High Load Factor Secondary HLFS	12,248,661	8.50%	763,291	(972,593)	-7.94%	6.17%	650,498	(161,048)	-1.31%
High Load Factor Primary HLFP	22,475,294	6.73%	1,246,621	(833,965)	-3.71%	6.17%	1,193,610	179,823	0.80%
Coal Mining Power Primary MPP	4,793,969	11.79%	311,631	(818,245)	-17.07%	6.17%	254,596	(281,824)	-5.88%
Coal Mining Power Transmission MPT	3,748,239	10.41%	247,142	(500,239)	-13.35%	6.17%	199,060	(150,590)	-4.02%
Large Power Mine Power TOD Primary LMPP	1,944,712	8.77%	126,091	(179,615)	-9.24%	6.17%	103,279	(38,168)	-1.96%
Large Power MinePower TOD Transmission LMPT	4,098,693	6.78%	260,049	(410,849)	-10.02%	6.17%	217,672	(96,588)	-2.36%
Combination Off- Peak CWH	414,205	-13.57%	3,506	1,449,743	350.01%	6.17%	21,997	735,870	177.66%
All Electric School AES	3,955,547	30.69%	(54,564)	(1,416,246)	-35.80%	6.17%	210,070	(603,088)	-15.25%
Electric Space Heating Rider 33	668,127	4.34%	107,875	21,058	3.15%	6.17%	35,483	28,270	4.23%
Water Pumping M	723,351	1.00%	23,636	179,763	24.85%	6.17%	38,415	109,089	15.08%
Street Lighting St Lt	5,402,425	-0.56%	79,795	3,213,134	59.48%	6.17%	286,910	1,750,022	32.39%
Decorative Street Lighting Dec St Lt	807,560	3.27%	27,665	133,283	16.50%	6.17%	42,888	88,085	10.91%
Private Outdoor Lighting PO Lt	6,293,268	8.62%	282,638	(964,108)	-15.32%	6.17%	334,221	(314,944)	-5.00%
Customer Outdoor Lighting C O Lt	893,164	6.76%	34,666	(63,386)	-7.10%	6.17%	47,434	(7,976)	-0.89%
Special Contracts	14,551,477	9.35%	(549,151)	(1,982,566)	-13.62%	6.17%	772,795	(604,885)	-4.16%
Total	676,762,012	3.93%	35,941,248	35,941,248	5.31%	6.17%	35,941,248	35,941,248	5.31%

Customer Class	Adjusted Revenues at Current Rates	KU's Proposed Revenue Increase with Kroger Adjustments	Revenues Required to Produce Equalized RORs	Percent Change to Produce Equalized RORs	Proposed Spread of Revenue Increase Under Kroger Alternative 1	Percent Change Under Kroger Alternative 1
Residential (Includes all GWH Schedules)	252,913,178	13,166,506	60,938,327	24.09%	37,184,977	14.70%
General Service (Excludes CWH-GS)	66,266,659	3,525,194	(1,034,778)	-1.56%	1,242,245	1.87%
Combined Light & Power Service	226,957,352	13,492,216	(17,104,233)	-7.54%	(2,525,529)	-1.11%
Commercial/Industrial TOD	84,135,769	4,991,368	(3,869,257)	-4.60%	299,499	0.36%
Coal Mining Power Service	8,542,208	558,773	(1,318,484)	-15.43%	(432,414)	-5.06%
Large Mine Power TOD	6,043,405	386,140	(590,463)	-9.77%	(134,756)	-2.23%
Special Contracts	14,551,477	(549,151)	(1,982,566)	-13.62%	(604,885)	-4.16%
Lighting	13,396,417	424,764	2,318,923	17.31%	1,515,188	11.31%
All Electric Schools	3,955,547	(54,564)	(1,416,246)	-35.80%	(603,088)	-15.25%
Total Ultimate Customers	676,762,012	35,941,248	35,941,248	5.31%	35,941,248	5.31%

KU Rate Increase Including Kroger's $21.9 Million Adjustment
Using Kroger's Alternative 2 Spread Methodology - No Rate Increase for Classes Above COS

Customer Class	Adjusted Revenues at Current Rates	Pro-Forma Rate of Return on Rate Base	KU's Proposed Revenue Increase with Kroger Adjustments	Revenues Required to Produce Equalized RORs	Percent Change to Produce Equalized RORs	Equalized Rate of Return on Rate Base	Proposed Spread of Revenue Increase Under Kroger Alternative 2	Percent Change Under Kroger Alternative 2
Residential Rate RS	121,233,914	0.76%	5,513,099	25,287,341	20.86%	6.17%	14,093,985	11.63%
All Electric Residential Rate FERS	131,265,059	0.33%	7,649,901	34,201,243	26.06%	6.17%	19,062,179	14.52%
General Service Secondary GSS	63,054,554	5.46%	3,549,602	(330,031)	-0.52%	6.17%	0	0.00%
General Service Primary GSP	2,543,978	17.47%	(132,283)	(725,805)	-28.53%	6.17%	0	0.00%
Combined Light & Power LPS	155,583,000	8.00%	9,844,091	(11,940,052)	-7.67%	6.17%	0	0.00%
Combined Light & Power LPP	35,121,686	8.91%	1,570,055	(3,353,858)	-9.55%	6.17%	0	0.00%
Combined Light & Power LPT	805,360	19.44%	44,522	(183,528)	-22.79%	6.17%	0	0.00%
Large Comm/ Ind TOD Primary LCIP	65,546,565	6.46%	4,002,705	(1,926,772)	-2.94%	6.17%	0	0.00%
Large Comm/ Ind TOD Transmission LCIT	18,589,204	9.60%	988,663	(1,942,484)	-10.45%	6.17%	0	0.00%
High Load Factor Secondary HLFS	12,248,661	8.50%	763,291	(972,593)	-7.94%	6.17%	0	0.00%
High Load Factor Primary HLFP	22,475,294	6.73%	1,246,621	(833,965)	-3.71%	6.17%	0	0.00%
Coal Mining Power Primary MPP	4,793,969	11.79%	311,631	(818,245)	-17.07%	6.17%	0	0.00%
Coal Mining Power Transmission MPT	3,748,239	10.41%	247,142	(500,239)	-13.35%	6.17%	0	0.00%
Large Power Mine Power TOD Primary LMPP	1,944,712	8.77%	126,091	(179,615)	-9.24%	6.17%	0	0.00%
Large Power MinePower TOD Transmission LMPT	4,098,693	8.78%	260,049	(410,849)	-10.02%	6.17%	0	0.00%
Combination Off- Peak CWH	414,205	-13.57%	3,506	1,449,743	350.01%	6.17%	808,019	195.08%
All Electric School AES	3,955,547	30.69%	(54,564)	(1,416,246)	-35.80%	6.17%	0	0.00%
Electric Space Heating Rider 33	668,127	4.34%	107,875	21,058	3.15%	6.17%	11,737	1.76%
Water Pumping M	723,351	1.00%	23,636	179,763	24.85%	6.17%	100,192	13.85%
Street Lighting St Lt	5,402,425	-0.56%	79,795	3,213,134	59.48%	6.17%	1,790,851	33.15%
Decorative Street Lighting Dec St Lt	807,560	3.27%	27,665	133,283	16.50%	6.17%	74,286	9.20%
Private Outdoor Lighting PO Lt	6,293,268	8.82%	282,638	(964,108)	-15.32%	6.17%	0	0.00%
Customer Outdoor Lighting C O Lt	893,164	6.76%	34,666	(63,386)	-7.10%	6.17%	0	0.00%
Special Contracts	14,551,477	9.35%	(549,151)	(1,982,566)	-13.62%	6.17%	0	0.00%
Total	676,762,012	3.93%	35,941,248	35,941,248	5.31%	6.17%	35,941,248	5.31%

Customer Class	Adjusted Revenues at Current Rates	KU's Proposed Revenue Increase with Kroger Adjustments	Revenues Required to Produce Equalized RORs	Percent Change to Produce Equalized RORs	Proposed Spread of Revenue Increase Under Kroger Alternative 2	Percent Change Under Kroger Alternative 2
Residential (Includes all GWH Schedules)	252,913,178	13,166,506	60,938,327	24.09%	33,964,183	13.43%
General Service (Excludes CWH-GS)	66,266,659	3,525,194	(1,034,778)	-1.56%	11,737	0.02%
Combined Light & Power Service	226,957,352	13,492,216	(17,104,233)	-7.54%	100,192	0.04%
Commercial/Industrial TOD	84,135,769	4,991,368	(3,869,257)	-4.60%	-	0.00%
Coal Mining Power Service	8,542,208	558,773	(1,318,484)	-15.43%	-	0.00%
Large Mine Power TOD	6,043,405	386,140	(590,463)	-9.77%	-	0.00%
Special Contracts	14,551,477	(549,151)	(1,982,566)	-13.62%	-	0.00%
Lighting	13,396,417	424,764	2,318,923	17.31%	1,865,137	13.92%
All Electric Schools	3,955,547	(54,564)	(1,416,246)	-35.80%	-	0.00%
Total Ultimate Customers	676,762,012	35,941,248	35,941,248	5.31%	35,941,248	5.31%