Exhibit No.:
Issues: UE Rate Comparisons
Witness: Mark Newton Lowry
Sponsoring Party: Union Electric
Type of Exhibit: Cross-Surrebuttal Testimony
Case No.: EC-2002-1
Date Testimony Prepared: June 24, 2002

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. EC-2002-1

CROSS-SURREBUTTAL TESTIMONY

OF

MARK NEWTON LOWRY

ON

BEHALF OF

UNION ELECTRIC COMPANY
d/b/a AmerenUE

St. Louis, Missouri
June, 2002

CROSS-SURREBUTTAL TESTIMONY

OF

MARK NEWTON LOWRY

CASE NO. EC-2002-1

Q. Please state your name and business address.

A. My name is Mark Newton Lowry. My business address is 22 E. Mifflin Street, Suite 302, Madison, WI 53703.

Q. Are you the same Mark Newton Lowry who previously filed rebuttal testimony in this proceeding?

A. Yes I am.

Q. What is the purpose of your cross-surrebuttal testimony?

A. The purpose of my testimony is to respond to certain comments made in rebuttal testimony by witness Maurice Brubaker. I discuss Mr. Brubaker's use of rate data from other utilities to appraise UE's recent retail rates.

Q. Please summarize your findings with respect to Mr. Brubaker's testimony.

A. I agree with Mr. Brubaker that evaluation of AmerenUE's rates is appropriate in this proceeding, where the value being received by its Missouri retail customers under the EARPs is at issue. However, my careful inspection of Brubaker's work has revealed that his particular approach to regional rate comparisons is unscientific and conclusions he draws from it misleading. My greatest concern is that his study doesn't reveal the true value that AmerenUE's customers are receiving given its operating environment. Compared to other utilities in its region, AmerenUE faces

substantially more challenging business conditions (such as higher taxes and labor costs) in its service territory. When the gross receipts taxes, one of the more challenging aspects of its operating environment, are excluded from rates, it is not at all true, as Brubaker alleges, that the Company's rates are "quite high". A more accurate rate comparison shows that AmerenUE's rates are, instead, on average about 5% *below* those faced by typical customers in Brubaker's selected region. I also found that AmerenUE's recent retail rates were more than 10% below those of a more scientifically selected peer group consisting of utilities in its region that serve large urban areas. Moreover, AmerenUE's Missouri customers' effective rates were even lower than that, given the fact that the rates in Mr. Brubaker's analysis do not reflect the sharing credits that customers received under the EARP. This finding is also consistent with the rate comparisons in Professor Weisman's rebuttal testimony. In short, scientific rate comparisons suggest that AmerenUE 's Missouri retail customers are getting good value for their electric service dollar.

The ability of UE to prosper under its low rates reflects well on the operating efficiency that the Company has achieved under the EARPs. In fact, the measured extent of customer value is quite consistent with my research finding, presented in my rebuttal testimony, that UE's cost efficiency has improved such that it is now about 14% better than the industry standard. The consistent evidence gathered in this proceeding of AmerenUE's low rates and superior cost efficiency under the EARPs together provide strong evidence of the program's success.

Q. What aspects of Mr. Brubaker's testimony do you address in this testimony?

A. Mr. Brubaker presents the results of comparisons he has made of UE's Missouri retail rates in 2001 to those of other utilities. Using well developed methods from economic science, I have appraised Brubaker's rate comparisons and undertaken my own rate appraisal. I found Mr. Brubaker's comparison methods to lack scientific rigor and the conclusions that he draws from his research to be in part erroneous and in general misleading.

Q. How can economic science be used to evaluate UE's rates?

A. Economists have developed a number of analytical tools and empirical methods that are useful for rate appraisals. Three important considerations coming out of this research are especially useful: (1) the selection of an appropriate peer group for rate comparisons; (2) the development of meaningful summary rate comparison measures; and (3) better ways to compare a company's rates to those of typical customers.

Q. How should a peer group be selected?

A. The rates charged by a utility typically reflect an array of external business conditions that as a group may be called its operating environment. A business condition is external to the operation of a utility to the extent that it is beyond the control of its personnel. Examples for a bundled power service provider like AmerenUE include the general run of local wage rates or of spot prices for western coals.

If AmerenUE's rates are to be evaluated properly using the rates of a peer group, one must ensure that the business conditions facing utilities in the peer group are not markedly more or less challenging than those facing the Company. The analysis begins by considering the process of rate determination. Since most U.S. electric utilities operate under cost of service regulation, differences in the rates charged by utilities

reflect, in the main, differences in their unit cost of operation. A company's unit cost is its cost per unit of output.

A utility's cost of service is strongly influenced by various external business conditions that can usefully be termed cost drivers. Typical rates obtained from a sample of utilities thus reflect the business conditions facing sampled utilities. In selecting a peer group for scientific research on AmerenUE's rates, it is thus appropriate to examine the degree to which the key cost drivers faced by the peer group were similar to those that the Company faced.

Q. How do we know which business conditions should be the focus of scrutiny?

A. The identification of the business conditions that merit attention is an issue that can be addressed by economic reason and empirical research. Economic reason suggests that the cost of service incurred by a company depends in part on its scale of operation and the general run of prices that must be paid for inputs. The inputs of an electric utility include capital, labor, materials, purchased power, and generation fuels. Those familiar with the electric power industry know that several other business conditions can also drive service cost.

Empirical research can shed light on the relative importance of alternative cost drivers. In my rebuttal testimony I presented the results of an econometric study of the drivers of bundled power service cost. Cost was posited to be a function of various business conditions. In keeping with scientific practice, the business conditions included in the models I developed were all significant based on well established statistical tests.

In the model I prepared for the cost levels research, which corresponds to an appraisal of a company's rate levels, I found that the significant cost drivers were output quantities, input prices, and load factor. Amongst the input prices, cost was found to be most responsive to the price of capital services. The price of capital services varies between utilities chiefly with regard to taxes and the cost of utility plant construction.

The one additional business condition that I found in the study to be a significant cost driver was the load factor. This is a widely used measure of the peakedness in a company's load. The cost of service is generally higher the *lower* is load factor since service at peak demand can involve power purchases at high prices and/or the ownership of frequently idle capacity.

Q. What business conditions are then of special concern in a rate comparison to a peer group?

A. In my experience, the load factor, output quantities, and prices paid for several production inputs can all differ substantially across the utility industry. Since rates reflect the *unit* cost of service, they control automatically for differences in the operating scales of utilities. It follows that in assessing the fairness of a peer group for rate comparisons we should be concerned chiefly with differences between the input prices and the load factors faced by UE and its peers.

Q. Why are summary price comparisons important and how should they be developed?

A. Electric utilities provide services to three main classes of customers: residences and commercial and industrial business establishments. The rates charged for these service classes differ considerably, due chiefly to differences in the cost of their

provision. It is possible for a utility to charge higher rates for some services and low rates for others. To assess the overall reasonableness of a company's rates, regulators therefore need an objective method for summarizing rate comparisons.

Fortunately, the methodology for summarizing price comparisons is well established in economic research. Summary price comparisons are commonly weighted averages of the rate comparisons for the individual service classes. The weights reflect the relative shares of the service classes in the total value of service. In the case of retail services revenue shares are used for this purpose. Indexes can also be calculated to summarize comparisons of the prices paid by companies for production inputs. In this case, the shares of inputs in the total *cost* of service are commonly used as the weights.

Q. What is the breakdown of revenue for AmerenUE?

A. UE typically obtains less than 20% of its Missouri retail revenue from industrial customers. This industrial revenue share is unusually small for a central U.S. electric utility. The Company's low reliance on industrial revenue in Missouri may surprise some in view of the image that St. Louis has as a major industrial center. However, a lot of the heavy industry in metropolitan St. Louis is located on the Illinois side of the Mississippi River.[1] The major implication of this discussion is that notwithstanding the importance that UE attaches to its industrial customers, a summary rate comparison for AmerenUE-Missouri is driven for the most part by the rates that it charges to residential and commercial customers.

Q. Are there any other important considerations in the appraisal of AmerenUE's rates?

[1] A sizable portion of this load is served by AmerenUE.

A. Yes. One comparison of interest is how AmerenUE's rates compare to those paid by *typical* electric utility customers. This is especially important in the industrial service class since many industrial establishments have energy intensive technologies and an ability to relocate production to areas of lower power prices. However, to make a meaningful comparison of industrial rates within a region it is important to determine how much of the regional industrial load actually pays the various rates. In this context , the rates charged by a utility selling 20,000,000 MWh to industrial customers each year is plainly much more relevant than the rates of a utility selling only 2,000,000 MWh. When the rates charged to other customers are of special interest, it is therefore useful to weight the rates for these other utilities on the basis of the corresponding sales volumes. Of course, to provide a fair comparison, the business conditions facing the peer group that provides the basis for such rate research still need to be scrutinized for their similarity to AmerenUE's.

Q. Please review how Mr. Brubaker made his price comparisons.

A. Mr. Brubaker compared AmerenUE's retail rates in 2001 to those of a peer group comprised of other utilities in the central states. The primary source of his data is an Edison Electric Institute rate comparison survey. The bulk of Mr. Brubaker's sample was apparently developed by choosing Missouri and certain surrounding states and then including in the sample rates for all investor owned utilities for which the rates were published in the EEI document. Mr. Brubaker also added to the sample observations for two of the many publicly held utilities in the region.[2] This approach

[2] These were: the Department of Water, Light and Power of the city of Memphis, TN and the Black River in Missouri.

yielded 38 utilities in Missouri, Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Oklahoma, Tennessee, and Wisconsin.

Several of the 38 utilities included in Brubaker's sample have service territories that cross state lines and thereby involve multiple jurisdictions. Some utilities also report rates for more than one jurisdiction in the same state. All such rates are reported separately in Mr. Brubaker's analysis. For example, for Mid-American Energy he breaks out 4 different entities: 3 in Iowa and one in Illinois. Brubaker's method yielded a total of 51 jurisdictional entities, each of which receive equal weight in Mr. Brubaker's rate comparison. The secondary jurisdictions in most cases involve quite small service volumes. For example, the service volume for the Kansas jurisdiction of Southwestern Public Service is almost infinitessimal.

Mr. Brubaker presents rates comparison separately for residential, commercial, and industrial customers. However, there is no attempt to provide an overall summary of the rate comparisons. Industrial rates are the focus of Mr. Brubaker's discussion. I am also concerned with Mr. Brubaker's treatment of the tax issue.

Q. What is your problem with the tax issue treatment?

A. Mr. Brubaker's alleges on page 9 of his testimony that his Schedule 5 shows that UE's industrial customers in Missouri face the "seventh highest out of the total of 51 service territories in Missouri and surrounding regions." He explains that the rates reported in his Schedule 5 includes applicable gross receipts taxes and acknowledges that UE's rates include such taxes. He then implies that the comparison reported in Schedule 5 is nonetheless fair when he states that "most utilities [in Schedule 5] include applicable add-on taxes." As it turns out, however, this statement is erroneous.

As Mr. Brubaker's own workpapers show, he checked for at least 39 of his 51 utilities whether their rates are, in fact, reported to include add-on taxes. As he was able to confirm, only 9 of these 39 utilities (including UE-Missouri) actually included such taxes. As a consequence, Mr. Brubaker's Schedule 5 compares UE's rates (which includes substantial add-on taxes) with rates for numerous other utilities that do not reflect such taxes. This misrepresentation is also evident in my Schedule 1 which compares the industrial rates in Mr. Brubaker's Schedule 5 (allegedly "with taxes") to his Schedule 6 (without taxes). The comparison not only shows that UE-Missouri's rates reflect by a wide margin the highest add-on taxes of any of his 51 entities, but also shows that the rates for 39 of these 51 entities do not reflect any taxes.

Q. Why do you feel that the rate comparisons that Mr. Brubaker makes for his sample are inaccurate and misleading?

A. Mr. Brubaker's Schedule 6, which removes any add-on taxes from the sampled utilities' rates, already shows that UE's rates are no longer "substantially above the region" but, rather, are for all three service classes almost in the middle of his sample using his rate comparison method. He nonetheless characterizes the Company's rates with taxes removed to be "quite high". This is plainly an unfair representation of his own evidence.

His manner of making rate comparisons compounds the problem because they are still unscientific and inaccurate even with taxes removed. One problem is that the vast differences in the size of Mr. Brubaker's 51 jurisdictional entities misrepresents the rates paid by typical customers in the region and renders meaningless his "ranking" of AmerenUE's rates within that group. Schedule 2 of my testimony shows that 24 of

Mr. Brubaker's 51 entities account for only 10% of the total industrial load located in these 51 service territories. It takes adding up the load of 17 of these entities to equal the industrial load of UE Missouri. With that many small entities in his sample, Mr. Brubaker's ranking of AmerenUE has little value. The fact that Mr. Brubaker calculated the average regional rates by attributing equal weight to each of his 51 entities makes his rate comparison further suspect.

Finally, Mr. Brubaker provides no summary comparison of rates which would take account of how much rates for each service category matter in an overall appraisal of service value. His focus on industrial rates, while understandable in view of his client, if anything creates the false impression that a comparison of UE's industrial rates is representative of results for the other major rate classes.

Q. Is the peer group that Mr. Brubaker employs a fair one?

A. For the most part, no. Mr. Brubaker does address one source of differences in input prices by his attempt at presenting rates both with and without add-on taxes. Apparently then, he does recognize the desirability of a peer group that faces similar input price challenges. In choosing rates for utilities in the central states, it is also noteworthy that Mr. Brubaker makes some attempt to select a peer group that faces other similar business conditions. It is, after all, reasonable to suppose that areas closer to UE's service territory have more similar business conditions in many cases than areas that are farther afield.

Nevertheless, Mr. Brubaker's sample selection method is a curious one. Given his selection of states, his method results in a highly uneven treatment of companies that are the same distance from the service territory of UE. In the case of

Oklahoma, for instance, there is an observation for Southwestern Public Service, which serves only the distant panhandle region of that state. In the case of Wisconsin, there are observations for utilities that serve only the northern reaches of that state. Meanwhile, more proximate utilities in Ohio, Michigan, and the southeast are not included in the sample. In equal proximity as some of Mr. Brubaker's sampled service territories are several major metropolitan areas including Atlanta, Cincinnati, Cleveland, Dallas, Detroit, and Pittsburgh.

Schedule 3 presents a map that indicates the states included in Mr. Brubaker's sample. By way of comparison, I have superimposed on the map a circle with a 600 miles radius and its center on St. Louis. It is evident that Mr. Brubaker's sample excludes observations from a broad region of equal or lesser distance, including Michigan, Ohio, and the nearer reaches of the southeast, that are of considerable interest in a rate comparison.

In inspecting this region I was particularly concerned that the typical utility in his sample might face lower input prices than UE. The marked differences in the rate comparisons with and without taxes show just how important input price differences can be. This finding reflects the fact that AmerenUE operates under an unusually heavy tax burden. Unfortunately, the prices of several other inputs could also differ substantially. The bulk of the sampled utilities have service areas in states, like Arkansas, Iowa, Kansas, Kentucky, Oklahoma, and Tennessee, where prices for labor and construction services are generally lower than in Missouri. Moreover, the service territories of companies in Brubaker's sample involve few major urban areas. This is

important because prices of labor and construction services are especially high in such areas.

As for the load factor, my preliminary inspection of the sample did not create as much suspicion of business condition non-comparability. While the Company's load factor is relatively low I would expect some of the other sampled utilities to have low load factors as well. The unusually small share of the industrial sector in UE's Missouri retail deliveries nonetheless made the load factor comparability issue one worth examining.

Mr. Brubaker could have engendered more confidence in the fairness of his peer group selection by presenting evidence of how the business conditions facing sampled utilities differed from those facing UE. Unfortunately, he did not.

Q. What empirical research did you undertake for this testimony?

A. First, I analyzed the rates of Mr. Brubaker's sample group of 51 jurisdictional entities to get a better understanding of how UE's Missouri retail rates with add-on taxes removed compared to the typical rates paid by customers in the region. For this purpose, I computed the average rates by weighting the rates of each entity by the volumes of service involved. As an alternative, I similarly computed simple averages of the rates for the primary state jurisdiction served by each utility in Brubaker's sample. I also computed simple averages of the rates for companies serving major urban areas. Consistent with the Bureau of Labor Statistics, I defined a large metro area as one with a population of at least 1.5 million. In all cases, I computed summary rate comparisons using revenue-share weighted price indexes.

Second, I repeated these exercises for an alternative and more geographically symmetrical sample that consisted of all investor owned utilities with available EEI rate data which served the bulk of their load within 600 miles of St. Louis. The 600 mile sample permitted me to add rates for utilities serving Atlanta, Cincinnati, Dallas, Detroit, and Pittsburgh. This more than doubled the sample of rates for major urban areas. The data for the 600 mile sample research was taken from EEI's summer 2001 and winter 2002 rate statistics and is thus more recent than that used by Brubaker. Thus, my work on the 600 mile sample represents a timely update of Brubaker's work as well as a methodological upgrade.

Finally, I investigated the key cost drivers facing the companies in Brubaker's sample and the 600 mile sample and compared them to those facing UE. Load factors and summary input price indexes were computed for each company. Data for the year 2000 were employed for this exercise as this was the most recent year for which all required data are as yet available.

Q. What are the results of these rate comparisons?

A. The rate comparisons are presented in the table and figure that are contained in Schedule 4. I commend to your attention first that the residential and commercial price comparisons are generally more favorable than the industrial price comparisons. Since residential and commercial services account for the lion's share of total revenue, industrial rate comparisons are a poor proxy for an overall comparison of the company's rates.

The table also shows that when rates are volume-weighted to better reflect the rates paid by typical customers, UE's Missouri industrial customers pay rates that are

about 3% *below* those of typical industrial customers in the Brubaker sample. When all rate classes are considered, the Company's rates are on average 5% lower. Thus, it is simply not true that AmerenUE's rates with taxes removed are in general "quite high" relative to those faced by customers in Brubaker's region. When only considering utilities serving major metropolitan areas (which, as I will show below, face business conditions that are more comparable on balance to those facing UE), UE's Missouri rates compare even more favorably: the Company's rates are on average about 8% below those of the other utilities.

Schedule 4 also shows that the comparison of UE's rates to the more geographically symmetric sample of service territories within 600 miles of St. Louis is even more favorable to UE. UE's rates are on average about 7% below those paid by typical customers in the 600 mile sample (i.e., the "size-weighted average"). Moreover, that table also shows that UE's rates are on average over *10%* lower than those for the major metropolitan areas in the sample.

Importantly, even this very favorable rate comparison does not fully reflect how well UE's Missouri retail rates compared to other utilities. This is because the "typical" rates used in these analyses do not reflect any of the sharing credits that customers received under the Company's Experimental Alternative Rate Plans (EARPs). Considering these sharing credits, AmerenUE's effective rates were an additional 1% to 2% lower than the rates of other utilities in the region.

Q. You noted that you also investigated the key cost drivers facing the companies in Mr. Brubaker's sample and the 600 mile sample and compared them those facing UE. Please explain how you performed that analysis.

A. I compared the load factors and the input prices of the alternative peer groups to those facing Ameren UE. Summary input prices indexes were calculated that are weighted averages of prices for labor services, generation fuel, purchased power, other O&M inputs, taxes other than gross receipts taxes, and other capital costs.[3] Each index was a weighted average of subindexes for major input groups, where the weights were the share of each group in total cost. The generation fuel price subindex was a weighted average of price comparisons for low sulfur coals, other coals, natural gas, and fuel oil. The price subindex for taxes was calculated as the ratio of tax payments to a capital quantity index that resulted from our econometric research. On the assumption that companies faced similar depreciation rates and costs for funds, the price of other capital inputs was measured using a location-specific index of electric utility construction costs over the past several decades. The price of other O&M inputs was assumed for simplicity to be the same for other utilities. This assumption is not likely to favor Ameren since this input category also includes labor-intensive local services that would have higher prices in major urban areas.

All data for this study were drawn from respected and publicly available sources. These included the U.S. Bureau of Labor Statistics (labor price subindex), FERC Form 1 (bulk power prices and load factor), FERC Form 423 (generation fuel price subindexes), and Whitman, Requardt and Associates and R.S. Means (construction cost data). Input price indexes were calculated for each utility and for the four sampled utilities serving large metropolitan areas.

[3] An input price index was also constructed for the aggregation of sampled utilities. This index corresponds to volume-weighted prices.

Q. What are the results of your scrutiny of business conditions in Mr. Brubaker's sample?

A. Results of my business conditions research are presented in the table and corresponding figure in Schedule 5. The table and figure there show that, compared to the simple average for primary jurisdictions, UE faced lower prices for generation fuels but considerable higher prices for purchased power, labor, and capital. For example, the table in Schedule 5 shows that UE faced labor costs in its service territory that were about 12% higher than the average labor costs faced by Mr. Brubaker's utilities. The summary input price index was around 7% above the sample mean.

The results for large urban areas shed light on the source of the problem. The input price index for the primary jurisdictions of utilities serving major urban areas was about 3% above the mean for Mr. Brubaker's sample as a whole, and much more similar to the input costs faced by UE. This finding implies that the large urban areas sample is a much more scientific basis for comparison than Brubaker's full sample.

As for the load factor, the table and figure in Schedule 1 show that UE's load factor was considerably below that for both the full sample and the large urban sample. This means that AmerenUE is compelled to serve a load with greater peakedness than the load faced by the other utilities—which also points to a cost disadvantage faced by UE in its service territory.

Q. Did you perform a similar analysis for your 600 mile sample?

A. Yes. As the table and figure in Schedule 4 show, utilities in the 600 mile sample had somewhat higher input prices than those in Brubaker's sample. The input prices that UE faced in its service territory were about 5% above the mean value for

primary jurisdictions and just 0.6% above the mean for primary jurisdictions involving major urban areas. The load factors of utilities in the 600 mile sample were above those in the Brubaker sample.

Q. What conclusions do you draw from this research regarding the fairness of Mr. Brubaker's rate comparison sample?

A. I conclude that the typical utility in Mr. Brubaker's sample faces operating conditions that were (and are) considerably less challenging than those faced by UE. As a result, Mr. Brubaker's selected sample is unscientific and unfair to UE. A more appropriate comparison is achieved by considering only the rates for utilities in Brubaker's sample that serve large urban areas. Unfortunately, however, there are only four such utilities in his sample. The best peer group that I examined on the basis of scientific criteria is consequently represented by the utilities in the 600 mile sample serving large urban areas. There are eight such utilities and the input prices they face are very similar to those faced by UE.

However, looking at the rates for this sample of large metro areas also shows that UE's summary rate index is more than 10% below the simple mean of the rates for customers in large metropolitan areas. UE's Missouri customers thus enjoy rates substantially below those of customers in the much more comparable large metro areas in the region. The Company can have healthy earnings at these low prices only by achieving a level of operating efficiency that is more than 10% above the norm for the region. As I have shown in my rebuttal testimony, operating under the experimental alternative rate plans, UE has in fact achieved such superior operating efficiencies.

Q. Given all these facts, how would you summarize your analysis of Mr. Brubaker's rate comparison.

A. I agree with Mr. Brubaker that an evaluation of UE's rates is appropriate in this proceeding, where the value being received by the Company's Missouri retail customers under the EARP is at issue. My careful inspection of Mr. Brubaker's work has revealed that his particular approach to rate comparisons is unscientific and highly misleading. My analyses lead to the conclusion that UE's Missouri retail customers are getting good value for their electric service dollar. The ability of UE to prosper under its low rates reflects well on the operating efficiency that the Company has achieved under the EARPs. In fact, the measured extent of value is quite consistent with my research finding, presented in my rebuttal testimony, that UE's cost efficiency has improved such that it is now about 14% better than the industry standard. It is also consistent with Professor Weisman's rate comparisons. The evidence of low rates and superior cost efficiency under the EARPs together provide strong evidence of the program's success.

Q. Does this conclude your testimony?

A. Yes it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

The Staff of the Missouri Public Service Commission, Complainant,	)	
vs.	)	Case No. EC-2002-1
Union Electric Company, d/b/a AmerenUE, Respondent.	)	

AFFIDAVIT OF MARK NEWTON LOWRY

STATE OF WISCONSIN)
) ss
CITY OF EAST MIFFLIN)

Mark Newton Lowry, being first duly sworn on his oath, states:

1. My name is Mark Newton Lowry. I work at 22 East Mifflin, Madison Wisconsin and I am employed by Pacific Economics Group as a Partner.

2. Attached hereto and made a part hereof for all purposes is my Cross-Surrebuttal Testimony on behalf of Union Electric Company d/b/a AmerenUE consisting of 18 pages, which has been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

Mark Newton Lowry

Subscribed and sworn to before me this 21st day of June, 2002.

Diana M. Lapp
Notary Public

My commission expires:

June 8, 2003

Schedule 1

Comparison of Industrial Rates in Mr. Brubaker's Schedule 5 ("With Taxes") and Schedule 6 (Without Taxes)

Line	Utility Company	Industrial Rates Brubaker Schedule 5 ("With Taxes")	Industrial Rates Brubaker Schedule 6 (Without Taxes)	Brubaker "Taxes"	Brubaker "Tax" Percentage
1	**AmerenUE, MO**	**4.90 ¢**	**4.41 ¢**	**0.49 ¢**	**11.1%**
2	Central Illinois Light Company	5.25	4.98	0.27	5.4%
3	Illinois Power Company	5.21	4.95	0.26	5.3%
4	Northern Indiana Public Service Company	6.05	5.76	0.29	5.0%
5	OG&E Electric Services, AR	3.82	3.68	0.14	3.8%
6	Southwestern Public Service Company, OK	4.13	4.03	0.10	2.5%
7	Commonwealth Edison Company	6.23	6.13	0.10	1.6%
8	AmerenUE, IL	3.72	3.68	0.04	1.1%
9	Southwestern Electric Power Company, AR	4.07	4.03	0.04	1.0%
10	OG&E Electric Services	4.32	4.28	0.04	0.9%
11	Central Illinois Public Service Company	4.52	4.49	0.03	0.7%
12	Public Service Company of Oklahoma	4.75	4.74	0.01	0.2%
13	AEP (Kentucky Power Rate Area)	2.78	2.78	-	-
14	Kentucky Utilities Company	2.81	2.81	-	-
15	AEP (Kingsport Power Rate Area)	3.18	3.18	-	-
16	Louisville Gas & Electric Company	3.37	3.37	-	-
17	Alliant Energy-IES Utilities, Inc. (Southern Zone), IA	3.41	3.41	-	-
18	PSI Energy, Inc.	3.47	3.47	-	-
19	Wisconsin Public Service Corporation	3.54	3.54	-	-
20	Empire District Electric Company, KS	3.54	3.54	-	-
21	Black River Coop	3.66	3.66	-	-
22	MidAmerican Energy, IL	3.67	3.67	-	-
23	Alliant Energy-Interstate Power Company, IL	3.79	3.79	-	-
24	MidAmerican Energy-North System, IA	3.80	3.80	-	-
25	UtiliCorp United, Inc./St. Joseph Light & Power Co., MO	3.81	3.81	-	-
26	Alliant Energy-Interstate Power Company, IA	3.82	3.82	-	-
27	Superior Water, Light & Power Company	3.85	3.85	-	-
28	Empire District Electric Company, AR	3.90	3.90	-	-
29	UtiliCorp United, Inc., MO	3.91	3.91	-	-
30	Empire District Electric Company, MO	3.91	3.91	-	-
31	Alliant Energy-WP&L	4.08	4.08	-	-
32	Empire District Electric Company, OK	4.08	4.08	-	-
33	KPL Company (Western Resources Inc.)	4.09	4.09	-	-
34	Indianapolis Power & Light Company	4.15	4.15	-	-
35	Kansas City Power & Light Company, MO	4.19	4.19	-	-
36	Southern Indiana Gas & Electric Company	4.22	4.22	-	-
37	MidAmerican Energy-South System, IA	4.35	4.35	-	-
38	Union Light, Heat and Power	4.44	4.44	-	-
39	Kansas City Power & Light Company, KS	4.47	4.47	-	-
40	Wisconsin Electric Power Company	4.48	4.48	-	-
41	MidAmerican Energy - East System, IA	4.54	4.54	-	-
42	Northern States Power Company (Wisconsin)	4.57	4.57	-	-
43	Alliant Energy-IES Utilities, Inc. (North & Southeast Zone)	4.61	4.61	-	-
44	AEP (Indiana Michigan Power), IN	4.62	4.62	-	-
45	KG&E Company	4.77	4.77	-	-
46	Entergy Arkansas, Inc.	4.79	4.79	-	-
47	Northwestern Wisconsin Electric Company	4.84	4.84	-	-
48	Madison Gas & Electric Company	4.87	4.87	-	-
49	Southwestern Public Service Company, KS	4.88	4.88	-	-
50	TVA/Memphis Light, Gas and Water Division	4.92	4.92	-	-
51	UtiliCorp United, Inc., KS	6.27	6.27	-	-
	Number of Utilities With Taxes	12			
	Number of Utilities Without Taxes	39			

Source: Brubaker Schedule 5 & 6.

Schedule 2

Size of Industrial Load for "Utilities" in Brubaker Rate Comparison

	Utility Company	Industrial MWHs	Percent of Total	Cummulative MWHs	Cummulative Percent
1	Empire District Electric Company, OK	38,834	0.02%	38,834	0.02%
2	Northwestern Wisconsin Electric Company	61,731	0.04%	100,565	0.06%
3	Empire District Electric Company, AR	62,270	0.04%	162,835	0.10%
4	Empire District Electric Company, KS	74,426	0.05%	237,261	0.15%
5	Southwestern Public Service Company, OK	87,654	0.06%	324,915	0.21%
6	Southern Indiana Gas & Electric Company	205,707	0.13%	530,622	0.34%
7	Madison Gas & Electric Company	314,447	0.20%	845,069	0.53%
8	Alliant Energy-Interstate Power Company, IL	326,988	0.21%	1,172,057	0.74%
9	Superior Water, Light & Power Company	328,392	0.21%	1,500,449	0.95%
10	Kansas City Power & Light Company, KS	394,598	0.25%	1,895,047	1.20%
11	UtiliCorp United, Inc., KS	484,254	0.31%	2,379,301	1.51%
12	UtiliCorp United, Inc./St. Joseph Light & Power Co., MO	514,751	0.33%	2,894,052	1.83%
13	MidAmerican Energy, IL	593,066	0.38%	3,487,118	2.21%
14	UtiliCorp United, Inc., MO	719,186	0.46%	4,206,304	2.66%
15	AEP (Kingsport Power Rate Area)	723,717	0.46%	4,930,021	3.12%
16	Empire District Electric Company, MO	830,618	0.53%	5,760,639	3.64%
17	MidAmerican Energy - East System, IA	984,465	0.62%	6,745,104	4.27%
18	MidAmerican Energy-South System, IA	984,465	0.62%	7,729,568	4.89%
19	MidAmerican Energy-North System, IA	984,465	0.62%	8,714,033	5.51%
20	Union Light, Heat and Power	985,973	0.62%	9,700,006	6.14%
21	OG&E Electric Services, AR	1,095,681	0.69%	10,795,687	6.83%
22	Kansas City Power & Light Company, MO	1,745,539	1.10%	12,541,226	7.93%
23	Southwestern Electric Power Company, AR	1,808,612	1.14%	14,349,838	9.08%
24	AmerenUE, IL	2,109,538	1.33%	16,459,376	10.41%
25	KPL Company (Western Resources Inc.)	2,129,144	1.35%	18,588,520	11.76%
26	Central Illinois Light Company	2,392,522	1.51%	20,981,042	13.27%
27	Alliant Energy-Interstate Power Company, IA	2,640,357	1.67%	23,621,399	14.94%
28	Northern States Power Company (Wisconsin)	2,695,965	1.71%	26,317,364	16.65%
29	Louisville Gas & Electric Company	2,973,505	1.88%	29,290,869	18.53%
30	AEP (Kentucky Power Rate Area)	3,126,397	1.98%	32,417,266	20.51%
31	Alliant Energy-IES Utilities, Inc. (North & Southeast Zone), IA	3,162,594	2.00%	35,579,860	22.51%
32	Alliant Energy-IES Utilities, Inc. (Southern Zone), IA	3,162,594	2.00%	38,742,454	24.51%
33	KG&E Company	3,488,160	2.21%	42,230,614	26.72%
34	Wisconsin Public Service Corporation	3,853,582	2.44%	46,084,196	29.16%
35	Alliant Energy-WP&L	4,448,444	2.81%	50,532,640	31.97%
36	Central Illinois Public Service Company	4,660,106	2.95%	55,192,746	34.92%
37	Public Service Company of Oklahoma	5,194,336	3.29%	60,387,082	38.20%
38	Kentucky Utilities Company	5,240,981	3.32%	65,628,063	41.52%
39	OG&E Electric Services	5,534,520	3.50%	71,162,583	45.02%
40	**AmerenUE, MO**	**6,405,554**	**4.05%**	**77,568,137**	**49.07%**
41	AEP (Indiana Michigan Power), IN	6,874,298	4.35%	84,442,435	53.42%
42	Entergy Arkansas, Inc.	7,051,831	4.46%	91,494,266	57.89%
43	Indianapolis Power & Light Company	7,386,213	4.67%	98,880,479	62.56%
44	Wisconsin Electric Power Company	8,539,427	5.40%	107,419,906	67.96%
45	Northern Indiana Public Service Company	8,935,539	5.65%	116,355,445	73.61%
46	Illinois Power Company	8,958,193	5.67%	125,313,638	79.28%
47	PSI Energy, Inc.	11,234,695	7.11%	136,548,333	86.39%
48	Commonwealth Edison Company	21,512,972	13.61%	158,061,305	100.00%
49	TVA/Memphis Light, Gas and Water Division	n/a	n/a	n/a	n/a
50	Southwestern Public Service Company, KS	n/a	n/a	n/a	n/a
51	Black River Coop	n/a	n/a	n/a	n/a
	Total	**158,061,305**	**100%**		

Source: Edison Electric Institute.

Schedule 3

A Comparison of the Brubaker and 600-Mile Samples

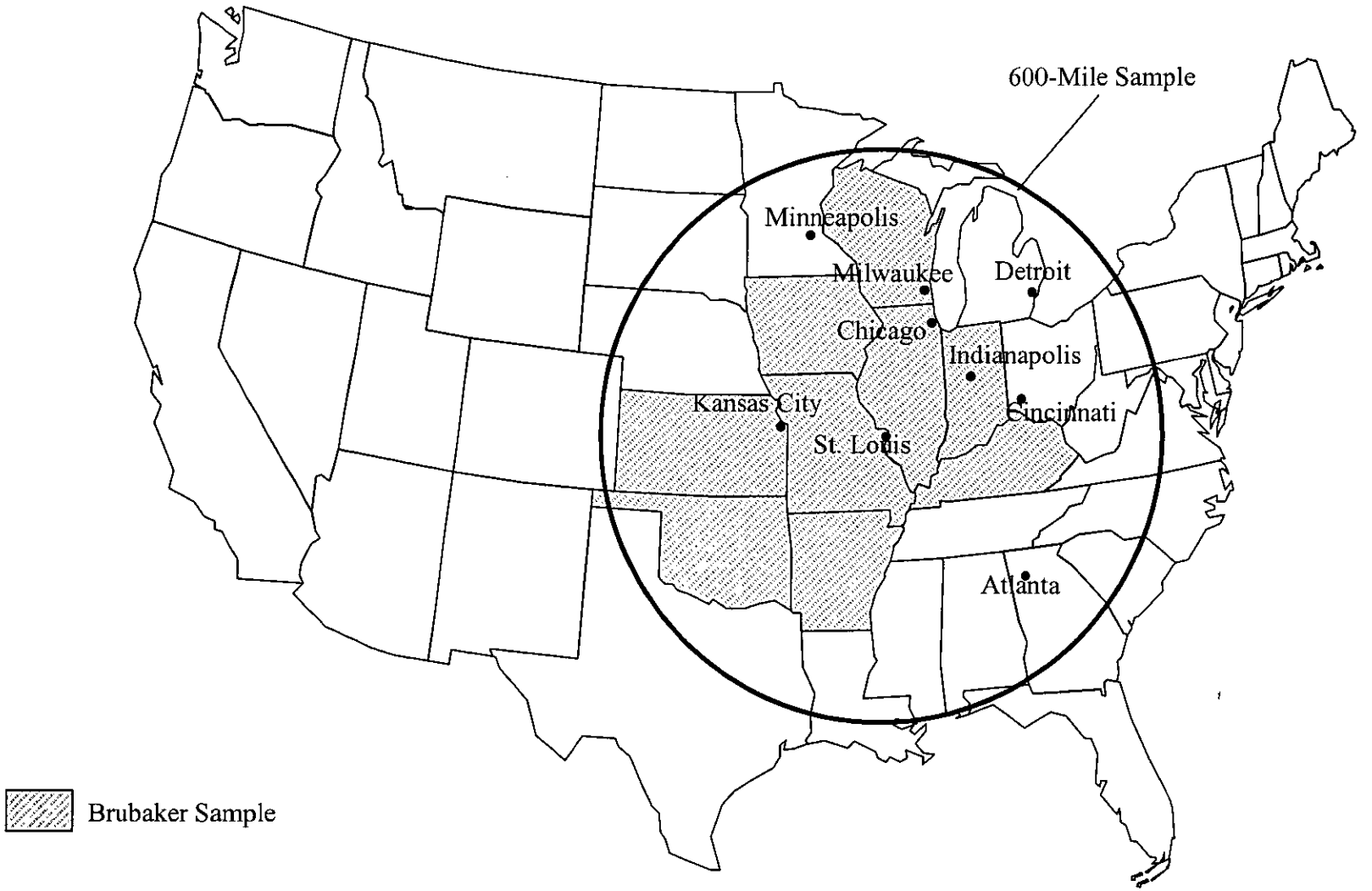


Table 1

Summary of Rate Comparison Research

	Retail Rates			
	Residential	Commercial	Industrial	Summary Rate Index
Indexes				
Brubaker Sample				
AmerenUE (Brubaker Industrial Rates)	7.58	6.10	4.41	1.038
Other Utilities				
All Jurisdictions				
Simple Average	7.48	6.07	4.22	na
Size-Weighted Average	7.86	6.71	4.53	1.096
Primary Jurisdiction	7.41	6.03	4.24	1.013
Large Metro Areas	7.96	7.07	4.74	1.131
600 Mile Sample				
AmerenUE (Average Industrial Rate)	7.44	5.92	4.74	0.997
600 Mile Sample				
All Jurisdictions				
Simple Average	7.52	5.95	4.67	na
Size-Weighted Average	7.77	6.58	4.96	1.064
Primary Jurisdiction	7.61	6.03	4.75	1.011
Large Metro Areas	8.12	7.06	5.38	1.118
How UE Compares to Peers				
Brubaker Sample				
All Jurisdictions				
Simple Average	101.4%	100.5%	104.5%	na
Size-Weighted Average	96.5%	90.9%	97.4%	94.7%
Primary Jurisdiction	102.3%	101.1%	104.0%	102.5%
Large Metro Areas	95.3%	86.3%	93.1%	91.8%
600 Mile Sample				
All Jurisdictions				
Simple Average	100.9%	102.5%	94.5%	na
Size-Weighted Average	95.8%	90.0%	95.6%	93.7%
Primary Jurisdiction	97.8%	98.2%	99.8%	98.6%
Large Metro Areas	91.7%	83.9%	88.1%	89.2%

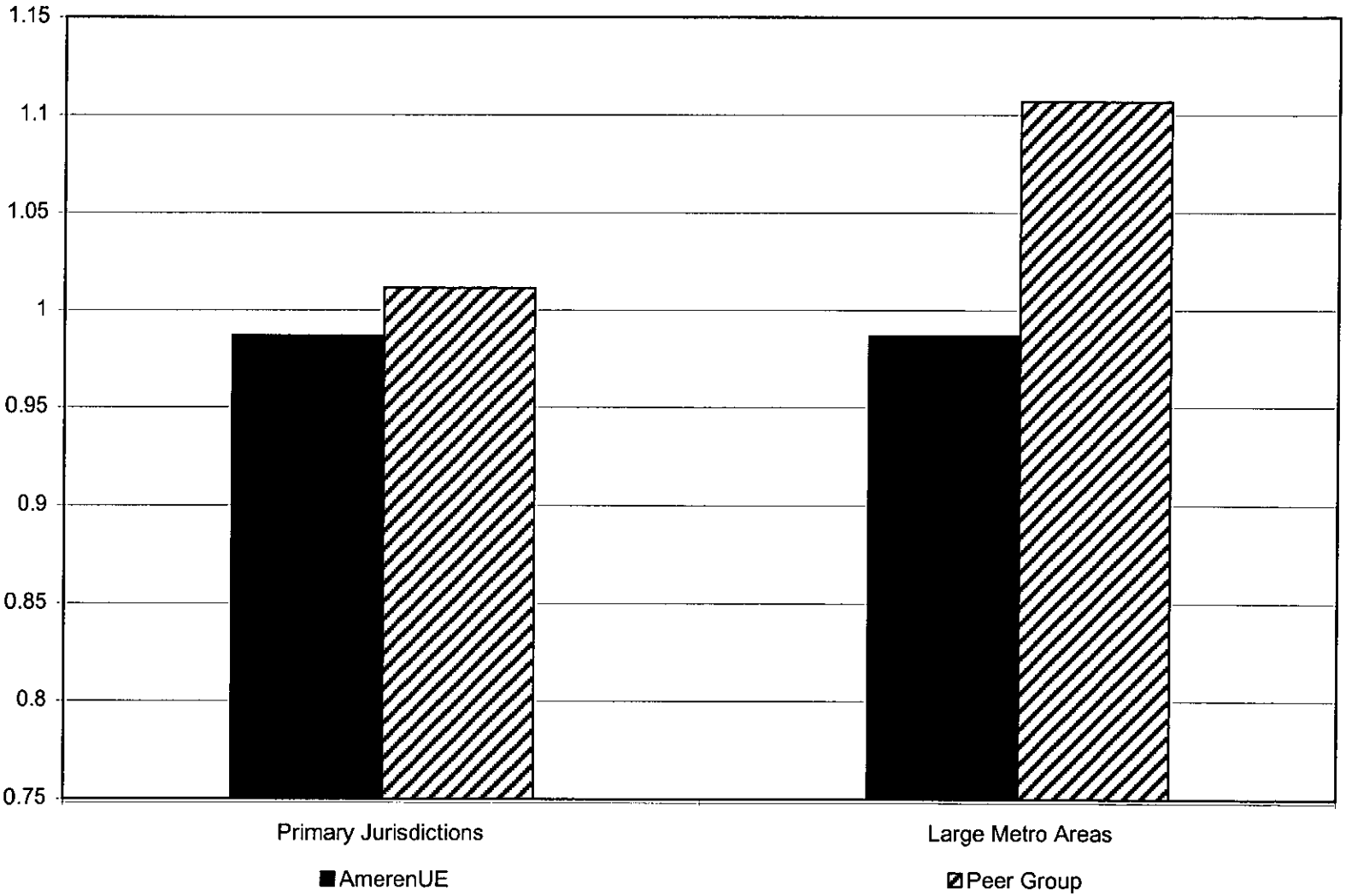
na = not available

Comment: The rate indexes for the primary jurisdictions and large metro areas are averages of multilateral indexes for the individual companies. They can be compared to one another. The rate index for the size-weighted average is bilateral in form and compares the size weighted rates only to those of Ameren. The 600 Mile sample is based on EEI Summer 2001 and Winter 2002 reports; typical industrial rates are based on an average of very large and midsized industrial customers.

Schedule 4-1

Figure 1

SUMMARY RATE INDEXES



Schedule 4-2

Table 2

Summary of Business Condition Research

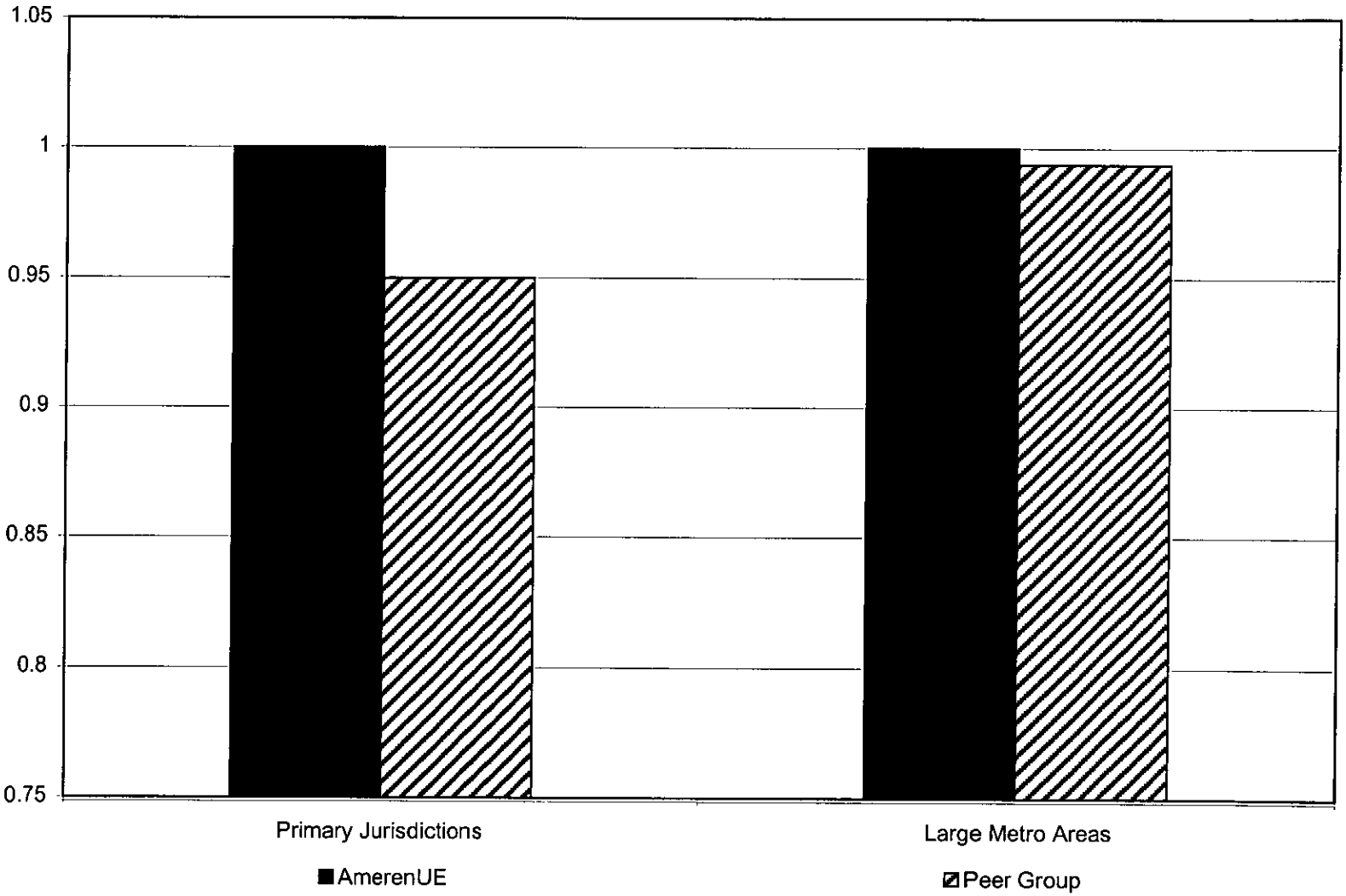
	Rate Index (Ameren=1.0)	Business Conditions								Load Factor
		Input Prices							Summary Index	
		Labor	Generation Fuel	Power	Summary Index	Other O&M	Capital Taxes	Capital Other		
Indexes										
AmerenUE	1.000	39,157	0.81	34.58	1.00	1.00	2.93	58.73	**1.000**	0.54
Brubaker Sample										
All Jurisdictions										
Size-Weighted Average	1.056	34,797	0.89	31.64	1.00	1.00	1.85	56.12	**0.945**	na
Primary Jurisdiction	0.976	34,937	0.88	33.80	1.02	1.00	1.87	55.24	**0.932**	0.59
Large Metro Areas	1.090	38,231	0.89	32.62	0.99	1.00	2.22	59.50	**0.973**	0.55
600 Mile Sample										
All Jurisdictions										
Size-Weighted Average	1.067	36,483	0.99	34.07	1.11	1.00	2.03	54.31	**0.974**	na
Primary Jurisdiction	1.014	34,722	0.94	35.60	1.08	1.00	1.90	54.68	**0.950**	0.61
Large Metro Areas	1.121	38,498	0.97	34.78	1.08	1.00	2.27	58.37	**0.994**	0.58
How UE Compares to Peers										
Brubaker Sample										
All Jurisdictions										
Size-Weighted Average	94.7%	106.7%	91.3%	109.3%	99.5%	100%	158.7%	104.6%	**105.8%**	na
Primary Jurisdiction	102.5%	112.1%	92.7%	114.8%	98.5%	100%	157.3%	106.3%	**107.2%**	91.7%
Large Metro Areas	91.8%	102.4%	91.9%	119.0%	100.5%	100%	132.4%	98.7%	**102.8%**	98.2%
600 Mile Sample										
All Jurisdictions										
Size-Weighted Average	93.7%	107.3%	82.1%	101.5%	90.5%	100%	144.8%	108.1%	**102.6%**	na
Primary Jurisdiction	98.6%	112.8%	86.9%	97.1%	92.4%	100%	154.7%	107.4%	**105.3%**	88.9%
Large Metro Areas	89.2%	101.7%	84.0%	99.4%	92.7%	100%	129.1%	100.6%	**100.6%**	92.6%

na = not available

Schedule 5-1

Figure 2

SUMMARY OF INPUT PRICE INDEXES



Schedule 5-2