Exhibit No.:	
Issues:	Class Cost of Service
Witness:	David C. Roos
Sponsoring Party:	MO PSC Staff
Type of Exhibit:	Rebuttal Testimony
Case No.:	ER-2008-0318
Date Testimony Prepared:	October 14, 2008

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

REBUTTAL TESTIMONY

OF

DAVID C. ROOS

UNION ELECTRIC COMPANY
D/B/A AMERENUE

CASE NO. ER-2008-0318

Jefferson City, Missouri
October 2008

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area.	)))))	Case No. ER-2008-0318

AFFIDAVIT OF DAVID C. ROOS

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

David C. Roos, of lawful age, on his oath states: that he has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 8 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

David C. Roos

Subscribed and sworn to before me this 14th day of October, 2008.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942086

Notary Public

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Q. Please state your name and business address.

A. My name is David C. Roos and my business address is Missouri Public Service Commission, P. O. Box 360, Jefferson City, Missouri, 65102.

Q. Are you the same David C. Roos who contributed as a witness to the Missouri Public Service Commission Staff's (Staff's) Class Cost of Service and Rate Design Report?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony?

A. I compare the results of the Class Cost of Service (CCOS) studies other parties present in the direct testimony of their witnesses in this case and respond to the appropriateness of different production capacity allocators those parties chose to rely on in those CCOS studies.

Comparison of Class Cost of Service

Q. Which parties have CCOS studies?

A. The Staff, Union Electric Company d/b/a AmerenUE, the Office of Public Counsel (OPC), and the Missouri Industrial Energy Consumers (MIEC) presented CCOS study results. Other parties such as, Noranda and the Commercial Group discuss CCOS issues in their direct testimony but did not conduct a CCOS study in this case.

Q. Would you compare these other parties' CCOS study results?

A. Yes. My comparison is shown on Schedule DCR-R-1. Since the use of a particular allocation method for allocating production (generation) capacity to classes is the main determinant of the overall study results, I have identified each study by the party sponsoring the study and by the production-capacity allocation method used.

For each party, the type of CCOS study and the witness who sponsors the study follows:

AmerenUE (4 NCP A&E): An **Average and Excess** allocator that is calculated using the highest noncoincident class peaks for energy by month per customer class for four months (the four highest monthly demands for energy by that class) in the test year. [William M. Warwick and Wilbon L. Cooper]

MIEC (1 NCP A&E): An **Average and Excess** allocator that is calculated using the highest monthly class peak in the summer (June through September) of the test year per customer class. [Maurice Brubaker]

Staff (12 NCP A&P): An **Average and Peak** allocator that is calculated using the highest noncoincident class peaks for energy by month per customer class for each of the twelve months in the test year. [David C. Roos]

OPC (4 CP A&P): An **Average and Peak** allocator that is calculated using the highest monthly coincident (system) peaks for energy by month per customer class for four months in the test year. [Barbara A. Meisenheimer and Ryan Kind]

OPC (TOU): A **Time-of-Use** allocator based upon class contribution to hourly production costs during the test year. [Barbara A. Meisenheimer and Ryan Kind]

Q. What are the CCOS studies results for the Residential (RES) Class?

A. Schedule DCR-R-1 shows the results of all the CCOS studies. For the Residential class, the results of the various CCOS studies range from a reduction in class revenues by 1.85% (OPC) to an increase in class revenues by 12.30% (MIEC) to match the rate of return of the residential class to AmerenUE's overall rate of return. Four of the CCOS studies—AmerenUE, Staff, OPC (4CP A&P), and MIEC—show positive values (increases) for the required percentage change in the revenue responsibility of the Residential Class. Only the OPC (TOU) study shows a negative value (decrease) for the required percentage change in class revenue responsibility.

Q. What are the results of the CCOS studies regarding the Small General Service (SGS) Class?

A. Schedule DCR-R-1 shows that the results of all the CCOS studies indicate that the SGS Class now provides revenues in excess of the revenues required to provide a rate of return equal to the overall rate of return. For the SGS class, the percentage reductions (decreases) to class revenue responsibility required to match the cost of serving that class ranges from 9.90% (OPC) to 3.06% (Staff).

Q. What are the results of the CCOS studies regarding the Large General Service (LGS) (LGS & SPS Rate Schedules)?

A. Schedule DCR-R-1 shows that the results of all the CCOS studies indicate that the LGS Class now provides revenues in excess of the revenues required to provide a rate of return equal to the overall rate of return. For the LGS Class, the percentage reductions (decreases) to class revenue responsibility required to match the cost of serving that class ranges from 11.00% (MIEC) to 2.13% (OPC).

Q. What are the results of the CCOS studies regarding the Large Primary Service (LPS)?

A. Schedule DCR-R-1 shows the results of the various CCOS studies range from a reduction in class revenues by 3.80% (MIEC) to an increase in class revenues by 14.47% (OPC) would be required to equate the rate of return of the residential class to the overall rate of return. Four of the CCOS studies: AmerenUE, Staff, OPC (4 CP A&P), and OPC (TOU), show positive values (increases) for the required percentage change in the revenue responsibility of the LPS Class. Only the MIEC study shows a negative value (decrease) for the required percentage change.

Q. What are the results of the CCOS studies regarding the Large Transmission Service (LTS)?

A. Of the six classes considered in the CCOS studies, the LTS Class results produced the widest range of outcomes with regard to changes in class revenue required to provide a rate of return equal to the overall rate of return. The results range from a reduction in class revenues by 16.20% (MIEC) to an increase in class revenues by 23.01% (OPC). Three of the CCOS studies: Staff, OPC (4 CP A&P), and OPC (TOU), show positive values (increases) for the required percentage change in the revenue responsibility of the LTS Class. Two of the CCOS studies: AmerenUE and MIEC show a negative value (decreases) for the required percentage change in revenue responsibility.

Q. Would you summarize your conclusions regarding class revenue responsibilities based on the CCOS study results?

A. The Staff's study shows that the RES, LPS, and LTS classes are currently providing less revenue than the cost of serving each class, while the SGS and LGS classes are

providing more revenues than the cost of serving them. A comparison of theses results with the results of the various parties shows the Staff's study results to be reasonable, because for four of the five rate classes Staff's results are bracketed by other parties' results.

Class Cost of Service Study – Allocation of Production Capacity and Transmission Costs

Q. Are there various ways to allocate production capacity and transmission costs?

A. Yes. There are basically two categories of production and transmission allocators -- Peak Responsibility methods and Capacity Utilization methods. Three variations of the Capacity Utilization method are the two Average and Peak (A&P) methods used by the Staff and the OPC, and the Time-of-Use method used by OPC. Two variations of the Peak Responsibility method are the different Average and Excess (A&E) methods used by both AmerenUE and MIEC. Each method is based on different assumptions about the reason an electric utility adds capacity and transmission. The A&P method assumes that an electric utility adds capacity and transmission to meet the entire load of the electric utility. The A&E method assumes that an electric utility adds capacity and transmission to meet peak demands.

Q. How do the A&E methods used by AmerenUE and MIEC differ from the A&P method used by Staff?

A. The difference between the two methods is how the demand piece of the allocator is determined. Both methods agree on the average piece of the allocator.

Q. What is the difference between the two methods in the demand piece of the allocator?

A. The demand-related piece of the A&E method is determined by taking the difference between a class' peak demand and its monthly peak demands averaged over the test year. In the case of MIEC Mr. Brubaker's CCOS study, each class' peak is determined

by using the class' non-coincident monthly peak for August, because the system's summer peak is in August (Brubaker, Direct, page 26, lines 13 to 17). AmerenUE's method uses the "four maximum non-coincident monthly peak demands for each customer class during the test year" (Cooper, Direct, page 14, lines 4 and 5). The Staff's A&P method determines the appropriate demand-related weight by using the Capacity Utilization method as described in the Staff's Class Cost of Service and Rate Design Report. This method takes the monthly demands for each class for each month of the year, not just the highest month or the four highest months, and determines each class' percent of that monthly maximum demand.

Q. What assumption are analysts making about why an electric utility increases its generation capacity when they choose the A&E method?

A. Inherent in the A&E method proposed by Mr. Brubaker is the assumption that an electric utility adds generation capacity to meet peak demands (Brubaker, Direct, page 21, line 13). However, that is not entirely the case. An electric utility adds generation capacity costs when doing so reduces the running costs of meeting its load requirements throughout the year by more than the cost of additional capacity.

Q. What do you mean by your statement that an electric utility adds generation capacity to meet its load requirements throughout the year rather than just to meet its peak requirements?

A. There are three types of electric generation facilities: base, intermediate, and peaking. Base generation facilities using coal or nuclear fuel are generally the most expensive capacity plants to build. Peaking generation facilities are generally the least expensive to build and usually use natural gas to generate electricity. Base generation facilities generally have lower running costs than peaking generation facilities.

Therefore, if, as suggested by Mr. Brubaker in his direct testimony, the primary driver which causes a utility to expand its generation and transmission capacity (Brubaker, Direct, page 24, lines 12 to 16) is its need to serve peak demands, it would only make sense that the appropriate generation facility to build would be a peaking facility, i.e., a natural gas combustion turbine. Since the only reason to expand an electric utility's generation capacity are peak loads (according to Mr. Brubaker), it would make zero economic sense to spend billions of dollars to build a base generation facility to reduce fuel and purchased power costs.

Q. If generation and transmission facilities are built to satisfy the loads throughout the year, is the A&E method employed by Mr. Brubaker and Mr. Cooper more reasonable than the Average and Peak method?

A. No. The A&E method does not take into account the fact that generation facilities are built to meet the entire load of the electric utility. The A&E method unfairly puts too great of a responsibility on the classes that have lower load factors. This happens because the demand-related piece of the allocator is determined by the difference between each class' peak demand and the class' average demand. Thus, a low load factor class would have a greater difference between its peak demand and its average demand causing an excessive amount of costs to be allocated to that class.

On the other hand, the A&P method considers each class's contribution to the system's total load, as opposed to each class's excess demands at peak. This is a more reasonable approach because peak is a function of the loads of each class, not just one class.

Q. Did Staff use the same A&P method that OPC used?

A. No. Staff used a 12 non-coincident peak (12-NCP) variation of the A&P method. OPC used a 4 coincident peak (4-CP) variation of the A&P method.

Q. Is Staff's 12-NCP variation for the A&P method more appropriate than OPC's 4-CP variation?

A. Yes, because it takes into account every month of the year, not just the months with the highest peak. Including the entire year is particularly significant with regard to generating facility maintenance. Generation facilities need to be taken out of service for maintenance. This would generally occur during low demand months. The amount of capacity to meet all of the system's loads must take into account the demands in the low demand months as well as the months in which the system may be peaking. Staff's 12-NCP methodology takes this into account.

Further, class peak (non-coincident peak or NCP) demand is the maximum demand of each class whenever it occurs during each month. While using coincident peak (CP or system peak) demand is theoretically appropriate, the Staff uses class peak demands because of the relative stability of class contribution to class peak demands, when compared to class contribution to coincident (system) peak demand. Each class's contribution to class peak is independent of when the system peaks; however, using coincident peaks would complicate comparisons over time.

Q. Does this conclude your rebuttal testimony in this case?

A. Yes, it does.

AMERENUE CASE ER-2008-0318
A COMPARISON OF THE RESULTS OF THE CLASS COST OF SERVICE STUDIES
THE PERCENT CHANGE IN CLASS REVENUES REQUIRED TO EQUALIZE CLASS RATES OF RETURN
(REVENUE NEUTRAL)

	Mo Retail	RES	SGS	LGS	LPS	LTS
Staff (12 NCP A&P)	0.00%	3.160%	-3.063%	-5.092%	2.901%	4.882%
AmerenUE (4 NCP A&E)	0.000%	6.820%	-6.626%	-7.561%	3.536%	-2.641%
OPC (TOU)	0.000%	-1.850%	-9.900%	-2.130%	14.470%	23.010%
OPC (4CP A&P)	0.000%	0.060%	-7.080%	-2.550%	10.480%	11.630%
MIEC (1 NCP A&E)	0.000%	12.300%	-5.800%	-11.000%	-3.800%	-16.200%