Exhibit No.:	
Witness:	Maurice Brubaker
Type of Exhibit:	Surrebuttal Testimony
Issues:	Cost of Service and Revenue Allocation
Sponsoring Party:	Missouri Industrial Energy Consumers
Case No.:	ER-2010-0036

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company, d/b/a AmerenUE's Tariffs to Increase Its Annual Revenues for Electric Service	))))))	**Case No. ER-2010-0036** Tariff Nos. YE-2010-0054 and YE-2010-0055

Surrebuttal Testimony and Schedule of

Maurice Brubaker

Cost of Service and Revenue Allocation

On behalf of

Missouri Industrial Energy Consumers

March 5, 2010

BAI
BRUBAKER & ASSOCIATES, INC.
CHESTERFIELD, MO 63017

Project 9187

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company, d/b/a AmerenUE's Tariffs to Increase Its Annual Revenues for Electric Service	**Case No. ER-2010-0036** Tariff Nos. YE-2010-0054 and YE-2010-0055

STATE OF MISSOURI)
) **SS**
COUNTY OF ST. LOUIS)

Affidavit of Maurice Brubaker

Maurice Brubaker, being first duly sworn, on his oath states:

1. My name is Maurice Brubaker. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by the Missouri Industrial Energy Consumers in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes are my surrebuttal testimony and schedule which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2010-0036.

3. I hereby swear and affirm that the testimony and schedule are true and correct and that they show the matters and things that they purport to show.

M S Brubaker
Maurice Brubaker

Subscribed and sworn to before me this 4th day of March 2010.

TAMMY S. KLOSSNER
Notary Public - Notary Seal
STATE OF MISSOURI
St. Charles County
My Commission Expires: Mar. 14, 2011
Commission # 07024862

Tammy S. Klossner
Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company, d/b/a AmerenUE's Tariffs to Increase Its Annual Revenues for Electric Service	))))))	**Case No. ER-2010-0036** Tariff Nos. YE-2010-0054 and YE-2010-0055

Surrebuttal Testimony of Maurice Brubaker

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Maurice Brubaker. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q ARE YOU THE SAME MAURICE BRUBAKER WHO HAS PREVIOUSLY FILED TESTIMONY IN THIS PROCEEDING?

A Yes. I have previously filed direct and rebuttal testimonies on revenue requirement, cost of service, revenue allocation and rate design issues.

Q ARE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE OUTLINED IN ANY OF THOSE PRIOR TESTIMONIES?

A Yes. This information is included in Appendix A to my direct testimony on revenue requirement issues.

Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A This testimony is presented on behalf of the Missouri Industrial Energy Consumers ("MIEC"). These companies purchase substantial quantities of electricity from AmerenUE, principally at the primary and transmission voltage levels.

Q WHAT DO YOU ADDRESS IN THIS TESTIMONY?

A In this testimony, I will address certain cost of service and revenue allocation issues raised by the Staff of the Commission, the Office of Public Counsel ("OPC") and by Midwest Energy Users' Association ("MEUA"). The fact that I do not address a particular issue or position of another party should not be construed as agreement.

Q ARE YOU ADDRESSING ANY ASPECTS OF THE DEMAND-SIDE MANAGEMENT ("DSM") COST RECOVERY ISSUE?

A No. It is my understanding that the parties have reached agreement on a partial stipulation that resolves the DSM cost recovery issues for this case. Accordingly, while I continue to have disagreements with certain other parties on this issue, additional responsive testimony is not being offered because of the partial stipulation.

Q PLEASE SUMMARIZE YOUR SURREBUTTAL TESTIMONY.

A My surrebuttal testimony may be summarized as follows:

1. The allocation methodologies for fixed generation plant costs proposed by Staff and OPC inappropriately diminish the role of peak demands in determining cost responsibility, and overstate the role of energy.

2. The rationale offered by Staff in support of its allocation methodologies constitutes a gross oversimplification of the planning process. Staff has offered no logic or analytical support for its particular recommendations.

3. The methodologies employed by Staff and OPC to allocate fixed generation costs fail to assign the customer classes who receive above-average capital

costs the below-average energy costs corresponding to that higher fixed cost allocation.

4. MEB-COS-SR-1 demonstrates this failure to recognize the fuel part of the capital costs/fuel costs tradeoff relied upon by Staff and OPC to support their fixed cost allocation methods. It shows that the Large Primary Service class is allocated capacity costs between 18% and 28% above the average, but is charged average fuel costs. The Large Transmission Service class is charged capital costs ranging from 44% to 73% above the average, but is still charged average fuel costs.

5. A generation system designed to meet the "peak and average" demand would fall far short of meeting the utility's peak, let alone provide any reserve capacity.

6. In response to other testimony, I clarify that MEB-COS-9 attached to my direct testimony was an illustration of a methodology for establishing a rate for LTS, and should not be construed as a recommendation either for the amount of rate increase used in the illustration, or the value of the LTS rate.

Cost of Service Issues

Q HAVE YOU REVIEWED THE REBUTTAL TESTIMONY OF OPC WITNESSES MEISENHEIMER AND KIND, AND STAFF WITNESS SCHEPERLE WITH RESPECT TO COST OF SERVICE ISSUES?

A Yes, I have.

Q AT PAGE 4 OF HER REBUTTAL TESTIMONY, OPC WITNESS MEISENHEIMER IS CRITICAL OF THE AVERAGE AND EXCESS ("A&E") METHOD THAT YOU AND AMERENUE HAVE USED TO ALLOCATE FIXED COSTS ASSOCIATED WITH THE GENERATION SYSTEM. THIS PARTICULAR CRITICISM IS RELATED TO THE USE OF NON-COINCIDENT ANNUAL PEAK DEMANDS, RATHER THAN SUMMER DEMANDS, IN DEVELOPING THE A&E ALLOCATION FACTOR. DOES THIS HAVE A MATERIAL IMPACT ON THE RESIDENTIAL CLASS?

A No, it does not. Use of the four coincident peaks (occurring during the summer) that are a component of OPC's allocation factor, would not materially change the result for the Residential class.

I note that on page 2 of her rebuttal testimony, Ms. Meisenheimer shows that the allocation factor for the Residential class under the A&E method is 46.65%. If the allocation factor is calculated using the four summer peaks, the Residential class would be allocated 45.29% of production fixed costs, which is not materially different from the A&E allocation factor. Notably, both allocation factors are substantially different from the two OPC studies and the two Staff studies that inappropriately diminish the role of peak demands in the allocation of generation system fixed costs.

Q ARE YOU FAMILIAR WITH THE TESTIMONY OF STAFF WITNESS SCHEPERLE AT PAGE 2 WHEREIN HE OUTLINES HIS VIEW OF THE BASIC DIFFERENCE BETWEEN A&E METHODS AND AVERAGE AND PEAK ("A&P") METHODS?

A Yes. He says the A&P methods used by Staff and OPC are based on an assumption that a utility adds capacity to meet its "entire" load, while the A&E method applied by AmerenUE and by me is based on an assumption that an electric utility adds capacity to meet its "peak load demands." Then, on page 3, he makes the statement that an electric utility adds generation capacity when doing so reduces the running cost of meeting its load requirements throughout the year by more than the cost of adding the additional capacity.

Q DO YOU AGREE WITH MR. SCHEPERLE'S ANALYSIS?

A No. First, I do not believe it is accurate to state that an electric utility adds generation when doing so reduces the running costs by more than the cost of adding the capacity. In my experience, the addition of generation capacity resources is triggered by a situation in which the forecasted peak load of the utility's customers (plus the necessary reliability reserve margin) exceeds the forecasted level of firm generation resources available to the utility.

In other words, the addition of generation capacity is a reliability-based circumstance, and not one based on replacement cost analysis as suggested by Mr. Scheperle. Mr. Scheperle's explanation could be correct only if the cost of failing to meet load is factored into the equation. Since utilities have an obligation to provide the needed services in a safe and reliable manner, I do not believe that this condition is realistic.

Q WHAT ELSE DOES MR. SCHEPERLE HAVE TO SAY ABOUT THIS MATTER?

A Beginning at the bottom of page 3, he has a brief discussion about different types of generation capacity, namely base load, intermediate and peaking. He points out the different technologies and their differences in fuel cost and other factors. He then concludes that if capacity is added only to meet peak load, utilities would build only peaking capacity. From this, he concludes that the A&E method is inappropriate, and that the A&P method is preferable.

Q DO YOU AGREE?

A No. This is a gross oversimplification of the planning process and the implications that are associated with the presence of a choice in generation technology.

Q IN SYSTEM PLANNING, DO UTILITIES TAKE INTO ACCOUNT MORE THAN JUST SYSTEM PEAK LOAD?

A Of course. In planning a generation expansion the need for additional capacity, based on peak load circumstances, is paramount. However, when a utility decides how to expand, it will certainly take into account the relative economics (both capital and fuel) of various types of generation facilities, the expected stability of the costs associated with the fuel for each technology choice, governmental regulations, construction and other risks, and the overall expected economics, both on a year-by-year basis and cumulatively on a net present value basis over the expected life of the expansion facilities.

Q DOES THE A&P METHOD, AND THE OTHER METHODS OFFERED BY STAFF AND OPC, TAKE THESE FACTORS INTO ACCOUNT?

A No. They do not even pretend to address these factors. Staff's and OPC's allocation methods arbitrarily include a large energy component in the allocation factors, but their methods do not reflect the types of decisions that AmerenUE (then Union Electric Company) actually made when planning its generation resources. If such considerations were to be reflected in the allocation factors, I believe that, at a minimum, it would have to be on an historic basis, looking back at the circumstances in existence at the time each generating facility in AmerenUE's generating fleet was planned. Considering economics and options that are in existence today, and which are far different from the economics and options available at the time that the existing generation fleet was planned, is neither relevant nor appropriate.

Q HOW DOES THE A&E METHOD PROPERLY TAKE INTO ACCOUNT THE RELEVANT FACTORS?

A First, as has been noted before, the A&E method has an energy component so that the contribution of each class to load in every hour of the year is considered. It combines those characteristics with the excess of the peak demands over those averages in forming an allocation factor that fairly apportions the diversity between class maximum demands and class contributions to system peak (i.e., classes peak at different times) among the various classes.

The A&E method then uses those demand responsibility allocation factors to allocate the fixed costs associated with the existing generation fleet. In doing so, the A&E method (and indeed all other traditional allocation methods such as coincident peak) recognizes that all customers are served from a single system based on a least-cost, reliability constrained dispatch that attempts to serve the load reliably and in as economical a manner as is feasible. Implicitly, all customers are bearing average capacity cost associated with the existing generation fleet.

On the other side of the coin, all customers also are sharing equally in the fuel cost of generation from the entire generation fleet. All customers get a proportionate benefit of the low-cost nuclear fuel, regardless of the "peakiness" of their load shape. All customers also get a proportionate share of the fuel cost of the peaking units, regardless of how level or continuous their loads are.

In other words, this is an averaging approach as to both the fixed capacity cost and the energy cost, and recognizes that all facilities contribute to serving all load.

Q DO STAFF AND OPC RECOGNIZE DIFFERENCES IN FUEL COST?

A No. They say they exist – indeed, that is part of the rationale they give for their fixed cost allocation method. Yet, when it comes to determining cost of service, both Staff and OPC ignore these fuel cost differences and focus exclusively on the capital cost side. As a consequence, the methods they propose disproportionately allocate capital cost to high-load factor customers without giving them the benefit of the lower fuel cost that theoretically is part and parcel of the higher allocation of capital cost. As pointed out in my rebuttal testimony, this is not consistent or correct and is highly biased in favor of low-load factor customers.

Q OPC WITNESS KIND MADE A REVISION TO HIS STUDY IN HIS REBUTTAL TESTIMONY. HAVE YOU UPDATED YOUR REBUTTAL SCHEDULES TO INCORPORATE THE RESULTS OF MR. KIND'S REVISED STUDY?

A Yes. Schedule MEB-COS-SR-1 presents that analysis. It is an updated version of Schedule MEB-COS-R-3, and shows that the capital cost per kW of peak demand varies widely when the OPC and Staff cost allocation methods are applied. The schedule also shows that there is no difference in the average cost of fuel and other variable items under these allocation methods.

As shown in the columns labeled "% Difference from System Avg." for capacity, Staff and OPC methods allocate to the Large Primary Service class capacity cost per kW ranging between 18% and 28% above the system average. For the

Large Transmission Service class, the numbers range from 44% above the average to 73% above the average. In each and every case, as shown by the column titled "% Difference from System Avg." with respect to energy, the cost per kWh allocated to each class is identical.

If Staff and OPC want to explore differential allocations of capital cost because of different load characteristics, they must also explicitly take into account the corresponding differences in fuel cost that would be associated with these different assignments of capacity cost. Since they have failed to do that, their studies are seriously flawed and should not be given any weight.

Q ONE FINAL POINT ON THIS SUBJECT. AT PAGE 5 OF HER REBUTTAL TESTIMONY, OPC WITNESS MEISENHEIMER STATES THAT "… PRODUCTION PLANT COSTS ACTUALLY VARY BY HOUR DEPENDING ON THE PLANTS IN USE." DO YOU AGREE WITH THIS STATEMENT?

A No. It is important to keep in mind that OPC witness Meisenheimer is only assigning generation plant capital costs to hours. Nowhere in her study does she take into account differences in energy costs by hour. While energy costs may differ by hour if examined on an actual dispatch basis, the fixed production plant costs used in the OPC's time-of-use cost of service study do no such thing. OPC's study does not consider energy-related costs at all. It considers only the fixed capital costs.

Fixed capital-related costs associated with generating plant absolutely do not vary by hour. The time-of-use study put forth by OPC is not a study that addresses cost-causation and should not be allowed to masquerade as such. Very simply, the OPC time-of-use study allocates the capital costs associated with each generating plant across all the hours that it runs. At best, the result is an "assignment" study which has no legitimate claim to cost-causation principles. While some might argue that it could be useful in fashioning time-of-use rates, it clearly is not appropriate for allocating fixed cost revenue requirement responsibility among customer classes.

Q CONSIDERING THE PEAK AND AVERAGE METHOD RECOMMENDED BY STAFF AND OPC, WOULD FACILITIES SIZED TO MEET THE "PEAK AND AVERAGE" DEMAND BE SUFFICIENT TO SERVE THE SYSTEM?

A No. The peak and average method is equivalent to weighting average demands equal to the system load factor, and weighting the four coincident peak demands by the quantity 1 minus the system load factor. When this is done, the weighted average demand totals to approximately 5,900 MW. This is substantially less than the system peak demand of approximately 8,200 MW, and also is substantially less than the average of the four coincident peak demands which is about 7,700 MW.

A system based around the idea of peak and average demands would be woefully inadequate, and fall far short of being able to provide reliable service to the utility's customers.

<u>Clarification of Revised Schedule MEB-COS-9</u>

Q DO BOTH STAFF WITNESS SCHEPERLE AND MEUA WITNESS CHRISS EXPRESS CONCERN ABOUT SCHEDULE MEB-COS-9?

A Yes. I think the concern arises out of confusion about what this schedule represents. For context, here is the testimony relating to it that is referenced by Mr. Chriss on page 9 of his rebuttal testimony. It appears at pages 38 and 39 of my revised direct testimony:

"Q IF, INSTEAD OF YOUR APPROACH, THE COMMISSION CHOOSES TO ESTABLISH A RATE LEVEL FOR LTS INDEPENDENT OF THE AMOUNT OF OVERALL REVENUE INCREASE, HAVE YOU PREPARED AN EXAMPLE TO ILLUSTRATE HOW THIS APPROACH COULD BE IMPLEMENTED?

A Yes. This is shown on Schedule MEB-COS-8 and Schedule MEB-COS-9.

Q PLEASE EXPLAIN THE APPROACH SET FORTH ON THESE SCHEDULES.

A Schedule MEB-COS-8 shows a cost of service adjustment for all classes other than LTS. The objective here is to move 20% of the way to cost of service. These adjustments are made to revenues at current rates in order to determine the adjusted revenues at current rates, which form the basis for the distribution of revenue adjustments.

Schedule MEB-COS-9 shows how to combine the cost of service adjustments with the target revenue level for LTS, and the overall rate increase that is granted. For purposes of illustration, I have used a $200 million overall rate increase.

This approach allows the Commission to establish an appropriate revenue level for Rate LTS by taking into account all of the evidence that is available to it, and without regard to the results of a particular cost of service study. At the same time, appropriate cost of service adjustments can be made for other customer classes as well."

The intent of this testimony and the accompanying schedule was to provide the Commission with an alternative approach to revenue allocation in this case REGARDLESS of the amount of the increase granted and REGARDLESS of the level of the LTS rate that the Commission found was appropriate. It was illustrated with particular numbers, because numbers had to be used to illustrate the concept. The use of specific numbers either for the amount of the increase or for the ultimate value for the LTS rate used in the illustration should not be construed as a recommendation.

Q DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A Yes, it does.

AmerenUE

CUSTOMER CLASS GENERATION CAPACITY COSTS PER KW AND ENERGY COSTS PER KWH UNDER TRADITIONAL METHODS AS COMPARED TO STAFF AND OPC PROPOSALS

MIEC COST OF SERVICE STUDY / 4 COINCIDENT PEAK

	Traditional Avg. & Excess CCOS				4 COINCIDENT PEAK			
	Capacity Rev Req.		Energy Rev Req.		Capacity Rev Req.		Energy Rev Req.	
Customer Class	Capacity Costs $ per KW	% Difference From System Avg.	Energy Costs ¢ per kWh	% Difference From System Avg.	Capacity Costs $ per KW	% Difference From System Avg.	Energy Costs ¢ per kWh	% Difference From System Avg.
Total	113		2.15		113		2.15	
Res	113	**0%**	2.15	**0%**	109	**-4%**	2.15	**0%**
Small GS	113	**0%**	2.15	**0%**	113	**0%**	2.15	**0%**
Large GS/Small PS	113	**0%**	2.15	**0%**	115	**2%**	2.15	**0%**
Large PS	113	**0%**	2.15	**0%**	117	**4%**	2.15	**0%**
Trans.	113	**0%**	2.15	**0%**	119	**5%**	2.15	**0%**

MISSOURI COMMISSION STAFF COST OF SERVICE STUDIES

	Staff Avg. and Peak CCOS				Staff Capacity Utilization CCOS			
	Capacity Rev Req.		Energy Rev Req.		Capacity Rev Req.		Energy Rev Req.	
Customer Class	Capacity Costs $ per KW	% Difference From System Avg.	Energy Costs ¢ per kWh	% Difference From System Avg.	Capacity Costs $ per KW	% Difference From System Avg.	Energy Costs ¢ per kWh	% Difference From System Avg.
Total	113		2.15		113		2.15	
Res	99	**-12%**	2.15	**0%**	98	**-13%**	2.15	**0%**
Small GS	107	**-5%**	2.15	**0%**	107	**-5%**	2.15	**0%**
Large GS/Small PS	121	**7%**	2.15	**0%**	122	**8%**	2.15	**0%**
Large PS	133	**18%**	2.12	**-1%**	135	**19%**	2.12	**-1%**
Trans.	165	**46%**	2.18	**1%**	168	**49%**	2.18	**1%**

OFFICE OF PUBLIC COUNSEL COST OF SERVICE STUDIES

	OPC Avg. and Peak CCOS				OPC TOU CCOS			
	Capacity Rev Req.		Energy Rev Req.		Capacity Rev Req.		Energy Rev Req.	
Customer Class	Capacity Costs $ per KW	% Difference From System Avg.	Energy Costs ¢ per kWh	% Difference From System Avg.	Capacity Costs $ per KW	% Difference From System Avg.	Energy Costs ¢ per kWh	% Difference From System Avg.
Total	113		2.15		113		2.15	
Res	98	**-13%**	2.15	**0%**	92	**-19%**	2.15	**0%**
Small GS	106	**-6%**	2.15	**0%**	100	**-12%**	2.15	**0%**
Large GS/Small PS	122	**8%**	2.15	**0%**	125	**11%**	2.15	**0%**
Large PS	137	**21%**	2.15	**0%**	145	**28%**	2.15	**0%**
Trans.	163	**44%**	2.15	**0%**	196	**73%**	2.15	**0%**