

Exhibit No.: 215  
Issues: Class Cost-of-Service  
Witness: David C. Roos  
Sponsoring Party: MO PSC Staff  
Type of Exhibit: Surrebuttal Testimony  
Case No.: ER-2008-0318  
Date Testimony Prepared: November 5, 2008

**MISSOURI PUBLIC SERVICE COMMISSION**

**UTILITY OPERATIONS DIVISION**

**SURREBUTTAL TESTIMONY**

**OF**

**DAVID C. ROOS**

**UNION ELECTRIC COMPANY d/b/a AMERENUE**

**CASE NO. ER-2008-0318**

**Jefferson City, Missouri  
November 2008**

Staff Exhibit No. 215  
Case No(s). ER-2008-0318  
Date 12-04-08 Rptr KF

**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 Surrebuttal Testimony in question and answer form, consisting of 12 pages of Surrebuttal Testimony to be presented in the above case, that the answers in the following Surrebuttal 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 5<sup>th</sup> day of November, 2008.



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

  
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Notary Public

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**OF**

**DAVID C. ROOS**

**UNION ELECTRIC COMPANY d/b/a AMERENUE**

**CASE NO. ER-2008-0318**

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**SURREBUTTAL TESTIMONY**

**OF**

**DAVID C. ROOS**

**UNION ELECTRIC COMPANY d/b/a AMERENUE**

**CASE NO. ER-2008-0318**

13 Q. Please state your name and business address.

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

16 Q. Are you the same David C. Roos who contributed to the Missouri Public  
17 Service Commission Staff's (Staff's) Class Cost-of-Service and Rate Design Report and who  
18 filed rebuttal testimony on behalf of Staff in this proceeding?

19 A. Yes, I am.

20 Q. What is the purpose of your surrebuttal testimony?

21 A. I respond to the rebuttal testimonies of Missouri Industrial Energy Consumers  
22 (MIEC) witness Maurice Brubaker, The Commercial Group witness Richard Baudino,  
23 Noranda Aluminum, Inc. witness Donald Johnstone, and Union Electric Company d/b/a  
24 AmerenUE (AmerenUE) witness Wilbon Cooper

25 Q. Please summarize your surrebuttal testimony.

26 A. In this surrebuttal testimony I explain: (1) the Average and Peak (A&P)  
27 allocation method used by the Staff is superior to the Average and Excess (A&E) allocation  
28 method because the A&P allocation method properly allocates costs to customers based on  
29 their load factors; and (2) the class cost of service allocation methodology and the  
jurisdictional allocation methodology utilized by a party need not be the same methodology.

1 **CLASS COST-OF-SERVICE STUDY – PRODUCTION CAPACITY ALLOCATION**

2 **Tradition and Precedence**

3 Q. On page 3, lines 6 – 8 of his rebuttal testimony, Mr. Brubaker states that the  
4 A&P allocation method used by Staff has never been adopted by the Missouri Public Service  
5 Commission (Commission). Is this correct?

6 A. No, it is not. This Commission, in 1983, issued a decision in Re Kansas City  
7 Power & Light Company, 53 PUR4th 315, 317, 326, 25 Mo.P.S.C.(N.S.) 605, 607, Case No.  
8 EO-78-161, February 28, 1983, Report and Order, in which it expressly stated:

9 . . . As will be discussed in greater detail, *infra*, based on the evidence  
10 presented in this case, the commission finds the time-of-use method to be the  
11 most theoretically appropriate approach for allocating generation costs and,  
12 further, finds the average and peak allocation method for fixed generation cost  
13 as the most reasonable alternative to a full time-of-use procedure. As a result  
14 of these findings, the updated cost-of-service study to be submitted by KCPL  
15 shall contain either: (a) a full hourly time-of-use allocation of both fixed and  
16 variable generation costs to the customer classes, or (b) an average and peak  
17 allocation of fixed generation costs and an allocation of variable generation  
18 costs on the basis of annual class energy usage adjusted for losses.

19  
20 Therefore, based on the findings that fixed generation and bulk transmission  
21 costs should be allocated to the customer classes based on class demand  
22 levels and that the average and peak method gives a degree of consideration  
23 to off-peak usage of generation facilities, the commission concludes that the  
24 average and peak method, as proposed by the staff, provides the most  
25 reasonable alternative to the time-of-use procedure for allocating the costs  
26 involved.

27  
28  
29 In addition, in Re Arkansas Power & Light Company, Case No. ER-81-364, 25  
30 Mo.P.S.C.(N.S.) 101, 113 Report and Order (1982) and Re Union Electric Company, Case  
31 Nos. EO-85-17 and ER-85-160, 27 Mo.P.S.C.(N.S.) 183, 274- Report and Order (1985) the  
32 Commission adopted the Time-Of-Use (TOU) method and the A&P method as an alternative.

33 Attached to this testimony as Schedule DCR-S1 is the data request response submitted to  
34 SIEUA and AGP which sets out these decisions. The Staff also discussed these cases in its

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1 prehearing brief filed in Case No. EO-2002-0384. In this proceeding, EO-2002-0384, In the  
2 Matter of an Examination of Class Cost of Service and Rate Design in the Missouri  
3 Jurisdictional Electric Service Operations of Aquila, Inc., Formerly Known as UtiliCorp  
4 United Inc., Mr. Brubaker was a witness for SIEUA and AGP. The portion of that brief  
5 containing the discussion of these cases is attached to this testimony as Schedule DCR-S2.

6 Q. Do you agree with Mr. Brubaker's statement on page 18, lines 10 through 17,  
7 of his rebuttal testimony, "Methods that have not had the benefit of that analysis and  
8 withstood the test of time must be viewed with skepticism, and proponents of such methods  
9 bear a special burden of proving that they do a more accurate job of identifying cost-causation  
10 than do recognized methods, and **are not merely ad hoc creations designed simply to**  
11 **support a particular result desired by the analyst**"? (Emphasis added).

12 A. Yes. This is a principle that the Staff adheres to in conducting its studies and,  
13 in part, why the Staff used an A&P method in this case. This method has been used by the  
14 Staff in Commission cases for at least the last twenty-five (25) years. The Staff's use of the  
15 A&P allocator in this rate case follows a long and established tradition of the Staff using the  
16 A&P allocator to equitably distribute costs to customer classes in Missouri electric utility rate  
17 cases.

18 **Comparing Class Cost-of-Service Allocators to Jurisdictional Allocators**

19 Q. Does Mr. Brubaker in his rebuttal testimony, page 8, line 4 through page 9, line 9,  
20 compare Staff's recommended jurisdictional capacity allocator in the 2006 Kansas City Power  
21 & Light Company (KCPL) rate case, Case No. ER-2006-0314, to Staff's recommended Class  
22 Cost-of-Service capacity allocator in this AmerenUE rate case?

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1           A.     Mr. Brubaker contends that because Staff used a 4 Coincident Peak (CP)  
2 jurisdictional allocator in the KPCL case, it should use the same methodology to calculate the  
3 demand allocated for Class Cost-of-Service (CCOS) in this case. He states that the Staff's  
4 CCOS A&P capacity allocator under-weights the summer peak demands when compared to  
5 the 4 CP capacity allocator used to allocate jurisdictional capacity in the KCPL case. When  
6 Staff presented testimony on jurisdictional allocations in the KCPL case, the Staff showed  
7 why a 4 CP based on KCPL's summer month peak demands was appropriate to use for KCPL  
8 jurisdictional allocators in that case. That does not mean that the same allocation  
9 methodology should be used for AmerenUE's CCOS study. In fact, Staff used its A&P  
10 allocator in Staff's CCOS in ER-2006-0314, the Empire District Electric Company Case No.  
11 ER-2004-0570, and in the last AmerenUE rate case, Case No. ER-2007-0002.

12           Q.     Is it useful to compare jurisdictional allocators to CCOS allocators?

13           A.     No. Jurisdictional allocations and CCOS allocations should not be confused  
14 with each other. Jurisdictional allocations are used to allocate among the federal and state  
15 jurisdictions, or said in another manner, allocate among wholesale and retail jurisdictions.  
16 This is in contrast to CCOS allocations that are used in a CCOS study to allocate costs among  
17 the utility's retail customers.

18           Q.     What is the primary difference between allocating costs among retail and  
19 wholesale jurisdictions compared to allocating costs among retail classes?

20           A.     The allocation of costs among jurisdictions, wholesale and retail (there may be  
21 more than one state jurisdiction), determines the amount of costs that are to be collected from  
22 retail customers. Of course, this Commission does not determine the rate structure for  
23 wholesale rates; however, this Commission does determine the allocation of costs to the rate

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1 classes and how, through rate structure, these costs are collected. The allocation of costs  
2 among the retail classes should be reflective of the how these costs are collected in rates from  
3 customers in the various rate classes. Therefore, the CCOS allocator has a retail rate structure  
4 component that the jurisdictional allocator does not have.

5 Q. How does the consistency between class cost allocation and class rate design  
6 affect Staff's choice of class allocation factors?

7 A. The rates for various classes include time differentiated rates such as seasonal  
8 and time-of-use rates. Staff's consistent position has been that the allocation of costs among  
9 retail classes should provide a reasonable basis for setting time differentiated rates. The A&P  
10 allocation method provides a reasonable method of cost allocation to be used in determining  
11 time differentiated rates. In contrast, allocation methods that depend only on summer peak  
12 demands do not provide a reasonable basis for setting time differentiated rates, because such a  
13 cost allocation method implies that all the demand charges set for non-residential customers  
14 should be collected during the summer months. This rate design would result in the free use  
15 of the generation and transmission capacity during the non-summer months, and from Staff's  
16 perspective, this is not a reasonable retail rate design.

17 **The Importance of Summer Peaks**

18 Q. Should summer month peak demands be treated more importantly than non-  
19 summer months in a CCOS study for AmerenUE?

20 A. Yes. The peak demands of the months with the highest demands should be  
21 treated more importantly (given more weight) than the other monthly demands. In Missouri,  
22 the highest demands generally occur in the summer due to air conditioning load.



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1 Q. Are summer month peak demands treated more importantly than other monthly  
2 peak demand in Staff's A&P allocator?

3 A. Yes. The monthly peak demands are weighted, with the summer month peaks  
4 given more weight (more importance) than the other monthly peaks.

5 Q. Is it true that the class peak demands for August, which has the highest peak  
6 demand for the test year, is weighted less than 10% in Staff's A&P allocator calculations, as  
7 claimed by Mr. Brubaker on page 7, lines 13 through 15 of his rebuttal testimony?

8 A. No. In its A&P allocator calculations, Staff used a weight of 0.2077 (almost  
9 21%) for the August class peak demand.

10 Q. Is it true that the two highest peak demands (that occurred in August and July)  
11 have a combined weight of less than 15% in Staff's A&P allocator calculations, as claimed by  
12 Mr. Brubaker on page 7, lines 17 - 19, of his rebuttal testimony?

13 A. No. The following table shows the weights used by Staff to weight the 12  
14 monthly class peaks. These weights can be found in my workpapers, in Excel spreadsheet:  
15 DCR Direct ER-2008-0318 Allocators worksheet.xls, on the A&P worksheet.

Month	Total NCP Demand (kW)	Weight	Weight as Percent	Ranked By Demand
Jan-07	6,861,099	0.0646	6%	8
Feb-07	7,127,319	0.0692	7%	6
Mar-07	6,087,526	0.0550	5%	11
Apr-07	6,289,521	0.0572	6%	10
May-07	6,918,169	0.0655	7%	7
Jun-07	7,962,764	0.0897	9%	4
Jul-07	8,290,559	0.1051	11%	2
Aug-07	9,238,190	0.2077	21%	1
Sep-07	8,092,877	0.0944	9%	3
Oct-07	7,514,710	0.0776	8%	5
Nov-07	5,928,210	0.0535	5%	12
Dec-07	6,547,446	0.0603	6%	9
Total		1.0000	100%	

16

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1 The combined weight of the July and August class peaks is 32%, and the combined weight of  
2 the summer months (June, July, August and September) is 50%. The table also shows the  
3 rank of each month with August having the highest sum of the class peaks with a rank of 1  
4 and November having the lowest sum of the class peaks ranked 12.

5 Q. Is this weighting for summer peak demands a reasonable one?

6 A. Yes. As described in Staff's Class Cost-of-Service and Rate Design Report,  
7 these weights were calculated using the Capacity Utilization Method. This method accounts  
8 for the relative size of the monthly peaks and, as shown in Table 1, months with higher peaks  
9 are weighted heavier (given more importance) than months with lower peaks.

10 Q. Is the A&P method a more reasonable method to allocate production capacity  
11 costs than the Average and Excess (A&E) method supported by Messrs. Brubaker, Baudino,  
12 and Cooper?

13 A. Yes. The A&P method is more reasonable than the A&E method because it  
14 properly takes into account production capacity costs throughout the entire year. That is, it  
15 doesn't simply look at the summer peak demand. The A&P method accounts for the fact that  
16 capacity is needed to meet demand on the system for each and every hour of the 8,760 hours  
17 in the year, not just the summer peak hour.

18 Q. Why is this important?

19 A. AmerenUE's facilities include peaking combustion turbine plants which  
20 generally are used only to meet system peak demands and are relatively inexpensive to build  
21 (in comparison to other generating facilities). It also includes the Callaway Nuclear Facility  
22 (Callaway). This plant generally runs during every hour of the year, except when it is off-line  
23 for maintenance or an unexpected outage. When it was built over 20 years ago, in the 1970's

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1 and 1980's, this facility cost billions of dollars and provides approximately 1,200 MW in  
2 capacity. All of AmerenUE's generating units are necessary to cost-effectively meet hourly  
3 demand. According to the A&E method and the arguments made by Messrs. Brubaker,  
4 Baudino, and Johnstone system peaks are the main reason for adding capacity, which implies  
5 that Callaway was built due to increases in peak demand.

6 But Callaway was not built because of changes in the Union Electric Company system  
7 peak demand. The fact that Callaway runs during every hour of the year, except when it is  
8 off-line for maintenance or an unexpected outage, indicates that Callaway was built to meet  
9 demand throughout the year. It is Staff's A&P method that properly takes into account these  
10 production capacity costs that are generated throughout the entire year.

11 Q. One of the criticisms of the A&P method by Messrs. Brubaker and Cooper is  
12 an assertion that it double counts the electrical usage of high load factor customers. Do you  
13 have a response to that criticism?

14 A. Yes, the argument is that the A&P method is faulty due to the issue of double  
15 counting. The claim is that since a high load factor customer's peak is only a little higher than  
16 its average demand, the A&P method double counts because it takes into account both the  
17 average demand and the peak demand. Supposedly, to remedy this "double counting", the  
18 A&E method only uses peak demand to calculate the allocation factor. Under this argument,  
19 followed to its illogical conclusion, a customer with a 100% load factor would not have its  
20 contribution to energy requirements accounted for in determining its fair share of production  
21 capacity costs. This benefits large customers to the detriment of low load factor customers,  
22 i.e., residential consumers and small general service customers, who have a large differential  
23 between their average use and their peak demand.

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1 Q. Schedule MEB-COS-R-3 to Mr. Brubaker's rebuttal testimony shows that  
2 Staff's A&P method allocates significantly more capital costs per kW to the Large Power  
3 class than his A&E method. Do you have a response to this?

4 A. Yes. In Schedule MEB-COS-R-3, Mr. Brubaker is merely comparing his  
5 CCOS A&E capacity allocator to Staff's and the Office of the Public Counsel's (OPC's)  
6 CCOS capacity allocators, while characterizing his A&E allocator as the "traditional"  
7 standard. In the last three sections of his Schedule MEB-COS-R-3, the values in the columns  
8 with the heading "% Difference From System Avg," are equal to the percent difference of  
9 Staff's or OPC's allocator from the A&E allocator. In the second section, labeled "Staff A&P  
10 12NCP CCOS", the values in the "% Difference From System Avg" column are equal to the  
11 A&P allocator's percent difference from the A&E allocator, for each class. These values are  
12 calculated as the difference between the A&P allocator and the A&E allocator divided by the  
13 A&E allocator or  $(A\&P - A\&E) / A\&E$ . In the first section of Schedule MEB-COS-R-3,  
14 under the heading "Traditional Method CCOS (MIEC)" the A&E allocator is compared to  
15 itself and the percent difference becomes  $(A\&E - A\&E) / A\&E$  so therefore it should be no  
16 surprise that the percent difference is zero.

17 This table could be duplicated using Staff's allocation factor as the "Traditional  
18 Method." The table would show that differences between the "Traditional Method" and  
19 Staff's allocation factor would be zero. By assuming that Staff's allocator is the correct  
20 standard for comparing CCOS capacity allocators, Staff can show that the A&E method,  
21 allocates significantly more capacity costs to the Residential Class than it does to the Large  
22 Power Class.

Surrebuttal Testimony of  
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1 Q. Have you performed any calculations and developed a schedule to illustrate  
2 this?

3 A. Yes, I have developed two Schedules DCR-S3 and DCR-S4 that are attached to this  
4 testimony. The first Schedule, DCR-S3, recreates the results of Mr. Brubaker's Schedule  
5 MEB-COS-R-3, for the "% Difference From System Avg" column using the general,  
6 simplified formula:  $(\text{Allocator-A\&E}) / \text{A\&E}$ . This schedule shows that Schedule MEB-COS-  
7 R-3, is simply a comparison of capacity allocators and validates Staff's simplified formula.  
8 Schedule DCR-S4 shows Staff's analysis, which uses Staff's A&P allocator as the basis for  
9 comparison and uses the general, simplified formula:  $(\text{Allocator-A\&P}) / \text{A\&P}$ .

10 Q. Regarding Schedule MEB-COS-R-3 and Mr. Brubaker's rebuttal testimony,  
11 what conclusions can be properly drawn from Staff's analysis?

12 A. As Mr. Brubaker correctly points out in his rebuttal, there is no significant  
13 difference among classes as to the energy costs. However, there is a difference in the way  
14 capacity costs are allocated to the classes. While Mr. Brubaker claims that Staff's A&P  
15 method allocates 25% more capital costs to the Large Primary Class than his A&E method, by  
16 Staff's analysis, Mr. Brubaker's A&E method allocates 19% more capacity costs to the  
17 residential class and 34% less capacity costs to the Large Primary Class, thus benefiting the  
18 Large Primary Class at the expense of the residential consumer. Staff's analysis also shows  
19 that OPC's methods allocates up to 8% more capacity costs to the Large Power Class and up  
20 to 5% less capacity costs to the Residential Class, thus benefiting the residential consumer at  
21 the expense of the Large Primary Class. Schedule DCR-S4 shows that Staff's method  
22 allocates capacity and energy costs to the classes in a fair and equal manner with no class  
23 benefiting at the expense of another.

Surrebuttal Testimony of  
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1 Q. On pages 5 and 6 of his rebuttal testimony Mr. Brubaker criticizes Staff's use  
2 of 12 monthly noncoincident peaks in performing its A&P method. Why is it more  
3 appropriate to use 12 monthly noncoincident peaks rather than just the one noncoincident  
4 peak of the summer months?

5 A. As I mentioned in my rebuttal testimony, an electric utility's system is  
6 designed to meet the demands on every day of every week of every month of the year, not just  
7 the demands made upon it in one or a few months in the year. The system is also designed to  
8 maintain reliable service during generation plant maintenance and potential outages. Using  
9 12 monthly peaks is a better proxy for these factors than simply using one summer month  
10 peak. Therefore, using 12 monthly noncoincident peaks is more appropriate.

11 **CLASS COST-OF-SERVICE STUDY-OTHER ALLOCATIONS**

12 **Allocating Fuel Costs**

13 Q. How do Staff, AmerenUE, OPC and MIEC allocate fuel costs in their  
14 CCOS studies?

15 A. Staff, AmerenUE, OPC, and MIEC allocate fuel costs by the amount of  
16 energy (kWh including losses) that each class used. This method allocates the average cost of  
17 fuels to the classes.

18 Q. What is Mr. Brubaker's concern with the way fuel costs are allocated?

19 A. Mr. Brubaker's believes that Staff's and OPC's CCOS studies allocate above  
20 average capacity costs to the high load factor customers and that these costs should be off set  
21 by a discount in fuel costs.

22 Q. Does Staff allocate too much capacity costs to the high load factor customers?

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1           A.     No. Most of the high load factor customers can be found in the Large Primary  
2 Class and the Transmission Class. Staff's A&P allocator properly allocates capacity costs to  
3 these classes; therefore there is no need to discount fuel costs.

4           **Revenues from Off-System Sales**

5           Q.     In Staff's CCOS, is it appropriate to allocate off-system sales revenues on an  
6 energy basis as proposed by Mr. Brubaker?

7           A.     No. In Staff's CCOS, fuel expenses for off-system sales and the cost of  
8 purchased power for off-system sales were subtracted from the off-system sales revenues to  
9 provide the margin from off-system sales. Removing the fuel expenses and the cost of  
10 purchased power removes the energy dependent component from off-system sales. The  
11 margin (net) from off-system sales was generated by AmerenUE's production capacity. Since  
12 the margin from off-system sales is a result of AmerenUE's production capacity, Staff  
13 allocates the margin of off-system sales using Staff's A&P allocator.

14          Q.     Does this conclude your surrebuttal testimony in this case?

15          A.     Yes, it does.

AQUILA NETWORKS, INC. D/B/A AQUILA MPS AND SJLP  
EO-2002-384  
Data Request  
of  
SIEUA and AGP  
to  
Missouri Public Service Commission Staff  
September 27, 2005

Item No. Description

3. At page 12 of his testimony, line 14, Mr. Busch states that "The TOU allocation methodology has been favored by past Commissions." With respect to this statement, please:

a. Describe fully the TOU allocation methodology that has been favored by past Commissions.

Staff Response:

It is my understanding that past Commissions have expressed the position that costs are caused by the utilization of the system each hour and the proper method of allocating those costs is on an hourly basis. I believe that hourly data was not available in those cases, and the Staff's "Average and Peak" method using 12 Class Peaks was adopted as most closely approximating the more preferable hourly TOU method.

b. Compare each element of methodology with the methodology being proposed in this proceeding.

Staff Response:

As I stated in response to part a, the Commission adopted a principle, not a methodology. The methods used by the Staff in this case are based on that principle, and are made possible by the availability of hourly class load data in this case.

c. Provide citations and copies of relevant portions of Orders for each instance in which the TOU allocation methodology was favored by past Commissions.

Staff Response:

The following is a list of case number, name of utility and date of Commission Orders that I'm aware of:



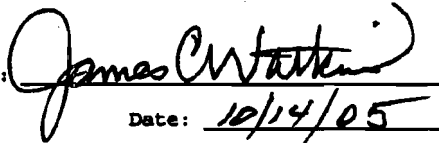
- (1) Case No. ER-81-364 (Arkansas Power & Light Company), April 20, 1982
- (2) Case No. EO-78-161 (Kansas City Power & Light Company), February 28, 1983
- (3) Case Nos. EO-85-17 and ER-85-160 (Union Electric Company), March 29, 1985

"...The Commission has indicated in recent cases that it believes the TOU [time of use] cost of service study most closely reflects cost causation of a utility's production and transmission facilities. Staff presented the same method to the Commission in Case No. ER-81-364 involving Arkansas Power & Light Company (AP&L), issued April 20, 1982. In that case, the Commission was presented with the same question of which theory properly reflected cost causation, TOU or CP. The Commission adopted the TOU/AP method. The Commission also adopted the TOU over the CP method of allocating costs in Case No. EO-78-161, which involved Kansas City Power & Light Company....The Commission considers its reasoning from the AP&L case to be supported by the evidence in this case. The Commission reaffirms its position that costs are caused by the utilization of the system each hour, and the proper method of allocating these costs is on an hourly basis. Here, as in AP&L, there is no hourly load data, so Staff's study utilizing TOU monthly data and AP [average and peak] allocation within the month is found to most closely approximate the more preferable hourly TOU... " [Case Nos. EO-85-17 and ER-85-160, pages 154-155]

The attached or above information provided to the requesting party or parties in response to this data or information request is accurate and complete and contains no material misrepresentations or omissions, based upon present facts to the best of the knowledge, information or belief of the undersigned. The undersigned agrees to immediately inform the requesting party or parties if during the pendency of this case any matters are discovered which would materially affect the accuracy or completeness of the attached information and agrees to regard this as a continuing data request.

As used in this request the term "document" includes publications in any format, work papers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data recordings, transcriptions and printer, typed or written materials of every kind in your possession, custody or control or within your knowledge. The pronoun "you" or "your" refers to the party to whom this request is tendered and named above and includes its employees, contractors, agents or others employed by or acting in its behalf.

Signed:



Date: 10/14/05

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of the Examination of Class )  
Cost of Service and Rate Design in the )  
Missouri Jurisdictional Electric Service )  
Operations of Aquila, Inc., Formerly )  
Known as UtiliCorp United Inc. )

Case No. EO-2002-384

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**STAFF'S PREHEARING BRIEF**

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November 4, 2005

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**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of an Examination of Class )  
Cost of Service and Rate Design in the )  
Missouri Jurisdictional Electric Service )                      Case No. EO-2002-384  
Operations of Aquila, Inc., Formerly )  
Known as UtiliCorp United Inc.                      )

**STAFF'S PREHEARING BRIEF**

**EXECUTIVE SUMMARY**

**ALLOCATION OF GENERATION-RELATED COSTS**

In this section of the brief, the Staff sets forth its factual support and argument for why the most appropriate manner of allocating fixed generation costs to customer classes is on a time-of-use basis, which involves the consideration of customer class contribution to generation demand for every hour of the year, rather than solely at the hour of generation peak demand.

**ALLOCATION OF TRANSMISSION-RELATED COSTS**

In this section of the brief, the Staff presents its factual support and arguments for why transmission costs should be allocated to customer classes on the same basis that generation costs are allocated to customer classes.

**PRIMARY DISTRIBUTION COST ALLOCATION METHOD**

In this section of the brief, the Staff presents its factual support and arguments for why that portion of primary distribution costs that is identified in the class cost-of-service studies as being length- or customer-related should be allocated on density-weighted customer numbers.

**DETERMINATION AND IMPLEMENTATION OF INTER-CLASS REVENUE ADJUSTMENTS**

In this section of the brief, the Staff presents its factual support and arguments for why inter-class revenue adjustments should not be determined in this case and, instead should be determined and implemented in Aquila, Inc.'s current rate case, Case No. ER-2005-0436.

**COMBINATION, ELIMINATION OR ADDITION OF RATE SCHEDULES**

In this section of the brief, the Staff presents its factual support and arguments for when rate schedules should be combined, and states which modifications Aquila proposes that the Staff does not oppose.

**CHANGES TO RATE STRUCTURES ON EACH RATE SCHEDULE**

In this section of the brief, the Staff presents its rationale and support for why the changes Aquila proposes to the rate structures on each rate schedule are inappropriate.

**DETERMINATION OF RATE VALUES**

In this section of the brief, the Staff presents its position that each rate value on the current rate schedules for each customer class should be increased by the same percentage amount the Commission determines is appropriate to move that class closer to its cost of service.

**CONCLUSION**

In this section of the brief, the Staff presents its recommendation to the Commission that the Commission only determine in this case the appropriate allocation factors to be used in a class cost-of-service study and explains why it makes that recommendation.

## **COST-OF-SERVICE ISSUES**

### **ALLOCATION OF GENERATION-RELATED COSTS**

This case begins with the premise that the costs Aquila, Inc. incurs to serve each customer class—a group of customers that have similar characteristics—should be matched to the revenues Aquila gets from that group of customers. In this case the Staff, Aquila, Public Counsel and a group of parties—AG Processing, Inc., FEA, SIEUA—each sponsor a different approach for how to estimate the costs Aquila incurs to serve each customer class. The most significant issue between them in estimating the costs Aquila incurs to serve each customer class is found in the first stated issue on the list of issues: What is the appropriate method for allocating generation-related costs to customer classes?

The Staff's position is that its time-of-use method which (1) spreads each increment of fixed generation capacity costs equally across the entire time period where that capacity is used and (2) matches usage costs to when they are incurred is the appropriate method for allocating generation-related costs to customer classes.

Unlike the Staff, the witnesses of Aquila, AG Processing, Inc., the Federal Executive Agencies and the Sedalia Industrial Energy Users' Association promote the use of a generation cost allocation method that relies on maximum capacity requirements Aquila must meet during the year, *i.e.*, a peak responsibility method. (Staff witness Watkins Rebuttal, p. 1, l. 22 to p. 2, l. 4; p. 3, ll. 8-19).

The evidence and argument in this case will show that, because production-capacity costs are determined by loads throughout the year, each class's contribution to the sum of the class loads in each hour should be used to allocate hourly production-capacity costs. For consistency,

and because production-energy costs also vary throughout the year, each class's contribution to the sum of class loads in each hour should be used to allocate hourly production-energy costs.

The electricity a utility provides to its customers must be created essentially instantaneously with when the customers use that electricity. (AG Processing, Inc./FEA/SIEUA witness Brubaker Direct, p. 4, ll. 14-21). Therefore, electric utilities must have sufficient generation capacity available to serve their customers at any given moment. The types of generating plants an electric utility relies on to supply that capacity at any given moment primarily depends on what mix of plants produces the least-cost electricity given the operational constraints of the plants, the costs of the plants and the costs of the energy sources the plants convert into electricity. (Staff witness Watkins Rebuttal, p. 2, ll. 6-9; p. 3, l. 21 to p. 4, l. 3, p. 4, ll. 4-12).

In allocating generation-related costs to customer classes, the Staff does not discriminate between customers in terms of the cost of the generation required to serve those customers at any given point in time. In this case the Staff had sufficient data to allocate generation costs in each hour of the year to customer classes, hour-by-hour. (Staff witness Watkins Direct, p. 5, ll. 8-18). With the Staff's method, the generation costs assigned to each customer class in each hour is based only on the amount of electricity that customer class uses in that same hour. The Staff's method, in each hour of the year, allocates to the customer classes Aquila's costs related to generation used in that hour to meet the electricity demands of the customers in those classes in that same hour, based on the electricity used by each customer class in that hour.

In three cases decided in the early and mid-1980s the Commission adopted the position the Staff takes here. In each case, the issue was both significant and hotly contested. The first

**AmerenUE Case No. ER-2008-0318  
Recalculation Of MIEC's Schedule MEB-COS-R-3**

<b>"Traditional Method" CCOS (MIEC)</b>					
CCOS Classes	MIEC A&E	MIEC A&E	(A&E-A&E)	% Difference from A&E	% Difference from System
				(A&E-A&E)/ A&E	Avg <sup>1</sup>
Total MO Retail	100.00%	100.00%			
Residential	47.09%	47.09%	0.00%	0%	0%
Small GS	11.21%	11.21%	0.00%	0%	0%
Large GS	28.33%	28.33%	0.00%	0%	0%
Large PS	7.78%	7.78%	0.00%	0%	0%
Transmission	5.60%	5.60%	0.00%	0%	0%

<b>Staff A&amp;P 12 NCP CCOS</b>					
CCOS Classes	Staff A&P	MIEC A&E	(A&P-A&E)	% Difference from A&E	% Difference from System
				(A&P-A&E)/ A&E	Avg <sup>1</sup>
Total MO Retail	100.00%	100.00%			
Residential	39.56%	47.09%	-7.52%	-16%	-16%
Small GS	10.72%	11.21%	-0.49%	-4%	-4%
Large GS	31.52%	28.33%	3.19%	11%	11%
Large PS	9.69%	7.78%	1.91%	25%	25%
Transmission	8.51%	5.60%	2.91%	52%	52%

<b>OPC A&amp;P CCOS</b>					
CCOS Classes	OPC A&P	MIEC A&E	(A&P-A&E)	% Difference from A&E	% Difference from System
				(A&P-A&E)/ A&E	Avg <sup>1</sup>
Total MO Retail	100.00%	100.00%			
Residential	39.46%	47.09%	-7.63%	-16%	-16%
Small GS	10.72%	11.21%	-0.49%	-4%	-4%
Large GS	31.45%	28.33%	3.12%	11%	11%
Large PS	9.77%	7.78%	1.99%	26%	26%
Transmission	8.60%	5.60%	3.00%	54%	54%

<b>OPC TOU CCOS</b>					
CCOS Classes	OPC TOU	MIEC A&E	(TOU-A&E)	% Difference from A&E	% Difference from System
				(TOU-A&E)/ A&E	Avg <sup>1</sup>
Total MO Retail	100.00%	100.00%			
Residential	37.56%	47.09%	-9.53%	-20%	-20%
Small GS	9.97%	11.21%	-1.24%	-11%	-11%
Large GS	31.74%	28.33%	3.41%	12%	12%
Large PS	10.49%	7.78%	2.71%	35%	35%
Transmission	10.24%	5.60%	4.64%	83%	83%

1. Result from MEB-COS-R-3



**AmerenUE Case No. ER-2008-0318  
Staff's Analysis of Allocators**

<b>"Traditional Method" CCOS (MIEC)</b>					% Difference from A&P (A&E-A&P)/ A&P
CCOS Classes	MIEC A&E	Staff A&P	A&P (A&E-A&P)	A&P	
Total MO Retail	100.00%	100.00%			
Residential	47.09%	39.56%	7.52%		<b>19%</b>
Small GS	11.21%	10.72%	0.49%		<b>5%</b>
Large GS	28.33%	31.52%	-3.19%		<b>-10%</b>
Large PS	7.78%	9.69%	-1.91%		<b>-20%</b>
Transmission	5.60%	8.51%	-2.91%		<b>-34%</b>

<b>Staff A&amp;P 12 NCP CCOS</b>					% Difference from A&E (A&P-A&P)/ A&P
CCOS Classes	Staff A&P	Staff A&P	(A&P-A&P)	A&P	
Total MO Retail	100.00%	100.00%			
Residential	39.56%	39.56%	0.00%		<b>0%</b>
Small GS	10.72%	10.72%	0.00%		<b>0%</b>
Large GS	31.52%	31.52%	0.00%		<b>0%</b>
Large PS	9.69%	9.69%	0.00%		<b>0%</b>
Transmission	8.51%	8.51%	0.00%		<b>0%</b>

<b>OPC A&amp;4P CCOS</b>					% Difference from A&E (A&4P-A&P)/ A&P
CCOS Classes	OPC A&4P	Staff A&P	(A&4P-A&P)	A&P	
Total MO Retail	100.00%	100.00%			
Residential	39.46%	39.56%	-0.10%		<b>0%</b>
Small GS	10.72%	10.72%	0.00%		<b>0%</b>
Large GS	31.45%	31.52%	-0.07%		<b>0%</b>
Large PS	9.77%	9.69%	0.08%		<b>1%</b>
Transmission	8.60%	8.51%	0.09%		<b>1%</b>

<b>OPC TOU CCOS</b>					% Difference from A&E (A&P-A&P)/ A&P
CCOS Classes	OPC TOU	Staff A&P	(TOU -A&P)	A&P	
Total MO Retail	100.00%	100.00%			
Residential	37.56%	39.56%	-2.00%		<b>-5%</b>
Small GS	9.97%	10.72%	-0.75%		<b>-7%</b>
Large GS	31.74%	31.52%	0.22%		<b>1%</b>
Large PS	10.49%	9.69%	0.80%		<b>8%</b>
Transmission	10.24%	8.51%	1.73%		<b>20%</b>