

Exhibit No.:  
Issue: Rate Design  
Witness: Maurice Brubaker  
Type of Exhibit: Surrebuttal Testimony  
Sponsoring Parties: Industrials  
Case No.: ER-2010-0355  
Date Testimony Prepared: January 5, 2011

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

\_\_\_\_\_)  
In the Matter of the Application of )  
Kansas City Power & Light Company )  
for Approval to Make Certain Changes ) Case No. ER-2010-0355  
in its Charges for Electric Service to )  
Continue the Implementation of Its )  
Regulatory Plan )  
\_\_\_\_\_)

Surrebuttal Testimony and Schedule of

**Maurice Brubaker**

On behalf of

**Ford Motor Company  
Midwest Energy Users Association  
Missouri Industrial Energy Consumers  
Praxair, Inc.**

January 5, 2011



*Industrials* Exhibit No. 1208 BRUBAKER & ASSOCIATES, INC.  
Date 1/18/11 Reporter LMB CHESTERFIELD, MO 63017  
File No. ER-2010-0355 Project 9215

BEFORE THE PUBLIC SERVICE  
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Case No. ER-2010-0355

STATE OF MISSOURI )  
COUNTY OF ST. LOUIS )

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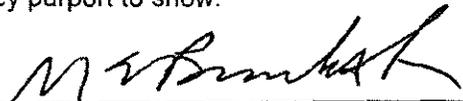
Affidavit of Maurice Brubaker

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

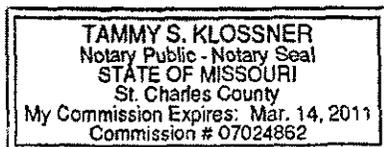
1. My name is Maurice Brubaker. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by Ford Motor Company, Midwest Energy Users Association, Missouri Industrial Energy Consumers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

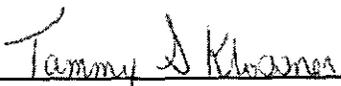
2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony and schedule which were prepared in written form for introduction into evidence in the Missouri Public Service Commission's Case No. ER-2010-0355.

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.

  
Maurice Brubaker

Subscribed and sworn to before me this 4<sup>th</sup> day of January, 2011.



  
Notary Public



1 "Industrials"). These companies purchase substantial amounts of electricity from  
2 Kansas City Power & Light Company ("KCPL") and the outcome of this proceeding  
3 will have an impact on their cost of electricity.

4 **Q WHAT IS THE SUBJECT OF YOUR SURREBUTTAL TESTIMONY?**

5 A In my surrebuttal testimony, I will respond to certain portions of the Rebuttal  
6 Testimony of KCPL witnesses Normand and Rush, OPC witness Meisenheimer and  
7 MPSC Staff witness Schepeler.

8 The fact that I may not respond to a particular point or position should not be  
9 interpreted as an endorsement.

10 **Response to KCPL**

11 **Q AT PAGE 4 OF HIS TESTIMONY, MR. NORMAND TAKES ISSUE WITH THE**  
12 **STATEMENT MADE IN YOUR TESTIMONY THAT HIS BIP APPROACH IS**  
13 **OBSCURE AND INAPPROPRIATE. IN RESPONSE, HE CLAIMS IT IS WELL**  
14 **RECOGNIZED IN THE INDUSTRY AND STATES HE HAS USED THIS APPROACH**  
15 **AS WELL AS SIMILAR METHODS FOR OVER 30 YEARS. PLEASE RESPOND**  
16 **TO MR. NORMAND'S TESTIMONY.**

17 A I readily acknowledge that Mr. Normand has proposed the BIP method on a number  
18 of occasions, and for a number of years. I also acknowledge that it is described in  
19 the NARUC Cost Allocation Manual, but the fact that it is described in the manual  
20 does not mean that it is endorsed by anyone, rather it is simply an explanation of  
21 what the method is.

22 What Mr. Normand has not rebutted, and indeed cannot rebut, is that BIP is  
23 an obscure and arcane method that has not found support in the industry. In this

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1 regard, please refer to Schedule MEB-COS-SR-1 which is the response to MIEC  
2 Data Request No. 2.1. In response to the request to identify rate proceedings that  
3 Mr. Normand was aware of where the BIP method was adopted, all that Mr. Normand  
4 was able to provide was a reference to the November 2010 decision by the Kansas  
5 Corporation Commission in the KCPL Iatan 2 rate case. I would certainly think that if  
6 Mr. Normand had succeeded in selling the BIP method during the last 30 or so years  
7 that he has been promoting it, that he would be able find at least one instance where  
8 it was adopted by a Commission prior to 2010.

9 **Q AT PAGE 6 OF HIS TESTIMONY, MR. NORMAND BEGINS A CRITICISM OF THE**  
10 **4 CP ALLOCATION METHOD AND CLAIMS THAT YOU, ALONG WITH MR.**  
11 **GOINS, RECOMMENDED THE USE OF A 4 CP ALLOCATION METHOD FOR**  
12 **PRODUCTION AND TRANSMISSION FACILITIES. IS THIS ACCURATE?**

13 **A** No, it is not accurate. Mr. Goins recommended a 4 CP allocation method. My  
14 recommendation was to use an Average and Excess – 4 Non-Coincident Peak  
15 (“A&E-4 NCP”) method. Indeed, the rates of return that Mr. Normand attributes to me  
16 on page 3 of his testimony are the rates of return under the A&E-4 NCP study which  
17 appear on my Schedule MEB-COS-4. It is true that I also presented (in the Appendix  
18 to my schedules) supplemental studies using 4 CP, and also A&E-2 NCP. I do not  
19 know why Mr. Normand seems to think that I recommended 4 CP when, in fact, I  
20 think it is very clear that I recommended A&E-4 NCP, the same method that this  
21 Commission recently approved for application to the summer peaking utility on the  
22 eastern side of the state, Ameren Missouri.

1 Q ON PAGE 6 OF HIS TESTIMONY, MR. NORMAND FURTHER STATES THAT  
2 ALTHOUGH YOU PROVIDE A MODIFIED VERSION OF HIS STUDY, YOU  
3 LIMITED YOUR PRESENTATION TO THE MAJOR CLASSES, AND DID NOT  
4 BREAKDOWN THE STUDIES BY SEASON OR ANY FURTHER DETAIL. IS MR.  
5 NORMAND CORRECT?

6 A No. All Mr. Normand would have had to do was to look at the workpapers supplied in  
7 association with my direct testimony. The workpapers contain the results of class  
8 cost of service studies using my recommended method (and the alternatives as well)  
9 in exactly the same rate schedule, voltage level and seasonal detail as Mr.  
10 Normand's studies.

11 Q DO YOU HAVE ANY COMMENT ON THE TABLE ON PAGE 4 OF MR.  
12 NORMAND'S REBUTTAL TESTIMONY?

13 A Yes. Here he compares the 4 CP (used by Mr. Goins) and energy allocation factors  
14 and concludes that, since the residential class is allocated more cost on a 4 CP basis  
15 than it is allocated on an energy basis, somehow the result is illogical. This is at the  
16 heart of the problem with Mr. Normand's approach to cost allocation. It essentially  
17 blurs the distinction between fixed costs and variable costs and masks the significant  
18 differences in cost-causation presented by "peaking" load shapes as compared to  
19 stable load shapes. I will also note that while Mr. Normand criticizes the 4 CP  
20 demand allocation for allocating more fixed cost to residential customers than does  
21 an energy allocator, that Mr. Normand's allocation of base load fixed costs to  
22 residential customers is 15% less than the allocation factor for energy. Such a result  
23 is completely illogical for a low load factor class that has high peaks in relation to its  
24 average demand (energy).

1 Q ON PAGE 12 OF HIS RATE DESIGN REBUTTAL TESTIMONY, KCPL WITNESS  
2 RUSH DESCRIBES YOUR RATE DESIGN PROPOSAL. HAS HE DONE SO  
3 ACCURATELY?

4 A No. He states that my proposal for the Large Power Service ("LPS") and Large  
5 General Service ("LGS") rates is that no increase be applied to the last energy block,  
6 which is the charge for usage over 360 kWh per kW. He fails to note, however, that I  
7 also propose that the increase to the middle energy block (in between 180 hours use  
8 and 360 hours use) would receive 75% of the average increase.

9 Q ON PAGE 13 OF HIS TESTIMONY, MR. RUSH ALLEGES THAT YOUR RATE  
10 DESIGN WOULD NOT REFLECT COST-CAUSATION PRINCIPLES BECAUSE  
11 THE PRIMARY DRIVERS FOR THIS INCREASE ARE IATAN 2 AND  
12 FUEL-RELATED COSTS. DO YOU AGREE?

13 A No, I do not. Clearly, the overwhelming component of the revenue requirement  
14 associated with Iatan 2 is fixed costs. As my proposals indicate, those fixed costs are  
15 properly reflected in demand charges, not in energy charges. Furthermore, the fixed  
16 costs as well as all the variable costs associated with the revenue requirement in this  
17 case are reflected in the class cost of service studies and properly allocated to  
18 classes using cost of service methodologies that have previously been approved by  
19 this Commission. I am at a loss to understand why Mr. Rush thinks that, despite the  
20 fact all costs are properly reflected in the cost study and in the rate analysis, there  
21 remains some distortion. The fact is that there is distortion in the current rates  
22 because entirely too much of the Company's fixed costs are collected in the high load  
23 factor energy blocks, thereby over-burdening high load factor customers who utilize  
24 the system efficiently and reduce average costs.

1 Q AT THE TOP OF PAGE 13 OF HIS REBUTTAL TESTIMONY, MR. RUSH  
2 CONTENDS THAT YOUR RATE DESIGN WILL RESULT IN A DISTORTION OF  
3 THE CURRENT OVERALL RATE DESIGN BETWEEN CLASSES AND WILL  
4 "...RESULT IN MANY CUSTOMERS SWITCHING RATES." HOW DO YOU  
5 RESPOND TO MR. RUSH?

6 A Mr. Rush makes this statement without having performed any studies, as indicated in  
7 his response to MIEC Data Request No. 3-1. As part of his response, he refers to the  
8 rebuttal testimony of Commission Staff witness Scheperle and recites a range of  
9 increases to the LPS customers that Mr. Scheperle reported in his rebuttal testimony.  
10 As I will describe later in responding to Mr. Scheperle, the worksheets that Mr.  
11 Scheperle used to calculate the impacts on individual LPS customers contain a  
12 number of incorrect cell references which produces a highly distorted and incorrect  
13 analysis. Mr. Rush has done no studies of his own, but rather has relied upon Staff.  
14 Thus, if Staff's analysis is shown to be faulty, Mr. Rush has absolutely no basis for his  
15 claims.

16 **Response to Commission Staff**

17 Q AT PAGE 4 OF HIS REBUTTAL TESTIMONY, IN A FOOTNOTE, MR. SCHEPERLE  
18 GENERALLY DESCRIBES THE ECONOMIC CHARACTERISTICS OF DIFFERENT  
19 TYPES OF GENERATION UNITS. DID YOU TAKE THIS INTO CONSIDERATION  
20 IN YOUR SELECTION OF THE A&E-4 NCP METHODOLOGY?

21 A Yes, I did. And, in my rebuttal testimony, I illustrated the technology tradeoffs and  
22 explained why, even if an analyst wanted to give more weight to the classes' relative  
23 energy usage, only energy use up to a certain point (load factor) was relevant in  
24 driving a technology choice and that using annual energy as a basis to allocate any

1 generation fixed cost was wrong. Nothing in Mr. Scheperle's rebuttal testimony  
2 changes those facts.

3 **Q AT THE TOP OF PAGE 6 OF HIS REBUTTAL TESTIMONY, MR. SCHEPERLE**  
4 **DESCRIBES THE A&E METHOD AS CONSISTING OF AN AVERAGE PART AND**  
5 **AN EXCESS PART. HE DESCRIBES THE EXCESS PART AS A MEASURE OF**  
6 **DEMAND EQUAL TO EACH CLASS'S CONTRIBUTION TO THE SYSTEM PEAK**  
7 **LOAD. IS THIS THE CORRECT DESCRIPTION?**

8 A No. The excess portion of the Average and Excess ("A&E") method is equal to the  
9 difference, for each class, between the non-coincident peak (in the case at hand the  
10 average of the 4 non-coincident peaks) and the average demand.

11 **Q AT THE BOTTOM OF PAGE 6 OF HIS REBUTTAL TESTIMONY, MR.**  
12 **SCHEPERLE ALLEGES THAT THE A&E METHODS ARE BASED ON AN**  
13 **ASSUMPTION THAT ADDITIONAL GENERATION FACILITIES ARE ONLY BUILT**  
14 **TO MEET PEAK DEMANDS. IS HE CORRECT?**

15 A No. The A&E method considers both class average demands and the maximum  
16 demands of each class. This, indeed, is the strength of the A&E method. Under the  
17 A&E method, every customer class is assigned at least its average demand.  
18 Furthermore, no customer class is over-allocated fixed costs (as is the case with the  
19 BIP method – which allocates 100% of the fixed costs associated with base load  
20 facilities on class kWh), without regard to important class load characteristics like the  
21 maximum requirements of the classes.

1    **Q    ON PAGE 8 OF HIS REBUTTAL TESTIMONY, MR. SCHEPERLE ADDRESSES**  
2           **THE 4 CP ALLOCATION METHOD AND EXPRESSES CONCERNS ABOUT THE**  
3           **FACT THAT IT WOULD ASSIGN NO COST TO OFF-PEAK CUSTOMERS SUCH**  
4           **AS LIGHTING. DO YOU HAVE ANY COMMENTS ABOUT THIS?**

5    **A**    Yes. Although I have not proposed 4 CP as my primary method of allocation, it would  
6           be my second choice to the A&E-4 NCP method that I did recommend. The concern  
7           about the lighting class is the classic case of the tail wagging the dog. It is only the  
8           lighting class that in the summer is essentially off-peak. And, the lighting class is a  
9           very small portion of the total system (1.1% of the A&E-4 NCP), so its results should  
10          not be allowed to drive the selection of allocation methods.

11                 Furthermore, I would note that for purposes of allocating fixed generation  
12                 costs between Kansas and Missouri, the Commission Staff supports the 4 CP method  
13                 that the Commission has previously found appropriate for this purpose. That method  
14                 is more favorable to Missouri than energy-based methods (like BIP) because the  
15                 4 CP method does not allocate excessive fixed costs to high load factor loads, such  
16                 as the State of Missouri in comparison to the State of Kansas. It is interesting that  
17                 the Staff finds a method such as 4 CP to be appropriate for jurisdictional allocation  
18                 purposes, but in the same case feels compelled to propose a radically different  
19                 method when it comes to allocating costs among retail customer classes.

20    **Q    WHAT DOES MR. SCHEPERLE SAY ABOUT THE ALLOCATION OF**  
21           **OFF-SYSTEM SALES?**

22    **A**    At page 9 of his rebuttal testimony, he takes issue with KCPL's allocation of  
23           off-system sales margin on the basis of steam fixed generation plant, and supports  
24           the allocation of off-system sales margins on the basis of energy usage, adjusted for

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**Page 8**

1 losses to the generation level. He notes with approval that the Commission adopted  
2 this method in KCPL Case No. ER-2006-0314 and in the recent Ameren Missouri  
3 Case No. ER-2010-0036. Mr. Scheperle does not explain why this precedent is  
4 important when it comes to the allocation of off-system sales but can be ignored  
5 when it comes to the method for allocating generation fixed costs...such as 4 CP in  
6 the case of previous KCPL studies, and A&E-4 NCP in the case of the prior Ameren  
7 case.

8 **Q ON PAGE 17 OF HIS TESTIMONY, MR. SCHEPERLE, IN DISCUSSING YOUR**  
9 **RATE DESIGN PROPOSAL, ASSERTS THAT YOU DO NOT STATE A**  
10 **RATIONALE FOR YOUR PROPOSAL. IS HE CORRECT?**

11 **A** No, he is not. He has completely overlooked or swept aside the extensive discussion  
12 at pages 29 through 35 of my direct testimony in which I explain the basis for the rate  
13 structure for the LGS and LPS classes, my analysis of the level of variable costs, and  
14 the specific moderate intra-class adjustments which I have proposed.

15 **Q AT PAGES 18 AND 19 OF HIS TESTIMONY, MR. SCHEPERLE ADDRESSES**  
16 **YOUR RATE DESIGN AND THE INCREASES TO LPS CUSTOMERS UNDER IT**  
17 **AS COMPARED TO KCPL'S PROPOSED RATES. DO YOU HAVE ANY**  
18 **COMMENTS ABOUT HIS ANALYSIS?**

19 **A** Yes. As I indicated earlier in this surrebuttal testimony, the analysis that Staff  
20 conducted in this regard contains numerous, and significant, errors. The differences  
21 in impact between my rates and the KCPL proposed rates he reports at pages 18 and  
22 19 are highly exaggerated. The differences are much more moderate.

1 **Q HAVE YOU BEEN ABLE TO IDENTIFY AND CORRECT THOSE ERRORS AND**  
2 **DISCUSS THEM WITH MR. SCHEPERLE?**

3 A Yes. We have been able to do that, have shared the changes with Mr. Scheperle,  
4 and it is my understanding that he agrees with our revised numbers.

5 **Q BASED ON THE REVISED ANALYSIS, WHAT IS THE RANGE OF IMPACTS OF**  
6 **YOUR LPS RATE DESIGN?**

7 A Mr. Scheperle evaluated impacts on 86 Rate LP customers. The average overall  
8 increase under KCPL's rate proposal is 13.7%. Under my rate design, 35 customers  
9 would experience increases in the range of 12% to 13.7% (no customer would  
10 experience an increase less than 12%). Forty-seven customers would experience  
11 increases in the range of 13.7% to 16%, and four customers would experience  
12 increases larger than 16%. Two of those would be at 16.2%, one is at 16.3% and the  
13 other is at 16.8%. Overall, 33 customers would experience a lower rate under my  
14 rate design, and 53 would experience a higher rate.

15 **Q WHAT IS THE POTENTIAL FOR MIGRATION OF LPS CUSTOMERS TO THE LGS**  
16 **RATE?**

17 A Comparing my LGS rate to my LPS rate, 28 LPS customers would be able to  
18 experience slightly lower rates by transferring to Rate LGS. The net revenue loss  
19 from that would be \$395,000 per year.

20 Comparing my LPS rate to my LGS rate with a 2.2% decrease applied to LGS  
21 (which I recommended for interclass revenue allocation), 43 customers would see  
22 slightly lower rates by switching to LGS. The revenue reduction associated with the  
23 switch would be \$961,000.

1    **Q    WOULD YOU CONSIDER THESE REVENUE REDUCTIONS FROM RATE**  
2    **SWITCHING TO BE SIGNIFICANT?**

3    A    No. The \$395,000 difference in revenues associated with my rate design is only  
4    0.14% of the combined current LPS and LGS revenues. The \$961,000 reduction is  
5    only 0.34% of the current combined LPS and LGS revenues. There is no guarantee  
6    that all of these customers would switch rates, but if KCPL is concerned about these  
7    relatively small amounts, I would have no objection to folding those adjustments into  
8    the overall rate design so that the combined LPS and LGS rates with my  
9    recommended adjustments would produce the targeted revenue after taking into  
10   account these possible revenue losses.

11    **Response to OPC**

12   **Q    HAVE YOU REVIEWED THE RATE DESIGN REBUTTAL TESTIMONY OF OPC**  
13   **WITNESS MEISENHEIMER?**

14   A    Yes. In her rebuttal testimony, she essentially disagrees with my application of the  
15   A&E-4 NCP study because I selected the non-coincident peaks ("NCP") from the four  
16   summer peak months that are most critical on the system.

17   **Q    MS. MEISENHEIMER SUGGESTS THAT THE HIGHEST FOUR PEAKS FROM**  
18   **ANY MONTH SHOULD BE SELECTED. DO YOU AGREE?**

19   A    No. The A&E method does not generically specify which NCPs should be selected.  
20   This is a judgment of the analyst and is based on the load pattern of the utility. If the  
21   utility has fairly similar peaks during each month, then it would be appropriate to  
22   select the highest NCPs regardless of the months in which they occurred. If a utility is  
23   predominantly winter peaking, then selecting the NCPs from the winter peak months

1 would be appropriate. Similarly, as is the case here, with a summer peaking utility it  
2 is appropriate to select the peaks from the summer peak season so that classes that  
3 have their highest loads in off-peak periods, and therefore do not contribute to the  
4 need to add new capacity, are not burdened as a result of those off-peak demands.

5 **Q IF YOU WERE TO FOLLOW MS. MEISENHEIMER'S RECOMMENDATIONS WITH**  
6 **RESPECT TO THE SELECTION OF NON-COINCIDENT PEAKS, HOW WOULD**  
7 **THAT AFFECT THE ALLOCATION OF FIXED GENERATION COST TO THE**  
8 **LARGE POWER CLASS?**

9 A As shown on Schedule BAM RD REB-1, the allocation to the large power class would  
10 be lower than under the A&E-4 NCP approach as I have implemented it.

11 **Q MS. MEISENHEIMER COMPLAINS THAT YOUR CHOICE OF NCP RESULTS IN**  
12 **AN ALLOCATION OF 51.71% TO THE RESIDENTIAL CLASS COMPARED TO**  
13 **51.24% IF NCPS ARE SELECTED FROM ALL MONTHS. IN YOUR OPINION, IS**  
14 **THIS A SIGNIFICANT DIFFERENCE IN THE ALLOCATION FACTOR?**

15 A No.

16 **Q DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

17 A Yes, it does.

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Company Name: KCPL MO  
Case Description: 2010 KCPL Rate Case  
Case: ER-2010-0355

Response to Vuylsteke Diana Interrogatories – Set MIEC\_20101129  
Date of Response: 12/09/2010

Question No. :2.1

Please identify all regulatory proceedings of which Mr. Normand is aware where the regulatory commission adopted the base-intermediate-peak method of cost allocation that Mr. Normand has proposed in this case.

RESPONSE:

Mr. Normand does not keep or maintain a list of the adoption of the base, intermediate and peak allocation procedure in his associated regulatory proceedings. Mr. Normand is, however, well aware of its development and use as an appropriate and reasonable allocation method for production allocation.

Additionally, in the report and order issued on November 22, 2010 by the Kansas Corporation Commission regarding the recent KCP&L rate case (10-KCPE-415-RTS) the Commission expressed its support and adoption of the base, intermediate and peak allocation procedure.

Attachment: Q2.1 MO Verification.pdf