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Service Commission

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Witness:

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Issue:

Sponsoring Parties:

Case No.:

James R. Dauphinais

Direct Testimony

Off-System Sales Revenue and Margin

Missouri Industrial Energy Consumers

ER-2007-0002

**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-2007-0002

Direct Testimony of

**James R. Dauphinais**

On Behalf of

**Missouri Industrial Energy Consumers**

December 15, 2006

**BAI**

BRUBAKER & ASSOCIATES, INC.  
ST. LOUIS, MO 63141-2000

Project 8632

**FILED<sup>2</sup>**

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Date 3/12/07 Case No. ER-2007-0002  
Reporter



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

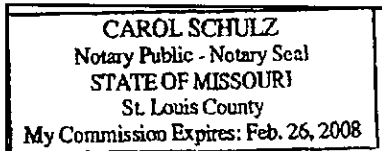
**Affidavit of James R. Dauphinais**

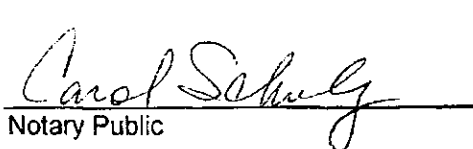
James R. Dauphinais, being first duly sworn, on his oath states:

1. My name is James R. Dauphinais. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 1215 Fern Ridge Parkway, Suite 208, St. Louis, Missouri 63141. 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 direct testimony and schedules, which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2007-0002.
  
3. I hereby swear and affirm that the testimony and schedules are true and correct and that they show the matters and things they purport to show.

  
James R. Dauphinais

Subscribed and sworn to before this 14th day of December 2006.



  
Notary Public

My Commission Expires February 26, 2008.

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

<u>In the matter of Union Electric Company</u>	)	
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<u>Service Provided to Customers in the</u>	)	
<u>Company's Missouri Service Area</u>	)	

**Direct Testimony of James R. Dauphinais**

1    **Q    PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2    **A    My name is James R. Dauphinais and my business address is 1215 Fern Ridge**  
3           **Parkway, Suite 208, St. Louis, MO 63141.**

4    **Q    WHAT IS YOUR OCCUPATION?**

5    **A    I am a consultant in the field of public utility regulation and a Principal with the firm of**  
6           **Brubaker & Associates, Inc. (BAI), energy, economic and regulatory consultants.**

7    **Q    PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPER-**  
8           **IENCE.**

9    **A    These are set forth in Appendix A to my testimony.**

10   **Q    ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?**

11   **A    This testimony is presented on behalf of the Missouri Industrial Energy Consumers**  
12           **(MIEC). Member companies purchase substantial quantities of electricity from**  
13           **AmerenUE, principally under the Large Primary Service (LPS) Rate Schedule,**  
14           **Rate 11.**

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1    **Q     WHAT IS THE SUBJECT OF YOUR TESTIMONY?**

2    A     My testimony reviews AmerenUE's system production cost modeling including certain  
3           inconsistencies and deficiencies related to that modeling that tend to understate the  
4           amount of margin AmerenUE would be expected to earn from off-system sales and  
5           overstate AmerenUE's fuel and purchased power costs.

6                 The fact that I do not address an issue should not be interpreted as approval  
7           of any position taken by AmerenUE.

8    **Q     PLEASE SUMMARIZE YOUR RECOMMENDATIONS.**

9    A     I recommend that the Missouri Public Service Commission (Commission):

- 10                 • Be very cautious in regard to determining whether it is reasonable, with  
11                 the lack of a post-Joint Dispatch Agreement benchmark of AmerenUE's  
12                 production cost model, to set a fixed number for the off-system sales  
13                 margin component of AmerenUE's revenue requirement.
- 14                 • Require AmerenUE to rerun its production cost simulations with coal, fuel  
15                 oil, natural gas, and wholesale electricity prices that reflect the historic  
16                 market prices for January through December of 2006. Alternatively, the  
17                 Commission should decrease AmerenUE's expected fuel oil and natural  
18                 gas cost by \$1.6 million, increase purchased power cost by \$1 million, and  
19                 increase off-system sales revenues by \$30.5 million, which is my estimate  
20                 of the impact of rerunning the simulations. This would net to a  
21                 \$31.1 million reduction in AmerenUE's proposed revenue requirement.
- 22                 • Require AmerenUE to rerun its production cost simulations with a known  
23                 projected decrease in operating reserve requirements from 202 MW to  
24                 106 MW due to AmerenUE's participation in the Midwest Contingency  
25                 Reserve Sharing Group as of January 1, 2007. Alternatively, the  
26                 Commission should reduce AmerenUE's revenue requirement by  
27                 \$7.1 million, which is my rough estimate of the impact of the reduction of  
28                 the operating reserve requirement.

29    **Q     HAVE YOU REVIEWED HOW AMERENUE DEVELOPED ITS FUEL AND**  
30           **PURCHASED POWER COSTS AND OFF-SYSTEM SALES REVENUES?**

31    A     Yes. AmerenUE performed production cost simulations to develop fuel cost,  
32           purchased power cost and off-system sales revenues. For dispatch purposes, these

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1 simulations used spot prices for fuel and wholesale electricity that AmerenUE  
2 developed by making a substantial number of adjustments to historical spot prices  
3 (Finnel Direct Testimony at 2 and Schukar Direct Testimony at 6-9). After performing  
4 the dispatch, AmerenUE made an accounting adjustment to the results to reflect its  
5 projected contract cost for coal and nuclear fuel based on executed contract prices  
6 for these fuels that will be in effect as of January 2007 (Schukar Direct Testimony at  
7 17).

8 **Q DO YOU HAVE ANY ISSUES WITH AMERENUE'S MODELING?**

9 **A** Yes. I have several, as follows:

- 10 • There is no benchmark of AmerenUE's production cost modeling against  
11 the post-Joint Dispatch Agreement conditions under which AmerenUE will  
12 be operating beginning on January 1, 2007.
- 13 • AmerenUE makes an accounting adjustment to reflect contracted prices  
14 for coal and nuclear fuel as of January 2007, but fails to make similar  
15 adjustments to reflect the prices of fuel oil, natural gas and wholesale  
16 electricity. This unreasonably incorporates AmerenUE's increased coal  
17 and nuclear fuel costs for 2007 into its proposed revenue requirement  
18 without incorporating the higher off-system sales revenues it will likely  
19 earn from higher electric market prices in 2007.
- 20 • AmerenUE failed to reflect in its production cost model dispatch reductions  
21 in its operating reserve requirement, which will be realized beginning  
22 January 1, 2007 due to its participation in the new Midwest Contingency  
23 Reserve Sharing Group.

24 **I. LACK OF POST-JDA BENCHMARKING**  
25 **OF AMERENUE'S PRODUCTION COST MODEL**

26 **Q PLEASE EXPLAIN YOUR CONCERN IN REGARD TO BENCHMARKING**  
27 **AMERENUE'S PRODUCTION COST MODELING.**

28 **A** AmerenUE has performed a benchmark (or calibration) simulation for actual 2005  
29 conditions (Finnel Direct Testimony at 5). However, the benchmark is for an

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1 operating environment that is very different from the one AmerenUE will be in  
2 beginning in January 2007. Most significantly, AmerenUE will no longer be operating  
3 under the Joint Dispatch Agreement (JDA) with Ameren Energy Generating Company  
4 (AEG) (Baxter Direct Testimony at 26-27). Instead, AmerenUE will operate its own  
5 North American Electric Reliability Council (NERC) balancing authority and have its  
6 generation dispatched separately from AEG (*Id.* and AmerenUE response to Data  
7 Request MIEC 4-01). AmerenUE has not, and cannot, benchmark its production cost  
8 model to this significantly different operating condition.

9 **Q WHAT IS THE IMPLICATION OF THERE BEING NO BENCHMARK OF**  
10 **AMERENUE'S MODEL TO THE OPERATING CONDITIONS AMERENUE WILL**  
11 **EXPERIENCE BEGINNING IN JANUARY 2007?**

12 **A** The implication is that there is uncertainty in regard to the ability of AmerenUE's  
13 production cost model to reasonably estimate its fuel and power purchase costs and  
14 its off-system sales revenue. For example, for the 12 months ending March 31, 2006,  
15 AmerenUE had an off-system sales volume of approximately 14,929 GWh  
16 (AmerenUE response to Data Request MIEC 4-03). AmerenUE's production cost  
17 modeling in this proceeding is predicting a substantially smaller off-system sales  
18 volume of 9,118 GWh for the adjusted test year (AmerenUE response to Data  
19 Request MIEC 6-06, Finnel Supplemental Workpapers at  
20 FBREPORT\_PSC05\_SEP8.xls). Without a benchmark of the post-JDA conditions  
21 under which AmerenUE will be operating beginning in January 2007, there is  
22 considerable uncertainty in regard to the accuracy of the modeling effort and whether  
23 it is significantly understating AmerenUE's off-system sales volumes and associated  
24 off-system sales revenue and margin.

1 Q ARE YOU, AT THIS TIME, MAKING ANY ADJUSTMENT TO INCREASE THE  
2 VOLUME OF OFF-SYSTEM SALES AS COMPARED TO WHAT IS CONTAINED IN  
3 AMERENUE'S FILING?

4 A No, at this time I am not. Any adjustment to recognize a higher volume of off-system  
5 sales would be in addition to the adjustments that I am recommending in this  
6 testimony.

7 Q HOW DO YOU RECOMMEND THE COMMISSION DEAL WITH THIS QUESTION  
8 OF CONFIDENCE IN THE REASONABLENESS OF AMERENUE'S PRODUCTION  
9 COST MODELING?

10 A The Commission should recognize there is uncertainty in regard to the  
11 reasonableness of AmerenUE's system production cost modeling results and the  
12 Commission should be very cautious in regard to determining whether it is  
13 reasonable under such circumstances to set a fixed number for the off-system sales  
14 margin component of AmerenUE's revenue requirement.

15 II. ACCOUNTING ADJUSTMENTS

16 Q PLEASE EXPLAIN YOUR CONCERN IN REGARD TO AMERENUE'S FAILURE TO  
17 MAKE CERTAIN ACCOUNTING ADJUSTMENTS RELATED TO FUEL OIL,  
18 NATURAL GAS AND WHOLESALE ELECTRICITY PRICES IN ITS PRODUCTION  
19 COST SIMULATION.

20 A AmerenUE performs the dispatch of its generation in its production cost simulations  
21 using spot market prices for fuel oil, natural gas, coal and wholesale electricity  
22 (Schukar Direct Testimony at 17 and AmerenUE response to Data Request MIEC  
23 9-06 (MPSC 0366)). Rather than use historical spot market prices for the test period,



1 a significant number of downward adjustments were made by AmerenUE to historical  
2 spot market prices for 2005 and then these downward adjusted 2005 prices were  
3 averaged with spot market prices for 2003 and 2004 (Schukar Direct Testimony at 8-  
4 17 and Finnel Direct Testimony at 8-9).

5 **Q WHAT WAS THE NET IMPACT OF THESE ADJUSTMENTS BY AMERENUE?**

6 **A** The spot market prices for wholesale electricity utilized for dispatch in AmerenUE's  
7 production cost model are substantially lower than either historical market prices for  
8 2006 or forward market prices for 2007. Table 1 below compares the monthly  
9 averages of AmerenUE's on-peak and off-peak adjusted and averaged wholesale  
10 spot electricity prices against historical December 2005 through November 2006,  
11 monthly averages of day-ahead on-peak and off-peak market prices reported by  
12 Platts *Megawatt Daily*, and Midwest ISO day-ahead on-peak and off-peak Locational  
13 Marginal Prices (LMP) for the MERAMEC1 pricing node within the AmerenUE  
14 system<sup>1</sup>. It is clear from Table 1 that December 2005 is an abnormally high pricing  
15 period likely brought on by the impact on natural gas supplies from Hurricanes  
16 Katrina and Rita. However, putting December 2005 aside, the average historical  
17 market price for on-peak wholesale electricity for the period January 2006 through  
18 November 2006 was still significantly higher than AmerenUE's downward adjusted  
19 and averaged market price for January through November.

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<sup>1</sup> I examined the average historical LMPs at each of AmerenUE's major generation nodes. To be conservative, I selected the MERAMEC1 generation node for the comparison of historical LMPs to AmerenUE's assumed wholesale electricity prices because it on average had the lowest LMP of AmerenUE's major generation nodes.

**TABLE 1**

**Comparison of AmerenUE's Downward Adjusted and Averaged  
Wholesale Electricity Market Prices  
vs.  
December 2005 through November 2006 Historical Prices**

Month	AmerenUE's Adjusted Prices*		Platts <i>Megawatt Daily</i> Cinergy Day-Ahead Price Dec '05 to Nov '06		Midwest ISO AMRN.MERAMEC1 Day-Ahead Locational Marginal Price Dec '05 to Nov '06	
	On-Peak	Off-Peak	On-Peak	Off-Peak	On-Peak	Off-Peak
January	***	***	50.65	32.88	50.01	31.95
February	***	***	48.48	36.64	45.63	33.19
March	***	***	47.70	32.91	44.89	30.07
April	***	***	54.52	30.98	50.50	23.66
May	***	***	50.35	29.83	46.57	28.85
June	***	***	52.66	28.29	56.84	28.89
July	***	***	64.79	38.06	69.41	37.26
August	***	***	71.34	37.52	70.37	35.85
September	***	***	38.36	26.55	36.20	21.86
October	***	***	44.53	27.34	41.03	22.44
November	***	***	50.61	33.43	48.43	26.19
December	***	***	<u>82.18</u>	<u>50.37</u>	<u>85.15</u>	<u>46.10</u>
Jan-Dec Average	***	***	<u>54.74</u>	<u>33.79</u>	<u>53.80</u>	<u>30.58</u>
Jan-Nov Average	***	***	<u>52.28</u>	<u>32.21</u>	<u>50.98</u>	<u>29.10</u>

\*AmerenUE's Adjusted Prices in this table are Highly Confidential

1    **Q**    **CAN YOU OFFER AN EXAMPLE IN REGARD TO HOW FORWARD PRICES FOR**  
2    **2007 COMPARE TO AMERENUE'S ADJUSTED AND AVERAGED MARKET**  
3    **PRICES?**

4    **A**    Yes. Table 2 compares AmerenUE's adjusted on-peak market prices for wholesale  
5    electricity, the historical Midwest ISO day-ahead on-peak LMPs for the MERAMEC1  
6    pricing node for January through November 2006 and the Platts *Megawatt Daily*  
7    reported on-peak forward prices for 2007 at the lowest closing of these forward prices

**NP**

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1 between October 1, 2006 through December 13, 2006. Table 2 clearly shows that  
 2 forward on-peak prices for 2007, even at the forward market low over the past two  
 3 and one-half months, are substantially higher than both AmerenUE's adjusted market  
 4 prices for electricity and historical Midwest ISO day-ahead on-peak prices. This  
 5 shows the market expects higher wholesale electricity prices in 2007 than either  
 6 AmerenUE's downward adjusted and averaged market prices, or historical prices for  
 7 2006.

<b>TABLE 2</b> <b>Comparison of AmerenUE's Adjusted On-Peak</b> <b>Wholesale Electricity Market Prices</b> <b>vs.</b> <b>January 2006 through December 2006 Historical Prices</b> <b>and 2007 Forward Prices</b>			
	<b>AmerenUE's Adjusted On-Peak Prices*</b>	<b>Historical Midwest ISO AMRN.MERAMEC1 Day-Ahead LMP Jan '06 - Nov '06</b>	<b>Lowest Platts Megawatt Daily On-Peak 2007 Cinergy Forward Price October 1- December 13<sup>2</sup></b>
January	***	\$50.01	\$51.10
February	***	\$45.63	\$57.85
March	***	\$44.89	\$54.50
April	***	\$50.50	\$54.50
May	***	\$46.57	\$52.25
June	***	\$56.84	\$54.25
July	***	\$69.41	\$72.25
August	***	\$70.37	\$72.25
September	***	\$36.20	\$53.50
October	***	\$41.03	\$53.25
November	***	\$48.43	\$53.25
Jan-Nov Average	***	<u>\$50.98</u>	<u>\$57.18</u>
*AmerenUE's Adjusted On-Peak Prices in this table are Highly Confidential			



<sup>2</sup> This was the market close for December 5, 2006 as reported in Platts *Megawatt Daily* on December 6, 2006, Page 4, and it was the lowest close in the most recent two and one-half months.

1 Q COULD AMERENUE'S DOWNWARD ADJUSTMENTS AND AVERAGING AFFECT  
2 THE OFF-SYSTEM SALES VOLUMES THAT RESULTED FROM AMERENUE'S  
3 PRODUCTION COST SIMULATIONS?

4 A Possibly. However, if the adjustments were made by AmerenUE in a manner that  
5 preserved the recent historic price relationships among fuel oil, natural gas, coal and  
6 wholesale electricity prices, the resulting off-system sales volumes may not have  
7 been unduly distorted by these downward adjustments and averaging.

8 Q ASSUMING THAT DOWNWARD ADJUSTMENTS AND AVERAGING DID NOT  
9 SIGNIFICANTLY AFFECT AMERENUE'S EXPECTED OFF-SYSTEM SALES  
10 VOLUME, WOULD ITS ADJUSTED MARKET PRICES FOR FUEL OIL, NATURAL  
11 GAS, COAL AND WHOLESALE ELECTRICITY AFFECT AMERENUE'S FUEL,  
12 PURCHASED POWER COSTS AND OFF-SYSTEM SALES REVENUES?

13 A Yes. The actual fuel and purchased power costs and off-system sales revenues  
14 AmerenUE experiences will be based on AmerenUE's actual cost for fuel and actual  
15 wholesale electricity prices. To the extent better information is available in regard to  
16 the likely level of these costs and revenues, there needs to be at least an accounting  
17 adjustment to the raw dispatch results of AmerenUE's production cost simulations.

18 Q HAS AMERENUE MADE ANY ACCOUNTING ADJUSTMENTS TO ITS  
19 PRODUCTION COST SIMULATIONS?

20 A Yes. As noted earlier, Ameren has made accounting adjustments to the results of its  
21 production cost simulations in order to reflect its known costs for coal and nuclear fuel  
22 associated with already executed fuel contracts using prices that will take effect as of  
23 January 2007 (Schukar Direct Testimony at 17).

1                   However, note that this accounting adjustment is not returning AmerenUE to  
2                   the coal and nuclear fuel costs it paid in the 2003 through 2005 timeframe upon which  
3                   the downward adjusted and average spot market prices it used in its production cost  
4                   model are based. Instead, AmerenUE's accounting adjustment has AmerenUE  
5                   paying for coal at its more expensive coal and nuclear fuel contract rates for 2007.

6    **Q     ARE THE ACCOUNTING ADJUSTMENTS MADE BY AMERENUE SUFFICIENT?**

7    A     No. AmerenUE's accounting adjustments would have ratepayers pay the higher coal  
8           and nuclear fuel costs of 2007 without recognizing there is a significant amount of  
9           information that supports there being significantly higher spot market prices for  
10          wholesale electricity than those used by AmerenUE. These higher spot market prices  
11          support a significantly higher off-system sales margin than AmerenUE has proposed.  
12          AmerenUE has not reflected this information in its production cost simulations. The  
13          net impact of this is that AmerenUE's off-system sales revenues and associated off-  
14          system sales margin are significantly understated in its proposed revenue  
15          requirement.

16   **Q     WHAT DO YOU RECOMMEND TO THE COMMISSION IN REGARD TO THIS**  
17           **ISSUE?**

18   A     AmerenUE should as a minimum be required to rerun its production cost simulations  
19          using spot prices for coal, fuel oil, natural gas and wholesale electricity that are  
20          consistent with the average spot market price reported for each of these commodities  
21          over the period of January 2006 through December 2006. If these reruns are taken in  
22          conjunction with AmerenUE's accounting adjustment to reflect 2007 coal and nuclear  
23          fuel contract prices, AmerenUE's model will reasonably reflect the higher spot market

1 prices that historical market price data for 2006 and forward market price data for  
2 2007 support.

3 This would also reasonably reflect that while AmerenUE's coal and nuclear  
4 fuel costs have increased since 2003-2005 levels, the market price at which electricity  
5 is sold has also risen from 2003-2005 levels. I would note that my recommendation is  
6 conservative. As I have noted, forward prices for 2007 have, over the last two and  
7 one-half months, been significantly higher than historic spot market prices for 2006.

8 **Q HAVE YOU ESTIMATED THE IMPACT OF YOUR RECOMMENDATION?**

9 A Yes. The impact of the change on AmerenUE's expected fuel oil, natural gas and  
10 purchased power costs would be relatively small in regard to AmerenUE's total  
11 revenue requirement since only a limited portion of AmerenUE's needs are met by  
12 these sources. I estimate AmerenUE's fuel oil and natural gas costs would decrease  
13 by \$1.6 million and its purchased power costs would increase by \$1.0 million.  
14 However, the impact of my recommendation on AmerenUE's off-system sales  
15 revenue would be substantial. I estimate AmerenUE's expected off-system sales  
16 revenue would increase by \$30.5 million. Netting my estimated decrease in fuel oil  
17 and natural gas costs and my estimated increase in purchased power cost against  
18 my estimated increase in off-system sales revenue yields an estimated decrease of  
19 \$31.1 million to AmerenUE's proposed revenue requirement. Schedule JRD-1 details  
20 my estimate.

1 Q YOU NOTED ABOVE THAT THE USE OF HISTORICAL SPOT PRICES FOR  
2 JANUARY THROUGH DECEMBER OF 2006 WOULD BE CONSERVATIVE.  
3 WHAT IS YOUR ESTIMATE OF THE REVENUE REQUIREMENT DECREASE IF  
4 FORWARD MARKET PRICES FOR 2007 WERE USED RATHER THAN HISTORIC  
5 SPOT MARKET PRICES FOR 2006?

6 A Based on using the single lowest market close for 2007 forward market prices over  
7 the period of October 1, 2006 through December 13, 2006, I estimate AmerenUE's  
8 fuel oil, natural gas and purchased power costs would together increase by  
9 \$4.3 million while AmerenUE's off-system sales revenue would increase by  
10 \$56.2 million. This would net to a substantially larger revenue requirement reduction  
11 of \$51.9 million. Schedule JRD-2 details this estimate.

12 Q WHAT IS AMERENUE'S OPINION OF FORWARD MARKET PRICES?

13 A AmerenUE dismisses them. It argues forward prices are not necessarily a good  
14 predictor of the actual prices at which AmerenUE would be able to buy or sell power  
15 (AmerenUE response to Data Request MIEC 4-07). While AmerenUE does not  
16 generally buy power from or sell power into the forward markets, the forward markets  
17 do reflect the outcome of market participants' expectations in regard to spot market  
18 prices at which AmerenUE will be buying and selling power during the forward  
19 delivery period. This is because sellers of forward products are generally required to  
20 either physically deliver power, or provide a revenue stream equal to spot market  
21 prices, during that forward period. Therefore, forward prices should not be dismissed  
22 from consideration as an indication of future spot market prices. As a minimum,  
23 forward market prices show that the forward market does not believe spot market  
24 prices in 2007 will be any lower than those spot market prices that historically  
25 occurred in 2006.

1 Q AS PART OF THE DATA RESPONSE YOU CITE, AMERENUE INDICATES IT  
2 WOULD BE APPROPRIATE TO MAKE A 5% TO 10% REDUCTION TO THE  
3 LIQUIDATED DAMAGES FORWARD CONTRACT PRICES TO REPRESENT THE  
4 PRICE THAT AMERENUE WOULD EXPECT TO ACHIEVE. DO YOU AGREE?

5 A No. Historically, forward prices have both overshoot and undershot the subsequent  
6 spot market prices that actually occurred during the delivery period covered by the  
7 forward product. It cannot be said that forward prices consistently overstate or  
8 understate the spot prices at which electricity will subsequently be bought and sold.  
9 Therefore, it is not appropriate to make the 5-10% downward adjustment to forward  
10 market prices that AmerenUE suggests.

11 Q PLEASE SUMMARIZE HOW YOU MADE YOUR ESTIMATES OF THE ABOVE  
12 REVENUE REQUIREMENT ADJUSTMENTS.

13 A For fuel oil and natural gas costs based on historic 2006 market prices, I multiplied  
14 the total fuel oil and natural gas cost from AmerenUE's production cost simulation  
15 with off-system sales times the ratio of the average January through November 2006  
16 Platts *Gas Daily* reported cash price for natural gas at Henry Hub (adjusted by a  
17 historic basis differential between Panhandle Eastern and Henry Hub) to AmerenUE's  
18 adjusted and averaged Panhandle Eastern market price. For fuel oil and natural gas  
19 costs based on forward prices for 2007, I substituted the December 5, 2006 market  
20 close NYMEX reported prices for natural gas for 2007 at Henry Hub in place of the  
21 average January through November 2006 Platts *Gas Daily* reported cash price for  
22 natural gas at Henry Hub. In neither case did I estimate the fuel oil cost impact  
23 separate from the natural gas cost impact because fuel oil is a substantially smaller  
24 contribution to AmerenUE's costs than natural gas.



1 For purchased power costs based on historic 2006 market prices, I multiplied  
2 the total non-APL purchased power cost from AmerenUE's production cost simulation  
3 with off-system sales times the ratio of the average historical Midwest ISO day-ahead  
4 price for the AMRN.MERAMEC1 pricing node for January through November 2006 to  
5 the average of AmerenUE's adjusted and averaged wholesale electricity prices.

6 For purchased power costs based on forward prices for 2007, I substituted the  
7 lowest October 1, 2006 through December 13, 2006 Platts *Megawatt Daily* on-peak  
8 forward price for 2007 for Cinergy (i.e., the price at the December 5, 2006 market  
9 close) adjusted for the historic ratio of spot around-the-clock prices to spot on-peak  
10 prices and the historic LMP difference between AMRN.MERAMEC1 and Cinergy  
11 Hub.

12 My estimate for the off-system sales revenue adjustments based on historic  
13 2006 market prices and forward prices for 2007 were calculated using a method  
14 similar to that I used to estimate the adjustment to purchased power costs. As noted  
15 above, my calculations are detailed in Schedules JRD-1 and JRD-2.

16 **III. MODELING OF OPERATING RESERVES**  
17 **IN AMERENUE'S PRODUCTION COST MODEL**

18 **Q PLEASE EXPLAIN YOUR CONCERN IN REGARD TO OPERATING RESERVES.**

19 **A** On January 1, 2007 AmerenUE will switch its participation from the Mid-American  
20 Interconnected Network (MAIN) Reserve Sharing Group to the new Midwest  
21 Contingency Reserve Sharing Group (AmerenUE response to Data Request MIEC  
22 4-06). This will reduce the amount of AmerenUE generating capacity set aside for  
23 operating reserves from a total of 202 MW for spinning and non-spinning reserves to  
24 a total of 106 MW for operating reserve (*Id.* and Finnel Direct Testimony at 10-11).  
25 AmerenUE's production cost simulations used the higher 202 MW level of operating

1 reserve even though it is known AmerenUE's operating reserve requirement is  
2 expected to only be 106 MW starting in January 2007.

3 **Q WHAT IMPACT DOES THIS HAVE ON AMERENUE'S PROPOSED REVENUE**  
4 **REQUIREMENT?**

5 **A** It has the impact of overstating AmerenUE's expected fuel and purchased power cost  
6 and understating its off-system sales margin. Taken together this overstates  
7 AmerenUE's revenue requirement.

8 **Q HOW DO YOU RECOMMEND THE COMMISSION ADDRESS THIS ISSUE?**

9 **A** AmerenUE should be required to rerun its production cost simulations with 106 MW of  
10 operating reserves modeled rather than 202 MW of spinning and non-spinning  
11 reserves to reflect the known expected impact of its participation in the Midwest  
12 Contingency Reserve Sharing Group.

13 **Q DO YOU HAVE AN ESTIMATE OF THE IMPACT OF THIS ADJUSTMENT?**

14 **A** I can only provide a very rough estimate as the actual impact is related to the power  
15 production economics of the AmerenUE generation capacity that is freed up in each  
16 hour to produce additional energy. However, if we assume 50% of the reduced  
17 operating reserve amount occurs on AmerenUE's coal-fired generation, the impact of  
18 the adjustment can be roughly estimated as 50% of the reduction in the operating  
19 reserve requirement times the product of 8760 hours and the difference between the  
20 average wholesale electricity market price and AmerenUE's per MWh coal cost at its  
21 most expensive coal-fired generation facility. Using this approach, I roughly estimate  
22 AmerenUE's revenue requirement would be reduced by approximately \$7.1 million.  
23 My estimate is detailed in Schedule JRD-3.

James R. Dauphinais  
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1 Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

2 A Yes, it does.

## **Appendix A**

### **Qualifications of James R. Dauphinais**

1    **Q     PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2    A     James R. Dauphinais. My business address is 1215 Fern Ridge Parkway, Suite 208,  
3           St. Louis, Missouri 63141.

4    **Q     PLEASE STATE YOUR OCCUPATION.**

5    A     I am a consultant in the field of public utility regulation and a Principal with the firm of  
6           Brubaker & Associates, Inc. (BAI), energy, economic and regulatory consultants.

7    **Q     PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERI-**  
8           **ENCE.**

9    A     I graduated from Hartford State Technical College in 1983 with an Associate's Degree  
10          in Electrical Engineering Technology. Subsequent to graduation I was employed by  
11          the Transmission Planning Department of the Northeast Utilities Service Company as  
12          an Engineering Technician.

13                While employed as an Engineering Technician, I completed undergraduate  
14          studies at the University of Hartford. I graduated in 1990 with a Bachelor's Degree in  
15          Electrical Engineering. Subsequent to graduation, I was promoted to the position of  
16          Associate Engineer. Between 1993 and 1994, I completed graduate level courses in  
17          the study of power system transients and power system protection through the  
18          Engineering Outreach Program of the University of Idaho. By 1996 I had been  
19          promoted to the position of Senior Engineer.

20                In the employment of the Northeast Utilities Service Company, I was

1 responsible for conducting thermal, voltage and stability analyses of the Northeast  
2 Utilities' transmission system to support planning and operating decisions. This  
3 involved the use of load flow and power system stability computer simulations.  
4 Among the most notable achievements I had in this area include the solution of a  
5 transient stability problem near Millstone Nuclear Power Station, and the solution of a  
6 small signal (or dynamic) stability problem near Seabrook Nuclear Power Station. In  
7 1993 I was awarded the Chairman's Award, Northeast Utilities' highest employee  
8 award, for my work involving stability analysis in the vicinity of Millstone Nuclear  
9 Power Station.

10 From 1990 to 1997 I represented Northeast Utilities on the New England  
11 Power Pool Stability Task Force. I also represented Northeast Utilities on several  
12 other technical working groups within the New England Power Pool (NEPOOL) and  
13 the Northeast Power Coordinating Council (NPCC), including the 1992-1996 New  
14 York-New England Transmission Working Group, the Southeastern  
15 Massachusetts/Rhode Island Transmission Working Group, the NPCC CPSS-2  
16 Working Group on Extreme Disturbances and the NPCC SS-38 Working Group on  
17 Interarea Dynamic Analysis. This latter working group also included participation  
18 from a number of ECAR, PJM and VACAR utilities.

19 In addition to my technical responsibilities, I was also responsible for oversight  
20 of the day-to-day administration of Northeast Utilities' Open Access Transmission  
21 Tariff. This included the creation of Northeast Utilities' pre-FERC Order No. 889  
22 transmission electronic bulletin board and the coordination of Northeast Utilities'  
23 transmission tariff filings prior to and after the issuance of Federal Energy Regulatory  
24 Commission (FERC or Commission) FERC Order No. 888. I was also responsible for  
25 spearheading the implementation of Northeast Utilities' Open Access Same-Time

Appendix A  
James R. Dauphinais  
Page 2

1 Information System and Northeast Utilities' Standard of Conduct under FERC Order  
2 No. 889. During this time I represented Northeast Utilities on the Federal Energy  
3 Regulatory Commission's "What" Working Group on Real-Time Information Networks.  
4 Later I served as Vice Chairman of the NEPOOL OASIS Working Group and Co-  
5 Chair of the Joint Transmission Services Information Network Functional Process  
6 Committee. I also served for a brief time on the Electric Power Research Institute  
7 facilitated "How" Working Group on OASIS and the North American Electric Reliability  
8 Council facilitated Commercial Practices Working Group.

9 In 1997 I joined the firm of Brubaker & Associates, Inc. The firm includes  
10 consultants with backgrounds in accounting, engineering, economics, mathematics,  
11 computer science and business. Since my employment with the firm, I have  
12 presented testimony before the Federal Energy Regulatory Commission in  
13 Consumers Energy Company, Docket No. OA96-77-000, Midwest Independent  
14 Transmission System Operator, Inc., Docket No. ER98-1438-000, Montana Power  
15 Company Docket No. ER98-2382-000, Inquiry Concerning the Commission's Policy  
16 on Independent System Operators, Docket No. PL98-5-003, SkyGen Energy LLC v.  
17 Southern Company Services, Inc., Docket No. EL00-77-000, Alliance Companies, et  
18 al., Docket No. EL02-65-000, et al., Entergy Services, Inc., Docket No. ER01-2201-  
19 000, and Remedying Undue Discrimination through Open Access Transmission  
20 Service and Standard Electricity Market Design, Docket No. RM01-12-000. I have  
21 also presented testimony before the Connecticut Department of Public Utility Control,  
22 Illinois Commerce Commission, the Indiana Utility Regulatory Commission, the Iowa  
23 Utilities Board, the Kentucky Public Service Commission, the Michigan Public Service  
24 Commission, the Missouri Public Service Commission, the Public Utility Commission  
25 of Texas, the Wisconsin Public Service Commission and various committees of the

1 Missouri State Legislature. I have also participated on behalf of clients in the  
2 Southwest Power Pool Congestion Management System Working Group, the Alliance  
3 Market Development Advisory Group and several working groups of the Midwest  
4 Independent Transmission System Operator, Inc. (MISO), including the Congestion  
5 Management Working Group. I am currently an alternate member of the MISO  
6 Advisory Committee in the end-use customer sector on behalf of a group of industrial  
7 end-use customers in Illinois. I am also Chairman of the Issues/Solutions Subgroup  
8 of the MISO Revenue Sufficiency Guarantee (RSG) Task Force. In addition to our  
9 main office in St. Louis, the firm also has branch offices in Phoenix, Arizona; Corpus  
10 Christi, Texas; and Plano, Texas.

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# Non-Proprietary

Missouri Public Service Commission  
Case No. ER-2007-0002

Union Electric Company  
d/b/a AmerenUE

## Estimate of the Impact of Adjusting AmerenUE's Fuel Oil, Natural Gas and Wholesale Electricity Spot Prices to Historic 2006 Levels

Line	Description	Amount	Notes
1	Total Production Cost Model Fuel Oil and Natural Gas Cost	""	From AmerenUE's response to Data Request MPSC - 0140
2	Total Production Cost Model Non-APL Purchased Power Cost	""	From AmerenUE's response to Data Request MPSC - 0140
3	Total Production Cost Model Off-System Sales Revenue	""	From AmerenUE's response to Data Request MPSC - 0140
4	Average Production Cost Model Panhandle Eastern Natural Gas Price	"" per MMBtu	From AmerenUE's response to Data Request MPSC - 0140
5	Average Production Cost Model Wholesale Electricity Price	"" per MWh	From AmerenUE's response to Data Request MPSC - 0140
6	Average Historic January - November 2006 Henry Hub Natural Gas Price	"" per MMBtu	From Platts Gas Daily's "Daily Price Survey"
7	Average Historic January - November 2006 Panhandle Eastern Basis Differential	"" per MMBtu	From Platts Gas Daily's "Daily Price Survey"
8	Average Historic January - November 2006 MISO DA Electricity Price for AMRN.MERAMEC1	"" per MWh	From www.midwestiso.org
9	Estimated Increase in AmerenUE Off-System Sales Revenue	""	Line 3 * ( Line 8 / Line 5 ) - Line 3
10	Estimated Increase in AmerenUE Fuel Oil and Natural Gas Cost	""	Line 1 * ( ( Line 6 + Line 7 ) / Line 4 ) - Line 1
11	Estimated Increase in AmerenUE Purchased Power Cost	""	Line 2 * ( Line 8 / Line 5 ) - Line 2
12	Estimated Net Decrease to AmerenUE's Revenue Requirement	""	Line 9 - Line 10 - Line 11

James R. Dauphinais  
Schedule JRD-1

Non-Proprietary



# Non-Proprietary

Missouri Public Service Commission  
Case No. ER-2007-0002

Union Electric Company  
d/b/a AmerenUE

Estimate of the Impact of Adjusting AmerenUE's Fuel Oil, Natural Gas and Wholesale Electricity Spot Prices to Lowest Forward Market Price Level  
for Calendar Year 2007 Reported from October 1, 2006 through December 31, 2006

Line	Description	Amount	Notes
1	Total Production Cost Model Fuel Oil and Natural Gas Cost	***	From AmerenUE's response to Data Request MPSC - 0140
2	Total Production Cost Model Purchased Power Cost	***	From AmerenUE's response to Data Request MPSC - 0140
3	Total Production Cost Model Off-System Sales Revenue	***	From AmerenUE's response to Data Request MPSC - 0140
4	Average Production Cost Model Panhandle Eastern Natural Gas Price	*** per MMBtu	From AmerenUE's response to Data Request MPSC - 0140
5	Average Production Cost Model Wholesale Electricity Price	*** per MWh	From AmerenUE's response to Data Request MPSC - 0140
6	Average January - December 2007 NYMEX Henry Hub Futures Natural Gas Price	*** per MMBtu	From Platts Gas Daily on December 6, 2006, Page 5
7	Average Historic January - November 2006 Panhandle Eastern Basis Differential	*** per MMBtu	From Platts Gas Daily's "Daily Price Survey"
8	Lowest 10/1/06 - 12/31/06 Platts Megawatt Daily Calendar Year 2007 On-Peak Forward Price for Cinergy	*** per MWh	From Platts Megawatt Daily, December 6, 2006, Page 4
9	Average Historic January 2006 - November 2006 Ratio of Around-the-Clock to On-Peak Cinergy Hub DA LMPs	***	From www.midwestiso.org
10	Average Historic January 2006 - November 2006 MISO DA LMP Difference Between AMRN.MERAMEC1 and Cinergy Hub	*** per MWh	From www.midwestiso.org
11	Estimated Calendar Year 2007 Around-the-Clock Forward Market Price for AMRN.MERAMEC1	*** per MWh	( Line 8 * Line 9 ) + Line 10
12	Estimated Increase in AmerenUE Off-System Sales Revenue	***	Line 3 * ( Line 11 / Line 5 ) - Line 3
13	Estimated Increase in AmerenUE Fuel Oil and Natural Gas Cost	***	Line 1 * ( ( Line 6 + Line 7 ) / Line 4 ) - Line 1
14	Estimated Increase in AmerenUE Purchased Power Cost	***	Line 2 * ( Line 11 / Line 5 ) - Line 2
15	Estimated Net Decrease to AmerenUE's Revenue Requirement	***	Line 12 - Line 13 - Line 14

James R. Dauphinais  
Schedule JRD-2

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Missouri Public Service Commission  
Case No. ER-2007-0002

Union Electric Company  
d/b/a AmerenUE

Rough Estimate of the Impact of Adjusting Down AmerenUE's Operating Reserve Levels to Those as of January 1, 2007

Line	Description	Amount	Notes
1	Production Cost Model AmerenUE Spinning Reserve Level	*** MW	From AmerenUE's response to Data Request MIEC 4-06
2	Production Cost Model AmerenUE Non-Spinning Reserve Level	*** MW	From AmerenUE's response to Data Request MIEC 4-06
3	AmerenUE's Estimated Midwest Reserve Sharing Group Operating Reserve Level as of January 1, 2007	*** MW	From AmerenUE's response to Data Request MIEC 4-06
4	Reduction of AmerenUE Operating Reserve Level as of January 1, 2007	*** MW	( Line 1 + Line 2 ) - Line 3
5	Percentage of Total Operating Reserve Reduction Associated with AmerenUE's Coal Fired Generation	*** %	Assumption
6	Estimated Reduction in Operating Reserve Carried by AmerenUE's Coal Fired Generation as of January 1, 2007	*** MW	Line 4 * Line 5
7	Production Cost Model Average Cost of Coal Generation	*** per MWh	From AmerenUE's response to MPSC - 0140
8	Production Cost Model Average Wholesale Electricity Price	*** per MWh	From AmerenUE's response to MPSC - 0140
9	Rough Estimate of Decrease to AmerenUE's Revenue Requirement	***	Line 6 * 8760 Hours * ( Line 8 - Line 7 )

James R. Dauphinais  
Schedule JRD-3

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