

Exhibit No.:
Issue: Rate Design
Witness: James R. Dauphinais
Type of Exhibit: Direct Testimony
Sponsoring Party: Missouri Industrial Energy Consumers
Case No.: ER-2011-0028
Date Testimony Prepared: February 10, 2011

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

**In the Matter of Union Electric
Company, d/b/a Ameren Missouri's
Tariff to Increase Its Annual
Revenues for Electric Service**

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Case No. ER-2011-0028
Tariff No. YE-2011-0166

Direct Testimony and Schedules of

James R. Dauphinais

on Rate Design

On behalf of

Missouri Industrial Energy Consumers

NON-PROPRIETARY VERSION

February 10, 2011



Project 9371

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

<p>In the Matter of Union Electric Company, d/b/a Ameren Missouri's Tariff to Increase Its Annual Revenues for Electric Service</p>)))))))	<p>Case No. ER-2011-0028 Tariff No. YE-2011-0166</p>
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STATE OF MISSOURI)
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COUNTY OF ST. LOUIS)

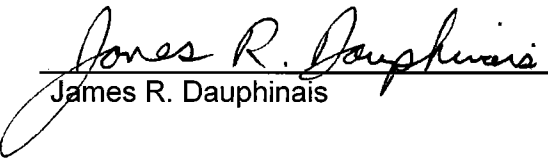
Affidavit of James R. Dauphinais

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 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by Missouri Industrial Energy Consumers in this proceeding on their behalf.

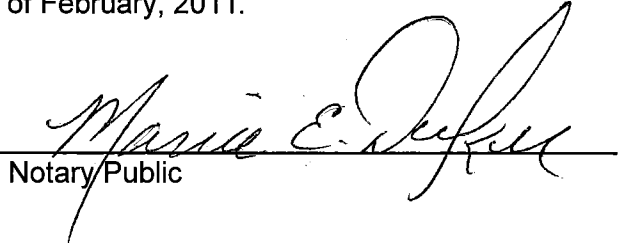
2. Attached hereto and made a part hereof for all purposes are my direct testimony and schedules which were prepared in written form for introduction into evidence in the Missouri Public Service Commission Case No. ER-2011-0028.

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

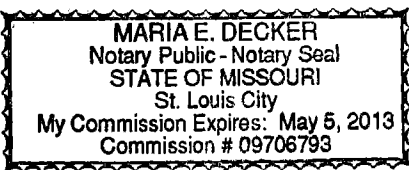


 James R. Dauphinais

Subscribed and sworn to before me this 10th day of February, 2011.



 Notary Public



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

)	
In the Matter of Union Electric)	
Company, d/b/a Ameren Missouri's)	Case No. ER-2011-0028
Tariff to Increase Its Annual)	Tariff No. YE-2011-0166
Revenues for Electric Service)	
)	

Direct Testimony of James R. Dauphinais

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

2 A James R. Dauphinais.

3 **Q** **ARE YOU THE SAME JAMES R. DAUPHINAIS WHO HAS FILED DIRECT**
4 **TESTIMONY ON REVENUE REQUIREMENT?**

5 A Yes.

6 **Q** **WHAT IS THE SUBJECT OF YOUR RATE DESIGN TESTIMONY?**

7 A The performance trend of Ameren Missouri's baseload generation facilities.

8 **Q** **PLEASE EXPLAIN WHY THAT PERFORMANCE IS RELEVANT TO THE**
9 **SUBJECT OF AMEREN MISSOURI'S RATE DESIGN.**

10 A As discussed in greater detail in Mr. Brubaker's testimony, the introduction of a fuel
11 adjustment clause for Ameren Missouri changed the incentives driving Ameren
12 Missouri's decision making especially when Ameren Missouri is weighing the
13 incurrence of costs recoverable in base rates versus savings in net fuel cost that
14 would result from the incurrence of those costs. In general, between base rate

James R. Dauphinais
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1 proceedings, Ameren Missouri must absorb additional costs recoverable in base rates
2 while it can recover 95% of its net fuel costs through its FAC between those
3 proceedings. As a result, it is important for the Commission to carefully monitor the
4 performance of Ameren Missouri's generation facilities, especially that of Ameren
5 Missouri's baseload generation facilities, and consider on an ongoing basis whether
6 the percentage of fuel cost increases and decreases assigned to Ameren Missouri
7 through the FAC should be increased from 5% in order to better incentivize Ameren
8 Missouri to keep its costs as low as reasonably possible.

9 **Q WHAT MATERIAL HAVE YOU REVIEWED REGARDING THE PERFORMANCE**
10 **TREND OF AMEREN MISSOURI'S BASELOAD GENERATION FACILITIES?**

11 A I have reviewed Ameren Missouri's responses to data requests from MIEC and the
12 Commission Staff regarding historical outage rate information for Ameren Missouri's
13 generation facilities.

14 **Q WHAT HAVE YOU FOUND?**

15 A The forced outage rates of Ameren Missouri's baseload generation facilities, and its
16 coal-fired generation facilities in particular, have been steadily trending upward since
17 2005. This upward trend has continued since Ameren Missouri's FAC went into effect
18 in March of 2009. Higher forced outage rates reduce the availability of Ameren
19 Missouri's baseload generation facilities reducing Ameren Missouri's off-system sales
20 opportunities and potentially increasing its purchases of electricity from the wholesale
21 market. These effects work to increase Ameren Missouri's net fuel cost. As noted
22 above, Ameren Missouri can currently recover 95% of such net fuel cost increases
23 from its retail customers between base rate proceedings through its FAC.

1 Q PLEASE PRESENT THE DATA UPON WHICH YOU ARE BASING YOUR
2 FINDING.

3 A In response to Commission Staff Data Request MPSC 0059, Ameren Missouri has
4 provided historical Equivalent Forced Outage Rate (“EFOR”) and Equivalent
5 Availability Factor (“EAF”) data for its generation facilities from January 2007 through
6 August 2010.

7 An EFOR is a measure of the percent of time that a generation unit is not in
8 service because physical reasons prevent its operation. It is calculated as the ratio
9 of: (i) the sum of forced outage hours and equivalent forced outage hours from
10 forced deratings to (ii) the sum of service hours, forced outage hours and equivalent
11 forced outage hours from forced derates. In effect, it is a measure of what percent of
12 the time a generation facility will be out of service due to forced outages and forced
13 derates to the time in which the generation facility was otherwise available for service
14 (i.e., not out due to a planned outage or derate) assuming the facility is only either
15 available at full capability or not available at all.

16 An EAF is a measure of the percent of time a unit is available to operate. It is
17 calculated as the ratio of: (i) the sum of service hours and reserve shutdown hours
18 less the sum of equivalent planned outage hours from planned derates, equivalent
19 forced outage hours from forced derates, equivalent maintenance outage hours from
20 maintenance derates and equivalent outage hours due to seasonal derates to (ii) the
21 total hours in a period. It is a measure of the percentage of time a generator will be
22 available assuming the facility is either available at full capability or not available at
23 all.

24 In general, it is desirable for the EFOR to be low and the EAF to be high.

1 **Q HAVE YOU ANALYZED THIS EFOR AND EAF DATA?**

2 A Yes. In Schedule JRD-9, I have plotted the EFOR of Ameren Missouri's baseload
3 generation facilities on a rolling 12-month basis from December 2007 through August
4 2010. This plot clearly shows a steady increase in the EFOR trend line for Ameren
5 Missouri's baseload generation fleet from a little under *** in December 2007 to
6 about *** in August 2010.

7 **Q YOU INDICATED EARLIER THAT THE TREND IS IN PARTICULAR PRESENT**
8 **FOR THE COAL-FIRED PORTION OF AMEREN MISSOURI'S BASELOAD**
9 **GENERATION FLEET. PLEASE EXPLAIN HOW YOU KNOW THIS TO BE TRUE?**

10 A In Schedule JRD-10, I have plotted just the EFOR for Ameren Missouri's coal fleet
11 from December 2007 through August 2010. This plot shows that the rolling 12-month
12 EFOR trend line for Ameren Missouri's coal fleet increased from just over *** in
13 December 2007 to just over *** in August 2010.

14 **Q HOW HAVE AMEREN MISSOURI'S BASELOAD AND COAL FLEET**
15 **AVAILABILITY FACTORS TRENDED OVER THIS SAME PERIOD?**

16 A In Schedule JRD-11 and Schedule JRD-12, respectively, I have plotted a 12-month
17 rolling average of the EAF for Ameren Missouri's baseload and coal-fired generation.
18 Schedule JRD-11 shows that the EAF trend line for baseload generation as a whole
19 has fallen from approximately *** in December 2007 to approximately
20 *** in August 2010. Schedule JRD-12 shows the EAF trend line for coal-fired
21 portion of baseload generation has fallen from a little under *** in December
22 2007 to a little under *** in August 2010.

1 **Q COULD YOU PROVIDE AN INDICATIVE EXAMPLE OF APPROXIMATELY WHAT**
2 **A FALL OF AMEREN MISSOURI’S COAL-FIRED EAF BY 3% MIGHT MEAN IN**
3 **TERMS OF ADDITIONAL NET FUEL COST?**

4 A Yes. In 2009, Ameren Missouri had approximately 36 million MWh of coal-fired
5 energy production (Direct Revenue Requirement Testimony of Dauphinais at
6 Schedule 8). Assuming a fuel cost for coal-fired generation of approximately \$20 per
7 MWh and an average around-the-clock electric market price of \$33 per MWh, a 3%
8 reduction in Ameren Missouri’s coal-fired energy production could potentially increase
9 Ameren Missouri’s net fuel cost by as much as \$14 million.¹

10 **Q WHAT DO YOU RECOMMEND TO THE COMMISSION?**

11 A I recommend the Commission carefully monitor the performance of Ameren
12 Missouri’s generation facilities, especially of Ameren Missouri’s baseload generation
13 facilities.

14 **Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

15 A Yes, it does.

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¹36,000,000 x 3% x (\$33 - \$20).

Schedule JRD-9

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Schedule JRD-10

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Schedule JRD-11

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Schedule JRD-12

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