

Exhibit No.:
Issue(s): Production Cost Modeling/
Net Base Fuel Costs
Witness: Timothy D. Finnell
Sponsoring Party: Union Electric Company
Type of Exhibit: Rebuttal Testimony
Case No.: ER-2010-0036
Date Testimony Prepared: February 11, 2010

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2010-0036

REBUTTAL TESTIMONY

OF

TIMOTHY D. FINNELL

ON

BEHALF OF

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

**St. Louis, Missouri
February, 2010**

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1 **REBUTTAL TESTIMONY**

2 **OF**

3 **TIMOTHY D. FINNELL**

4
5 **CASE NO. ER-2010-0036**

6 **Q. Please state your name and business address.**

7 A. My name is Timothy D. Finnell. My business address is One Ameren Plaza,
8 1901 Chouteau Avenue, St. Louis, MO 63103.

9 **Q. By whom and in what capacity are you employed?**

10 A. I am employed by Ameren Services Company as Managing Supervisor,
11 Operations Analysis in the Corporate Planning Function.

12 **Q. Are you the same Timothy D. Finnell who filed direct testimony on July**
13 **24, 2009 in this case?**

14 A. Yes, I am.

15 **Q. What is the purpose of your rebuttal testimony?**

16 A. The purpose of my rebuttal testimony is to address the production cost model
17 results that the Staff used in calculating its net base fuel cost which underlies the Staff's
18 revenue requirement filed on December 18, 2009. In summary, the Staff was able to use data
19 for a more recent period than was available to me at the time I filed my direct testimony in
20 July 2009. This means that the Staff's net base fuel cost results are closer to the results I
21 would expect when the net base fuel costs are finally trued-up through January 31, 2010, as
22 part of the true-up scheduled in this case. With the exception of one input, that is, nuclear
23 fuel costs for the Callaway Plant, I generally agree with the Staff's modeling results and I
24 expect the Company and the Staff to be in agreement regarding net base fuel costs in the

1 true-up phase, except as those costs are affected by the Callaway fuel issue. I also respond to
2 net base fuel cost-related issues raised by Missouri Industrial Energy Consumers (MIEC)
3 witness James Dauphinais in his direct testimony.

4 **Q. Please summarize your observations about the Staff's testimony**
5 **regarding net base fuel costs.**

6 A. I have reviewed the results of the Staff's RealTime production cost model
7 results and have determined that it does produce reasonable results of net base fuel costs.¹
8 The major differences between the Staff's calculation and my initial calculation in July 2009
9 are due to the fact that the Staff updated inputs to its production cost model.

10 **Q. What production cost model inputs did Staff update?**

11 A. The production cost model inputs that the Staff has updated include: (1)
12 loads, (2) hourly load shapes, (3) coal, gas, oil, and nuclear fuel costs, and (4) power prices.

13 **Q. How will the difference in the production cost model inputs be handled in**
14 **setting the net base fuel cost component of the final revenue requirement in this case?**

15 A. AmerenUE agrees with the Staff's approach to all of the above-mentioned
16 inputs, except with respect to fuel expenses for the Callaway Plant. Consequently, I expect
17 any differences between loads and hourly load shapes will be eliminated through the use of
18 normalized true-up sales data as part of the true-up in this case. The normalized true-up sales
19 will be prepared on an hourly basis, so that the hourly load shapes and total loads will be the
20 same for each model. The coal, oil, and gas price differences will be eliminated through the
21 use of true-up fuel costs. The differences in nuclear fuel costs, which are addressed in the

¹ Net base fuel costs are determined from production cost modeling, which provides normalized fuel and purchased power costs net of off-system sales revenues, plus consideration of other accounting costs and revenues which are not modeled, as detailed on Schedule GSW-E20 to the July 24, 2009 direct testimony of

1 rebuttal testimony of AmerenUE witness Randall Irwin, will need to be resolved by the
2 Commission. The differences in power prices will be handled using true-up data (through
3 January 31, 2010), based upon the Staff's normalized power prices, which will eliminate the
4 load forecasting and generation forecasting deviation cost that I had described in my direct
5 testimony.

6 **Q. What inputs did the Staff use for generating unit availability?**

7 A. The Staff used similar generating unit availability inputs to those I used in my
8 production cost modeling. The generating unit availability inputs were based on a six-year
9 average for planned outages, unplanned outages and derates; with one exception for the 2005
10 Callaway refueling outage. Since the 2005 Callaway refueling outage was an unusual, non-
11 recurring outage related to replacement of the steam generators at Callaway, it was
12 eliminated from the six-year average. In summary, the Staff's approach and the Company's
13 approach to modeling generating unit availability are in all material respects the same.

14 **Q. What is the length of the Callaway refueling outage reflected in the**
15 **Staff's production cost model?**

16 A. The Staff's production cost model used a 29-day (two-thirds of a normalized
17 44-day outage length) refueling outage for Callaway, which is the same length used in the
18 AmerenUE production cost model.

19 **Q. Is there any additional information that should be included in the net**
20 **base fuel cost true-up?**

21 A. Yes. Contract off-system sales and purchases are included in Factor OSSR in
22 AmerenUE's fuel adjustment clause. As mentioned in my direct testimony, there were no

AmerenUE witness Gary S. Weiss. It is my understanding that the Company is in agreement with the Staff's treatment of these other accounting costs and revenues.

1 contract off-system sales or purchases made at the time I prepared that testimony, but such
2 purchases and sales do exist as of the true-up cutoff date of January 31, 2010. Consequently,
3 those contract off-system sales and purchases will need to be included in the true-up
4 modeling that will ultimately be used to set net base fuel costs in this case. Schedule
5 TDF-ER7 contains a summary of the contract sales and purchases that should be included in
6 the true-up of net base fuel costs.

7 **Q. Please summarize your concerns regarding Mr. Dauphinais's testimony**
8 **regarding net base fuel costs.**

9 A. I will be addressing three adjustments that Mr. Dauphinais has made to
10 AmerenUE's calculation of net base fuel costs. These adjustments are: (1) his adjustment of
11 the hourly loads used in the normalized test year; (2) his adjustment of the length of the
12 normalized Callaway refueling outage; and (3) his normalization of net load and generation
13 forecast deviation costs.

14 **Q. Please address the hourly load shape issue raised by Mr. Dauphinais.**

15 A. As I noted above, the hourly load shapes used to set the net base fuel costs
16 will be updated to match the normalized true-up period hourly loads which should eliminate
17 the issue raised by Mr. Dauphinais. These updated hourly loads will replace the normalized
18 hourly loads which I had used in the modeling sponsored in my direct testimony and which
19 were based on calendar year 2007.

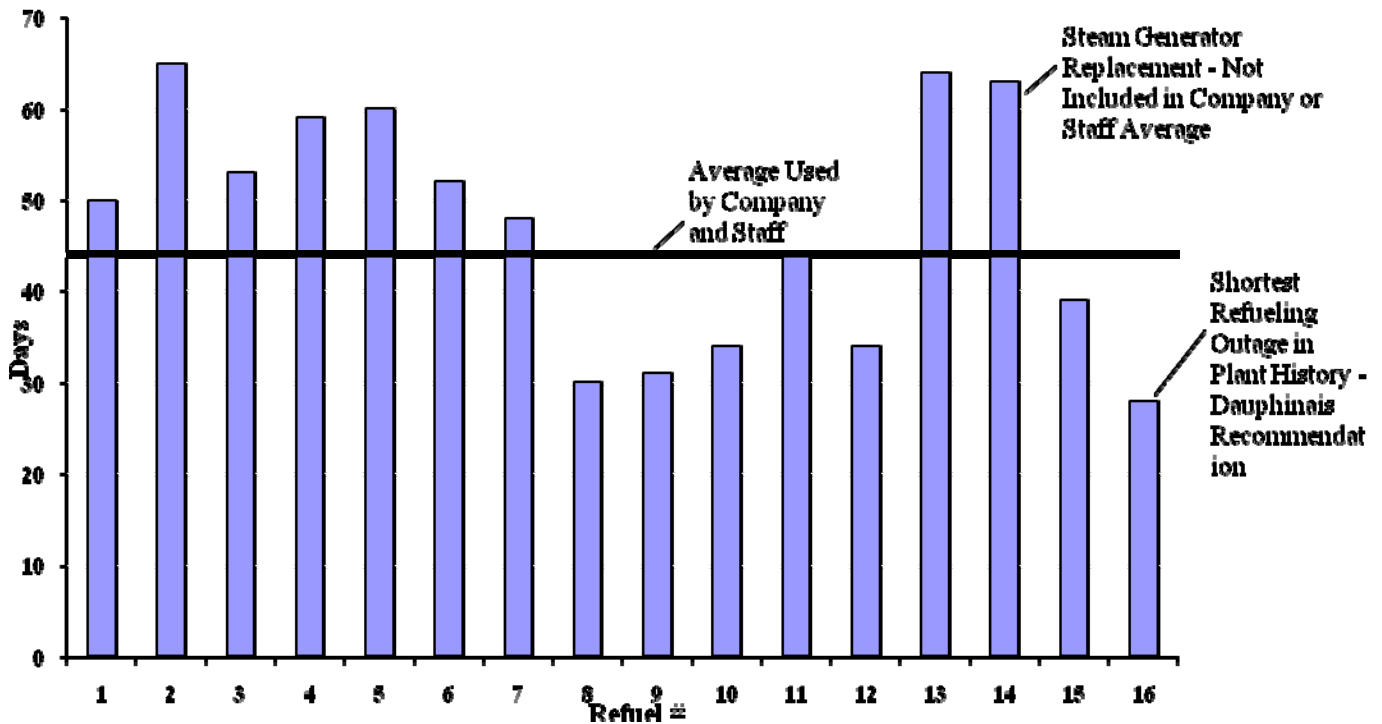
20 **Q. Please address the Callaway refueling outage length issue raised by Mr.**
21 **Dauphinais.**

22 A. The "normalized" Callaway refueling outage length proposed by Mr.
23 Dauphinais of just 18.7 days (which is based on an actual outage length of 28 days, because

1 the production cost modeling reflects two-thirds of a normal outage since the Callaway Plant
2 is refueled every 18 months). This is completely inappropriate and fails to reflect a normal
3 refueling outage length at the Callaway Plant. In fact, a review of Mr. Dauphinais's
4 testimony and work papers reveals that he did not even attempt to actually "normalize"
5 outage lengths, but rather, he simply picked the length of just one refueling outage (the last
6 one, refuel 16), which occurred between October 10, 2008 and November 7, 2008. The
7 chart below shows the lengths of all of the 16 Callaway refueling outages that have occurred
8 since the plant began operation in 1985. As you can see from the chart, Mr. Dauphinais has
9 chosen as "normal" the single lowest refueling outage length in the history of the Callaway
10 plant. The data on this chart shows that 10 refueling outages were greater than or equal to
11 the 44-day² normalized outage length that I calculated for my direct testimony, and just 6
12 outages were shorter than the 44-day normalized outage that I calculated. The distribution of
13 refueling outage lengths indicates that a 44-day normalized refueling outage length is more
14 reasonable and representative of a normal outage length than the 28-day refueling outage
15 length proposed by Mr. Dauphinais.

² My production cost modeling and the Staff's includes 2/3 of this 44-day outage length, or 29 days.

Callaway Refueling Outage Length



Q. Please address the load and generation forecast issues raised by Mr. Dauphinais.

A. I agree with Mr. Dauphinais's conclusion that the 17-month period that I used to determine the load and generation forecast deviation cost should be updated to calculate net base fuel costs. However, I disagree with Mr. Dauphinais's recommendation of using *only* 2009 data for updating these costs.

Q. How do you propose updating the costs associated with load and generation forecast deviations?

A. As noted, use of the Staff's production cost modeling will render this issue moot. If, however, the issue did need to be addressed separately I recommend that the load and forecast deviation costs be updated using the same time period that is used for determining the

1 normalized power prices used for determining normalized off-system sales revenues, which is
2 the 36-month period ending January 31, 2010. Use of data from this period is appropriate
3 because both rely on Midwest Independent Transmission System Operator, Inc. (MISO) Day
4 Ahead Locational Marginal Prices (DA LMP) and Real Time Locational Marginal Prices (RT
5 LMP).

6 **Q. Why do you disagree with Mr. Dauphinais's recommendation to use only**
7 **data from calendar year 2009?**

8 A. I disagree with his method because it does not take into account the volatility of
9 power prices. Power prices are one of the major components of the load and generation forecast
10 deviation costs. Schedule TDF-ER8 shows the DA LMPs and RT LMPs for calendar years
11 2007, 2008 and 2009 for the marginal pricing node labeled MOGEN1. The MOGEN1 pricing
12 node is an aggregate value for multiple generation sources and is used by the Company to track
13 LMPs. The LMP data from this table illustrates the large decline in DA LMP and RT LMP
14 between 2008 and 2009, which is consistent with Mr. Dauphinais's conclusion that 2009 load
15 and generation forecast deviations costs are lower than the costs contained in my original
16 testimony. The data in Schedule TDF-ER8 also indicates that the DA LMP and RT LMP are
17 very volatile and that 2009 data alone may not be reflective of normalized prices. Another
18 important observation from the price data in Schedule TDF-ER8 is the percent difference
19 between DA LMPs and RT LMPs is almost the same for all three years, approximately 2.5%,
20 even though the absolute differences have changed significantly. The use of percent changes is a
21 better measure for determining if the MISO market fundamentals have changed due to changes
22 in the market structure such as the MISO's Ancillary Services Market, which started on January
23 6, 2009. The small percentage change between DA LMPs and RT LMPs illustrates that any

1 changes to the MISO market have not had a material impact on the differences between DA
2 LMPs and RT LMPS and that it is appropriate to use data for multiple years to determine load
3 and generation forecasting deviation costs.

4 **Q. Does this conclude your rebuttal testimony?**

5 A. Yes, it does.

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

STATE OF MISSOURI)
) ss
CITY OF ST. LOUIS)

Timothy D. Finnell
Timothy D. Finnell

Mary Hoyt
Notary Public

Mary Hoyt - Notary Public
Notary Seal, State of
Missouri - Jefferson County
Commission #06397820
My Commission Expires 4/1/2010

SCHEDULE TDF-ER7
HAS BEEN DEEMED
HIGHLY CONFIDENTIAL
IN ITS ENTIRETY

Day Ahead Locational Marginal Prices vs. Real Time Locational Marginal Prices

	MOGEN 1 DA LMP	MOGEN 1 RT LMP	Difference (DA LMP - RT LMP)	% Difference)
2007	\$41.47/Mwh	\$40.42/Mwh	\$1.05/Mwh	2.60%
2008	\$44.37/Mwh	\$43.34/Mwh	\$1.06/Mwh	2.50%
2009	\$24.52/Mwh	\$24.00/Mwh	\$.53/MWh	2.20%