

Exhibit No.:
Issues: Unit Availability
Witness: Leon C. Bender
Sponsoring Party: MO PSC Staff
Type of Exhibit: Rebuttal Testimony
Case No.: ER-2011-0028
Date Testimony Prepared: March 25, 2011

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

REBUTTAL TESTIMONY

OF

LEON C. BENDER

**UNION ELECTRIC COMPANY
d/b/a Ameren Missouri**

CASE NO. ER-2011-0028

*Jefferson City, Missouri
March 2011*

****Denotes Highly Confidential Information****

NP

1 performed. He expressed concern that if Ameren Missouri's equivalent forced outage rates
2 (EFOR) and the equivalent availability factor (EAF) continue trending as they have in the
3 past, the resulting reduced availability of Ameren Missouri's coal plants could potentially
4 increase Ameren Missouri's net fuel cost in the future.

5 Q. What data did Mr. Dauphinais use in his analysis?

6 A. Mr. Dauphinais states in his testimony he used data from Ameren Missouri's
7 response to Staff's data request MPSC 0059.

8 Q Have you reviewed Ameren Missouri's response to Staff's data request MPSC
9 0059?

10 A. Yes I have.

11 Q. Please describe the data submitted in Ameren Missouri's response to Staff's
12 data request MPSC 0059.

13 A. Ameren Missouri's response to Staff's data request MPSC 0059 included
14 Ameren Missouri's calculated values of availability factor, EAF, forced outage rate, EFOR,
15 net capacity factor, and commercial availability for each of its coal generation plants for each
16 month of the period of January 2007 through August 2010.

17 Q. Please describe your analysis of this data.

18 A. In schedule LCB-1 and LCB-2, I have plotted the data for EAF and EFOR for
19 each coal plant and also for all coal generation plants combined on a graph and plotted a trend
20 line of the EAF and EFOR on each graph. The trend lines for EAF for all coal generation
21 plants combined showed that the trend for EAF was decreasing for the period graphed. The
22 trend lines for EFOR for all coal generation plant combined showed that the trend for EFOR
23 was increasing for the period graphed.

1 Q. What does a decreasing trend for EAF for all coal generation plant combined
2 mean for the operation and cost of the coal generation plants?

3 A. Typically the coal generation plants are the least cost generation resources and
4 should be dispatched to meet load first to keep fuel cost at its lowest cost. A decreasing EAF
5 means the coal generation plants are becoming less available to meet load and make off
6 system energy sales. Thus, more expensive fuel will have to be used in electric generation
7 plants to meet load and make off system energy sales. If the EAF continues to trend down
8 this could potentially result in increasing fuel cost in the future.

9 Q. What does an increasing trend for EFOR for all coal generation plants
10 combined mean for the operation and cost of the coal generation plants?

11 A. As stated above, typically the coal generation plants are the least cost
12 generation resources and should be dispatched to meet load first to keep fuel cost at its lowest
13 cost. An increasing EFOR means the coal generation plants are becoming less available to
14 meet load and make off system energy sales due to increasing forced outages. Thus, more
15 expensive fuel will have to be used in electric generation plants to meet load and make off
16 system energy sales when the coal generation plants are forced out. If the EFOR continues to
17 trend upward this could potentially result in increasing fuel cost in the future.

18 Q. Should a plant's EFOR and EAF remain constant?

19 A. It would be unusual for a plant's EFOR and EAF to remain constant. As
20 generation plants get older, it is expected that the EFOR would increase and the EAF
21 decrease. Also, the addition of emission equipment could result in a decrease in the EAF.
22 However, regular plant maintenance and technology advances can result in decreases in the

1 EFOR and increases in the EAF. Therefore, it would be unusual for the EFOR and EAF to be
2 static.

3 Q. Do you have any recommendations?

4 A. I recommend that Ameren Missouri be required to provide the information
5 requested by Missouri Industrial Energy Consumers so that the Staff can continue to monitor
6 the forced outages and availability of the generation plants at Ameren Missouri to ensure that
7 the trend which was found in this analysis and by the analysis performed by Mr. Dauphinais is
8 short lived and does not result in increased fuel cost.

9 Q. Does this conclude your rebuttal testimony?

10 A. Yes, it does.

Schedule LCB-1

Is Deemed

Highly Confidential

In Its Entirety

Schedule LCB-2

Is Deemed

Highly Confidential

In Its Entirety