

Exhibit No.:
Issue: Reliability
Witness: Gregory C. Brossier
Sponsoring Party: MoPSC Staff
Type of Exhibit: Rebuttal Testimony
File No.: ER-2010-0356
Date Testimony Prepared: December 15, 2010

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

REBUTTAL TESTIMONY

OF

GREGORY C. BROSSIER

KCP&L GREATER MISSOURI OPERATIONS COMPANY

FILE NO. ER-2010-0356

*Jefferson City, Missouri
December 15, 2010*

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

NP

1
2
3
4
5
6
7
8
9
10
11
12
13
14

TABLE OF CONTENTS

REBUTTAL TESTIMONY

OF

GREGORY C. BROSSIER

KCP&L GREATER MISSOURI OPERATIONS COMPANY

FILE NO. ER-2010-0356

EXECUTIVE SUMMARY 1

GMO’s REQUEST FOR MONETARY RECOGNITION FOR RELIABILTY 2

1 **GMO's REQUEST FOR MONETARY RECOGNITION FOR**
2 **RELIABILITY**

3 Q. What specifically has the Company said it is requesting and why?

4 A. The Company has indicated that it is requesting:

5 "...GMO requests a return on equity commensurate with the top of Dr.
6 Hadaway's range to reflect the Company's reliability and customer
7 satisfaction achievements. GMO's T&D systems continued to
8 perform at Tier 1 reliability levels in 2009, as measured by System
9 Average Interruption Duration Index ("SAIDI") in the annual Edison
10 Electric Institute Reliability Survey. In addition, KCP&L/GMO is
11 ranked as one of the highest rated electric utilities in Customer
12 Satisfaction according to JD Power and Associates..." (Blanc, Direct,
13 p. 10, lines 7-13)

14 Q. What is SAIDI?

15 A. System Average Interruption Duration Index (SAIDI) measures, in minutes,
16 the average length of time a customer is without power over the course of a year. This is done
17 by taking the total duration of all customer interruptions divided by the total number of
18 customers served. This is one of the most common indices used to measure reliability and is
19 used widely throughout the electric power industry.

20 Q. Are any other indices used or recorded by the Company?

21 A. Yes. There are three other indices used. Customer Average Interruption
22 Duration Index (CAIDI), System Average Interruption Frequency Index (SAIFI), and
23 Momentary Average Interruption Frequency Index (MAIFI). All of these indices, including
24 SAIDI, are broken down into weather adjusted and non-weather adjusted figures. The
25 weather adjusted figures remove large outliers from the data that were caused by weather
26 conditions that are considered extreme or outside of typical weather patterns.

27 Q. Is there other important information that should be considered when reviewing
28 the Company's SAIDI figures?

1 A. Yes. After Great Plains Energy, Inc. acquired Aquila in July 2008, and
2 renamed it GMO, GMO eliminated the operating divisions, but, because they still have
3 different rate designs and rate structures, for regulatory purposes GMO refers to its Kansas
4 City area operations as MPS and its St. Joseph area operations as L&P. The data that was
5 used prior to the acquisition was obtained from Aquila. From that point forward the numbers
6 were provided by GMO. L&P and MPS are distinct operating areas and their reliability
7 indices are collected and calculated separately. That is why there are a total of eight graphs
8 attached in Schedule GCB-1.

9 Q. What do these indices indicate regarding the reliability of GMO's transmission
10 and distribution system?

11 A. The SAIDI figures indicate that the system is within normal working
12 conditions and is experiencing the expected randomness inherent in an electrical transmission
13 and distribution system and there are several instances where the monthly value falls outside
14 the statistical boundaries that define a normal range. The graphs also show that, on average,
15 the system experiences higher SAIDI values during the summer months than in the winter
16 months for both L&P and MPS.

17 Q. Would you please define "major event day"?

18 A. A major event day is a day in which the daily SAIDI (or other index) value
19 exceeds a given threshold. These thresholds are found using a similar method as was used to
20 find the boundary lines included in the charts in Schedule GCB-1. If a data point is found to
21 be a major event day it is removed from the data set. It is assumed that the system is
22 experiencing weather or conditions that are outside what the Company can reasonably be

1 | expected to handle without incurring excessive costs. The Company provides Staff monthly
2 | values that are weather adjusted for major event days and also provides unadjusted values.

3 | Q. Are you including any graphical representations of the Company's reliability
4 | indices?

5 | A. Yes. The graphs for SAIDI for L&P and MPS service territories are attached
6 | as schedule GCB-1.

7 | Q. Could you please explain the graphs shown in this schedule?

8 | A. There are eight graphs which breakdown the SAIDI data, four for L&P and
9 | four for MPS, that was provided by the Company for January 2006 through July 2010. The
10 | four graphs for each territory are: Monthly, Quarterly, Summer Months (May through
11 | October), and Winter Months (January through April, November and December). All of the
12 | graphs include data points, the data points, average, an upper and lower bound, and a moving
13 | average. The data points come from the data provided by the company in response to
14 | Stipulation and Agreement EO-2005-0329, the data points' average is just the sum of the data
15 | points divided by the total number of data points for that graph and the upper and lower
16 | bounds are three standard deviations above and below the average respectively. The Monthly
17 | graph shows a 12-month moving average and the Quarterly graph shows a 4-quarter moving
18 | average, i.e., both of these moving averages use a years worth of data. The Summer and
19 | Winter Months graphs use a 6-period moving average to track that season.

20 | Q. What do the moving averages in these graphs indicate?

21 | A. The moving average is a simple method used to show trends in data. When
22 | there are numerous consecutive data points, usually seven or more, in a large enough sample,
23 | either gradually increasing or gradually decreasing it can be assumed that something is

1 causing the trend, not randomness. By viewing these moving average trend lines it can be
2 seen that there is no trend in reliability in an upward or downward direction.

3 Q. What would an upward or downward trend indicate?

4 A. An upward or downward trend would indicate that something outside of
5 normal variability is occurring.

6 Q. Would an upward or downward trend be negative or positive?

7 A. An upward trend i.e., the average number of minutes the customers were
8 without power is increasing would indicate that there may be something the Company would
9 need to address to improve its reliability. A downward trend i.e., the average number of
10 minutes the customers were without power is decreasing, would indicate that the Company
11 may be doing something or executing a plan to improve reliability and it is working. No
12 definite statement regarding the change in reliability should be made without looking at the
13 other indices and the changes in the utility's vegetation management and infrastructure
14 replacement practices.

15 Q. Why is the Staff opposed to the Company's request for the high end of its
16 recommended range on ROE for the reasons the Company states?

17 A. Staff witness Lisa A. Kremer's Rebuttal Testimony addresses the customer
18 satisfaction issue, but Staff is also opposed to the Company's request due to the fact that
19 GMO shows no significant trend either upward or downward in its reliability statistics over
20 the past five years. The Company's overall SAIDI numbers show no evidence of trending in
21 either direction. Instead, the numbers vary from year to year which is to be expected when
22 dealing with indices that are affected by so many factors (e.g., weather, system loads,
23 geography). When broken down into summer months (May – October) and winter months

1 (January through April, November and December) the inconsistency remains, which further
2 supports that lack of a trend. For these reasons Staff believes that the Company is operating
3 its system at a consistent level of reliability.

4 Q. Please summarize your rebuttal testimony.

5 A. The Company's request for an increased rate of return based in part upon
6 Mr. Blanc's statements that "GMO's T&D systems continued to perform at Tier 1 reliability
7 levels in 2009..." should be rejected by the Commission for the following reasons:

8 1) GMO's reliability has had no significant trends upward or downward
9 over the past five years.

10 2) Reliable service is something that is expected from GMO, and does not
11 justify a higher rate of return.

12 Q. Does this conclude your rebuttal testimony?

13 A. Yes.

Schedule GCB 1

Is Deemed

Highly Confidential

In Its Entirety