

Exhibit No.:
Issues: Fuel Expense
Modeling
Witness: Shawn E. Lange
Sponsoring Party: MO PSC Staff
Type of Exhibit: Surrebuttal Testimony
Case No.: ER-2010-0130
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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

SURREBUTTAL TESTIMONY

OF

SHAWN E. LANGE

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2010-0130

**Jefferson City, Missouri
April 2010**

Surrebuttal Testimony of
Shawn E. Lange

1 expensive source of power, was down much of November 2008, December 2008, January
2 2009 and February 2009 with an Air Quality Control System (AQCS) related planned
3 and forced outages. In addition, the Meridian Way Wind Farm came online in December
4 2008. Without simulating the known and measurable changes that take place, it will be
5 difficult to quantify how those changes will affect the dispatch of the units in Empire's
6 fleet and therefore the fuel and purchase power expense. By estimating fuel and
7 purchased power costs through a production cost simulation model, Staff has a better
8 estimate of the normalized fuel and purchased power costs to be included in the revenue
9 requirement and the Fuel Adjustment Clause base cost.

10 Q. Should a fuel run be made before true-up?

11 A. Yes. Since the true-up period has less time between getting the necessary
12 information and the testimony filings, it is important to analyze the data, perform the
13 simulation, discuss concerns and correct any errors that may have occurred, prior to true-
14 up.

15 Q. Has Staff reviewed and/or made changes to its modeled planned outage
16 duration for Iatan Unit 1 and Riverton Unit 7?

17 A. Yes. For Iatan Unit 1 and Riverton Unit 7 Staff found two calculation
18 errors. Once corrected, the Iatan Unit 1 planned outage duration is at 695 hours or
19 approximately 29 days and the Riverton Unit 7 planned outage duration is at 333 hours or
20 approximately 14 days.

21 Q. Is the lower number of planned outage days estimated by Staff the entire
22 reason for the increase in Iatan Unit 1 generation, as Mr. Tarter contends (Tarter Rebuttal
23 page 5 lines 8 through 17)?

Surrebuttal Testimony of
Shawn E. Lange

1 A. No. Mr. Tarter neglected the fact that included in the AQCS upgrade of
2 Iatan Unit 1 was the addition of the High Pressure Dense Pack Turbine, which resulted in
3 greater efficiency and more capacity for the unit.

4 Q. Does the Generation (MWh) table in Mr. Tarter's Rebuttal (Tarter
5 Rebuttal page 6), which illustrates the historical generation of the unit, take account of
6 this unit's efficiency gain?

7 A. No. First, even though the averages that Mr. Tarter shows includes 2009,
8 the unit was not fully operational the full year; the unit was down during early 2009 due
9 to AQCS related outages. Second, the majority of each average includes multiple years
10 prior to the upgrade thereby giving more weight to the years when Iatan Unit 1 had less
11 capacity.

12 Q. Has Staff reviewed and/or made changes to its modeling of the Meridian
13 Way Wind Farm?

14 A. Yes. Staff reviewed the Company's response to Data Request 346 as well
15 as the actual generation data. From this review, Staff felt that the generation of Meridian
16 Way needed to be adjusted to remove the effect of the outages outlined by Mr. Tarter
17 (Tarter Rebuttal Page 7 lines 22 through 23 and Page 8 lines 1 through 4). This
18 adjustment increases the capacity factor for Meridian Way from the filed 29% to
19 approximately 36%.

20 Q. What is the current Staff estimate of the variable fuel and purchased power
21 expense for Empire?

22 A. As revised, the Staff estimates the variable fuel and purchased power
23 expense for Empire for the twelve months ending June 30, 2009, to be \$144,894,912.

Surrebuttal Testimony of
Shawn E. Lange

1 This estimate includes the changes as outlined above as well as a decrease in the level of
2 Net System Input due to corrections found after the direct filing.

3 Q. With regard to Riverton Unit 7, after the changes are made, does the
4 generation of the unit exceed the averages outlined in the Generation (MWh) table in Mr.
5 Tarter's Rebuttal (Tarter Rebuttal page 6)?

6 A. Yes.

7 Q. Did Staff analyze the modeled generation as well as the historical
8 generation for Riverton Unit 7?

9 A. Yes.

10 Q. During the most recent four years, did the actual annual generation of the
11 Riverton Unit 7 meet or exceed the modeled generation?

12 A. Yes. Based on data provided to Staff in Empire's Commission Rule 4
13 CSR 240-3.190 filing requirement, two of the last four years the actual annual generation
14 of Riverton Unit 7 exceeded the modeled generation.

15 Q. Does this conclude your surrebuttal testimony?

16 A. Yes, it does.