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

Date Testimony Prepared: April 23, 2010

## 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

# BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of the Empire District Electric Company for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Missouri Service Area of the Company	c ) Case No. ER-2010-0130
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#### AFFIDAVIT OF SHAWN E. LANGE

STATE OF MISSOURI	)
	) s:
COUNTY OF COLE	)

Shawn E. Lange, of lawful age, on his oath states: that he has participated in the preparation of the following Surrebuttal Testimony in question and answer form, consisting of \_\_\_\_\_ pages of Surrebuttal Testimony to be presented in the above case, that the answers in the following Surrebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

Shawn E. Lange

Subscribed and sworn to before me this 22<sup>nd</sup> day of April, 2010.

MOTARY SEAL ST

SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942086

1	SURREBUTTAL TESTIMONY		
2	OF		
3	SHAWN E. LANGE		
4	THE EMPIRE DISTRICT ELECTRIC COMPANY		
5	CASE NO. ER-2010-0130		
6	Q. Please state your name and business address.		
7	A. My name is Shawn E. Lange and my business address is Missouri Public		
8	Service Commission, P.O. Box 360, Jefferson City, MO 65102.		
9	Q. Are you the same Shawn E. Lange that participated in the filing of the		
10	Staff's Class Cost of Service Report in this proceeding?		
11	A. Yes, I am.		
12	Q. What is the purpose of your surrebuttal testimony?		
13	A. The purpose of my surrebuttal testimony is to give Staff's rational for		
14	estimating fuel and purchased power costs through a production cost simulation model		
15	and to respond to the rebuttal testimony of The Empire District Electric Company		
16	6 (Company or Empire) Witness Todd W. Tarter on the issues of Iatan Unit 1 and Riverton		
17	Unit 7 modeled planned outage duration as well as the Meridian Way Wind Farm outage.		
18	Q. Why is it necessary to run a fuel model simulation instead of using the		
19	current Fuel Adjustment Clause base cost which was based on analysis from the ER-		
20	2008-0093 rate case?		
21	A. From year to year and from rate case to rate case the level of kWh usage,		
22	purchased power prices, and generation fleet properties change. For example, during the		
23	test-year as updated through December 2009 Iatan Unit 1, which is Empire's least		

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

- Q. Should a fuel run be made before true-up?
- A. Yes. Since the true-up period has less time between getting the necessary information and the testimony filings, it is important to analyze the data, perform the simulation, discuss concerns and correct any errors that may have occurred, prior to true-up.
- Q. Has Staff reviewed and/or made changes to its modeled planned outage duration for Iatan Unit 1 and Riverton Unit 7?
- A. Yes. For Iatan Unit 1 and Riverton Unit 7 Staff found two calculation errors. Once corrected, the Iatan Unit 1 planned outage duration is at 695 hours or approximately 29 days and the Riverton Unit 7 planned outage duration is at 333 hours or approximately 14 days.
- Q. Is the lower number of planned outage days estimated by Staff the entire reason for the increase in Iatan Unit 1 generation, as Mr. Tarter contends (Tarter Rebuttal page 5 lines 8 through 17)?

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

- Q. Does the Generation (MWh) table in Mr. Tarter's Rebuttal (Tarter Rebuttal page 6), which illustrates the historical generation of the unit, take account of this unit's efficiency gain?
- No. First, even though the averages that Mr. Tarter shows includes 2009, A. the unit was not fully operational the full year; the unit was down during early 2009 due to AQCS related outages. Second, the majority of each average includes multiple years prior to the upgrade thereby giving more weight to the years when Iatan Unit 1 had less capacity.
- Q. Has Staff reviewed and/or made changes to its modeling of the Meridian Way Wind Farm?
- Yes. Staff reviewed the Company's response to Data Request 346 as well A. as the actual generation data. From this review, Staff felt that the generation of Meridian Way needed to be adjusted to remove the effect of the outages outlined by Mr. Tarter (Tarter Rebuttal Page 7 lines 22 through 23 and Page 8 lines 1 through 4). This adjustment increases the capacity factor for Meridian Way from the filed 29% to approximately 36%.
- Q. What is the current Staff estimate of the variable fuel and purchased power expense for Empire?
- As revised, the Staff estimates the variable fuel and purchased power A. expense for Empire for the twelve months ending June 30, 2009, to be \$144,894,912.

1	This estimate	includes the changes as outlined above as well as a decrease in the level of
2	Net System In	nput 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 Rebu	ttal (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 240-3.19	90 filing requirement, two of the last four years the actual annual generation
14	of Riverton U	nit 7 exceeded the modeled generation.
15	Q.	Does this conclude your surrebuttal testimony?
16	А	Ves it does