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**MISSOURI PUBLIC SERVICE COMMISSION**

**Case No. ER-2011-0028**

**SURREBUTTAL TESTIMONY**

**OF**

**TIMOTHY D. FINNELL**

**ON**

**BEHALF OF**

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

**St. Louis, Missouri  
April, 2011**

*Ameren* Exhibit No. 142  
Date 5/10/11 Reporter SA  
File No. ER 2011 0028

**SURREBUTTAL TESTIMONY**

**OF**

**TIMOTHY D. FINNELL**

**CASE NO. ER-2011-0028**

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

2           A.    My name is Timothy D. Finnell. My business address is One Ameren Plaza,  
3 1901 Chouteau Avenue, St. Louis, Missouri 63103.

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

5           A.    I am employed by Ameren Services Company as Managing Supervisor,  
6 Operations Analysis.

7           **Q.    Are you the same Timothy D. Finnell who filed direct and rebuttal**  
8 **testimony in this case?**

9           A.    Yes, I am.

10          **Q.    What is the purpose of your surrebuttal testimony?**

11          A.    One purpose of my surrebuttal testimony is to explain why the Commission  
12 should reject the position taken by Staff Witness Erin Maloney in her rebuttal testimony  
13 relating to load and generation forecasting deviation costs and to recommend that the  
14 Commission adopt the Company's position on this issue. As I explain further below,  
15 normalized load and generation forecast deviation costs must be included as a part of the net  
16 base fuel costs established in this case. Otherwise, we will fail to rebase net base fuel costs as  
17 accurately as possible. This testimony contains an update of the load and generation forecast  
18 deviation costs based upon data through the end of the true-up period. The second purpose of  
19 my surrebuttal testimony is to explain why the Commission should reject the use of Ms.

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1 Maloney's normalized power prices in the modeling that will be done to establish net base  
2 fuel costs. Those power prices are reflected in the workpapers that support Ms. Maloney's  
3 rebuttal testimony, which demonstrate that the power prices contain errors and thus should not  
4 be used. Finally, my surrebuttal testimony addresses a concern I have with the Staff's  
5 production cost modeling presented in Staff's rebuttal testimony relating to the Company's  
6 Osage and Keokuk hydroelectric plants. As discussed below, the production cost modeling  
7 for those plants should use monthly energy values based on six years of data from the period  
8 April 2004 through March 2010.

9 **Q. What is the Staff's position on load and generation forecast deviations?**

10 A. Ms. Maloney stated in her rebuttal testimony that "load forecasting and  
11 generation planning is an inherent risk in the electric utility business that should not be  
12 passed to the rate payers." I assume that Ms. Maloney is referring to load and generation  
13 forecasting deviations, which I described in my direct testimony as being part of "daily"  
14 operation of the Midwest Independent Transmission System Operator, Inc. ("MISO") energy  
15 market and not long-term resource planning. Ms. Maloney also stated in her rebuttal  
16 testimony that "these costs are not 'additional costs' as Mr. Finnell claims on line 14 of his  
17 testimony but rather the costs of meeting load, which the Company is being compensated for  
18 through rates."

19 **Q. Assuming Ms. Maloney was referring to the load and generation forecast**  
20 **deviations costs associated with participation in the MISO energy market, do you agree**  
21 **with her first statement regarding the inherent risk of load and generation forecast**  
22 **deviation costs that "should not be passed along to the customer"?**

1           A.     No, I strongly disagree with Ms. Maloney's assertion that these costs should  
2 not be passed along to the customer. I have explained in my direct testimony why the load  
3 and generation forecast deviation costs occur. That is, these costs are the *result* of  
4 participation in the MISO energy market. The MISO energy market consists of a Day Ahead  
5 (DA) market which is based on forecasted loads and forecasted generation and a Real Time  
6 (RT) market, which balances the differences between actual loads and forecasted loads and  
7 actual generation and forecasted generation. Later in this testimony I provide examples of  
8 actual load and generation deviations. Customers receive the benefit of the Company's  
9 participation in the MISO energy market through the substantial off-system sales that the  
10 Company is able to make, which offset net fuel costs in base rates. The load and generation  
11 forecast deviation costs are real, and they are caused by the Company's participation in the  
12 MISO market. There is no justification for excluding them from the Company's cost of  
13 service; indeed, the Company has a right to recover these prudently incurred costs, just like  
14 any other prudently incurred cost.

15           **Q.     Are the load and generation forecast deviations constant from year to**  
16 **year?**

17           A.     No, the load and generation forecasted deviation costs can vary significantly  
18 from year to year. The table below shows how the load and generation deviations have  
19 changed among calendar years 2008, 2009 and 2010.

	MWh of Load Forecast Deviation	\$ Impact of Load Forecast Deviation	MWh of Generation Forecast Deviation	\$ Impact of Generation Forecast Deviation	ATC Power Prices
2008	86,847	\$13,3243,251	-591,012	\$899,921	\$44.61/MWh
2009	156,282	\$4,257,151	-617,034	-\$1,930,719	\$24.64/MWh
2010	190,940	\$5,115,466	-1,399,547	-\$3,826,692	\$30.79/Mwh
Average	144,691	\$7,538,622	-869,198	-\$1,619,163	\$33.79/MWh

1           The positive values for the MWh of load and generation forecast deviations indicated  
2 that the actual values were greater than the forecasted values. The positive value for the  
3 dollar impact of load and generation deviations indicate that there was a net cost for the year  
4 and a negative value indicates that there were additional revenues received for the year.

5           Note that the load forecast deviation costs have declined in a manner similar to the  
6 decline in the around-the-clock (ATC) power prices that we have seen since the financial  
7 recession began in late 2008. I would also note that the Company is using the same three-  
8 year time period that is being used in this case for determining normalized power prices to  
9 arrive at a normalized level of forecast deviation costs.

10           Another observation from the data included in the table above is that annualized load  
11 forecast deviations tend to result in a cost increase, while annualized generation forecast  
12 deviations tend to result in additional revenues; however it is inappropriate to state that the  
13 cost of load forecast deviations and the extra revenues from generation deviations cancel  
14 each other out. This is because when those values are averaged and netted over this three-  
15 year period, it can be readily seen that the Company is experiencing a net cost of \$5,919,459.  
16 This is because the cost associated with the load forecast deviations are generally  
17 substantially in excess of the revenues associated with the generation forecast deviations.

18           **Q.     Why does the Company add the load and generation forecast deviation**  
19 **costs to the net base fuel costs calculated by the Company's production cost model**  
20 **instead of having the production cost model determine these costs?**

21           A.     The Company has chosen this approach because the Company's production  
22 cost model, PROSYM, does not model the entire MISO energy market. PROSYM is a one  
23 pass model, similar to the MISO DA energy market. The model assumes *perfect knowledge*

1 of both loads and generation. In other words, it assumes that on Monday, when day-ahead  
2 load and generation bids are made by the Company, the actual loads and generation that will  
3 occur on Tuesday, in real time, will always match. Of course this is obviously not true. If on  
4 Monday the weather was forecasted to be cloudy and 84 degrees, but it turned out to be  
5 sunny and 91 degrees, loads will be materially higher in real time, as will generation.  
6 Consequently, PROSYM does not calculate the impact of any deviations that occur between  
7 forecasted and actual loads and forecasted and actual generation – it assumes there is no such  
8 deviation. Therefore, to determine the net base fuel costs the Company adds the normalized  
9 load and generation forecast deviation costs to the results of the production cost model,  
10 together with other components of net base fuel costs, which were outlined in detail in  
11 Ameren Missouri witness Gary S. Weiss' direct testimony.

12 **Q. Are the load and generation forecast deviation costs accounted for in any**  
13 **other place in the Company's filing?**

14 A. No they are not.

15 **Q. Please elaborate on the major cause of the load and generation forecast**  
16 **deviation costs?**

17 A. The major reason for the load and generation forecast deviation costs  
18 is the difference between DA prices and the RT Prices and of course variances between load  
19 and generation, over which the Company has no control. In the ideal world there should be  
20 no difference between the DA prices and RT prices, however price variations occur because  
21 of changes in market conditions, including actual MISO loads, generation and even  
22 transmission conditions that vary from the forecast. Those variations are completely outside  
23 of the Company's control.

1           **Q.    What are some examples of load and generation forecast deviations?**

2           A.    I will first provide an example of load forecast deviation costs. The DA bids  
3           and offers must be submitted to MISO by 11:00 a.m. Eastern Standard Time for the next day  
4           load and generation. Consequently, many things can change during the time interval  
5           between the time of the forecast and the time of the actual conditions. Weather is the largest  
6           item that impacts load forecast deviations. Changes in weather such as storms or forecasted  
7           storms which do not materialize can result in increased costs associated with load  
8           forecasting deviations. For example, on August 1, 2009 hour ending 16 the DA load  
9           forecast was 5388 net MW which was based on a temperature forecast of 85 degrees and a  
10          DA price of \$26.69/MWh. The actual load for the same hour came in much lower, at 4332  
11          Net MW, and the actual temperature was just 71 degrees. As a result, the RT price in that  
12          hour was only \$16.27/MWh. The load forecast deviation cost for this hour resulted in an  
13          additional cost of \$11,000. This type of event, which occurred due to uncontrollable  
14          changes in weather is inherent in the operation of the MISO market, which as noted earlier  
15          benefits customers, and its costs should be normalized and included in rates just like any  
16          other prudently incurred cost that has a lot of variability over time.

17          Another example of costs associated with load forecast deviations is August 3, 2010  
18          hour ending 17. The DA load forecast was 7915 new MW which was based on a  
19          temperature forecast of 98 degrees and a DA price of \$89.62/MWh. The actual temperature  
20          was 100 degrees, and the actual generation for the same hour was much higher, at 8320 Net  
21          MW and the RT price was \$121.48/MWh. The load forecast deviation for this hour resulted  
22          in an extra cost of \$12,353. These two examples illustrate that both over-forecasting loads  
23          and under-forecasting loads can result in higher costs.

1           **Q.    Do you have an example of a generation forecast deviation?**

2           A.    Yes.    An example of a generation deviation, which in this example produced  
3 revenues, is when the RT prices decline significantly from DA prices and a generating unit  
4 reduces its planned output. For example, on September 2, 2010 hour ending 1 a.m. Rush  
5 Island Unit #1 was scheduled to produce 485 Net MW (based upon its DA bid) at a DA  
6 price of \$20.13/MWh. However, in real time the price dropped to negative \$(78.15/MWh)  
7 and the unit reduced its output to 310 MW (near its minimum operating level), resulting in a  
8 net revenue increase of \$17,206 from reducing the generation from Rush Island Unit #1.

9           **Q.    How have the load and generation forecasts been handled in previous rate**  
10 **cases?**

11          A.    In Case No. ER-2008-0318, Staff witness Dr. Michael Proctor calculated both the  
12 load and generation forecast deviation costs in a manner similar to the manner I am using in this  
13 case and, as I recommend in this case, Dr. Proctor added the load and generation forecast costs  
14 to the net fuel costs produced by the Staff's production cost model.

15          **Q.    Do you agree with Ms. Maloney's second statement "these costs are not**  
16 **'additional costs' as Mr Finnell claims...but rather the cost of meeting load, which the**  
17 **Company is being compensated for through rates"?**

18          A.    Her statement is internally inconsistent. The first part of her statement that  
19 "these costs are not additional costs" is similar to her first assertion that the customers should  
20 not pay for the load and generation deviation costs. However, the last part of her statement  
21 contradicts the first, and supports the Company's position that load and generation forecast  
22 deviation costs are valid costs for which the Company should be compensated by including



1 these costs when calculating rates. After all, if these are costs of meeting load – and they are –  
2 then why should the load (customers) not pay for them?

3 **Q. Have you updated the load and generation forecast deviation costs to**  
4 **account for data through the end of the true-up period?**

5 A. Yes, the load and generation forecast deviation costs have been updated from my  
6 original testimony using actual data through February 28, 2011. The updated load forecast  
7 deviations produced a cost of \$7.2 million and the updated generation forecast deviation  
8 produced revenues of \$2.1 million, which results in a net cost of \$5.1 million.

9 **Q. Do you have any concerns about the power prices reflected in the**  
10 **workpapers provided in Ms. Maloney rebuttal testimony?**

11 A. Yes. Ms. Maloney's workpapers reflect a normalized around-the-clock power  
12 price of \$33.25/MWh, which was higher than the \$32.51/MWh price calculated by the  
13 Company using the exact same data. Through discussions with Ms. Maloney, she has  
14 recognized this problem and she has provided the Company with a corrected workpaper that  
15 now reflects a normalized around-the-clock power price of \$32.48/MWh. The incorrect price in  
16 her rebuttal testimony workpapers also produced inaccurate results in the modeling that is  
17 presented in the rebuttal testimony of Staff witness David Elliot.

18 **Q. Did you have any concerns with the Osage generation produced by the**  
19 **production model run from Mr. Elliot's rebuttal testimony?**

20 A. Yes. I reviewed the monthly Osage energy forecast produced by the Staff's  
21 production model and found that it was unrealistic. For example, during the month of July, the  
22 Staff's production cost model workpapers indicated that 160,978 MWh were generated by

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1 Osage plant, which is more than twice the actual six-year average July generation of 71,944  
2 MWh.

3 **Q. Is the Staff aware of the problem with the Osage monthly generation used**  
4 **in its model?**

5 A. Yes, the Staff is aware of the problem and Mr. Elliot has agreed to use a six-year  
6 average for the monthly average Osage generation, as well as a six-year average of monthly  
7 generation for the Company's other hydroelectric plant, Keokuk.

8 **Q. Does this conclude your surrebuttal testimony?**

9 A. Yes, it does.

