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Witness: Matthew J. Barnes  
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**MISSOURI PUBLIC SERVICE COMMISSION**

**UTILITY OPERATIONS DIVISION**

**REBUTTAL TESTIMONY**

**OF**

**MATTHEW J. BARNES**

**THE EMPIRE DISTRICT ELECTRIC COMPANY**

**CASE NO. ER-2010-0130**

**Jefferson City, Missouri  
April 2010**

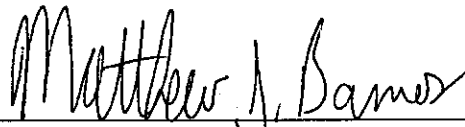
**BEFORE THE PUBLIC SERVICE COMMISSION**  
**OF THE STATE OF MISSOURI**

In the Matter of The Empire District Electric )  
Company for Authority to File Tariffs Increasing ) Case No. ER-2010-0130  
Rates for Electric Service Provided to Customers )  
in the Missouri Service Area of the Company )

AFFIDAVIT OF MATTHEW J. BARNES

STATE OF MISSOURI     )  
                                  )     ss.  
COUNTY OF COLE     )

Matthew J. Barnes, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form, consisting of 9 pages to be presented in the above case; that the answers in the foregoing Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

  
Matthew J. Barnes

Subscribed and sworn to before me this 31<sup>st</sup> day of March, 2010.

NIKKI SENN Notary Public - Notary Seal State of Missouri Commissioned for Osage County My Commission Expires: October 01, 2011 Commission Number: 07287016
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Notary Public

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**OF**

**MATTHEW J. BARNES**

**THE EMPIRE DISTRICT ELECTRIC COMPANY**

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1 case, fuel and purchased power costs in the test year, changes in Empire's supply-side  
2 resources, changes in natural gas and coal prices, and additional costs to be included in the  
3 FAC.

4 Q. What are fuel and purchased power base costs?

5 A. The FAC is designed to collect or refund 95% of the difference between the  
6 fuel and purchased power expense built into base rates on the Company's traditional rate  
7 schedules, and the fuel and purchased power costs actually incurred. To measure this  
8 difference, a "base cost" per kWh of energy must be established. The fuel and purchased  
9 power base cost appears on Empire's FAC tariff sheets.

10 Q. Is the fuel and purchased power base cost the same as the traditional energy  
11 charge per kWh that appears in Empire's traditional rate schedules?

12 A. No. The base costs discussed in this testimony are the FAC base costs – which  
13 are based on the amounts of fuel and purchased power that are built into traditional rates.  
14 These fuel and purchased power base costs are just the starting point for determining the  
15 amount of additional revenue or credits generated by the FAC.

16 Q. Doesn't an FAC eliminate the need to examine the costs of fuel and purchased  
17 power in each rate case?

18 A. No. Each rate case requires an examination of all costs and revenues of  
19 Empire, to reflect the proper values in the Company's traditional rate schedules. The fuel and  
20 purchased power base costs reflected on Empire's FAC tariff sheets are simply a product of  
21 the value of the fuel and purchased power costs determined in the rate case, and the billing  
22 determinants determined in the rate case. Therefore, every rate case requires the

1 reestablishment of the fuel and purchased power base costs to be reflected on Empire's FAC  
2 tariff sheets.

3 **The Need to Rebase Fuel and Purchased Power Costs in This Case**

4 Q. What is Mr. Tarter's proposal for Empire's FAC?

5 A. Mr. Tarter recommends the Commission continue Empire's FAC, as approved,  
6 in its last rate case, Case No. ER-2008-0093, without updating the base fuel and purchased  
7 power costs. Mr. Tarter contends that the actual base fuel and purchased power costs incurred  
8 since the last rate case are very close to the base fuel and purchased power costs approved in  
9 Empire's last rate case, Case No. ER-2008-0093 (Tarter Direct, page 4, lines 2 and 3).

10 Q. Do you disagree with his statement?

11 A. I have no reason to disagree with his statement regarding the actual fuel and  
12 purchased power costs. However, Staff modeled fuel and purchased power costs using  
13 normalized, annualized inputs in its direct case. The results of this modeling estimate that the  
14 normalized, annualized fuel and purchased power costs are lower than the current base fuel  
15 and purchased power costs in the FAC, which were approved by the Commission in Case No.  
16 ER-2008-0093.

17 Q. Does Mr. Tarter propose to monitor fuel and purchased power costs as this rate  
18 case continues?

19 A. Yes. Mr. Tarter states that the Company will monitor fuel and purchased  
20 power costs as this rate case continues, but he does not say whether or not the Company will  
21 file a change in the FAC base fuel and purchased power costs.

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1 Q. When an electric company files a general rate case, should the company file to  
2 rebase the fuel and purchased power costs in its FAC regardless of whether or not the base  
3 fuel and purchased power costs and the actual fuel and purchased power costs are close?

4 A. Yes. Although the base fuel and purchased power costs approved in Empire's  
5 last rate case compared to the actual fuel and purchased power costs for the test year in this  
6 case were close, Empire should have filed to rebase the fuel and purchased power costs in its  
7 FAC in this case, since the costs during the test year included: changes in fuel prices and  
8 Empire's proposal to include consumable costs in its FAC. Also, it is important to rebase fuel  
9 and purchased power costs to make sure the rates being charged to customers are correct.

10 Q. How do Empire's current FAC base rates compare to Staff's proposed FAC  
11 base rates for this case?

12 A. The following table demonstrates the changes in Empire's base rates per kWh  
13 from the last rate case compared to Staff's proposed base rates per kWh in the current rate  
14 case:

Current FAC Base Rates		Staff Proposed FAC Base Rates	
Summer	Winter	Summer	Winter
\$0.03001/kWh	\$0.02744/kWh	\$0.02948/kWh	\$0.02675/kWh

15  
16 Staff's proposed FAC base rates represent a decrease of \$0.00053 per kWh for  
17 summer months and a decrease of \$0.00069 per kWh for winter months. Most of these  
18 decreases are due to Empire's decrease in natural gas costs.

19 Q. Should the Commission adopt Staff's FAC recommendation of changing the  
20 FAC base rates in this case based on this difference?

1           A.     Yes. If the Commission adopts Empire's recommendation of not changing its  
2 fuel and purchased power costs in this case, it is expected that the Company would recover  
3 more than its actual costs through its base rates and only return 95% of the amount over actual  
4 costs back to the customers. If the Plum Point generation plant is operational and used for  
5 service by August 15, 2010, Staff's fuel and purchased power expense will be updated to  
6 reflect this change. Even though Plum Point is a base load plant that will be replacing a base  
7 load Purchased Power Agreement (PPA), it is very likely that the fuel and purchased power  
8 costs will change from what is shown in the table above.

9           **Fuel and Purchased Power Costs in the Test Year**

10          Q.     Were there any events that significantly impacted Empire's fuel and purchased  
11 power costs?

12          A.     A planned outage at Iatan 1 began October 17, 2008. Iatan 1 was scheduled to  
13 be back online February 7, 2009, but severe vibration in a high pressure turbine and resulting  
14 damage to the turbine rotor extended the outage to March 17, 2009.

15          Q.     Was the extended outage determined to be a forced outage?

16          A.     Yes.

17          Q.     Why is this important to determining base fuel costs?

18          A.     During the time of the planned and forced outage Empire had to purchase  
19 power on the spot market resulting in higher fuel costs than what would have been if the  
20 forced outage did not occur. Staff notes that even though the Company had to purchase  
21 power on the spot market during the planned and forced outage, Empire's fuel and purchased  
22 power costs are still lower for the test year in this case compared to the last rate case.



1 Q. Was the planned outage at Iatan 1 taken into account in the calculation of the  
2 normalized planned outage duration used in Staff's fuel run?

3 A. Yes. The normalized Iatan 1 outage was based on 11 years of historical data  
4 which includes this planned outage.

5 Q. Was the forced outage at Iatan 1 taken into account in the calculation of the  
6 forced outage rate used in Staff's fuel run?

7 A. Yes. The normalized Iatan 1 outage was based on 11 years of historical data  
8 which includes this forced outage.

9 **Changes in Supply-Side Resources**

10 Q. What known changes in supply-side resources may still need to be reflected in  
11 Empire's fuel and purchased power costs?

12 A. Empire's long-term contract with the Jeffery Energy Center (JEC) will be  
13 ending in May 2010, and the new coal-fired Plum Point power plant is expected to begin  
14 generation in July 2010.

15 Q. Does Empire have plans to replace the JEC contract?

16 A. Yes. Empire's portion of Iatan 2 and Plum Point, along with the 50 MW PPA  
17 from Plum Point will replace the JEC contract and provide approximately 40 MW of  
18 additional base load capacity for Empire.

19 Q. Was the JEC contract modeled in Staff's fuel run?

20 A. Yes.

21 Q. You mentioned the new coal-fired Plum Point power plant. When is Plum  
22 Point due to come online?

23 A. Plum Point is currently due to come online in July 2010.

1 Q. Was Plum Point included in Staff's fuel run in its direct case?

2 A. No. Plum Point was not included in Staff's fuel run.

3 **Changes in Natural Gas and Coal Costs**

4 Q. Have there been changes in Empire's cost of natural gas since the last rate  
5 case?

6 A. Yes. Since Empire's last rate case, the market price of natural gas has  
7 declined. Input to Staff's fuel run model for the weighted average cost of natural gas has  
8 decreased since the last rate case from \$6.78 to \$6.02 per MMBtu in the fuel run model for  
9 the Staff's direct case.

10 Also, the volume of natural gas consumed by Empire's natural gas units has declined  
11 from 7,826,000 MMBtu in the last rate case to 7,325,800 MMBtu in the fuel run model for  
12 Staff's direct case due to less demand for electricity.

13 Q. Have there been changes in Empire's cost of coal since the last rate case?

14 A. Yes. Empire's average price of coal in the Company's long-term coal  
15 contracts has increased from \$28 to \$31 since the last rate case.

16 Q. Can you summarize Empire's changes in natural gas and coal costs since the  
17 last rate case?

18 A. Yes. Since the last rate case the decline in natural gas cost is greater than the  
19 increase in coal cost resulting in lower fuel and purchased power cost for Empire during the  
20 test year.

21 **Additional Costs to Be Included in the FAC**

22 Q. Is Empire proposing any additional costs that should be passed through as part  
23 of the FAC?

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1           A.     Yes.    Empire is proposing to pass through the costs associated with  
2 consumables that are used in the Air Quality Control Systems installed at Iatan 1, Iatan 2, and  
3 Plum Point coal-fired generating units.

4           Q.     What are the consumables that Empire proposes to pass through the FAC?

5           A.     The consumables include ammonia used by a Selective Catalytic Reduction  
6 system, limestone used by the scrubbers, and powder activated carbon used to remove  
7 mercury.

8           Q.     Does Staff have any concerns with including these consumables in the FAC?

9           A.     Staff does not have any concerns with including these consumables in the  
10 FAC, as they will vary with the amount of energy produced, and their use is contingent on the  
11 generation decisions made by Empire. However, these consumables are another cost which is  
12 changing since the last rate case and should be modeled in a fuel run for the true-up in this  
13 case.

14          Q.     How does the inclusion of these costs impact the FAC base rates?

15          A.     At this time Staff has not determined the impact to the FAC base rates by  
16 including consumables in the FAC.

17           **Summary**

18          Q.     Will Staff's true-up fuel run take into account the changes in Empire's supply-  
19 side resources, changes in natural gas and coal prices, and the inclusion of consumables  
20 discussed above?

21          A.     Yes.   Staff will perform a true-up fuel run and recalculate the summer and  
22 winter base costs per kWh for Empire's FAC based on the changes in Empire's supply-side

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1 resources, changes in natural gas and coal prices, and the inclusion of consumables in the  
2 FAC.

3 Q. Will Staff's true-up fuel run likely indicate different base fuel and purchased  
4 power costs per kWh for summer and winter rates than those recommended by Staff at this  
5 time?

6 A. Yes.

7 Q. Does this conclude your rebuttal testimony?

8 A. Yes it does.