BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area.	)))))	Case No. ER-2007-0002

AFFIDAVIT OF WARREN T. WOOD

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Warren T. Wood, of lawful age, on his oath states: that he has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 10 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following Rebuttal 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.

Warren T. Wood

Subscribed and sworn to before me this 2nd day of February, 2007.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

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

Notary Public

My commission expires 9-21-10

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OF

WARREN T. WOOD

UNION ELECTRIC COMPANY d/b/a AMERENUE

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UNION ELECTRIC COMPANY d/b/a AMERENUE

CASE NO. ER-2007-0002

Q. Please state your name and business address.

A. Warren T. Wood, P.O. Box 360, Jefferson City, Missouri 65102.

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

A. I am the Director of the Missouri Public Service Commission (Commission) Staff's Utility Operations Division.

Q. Are you the same Warren T. Wood who filed direct testimony in this case on December 15, 2006 and rebuttal testimony on January 31, 2007?

A. Yes.

Executive Summary

Q. Would you please give a brief summary of your rebuttal testimony?

A. My rebuttal testimony provides the Commission Staff's (Staff) position on the following two issues:

Fuel Adjustment Clause (FAC): Staff believes the Commission should not implement a fuel adjustment clause (FAC), or an interim energy charge (IEC), at this time for AmerenUE for the following reasons:

1) AmerenUE does not need a FAC, or an IEC, since its revenue opportunities in off-system sales mitigate much of its fuel price risk.

2) AmerenUE does not need a FAC, or an IEC, in order to have a reasonable opportunity to achieve its authorized rate of return.

3) Although it is not sufficient reason alone, not providing AmerenUE with a FAC, or an IEC, preserves strong incentives for AmerenUE to be prudent in its efforts to purchase fuel and power.

Heat Rate Testing: I also provide Staff's position on the need to implement robust heat rate and/or efficiency testing programs, as covered by 4 CSR 240-3.161, if AmerenUE is granted a FAC.

Q. Are there other Commission Staff witnesses in this case, who are testifying in rebuttal on matters directly related to the FAC matters you address in your rebuttal testimony?

A. Yes.

Q. Would you please identify those witnesses and briefly explain how their testimony relates to yours?

A. Michael S. Proctor's rebuttal testimony shows that AmerenUE's revenues from off-system sales significantly reduce AmerenUE's downside risks related to fuel expense. John Cassidy's rebuttal testimony provides an estimate of fuel cost increases that AmerenUE expects to incur over the next two years.

Fuel Adjustment Clause

Q. Does Staff have any response to testimony about a FAC for AmerenUE found in the direct or supplemental direct testimony of other parties' witnesses filed in this case?

A. Yes. Staff believes the Commission should not allow AmerenUE to implement a FAC or IEC at this time. AmerenUE provides its support and rationale for why it believes the Commission should allow it to implement a fuel and purchased power costs recovery

mechanism (FAC) and how it believes such a mechanism should be structured at pages 4 through 11 and the Schedules attached to Mr. Martin J. Lyons' direct testimony, filed in this case on behalf of AmerenUE on September 29, 2006.

Q. Do you know if the Commission has the authority to allow AmerenUE to implement a FAC?

A. It is my understanding the Commission has such authority. In the 2005 Legislative Session, Senate Bill 179 (RSMo 386.266 or SB 179) was passed and the legislation was signed into law by Governor Blunt. A copy of SB 179 is attached to this testimony as **Schedule WW-3**. Briefly, it is my understanding SB 179 gave the Commission authority to allow an electric utility to flow fuel and purchased power costs into customer rates without requiring a full general rate proceeding before the Commission, authority the Missouri Supreme Court ruled in 1979 the Commission did not then have. That bill is now found in the Revised Statutes of Missouri as Section 386.266.

Q. Has the Commission taken any actions to exercise the authority you understand the Legislature gave it in SB 179?

A. Yes. The Commission has adopted rules 4 CSR 240-3.161 and 4 CSR 240-20.090 to implement the electric utility FAC and IEC provisions of RSMo 386.266. In fact, I was the principal member of the Staff assigned the responsibility of effectuating a series of roundtables for the drafting of such rules for the Commission's consideration.

Q. Why does the Staff oppose AmerenUE being authorized by the Commission to use a FAC at this time?

A. Staff's opposition is based on the following:

1) AmerenUE does not need a FAC, or an IEC, since its revenue opportunities in off-system sales mitigate much of its fuel price risk.

2) AmerenUE does not need a FAC, or an IEC, in order to have a reasonable opportunity to achieve its authorized rate of return.

3) Although it is not sufficient reason alone, not providing AmerenUE with a FAC, or an IEC, preserves strong incentives for AmerenUE to be prudent in its efforts to purchase fuel and power.

Q. You have stated that AmerenUE does not need a FAC, or an IEC, since its revenue opportunities in off-system sales mitigate much of AmerenUE's fuel price risk, would you please explain?

A. Staff's analysis shows that AmerenUE's revenues from off-system sales significantly reduce its downside risk related to fuel expense. Staff witness Dr. Michael S. Proctor presents this analysis in his rebuttal testimony. Dr. Proctor's analysis shows that a significant correlation exists between variability in fuel expense and variability in profit margins from off-system sales. Very simply, lower fuel costs tend to directly correlate with lower off-system sales revenues and higher fuel costs tend to directly correlate with higher off-system sales revenues. Thus, increases in fuel costs are mitigated by increases in off-system sales revenues and decreases in fuel costs are associated with reductions in off-system sales revenues.

Q. Why does Staff believe AmerenUE does not need a FAC, or an IEC, to have a reasonable opportunity to achieve its authorized rate of return?

A. A significant portion of AmerenUE's energy needs to serve its customers are provided by nuclear and coal-fired generation plants versus natural gas-fired plants, which is

unlike the cases regarding The Empire District Electric Company and Aquila, Inc. Updates to AmerenUE's fuel costs for nuclear and coal cost increases as of January 1, 2007, will be reflected in this rate case. In fact, one of the reasons this update period was specifically chosen for this case was that some recent increases in coal costs would not be certain until January 1, 2007. Staff witness John Cassidy provides in his rebuttal testimony an assessment of coal and nuclear fuel cost increases that AmerenUE expects to incur during 2008 and 2009.

Q. What are the strong incentives AmerenUE now has to be prudent in its efforts to purchase fuel and power without a FAC?

A. The current regulatory approach for recovery of fuel and purchased power costs provides strong incentives to control these costs. Ameren recognizes this risk/incentive relationship. In Ameren's 1998 Annual Report to Shareholders, the former Chairman, President and CEO of Ameren Corporation, Charles Mueller, stated:

> We continue to reduce costs by increasing operating efficiency through the effective use of technology. These initiatives range from installation of remote sensing devices on our distribution lines to expansion of our automated meter system – now the world's largest. **We are also focused on lowering fuel costs. In 1998 in Illinois, we chose to eliminate the fuel adjustment clauses, which called for offering credits if certain fuel costs dropped or increasing customer bills if they rose. That decision, coupled with the fact that we have operated for several years without a fuel adjustment clause in Missouri, has given us additional incentive to continue to manage our fuel costs effectively.** Our four AmerenUE coal-fired power plants continue to use substantial quantities of lower cost, low-sulfur Western coal, reducing production costs and emissions. In 1998, AmerenCIPS' Newton Plant began using Western coal. We will continue to aggressively explore these and other options to reduce our fuel costs. (Emphasis added)

Q. Would you elaborate on the risk/incentive relationship of the current regulatory approach for recovery of fuel and purchased power costs?

A. Electric utilities recovering fuel and purchased power costs based on a fixed amount set in a rate case have strong incentives to control their fuel and purchased power costs. If a utility can reduce its overall fuel and purchased power costs below the fixed amount set in rates, the difference improves the utility's profitability. If, on the other hand, the utility experiences fuel and purchased power costs that exceed the fixed amount set in rates this difference decreases the utility's profitability. This dynamic creates a strong incentive for the utility to control its fuel and purchased power costs.

Electric utilities that can adjust their rates between rate cases to reflect increases and decreases in fuel and purchased power costs do not have the same incentives to control these costs. Electric utilities that can adjust their rates to reflect changes in fuel and purchased power costs between rate cases may have incentives to appear prudent in their purchasing decisions but Staff does not view this incentive as being as effective as the incentive that exists to control these costs if no changes in rates are possible between rate cases.

This can be compared to the incentives that each of us faces each day when driving a car. Since each of us pays for the gasoline in our car, we are sensitive to how efficiently our vehicle consumes gasoline. We have incentives to consolidate trips, maintain our vehicle to avoid unnecessary expense and consider fuel efficiency in new vehicle purchases. If someone else paid our cost of gasoline, we would not be as sensitive about avoiding unnecessary fuel expense or the fuel efficiency of the vehicle we purchase.

Heat Rate Testing

Q. Does Staff have any other issues regarding implementation of a FAC in this proceeding?

A. Yes. If the Commission were to grant AmerenUE a FAC, Staff believes AmerenUE's proposed heat rate and/or efficiency testing plan for its generation assets is insufficient. **Schedule MJL-2-10** and **Schedule MJL-2-11** attached to Mr. Lyons' direct testimony provide AmerenUE's proposed minimum filing requirement to comply with Commission rule 4 CSR 240-3.161(2)(P). This new rule provision requires the electric utility to propose a schedule and testing plan for heat rate tests and/or efficiency tests to determine a base level of efficiency for each generation asset.

Q. If the Commission authorizes AmerenUE to implement a FAC, what generation unit testing procedures does Staff believe AmerenUE should implement?

A. It is Staff's position that electric utilities operating under a FAC must have procedures in place that: 1) require testing of generation plant heat rates no less frequently than every two years, 2) generally conform to industry-standard performance testing methodologies, 3) require identification of plant components that are diminishing overall plant heat rates, and 4) require cost-effective maintenance or replacement activities to plant components that have been identified as diminishing overall plant heat rates.

Q. Why does Staff believe that these procedures are necessary for electric utilities operating under a FAC?

A. Staff believes robust efficiency testing procedures are necessary for electric utilities operating under a FAC, or an IEC, because a FAC, or an IEC, reduces a utility's incentives to prudently incur costs which are likely otherwise eligible for pass through to customers in a FAC, or an IEC. As noted earlier, electric utilities recovering costs based on a fixed, not to exceed amount set in a rate case have strong incentives to control their costs. If a utility can reduce its overall costs below the fixed, not to exceed amount set in rates, the

utility's profitability is improved. If, on the other hand, the utility experiences costs that exceed the fixed, not to exceed amount set in rates, the utility's profitability decreases. This dynamic creates a strong incentive for a utility that does not have a FAC, or an IEC, to control its costs; including the cost of fuel it incurs to operate its units.

To address this reduction in incentive to control generation plant efficiency, Staff believes electric utilities that are permitted by the Commission to operate under a FAC, or an IEC, must have procedures in place that: 1) require testing of generation plant heat rates no less frequently than every two years, 2) generally conform to industry-standard performance testing methodologies, 3) require identification of plant components that are diminishing overall plant heat rates, and 4) require cost-effective maintenance or replacement activities to plant components that have been identified as diminishing overall plant heat rates.

Q. The Commission recently adopted rules for electric utility fuel and purchased power cost recovery mechanisms. Please discuss the provisions of these rules that require the procedures Staff is specifically addressing with your rebuttal testimony?

A. In rulemaking Case No. EX-2006-0472, the Commission adopted rules 4 CSR 240-3.161 and 4 CSR 240-20.090. These rules detail the filing requirements for an electric utility that wishes to establish and implement a fuel and purchased power cost recovery mechanism. Commission rule 4 CSR 240-3.161, Electric Utility Fuel and Purchased Power Cost Recovery Mechanisms Filing and Submission Requirements (Rule 3.161), provision (2)(P), which applies to an electric utility filing to establish a rate adjustment mechanism, reads:

> (2) When an electric utility files to establish a RAM . . . the electric utility shall file . . . :

> (P) A proposed schedule and testing plan with written procedures for heat rate tests and/or efficiency tests for all of the electric utility's nuclear and non-nuclear generators, steam, gas, and oil turbines and heat recovery steam generators (HRSG) to determine the base level of efficiency for each of the units;

Rule 3.161, provision (3)(Q), which applies to an electric utility filing to continue or modify a rate adjustment mechanism, reads:

> (3) When an electric utility files a general rate proceeding . . . the electric utility shall file . . . :
>
> (Q) The results of heat rate tests and/or efficiency tests on all the electric utility's nuclear and non-nuclear steam generators, HRSG, steam turbines and combustion turbines conducted within the previous twenty-four (24) months;

Q. Does Staff have any specific recommendations for testing procedures?

A. Yes. Staff believes that a number of adequate testing procedures are provided in the American Society of Mechanical Engineers' Performance Test Codes (ASME-PTCs).

Q. What are ASME-PTCs?

A. These test codes are written procedures for conducting tests on certain power industry equipment to determine its efficiency or heat rate. The American Society of Mechanical Engineers (ASME), based on recommendations of a formal committee, and updated as needed by the committee, publishes the test codes.

Q. What ASME-PTCs are available?

A. Some of the ASME-PTCs are listed below:

1. Performance Monitoring Guidelines for Steam Power Plants (ASME PTC PM - 1993)
2. Procedures for Routine Performance Tests of Steam Turbines (ASME PTC 6S - 1988)
3. Fired Steam Generators (ASME PTC 4 - 1998), and ASME Test Report for Simplified Efficiency Test
4. Performance Test Code on Gas Turbines (ASME PTC 22 - 2005)
5. Steam Turbines in Combined Cycles (ASME PTC 6.2 - 2004)
6. Gas Turbine Heat Recovery Steam Generators (ASME PTC 4.4 - 1981)

Q. Does Staff believe that 4 CSR 240-3.161 and 4 CSR 240-20.090 require the ASME-PTC procedures?

A. No. Staff believes a robust heat rate and/or efficiency testing plan that uses the ASME-PTCs to develop simplified testing procedures would be acceptable. Staff intends to review any proposed testing plans and procedures to determine if they are adequate. In addition to reviewing any utility-proposed testing plan for adequacy, Staff also intends to review procedures the utility has in place to identify plant components that are diminishing overall plant heat rates and how these components are prioritized for maintenance or replacement activities if they are significantly impacting overall plant heat rates.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

FIRST REGULAR SESSION

[TRULY AGREED TO AND FINALLY PASSED]

SENATE SUBSTITUTE FOR

SENATE COMMITTEE SUBSTITUTE FOR

SENATE BILL NO. 179

93RD GENERAL ASSEMBLY

2005

0983S.05T

AN ACT

To amend chapter 386, RSMo, by adding thereto one new section relating to cost recovery for utility companies.

Be it enacted by the General Assembly of the State of Missouri, as follows:

Section A. Chapter 386, RSMo, is amended by adding thereto one new section, to be known as section 386.266, to read as follows:

386.266. 1. Subject to the requirements of this section, any electrical corporation may make an application to the commission to approve rate schedules authorizing an interim energy charge, or periodic rate adjustments outside of general rate proceedings to reflect increases and decreases in its prudently incurred fuel and purchased power costs, including transportation. The commission may, in accordance with existing law, include in such rate schedules features designed to provide the electrical corporation with incentives to improve the efficiency and cost-effectiveness of its fuel and purchased power procurement activities.

2. Subject to the requirements of this section, any electrical, gas, or water corporation may make an application to the commission to approve rate schedules authorizing periodic rate adjustments outside of general rate proceedings to reflect increases and decreases in its prudently incurred costs, whether capital or expense, to comply with any federal, state, or local environmental law, regulation, or rule.

Any rate adjustment made under such rate schedules shall not exceed an annual amount equal to two and one-half percent of the electrical, gas, or water corporation's Missouri gross jurisdictional revenues, excluding gross receipts tax, sales tax and other similar pass-through taxes not included in tariffed rates, for regulated services as established in the utility's most recent general rate case or complaint proceeding. In addition to the rate adjustment, the electrical, gas, or water corporation shall be permitted to collect any applicable gross receipts tax, sales tax, or other similar pass-through taxes, and such taxes shall not be counted against the two and one-half percent rate adjustment cap. Any costs not recovered as a result of the annual two and one-half percent limitation on rate adjustments may be deferred, at a carrying cost each month equal to the utilities net of tax cost of capital, for recovery in a subsequent year or in the corporation's next general rate case or complaint proceeding.

3. Subject to the requirements of this section, any gas corporation may make an application to the commission to approve rate schedules authorizing periodic rate adjustments outside of general rate proceedings to reflect the non-gas revenue effects of increases or decreases in residential and commercial customer usage due to variations in either weather, conservation, or both.

4. The commission shall have the power to approve, modify, or reject adjustment mechanisms submitted under subsections 1 to 3 of this section only after providing the opportunity for a full hearing in a general rate proceeding, including a general rate proceeding initiated by complaint. The commission may approve such rate schedules after considering all relevant factors which may affect the costs or overall rates and charges of the corporation, provided that it finds that the adjustment mechanism set forth in the schedules:

(1) Is reasonably designed to provide the utility with a sufficient opportunity to earn a fair return on equity;

(2) Includes provisions for an annual true-up which shall accurately and appropriately remedy any over- or under-collections, including interest at the utility's short-term borrowing rate, through subsequent rate adjustments or refunds.

(3) In the case of an adjustment mechanism submitted under subsections 1 and 2 of this section, includes provisions requiring that the utility file a general rate case with the effective date of new rates to be no later than four years after the effective date of the commission order implementing the adjustment mechanism. However, with respect to each mechanism, the four-year period shall not include any periods in which the utility is prohibited from collecting any charges under the adjustment mechanism, or any period for which charges collected under the adjustment mechanism must be fully refunded. In the event a court determines that the adjustment mechanism is unlawful and all moneys collected thereunder are fully refunded, the utility shall be relieved of any obligation under that adjustment mechanism to file a rate case.

(4) In the case of an adjustment mechanism submitted under subsections 1 or 2 of this section, includes provisions for prudence reviews of the costs subject to the adjustment mechanism no less frequently than at eighteen month intervals, and shall require refund of any imprudently incurred costs plus interest at the utility's short-term borrowing rate.

5. Once such an adjustment mechanism is approved by the commission under this section, it shall remain in effect until such time as the commission authorizes the modification, extension, or discontinuance of the mechanism in a general rate case or complaint proceeding.

6. Any amounts charged under any adjustment mechanism approved by the commission under this section shall be separately disclosed on each customer bill.

7. The commission may take into account any change in business risk to the corporation resulting from implementation of the adjustment mechanism in setting

the corporation's allowed return in any rate proceeding, in addition to any other changes in business risk experienced by the corporation.

8. In the event the commission lawfully approves an incentive or performance based plan, such plan shall be binding on the commission for the entire term of the plan. This subsection shall not be construed to authorize or prohibit any incentive or performance based plan.

9. Prior to the effective date of this section, the commission shall have the authority to promulgate rules under the provisions of chapter 536, RSMo, as it deems necessary, to govern the structure, content and operation of such rate adjustments, and the procedure for the submission, frequency, examination, hearing and approval of such rate adjustments. Such rules shall be promulgated no later than one hundred fifty days after the initiation of such rulemaking proceeding. Any electrical, gas, or water corporation may apply for any adjustment mechanism under this section whether or not the commission has promulgated any such rules.

10. Nothing contained in this section shall be construed as affecting any existing adjustment mechanism, rate schedule, tariff, incentive plan, or other ratemaking mechanism currently approved and in effect.

11. Each of the provisions of this section is severable. In the event any provision or subsection of this section is deemed unlawful, all remaining provisions shall remain in effect.

12. The provisions of this section shall take effect on January 1, 2006, and the commission shall have previously promulgated rules to implement the application process for any rate adjustment mechanism under this section prior to the commission issuing an order for any rate adjustment.

13. The public service commission shall appoint a task force, consisting of all interested parties, to study and make recommendations on the cost recovery and implementation of conservation and weatherization programs for electrical and gas corporations.