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Witness: Shawn E. Schukar
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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2007-0002

SURREBUTTAL TESTIMONY

OF

SHAWN E. SCHUKAR

ON

BEHALF OF

UNION ELECTRIC COMPANY d/b/a AmerenUE

St. Louis, Missouri
February 27, 2007

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I. INTRODUCTION.

Q. Please state your name and business address.

A. My name is Shawn E. Schukar. My business address is One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63166-6149.

Q. Are you the same Mr. Schukar that filed Direct and Rebuttal Testimonies in this proceeding?

A. Yes, I am. My background and qualifications are set forth in my Direct Testimony.

Q. What is the purpose of your Surrebuttal Testimony filed today?

A. My Surrebuttal Testimony is in response to points made in the Rebuttal Testimony of various parties' witnesses, including: (1) Dr. Proctor's concerns over the fuel costs, power prices, and off-system sales ("OSS") limits used in AmerenUE's production cost model; (2) Dr. Proctor's concern over insufficient specificity of the Company's definition of OSS costs and profit margins; (3) Dr. Proctor's erroneous conclusion that OSS margins substantially reduce fuel cost uncertainty, a finding upon which Mr. Wood based his erroneous conclusion that AmerenUE would not need an FAC; (4) Dr. Proctor's claim that the impact of native load and availability risks on OSS margins may be overstated; and (5) Dr. Proctor's contention that the sharing band and sharing fractions proposed in my Direct Testimony are not reasonable.

Importantly, I will show that Staff's conclusion that OSS margins substantially reduce (i.e., are a natural hedge against) fuel cost uncertainty is inconsistent with the facts and leads to erroneous conclusions including (1) that AmerenUE does not need the proposed FAC; and (2) that without the FAC, a sharing mechanism for OSS margins would increase AmerenUE's fuel-related risks. A close examination of available data shows that variations in OSS margins do *not* provide a natural hedge against variations in fuel costs. This invalidates Staff's conclusions and provides further support for the reasonableness of the Company's original proposed separate treatment of native load fuel costs and OSS margins or the alternative OSS sharing mechanism outlined in my Direct Testimony, irrespective of whether an FAC is implemented. If an FAC is implemented, the analysis shows that netting of OSS margins with native load fuel costs does not, on average, offset or reduce variations in native load fuel cost and the associated impact to customers. Consequently, the separation of OSS margins from native load fuel costs and the sharing of OSS-related risks between AmerenUE and its customers as I originally proposed makes sense.

Nevertheless, Mr. Lyons, in his Surrebuttal Testimony, will explain the Company's modified proposal which, in response to various parties' concerns regarding OSS and native load cost allocations, would net OSS revenues against total load fuel costs and recover these net costs through the FAC. Mr. Lyons also discusses a compromise mechanism for sharing overall net fuel cost savings with customers that provides appropriate incentives for the Company with respect to areas such as plant availability and overall plant efficiency, which are more within the control of the Company.

Q. Would you please summarize why Dr. Proctor's conclusion that OSS margins provide a natural hedge against fuel cost risk is incorrect?

A. Dr. Proctor arrives at this conclusion by comparing the normalized level of native load fuel costs and OSS margins with costs and margins in just two alternative and, as I discuss below, unlikely cases: (1) an "all high" case, in which power prices, natural gas and coal dispatch prices, and AmerenUE fuel costs are all significantly higher than their normalized values; and (2) an "all low" case, in which power prices, dispatch prices, and AmerenUE fuel costs are all significantly below their normalized values. He finds that in the "all high" case both native load fuel costs and OSS margins are higher than their normal value, which would mean, if true, that netting OSS margins against native load fuel costs partly offsets the fuel cost increase. Similarly, in the "all low" case, both native load fuel costs and OSS margins are below their normalized values, which by definition would mean, if true, that netting of native load fuel costs and OSS margins reduces the change. However, this apparent "hedging" or risk mitigating effect of netting OSS margins against native load fuel costs is entirely a function of Dr. Proctor's use of the all high and all low cases only, which are highly unrepresentative of the range of possible future outcomes associated with power prices, dispatch prices, and AmerenUE fuel costs. The use of only the all high and all low cases is inappropriate because, among other reasons:

- Dr. Proctor's assumption that AmerenUE's average delivered fuel costs[1] change in lock-step with average spot market prices for coal dispatch,[2] natural gas, and power is not reasonable. AmerenUE's delivered fuel costs are based on multi-year coal and transportation contracts which are based on the information that was available at the time the contracts were consummated while spot coal, natural gas, and power prices are based on the spot market conditions at the time of delivery. As can be seen from the most recent AmerenUE coal cost changes, AmerenUE's delivered fuel costs can easily change more than (or in the opposite direction of) the average spot market prices for coal, natural gas, and power. Because AmerenUE's delivered fuel costs do not increase or decrease in lock-step or even necessarily in the same direction with spot market prices for coal, natural gas, and power, Dr. Proctor's conclusions about the risk mitigation of OSS margins are incorrect.

- Dr. Proctor's assumption that the market prices for coal move in lock-step with market prices for natural gas is equally unreasonable. A historic comparison of coal and natural gas prices shows that even over multi-year periods natural gas prices can increase when coal prices are decreasing, or (as current forecasts show) gas prices can decrease while coal prices are increasing. Because on-peak power prices tend to rise and fall with spot prices for gas while off-peak power prices

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[1] AmerenUE delivered fuel costs include contract commodity costs, transportation costs and, with respect to coal, quality adjustment costs associated with SO2.

[2] Coal dispatch prices include spot coal prices, transportation costs, and SO2 allowance prices.

tend to rise and fall with spot prices for coal and emissions, and since gas and coal prices do not necessarily move in the same direction, the assumption that movement in coal prices will also result in increased natural gas and on-peak OSS margins and will generally offset fuel cost risk is inaccurate.

- The apparent hedge value identified in Dr. Proctor's all high and all low cases only exists because Dr. Proctor constructed the cases such that power prices change not only in the same direction but also by a higher $/MWh amount than AmerenUE's delivered coal costs. This construct is based on an assumption that is not reasonable. Even if the market prices for power always moved in the same direction as AmerenUE's delivered coal costs (which they do not), it makes little sense to assume that the $/MWh change in AmerenUE coal costs would *always* be less than the $/MWh change in power prices. If AmerenUE's delivered coal costs change by more than power prices or in the opposite direction, Dr. Proctor's assumed hedge value of OSS margins is eliminated.

- In addition to the normalized test-year case, Dr. Proctor analyzed only two (i.e., the all high and all low) combinations of possible future costs and market prices. This does not consider that the changes in at least three sets of costs and prices can differ substantially from each other: (a) changes in AmerenUE fuel costs; (b) changes in market prices for coal and off-peak power; and (c) changes in market prices for natural gas and on-peak power. Because these three sets of costs and prices will not generally move in lock-step with each other, there are many (i.e., at least 24) other combinations of cost and price outcomes that Dr. Proctor has not explored at all (e.g., higher AmerenUE fuel costs but normal natural gas and on-peak power prices). As I will show, in the overwhelming majority of such possible cost and price combinations, netting of OSS margins does not reduce the uncertainty of native load fuel costs. The significant "hedge value" found by Dr. Proctor exists only for the very narrow, unique, and ultimately unlikely two sets of "all high" and "all low" combinations of costs and prices he has constructed.

- Finally, as acknowledged in his Rebuttal Testimony, Dr. Proctor has not considered the impact of plant availability and native load uncertainty on fuel cost and OSS risks. As I will show, variances in plant availability (e.g., due to outages) and the level of native load (e.g., due to weather) have a more significant impact on OSS margins than on average native load fuel costs. While fuel cost uncertainties are significant, this again shows that the level of risk associated with plant availability has a much greater impact on OSS margins and reinforces the point AmerenUE made in its Rebuttal Testimony – namely that incentives associated with OSS margins appropriately target the areas where the Company can have the greatest impact, including plant performance.

These points are discussed further in Sections IV and V below. Evidence supporting these points is also presented in Schedules SES-13 through SES-20, which are attached.

II. FUEL COSTS, POWER PRICES, AND OSS LIMITS.

Q. Dr. Proctor testified that the fuel and power prices you presented in your direct testimony are unreasonable and should be rejected. How do you respond?

A. I have explained in my January 31, 2007 Rebuttal Testimony why the fuel costs and power prices I proposed are reasonable. As I have also explained in that Rebuttal Testimony, while Dr. Proctor's normalized coal costs are reasonable, the normalized natural gas and power prices sponsored by Dr. Proctor need to be lowered to reflect more recent data and there were errors that needed to be corrected in Dr. Proctor's development of normalized on-peak and off-peak power prices. Even with these corrections, Dr. Proctor's normalized on-peak and off-peak prices may be overstated because of continued impacts associated with the 2005 hurricanes on natural gas and power prices in the first part of 2006, which Dr. Proctor failed to remove from his analyses (see pages 5 and 6 of my Rebuttal Testimony filed on January 31, 2007). However, a more recent review of potential prices for the on-peak and off-peak periods, including an update to the prices I sponsored to include the actual 2006 locational marginal prices ("LMPs") realized at the AmerenUE generators[3] and the most recently available LMPs at the AmerenUE generators for the period February 2006 – January 2007 indicates that the prices based on Dr. Proctor's analysis with the specified updates and corrections outlined in my Rebuttal Testimony reflect a reasonable compromise for the appropriate prices to utilize in the production cost modeling. Schedule SES-13 shows the updated range of prices that were reviewed for the on-peak, off-peak, and around the clock periods.

Q. How do the updated and corrected Proctor prices compare to price benchmarks used by some of the other parties' witnesses?

[3] The updated prices include the original 2003 through 2005 adjusted prices that I sponsored in my Direct Testimony with the addition of the actual 2006 LMPs at the AmerenUE generator nodes.

A. As noted in my January 31, 2007 Rebuttal Testimony (on page 23), Missouri Industrial Energy Consumers' witness Mr. Dauphinais also looked at Cinergy spot and forward prices as a possible benchmark for the price that AmerenUE might realize on its off-system sales. Again, the evidence shows that the Cinergy LMPs do not track the prices actually realized by AmerenUE or the adjusted and corrected Proctor normal prices. For example, Schedule SES-13 shows that the Cinergy Hub LMPs vary substantially from the LMPs at AmerenUE's coal baseload plants over this time period and are higher overall. In short, the Cinergy Hub is not an appropriate point for estimating normal price levels for AmerenUE off-system sales and, indeed, would overstate OSS margins.

Mr. Dauphinais also looked at Cinergy forward prices for 2007, but while forward prices are frequently relied on for short-term planning purposes, as I explained on page 30 of my January 31 Rebuttal Testimony, they are not a good predictor of actual spot market prices at the AmerenUE generation nodes relevant to determining an unbiased estimate of normal off-system sales. As I also explained on page 28 of my January 31, 2007 Rebuttal Testimony, forward prices include a risk premium that currently still appears to overstate spot market prices by up to \$6/MWh. Given this forward risk premium and the fact that Schedule SES-13 also shows that for the 12 months ending January 31, 2007, the 24-hour average spot price at AmerenUE generating units was \$1.63/MWh (\$40.05/MWh vs. \$38.42/MWh) lower than the Cinergy spot price, the use of Cinergy forward prices would be highly inappropriate for determining a normalized test-year level of OSS prices. Even on a going-forward basis, use of Cinergy forward prices would reflect a stretch goal, not expected average conditions. This again means that, even if Missouri retail rates were set based on forecasts (which they are not – instead, they are set based upon an historic test year), Cinergy forward prices for 2007 would be inappropriate for the purpose of setting rates.

Q. What are the normalized test-year OSS margins based on these various changes to the production cost modeling assumptions, including using a consistent set of prices and costs from the updated and adjusted Proctor analysis you discussed previously?

A. As explained in AmerenUE witness Mr. Finnell's Surrebuttal Testimony, applying Dr. Proctor's updated and adjusted power prices and fuel costs and other agreed-upon modifications to production cost modeling assumptions yields a normalized test-year OSS margin of $185 million (the OSS margin is defined as OSS revenue less OSS fuel and emission costs), which excludes $3.5 million representing an allocation of charges from the Midwest Independent Transmission System Operator, Inc. ("MISO").

III. DEFINITION OF OSS MARGINS.

Q. Dr. Proctor is concerned that AmerenUE has not sufficiently specified how OSS margins would be determined on a day-to-day basis, which led him to conclude that the determination of fuel costs and MISO charges associated with off-system sales could be contentious and lead to overstated profit margins. How do you respond to Dr. Proctor's concern?

A. A similar concern was raised by other parties in their December 2006 direct testimonies. In response to these concerns, I have explained in my February 5, 2007 Rebuttal Testimony and Schedule SES-12 (attached to that Rebuttal Testimony) how fuel costs and MISO charges will be allocated between native load and off-system sales on a going forward basis. My Rebuttal Testimony and Schedule SES-12 provides substantial detail that, I believe, addresses each of the "insufficient definition" concerns raised in Dr. Proctor's Rebuttal Testimony. In addition, as Mr. Kind points out with respect to Minnesota, other states have already developed and approved allocations of MISO charges and revenues between off-system sales and native load. The allocation approach and level of detail presented in my February 5, 2006 Rebuttal

Testimony is fully consistent with the MISO cost and revenue allocation framework that the Minnesota Commission has recently approved. This indicates that these allocations have been successfully accomplished elsewhere and can also be successfully accomplished in Missouri.

Q. On page 13 and 14 of your Rebuttal Testimony you addressed another MISO issue, that is, Mr. Dauphanais' assertion that MISO adjustments to previously incurred MISO charges should be booked as an offset to Account 555 charges, rather than assigning the charges to Account 457. Do you wish to revise your response to Mr. Dauphanais assertion and if so how?

A. Yes. Based on discussions that I had with Mr. Dauphanais to fully understand his position and a further review of the his proposal, AmerenUE will assign MISO adjustments to previously incurred MISO charges as an offset to Account 555 charges.

IV. CORRELATION OF NATIVE LOAD FUEL COSTS AND OSS MARGINS.

Q. Mr. Wood states on page 4 of his Rebuttal Testimony that AmerenUE "does not need an FAC" because OSS margins "mitigate much of its fuel price risk." He bases this recommendation on the analysis presented in Dr. Proctor's Rebuttal Testimony concluding that increases in fuel costs are mitigated by increases in OSS revenues. Do you agree with Mr. Wood's conclusions and recommendations?

A. No, not at all. Mr. Wood's recommendation and claim that OSS revenues (or OSS margins) tend to offset any negative impacts from higher fuel costs is incorrect and is not supported by a complete analysis. Even Dr. Proctor himself, upon whom Mr. Wood relies for his incorrect conclusion, seems to be less certain drawing such conclusions from his analysis because (1) he states only that his analysis "perhaps" shows that OSS margins reduce risk to a level that "brings into question AmerenUE's need for a fuel adjustment clause" (pp. 27:19-28:1); (2) he recommends only that the Commission should look at OSS and fuel costs in combination to see if OSS margins offset a need for a fuel adjustment clause (p. 28: 13-15); (3) he recognizes that his analysis of OSS margins is only an "illustration" (pp. 10:6 and 19:21); (4) his analysis has not taken into account all sources of uncertainty, such as load and generation outages (p.11:9-11); (5) he performed this analysis only for two "extreme price scenarios" that only reflect a "lower end" and an "upper end" of possible cost and price outcomes; and (6) he states explicitly that a complete analysis would include a greater number of cost and price outcomes (p. 10:11-12). Simply given these qualifications of Staff's own witness, upon which Mr. Wood placed total reliance, it is evident that Mr. Wood's conclusions are inappropriate and wrong. As I will show further, the available data confirms that netting OSS margins does not reduce native load fuel cost risk.

Q. How did Dr. Proctor come to the conclusion that variations in OSS margins could offset fuel cost uncertainty?

A. Dr. Proctor arrives at this conclusion by comparing normalized native load fuel costs and OSS margins with costs and margins in just two unusual, alternative cases: (1) an "all high" case, in which power prices, natural gas and coal dispatch prices, and AmerenUE fuel costs are all significantly higher than their normalized values; and (2) an "all low" case, in which power prices, dispatch prices, and AmerenUE fuel costs are all significantly lower than their normalized values. He constructed his cases such that in the "all high" case both AmerenUE delivered fuel costs and OSS margins are higher than their normal value, which means netting OSS margins against fuel costs reduces the fuel cost increase. Similarly, he constructed the "all low" case so that both native load fuel costs and OSS margins are below their normalized values, which again means that netting reduces that decrease. This apparent "hedging" effect of netting OSS margins, however, is entirely based on Dr. Proctor's unique construct of the two cases, which are only a small and unrepresentative subset of many more possible future outcomes. The selection of these two cases provides an unrepresentative and inaccurate portrayal of the offset effect (or lack thereof) of OSS margins and AmerenUE's delivered fuel costs for at least the following reasons:

1. Dr. Proctor's assumption that AmerenUE fuel costs and market prices for power and fuel change in lock-step is contrary to the facts;
2. Dr. Proctor's assumption that market prices for natural gas prices move in lock-step with coal dispatch prices is contrary to the facts;
3. Dr. Proctor's assumption that any increases or decreases in AmerenUE delivered coal costs are always smaller on a \$/MWh basis than \$/MWh changes in power prices is not reasonable;
4. Dr. Proctor's two cases (i.e., all high and all low) are too narrow and too unlikely to be representative of typical combinations of future fuel costs and market prices; and
5. Typical variances in plant availability (e.g., due to outages) and the level of native load (e.g., due to weather), factors Dr. Proctor recognizes are not considered in his analysis, can have a substantial impact on OSS margins but a smaller effect on average native load fuel costs.

I discuss the first four items in the remainder of this section of my Surrebuttal Testimony. The fifth point is discussed in Section V.

Q. Where in Dr. Proctor's Rebuttal Testimony does he assume that AmerenUE delivered fuel costs and market prices for power and fuel would change in lock-step, and how does he use this assumption to analyze how OSS margins and fuel costs would likely change over time?

A. Dr. Proctor first defines his "lower end" and "upper end" price scenarios on page 10 (lines 8-12) by increasing and decreasing prices relative to normalized test-year levels. The "upper end" case includes high on-peak power prices, high off-peak power prices, high coal dispatch prices, and high natural gas prices. The "lower end" case has all these prices at low levels. The same percentage increase or decrease in coal dispatch prices is then also applied to AmerenUE's average coal costs (p. 36:6-7). Dr. Proctor also assumes that AmerenUE's gas costs are equal to his assumed higher and lower market prices for natural gas, but has assumed AmerenUE's cost of nuclear fuel and oil would remain at normalized test-year levels in these two cases.

Dr. Proctor provided these market price and fuel cost assumptions to Staff's modeling witness, Mr. Rahrer, who then used his production cost model to estimate total annual fuel costs and OSS margins for three distinct cases: the normalized test-year case, the "all high" case, and the "all low" case.[4] Dr. Proctor's analysis of native load fuel costs and OSS margins consequently assumes that power prices and AmerenUE delivered fuel costs move in lock-step because he analyzes only cases in which (1) power prices and AmerenUE delivered fuel costs are normal; (2) power prices and AmerenUE fuel costs are both above normal; and (3) power prices and AmerenUE delivered fuel costs are both below normal.

Q. Is it reasonable to analyze only cases that assume AmerenUE fuel costs change in lock-step with market prices?

A. No. It is not reasonable to assume that AmerenUE's delivered fuel costs would rise and fall only in lock-step with market prices. AmerenUE's delivered fuel costs are based on multi-year contract costs for coal which are based on information that is available when the

[4] Mr. Rahrer performed these runs both with and without output from Electric Energy, Inc.'s Joppa plant.

contract is consummated while average spot market prices for coal, natural gas, and power are based on more recent information.

As Schedule SES-14 shows, AmerenUE's cost of delivered coal has not changed in lock-step with market prices for coal, natural gas, and power. As can easily be seen from the chart, in only one of the three years since 2003 did AmerenUE's coal cost, coal dispatch prices, natural gas, and power prices all move in the same direction, and that was only in a year (2005) impacted by significant and unusual coal and gas supply disruptions. While AmerenUE's contract coal costs will over time rise and fall with the changes in today's volatile and unpredictable coal and coal transportation market, this chart clearly shows that even over the course of several years, AmerenUE's delivered fuel costs will not generally move in lock-step with market prices for power and fuel, not even during a period such as 2003-2006 that generally has shown an increased trend in market prices for both coal and natural gas.

Even Dr. Proctor himself seems to acknowledge that, "depending on the contracts," AmerenUE coal cost over time can "vary somewhat" from spot-market prices for coal (p. 34:8-10). Dr. Proctor also explains that AmerenUE fuel costs are more fundamentally disconnected from the "coal dispatch prices" that on average determine off-peak power prices when he acknowledges that coal dispatch prices appropriately include the price of SO2 allowances, while these SO2 spot market prices are not part of AmerenUE fuel costs and OSS margins (pp. 33:15-34:7). As Dr. Proctor has shown in his Direct Testimony, SO2 allowance prices are a significant part of coal dispatch prices and have been very volatile. By creating corresponding volatility in the market price of power, this again suggests that power prices will not generally move in lock-step with AmerenUE's fuel costs.

Q. What are the consequences of the fact that AmerenUE's delivered fuel costs and market prices for fuel and power will not generally move in lock-step with each other and, as the last two years have shown, can easily move in opposite directions?

A. It means that Staff's claim that OSS margins tend to increase (or decrease) whenever AmerenUE's delivered fuel costs increase (or decrease) is entirely unsupported. This lack of support makes sense, as one would not anticipate that just because AmerenUE's delivered fuel costs increase, market prices and AmerenUE's profits from off-system sales would increase as well. The Staff's claim would only seem to make sense if AmerenUE delivered fuel prices were either perfectly aligned with all other market participants' fuel contracts or the AmerenUE units were the incremental units in the markets -- neither condition holds in reality. The lack of a lock-step relationship also means that OSS opportunities would not mitigate AmerenUE's risk of increasing and volatile fuel costs, which directly invalidates Mr. Wood's main argument in support of his contention that AmerenUE does not need the proposed FAC.

Q. Please explain how Dr. Proctor arrives at his assumption that market prices for natural gas prices move in lock-step with coal dispatch prices.

A. Dr. Proctor attempts to show in his Rebuttal Testimony (page 8 and Schedule 1.3) that there has been a "strong correlation" between the 12-month moving average of on-peak and off-peak market prices for power for the last several years. Because average on-peak power prices are closely correlated with natural gas prices and average off-peak power prices are closely correlated with coal dispatch prices, the lock-step relationship between on-peak and off-peak power prices essentially reflects an assumption of a lock-step relationship between natural gas and coal dispatch prices. As noted above, Dr. Proctor's "all high" and "all low" scenarios also only represent two alternative cases in which gas prices are high at the same time that coal dispatch prices are high, which again assumes a lock-step relationship. Finally, Dr. Proctor concluded in his response to AmerenUE Data Request No. SES-Staff-14 that "there is a strong positive correlation between coal prices and natural gas prices starting in 2000" based on a regression analysis he provided with his response.

Q. Given these observations about recent correlations of on-peak and off-peak power prices and natural gas and coal prices, is it reasonable to assume that market prices for natural gas will continue to move in lock-step with coal dispatch prices?

A. No. While it is correct that coal dispatch prices and natural gas prices have moved very similarly in recent years, that relationship is the exception rather the rule. Much of the apparently strong correlation during that period also relates to the fact that in the second half of 2005, hurricane-related disruptions to natural gas supplies coincided with railroad-related disruptions to coal supplies, creating significant and unusual coincidental spikes in market prices for both natural gas and coal. All available evidence shows that, both historically and on a forward-looking basis, coal and natural gas prices cannot be expected to increase and decrease in lock-step fashion. This expectation makes intuitive sense, given how many utilities are now planning to build new coal-fired power plants in order to be less exposed to movements in gas prices. If the two prices were to move in lock-step, building a coal plant would not help diversify fuel price risk.

Q. Would you please provide evidence documenting that natural gas and coal prices do not increase and decrease in lock-step fashion.

A. Certainly. Schedule SES-15-1 shows average prices of natural gas and coal delivered to electric utilities as reported by the U.S. Department of Energy ("DOE") since 1990. The schedule also shows DOE's forecasts of these prices for the next ten years, from 2007 through 2016. As the chart shows, the market prices for coal rarely move in lock-step with market prices for natural gas. During all of the 1990s, for example, coal prices were decreasing while natural gas prices were flat or increasing. Since 2000, both coal and natural gas prices have increased similarly, but as I had just noted, some of that, in particular the coincidence of high prices in 2005 and 2006, is due to the coincidence of the unusual and significant hurricane-related natural gas and railroad-related coal supply disruptions.

Interestingly enough, even Dr. Proctor documented the fact that coal and gas prices have increased simultaneously only in recent years. Schedule SES-15-2 reproduces a chart Dr. Proctor has provided in his response to AmerenUE Data Request No. SES-Staff 14. It shows that while there has been a positive relationship of coal and natural gas prices for the 2000-2005 period, there was a negative relationship of coal and gas prices during the preceding five years (1995-1999). Note that Dr. Proctor's chart also shows that the variance in coal prices since 2000 has covered a significantly wider range than the variance in coal prices during 1995-1999 – which is consistent with the increased volatility in coal markets that is also documented in Mr. Neff's February 5, 2006 Rebuttal Testimony.

Q. Dr. Proctor seems to speculate that the recent positive relationship between gas prices and coal prices is a pattern that will remain typical for market conditions faced by AmerenUE and other utilities going forward. Is that a reasonable assumption?

A. No. Looking forward, quite the opposite is the case. Schedule SES-15-1 shows that coal prices currently are expected to continue their recent increase while gas prices are anticipated to decrease through 2013. Only after that, the DOE forecasts that both coal and gas prices would increase. Schedule SES-15-3 shows that, based on these DOE forecasts for the next decade, coal and natural gas prices will likely be negatively correlated over the next decade – which suggests that, if natural gas and coal prices do change at the same time, those changes are more likely to be in opposite directions.

In sum, the comparison of both historical and projected coal and natural gas prices shows that, even over a multi-year period, natural gas prices can increase when coal prices are decreasing, or gas prices can decrease while coal prices are increasing. DOE forecasts that the latter relationship of increasing coal prices and decreasing gas prices is more likely to exist over the next 5-10 years.

Q. What does this lack of a lock-step relationship between coal and gas prices, and in fact the likelihood of increasing coal prices but decreasing natural gas prices, mean with respect to the reasonableness of Staff's conclusions about the risk relating to AmerenUE's fuel costs and OSS margins?

A. It means Staff's conclusions are not supported by the available evidence. First, the lack of a lock-step relationship means that Dr. Proctor's "all high" and "all low" scenarios are not representative of the likely range of the market conditions that would drive AmerenUE's delivered fuel costs and OSS margins. It would appear to be just as likely (if not more likely) that AmerenUE would face increased fuel costs in an environment where on-peak power prices are flat or declining because of flat or declining natural gas prices. This would mean higher fuel costs but flat or declining OSS profit margins. Clearly, this would also mean that OSS margins would do nothing to reduce AmerenUE's fuel cost risk. In short, the fact that natural gas prices do not generally change in lock-step with coal prices, and in fact are anticipated to trend in opposite directions, means that Dr. Proctor's conclusions about the hedge value of OSS margins are invalid. This result in turn invalidates Mr. Wood's conclusions that AmerenUE's proposed FAC is not needed because OSS margins offset AmerenUE's fuel cost.

Q. Please discuss your concern with Dr. Proctor's apparent assumption that increases or decreases in AmerenUE's delivered coal costs are always smaller on a \$/MWh basis than \$/MWh changes in power prices.

A. As noted, Dr. Proctor's illustration of AmerenUE's fuel costs and OSS margin uncertainties are only based on normalized test-year conditions, an all high case, and an all low case. In constructing the all high and all low cases, Dr. Proctor increased and decreased his normalized coal dispatch price of 139 cents/MMBtu by 29.7% (Rebuttal Testimony, pp. 9-10). He then applied the exact same percentage increase and decrease to AmerenUE's updated normalized coal costs (p. 36:5-9), which results in a smaller $/MWh increase than the $/MWh increase in coal dispatch prices and power market prices, because Dr. Proctor's coal dispatch prices, which also include the market price of emissions allowances, are higher than AmerenUE's coal costs.

The result of this construct is shown in Schedule SES-16. This schedule reflects Mr. Rahrer's production cost model data upon which Dr. Proctor drew his conclusions. It shows that in Dr. Proctor's "all high" case, AmerenUE's average coal costs are assumed to increase by only approximately $4/MWh, while the weighted average market prices for off-system sales increase by approximately $11/MWh (consistent with the approximately $7/MWh off-peak and approximately $14.5/MWh on-peak price increases shown on page 9 of Dr. Proctor's Rebuttal Testimony). Similarly, in Dr. Proctor's "all low" case, AmerenUE's average coal costs are assumed to decrease by only approximately $4/MWh, while the market prices for off-system sales are assumed to decrease by approximately $11/MWh.

Dr. Proctor's conclusions that AmerenUE's OSS margins tend to offset fuel cost risks is consequently based entirely on a construct in which market prices for power not only always change in the same direction as AmerenUE's fuel costs, but also at a greater $/MWh rate. While such changes may be possible, it is entirely unreasonable to assume the relationship between power prices and AmerenUE's fuel costs in Dr. Proctor's "illustration" is typical or even likely as discussed above. This finding shows that Staff's claim that changes in OSS margins would typically offset variations in AmerenUE's fuel costs is unreasonable.

Q. You noted that Dr. Proctor's two cases (i.e., all high and all low) are too narrow and too unlikely to be representative of typical combinations of future fuel costs and market prices. Have you had an illustration prepared of the extent to which other combinations of market prices and costs affect the uncertainty of AmerenUE's OSS margins and fuel costs?

A. Yes. As Dr. Proctor notes on page 10 (lines 11-12), a more complete analysis would include a greater number of cost and price outcomes than the "all low" and "all high" cases he has analyzed (p. 10:11-12). Schedule SES-17 presents an illustration that shows how AmerenUE fuel costs and OSS margins would change if Dr. Proctor's high, normal, and low prices for fuel and power were combined with AmerenUE high, normal, and low fuel costs in a less lock-step fashion.

Schedule SES-17, shows that in the overwhelming majority of possible cost and price combinations, the "hedge value" found by Dr. Proctor does not exist. In fact, a significant hedge value seems to exist only for the very narrow, unique, and ultimately unlikely set of Dr. Proctor's "all high" and "all low" combinations of possible future fuel costs and market prices.

Q. Please describe the analyses that led you to arrive at this conclusion, and walk us through Schedule SES-17.

A. I requested that Mr. Finnell run his current production cost model reflecting all corrections to Staff's model, and using normal market prices that reflect the updates and corrections to Dr. Proctor's prices. This produces an "all normal" base case. I also requested model runs where these market prices were simultaneously increased and decreased with the percentage changes that Dr. Proctor described in his Rebuttal Testimony. This request produced an "all high" and an "all low" case.

The goal of this analysis is to develop a simplified model of AmerenUE production costs that allows me to examine the potential "hedge value" of OSS margins in cases where fuel and power prices are not at coincident high, normal, or low values. Instead of requesting numerous, additional production cost model runs, I requested a simplified heat rate model of AmerenUE's production costs that allows variations in fuel and power prices, but holds native load volumes, OSS volumes (including the split between peak and off-peak periods), and average heat rates constant at the levels produced in the "all normal" case.

Schedule SES-17-1 shows how the actual results of the production cost model compare to the results of this simplified heat rate model for the "all normal," "all high," and "all low" cases. The table first compares native load costs and OSS margins. As shown, the simplified model produces very similar results for AmerenUE fuel costs, OSS revenues, and OSS margins: native load costs and OSS margins are only $1 million and $6 million higher than the actual results in the "all high" case, and they are even closer for the "all low" case. The table shows similar results for "native load fuel risk" (which measures how native load fuel costs differ in the "all high" and "all low" cases relative to the "all normal" case) and for the "native load net of OSS margin fuel risk." In short, the simple heat rate model provides a reasonable approximation of results from actual production cost model runs.

The simple heat rate model was then used to approximate how native load costs and OSS margins would change under alternative combinations of (a) changes in AmerenUE fuel costs; (b) changes in market prices for coal and off-peak power; and (c) changes in market prices for natural gas and on-peak power. To reflect the fact that these costs and prices will not generally change in lock-step fashion, I allow for all possible high, normal, and low combinations of these three sets of variables. While they may not all be equally likely, there are a total of 27 possible combinations examined, which result in 27 different outcomes for native load costs and OSS margins. These 27 cases and the native load cost and OSS margin results are shown on Schedule SES-17-2. The schedule also shades in yellow the three cases considered by Dr. Proctor and calculates in the last column the extent to which netting OSS margins against native load fuel costs reduces native load fuel risks. A positive number (in black font color) means the OSS margins reduce fuel risks consistent with the Staff's claim. The table shows that in only 5 of these 27 possible combinations (i.e., in only 19% of all cases), does combining OSS margins and native load fuel costs reduce fuel price variances. The table also shows that in over 77% of these possible combinations, combining OSS margins and native load fuel costs does *not* reduce risk. Importantly, only in Dr. Proctor's all high and all low cases on the very top and bottom of this table (i.e., in only 2 out of the 27 cases) does the netting of OSS margins help reduce the variance of native load fuel costs by more than 20%. Clearly this means the likelihood that OSS margins reduce fuel risk is the exception not the rule.

Q. You noted that Dr. Proctor's all high or all low cases are unusual and atypical of likely future market conditions. Have you undertaken any analysis to show just how unlikely Dr. Proctor's all high and all low cases might be?

A. Yes. Even a simple review of fuel and power prices over the 2003 - 2006 time period shows that simultaneous occurrences of high and low fuel and power prices is very unlikely. This analysis is presented in Schedule SES-18. The schedule shows annual average prices for AmerenUE's cost of delivered coal, coal dispatch prices, natural gas prices, and electricity prices included in the updated and corrected Proctor analysis. This schedule also shows the direction and magnitude of year-over-year changes in each of these variables. For example, in 2004 the average cost of delivered coal for AmerenUE declined, while all other prices increased.

This review shows that even for the period during which Dr. Proctor has found strong correlations among natural gas, coal, and power prices (*i.e.*, the correlations presented in Schedules 1.1 – 1.3 of Dr. Proctor's Rebuttal Testimony), there was only one year during which AmerenUE costs and all three market prices actually moved in the same direction. This only occurred in 2005, which was a year characterized by coincidental disruptions of both natural gas supply (through hurricanes) and coal supply (through rail delivery problems). As shown in Schedule SES-15, even this level of correlation is not expected to continue going forward.

Q. What is the bottom-line conclusion that one can draw from this analysis of OSS margin and native load fuel cost risks?

A. The bottom-line conclusion is that it is unlikely and certainly not typical that uncertainties in OSS margins would serve to reduce uncertainties in native load fuel costs. These results show that the "hedge value" found in Dr. Proctor's "illustrative" analysis exists primarily for the unrepresentative and ultimately unlikely sets of "all high" and "all low" combinations of possible future fuel costs and market prices he has constructed. Staff's claim that changes in OSS margins would *typically* offset variations in AmerenUE fuel costs consequently is not supported by the facts.

V. PLANT AVAILABILITY AND NATIVE LOAD UNCERTAINTY.

Q. Dr. Proctor has acknowledged that his illustrative analysis did not consider various risks, such as uncertainties related to the level of native load and the level of generating plant outages. How do generation outage and native load uncertainty affect the conclusions about the uncertainty of OSS margins and native load costs?

A. I find that typical variances in plant availability (e.g., due to forced outages) and the level of native load (e.g., due to weather) have a substantial impact on OSS margins but a smaller effect on average native load fuel costs. While fuel cost uncertainties are significant, the extent to which OSS risks are affected by both plant availability and native load variances is higher because these variances disproportionately affect the volume of off-system sales. This further supports the points made in Mr. Lyons' Rebuttal Testimony that because plant availability and performance is more directly under the Company's control (while fuel costs are largely outside the Company's control), it is appropriate to utilize an FAC with separate incentives for OSS margins as AmerenUE proposed in its direct case.

How forced outages affect native load fuel costs and OSS margins is illustrated in Schedule SES-19. Schedule SES-19 compares results for the "normal" production cost model run and to another run where the forced outage factors are increased by 4.6 percentage points in each month. I requested this second run to illustrate the risks associated with more forced outages, and also to respond to Dr. Proctor's concern that a given MW reduction in generation availability does not translate into the same MW loss of OSS volumes because AmerenUE may not be making off-system sales in every hour (Proctor Rebuttal p.13:19-15:2). The low availability production cost model run shows that a 4.6 percentage point increase in forced outages reduces average annual off-system sales volumes by about 196 MW per hour. This level of reduction addresses Dr. Proctor's concerns, because forced outages are randomly distributed in the production cost run to meet the revised forced outage level in each month

Schedule SES-19 shows the impact that this 4.6% higher forced outage factor has on native load fuel costs and OSS margins. Row [3] of this table shows that native load costs would increase by $23 million or approximately 4.7% relative to the normal case, due to elevated average costs resulting from lower plant availability. However, rows [4] - [7] show that the resulting reduction in off-system sales volumes has a much more significant impact: OSS margins fall by $45 million relative to the normal case or by nearly twice the dollar increase in native load fuel costs. On a percentage base, the 22.4% impact on OSS margins is about five times as large as the percentage impact on native load fuel costs. This analysis further documents that netting OSS margins also does not serve to hedge risks associated with increased forced outages.

Schedule SES-20 shows a similar calculation to analyze the impact of native load levels being 2.7% higher than normalized test year load values. Again, this table illustrates that native load variances more strongly affect OSS margins because the level of native load directly impacts the quantity of AmerenUE generation that is available for off-system sales. The example is based on a production cost model run where hourly native load volumes were increased by 2.7%. Schedule SES-20 shows that native load fuel costs increased by 4.0% relative to the normal case, while off-system sales margins decreased by 13.3% relative to the normal case. In dollar terms, the impacts are closer than what was observed for the scenario where plant availability was varied, but the impact on OSS margins is still $5 million greater than the impact on native load costs. This analysis shows that OSS margins do not serve to hedge risks associated with increased native load levels either.

VI. FAC SHARING MECHANISMS.

Q. What are the implications of the fact that netting OSS margins against native load fuel costs would not mitigate risks as Staff has concluded erroneously?

A. The Staff's incorrect conclusion that OSS margins are a natural hedge against fuel cost uncertainty directly led to the erroneous conclusion that a sharing mechanism for OSS margins would increase AmerenUE's fuel-related risks in the absence of a FAC. This provides further support for the reasonableness of separate treatment of the OSS margins through either a traditional regulatory treatment or a sharing of OSS margins as initially proposed by AmerenUE. If a FAC is implemented, the full pass through of OSS margins by netting OSS revenues against total fuel costs would not reduce the variability associated with the native load fuel cost that would be recovered in the FAC, as suggested by Dr. Proctor. Both separating OSS margins from native load fuel costs and the sharing of OSS-related risks between AmerenUE and its customers (as initially proposed by AmerenUE) consequently makes sense.

Q. On pages 17 through 22 of his Rebuttal Testimony, Dr. Proctor criticizes the sharing mechanism you and Mr. Lyons have proposed in your direct testimonies. How do you respond?

A. Dr. Proctor raises concerns similar to those raised by witnesses of other parties. Specifically, Dr. Proctor is concerned about the $120 million base level of my proposed sharing grid and the balance of how upside and downside risks are shared. I have already addressed these concerns in the responses to other parties' witnesses contained in pages 33-41 of my January 31, 2007 and pages 4-8 of my February 5, 2007 rebuttal testimonies.

Q Is this the treatment of OSS margins and sharing grid that AmerenUE is now proposing?

A. No. To address the concerns expressed by Staff and other parties, Mr. Lyons outlines the proposal that AmerenUE is now presenting in his Surrebuttal Testimony which nets OSS revenues against total fuel costs, but couples this netting with a mechanism to share total fuel cost savings. This will provide appropriate incentives in areas within the Company's control.

Q. Does this conclude your Surrebuttal Testimony?

A. Yes, it does.

Estimates of Normal AmerenUE OSS Prices

Measure	Proctor Original Prices [1]	Updated and Corrected Proctor Prices [2]	AmerenUE 2003 - 2005 Adjusted Ave. [3]	AmerenUE 2003 - 2006 Adjusted Ave. [4]	AmerenUE LMP 12 Months Ending Jan. 07 [5]	Cinergy LMP 12 Months Ending Jan. 07 [6]
Peak	54.51	49.06	46.31	47.21	49.62	51.77
Off-Peak	30.63	28.43	26.48	27.22	28.66	29.84
Non-Summer Peak		46.77	44.86	44.73	44.00	47.69
Summer Peak		55.75	50.56	54.46	66.02	63.68
OSS Weighted Average	41.23	37.35	35.13	35.84	37.39	39.16
Around-the-Clock Simple Average	41.75	38.04	35.71	36.53	38.42	40.05

Sources and Notes:

[1]: Dr. Proctor's normal prices as sponsored in his direct testimony.

[2]: Updated and corrected Proctor normal prices.

[3]: AmerenUE original 3-year average, adjusted for effects of hurricanes and rail disruption.

[4]: [3], recalculated after adding 2006 UE coal baseload generator LMPs, weighted by OSS volumes.

[5]: 2/06 - 1/07 UE coal baseload generator LMPs, weighted by OSS volumes.

[6]: Cinergy Hub Day-Ahead LMP.

Fuel Costs and OSS Prices for Dr. Proctor's Cases

	Base Case	High Case	Low Case
Coal Costs			
Average Cost ($ / MWh)	$13.54	$17.54	$9.54
Percentage Difference from Base Case		30%	-30%
Difference from Base Case ($ / MWh)		$4.00	-$4.00
Total Costs			
Average Cost ($ / MWh)	$12.52	$15.95	$9.14
Percentage Difference from Base Case		27%	-27%
Difference from Base Case ($ / MWh)		$3.43	-$3.38
Off-System Sales			
Average Price ($ / MWh)	$40.67	$51.99	$29.60
Percentage Difference from Base Case		28%	-27%
Difference from Base Case ($ / MWh)		$11.32	-$11.07

Source:
Rahrer Workpaper CD produced on 1/10/07 in response to various AmerenUE DRs.
No Joppa, With Sales, Normal, High, and Low Runs:

Comparison of Results between AmerenUE Production Cost Model and Simplified Average Heat Rate Model Used in Illustration of OSS Margin Hedging Analysis

(Using Updated and Corrected Proctor Prices)

			Case		
			All High Prices	All Normal Prices	All Low Prices
Total Native Load Costs					
Production Cost Model	($ Million)	[1]	$614	$487	$357
Simplified Average Heat Rate Model	($ Million)	[2]	$616	$487	$357
Difference	($ Million)	[3]	-$1	$0	$0
Off System Sales Margins					
Production Cost Model	($ Million)	[4]	$209	$187	$132
Simplified Average Heat Rate Model	($ Million)	[5]	$215	$187	$130
Difference	($ Million)	[6]	-$6	$0	$2
Native Load Fuel Risk					
Production Cost Model	($ Million)	[7]	$128	$0	-$130
Simplified Average Heat Rate Model	($ Million)	[8]	$129	$0	-$130
Difference	($ Million)	[9]	-$1	$0	$0
Native Load Net of OSS Margin Fuel Risk					
Production Cost Model	($ Million)	[10]	$106	$0	-$74
Simplified Average Heat Rate Model	($ Million)	[11]	$101	$0	-$73
Difference	($ Million)	[12]	$5	$0	-$1

Notes and Sources

[1]: Based on AmerenUE normal, high, and low price runs.
[2]: Illustration using normal native load volumes, OSS volumes, and heat rates.
[3]: = [1] - [2].
[4]: Based on AmerenUE normal, high, and low price runs.
[5]: Illustration using normal native load volumes, OSS volumes, and heat rates.
[6]: = [4] - [5].
[7]: Based on AmerenUE normal, high, and low price runs.
[8]: Illustration using normal native load volumes, OSS volumes, and heat rates.
[9]: = [7] - [8].
[10]: Based on AmerenUE normal, high, and low price runs.
[11]: Illustration using normal native load volumes, OSS volumes, and heat rates.
[12]: = [10] - [11].

Illustration of OSS Margins As Fuel Cost Hedge under All Cases

Using Simplified Average Heat Rate Model ($ Millions)

Case Assumptions			*Illustrative Comparison of Fuel Costs*			*Illustrative Comparison of Risks*		
On-Peak Price and Gas Dispatch Costs	Off-Peak Price and Coal Dispatch Costs	AmerenUE Fuel Costs	Total Native Load Costs	OSS Margins	Native Load Costs Net of OSS Margins	Native Load Fuel Risk	Native Load Fuel Risk w/ Netting of OSS Margins	Reduction (Increase) in Variance Due to OSS Netting
			[1]	[2]	[3]	$[4] = [1] - [1]_{Normal}$	$[5] = [2] - [2]_{Normal}$	[6] = abs([4]) - abs([5])
High	**High**	**High**	616	215	400	129	101	28
High	**Normal**	**High**	616	193	423	129	123	6
High	**Low**	**High**	616	155	460	129	161	(32)
Normal	**High**	**High**	616	179	436	129	137	(8)
Normal	**Normal**	**High**	616	157	458	129	159	(30)
Normal	**Low**	**High**	616	120	496	129	197	(68)
Low	**High**	**High**	616	127	488	129	189	(60)
Low	**Normal**	**High**	616	105	511	129	211	(82)
Low	**Low**	**High**	616	67	548	129	249	(120)
High	**High**	**Normal**	487	245	241	0	-58	(58)
High	**Normal**	**Normal**	487	223	263	0	-36	(36)
High	**Low**	**Normal**	487	185	301	0	2	(2)
Normal	**High**	**Normal**	487	209	277	0	-22	(22)
Normal	**Normal**	**Normal**	487	187	299	0	0	0
Normal	**Low**	**Normal**	487	150	337	0	38	(38)
Low	**High**	**Normal**	487	157	329	0	30	(30)
Low	**Normal**	**Normal**	487	135	352	0	52	(52)
Low	**Low**	**Normal**	487	97	389	0	90	(90)
High	**High**	**Low**	357	278	79	-130	-221	(91)
High	**Normal**	**Low**	357	256	101	-130	-198	(68)
High	**Low**	**Low**	357	218	139	-130	-161	(31)
Normal	**High**	**Low**	357	242	115	-130	-185	(55)
Normal	**Normal**	**Low**	357	220	137	-130	-162	(33)
Normal	**Low**	**Low**	357	182	175	-130	-125	5
Low	**High**	**Low**	357	190	167	-130	-133	(3)
Low	**Normal**	**Low**	357	168	189	-130	-110	20
Low	**Low**	**Low**	357	130	227	-130	-73	57

Total Number of Cases	**27**
Number of Cases for Which Netting of OSS Decreases Risk	**5**
Number of Cases for Which Netting of OSS Decreases Risk by 20%	**2**

Note: Yellow shading identifies Dr. Proctor's all-high, all-normal, and all-low cases.

Year-Over-Year Changes in AmerenUE Fuel and Electricity Prices

	2003	2004	2005	2006
Average Cost of Delivered Coal [1]				
Cost ($ / MMBtu)	**$0.91**	**$0.89**	**$0.99**	**$1.08**
% Change from Previous Year	-	**-2.1%**	**11.2%**	**9.1%**
Change from Previous Year	-	↓	↑	↑
Coal Dispatch Price [2]				
Price ($ / MMBtu)	**$1.00**	**$1.18**	**$1.64**	**$1.71**
% Change from Previous Year	-	**17.5%**	**39.1%**	**4.1%**
Change from Previous Year	-	↑	↑	↑
Off-Peak Electricity Price [3]				
Price ($ / MWh)	**$22.00**	**$25.62**	**$35.23**	**$29.30**
% Change from Previous Year	-	**16.5%**	**37.5%**	**-16.8%**
Change from Previous Year	-	↑	↑	↓
Natural Gas Price [4]				
Price ($ / MMBtu)	**$5.57**	**$5.89**	**$8.47**	**$6.58**
% Change from Previous Year	-	**5.9%**	**43.7%**	**-22.3%**
Change from Previous Year	-	↑	↑	↓
On-Peak Electricity Price [5]				
Price ($ / MWh)	**$39.84**	**$44.04**	**$63.03**	**$50.11**
% Change from Previous Year	-	**10.6%**	**43.1%**	**-20.5%**
Change from Previous Year	-	↑	↑	↓

Notes and Sources:

[1]: Historical average cost of delivered coal paid by AmerenUE.
[2]: Average coal dispatch prices used in updated and corrected Proctor regression model.
[3]: Simple average of off-peak electricity prices used in updated and corrected Proctor regression model.
[4]: Average of peak natural gas prices used in updated and corrected Proctor regression model.
[5]: Simple average of on-peak electricity prices used in updated and corrected Proctor regression model.

Impact of Increased Forced Outages on Native Load Costs and OSS Margins

AmerenUE Production Cost Model with Updated and Corrected Proctor Prices

			Base Case	Low Availability Case	Difference	Percentage Difference
Change in Monthly Forced Outage Factor	% Points	[1]	0	4.6	4.6	-
Total Native Load	(GWh)	[2]	40,468	40,468	0	0.0%
Total Native Load Costs	($ Million)	[3]	487	509	23	4.7%
Total OSS Volumes	(GWh)	[4]	8,460	6,739	-1,720	-20.3%
Total OSS Costs	($ Million)	[5]	120	98	-22	-18.3%
Total OSS Revenues	($ Million)	[6]	307	240	-67	-21.8%
Total OSS Margins	($ Million)	[7]	187	142	-45	-24.1%

Notes and Sources

[1]: Change in monthly target rates for forced outages in AmerenUE Model.
[2]: Based on AmerenUE normal and low availability runs.
[3]: Based on AmerenUE normal and low availability runs.
[4]: Based on AmerenUE normal and low availability runs.
[5]: Based on AmerenUE normal and low availability runs.
[6]: Based on AmerenUE normal and low availability runs.
[7]: = [6] - [5].

Impact of Increased Native Load on Native Load Costs and OSS Margins

AmerenUE Production Cost Model with Updated and Corrected Proctor Prices

			Base Case	High Load Case	Difference	Percentage Difference
Change in Hourly Native Load	%	[1]	0	2.7	2.7	-
Total Native Load	(GWh)	[2]	40,468	41,561	1,093	2.7%
Total Native Load Costs	($ Million)	[3]	487	506	20	4.0%
Total OSS Volumes	(GWh)	[4]	8,460	7,581	-879	-10.4%
Total OSS Costs	($ Million)	[5]	120	110	-11	-8.9%
Total OSS Revenues	($ Million)	[6]	307	272	-36	-11.6%
Total OSS Margins	($ Million)	[7]	187	162	-25	-13.3%

Notes and Sources

[1]: Change in average hourly native load in AmerenUE Model.
[2]: Based on AmerenUE normal and high load runs.
[3]: Based on AmerenUE normal and high load runs.
[4]: Based on AmerenUE normal and high load runs.
[5]: Based on AmerenUE normal and high load runs.
[6]: Based on AmerenUE normal and high load runs.
[7]: = [6] - [5].

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 SHAWN E. SCHUKAR

STATE OF MISSOURI)
) ss
CITY OF ST. LOUIS)

Shawn E. Schukar, being first duly sworn on his oath, states:

1. My name is Shawn E. Schukar. I work in the City of St. Louis, Missouri, and I am employed by Ameren Energy, Inc. as Vice President.

2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of Union Electric Company d/b/a AmerenUE consisting of 24 pages and Schedules SES-13 through SES-20, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

Shawn E. Schukar

Subscribed and sworn to before me this 27th day of February, 2007.

Carolyn J. Woodstock
Notary Public

My commission expires: May 19, 2008

CAROLYN J. WOODSTOCK
Notary Public - Notary Seal
STATE OF MISSOURI
Franklin County
My Commission Expires: May 19, 2008