Exhibit No.:
Issues: Fuel
And Purchase Power
Witness: Andrew N. Korte
Sponsoring Party: Aquila Networks-L&P
Case No.: HR-2005-0450

Before the Public Service Commission
of the State of Missouri

Rebuttal Testimony

of

Andrew N. Korte

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REBUTTAL TESTIMONY OF ANDREW N. KORTE
AQUILA, INC. D/B/A AQUILA NETWORKS-L&P
CASE NO. HR-2005-0450

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI
REBUTTAL TESTIMONY OF ANDREW N. KORTE
ON BEHALF OF AQUILA, INC.
D/B/A AQUILA NETWORKS-L&P
CASE NO. HR-2005-0450

Q. Please state your name and business address.

A. My name is Andrew Korte. My business address is 10750 East 350 Highway, Kansas City, Missouri, 64138.

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

A. I am employed by Aquila, Inc., ("Aquila") as Vice President Energy Resources, in its regulated electric utility operations.

Q. Please describe your responsibilities in that position.

A. Within its regulated electric utility operations, Aquila has functionally separated the supply of electric energy from the transmission and distribution of energy. I am employed within the energy supply operation. My position's responsibility include power supply resource planning, dispatch of and marketing from power supply assets, managing elements of generation fuel supply, and managing the power supply resource contracts in Aquila's Colorado, Kansas and Missouri electric utility operations.

Q. What are your educational qualifications, training, and experience?

A. I hold a Bachelor of Science Degree in Electrical Engineering from the University of Nebraska-Lincoln, Masters of Business Administration and Juris Doctor from Creighton University, and I am presently a licensed Professional Engineer in the state of Nebraska. I have approximately fifteen years of experience in regulated utility operations beginning in 1987 with the Omaha Public Power District. I have held various positions in

engineering, system planning, and system operations. Between 1999 and 2003 I was employed by Aquila Merchant Services, Inc. I became Vice President Energy Resources in November 2003.

Q. Have you previously filed testimony before any state or federal agencies?

A. No.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of this rebuttal is to support Aquila's position(s) in this case regarding the Aquila Networks-L&P ("L&P") steam operating division of Aquila. Specifically, I will respond to Mr. David Elliott regarding purchased power cost determination; and to Mr. Charles Hyneman regarding the cost of natural gas used for electric generation.

PURCHASED POWER COSTS

Q. Please summarize, as you understand it, the method used by Mr. Elliot to arrive at his recommended market purchase power prices for this case.

A. Mr. Elliott uses the average cost of power purchased by the company and reported by the company in response to 4 CSR 240-3.190. The staff utilizes an averaging method detailed in their 1996 policy paper, documented in Mr. Elliott's working papers.

Q. Did the company review the 1996 policy paper?

A. Yes

Q. Did the company review Mr. Elliott's working papers?

A. Yes.

Q. Was the method followed accurately?

A. It is uncertain. The method described in the policy paper was developed using different programming software than either the staff or the company now uses. The policy paper

method describes using Lotus 1-2-3 as the software to calculate the averages. The staff uses Microsoft Excel as its calculation software for this case. The company has been unable to determine if this change in staff methodology would produce a material change in the final results.

Q. Given that the method has not been updated to reflect current actual practice, does the company hold with the basic analytical premise of the method described in the 1996 method?

A. No. The method described in the 1996 policy paper does not take into account many of the aspects of market power prices. The major flaws with the staff method are a) no correlation with natural gas market prices and b) a bias to lower power prices than are experienced in the market.

Q. What is meant by the correlation of natural gas prices and power prices?

A. Correlation is a statistical measurement of the "connectedness" of two variables. Two variables [in this case power prices and natural gas prices] with a high correlation would tend to move together. So when natural gas prices are high, the market for power would move up as well. Similarly, if the price of natural gas drops, the price of power should also decrease.

Q. Is there a strong correlation between power and natural gas prices in their respective markets?

A. Yes. The company has documented this strong correlation and has shared this information with the staff in a past rate case. Most all market participants acknowledge the strength of the natural gas-power market price correlation and consider a strong correlation as fact.

Q. Is the correlation of market power and natural gas prices an important feature of production cost modeling?

A. Yes. If the purchase power prices and the natural gas prices do not accurately depict the actual market correlations, the model may have instances where purchase power input prices are high and natural gas input prices are low. The model could choose generating with natural gas rather than open market purchases. The reverse would also be true. If power prices were low relative to natural gas prices, the model would choose to purchase more power than use natural gas to generate electricity.

Q. Would this lack of correlation introduce a bias into the production cost model?

A. Yes. It would cause the model to estimate lower production costs as the model would have more opportunity to obtain low cost energy than would be found in the actual market.

Q. Is there a method by which power and natural gas prices can be estimated such that the market correlations hold true?

A. Yes. A method utilizing the MIDAS GOLD software package is described in the direct testimony of Mr. James Okenfuss (Case No. ER-2005-0436) and was used by the company in its production cost estimate. This software has been adopted by other investor-owned utilities in Missouri.

Q. Is the lack of correlation the only source of bias in the staff method?

A. No. The most glaring source of bias comes from the appearance that the method over-estimates the number of high outlier data points, discarding valid information while under-estimating low outliers.

Q. Is it statistically valid to screen outliers from a data set?

A. Yes, when it is done to improve the data by throwing out points that are incorrect due to being improperly coded into the data set or simply "bad" data. But a statistician should never screen data simply because the statistician feels its value is too high. This is my main point of contention with the statistics of the staff method; it is apparently designed to throw out valid and accurate data.

Q. Do you have any examples of how this bias imbedded in the staff method negatively impacts the value of the data going into the staff's production model?

A. Yes. Because the staff does not look at a full range of market information in developing their estimate of power market prices, but instead relies solely upon limited insight into one company's resultant cost structure, the staff has produced a power market price curve that is less than credible. For example, the peak price for power in December is 5.9% higher than the peak price in July. Most market observers would assume that for the Midwest, July power prices should be higher than December prices.

Q. Would you consider the Staff's approach a valid method of developing prices?

A. No. In light of the computational tools available, the method used by staff is antiquated and bears no semblance to the actual marketplace.

COST OF NATURAL GAS

Q. Have you reviewed Mr. Hyneman's direct testimony?

A. Yes. I have reviewed Mr. Hyneman's direct testimony regarding the price estimate for natural gas. I have also reviewed the market prices for natural gas staff used as an input into the staff production cost model.

Q. Does Mr. Hyneman's method appear consistent with past methods of natural gas price estimating used by the staff in previous rate cases?

A. No. In Case ER-2004-0034 and HR-2004-0024, I believe staff used a 21-month average of natural gas expenditures by the company. In that case, Mr. Vesely stated that the averaging method proposed for that case followed a policy that was used by staff for many years. In this case, Mr. Hyneman has arbitrarily chosen the Month of June 2005 as the accurate month to determine natural gas prices.

Q. Why June 2005?

A. No reasons were given by staff as to why June 2005 was the correct month, but it may have been that this was the latest month available at the time they were performing their audit.

Q. Does June have any particular prominence in historical natural gas pricing?

A. Yes, in history it is generally the month that natural gas prices are among the lowest.

Q. Would arbitrarily selecting a historically low priced natural gas month introduce a bias into the results of the production cost model?

A. Yes, and once again this bias would have the effect of lowering estimated costs for operating the company's electric service business.

Q. Would it be appropriate to return to Staff's previous month of using a twenty-one month historical average to determine the expected cost of natural gas?

A. No. The well publicized recent rises in natural gas prices also render a historical average of prices as inadequate for use in determining an appropriate level of natural gas costs for rate setting.

Q. Is there a way to mitigate the bias introduced by the arbitrary nature of the staff's recommendation?

A. Yes. Staff could utilize a comprehensive method; similar to the one proposed by the company, that incorporates a more complete view of the actual marketplace.

Q. Does this conclude your rebuttal testimony?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

County of Jackson)
) ss
State of Missouri)

AFFIDAVIT OF ANDREW N. KORTE

Andrew N. Korte, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Rebuttal Testimony of Andrew N. Korte;" that said testimony was prepared by him and under his direction and supervision; that if inquiries were made as to the facts in said testimony and schedules, he would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of his knowledge, information, and belief.

Andrew N. Korte

Subscribed and sworn to before me this 18th day of November, 2005.

Notary Public
Terry D. Lutes

My Commission expires:
8-20-2008

Notary Public Notary Seal State of Missouri

TERRY D. LUTES
Jackson County
My Commission Expires
August 20, 2008