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Witness: Leon C. Bender
Sponsoring Party: MO PSC Staff
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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

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REBUTTAL TESTIMONY

Missouri Public
Service Commission

OF

LEON C. BENDER

AQUILA, INC.

D/B/A AQUILA NETWORKS -- MPS

CASE NO. ER-2004-0034

**Jefferson City, Missouri
January 2004**

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REBUTTAL TESTIMONY
OF
LEON C. BENDER
AQUILA NETWORKS, INC.
D/B/A AQUILA NETWORKS – MPS

CASE NO. ER-2004-0034

Q. Please state your name and business address.

A. Leon C. Bender, P.O. Box 360, Jefferson City, Missouri, 65102.

Q. Are you the same Leon C. Bender who filed direct testimony in this case?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony in this case, Aquila, Inc.

(Aquila) D/B/A Aquila Networks-MPS (MPS) and Aquila Networks-L&P (L&P)
Case No. ER-2004-0034?

A. The purpose of my rebuttal testimony is to respond to purchased power inputs described in the direct testimony of Jerry G. Boehm, of Aquila. These purchased power inputs were used by Aquila in its electric production cost model simulation to estimate fuel and purchased power cost for Aquila for the test year.

Q. Did you review the purchased power inputs of Aquila's production cost model and compare these with the Missouri Public Service Commission Staff's (Staff) inputs of Staff's production cost model?

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1 A. Yes, I did.

2 Q. Did you find differences between these inputs?

3 A. Yes, I found differences in the spot purchased power prices used and the
4 amount of purchased power energy available.

5 Q. Why were the prices different?

6 A. The prices differed because the methods used to determine those prices were
7 different.

8 Q. Please describe the method used by Aquila to determine spot purchased power
9 prices.

10 A. The method used by Aquila is described in Mr. Boehm's direct testimony
11 starting on page 10, line 3 of his testimony and particularly on page 13 line 3.

12 Q. Please summarize this method in your own words.

13 A. Aquila used the purchased power estimates from simulations of the MIDAS
14 analysis software from M.S. Gerber and Associates. These estimates are based upon inputs
15 which include existing generation, forecasts of new proposed generation, load profiles with
16 forecasted load growth, and current and forecasted fuel prices of Aquila and other electric
17 utilities in the regions surrounding Aquila (Jerry G. Boehm's direct testimony, page 10, lines
18 11 through 16). In other words, the spot purchased power prices used by Aquila are
19 forecasted prices based upon forecasted events and forecasted gas prices affecting Aquila
20 and the surrounding utilities that are not known and measurable.

21 Q. Did Staff attempt to verify the inputs to the MIDAS analysis software used
22 by Aquila to determine spot purchased prices?

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1 A. Yes. However, Aquila stated, in response to Staff Data Request
2 No. MPSC-32, that the data was available only to a licensed user with a licensing agreement.
3 Staff does not have a licensing agreement to view the data.

4 Q. Could this method be used to determine spot purchased power prices for a rate
5 case? Please explain.

6 A. It may be that this method could be used for a rate case but Staff did not have
7 access to all the input data or to the MIDAS model. Therefore, Staff is unable to determine
8 whether it is appropriate. If Aquila used actual test year inputs to model the spot purchased
9 power market, it may be appropriate to use this method. However, Aquila used forecasted
10 future events to determine prices for an updated test year in which spot purchased prices were
11 known. Using forecasted future events would be appropriate in determining the forecasted
12 fuel budget for future years, but it is not appropriate for determining input spot purchased
13 power prices in a rate case. The Commission has ordered the test year to be the 12 months
14 ending December 31, 2002, updated for known and measurable changes to
15 September 30, 2003. Aquila used results from a model that utilized forecasted, not
16 historical, inputs. Therefore, the spot purchased power prices used by Aquila to estimate
17 average annual fuel and purchased power are not appropriate for this rate case.

18 Q. What data did Staff use as input to its method of determining spot purchased
19 power prices?

20 A. As described in my direct testimony on page 5, line 9, Staff used actual non-
21 contract data submitted by Aquila for the time period ordered by the Commission. Staff has
22 traditionally used historical data submitted by the companies for input to its production cost
23 model.

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1 Q. Did Aquila's use of forecasted spot purchased power affect the results of
2 Aquila's production cost model? Please explain.

3 A. Yes. Aquila's final computed yearly average spot purchased power price for
4 joint dispatch was \$37.23 per mega-watt-hour (MWH). This number is computed by
5 dividing the dollar amount for spot purchases, as submitted in Schedule 1 of
6 Jerry G. Boehm's direct testimony, by the number of MWH purchased. This result is much
7 higher than the actual historical computed yearly average for any year since the merger and is
8 higher than any previous historical yearly average for the former Missouri Public Service
9 Company. Use of Aquila's computed yearly average spot purchased power price results in a
10 considerable overstatement of the fuel and purchased power expense for the updated test
11 year.

12 Q. What is the actual historical yearly average price of spot purchased power in
13 the last three years?

14 A. For the year 2000, it was \$ 32.00/MWH, for 2001, it was \$30.44/MWH and
15 for 2002, it was \$23.62/MWH. Aquila's estimated annual average purchased power in this
16 case is \$5.23 greater than the highest of these prices.

17 Q. How does the Staff's estimated spot purchased power yearly average price
18 compare to historical values?

19 A. In this case, Staff's production cost model computed a spot purchased power
20 yearly average price of \$30.10 per MWH. This is much closer to the historical averages
21 shown above. Staff's use of historical data inputs, instead of unknown future events, results
22 in costs that are more representative of historical actual results.

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1 Q. Are there any other checks for reasonableness that raise doubt as to the
2 validity of Aquila's spot purchased power inputs?

3 A. Yes. In its production cost model, Aquila made an excessive amount of spot
4 purchased energy available, and also used an unreasonable outage rate for spot purchased
5 power. Aquila made a total 1800 megawatts (MW's) of spot energy available in every hour
6 of the year. This is greater than the peak for the combined MPS and SJLP systems and
7 greater than any amount actually purchased in any hour since the merger. Also, due to the
8 forced outage rates for each spot purchased level included in the model, the spot purchased
9 energy available in some hours is zero. It is unrealistic to assume that Aquila could import
10 enough energy in all hours to supply its entire demand. It is also unrealistic that there were
11 approximately 600 hours in the test year in which no energy could be imported by Aquila.

12 Q. Do Aquila's excessive and unrealistic assumptions regarding spot purchased
13 energy available and its forced outages have a significant effect on production cost?

14 A. Initially, Staff ran its production cost model using Aquila's spot purchased
15 energy available for every hour and found the difference between the results of using Staff's
16 energy available and Aquila's energy available to be insignificant. However, when the Staff
17 included Aquila's spot purchased power outage rate with Aquila's energy available in the
18 Staff's production cost model, as was the case in Aquila's model run, the model found hours
19 for which no spot energy was available due to the outages. This resulted in the model
20 making more expensive generation from gas fired combustion turbines. Consequently, the
21 cost of production increased significantly.

22 Q. Have you made any changes to Staff's purchased power inputs that you filed
23 direct testimony on as a result of discussions with the other parties in prehearing?

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1 A. No, I have not.

2 Q. Does this conclude your rebuttal testimony?

3 A. Yes, it does.