

Exhibit No.:

Issues: Natural Gas Pricing, Spot
Purchase Power Pricing

Witness: Jerry G. Boehm

Sponsoring Party: Aquila Networks-L&P

Case No.: HR-2005-0450

Before the Public Service Commission
of the State of Missouri

FILED

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Surrebuttal Testimony

Missouri Public
Service Commission

of

Jerry G. Boehm

Exhibit No. 1014
Case No(s) HR-2005-0450
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ON BEHALF OF AQUILA, INC.
D/B/A AQUILA NETWORKS-L&P
CASE NO. HR-2005-0450**

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**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI
SURREBUTTAL TESTIMONY OF JERRY G. BOEHM
ON BEHALF OF AQUILA, INC.
D/B/A AQUILA NETWORKS-L&P
CASE NO. HR-2005-0450**

1 Q. Please state your name and business address.

2 A. My name is Jerry G. Boehm. My business address is 10750 East 350
3 Highway, Kansas City, Missouri, 64138.

4 Q. Are you the same Jerry G. Boehm who submitted direct testimony in this case
5 on behalf of Aquila Inc, ("Aquila") before the Missouri Public Service
6 Commission ("Commission")?

7 A. Yes.

8 **EXECUTIVE SUMMARY**

9 Q. What is the purpose of your testimony?

10 A. I am providing surrebuttal Natural Gas prices discussed in the rebuttal
11 testimony belonging to Staff witness Charles R Hyneman. I will also provide
12 surrebuttal to the rebuttal testimony of David W. Elliott concerning production
13 modeling methods and spot power market pricing.

14 **NATURAL GAS PRICES**

15 Q. What is your understanding of Mr. Hyneman's rebuttal testimony?

16 A. Mr. Hyneman appears to be confused with basic terms used in the marketing
17 of natural gas. He misinterprets my direct testimony concerning previous

1 analysis methods used by Aquila. He restates Mr. Choe's incorrect allegations
2 that the NYMEX is not correlated to actual prices.

3 Q. How does Mr. Hyneman confuse marketing terms?

4 A. Mr. Hyneman's testimony states that Aquila does not purchase gas at the
5 Henry Hub though it uses Henry Hub prices for a reference. His statement
6 pointing has the appearance of trying to demonstrate that this reference is
7 invalid. On the contrary, the markets purpose for using established price
8 points like the Henry Hub is in recognition of its relationship to all other
9 published and private price points.

10 Q. Does Mr. Hyneman make other errors in his understanding of the market?

11 A. Yes. Mr. Hyneman suggests that the basis differential between the mid-
12 continent source and Henry Hub should be *subtracted*. This makes no sense.
13 Since basis differentials are normally stated in reference to an established
14 price point then the basis between Henry Hub and Mid-Continent is most
15 often a negative number. Subtracting the basis would artificially raise the
16 expected price of natural gas at Mid-Continent. Aquila correctly added a
17 negative basis estimate to the Henry Hub price in order to correctly align the
18 price with the Henry Hub.

19 Q. Please explain how Mr. Hyneman misinterpreted your testimony.

20 A. My testimony refers to the use of the NYMEX pricing in the previous rate
21 case. In that case Aquila reviewed numerous sources in establishing a base
22 natural gas strip price. Aquila adjusted a NYMEX Henry Hub price curve to
23 match the derived natural strip price. During the IEC process Aquila proposed

1 a revised Henry Hub curve after reviewing previous sources and NYMEX
2 information.

3 Mr. Hyneman points out correctly that the methods in the previous case and
4 this case are not identical, however the use of the NYMEX Henry Hub price
5 point is still required as is the monthly volatility curve typical of NYMEX
6 prices. For this case Aquila has determined the use of a gas price derived
7 from NYMEX price analysis is an appropriate method. Aquila expects to
8 hedge natural gas costs, therefore present day NYMEX prices more accurately
9 reflect the prices Aquila is paying. The trends shown in Mr. Choe's rebuttal
10 Schedule 2 and Mr. Hyneman's Schedule 1 indicate that hedging natural gas at
11 present NYMEX prices may save money compared to future spot prices. Mr.
12 Hyneman's table appears to lend support to the evidence in Mr. Choe's graph
13 that shows Aquila's Natural Gas prices may be too low. He provides no
14 explanation as to why the Staff's prices are even lower than Aquila's.

15 Q. In his rebuttal did Mr. Hyneman provide any support for Staff's method of
16 determining Natural Gas Prices?

17 A. No.

18 **SPOT PURCHASE POWER PRICING**

19 Q. What is your understanding of Mr. Elliot's rebuttal testimony?

20 A. Mr. Elliott is concerned that the purchase power market is incorrectly modeled
21 due to capacity size and constraints on purchase power modeled as contracts.
22 Mr. Elliot also questions the relationship of natural gas prices and purchase
23 power markets.

1 Q. Why is Mr. Elliott concerned with spot market capacity size and availability?

2 A. Mr. Elliott states that the modeling technique of having 900 MW available to
3 buy may be incorrect. In real operating situations there is often 900 MW or
4 more available for purchase. The price of the power, delivery cost, and
5 Aquila's must-run status for certain plants make it uneconomical to buy that
6 amount. The production model is designed to simulate these situations and
7 buy power accordingly. Just like the operators who have 900MW or more
8 available to them the program will only buy power amounts which satisfy
9 economic dispatch conditions.

10 Mr. Elliot is also concerned over the technique of modeling purchase power in
11 tiers which have forced outage values. Aquila uses this technique to simulate
12 the price changes in depth of market and the varying nature of transmission
13 availability. As this is a modeling issue Aquila strives to find a method with
14 which Staff is comfortable. These techniques have been modeled in previous
15 cases and discussed with Staff.

16 Q. Do you agree with Mr. Elliot's claim that there is no correlation between spot
17 gas prices and spot market prices?

18 A. No. Mr. Elliot's opinion appears to be based on mistaken analysis. First, he
19 doesn't compare purchase power **prices** with NYMEX natural gas prices he
20 compares purchase power **costs** with NYMEX natural gas prices. He is
21 analyzing a strict subset of the market prices and attempting to infer the entire
22 market. His second error is that he seems to have corrupted his input purchase

1 power cost information with figures that are not representative of Aquila's
2 purchased power.

3 Q. Why do you think his cost data are corrupt?

4 A. I believe that his data may come from misreading records that Aquila provided
5 to Staff. Those records contain the costs and quantities of spot market
6 purchases and also the costs and quantities of Aquila's own generation that is
7 transported from other dispatch areas. Iatan generation is an example of an
8 Aquila owned source on this form. Purchase power figures are separately
9 available on this form but it appears that Mr. Elliott may have used figures
10 including some of Aquila's generation costs.

11 Q. Did Aquila perform a comparison with correct purchase power costs?

12 A. Yes. While we still stress that this analysis method is flawed by the fact a
13 market subset is used as a market representation we reviewed Mr. Elliott's
14 analysis with corrected numbers. A graph of the results is attached. Mr.
15 Elliott's NYMEX closing prices were interpolated from his graph and
16 corrected monthly purchase power costs were added. A polynomial trend of
17 the purchase power costs is also shown on the graph. By inspection of the
18 graph it is obvious that the trend of the subset group purchase power costs
19 follows the trend of natural gas.

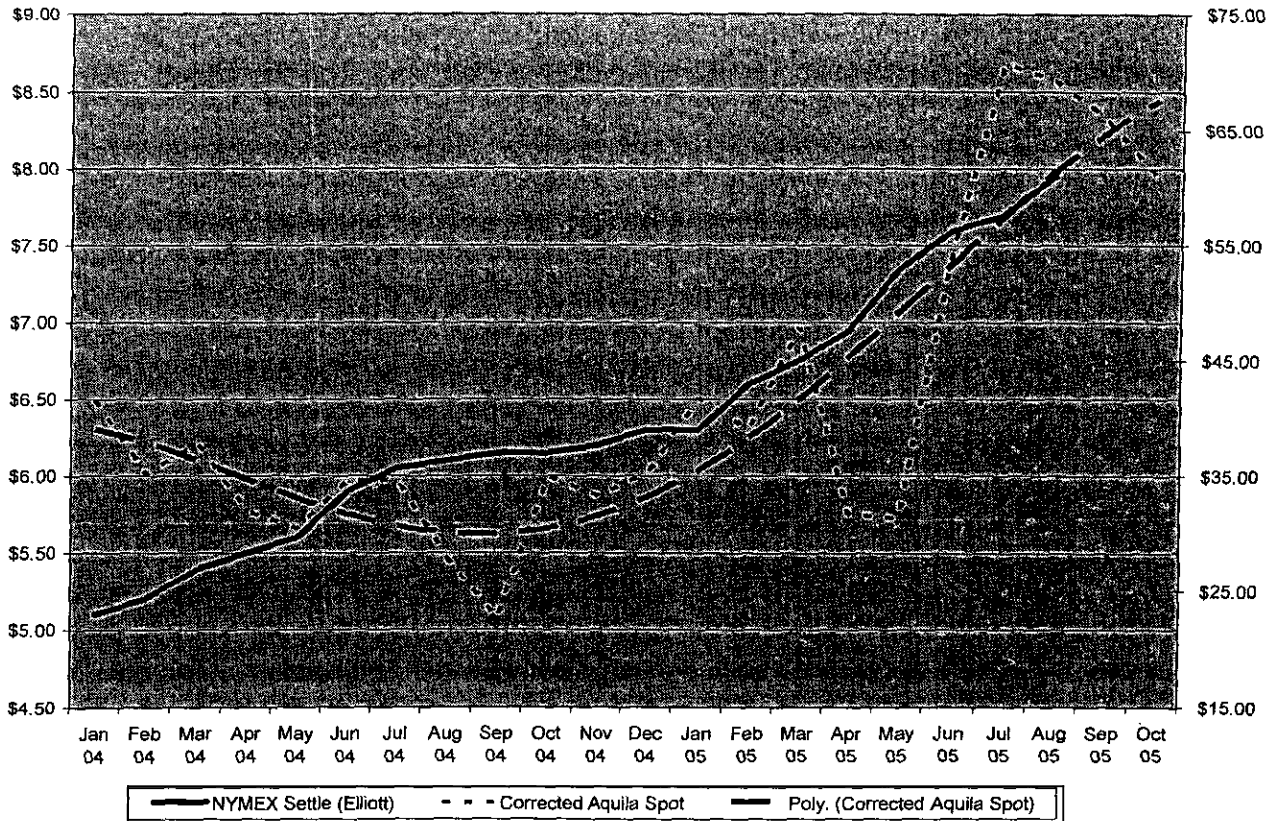
20 Q. In his rebuttal did Mr. Elliott provide any support for Staff's method of
21 determining Purchase Power Prices?

22 A. No. Mr. Elliott acknowledged that Staff lacks the necessary software to
23 perform the analysis.

1 Q. Does this conclude your surrebuttal testimony?

2 A. Yes.

1 - Schedule JGB Surr 1

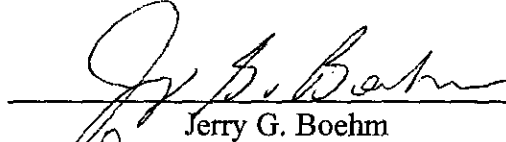


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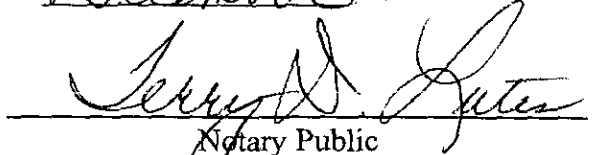
County of Jackson)
)
State of Missouri) ss

AFFIDAVIT OF JERRY G. BOEHM

Jerry G. Boehm, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Surrebuttal Testimony of Jerry G. Boehm;" 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.


Jerry G. Boehm

Subscribed and sworn to before me this 13th day of December, 2005.


Notary Public
Terry D. Lutes

My Commission expires:

8-20-2008



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