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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

SURREBUTTAL TESTIMONY

OF

HONG HU

AQUILA, INC.

D/B/A AQUILA NETWORKS – MPS

CASE NO. ER-2004-0034

Jefferson City, Missouri
February 2004

Exhibit No. 1029
Case No(s) ER-2004-0034
Date 3-1-04 Rptr TW

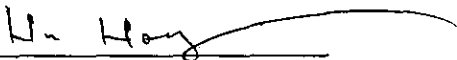
**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In The Matter Of Aquila, Inc. D/B/A Aquila)
 Networks L&P And Aquila Networks MPS)
 To Implement A General Rate Increase In) Case No. ER-2004-0034
 Electricity)

AFFIDAVIT OF HONG HU


STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

Hong Hu, of lawful age, on her oath states: that she has participated in the preparation of the following written testimony, as modified, in question and answer form, consisting of 7 pages of testimony to be presented in the above case, that the answers in the attached written testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true to the best of her knowledge and belief.



 Hong Hu

Subscribed and sworn to before me this 27th day of February, 2004.



 Notary Public

My commission expires _____
 DAWN L. HAKE
 Notary Public - State of Missouri
 County of Cole
 My Commission Expires Jan 9, 2005

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SURREBUTTAL TESTIMONY OF

HONG HU

AQUILA, INC., d/b/a AQUILA NETWORKS-MPS

CASE NO. ER-2004-0034

Q. Please state your name and business address.

A. My name is Hong Hu and my business address is Missouri Public Service Commission, P. O. Box 360, Jefferson City, Missouri 65102.

Q. Are you the same Hong Hu that previously filed Direct Testimony in this case?

A. Yes, I am.

Q. What is the purpose of this testimony?

A. I will address the Rebuttal Testimony of Aquila witness Eric L. Watkins regarding customer annualization adjustments for rate codes MO730 and MO735 in determining electric revenues for MPS.

Q. Did the Staff and the Company follow the same methodology in calculating customer annualization adjustments for rate codes MO730 and MO735?

A. No. Aquila utilized a customer growth methodology based on changes in the number of customers in determining the test year sales and revenue for rate codes MO730 and MO735. The Staff believes that such a method is not suitable for these two rate codes. MO730 contains large power customers who are served at secondary voltages and MO735 contains large power customers who are served at primary voltages. Compared to other rate codes, these customers are relatively diversified in their load

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1 pattern, and are large enough to individually have a significant impact on the Company's
2 revenues. The Staff believes a more reasonable approach is to individually annualize
3 these customers, as was done by the Staff.

4 Q. Has the Company criticized the Staff's approach of annualizing customer
5 sales and revenues for rate codes MO730 and MO735 on an individual customer basis?

6 A. No. My understanding is that the Company has raised two specific
7 criticisms to the Staff's calculation of the Staff's adjustments. However, Aquila has not
8 stated that it disagrees with the Staff's approach of individually annualizing customers.
9 In fact, in line 7, page 5 of his Rebuttal Testimony, Mr. Eric Watkins indicated that the
10 Company has now attempted to adopt the same approach to individually adjusting
11 customers for these two rate codes.

12 Q. What are the two specific criticisms listed by the Company regarding
13 Staff's customer annualization adjustments for rate codes MO730 and MO735?

14 A. In his Rebuttal Testimony, Company witness Eric L. Watkins explains that
15 his main concerns about the Staff's customer annualization adjustments for rate codes
16 MO730 and MO735 are the following:

- 17 1. Adjustments made for rate-switching customers appear to be
18 inconsistently applied. Specifically, revenues are individually adjusted for
19 rate switching in MO730 or MO735 while rate switchers are not
20 individually treated in the classes to which or from which they switched
21 where an averaging method of annualization was used.
- 22 2. Individual customer annualization adjustments made for load changes is a
23 difficult method to apply with a high degree of accuracy.

24

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1 **Rate Switching**

2 Q. How are rate-switching customers treated in the Staff's method of
3 individually calculating revenue annualization adjustments?

4 A. The goal of individually calculating revenue annualization adjustments is
5 to estimate the revenues that the Company would have collected from each customer if
6 those customers that were served under a rate code at the end of the update period had
7 been served on that rate code for the entirety of the test year. In other words, when a
8 customer begins service during the test year on rate code MO730 or MO735, test year
9 revenue and sales for MO730 or MO735 should be increased to reflect the 12 months of
10 sales and revenue associated with serving the customer on an annual basis. Conversely,
11 in the situation where a large customer leaves MO730 or MO735, its sales and revenues
12 on MO730 or MO735 should be eliminated because it is no longer a customer on these
13 rates at the end of the test year.

14 Q. In the case of rate-switching, does the method described above result in
15 double counting of revenues if a customer's actual sales and revenue aren't subtracted
16 from the monthly totals for the rate code it switched out of when it moved to MO730 or
17 MO735?

18 A. No. For example, if a customer switches from MO720 into MO730, the
19 sales and revenue of MO720 will be adjusted downward for the months that customer
20 was on MO720; however, by annualizing MO720 based on the number of customers each
21 month, the adjustment will be made using the average sales and revenues for MO720 for
22 those months, not by using the actual sales and revenues of that customer.

23 Q. Please explain how sales and revenues in MO720 are adjusted for
24 rate-switching customers.

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1 A. If a customer switches out of MO720, say, after June of 2002, the
2 customer count for September of 2003 will reflect one less customer than it would if the
3 customer hadn't switched. This will adjust MO720 sales and revenues for the months of
4 January through June of 2002 downward by one average customer.

5 Q. Is this a reasonable way to treat the sales and revenues of these
6 rate-switchers?

7 A. In my opinion, yes. Unlike the customers that are moved by the Company
8 from rate code MO710 to MO711 when a demand meter is installed, customers moving
9 to and from rate codes MO730 and MO735 do so by their own choice. It is reasonable to
10 assume that the customer makes this choice because its usage characteristics have
11 changed making its bill for the changed usage lower on the new rate code than on the old
12 rate code. Moving a customer's prior usage to the new rate code when a customer
13 switches would then be inappropriate since the prior usage is typical of usage on the old
14 rate code, not the new one.

15 Simply subtracting a rate switching customer's usage on the old rate code without
16 adding it to the new rate code would be an option. In the example of a customer
17 switching from MO720 to MO730, the only difference this would make is whether that
18 customer's usage on the old rate code (MO720) should be used in determining average
19 sales and revenues in the months the customer was served on that rate code. The Staff
20 assumed that the customer's usage while it was served on MO720 was representative of
21 usage on that rate code, but excluding that data from the calculation of average sales and
22 revenue each month should have very little effect.

23 Q. In lines 15 to 17, page 4 of his Rebuttal Testimony, Mr. Watkins states
24 that the effect of individually adjusting rate-switching customers in MO730 and MO735

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1 without individually adjusting them in other classes such as MO720 is "a net revenue
2 addition of \$529,326 to MPS's revenue rather than a more appropriate neutral effect." Is
3 this a reasonable estimate?

4 A. No. Mr. Watkins did not provide the basis of his comparison to the Staff's
5 revenue adjustments. Without adjusting all of the other rate codes for each of the
6 individual rate-switching customers as a base of comparison, one would not be able to
7 produce an accurate number on the effect of not doing so. As far as I know, the
8 Company has not attempted to do such a comparison.

9 Q. Did you perform any analysis to determine whether there could indeed a
10 \$529,329 net revenue addition?

11 A. Yes. I have calculated the net amount of revenue adjustments that were
12 made to each customer class due to rate switching, including the effects of customer
13 growth. The net revenue adjustment is to decrease booked revenues by \$70,346.91. The
14 total of the individual customer adjustments for rate switching to rate codes MO730 and
15 MO735 was a decrease in revenues of \$155,400.31. The total of the corresponding
16 customer growth adjustments to the other rate codes was an increase of \$85,053.40. The
17 customer growth adjustments to the other rate codes were calculated by multiplying the
18 average revenues in each month by the net number of customers switching to and from
19 either MO730 or MO735.

20 **Load Changes**

21 Q. What is the second specific criticism that Mr. Watkins raised toward the
22 Staff's annualization method for rate codes MO730 and MO735?

23 A. In line 18 to line 20, page 4 of his Rebuttal Testimony, Mr. Watkins stated
24 that "Ms., Hu's method for annualization for load change is a very difficult method to

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1 apply with a high degree of accuracy.” In addition, Mr. Watkins stated that “[l]ocal
2 knowledge of each customer must be used” in analyzing customers’ load change.

3 Q. What is the Staff’s method of annualization for load change?

4 A. As I described in my Direct Testimony, I have utilized two criteria in
5 determining whether a customer needs to be adjusted for load change. The first criteria is
6 a graphical comparison of each of the 180 customers’ monthly demand and energy use
7 over the test year (12 months) and the update period (9 months) to determine whether the
8 customer has experienced a significant increase or reduction in electric load that required
9 annualizing. The second criterion is a list of customers provided by the Company
10 identifying the customers that it expects to experience a significant change in load. As a
11 result of these two criteria, I identified only one MO735 customer and three MO730
12 customers to be annualized for significant load changes. All of these four customers have
13 publicly announced their expected load change and have exhibited significant load
14 changes. For other customers contained in the Aquila’s list, I have not been able to spot
15 significant changes in their loads and therefore have not made any adjustment. I agree
16 with Mr. Watkins that individual customer information is crucial in making the
17 determination of load change adjustments and that adjustment should not be made solely
18 based on graphical display without definite indication of specific customer knowledge.

19 Q. Is the Staff’s method a difficult method to apply?

20 A. Yes. It is a very detailed time consuming process; however, the Staff
21 believes that it was an important enough issue in this case to devote the required
22 resources to accurately adjust for individual customer load changes. In addition, the
23 billing units developed in this process will be used in the Company’s rate design case,

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1 Case No. EO-2002-384, in which the accuracy of individual customer data is even more
2 important.

3 Q. Did Mr. Watkins claim that the Staff had inaccurately applied this
4 method?

5 A. No. He only states that the Company's result is lower than the Staff's.

6 Q. Did the Company also use this method?

7 A. On page 5 of his Rebuttal Testimony and in the attached schedule ELW-1,
8 Mr. Watkins has provided an amount of \$398,000 as the Company's total adjustment to
9 revenues for MO730 and MO735 combined "adjusted for individual customer
10 additions/subtractions." Mr. Watkins has not provided an explanation or description of
11 the Company's calculation that resulted in that number, nor has he provided any
12 examples of faulty analysis by the Staff.

13 Q. What is your recommendation to the Commission?

14 A. I recommend that the Commission adopt the Staff's adjustments to the
15 Company's booked sales and rate revenue.

16 Q. Does this conclude your Surrebuttal Testimony?

17 A. Yes, it does.