

Exhibit No.:
Issues: Quality of Service
Witness: James L. Ketter
Sponsoring Party: MO PSC Staff
Type of Exhibit: Rebuttal Testimony
Case No.: EF-2003-0465
Date Testimony Prepared: September 10, 2003

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

FILED

DEC 05 2003

REBUTTAL TESTIMONY

Missouri Public
Service Commission

OF

JAMES L. KETTER

AQUILA, INC.

CASE NO. EF-2003-0465

Jefferson City, Missouri
September, 2003

Exhibit No.	23
Case No(s).	EF-2003-04 65
Date 10-20-07	Rptr. TW

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

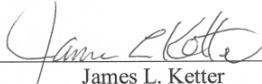
IN THE MATTER OF THE)
APPLICATION OF AQUILA, INC. FOR)
AUTHORITY TO ASSIGN, TRANSFER,)
MORTGAGE OR ENCUMBER ITS)
FRANCHISE, WORKS OR SYSTEM)

Case No. EF-2003-0465

AFFIDAVIT OF JAMES L. KETTER

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

James L. Ketter, of lawful age, on his oath states: that he has participated in the preparation of the following written Rebuttal Testimony in question and answer form, consisting of 5 pages of testimony to be presented in the above case, that the answers in the attached written Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.


James L. Ketter

Subscribed and sworn to before me this 9th day of September, 2003.



My commission expires _____

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


Notary Public

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1 registered Professional Engineer in the state of Missouri; my registration number is
2 E-20056. I am a member of the National Society of Professional Engineers and I am a
3 member of the Jefferson City Chapter of the Missouri Society of Professional Engineers.

4 Q. What is the purpose of your testimony in this case?

5 A. I address reliability indices utilized within the electric utility industry that
6 provide a measure of a utility's overall performance in delivering electric service.
7 Indices have been established that provide information regarding the average number of
8 times a customer is without electric service, the average interruption duration for all
9 customers and the average interruption duration for those customers interrupted. The
10 Staff recommends that the Commission direct Aquila, Inc. (Aquila) to submit reliability
11 indices for the Missouri service area of Aquila to Staff until Aquila's financial condition
12 attains investment grade and the Staff determines reporting this information is no longer
13 necessary. This information will assist the Staff in monitoring the quality of service
14 provided to Missouri customers in the Aquila service area.

15 Q. Are other Staff witnesses filing testimony regarding quality of service?

16 A. Yes. Staff witness J. Kay Niemeier is concurrently filing rebuttal
17 testimony concerning customer service measurements for Aquila's Call Center.

18 Q. Please identify the reliability indices that are utilized by the electric utility
19 industry.

20 A. System Average Interruption Frequency Index (SAIFI), System Average
21 Interruption Duration Index (SAIDI) and Customer Average Interruption Duration Index
22 (CAIDI) are the most common reliability indices used for electric utilities. Unadjusted
23 indices, or actual data, reflect the total time or number of outages for the period reviewed.

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Adjusted indices remove the time and frequency of events that are the result of major storms.

Q. What benefit is gained by removing major storms from the unadjusted data?

A. When major events, such as the ice storm of 2002 or the tornados that struck the western part of Missouri in May 2003, cause extended outages for a utility, the day-to-day operations of the electric system are obscured by the extended electric outages resulting from these events. Damage to electric facilities because of major storms and the subsequent outage that customers experience is important, but the adjusted number will better reflect the operation of the system under normal conditions.

Q. Explain these indices and how they measure reliability.

A. SAIFI (number of occurrences per customer) reflects the average frequency of interruptions per customer and is defined as the total number of customer interruptions for the period covered, divided by the total number of customers served. SAIDI (hours or minutes per customer) reflects the average interruption duration for the period covered and is defined as the sum of all customer interruption durations divided by the total number of customers served. CAIDI (hours or minutes per customer) reflects the average interruption duration and is defined as the sum of all customer interruption durations divided by the total number of customers interrupted.

These reliability indices reflect overall system performance. These measures can help in accessing the performance of the utility in the delivery of electric service by providing a quantitative measure to help define the quality of service.

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1 Typically, all of these indices are adjusted to eliminate the effects of adverse weather
2 conditions.

3 Q. Does Aquila presently calculate and maintain these indices?

4 A. Yes, this data is collected monthly.

5 Q. Customers often complain about momentary outages on the electric
6 system. Is there an index to track these outages?

7 A. Yes, the Momentary Average Interruption Frequency Index (MAIFI)
8 reflects the average number of momentary outages. These outages are the result of
9 devices that interrupt a fault on the system and re-energize after a short delay, without
10 outside human intervention.

11 Q. Is the MAIFI information compiled by Aquila?

12 A. Yes, this data is compiled on a quarterly basis.

13 Q. Has the Staff received the SAIFI, SAIDI, CAIDI and MAIFI information
14 from Aquila in the past?

15 A. Yes. In the UtiliCorp United, Inc. – St. Joseph Light & Power Company
16 merger, Case No. EM-2000-292, Aquila was ordered by the Commission (effective
17 December 24, 2000) to provide Staff with monthly reports of reliability standards for one
18 year. Following the expiration of this period, Aquila has provided this information on an
19 informal basis.

20 Q. Why is it necessary for the Staff to ask that the Commission require
21 Aquila to report this reliability data?

22 A. Aquila has continued to provide this information on a voluntary basis to
23 date, but absent a Commission order there is no assurance that Aquila will continue to do

1 so in the future. The financial pressure on Aquila may affect its willingness to collect,
2 calculate and provide this data to Staff. Therefore, Staff is requesting that Aquila be
3 ordered by the Commission to provide its service quality measurements to Staff on a
4 monthly basis until Aquila's financial condition attains investment grade and the Staff
5 determines that reporting is no longer necessary. Staff will monitor this information to
6 help determine the level of service that customers are receiving from Aquila. Reporting
7 this information monthly will provide an ongoing summary of the transmission and
8 distribution system's performance as measured by these reliability indices.

9 Q. What is Staff's recommendation?

10 A. Staff recommends that the Commission order Aquila to submit monthly
11 data for Missouri customers of Aquila Networks-MPS and Aquila Networks-L&P for
12 SAIFI, SAIDI and CAIDI in an electronic format, both unadjusted and adjusted indices to
13 exclude major storm events, to Staff within twenty-one (21) days of the last day of the
14 month being reported. In addition, Staff recommends that MAIFI information be
15 provided to Staff on a quarterly basis and transmitted with the monthly data at the end of
16 each quarter. Staff recommends that both reporting requirements extend until Aquila's
17 financial condition reaches investment grade and the Staff determines that reporting is no
18 longer necessary.

19 Q. Does this conclude your rebuttal testimony?

20 A. Yes it does.