Exhibit No.:
Issues: Electric Service Reliability
Witness: Glenn P. Keefe
Sponsoring Party: Aquila Networks-MPS And L&P
Case No.: ER-2005-0436

Before the Public Service Commission
of the State of Missouri

Surrebuttal Testimony

of

Glenn P. Keefe

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI
SURREBUTTAL TESTIMONY OF GLENN P. KEEFE
ON BEHALF OF AQUILA, INC.
D/B/A AQUILA NETWORKS-MPS AND AQUILA NETWORKS-L&P
CASE NO. ER-2005-0436

Q. Please state your name and business address.

A. My name is Glenn P. Keefe. My business address is 10750 East 350 Highway, Kansas City, Missouri.

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

A. I am employed by Aquila, Inc. as Operating Vice-President, Missouri Electric (Networks-MPS and Networks-L&P).

Q. Are you the same Glenn P. Keefe who submitted rebuttal testimony in this case?

A. Yes, I am.

EXECUTIVE SUMMARY

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of this surrebuttal testimony is to respond to prepared comments of Terry McClatchey, representing AG Processing (AGP) at the public hearing held in St. Joseph, Missouri on November 17, 2005.

Q. What issue did Mr. McClatchey bring to the Commission's attention to which you wish to respond?

A. Mr. McClatchey expressed concern about service reliability, stating in particular that "AGP normally experiences up to nineteen electrical and steam outages per year." I will provide statistics that will reflect good service reliability provided by Aquila, Inc. for

electric service.

ELECTRIC SERVICE RELIABILITY

Q. What level of service in general do you supply the customers of St. Joseph?

A. At the November 17, 2005 meeting, other customers did not complain about the service provided them from a reliability or restoration perspective. Chairman Davis even asked each of the customers that spoke at the hearing, "How is your service from a reliability and restoration perspective?" There were no negative comments from our customers and statements were made that service is good. I also note that there were no negative comments concerning reliability and restoration at the November 29, 2005 public meeting in Raytown, Missouri.

Q. What key performance indicators do you use to measure electrical customer service reliability?

A. SAIDI – System Average Interruption Duration Index (defined as the amount of minutes the average customer is out of service per period or total customer interruption durations divided by total customers)

SAIFI – System Interruption Frequency Index (defined as the average number of interruptions experienced by a customer or customers interrupted / total customers)

CAIDI – Customer Average Interruption Duration Index (defined as the number of minutes to restore service when a customer has an outage defined as customer interruption durations divided by customers interrupted)

Q. What are some of the major factors that affect these reliability indicators?

A. Weather is the most significant contributor. Utility companies normalize to some extent the abnormal weather conditions from year to year by using a weather normalized function. This method is taken into account only during major outages such as ice storms, major hurricane or tornado/wind events where a defined amount of customers are out for a specific period of time. The weather normalization does not remove all weather related outages but does extract the significant events.

Q. What are your weather normalized reliability indicators during the last three years?

A. The most recent three year average (2002 – 2004) for the St. Joseph area is as follows:

SAIDI = 105.2 minutes

CAIDI = 52.2 minutes

SAIFI = 1.99

Q. How does this compare with weather normalized EEI national averages?

A. The EEI data for 2004 is sent out late 2005. To compare with EEI, I used the three year average 2001 – 2003 averages. The weather normalized EEI national data is as follows:

SAIDI = 140.9 minutes

CAIDI = 107.9 minutes

SAIFI = 1.25

Q. Give me some sense of what a SAIDI of 105.2 minutes relates to actual customer reliability?

A. This is an average number of minutes a customer is without electrical service. Some customers have more and some customers have less (customer interruption durations /

total customers). This number represents an average yearly period over the last three years. A year consists of 525,600 minutes and if the customer is off 105.2 minutes, then the availability of electrical service is 99.98% available. The EEI national average SAIDI is 140.9 minutes and thus the 105.2 minutes experiences by our customers is 35.7 minutes better than the EEI national average.

Q. Mr. McClatchey insinuates that AGP has poor service reliability. What did he say?

A. During the public hearing of November 17, 2005 at St. Joseph, MO, Mr. McClatchey made the statement:

> "The price of utility services is of great concern. However, if customers experience abnormal amount of service interruptions, price becomes secondary. AGP's customers demand reliable service, and high quality products at reasonable prices. Similarly, we believe that utilities should be held to similar standards. Since AGP is multi plant continuous operation, many times it is difficult to start back up after a utility outage. Starting the plant under full load puts stress on equipment and the weak areas are exposed plus unloading filled systems become an issue itself, as safety is always a concern. AGP normally experiences up to nineteen electrical and steam outages per year. The problems ought to be identified and addressed promptly."

Q. How do you respond to Mr. McCatchey's statement?

A. First, I will respond to all electrical outages. Our records indicate that this year to date October, that AGP experienced one outage as would be recorded in regular utility SAIDI, CAIDI, SAIFI data. This outage occurred on August 19th at 8:40 PM and the duration was 96 minutes. In other words, the SAIDI is 96 minutes. This is below the regular area average SAIDI of 105.2 minutes. I assume, Mr. McCatchey may be referring to voltage drops as outages.

Q. What are voltage drops or irregularities?

A. From time to time, other areas or customers experience outages or momentary breaker operations. This causes voltage irregularities on the system that may affect AGP's operations. In AGP's case, this type event typically lasts for up to 8 cycles of the 60 cycle frequency or about a 10^{th} of a second.

Q. Is this unusual in utility operations?

A. No. The electrical grid is tied together and at times, especially during storms, various breaker operations are experienced in the system. Power is not lost but voltage drops may occur.

Q. Can voltage drops cause problems for a customer like AGP?

A. Yes. If the voltage change is significant and a sensitive part of the process such as electronic equipment is involved, it could cause a process problem.

Q. If AGP experienced only one power outage but experienced voltage irregularities, what can be done?

A. As a former plant manager, I understand the concerns of manufacturing plants with this issue and the need to keep production at maximum. At our plants, we install devices that decrease this potential process problem. These devices are called a UPS (Uninterruptible Power Supply) and are installed in critical electrical processes at manufacturing plants. We have this equipment at our own power plants. It is common for this equipment to be installed by the customer if they have processes that require sensitive equipment.

Q. Have you worked with other customers concerning this issue?

A. Yes. We have brought in vendors to talk with customers on this problem at our

"Customer Appreciation Day" event. For large industrial customers with critical processes, we have also taken a look at their process and made recommendations or recommended others to review the system. This has been also discussed with AGP.

Q. Does Aquila meet with AGP regularly on their outage concerns?

A. Yes. Both electric and steam outages.

Q. Does this conclude your prefiled surrebuttal testimony?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

County of Jackson)
) ss
State of Missouri)

AFFIDAVIT OF GLENN P. KEEFE

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

Glenn P. Keefe

Subscribed and sworn to before me this 6th day of December, 2005.

Notary Public

My Commission expires:

May 4, 2008

ALEXA NUNNERY NOTARY SEAL MY COMM. EXPIRES MAY 4, 2008 JACKSON COUNTY NOTARY PUBLIC STATE OF MISSOURI