

Exhibit No.: 011  
Issues: Hedging Program  
Witness: Gary L. Gottsch  
Sponsoring Party: Aquila Networks-MPS  
& L&P  
Case No.: ER-

Before the Public Service Commission  
of the State of Missouri

**FILED**  
APR 27 2007  
Missouri Public  
Service Commission

Direct Testimony

of

Gary L. Gottsch

**\*\*Denotes Highly Confidential Information\*\***

**NP**

*Aquila* Exhibit No. 11  
Case No(s) ER-2007-0001  
Date 4-27-07 Rptr xf

**TABLE OF CONTENTS**  
**DIRECT TESTIMONY OF GARY L. GOTTSCH**  
**ON BEHALF OF AQUILA, INC.**  
**D/B/A AQUILA NETWORKS-MPS AND AQUILA NETWORKS-L&P**  
**CASE NO. ER-\_\_\_\_\_**

<b>EXECUTIVE SUMMARY.....</b>	<b>2</b>
<b>HEDGING.....</b>	<b>2</b>

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI  
DIRECT TESTIMONY OF GARY L. GOTTSCH  
ON BEHALF OF AQUILA, INC.  
D/B/A AQUILA NETWORKS-MPS AND AQUILA NETWORKS-L&P  
CASE NO. ER-\_\_\_\_\_**

1 Q. Please state your name, business address, employer and present position.

2 A. My name is Gary L. Gottsch. My business address is 10700 East 350 Hwy, Kansas City,  
3 Missouri 64138. I am employed by Aquila, Inc. ("Aquila" or "Company") as a Senior  
4 Gas Supply Representative in the Energy Resources Division of Aquila Networks, an  
5 operating division of Aquila.

6 Q. Can you briefly describe your education and work experience?

7 A. I have Bachelor of Science (BS) in Business Administration from The University of  
8 Nebraska at Omaha. I joined Aquila in June of 1999 working in the Merchant Division,  
9 initially responsible for scheduling gas on various interstate pipelines. In April 2000, I  
10 began handling fuel management responsibilities for our natural gas fired generation  
11 units. This consisted of day ahead and real time interactions with the power marketers  
12 responsible for dispatching Aquila's Merchant fleet as well as third party customers. My  
13 duties included purchasing supply, managing transport, pipeline interaction and  
14 balancing natural gas on various interstate pipelines for Aquila's merchant division's  
15 Capacity Services group. In August 2003, I assumed my current position with Aquila  
16 Networks performing similar responsibilities for our gas fired generation units in addition  
17 to managing the natural gas hedging programs for Aquila's electric utilities.

18 Q. What are your job responsibilities?

1 A. The primary responsibilities in this position are to: 1) Coordinate fuel needs with the day  
2 ahead and hourly dispatch operators and act upon those needs. 2) Negotiate  
3 transportation and fuel supply contracts for each generating facility. 3) Implement and  
4 manage any fuel hedging strategies for our electric utilities. 4) Interact with various  
5 pipelines and local distribution companies ("LDCs").

6 **EXECUTIVE SUMMARY**

7 Q. What is the purpose of your testimony?

8 A. The purpose of my testimony is to provide background on how Aquila's natural gas  
9 hedging program for electric generation and on-peak purchased power is managed.

10 **HEDGING PROGRAM**

11 Q. Can you summarize Aquila's natural gas hedging program for electric generation and on-  
12 peak purchased power?

13 A. Aquila's approach for hedging natural gas and on-peak purchased power is to procure  
14 one-third of the monthly forecast quantity through fixed price NYMEX swaps, one-third  
15 in option contracts (straight calls or collars), and the remaining one-third at the then  
16 prevailing daily or monthly market indexes. These positions are acquired over a 28  
17 month process that allows the Company to capture a greater averaging effect.

18 Q. Why does Aquila believe that this hedging approach is appropriate?

19 A. This approach allows Aquila to mitigate the natural gas price volatility (via fixed price  
20 and option contracts) while still allowing it to take advantage of decreases in natural gas  
21 prices (via option contracts and index purchases).

22 Q. Why is natural gas used to hedge on-peak purchased power?

1 A. Since a large portion of Aquila's budget is tied to purchased power, Aquila believes that  
2 it is appropriate to mitigate this price exposure and minimize this risk. Approximately  
3 \*\* \_\_ \*\*% of this purchased power is to cover on-peak needs and it's these volumes that  
4 have the greatest exposure to volatile markets. On-peak power prices are closely tied to  
5 natural gas prices as loads increase. When the full amount of coal based capacity is  
6 absorbed, the next set of units to come online are staggered by heat rates, namely gas  
7 fired combined cycle combustion turbines, then simple cycle peaking units. For example,  
8 the local power market is trading at coal priced generation early in the morning and as the  
9 load picks up, the next prices quoted in the market area are tied to what gas fired  
10 combined cycle turbines would cost to run. As loads continue to build, the next level of  
11 prices are equivalent to what peaking units would cost to come online. Rather than  
12 implement a generally less efficient on-peak purchase power hedge plan at a remote hub,  
13 Aquila converts on-peak purchase power into equivalent quantities of natural gas. By  
14 hedging with NYMEX based swaps, the Company has increased flexibility due to the  
15 much more liquid NYMEX natural gas markets.

16 Q. What do you mean by a remote hub?

17 A. A hub is an interchange where multiple electric transmission lines interconnect and form  
18 a market center. A remote hub is one that is not as actively traded due to various factors,  
19 including location and number of interconnecting lines.

20 Q. How is natural gas used as a hedge for on-peak purchase power?

21 A. By using a forward market based heat rate that is tied to gas and power prices, Aquila is  
22 able to convert purchase power budgeted volumes into mmbtus. The heat rate is

1       calculated by dividing a forward power price plus basis, by corresponding NYMEX  
2       Natural Gas price with appropriate basis and transport for the mid-continent.

3    Q.    Can you provide an example of how this works?

4    A.    Let's say for July 2007 Aquila has a budget of 100,000 MWH's of on-peak purchase  
5       power. Conversations are held with the day ahead and hourly power traders to ascertain  
6       which forward power prices most closely resemble Aquila's market for the time frame in  
7       question. Let's assume the consensus is that Entergy + \$3 seems reasonable for July and  
8       that that market is trading at \$70. July Natural Gas futures are trading at \$10 and basis is  
9       currently minus \$1 for the mid-continent with transport charges of \$.35. Hence, our heat  
10      rate to use is,  $(\$70 + \$3) / (\$10 - \$1 + \$.35) = 7.807$ . This produces a theoretical  
11      exposure to 780,700 mmbtus  $(100,000 \times 7.807)$  in July of which approximately 260,000  
12      (1/3) would be hedged by futures swaps and another 260,000 with option contracts.

13   Q.    How are Aquila's budgeted volumes determined?

14   A.    They are determined by Aquila's Resource Planning Group.

15   Q.    Please explain.

16   A.    Prior to July 15th of each year, the Resource Planning Group will establish initial  
17      volumetric forecasts for the natural gas and natural gas equivalent on-peak purchase  
18      power needed to meet Aquila's net system requirements during the subsequent years.  
19      Energy Resources will then update current years and establish quotas for the next roll out  
20      year. Budget reruns can occur within the year and updates to volumes are made as  
21      necessary.

22   Q.    What is the timeline for these purchases?

1 A. After receiving volumes from the Resource Planning Group, Energy Resources will then  
2 purchase a proportional quantity of fixed-price and options during each month of the  
3 subsequent three years that is sufficient to have fully procured the one-third volume of  
4 fixed and options by October 31<sup>st</sup> of the calendar year immediately proceeding the  
5 calendar year of need (e.g., purchase of calendar 2009 monthly fixed needs in equal  
6 quantities during the 28 months from July 2006 through October 2008). Purchases occur  
7 on the day the spot contract expires to reduce volatility risk within the month. For  
8 clarification, June 2006 futures roll off on May 26<sup>th</sup>, which is the day Aquila will also  
9 make purchases for 2007 and 2008, potentially avoiding liquidation of positions on down  
10 days and making new purchases on higher days previous to expiration.

11 Q. Does Aquila ever deviate from this plan?

12 A. Yes. There are some circumstances that require flexibility. However, before deviating  
13 from the plan Energy Resources will discuss the situation with one of Aquila's  
14 Commodity Risk Management representatives and seek feedback regarding possible  
15 solutions.

16 Q. What are some scenarios in which this might occur?

17 A. One scenario would be a sudden spike in prices on expiration, due to a weather event that  
18 could be interpreted as short term. Energy Resources would confer with a Commodity  
19 Risk Management representative to get his or her opinion about delaying the next round  
20 of purchases. Another situation is with the option purchases. There is not much liquidity  
21 in options past 18 months out, so possible solutions are to delay purchases, package  
22 purchases into larger single month blocks, or add additional fixed positions until the

1 option market becomes more liquid. The ultimate goal is to have positions back on plan  
2 as quickly as reasonable.

3 Q. Did Aquila deviate from its plan in 2005?

4 A. The only deviation from the plan in 2005 was the schedule of the Company's option  
5 purchases. As stated earlier, liquidity becomes an issue the farther out you go in time, so  
6 to attract counterparties Aquila has to rearrange its option purchases. For example, if in a  
7 particular purchase cycle the Company is required to buy one contract of each month, it  
8 may buy 10 – 15 contracts of a single month. The Company would then make up  
9 purchases later in the time cycle as liquidity improves. Aquila is currently using this  
10 similar approach for its 2008 positions as we had for our 2006 and 2007 positions.

11 Q. What is Aquila's hedged price for 2006, 2007 and 2008 as of today?

12 A. As of May 31<sup>st</sup>, 2006 Aquila's fixed price average for 2006 positions was \$\*\* \_\_\_\_ \*\* and  
13 the average strike price for call options was \$\*\* \_\_\_\_ \*\*. For 2007 the fixed average was  
14 \$\*\* \_\_\_\_ \*\* with an average option strike price of \$\*\* \_\_\_\_ \*\*. In 2008 Aquila has an  
15 average fixed price of \$\*\* \_\_\_\_ \*\* and an average option strike of \$\*\* \_\_\_\_ \*\*.

16 Q. Do you have additional hedges to purchase in any of these years?

17 A. Yes. As of May 31<sup>st</sup> Aquila had roughly \*\* \_\_\_\_ \*\*% of its 2007 hedges yet to place, and  
18 for 2008 approximately \*\* \_\_\_\_ \*\*% of the Company's plan remained to be hedged.

19 Q. Does this conclude your testimony?


20 A. Yes.



In the matter of Aquila, Inc. d/b/a Aquila Networks-MPS and Aquila Networks-L&P, for authority to file tariffs increasing electric rates for the service provided to customers in the Aquila Networks-MPS and Aquila Networks-L&P area

[illegible]

Gary L. Gottsch, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Direct Testimony of Gary L. Gottsch;" 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.

  
\_\_\_\_\_  
Gary L. Gottsch

Subscribed and sworn to before me this 3rd day of July, 2006.

of July, 2006.

Terry D. Lutes  
Notary Public  
Terry D. Lutes

8-20-2008



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


**STATE OF MISSOURI**

**OFFICE OF THE PUBLIC SERVICE COMMISSION**

**I have compared the preceding copy with the original on file in this office and I do hereby certify the same to be a true copy therefrom and the whole thereof.**

**WITNESS my hand and seal of the Public Service Commission, at Jefferson City, Missouri, this 15<sup>th</sup> day of June 2012.**



  
\_\_\_\_\_  
**Steven C. Reed**  
**Secretary**