

Exhibit No.:
Issues: Steam Sales
Witness: David C. Roos
Sponsoring Party: MO PSC Staff
Type of Exhibit: Direct Testimony
Case No.: ER-2007-0004
Date Testimony Prepared: January 18, 2007

MISSOURI PUBLIC SERVICE COMMISSION
UTILITY OPERATIONS DIVISION

DIRECT TESTIMONY

OF

DAVID C. ROOS

AQUILA, INC.

d/b/a AQUILA NETWORKS-L&P

CASE NO. ER-2007-0004

Jefferson City, Missouri
January 2007

FILED

MAY 2 2007

**Missouri Public
Service Commission**

Staff Exhibit No. 224
Case No(s). ER-2007-0004
Date 4-12-07 Rptr KE

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


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 service areas.)

Case No. ER-2007-0004

AFFIDAVIT OF DAVID C. ROOS

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

David C. Roos, of lawful age, on his oath states: that he has participated in the preparation of the following Direct Testimony in question and answer form, consisting of 5 pages of Direct Testimony to be presented in the above case, that the answers in the following Direct 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.



David C. Roos

Subscribed and sworn to before me this 16th day of January, 2007.



SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942086



Notary Public

My commission expires 9-21-10

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OF

DAVID C. ROOS

AQUILA, INC.

d/b/a AQUILA NETWORKS-L&P

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DIRECT TESTIMONY

OF

DAVID C. ROOS

AQUILA, INC.

d/b/a AQUILA NETWORKS-L&P

CASE NO. ER-2007-0004

15 Q. Q. Please state your name and business address.

16 A. My name is David C. Roos and my business address is Missouri Public Service
17 Commission, P.O. Box 360, Jefferson City, MO 65102.

18 Q. What is your present position with the Missouri Public Service Commission
(Commission)?

19 A. I am a Regulatory Economist III in the Economic Analysis Section, Energy
20 Department, Operations Division of the Missouri Public Service Commission.

21 Q. What is your educational background and work experience?

22 A. I graduated from the University of Notre Dame, Notre Dame, Indiana, with a
23 Bachelor of Science degree in Chemical Engineering in May 1983. I received a Master of
24 Arts degree in Economics from the University of Missouri in December 2005. I have been
25 employed at the Missouri Public Service Commission as a Regulatory Economist III since
26 March 2006. Prior to joining the Public Service Commission, I taught introductory
27 economics and conducted research as a graduate teaching assistant and graduate research
28 assistant at the University of Missouri. Prior to the University of Missouri, I was employed
29 by several private firms where I provided consulting, design, and construction oversight of
30 environmental projects for private and public sector clients.

Direct Testimony of
David C. Roos

1 Q. Have you previously filed testimony before the Commission?

2 A. Yes, I have. I filed testimony in The Empire District Electric Company's most
3 recent general electric rate case, Case No. ER-2006-0315; and Union Electric Company d/b/a
4 AmerenUE's most recent general electric rate case, Case No. ER-2007-0002.

5 **EXECUTIVE SUMMARY**

6 Q. What is the purpose of your direct testimony?

7 A. In this filing I present adjusted monthly sales of steam (measured in MMBtu)
8 for the steam operations of Aquila Networks, Inc, d/b/a Aquila Networks - L&P (L&P).
9 Steam sales are based upon a test year of January 1, 2005 - December 31, 2005, updated for
10 known and measurable changes through September 30, 2006. My direct testimony describes
11 my role in the development of specific adjustments to test year steam sales.

12 Q. Does Staff have a recommendation for the Commission regarding sales for
13 L&P's steam operations?

14 A. Staff recommends that the Commission adopt my adjustments to test year
15 MMBtu sales. If adopted, my adjusted level of steam sales will be used as an input into the
16 development of hourly steam loads in this case.

17 **STEAM SALES**

18 Q. How are hourly steam loads used in an electric case?

19 A. My calculated steam sales are used to compute the hourly steam loads which
20 are used in the calculation of L&P's electric fuel and purchased power expense. Please see
21 Staff witness Shawn E. Lange's direct testimony for the hourly steam load calculations and
22 Staff witness David W. Elliott's direct testimony for the appropriate level of electric fuel and
23 purchased power expense.

Direct Testimony of
David C. Roos

1 Q. Please describe the characteristics of the steam sales you have developed.

2 A. The Missouri steam sales, expressed in millions of British thermal units
3 (MMBtu), have these characteristics: (i) they have been reviewed at the individual customer
4 level; (ii) they have been annualized to reflect billing corrections; (iii) they have been adjusted
5 to reflect any load growth (or decline) at the individual customer level; (iv) they have been
6 adjusted to reflect anticipated load growth due to the addition of new customers.

7 Q. Why were the adjustments to test year steam sales and rate revenue done by
8 individual customer?

9 A. Steam customers are heterogeneous in terms of both size and load factor and,
10 as a consequence, aggregate methods of analyzing them are generally not very accurate.
11 Adjusting each account separately reflects the unique circumstances of each customer.

12 Q. Please describe the rationale and process for annualizing billing corrections for
13 individual steam accounts.

14 A. Aquila made billing corrections to individual steam accounts that applied to
15 usage during the test year. Billing corrections for a particular month are generally recorded
16 by L&P in a subsequent month. I adjusted the individual customer monthly sales as recorded
17 by L&P, to match what the test year billing data would have looked like if all of the original
18 bills had been correct and recorded by L&P in the month in which the usage occurred. Not
19 adjusting for these billing corrections would distort the monthly test year data required for my
20 analysis of steam sales and hourly loads.

21 Q. What changes to steam sales have you accounted for that occurred or are
22 projected to occur before the end of the true-up period in this case?

23 A. I have made adjustments to steam sales to reflect:

Direct Testimony of
David C. Roos

- 1 (i) the closing of two existing accounts,
2 (ii) the expansion of one existing account, and
3 (iii) the entrance of a new steam account.

4 Overall, these changes are estimated to increase total annual steam sales for L&P by 367,483
5 MMBtu from test year 2005 steam sales, an increase of about 20%.

6 Q. Please describe how the closing of two existing steam accounts during the test
7 year was treated in your analysis.

8 A. All recorded steam sales for the two accounts that closed during the test year
9 were removed from test year sales. In effect, these two accounts were treated as if they had
10 received no steam service during the test year so that projections of future steam sales will not
11 reflect their presence.

12 Q. Please describe how the expansion of one existing steam account was treated
13 in your analysis.

14 A. Data for this customer was available through October 2006. Analysis of this
15 customer's monthly usage indicates that the expansion was not completed until April 2006.
16 Usage in the test year months of April through October was replaced with data for the same
17 months in 2006. The average monthly steam use for the period April through October 2006
18 was used to replace the usage in the test year months prior to April and after October.

19 Q. Please describe your adjustment to account for the addition of a new steam
20 account in your analysis.

21 A. This new customer began receiving steam in December 2005 and steadily
22 increased monthly steam usage through March 2006. Monthly steam sales after March 2006
23 reached a plateau at a level comparable to March 2006 usage. I replaced the zero usage data

Direct Testimony of
David C. Roos

1 in the months of March through October of the test year with usage data in the corresponding
2 months in 2006. The average monthly steam use for the period March 2006 through October
3 2006 was used to fill in the missing usage in the test year months prior to March and after
4 October

5 Q. Does this conclude your direct testimony in this case?

6 A. Yes, it does.