Before the Public Service Commission
of the State of Missouri

Surrebuttal Testimony

of

Trenton W. Cozad

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SURREBUTTAL TESTIMONY OF TRENTON W. COZAD
ON BEHALF OF AQUILA, INC.
D/B/A AQUILA NETWORKS-MPS AND AQUILA NETWORKS-L&P
CASE NO. ER-2007-0004

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI
SURRREBUTTAL TESTIMONY OF TRENTON W. COZAD
ON BEHALF OF AQUILA, INC.
D/B/A AQUILA NETWORKS-MPS AND AQUILA NETWORKS-L&P
CASE NO. ER-2007-0004**

1 Q. What is your name?

2 A. Trent Cozad

3 Q. What is your title?

4 A. Vice President, Gas Supply Services

5 Q. Have you provided any direct or rebuttal testimony in this case?

6 A. No, I have not.

7 Q. How long have you been with Gas Supply Services?

8 A. I have been working in Gas Supply Services since 1993.

9 Q. What have been your responsibilities in Gas Supply Services?

10 A. I started as a gas buyer. I spent 4 years as the Director of Gas Purchasing. My

11   key responsibility was buying gas and I am very familiar with the dynamics of the

12   gas procurement process. At that time, I was also purchasing financial derivative

13   products such as swaps for our large customers to help them hedge against

14   volatility and price risk. In 1997, I became the Director, Product Development.

15   In that role, I was responsible for developing complex derivative products for

16   transportation customers. I am currently responsible for overseeing the gas

17   supply function that supports both the gas and electric utilities. In that capacity, I

18   am responsible for managing the design and execution of the gas supply portfolio

1   and hedging strategy and manage the physical purchases of natural gas for both

2   the gas and electric utilities. I have been in this role since 2000.

3   Q.   Can you define what is meant by a hedging strategy within the context of this

4   case?

5   A.   The goal of a hedging strategy is to mitigate the potential impact of the volatility

6   of natural gas and purchase power prices on the consumer. A hedging strategy

7   will not guarantee the lowest price but instead is implemented to provide stability.

8   Q.   Why is a hedging strategy so important for a natural gas and electric utility in

9   today's market environment?

10   A.   As documented in the attached chart (Schedule TWC-2), by far one of the most

11   volatile commodities in today's market is natural gas. Volatility represents the

12   relative rate of price moves (up and down). If prices move up and down rapidly,

13   they are considered volatile. If prices do not change, they have low volatility.

14   This volatility underlies the importance for utilities to implement hedging

15   strategies and also demonstrates how vulnerable utilities are to achieve a

16   reasonable return when the volatility is beyond their ability to control. Price

17   volatility can be created by many factors including an abnormal weather condition

18   like a heat wave or hurricane in the Gulf Coast, a transmission path outage, an

19   unplanned major generation plant outage, national gas storage inventory levels, or

20   by simple perception changes of commodities traders.

21   Q.   Do you have both education and experience in hedging or risk management

22   strategies?

1   A.   Yes. I have attended several industry seminars on risk management. The last such

2   seminar was in Houston, Texas, on March 8-9, 2007. In addition, I have managed

3   the Gas Supply Portfolio for Aquila's natural gas utilities since September, 2000.

4   I am very familiar with the concepts we use to hedge our supply portfolio.

5   Q.   What is the purpose of your testimony?

6   A.   I am responding to the Rebuttal testimonies of Mr. Donald Johnstone, Sedalia

7   Industrial Energy User's Association and Ag Processing Inc and Staff witness

8   Cary Featherstone. Mr. Johnstone is proposing a 50/50 sharing mechanism above

9   a base price that contrary to his testimony does not align the interests of Aquila

10   and its ratepayers (Johnstone Rebuttal, page 11, lines 17-20). My testimony will

11   show that his proposal is not symmetrical between Aquila and its customers and

12   in fact places Aquila at a significant financial risk, therefore inhibiting if not

13   prohibiting Aquila from the opportunity of earning a fair return. Mr. Featherstone

14   is proposing an IEC (Featherstone Rebuttal, page 6, lines 6-9). My testimony will

15   show that based upon a statistical analysis, the potential range of prices being

16   proposed by Mr. Featherstone is too narrow and subjects Aquila to significant

17   risk.

18   Q.   What analysis have you used to support your testimony?

19   A.   When making decisions about gas supply portfolio management, we use a tool

20   called a distribution curve. I have been using these distribution curves for many

21   years in my responsibilities in gas supply. I had these distribution curves

22   prepared for me so that I could evaluate the potential impact of implementing the

23   FAC's proposed by Mr. Featherstone and Mr. Johnstone.

1 Q. What is the purpose of creating the distribution curves included in your testimony

2 as Schedule TWC-1?

3 A. We have been using this type of analysis as one of our criteria in evaluating and

4 projecting gas price movements as we execute our portfolio strategy.

5 Q. Please explain.

6 A. I had a price distribution curve developed for the time period of April, 2008 –

7 October, 2008. A price distribution curve captures the expected price frequency

8 for the defined periods which can be used to determine the price expectation and

9 corresponding ranges of prices. The X axis represents monthly NYMEX natural

10 gas prices. The Y axis represents percentages associated with the frequency of

11 occurrence. It should be noted, 50% represents the most frequency of occurrence.

12 Q. Why did you use the April-October 2008 time period?

13 A. It is my understanding that the rates set in this case will become effective in June

14 2007 and that Aquila would not be filing another rate case until 2008 with rates

15 effective in 2009. Therefore, the summer of 2008 would represent the most

16 significant period of exposure.

17 Q. According to this analysis, what is the price with the highest frequency of

18 occurrence?

19 A. The most frequent price occurrence for April, 2008 to October, 2008 was $7.332

20 (round to $7.33).

21 Q. What is a standard deviation?

1   A.   A standard deviation is defined as the measure of a spread of values. One

2   standard deviation represents approximately a 68.3% chance of occurrence in the

3   spread of data. Two standard deviations represent a 95.5% chance.

4   Q.   What are the one standard deviation prices?

5   A.   The most common price is $7.332 (round to $7.33). On the upside, it is $10.572

6   (round to $10.57) and on the downside, it is $5.086 (round to $5.09). This means

7   that 68.3% of the period from April to October 2008, you can expect the prices to

8   fall between $5.09 on the low side and $10.57 on the high side. This range for

9   one standard deviation is significantly broader than the range of $6-$9 being

10   proposed by Mr. Featherstone.

11   Q.   What does this illustrate?

12   A.   This demonstrates that the risk reward around a set price is not symmetrical.

13   With the same probability of occurrence, an upward movement of one standard

14   deviation creates a price increase of $3.24 per mcf while a one standard deviation

15   drop in prices creates a $2.24 per mcf impact.

16   Q.   What does this lack of symmetry mean?

17   A.   Since Mr. Johnstone is proposing a sharing of 50/50 above and below a set price,

18   it shows that the impact on Aquila is distorted. Aquila only recovers 50% of $3.24

19   above the base price and only retains 50% of $2.24 when the price is below the

20   base price.

21   In an equal risk situation (one standard deviation), upward movement generates a

22   bigger differential from the mode.

23   Q.   What does a two standard deviation comparison show?

5

1 A. This means that 95.5% of the time, one can expect the April to October 2008

2 prices to fall between $3.53 and $15.24.

3 Q. Why is that important from a risk management point of view?

4 A. From a dollar standpoint, there is not an equal risk. Anyone with risk on upward

5 price movements would stand to lose against his counterpart with risk on

6 downward price movements. It is not an even risk.

7 Q. That sounds like there is more risk prices can go up, then down. Is that so?

8 A. While there is an equal chance of them going up or down, the absolute value of an

9 increase is greater than a decrease which creates the disparity in financial impact.

10 Therefore, it is always a disadvantage if someone takes the risk on upward price

11 movement without extra compensation. There is a market bias of the market

12 going higher versus lower.

13 Q. What else does this graph show us?

14 A. It shows the statistical probability that prices will move either above or below a

15 most probable price. In one standard deviation, there is a 68.3% chance (basically

16 2 in 3) that April to October prices in 2008 will be between $5.09 and $10.57.

17 Again, prices might go up $3.24 versus going down $2.24.

18 Q. Mr. Cozad, is there any other risk factor which should be discussed?

19 A. Yes, all of this analysis accounts for FOM (First of Month) pricing or monthly

20 NYMEX pricing. We purchase gas for the power plants as requirements change

21 based on changes in daily demand created by such actions as hot weather or

22 unanticipated interruptions in supply. Unfortunately, it is usually hot days during

23 the summer when the daily prices are over the FOM prices. These purchases are

1   made during hot days in the summer when power generation is needed. This

2   increase in demand tends to drive an increase in daily prices.

3   Q.   Why is this relevant?

4   A.   To cover this daily price risk, the company would need to buy protection that

5   would allow the company to call on daily supply at the First of Month (FOM)

6   pricing. In order to purchase the products to hedge your risk, the market is going

7   to demand a $.30 premium measured via RFP's completed. Furthermore, this

8   premium must be paid everyday regardless of the daily purchase. In essence, if

9   gas is only used 10 days in a 30 day month, the premium is $.90 per unit. This

10   daily price risk is real and is easy to measure via these RFPs.

11 Q.   So, in addition to the risk for FOM prices going up, there is an additional risk for

12   supply prices increasing in the daily purchases.

13 A.   Yes. And it is a difficult risk to hedge because you don't know when you need it.

14 Q.   What are the implications of this risk when you look at the design of a FAC?

15 A.   The inability to project if or when the within the month purchases will be required

16   makes a rigid approach to a FAC design untenable for a utility. The incremental

17   financial exposure above FOM prices is a significant exposure that cannot be

18   effectively anticipated or managed by a utility. We experience this same dilemma

19   in the gas utility business where we have the PGA process.

20 Q.   Do all four of Aquila's natural gas utilities have PGA capability to regularly

21   recover or refund costs that are above or below a set cost?

22 A.   Yes.

1   Q.   Are after-the-fact prudence reviews a part of the normal process when dealing

2   with PGA's?

3   A.   Yes.

4   Q.   Do you agree with witnesses Johnstone, Featherstone, and Trippensee that after-

5   the-fact prudence reviews are not an effective incentive or motivation for utilities

6   to manage natural gas and energy costs?

7   A.   I absolutely disagree.

8   Q.   Please explain.

9   A.   My department feels very accountable for effectively executing our supply

10   portfolio procurement plans. We view any prudency disallowance as a negative

11   statement about our ability to achieve effective execution. Therefore, we

12   emphasize the importance of both internal and external communication. First, we

13   have set a monthly meeting process where gas supply personnel, corporate

14   support personnel, and executive management review monthly and year-to-date

15   activities to ensure that the portfolio strategy is being executed appropriately and

16   to discuss current market conditions that might impact the strategy. Minutes are

17   taken in these meetings to document the decisions that were made. Second, we

18   meet at least once a year with Commission staff to discuss the results of executing

19   the portfolio and any changes we might make in the following year. If within a

20   year we see reason to vary from the stated plan, we contact Commission staff to

21   review the proposed changes. We have found these communications very

22   beneficial in developing an understanding for the decision making process. It is
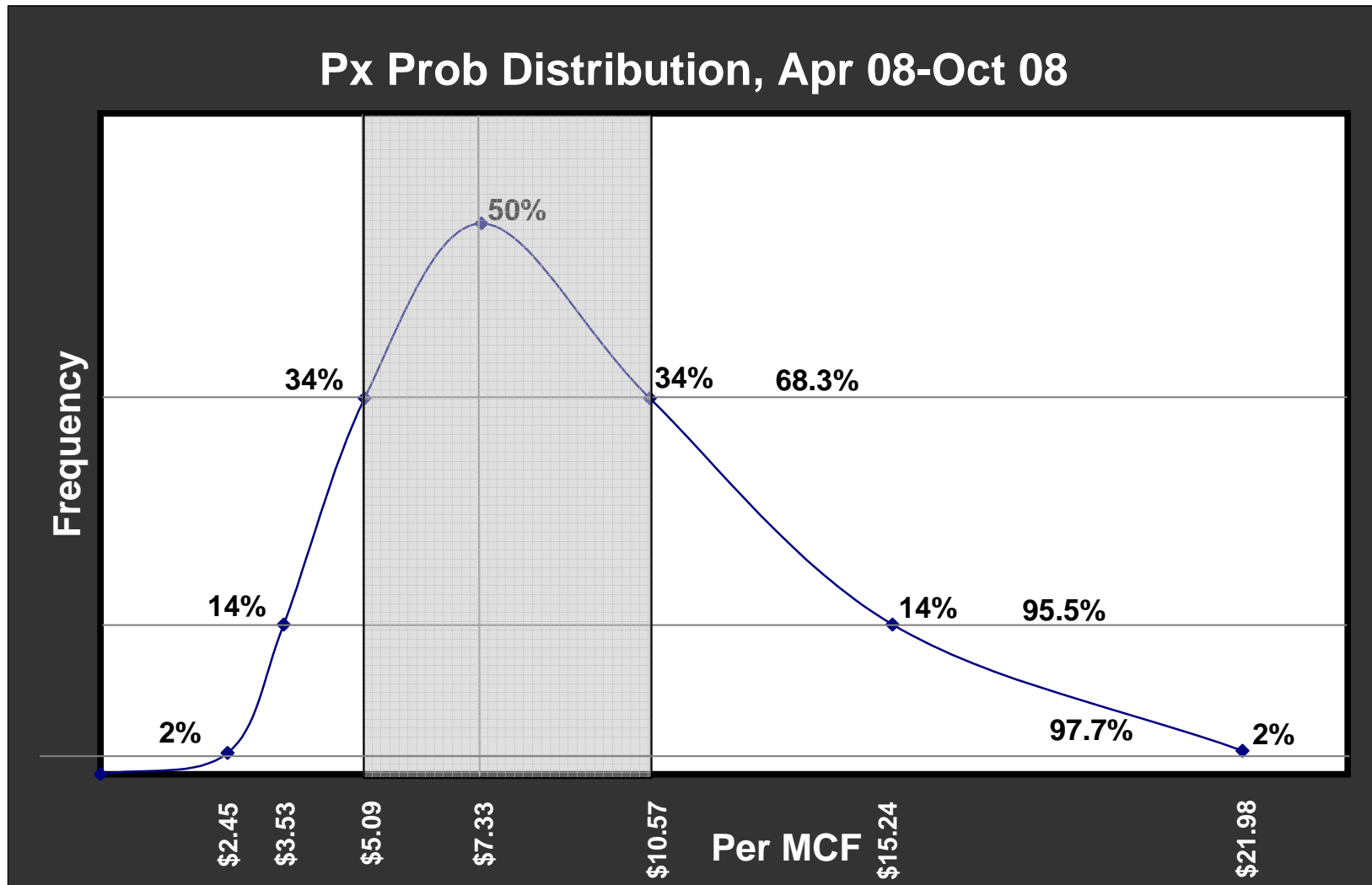
1   my understanding that a comparable process exists for the financial hedging

2   strategy for the Missouri electric utilities.

3   Q.   Your testimony emphasizes the importance of the futures market in setting prices.

4   Given your background in Gas Supply, how would the market establish a price

5   today for a July, 2008 delivery.
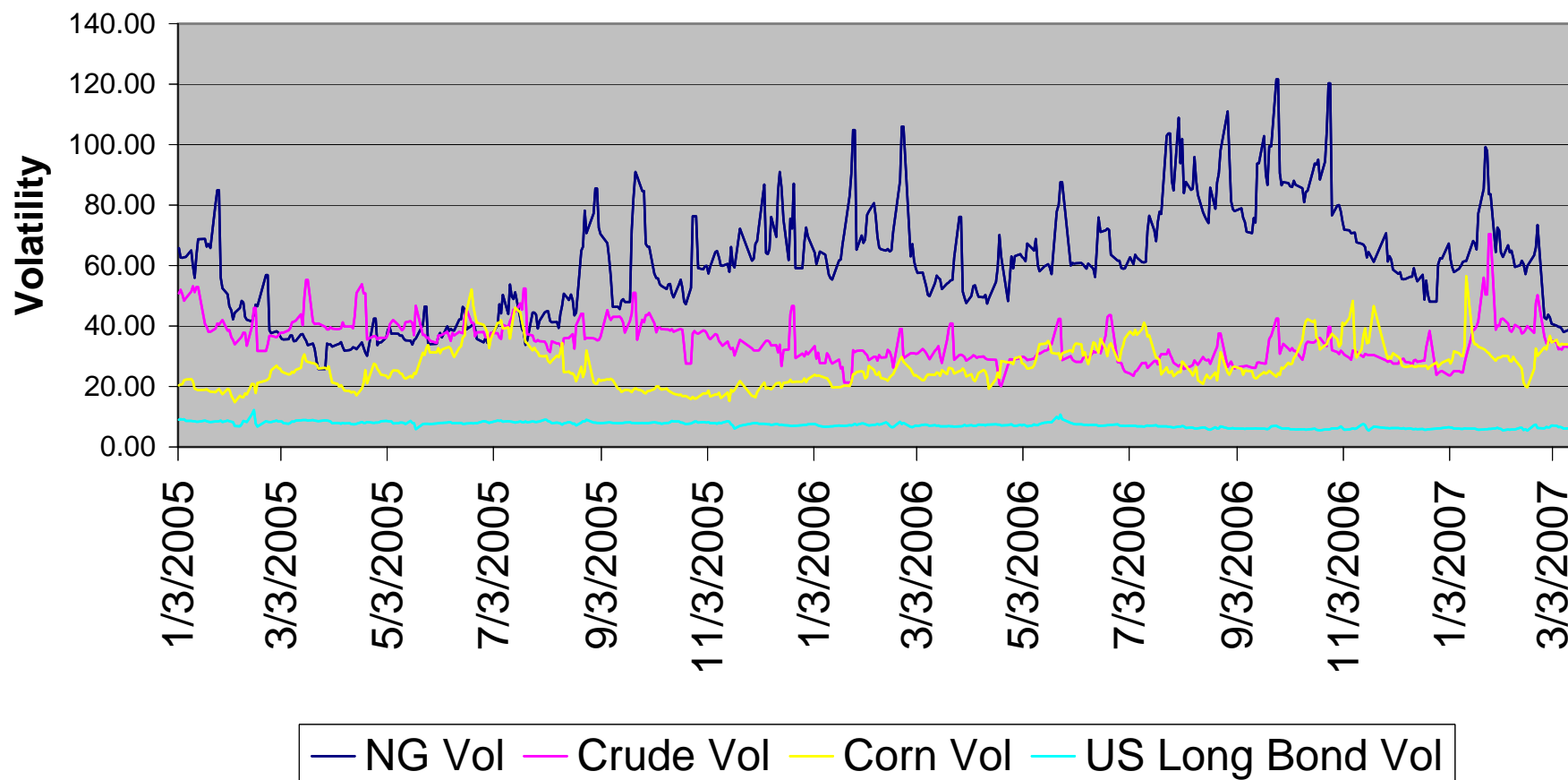
6   A.   Clearly, the market would not use an analysis of historical prices to determine a

7   price for future delivery. In my 13 years of experience at Aquila in buying gas, I

8   can emphatically state that a price for a firm contract of gas to be delivered in

9   July, 2008 would be based upon the NYMEX price for that month (July, 2008).

10   Q.   Does this conclude your testimony?

11   A.   Yes.

Px Prob Distribution, Apr 08-Oct 08

Frequency

50%

34%   34%   68.3%

14%   14%   95.5%

2%   97.7%   2%

$2.45 $3.53 $5.09 $7.33 $10.57   **Per MCF** $15.24 $21.98

Commodity Prompt Month Volatility

Legend: NG Vol — Crude Vol — Corn Vol — US Long Bond Vol

Provided by BP Energy

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI
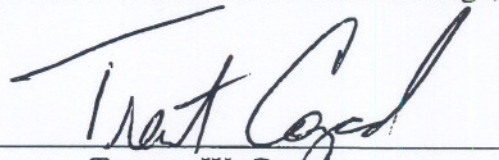
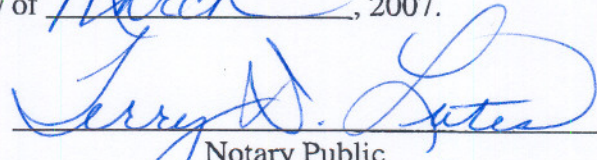|		
In the matter of Aquila, Inc. d/b/a Aquila	)	
Networks-MPS and Aquila Networks-L&P,	)	
for authority to file tariffs increasing electric	)	Case No. ER-2007-0004
rates for the service provided to customers in	)	
the Aquila Networks-MPS and Aquila	)	
Networks-L&P area	)	

County of Jackson	)
	) ss
State of Missouri	)

AFFIDAVIT OF TRENTON W. COZAD

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

_____
Trenton W. Cozad

Subscribed and sworn to before me this 20th day of March, 2007.

_____
Notary Public
Terry D. Lutes

My Commission expires:

_8-20-2008_____