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Issues: Purchased Power

Witness: Leon C. Bender
Sponsoring Party: MO PSC Staff
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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

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SURREBUTTAL TESTIMONY

Missouri Public
Service Commission

OF

LEON C. BENDER

AQUILA, INC. D/B/A AQUILA NETWORKS--MPS

CASE NO. ER-2004-0034

**Jefferson City, Missouri
February 2004**

Surrebuttal Testimony of
Leon C. Bender

1 Q. Do you agree that the Staff should change its purchased power prices based on
2 natural gas prices?

3 A. No. Purchased power prices are influenced by many factors.

4 Q. What are some of the factors that could have an influence on purchased power
5 prices in general?

6 A. Schedule 1 lists some of the factors that influence purchased power prices
7 such as plant specific characteristics, the economy, electrical system congestion and a
8 sellers intent.

9 Q. With all these variables affecting purchased power can one assume only one
10 variable controls the outcome?

11 A. No. A change in any one of these variables can influence the final choices a
12 supplier makes to minimize its costs. Some factors have a greater influence than others but
13 all the variables influence the outcome in some way. For example, a suppliers low cost
14 unit being forced out during peak periods probably would cause a rise in local market
15 prices. As another example, load could decrease due to a sudden reduction in demand from
16 a large industrial customer's closing. The supplier would have excess generation available
17 thus lowering the price at which energy could be purchased. Or, for instance, a marketer
18 may be anticipating an increase in demand and may be holding back his unit to save on
19 maintenance cost as he expects prices to go even higher in the near future. In the last
20 example, marginal cost at the hub has little to do with his decision but the effect might be
21 increased prices.

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1 Q. Please discuss how Staff's method satisfactorily addresses the
2 interdependence of the various inputs.

3 A. Since Staff is using actual prices, this by definition accounts for all the
4 variables that affected the market price curve during the test year. Thus, Staff's method
5 avoids the need to speculate as to the effect of any one variable or combination of variables
6 upon the purchase power price.

7 Q. Has Staff confused cost with prices as Mr. Okenfuss states at the bottom of
8 page 4 of his rebuttal testimony?

9 A. No. Mr. Okenfuss's testimony is confusing when he refers to Staff's use of
10 cost and prices. Staff develops prices for input into the production cost model. To do so,
11 Staff uses Aquila's actual purchased power cost in dollars (\$) divided by the amount
12 purchased in mega-watts (MW) to determine the actual price paid (\$/MW) in each hour of
13 the test year.

14 Q. Does the Staff's method used to develop purchased power prices determine a
15 cost curve or a market price curve?

16 A. In effect, it develops a market price curve, based on the market conditions in
17 the test year as represented by Aquila's expenditures for power and the amount received.
18 This so-called market price curve is then input into the production cost model.

19 Q. Please briefly discuss the Staff's method.

20 A. The Staff's method is described in my direct testimony in this case. The
21 method employs actual data submitted by Aquila during the test year through August 2003.
22 The data includes actual cost and amounts for energy sales and energy purchases for every

Surrebuttal Testimony of
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1 hour. As stated earlier, the total cost (\$) for each hour is divided by the total amount (MW)
2 for each hour to obtain the price (\$/MW) for each hour. This price represents the power
3 market price (\$/MW) for Aquila during that hour. In hours for which no energy was
4 purchased, a statistical calculation is used to estimate a price for that hour. The calculation
5 is based upon actual prices in other hours around it and is not a forecasted price. The
6 prices are then aligned with the weather-normalized load to ensure that the highest price is
7 paid during the period of highest demand and vice versa. This forms a market price curve
8 for use in the estimation of fuel and purchased power expense that is consistent with the
9 prices from the time period ordered by the Commission.

10 Q. Why doesn't Staff use a forecasted market price curve in its production cost
11 model, as does Aquila?

12 A. Staff has traditionally used inputs to its production cost model that are from
13 the same period for which revenues are calculated in a rate case. Staff witness,
14 Dana E. Eaves, discusses why it is appropriate to use matching revenue and cost data to set
15 rates in his rebuttal testimony on page 8, starting at line 9 of his testimony.

16 Q. Have you made any changes to Staff's purchased power inputs that you filed
17 direct testimony on as a result of discussions with the other parties in prehearing?

18 A. No, I have not.

19 Q. Does this conclude your surrebuttal testimony?

20 A. Yes, it does.

FACTORS WHICH AFFECT THE COST OF PURCHASE POWER

1. Incremental cost of each generating unit in the model
 - Plant specific items:
 - Minimum and maximum capacity
 - Normal operating capacity
 - Availability and maintenance schedules
 - Operation & Maintenance cost
 - Unit Ramp rates
 - Unit Net Heat Rate curve
 - Plant minimum up times and down times
 - Startup cost
 - Length of time it takes to startup up
 - Cost of primary and supplemental fuels for startup, and operation
2. Load at which generation is dispatched
 - Weather
 - Economy
 - Transmission availability
 - Demand side management
 - Customer turnover
3. Transmission availability
 - Outages
 - Maintenance
 - New construction
 - System congestion
4. Position of company and sellers
 - Ability and willingness of company and sellers to take risks-this could change frequently
 - Companies and sellers expectations of the future prices
5. Purchase power contracts in effect at time