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Service and
Rate Design
Witness: James C. Watkins
Sponsoring Party: MoPSC Staff
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MISSOURI PUBLIC SERVICE COMMISSION
UTILITY OPERATIONS DIVISION

REBUTTAL TESTIMONY

OF

JAMES C. WATKINS

AQUILA, INC.

CASE NO. EO-2002-0384

Jefferson City, Missouri
October 2005

Commission expires June 1, 2009

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1 **REBUTTAL TESTIMONY**

2 **OF**

3 **JAMES C. WATKINS**

4 **AQUILA, INC.**

5 **CASE NO. EO-2002-384**

6
7 Q. Please state your name and business address.

8 A. My name is James C. Watkins and my business address is Missouri Public
9 Service Commission, 301 West High Street, P. O. Box 360, Jefferson City, Missouri 65102.

10 Q. Are you the same James C. Watkins who filed direct testimony in this case
11 on September 19, 2005?

12 A. Yes, I am.

13 Q. What is the purpose of your rebuttal testimony in this case?

14 A. The purpose of my rebuttal testimony is to address the allocation of
15 production and transmission costs, the need for making changes to Aquila's rate
16 structures, recommend how to determine appropriate shifts in class revenue
17 responsibility, and discuss how those shifts should be implemented.

18 **EXECUTIVE SUMMARY**

19 Q. Please provide a brief summary of you testimony.

20 A. The vast majority of an electric utility's costs are incurred in the
21 production of electricity, and these costs on a per-unit basis vary over time with the
22 demands placed on the system. Both Aquila witness Matt Tracy and SIEUA/Ag
23 Processing/FEA (Intervenors) witness Maurice Brubaker used a peak responsibility

1 method for allocating both production and transmission capacity costs. This
2 methodology is based on the assumption that all capacity is added for the sole purpose of
3 being able to serve the utility's peak load and the cost of all capacity should be allocated
4 to customer classes based on their contribution to peak load. In developing the Staff's
5 class cost-of-service study, the staff has allocated these costs to each customer class by a
6 method that recognizes that relatively expensive base load units with relatively
7 inexpensive fuel costs serve load throughout the year, while relatively inexpensive
8 peaking units with relatively expensive fuel costs are reserved for serving only the
9 highest loads. The Commission should reject any peak responsibility method of
10 allocating generation capacity costs because they have no basis in reality and are,
11 therefore, unreasonable.

12 An electric utility's rate schedules should reflect the time dependent nature of
13 these costs, not just to be fair to its customers, but to encourage the efficient use of
14 natural resources. Aquila's current rate schedules have this characteristic and should not
15 be abandoned on a whim. Rate structure changes can have significant impacts on
16 consumers and Aquila has not quantified the impacts of its proposed rate structure
17 changes. Aquila's proposed rate structure changes should be rejected.

18 To avoid in a short period of time one rate increase followed by another rate
19 increase for some customers and a rate decrease to be followed by a rate increase for
20 others, the Commission should require Aquila to implement any approved rate structure
21 changes and any approved shifts in class revenue responsibility together with any
22 allowed overall increase in revenues determined in Case No. ER-2005-0436 in a single

tariff filing at the conclusion of both this case, Case No. EO-2002-384, and Aquila's pending general electric rate increase case, Case No. ER-2005-0436.

TIME-OF-USE ALLOCATIONS

Q. Has the Staff reviewed the class cost-of-service studies filed by other parties in this case to identify major differences?

A. Yes. Staff witness James A. Busch performed such a review and determined that the single major difference among the studies is in the allocation of production and transmission costs. Both Aquila witness Matt Tracy and SIEUA/Ag Processing/FEA (Intervenors) witness Maurice Brubaker used a peak responsibility method for allocating both production and transmission capacity costs and class contribution to sales to allocate energy costs. The Office of the Public Counsel (Public Counsel) witness Barbara Meisenheimer used a method based on the utilization of capacity in each month to allocate both production and transmission capacity costs and class contribution to sales to allocate energy costs.

Q. Does a peak responsibility method consider how capacity is utilized throughout the year?

A. No. This methodology is based on the assumption that all capacity is added for the sole purpose of being able to serve the utility's peak load and the cost of all capacity should be allocated to customer classes based on their contribution to peak load.

Q. Is this a reasonable basis for allocating the costs of generating plants?

A. No. This premise totally ignores the fact that there are different types of generating units (*e.g.*, baseload, intermediate, and peaking) with different operating cost characteristics (*e.g.*, coal-fired, natural gas-fired, wind powered, *etc.*). This premise

1 would have the Commission believe that Aquila's participation in the construction of
2 Iatan II has nothing to do with the high cost of natural gas or the limited operating hours
3 of combustion turbines. It's just another way to meet peak load.

4 This premise is clearly false. An electric utility's resource planning process
5 considers the tradeoff between the higher capacity cost and lower running costs of coal-
6 fired generation and the lower capacity cost, but higher running costs of natural gas-fired
7 generation in determining what type of capacity it should add next. Furthermore, in
8 dispatching generation to serve load, the lowest running cost units are dispatched first,
9 and the highest running cost units are dispatched last. This results in the lowest running
10 cost units being utilized in every hour throughout the year that they are available, and the
11 highest running cost units being reserved to meet reserve margins (*i.e.*, available, but not
12 running) except in the few hour of the year when no cheaper alternatives are available.

13 The Commission should reject any peak responsibility method of allocating
14 generation capacity costs because they have no basis in reality and are, therefore,
15 unreasonable.

16 Q. Does the method used by the Office of the Public Counsel witness Barbara
17 Meisenheimer account for the utilization of generating capacity throughout the year?

18 A. Yes, it does; however it does not directly account for the cost differences
19 of different types of units and looks only at the monthly utilization of capacity. That
20 said, the Staff has found that when it has used a similar method to allocate both
21 transmission and production capacity costs and class contribution to sales to allocate
22 energy costs, the aggregate allocation of the combined costs of all three categories of

1 costs to the customer classes are comparable to the results produced by using its hourly
2 time-of-use allocation methods.

3 Q. Does using class contribution to sales account for variations in energy
4 costs throughout the year?

5 A. No, but it is a fairly standard method to use, and one that the Staff uses
6 when recent load research data is not available. Sales data are always available.

7 Q. Does a peak responsibility method consider how transmission capacity is
8 utilized throughout the year?

9 A. No. It considers only how transmission capacity is utilized at peak load.
10 While, unlike generating capacity, there is only one type of transmission capacity, its
11 utilization throughout the year should be accounted for in allocating transmission
12 capacity costs. Even though the cost per kW of each kW of transmission capacity is the
13 same, a portion of the transmission capacity serves a baseload function, *i.e.*, it is required
14 to carry load in every hour of the year that it is available, a portion serves an intermediate
15 function, and a portion serves a peaking function, *i.e.*, that portion of the transmission
16 capacity is required only to carry the peak loads.

17 Peak responsibility methods should be rejected for the same reason they should
18 be rejected for allocating generation capacity costs.

19 **RATE STRUCTURE CHANGES**

20 Q. Has any party proposed changes to the current rate structures?

21 A. Yes. Aquila has proposed rate structure changes.

22 Q. Has the Staff reviewed Aquila's current rate structures?

1 A. Yes. Staff witness Janice Pyatte performed that review and reported the
2 results in her direct testimony in this case. She found that Aquila's current rate structures
3 have the desirable characteristics the Staff expects to see in the rate structures of
4 Missouri's regulated electric utilities.

5 Q. Has Aquila designed rate levels to go with its proposed rate structures that
6 are based on its class cost-of-service study?

7 A. Aquila has not made that claim, except to the extent that the revenue
8 targets are equal to each class's cost of service, as determined by its class cost-of-service
9 study.

10 Aquila's rate levels are inconsistent with its class cost of service study. To be
11 consistent with its class cost of service study, all production and transmission capacity
12 costs would have to be recovered in summer rates and all energy would be priced at the
13 same price.

14 Q. Has Aquila designed rate levels to go with its proposed rate structures that
15 will actually collect the stated revenue targets from each class?

16 A. Aquila has not filed evidence in this case or otherwise provided any
17 information to the Staff to show that they would.

18 Q. Should the Commission approve Aquila's proposed rate structure
19 changes?

20 A. An electric utility's rate schedules should reflect the time dependent
21 nature of these costs, not just to be fair to its customers, but to encourage the efficient use
22 of natural resources. Aquila's current rate schedules have this characteristic and should
23 not be abandoned on a whim. Rate structure changes can have significant impacts on

1 consumers and Aquila has not quantified the impacts of its proposed rate structure
2 changes. Aquila's proposed rate structure changes should be rejected.

3 **IMPLEMENTATION**

4 Q. How should any shifts in revenue responsibility approved by the
5 Commission in this case be implemented?

6 A. To avoid in a short period of time one rate increase followed by another
7 rate increase for some customers and a rate decrease followed by a rate increase for
8 others, the Commission should require Aquila to implement any approved rate structure
9 changes and any approved shifts in class revenue responsibility together with any
10 allowed overall increase in revenues determined in this case, Case No. EO-2002-384, and
11 Aquila's pending general electric rate increase case, Case No. ER-2005-0436.

12 Q. What factors should the Commission consider in determining the magnitude
13 of any shifts in revenue responsibility resulting from this case?

14 A. Primarily, the Commission should consider the combined impact on
15 customers of any changes in rate structures, any shifts in class revenue responsibility, and
16 any overall rate increase granted in Aquila's pending rate case, Case No. ER-2005-0436.
17 The Staff recommends that rate structure changes not be permitted and shifts in class
18 revenue responsibility be limited along the lines proposed in my direct testimony.

19 Q. Do you have any further testimony at this time?

20 A. No.