

Exhibit No.  
Witness: Maurice Brubaker  
Type of Exhibit: Rebuttal Testimony  
Sponsoring Party: Sedalia Industrial Energy Users Association  
Subjects: Rate Design  
Date: February 13, 2004

**FILED**<sup>3</sup>

JUN 21 2004

**BEFORE THE**  
**PUBLIC SERVICE COMMISSION OF MISSOURI**  
Missouri Public Service Commission

In the Matter of Aquila, Inc., d/b/a Aquila )  
Networks – MPS and Aquila Networks - ) Case No. GR-2004-0072  
L&P, Natural Gas General Rate Increase. )

Rebuttal Testimony of

**Maurice Brubaker**

On behalf of

**Sedalia Industrial Energy Users Association**

February 13, 2004  
Project 8118



**BRUBAKER & ASSOCIATES, INC.**  
ST. LOUIS, MO 63141-2000

exhibit no. 74  
Date 3-30-04 Case No. GR. 2004-0072  
Reporter KF

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**Affidavit of Maurice Brubaker**

STATE OF MISSOURI     )  
  )     SS  
COUNTY OF ST. LOUIS     )

Maurice Brubaker, being first duly sworn, on his oath states:

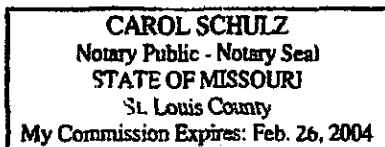
1. My name is Maurice Brubaker. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 1215 Fern Ridge Parkway, Suite 208, St. Louis, MO 63141-2000. We have been retained by the Sedalia Industrial Energy Users Association in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony which was prepared in written form for introduction into evidence in the GR-2004-0072 Proceeding.

3. I hereby swear and affirm that my rebuttal testimony is true and correct and shows the matters and things it purports to show.

  
\_\_\_\_\_  
Maurice Brubaker

Subscribed and sworn before this 13th day of February, 2004.



  
\_\_\_\_\_  
Notary Public

My Commission expires on February 26, 2004.

**BEFORE THE  
PUBLIC SERVICE COMMISSION OF MISSOURI**

In the Matter of Aquila, Inc., d/b/a Aquila     )  
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**Rebuttal Testimony of Maurice Brubaker**

1   **Q     PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2   A     Maurice Brubaker. My business address is 1215 Fern Ridge Parkway, Suite 208,  
3     St. Louis, Missouri 63141-2000.

4   **Q     WHAT IS YOUR OCCUPATION?**

5   A     I am a consultant in the field of public utility regulation and president of Brubaker &  
6     Associates, Inc. (BAI), energy, economic and regulatory consultants.

7   **Q     PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

8   A     This information is included in Appendix A attached to my direct testimony.

9   **Q     WHAT ISSUES DO YOU ADDRESS IN YOUR REBUTTAL TESTIMONY?**

10  A     I address the class cost of service studies offered by the Staff of the Missouri Public  
11     Service Commission (Staff) and by the Office of Public Counsel (OPC). In particular, I  
12     address the inappropriate treatment of special contract customers and the inappropriate

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1 allocation methodology applied to transmission and distribution mains and certain other  
2 cost elements.

3 I also address the testimonies of Staff and the Missouri Department of Natural  
4 Resources (DNR) concerning low income programs.

5 **Q PLEASE SUMMARIZE THE PRINCIPAL POINTS AND CONCLUSIONS FROM YOUR**  
6 **REBUTTAL TESTIMONY.**

7 **A** They may be summarized as follows:

8 1) Both Staff and OPC have used methods for allocation of transmission and  
9 distribution mains that are inappropriate. They are inappropriate for the following  
10 reasons.

11 a. The Staff capacity utilization (CU) method and the OPC RSUM method both  
12 ignore the fact that facilities must be sized to meet peak demands. The fact that  
13 some customers do not use as much in certain months as in peak months in no  
14 way affects the investment required to meet their loads during the peak months.  
15 By employing these non-traditional methods, both Staff and OPC try to reduce  
16 the costs allocated to customers with high peaking requirements by  
17 inappropriately allocating large amounts of costs to non-peak months and  
18 therefore to customers with more consistent usage patterns.

19 b. The OPC allocation methodology contains another non-traditional element – an  
20 “economies of scale” argument on investment in larger sized mains versus  
21 smaller sized mains. Not only is the rationale for the methodology not explained  
22 by the offering witnesses but, there is no basis provided for the adjustment  
23 factors utilized.

24 2) Staff and OPC have used the same allocation factors for both transmission mains  
25 and distribution mains. This is wrong because the transmission mains serve an  
26 entirely different purpose than the distribution mains. The transmission mains feed  
27 the distribution mains. Then, the distribution mains move gas from the transmission  
28 system to the individual points of receipt of the many residential and commercial  
29 customers whose facilities are located throughout Aquila’s extensive geographic  
30 network service area. For this reason, in the allocation of distribution mains there  
31 must be a significant recognition of the number of customers served. Aquila’s  
32 methodology explicitly recognizes this important aspect, while the method employed  
33 by both Staff and OPC does not.

34 3) Both Staff and OPC have inappropriately included the contract transportation  
35 customers in the tariff transportation class. Costs are allocated to these customers  
36 and their revenues are added to the revenues of the other customers in the class.  
37 This is inappropriate because any margin shortfall from these customers is assigned  
38 exclusively to other members of the same class. Presumably, the purpose of special

1 contracts is to retain load on the system – which benefits all customers. The more  
2 appropriate method to handle these customers is that employed by Aquila – namely  
3 to exclude them from explicit cost allocation and to credit their margin revenues back  
4 to all other customers in all classes.  
5

6 4) Both Staff and DNR offer proposals to fund weatherization programs for low-income  
7 customers. Staff goes further and proposes to implement a discount rate program  
8 for certain low-income customers who participate in the weatherization program. In  
9 regard to these proposals, my position is as follows:

10 a. To the extent cost-effective weatherization programs are funded by ratepayer  
11 dollars, the funding should come from the class in which the low-income  
12 consumers reside. This is appropriate because reduced volumes result in  
13 reduced costs being allocated to that class, while the cost allocated to other  
14 classes actually increase.

15 b. The rate discount program proposed by Staff is unbounded and I have seen no  
16 cost estimates for it. Furthermore, no basis has been shown for offering these  
17 discounts, but if they are offered, then they should be charged to the customers  
18 in which the low-income consumers reside because they are pure social welfare  
19 programs.

## 20 Allocation of Transmission and Distribution Mains

21 **Q HOW HAS STAFF DEVELOPED ITS ALLOCATION FACTORS FOR TRANSMISSION**  
22 **MAINS?**

23 **A** As noted in my summary, Staff has used something called the capacity utilization or CU  
24 method.

25 **Q IS THE CU METHOD BASED ON COST-CAUSATION?**

26 **A** No, it is not and Staff flatly admits that it is not at page 5 of the testimony of Staff witness  
27 Thomas Imhoff. In describing the CU method, he states at line 17 of page 5, the  
28 following with respect to mains:

29 "While the diameters of the pipes used in that system are sized to carry  
30 sufficient volumes to meet peak day demands, the "value" to the  
31 customer from the system occurs throughout the year, not just on the  
32 peak day. The allocation of the cost of mains should reflect the total  
33 value that customers derive from the service throughout the year."  
34 (Emphasis supplied)

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1           Mr. Imhoff provides no justification for either his measurement of “*value*,” nor  
2 does he explain why “*value*” should be the basis for allocating costs, as opposed to the  
3 traditional method of cost-causation.

4 **Q    WHAT IS YOUR RECOMMENDATION WITH RESPECT TO MR. IMHOFF’S**  
5 **METHODOLOGY?**

6 A    Obviously, it should be rejected. It does not even pretend to be based on cost-causation  
7 – as explicitly acknowledged by witness Imhoff. It is, as he acknowledges, based on  
8 some vague notion of value, and is nothing more than an attempt to reduce the cost  
9 allocated to customers who have seasonal peaking requirements. The methodology  
10 employed is not a traditional methodology and is not accepted in the industry. By  
11 allocating large amounts of costs to off-peak periods, the CU method under-allocates  
12 costs to customers who have high peaking requirements relative to their demands in  
13 other periods of the year, and over-allocates costs to customers who have more  
14 consistent requirements for natural gas service. Since there is no real debate about the  
15 fact that mains must be sized to meet peak demands, Staff’s method must be rejected.  
16 Traditional methods that recognize cost-causation must be used.

17 **Q    IS OPC’S METHOD SIMILAR?**

18 A    Yes. As noted above, OPC uses something called RSUM. It is basically the same kind  
19 of methodology as employed by Staff, it just goes by a different name. It should be  
20 rejected for the same reason.

21 **Q    ARE THE CU AND RSUM METHODS ACCEPTED IN THE INDUSTRY?**

22 A    No. Neither is an accepted methodology.

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1 **Q ARE THERE ANY OTHER ASPECTS TO OPC'S METHODOLOGY FOR**  
2 **ALLOCATING TRANSMISSION AND DISTRIBUTION MAINS THAT DESERVE**  
3 **COMMENT?**

4 A Yes. OPC adds a dimension related to "economies of scale" by further modifying its  
5 RSUM to allocate even more costs to customers with relatively consistent throughput.

6 **Q WHERE IN THE OPC TESTIMONY IS THIS EXPLAINED?**

7 A OPC witness Barbara Meisenheimer provides a very general description of the concept  
8 of economies of scale, and refers to individuals who previously performed work in this  
9 area, but who no longer work for OPC or Staff and who certainly are not appearing as  
10 witnesses in this proceeding. OPC witness James Busch, simply notes that witness  
11 Meisenheimer describes the concept, and then says on page 9 of his testimony that he  
12 raises the capacity allocation percentages to the power of 0.3, referring to the same non-  
13 witness as does Ms. Meisenheimer.

14 **Q IS THE ADJUSTMENT PROPOSED BY THESE WITNESSES ACCEPTED IN THE**  
15 **INDUSTRY?**

16 A No. Other than in Missouri, I have never seen anyone propose this methodology, and  
17 certainly am not aware of any Commission that has adopted it.

18 **Q SHOULD THIS ADJUSTMENT BE ACCEPTED?**

19 A No, it should not.

1 Q HAVE BOTH OPC AND STAFF USED THE SAME ALLOCATION FACTORS FOR  
2 DISTRIBUTION MAINS AS THEY HAVE USED FOR TRANSMISSION MAINS?

3 A Yes, they have.

4 Q IS THIS APPROPRIATE?

5 A No. A significant portion of the investment in distribution mains is required to provide  
6 network coverage of the entire geographic area of the service territory to enable Aquila  
7 to serve the residential and smaller commercial customers, many of whom are located a  
8 significant distance from the transmission system or from city gate delivery points.  
9 Allocating these costs on the same basis as the transmission mains (demands and/or  
10 volumes), which feed these extensive networks without regard to the number of  
11 customers served, is wrong.

12 Q DID AQUILA RECOGNIZE THE AREA COVERAGE FUNCTION FOR THIS  
13 DISTRIBUTION MAIN NETWORK?

14 A Yes. Aquila's approach is conventional. It allocates the investment in distribution mains  
15 using a combination of peak demand and number of customer services. This is the  
16 appropriate and traditional approach and, in the absence of a more specific and detailed  
17 analysis of the distribution system, is the appropriate approach.

18 **Treatment of Contract Customers**

19 Q DOES AQUILA SERVE CERTAIN CUSTOMERS UNDER SPECIAL TRANSPOR-  
20 TATION CONTRACTS THAT ARE DIFFERENT FROM THE TARIFF RATES?

21 A Yes. Aquila has a number of such customers.



1 **Q HOW DID OPC AND STAFF TREAT THESE CUSTOMERS IN THEIR COST OF**  
2 **SERVICE STUDIES?**

3 A They included the volumes and demands of these customers in the transportation class  
4 for purposes of cost allocation and allocated cost to this combined class. The revenues  
5 from these contracts were then added to the tariff revenues from the other transportation  
6 customers.

7 **Q HOW DOES THIS DIFFER FROM AQUILA'S APPROACH?**

8 A The approach used by Aquila, and which I adopted in my direct testimony, does not  
9 include the volumes or demands of these customers in the allocation factors, but rather  
10 treats them as a system sale. In the cost study the costs of the system are allocated to  
11 all tariff customers, and then the revenues from the contract customers are credited to all  
12 customer classes as an offset to cost of service.

13 **Q WHICH APPROACH IS APPROPRIATE?**

14 A Aquila's approach is appropriate.

15 **Q WHY IS IT APPROPRIATE?**

16 A Aquila's approach recognizes that these special contracts were approved by the  
17 Commission because doing so was beneficial to the system. Otherwise, the  
18 Commission would presumably not have approved them. These contracts usually are  
19 for the purpose of retaining a load in cases where customers have alternative means of  
20 supply. The ability to retain the customers on the system and therefore spread the fixed  
21 costs over larger volumes is generally considered to be a benefit to the entire system,  
22 and therefore the treatment adopted by Aquila is the appropriate one. The treatment

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1 proposed by OPC and Staff would have the effect of further driving up the rates for tariff  
2 transportation customers, and could result in the need for additional special contracts in  
3 order to retain additional loads that would now be priced in excess of their alternatives.

4 **Low-Income Programs**

5 **Q HAVE STAFF AND DNR PROPOSED LOW-INCOME WEATHERIZATION**  
6 **PROGRAMS?**

7 A Yes, they have. Although few details are provided, the proposal has been made to  
8 establish a special ratepayer-funded weatherization program aimed at low income  
9 consumers.

10 **Q ARE ENERGY EFFICIENCY PROGRAMS DESIRABLE?**

11 A They are desirable if they are shown to be cost-effective. Improvements in energy  
12 efficiency, without regard to the cost of achieving those improvements are not desirable.  
13 Therefore, if any such program is established there must be specific parameters and  
14 guidelines and a requirement that the weatherizations undertaken first be shown to be  
15 cost-effective.

16 **Q IF THE USAGE OF INDIVIDUAL DWELLINGS IS REDUCED, WHAT DOES THIS DO**  
17 **TO THE ALLOCATION OF COSTS?**

18 A In general, it will reduce the allocation of cost to the class in which the occupant of the  
19 structure is served, and therefore will reduce the cost allocated to that class. Although  
20 the individual consumer who received the benefits of the weatherization will be the  
21 largest winner, other members of the class will also benefit. At the same time,  
22 allocations of cost to other classes will increase because the fixed costs are now being

1 spread over a smaller amount of sales. This will tend to increase the rates of customers  
2 in other classes.

3 **Q WHAT IMPLICATION DOES THIS PHENOMENON HAVE FOR RECOVERY OF THE**  
4 **COST OF ANY SUCH PROGRAM?**

5 A The implication is that the most reasonable approach to funding any such program that  
6 is going to be ratepayer funded is from the class of customers in which the occupant of  
7 the weatherized premise is served.

8 **Q DOES STAFF OFFER ANY ADDITIONAL RECOMMENDATIONS WITH RESPECT TO**  
9 **LOW-INCOME CONSUMERS?**

10 A Yes. Staff witness Anne Ross proposes a subsidy program for low-income consumers.  
11 She proposes it as an experiment and wants to fund it with \$50,000.

12 **Q HOW DOES SHE PROPOSE TO RECOVER THIS COST?**

13 A She proposes to recover the revenue loss resulting from these discounts from other  
14 customers through higher margin rates.

15 **Q HAS SHE PROVIDED ANY ESTIMATE OF POTENTIAL REVENUE LOSS**  
16 **ASSOCIATED WITH THIS PLAN?**

17 A No, she has not.

18 **Q DO YOU BELIEVE IT WOULD BE APPROPRIATE TO IMPLEMENT THIS**  
19 **PROGRAM?**

1 A No, I do not. This is purely a social welfare type of program, and should not be  
2 something in which the utility or its other customers are forced to participate. Funding  
3 for such programs is either a legislative function, or should be handled by charitable  
4 agencies who receive voluntary contributions. It is most inappropriate to tax other  
5 consumers for these programs.

6 However, to the extent that any such program is implemented, it should be  
7 funded strictly within the residential class so as to not further affect the competitiveness  
8 of business enterprises who take gas service from Aquila.

9 **Q DO THESE WITNESSES ATTEMPT TO JUSTIFY THE PROPOSALS, AT LEAST IN**  
10 **PART, BY ARGUING THAT THEY WOULD RESULT IN LOWER UNCOLLECTIBLE**  
11 **ACCOUNTS?**

12 A Yes, they do. However, they do not provide any specific support for this position.  
13 Rather, they choose to cite articles and orders from other jurisdictions without either  
14 establishing that there is a comparability of circumstances, or showing that the programs  
15 proposed would be cost effective in any respect.

16 Furthermore, while it is certainly true that not paying a \$100 gas bill produces a  
17 smaller uncollectible account than not paying a \$150 gas bill, there is no demonstration  
18 by either of these witnesses that the costs incurred to achieve such a result would be  
19 less than the alleged \$50 benefit.

20 **Q DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

21 A Yes, it does.