

Exhibit No.:  
Issues: Class Cost of Service  
  
Witness: James A. Busch  
Sponsoring Party: MO PSC Staff  
Type of Exhibit: Rebuttal Testimony  
Case No.: EO-2002-384  
Date Testimony Prepared: October 14, 2005

**MISSOURI PUBLIC SERVICE COMMISSION**

**UTILITY OPERATIONS DIVISION**

**REBUTTAL TESTIMONY**

**OF**

**JAMES A. BUSCH**

**AQUILA, INC**

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

**Jefferson City, Missouri  
October 2005**

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

In the Matter of an Examination of the )  
Class Cost of Service and Rate Design in )  
the Missouri Jurisdictional Electric )  
Service Operations of Aquila, Inc., )  
formerly known as UtiliCorp United, Inc. )

Case No. EO-2002-0384

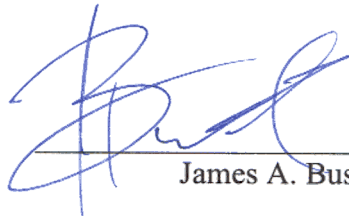
**AFFIDAVIT OF JAMES A. BUSCH**

**STATE OF MISSOURI**

**COUNTY OF COLE**

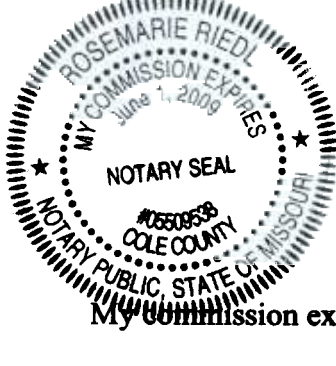
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)

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



James A. Busch

Subscribed and sworn to before me this 13<sup>th</sup> day of October, 2005.



Notary Public

My commission expires

June 1, 2009

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1           A.     The single major difference among the studies is in the allocation of  
2 production and transmission costs. Staff witness James Watkins will address the  
3 appropriate basis for allocating production and transmission costs.

4           Q.     Did you identify other differences between the Parties' CCOS studies?

5           A.     Yes; however, the other differences are for the most part not very  
6 significant in determining that Party's recommended revenue shifts.

7           Q.     Other than the allocation of production and transmission cost, what is the  
8 main difference between the Staff's studies and the studies provided by Mr. Brubaker?

9           A.     The main difference between the Staff and Mr. Brubaker is the  
10 determination of what the classes are for certain allocation purposes. This affects  
11 primarily the residential class in the allocation of costs based on class peak. Class peak is  
12 defined as the highest load of the class no matter when it occurs. Mr. Brubaker treats each  
13 of the residential sub-classes as if they were classes in and of themselves. Thus, Mr.  
14 Brubaker in essence sums the "class" peaks of each sub-class to derive the residential  
15 class peak. For example, the residential class on the MPS system is made up of  
16 residential-general customers and residential-space heating customers. Mr. Brubaker  
17 treated each of these sub-classes as separate classes. He added the residential-general's  
18 "class" peak in August to the residential-space heating's peak in January to come up with  
19 the residential class peak. The same is true of the small general service class. This has  
20 the effect of reducing the diversity benefits within the residential and small general  
21 service classes and, thereby, increasing the amount of costs allocated to those classes and  
22 reducing the amount of costs allocated to his clients. A "diversity benefit" is that plant  
23 doesn't have to be installed to meet the residential general peak in August, plus the

1 residential space heating peak in January. Only enough plant has to be installed to meet  
2 the combined peak, whenever that occurs.

3 Q. What is the main difference between Staff's CCOS studies and Public  
4 Counsel's studies?

5 A. For the distribution accounts (FERC accounts 364 – 367), Staff, as well as  
6 the Company and the Intervenors, functionalized the costs as primary or secondary costs  
7 and demand-related or customer-related costs. This recognizes that the capacity of the  
8 distribution system is determined by the size of the load, but the length of the distribution  
9 system is determined by the number of customers and their density. Public Counsel  
10 witness Barbara Meisenheimer, allocated all of the primary costs as if they were demand-  
11 related. This is not a reasonable assumption.

## 12 **II. Class Cost of Service Study – Updates**

13 Q. What changes has the Staff made to update its CCOS Studies?

14 A. I have listed the changes below with an explanation of the change:

15 1. Allocated to the lighting class a portion of the costs recorded in  
16 certain distribution accounts based on Aquila's representation of how distribution  
17 facilities serving lighting customers were recorded in its accounting system.

18 2. Functionalized certain costs recorded in a sub-account of Account  
19 368 as "Distribution Transformers-Primary" based on Aquila's representation that the  
20 cost of capacitors had been recorded in this sub-account.

21 3. Corrected a data entry error in the customer weights that were  
22 input into the L&P study for allocating Accounts 364 and 365.

4. Corrected a data entry error in the functionalization of certain production payroll expenses to follow plant.

Q. Please describe the results of Staff's updated CCOS studies.

A. The results for MPS are provided in Schedule 1 and for L&P in Schedule 2. Table 1 and Table 2 below summarize those results.

Table 1 – MPS CCOS Class Revenues

|                    | TOTAL | Residential | SGS           | LGS           | LPS         | Other    |
|--------------------|-------|-------------|---------------|---------------|-------------|----------|
| Revenue Deficiency | \$0   | \$4,533,994 | (\$2,245,612) | (\$3,738,907) | \$1,103,191 | \$69,555 |
| %                  | 0.00% | 2.67%       | -4.17%        | -8.46%        | 2.16%       | 12.33%   |

Table 2 – L&P CCOS Class Revenues

|                    | TOTAL | Residential | SGS         | LGS           | LPS       |
|--------------------|-------|-------------|-------------|---------------|-----------|
| Revenue Deficiency | \$0   | \$2,066,124 | (\$989,163) | (\$1,704,135) | \$569,029 |
| %                  | 0.00% | 5.03%       | -13.06%     | -9.61%        | 2.48%     |

For comparison, Table 3 and Table 4 below show the results from Staff's previous CCOS studies.

Table 3 – MPS CCOS Class Revenues

|                    | TOTAL | Residential | SGS           | LGS           | LPS         | Other    |
|--------------------|-------|-------------|---------------|---------------|-------------|----------|
| Revenue Deficiency | \$0   | \$5,382,207 | (\$1,880,429) | (\$3,463,580) | \$1,418,776 | \$74,534 |
| %                  | 0.00% | 3.16%       | -3.49%        | -7.84%        | 2.78%       | 13.21%   |

Table 4 – L&P CCOS Class Revenues

|                       | TOTAL | Residential | SGS           | LGS           | LPS       |
|-----------------------|-------|-------------|---------------|---------------|-----------|
| Revenue<br>Deficiency | \$0   | \$3,167,745 | (\$1,206,592) | (\$1,753,980) | \$839,838 |
| %                     | 0.00% | 7.71%       | -15.93%       | -9.89%        | 2.76%     |

Q. Are there also corrections that you want to make to your direct testimony at this time?

A. Yes. On page 6, lines 10 and 11, I made reference to a schedule 2 that was not attached to my testimony and therefore that reference should be stricken.

On page 15, lines 6 – 13, in my discussion of how I allocated services and meters, I indicated that the costs were allocated based on a service-weighted allocator. It should have stated that it was a meter-weighted allocator.

Q. What is your recommendation to the Commission?

A. I recommend that the Commission adopt the Staff's updated CCOS studies for MPS and L&P as the most reasonable studies upon which to base its determination of the cost of serving each customer class.

Q. Does this conclude your direct testimony?

A. Yes.



# STAFF CLASS COST-OF-SERVICE RESULTS

(At Revenue Neutral ROR 8.62%)

AQUILA NETWORKS - MPS

CASE NO. EO-2002-384

| FUNCTIONAL CATEGORY                   |                         |                      | RES           | SGS           | LGS           | LPS          | Other     | Lighting    | TOTAL         | % OF TOTAL |
|---------------------------------------|-------------------------|----------------------|---------------|---------------|---------------|--------------|-----------|-------------|---------------|------------|
| PRODUCTION                            | CAPACITY                |                      | \$52,578,063  | \$16,618,423  | \$15,318,103  | \$20,752,525 | \$241,481 | \$432,674   | \$105,941,269 | 30.82%     |
| PRODUCTION                            | ENERGY                  |                      | \$47,510,360  | \$15,789,899  | \$15,880,523  | \$22,900,632 | \$258,781 | \$762,800   | \$103,102,997 | 30.00%     |
| TRANSMISSION                          | CAPACITY                |                      | \$13,397,158  | \$4,403,860   | \$4,400,486   | \$6,218,959  | \$70,495  | \$197,193   | \$28,688,150  | 8.35%      |
| DISTRIBUTION                          | SUBSTATIONS             | DEMAND               | \$5,942,571   | \$1,738,603   | \$1,361,226   | \$1,605,774  | \$24,039  | \$79,599    | \$10,751,813  | 3.13%      |
| DISTRIBUTION                          | POLES AND CONDUCTORS    | PRI. FEEDER - DEMAND | \$0           | \$0           | \$0           | \$0          | \$0       | \$0         | \$0           | 0.00%      |
| DISTRIBUTION                          | POLES AND CONDUCTORS    | PRI. TAP -CUSTOMER   | \$6,681,107   | \$2,891,270   | \$232,601     | \$46,130     | \$0       | \$467,837   | \$10,318,945  | 3.00%      |
| DISTRIBUTION                          | POLES AND CONDUCTORS    | SEC. CUSTOMER        | \$5,699,911   | \$2,466,007   | \$194,191     | \$29,932     | \$308     | \$0         | \$8,390,350   | 2.44%      |
| DISTRIBUTION                          | POLES AND CONDUCTORS    | PRI. TAP - DEMAND    | \$10,351,575  | \$3,028,535   | \$2,371,168   | \$2,797,155  | \$41,874  | \$138,656   | \$18,728,964  | 5.45%      |
| DISTRIBUTION                          | POLES AND CONDUCTORS    | SEC. DEMAND          | \$4,794,269   | \$1,400,745   | \$1,057,921   | \$628,086    | \$19,394  | \$0         | \$7,900,415   | 2.30%      |
| DISTRIBUTION                          | TRANSFORMERS            | SEC. CUSTOMER        | \$11,342,584  | \$2,150,908   | \$909,554     | \$479,938    | \$13,833  | \$0         | \$14,896,817  | 4.33%      |
| DISTRIBUTION                          | TRANSFORMERS            | DEMAND               | \$504,949     | \$134,304     | \$94,654      | \$51,219     | \$1,554   | \$0         | \$786,681     | 0.23%      |
| DISTRIBUTION                          | CUSTOMER INSTALLATIONS  |                      | \$1,508,470   | \$217,541     | \$8,565       | \$880        | \$16      | \$0         | \$1,735,474   | 0.50%      |
| DISTRIBUTION                          | SERVICES                |                      | \$5,860,242   | \$845,346     | \$116,973     | \$39,923     | \$324     | \$410,357   | \$7,273,165   | 2.12%      |
| DISTRIBUTION                          | METERS                  |                      | \$3,974,736   | \$573,360     | \$79,338      | \$27,078     | \$220     | \$278,326   | \$4,933,058   | 1.44%      |
|                                       | CUSTOMER DEPOSITS       |                      | (\$256,936)   | (\$37,063)    | (\$1,491)     | (\$197)      | (\$3)     | (\$17,992)  | (\$313,682)   | -0.09%     |
|                                       | METER READING           |                      | \$1,165,033   | \$504,172     | \$40,560      | \$8,044      | \$63      | \$81,580    | \$1,799,452   | 0.52%      |
|                                       | BILLING, SALES, SERVICE |                      | \$5,623,677   | \$811,221     | \$32,631      | \$4,314      | \$61      | \$393,792   | \$6,865,696   | 2.00%      |
|                                       | ASSIGNED LGS/LPS/SC     |                      | \$0           | \$0           | \$1,035,337   | \$136,888    | \$1,928   | \$0         | \$1,174,153   | 0.34%      |
|                                       | ASSIGNED RES/SGS        |                      | \$7,349,251   | \$1,060,137   | \$0           | \$0          | \$0       | \$0         | \$8,409,388   | 2.45%      |
|                                       | Assigned Lighting       |                      | \$0           | \$0           | \$0           | \$0          | \$0       | \$2,342,925 | \$2,342,925   | 0.68%      |
| TOTAL                                 |                         |                      | \$184,027,021 | \$54,597,268  | \$43,132,340  | \$55,727,282 | \$674,369 | \$5,567,748 | \$343,726,028 | 100.00%    |
| Allocate Cost of Service for Others   |                         |                      | \$0           | \$0           | \$0           | \$0          | \$0       | \$0         | \$0           |            |
| TOTAL COST OF SERVICE                 |                         |                      | \$184,027,021 | \$54,597,268  | \$43,132,340  | \$55,727,282 | \$674,369 | \$5,567,748 | \$343,726,028 |            |
| %                                     |                         |                      | 53.54%        | 15.88%        | 12.55%        | 16.21%       | 0.20%     | 1.62%       | 100%          |            |
| RATE REVENUE                          |                         |                      | \$170,064,667 | \$53,861,537  | \$44,188,703  | \$51,095,135 | \$564,116 | \$5,167,156 | \$324,941,314 |            |
| Allocate Rate Revenues for Others     |                         |                      | \$0           | \$0           | \$0           | \$0          | \$0       | \$0         | \$0           |            |
| NON RATE REVENUE                      |                         |                      | \$2,034,732   | \$644,424     | \$528,694     | \$611,326    | \$6,749   | \$61,822    | \$3,887,748   |            |
| Interruptible Credit                  |                         |                      | \$0           | \$0           | \$0           | \$0          | \$0       | \$0         | \$0           |            |
| OffSystem Revenue                     |                         |                      | \$7,386,948   | \$2,334,803   | \$2,152,115   | \$2,915,623  | \$33,927  | \$60,788    | \$14,884,205  |            |
| Excess Facility Revenue               |                         |                      | \$0           | \$0           | \$0           | \$0          | \$0       | \$0         | \$0           |            |
| Interdepartmental Sales               |                         |                      | \$6,679       | \$2,115       | \$1,735       | \$2,007      | \$22      | \$203       | \$12,761      |            |
| Allocate Non Rate Revenues for Others |                         |                      | \$0           | \$0           | \$0           | \$0          | \$0       | \$0         | \$0           |            |
| TOTAL REVENUE                         |                         |                      | \$179,493,026 | \$56,842,880  | \$46,871,247  | \$54,624,091 | \$604,814 | \$5,289,970 | \$343,726,028 |            |
| %                                     |                         |                      | 52.22%        | 16.54%        | 13.64%        | 15.89%       | 0.18%     | 1.54%       | 100%          |            |
| REVENUE DEFICIENCY                    |                         |                      | \$4,533,994   | (\$2,245,612) | (\$3,738,907) | \$1,103,191  | \$69,555  | \$277,779   | \$0           |            |
| % CHANGE                              |                         |                      | 2.67%         | -4.17%        | -8.46%        | 2.16%        | 12.33%    | 5.38%       | 0.00%         |            |

# STAFF CLASS COST-OF-SERVICE RESULTS

(At Revenue Neutral ROR 8.58%)

AQUILA NETWORKS - L&P

CASE NO. EO-2002-384

| FUNCTIONAL CATEGORY                   |                         |                      | RES          | SGS         | LGS           | LPS          |       | Lighting    | TOTAL        | % OF TOTAL |
|---------------------------------------|-------------------------|----------------------|--------------|-------------|---------------|--------------|-------|-------------|--------------|------------|
| PRODUCTION                            | CAPACITY                |                      | \$13,950,182 | \$1,977,236 | \$6,667,427   | \$10,539,030 | \$0   | \$280,615   | \$33,414,490 | 34.49%     |
| PRODUCTION                            | ENERGY                  |                      | \$9,996,674  | \$1,445,844 | \$5,134,745   | \$8,610,374  | \$0   | \$301,949   | \$25,489,586 | 26.31%     |
| TRANSMISSION                          | CAPACITY                |                      | \$3,119,436  | \$442,135   | \$1,490,920   | \$2,356,660  | \$0   | \$62,749    | \$7,471,900  | 7.71%      |
| DISTRIBUTION                          | SUBSTATIONS             | DEMAND               | \$2,253,555  | \$322,524   | \$930,131     | \$1,207,822  | \$0   | \$60,506    | \$4,774,537  | 4.93%      |
| DISTRIBUTION                          | POLES AND CONDUCTORS    | PRI. FEEDER - DEMAND | \$0          | \$0         | \$0           | \$0          | \$0   | \$0         | \$0          | 0.00%      |
| DISTRIBUTION                          | POLES AND CONDUCTORS    | PRI. TAP - CUSTOMER  | \$1,121,743  | \$358,564   | \$130,169     | \$10,267     | \$0   | \$138,394   | \$1,759,136  | 1.82%      |
| DISTRIBUTION                          | POLES AND CONDUCTORS    | SEC. CUSTOMER        | \$1,203,193  | \$384,599   | \$138,976     | \$10,240     | \$0   | \$0         | \$1,737,008  | 1.79%      |
| DISTRIBUTION                          | POLES AND CONDUCTORS    | PRI. TAP - DEMAND    | \$2,795,642  | \$400,106   | \$1,153,872   | \$1,498,360  | \$0   | \$75,060    | \$5,923,041  | 6.11%      |
| DISTRIBUTION                          | POLES AND CONDUCTORS    | SEC. DEMAND          | \$679,928    | \$97,310    | \$279,113     | \$309,054    | \$0   | \$0         | \$1,365,404  | 1.41%      |
| DISTRIBUTION                          | TRANSFORMERS            | SEC. CUSTOMER        | \$2,166,549  | \$365,091   | \$395,139     | \$296,729    | \$0   | \$0         | \$3,223,509  | 3.33%      |
| DISTRIBUTION                          | TRANSFORMERS            | DEMAND               | \$95,440     | \$13,869    | \$33,751      | \$40,937     | \$0   | \$0         | \$183,997    | 0.19%      |
| DISTRIBUTION                          | CUSTOMER INSTALLATIONS  |                      | \$79,136     | \$51,083    | \$123,805     | \$126,867    | \$0   | \$0         | \$380,890    | 0.39%      |
| DISTRIBUTION                          | SERVICES                |                      | \$1,201,251  | \$218,868   | \$99,203      | \$6,255      | \$0   | \$148,203   | \$1,673,780  | 1.73%      |
| DISTRIBUTION                          | METERS                  |                      | \$982,065    | \$178,932   | \$81,102      | \$5,113      | \$0   | \$121,161   | \$1,368,373  | 1.41%      |
|                                       | CUSTOMER DEPOSITS       |                      | (\$29,124)   | (\$3,103)   | (\$563)       | (\$30)       | \$0   | (\$3,593)   | (\$36,413)   | -0.04%     |
|                                       | METER READING           |                      | \$305,668    | \$97,706    | \$35,470      | \$2,798      | \$0   | \$37,711    | \$479,353    | 0.49%      |
|                                       | BILLING, SALES, SERVICE |                      | \$2,737,730  | \$291,704   | \$52,948      | \$2,784      | \$0   | \$337,765   | \$3,422,931  | 3.53%      |
|                                       | ASSIGNED LGS/LPS/SC     |                      | \$0          | \$0         | \$373,081     | \$19,618     | \$0   | \$0         | \$392,698    | 0.41%      |
|                                       | ASSIGNED RES/SGS        |                      | \$2,759,041  | \$293,975   | \$0           | \$0          | \$0   | \$0         | \$3,053,016  | 3.15%      |
|                                       | Assigned Lighting       |                      | \$0          | \$0         | \$0           | \$0          | \$0   | \$807,417   | \$807,417    | 0.83%      |
| TOTAL                                 |                         |                      | \$45,418,108 | \$6,936,442 | \$17,119,288  | \$25,042,878 | \$0   | \$2,367,938 | \$96,884,654 | 100.00%    |
| Allocate Cost of Service for Others   |                         |                      | \$0          | \$0         | \$0           | \$0          | \$0   | \$0         | \$0          |            |
| TOTAL COST OF SERVICE                 |                         |                      | \$45,418,108 | \$6,936,442 | \$17,119,288  | \$25,042,878 | \$0   | \$2,367,938 | \$96,884,654 |            |
| %                                     |                         |                      | 46.88%       | 7.16%       | 17.67%        | 25.85%       | 0.00% | 2.44%       | 100%         |            |
| RATE REVENUE                          |                         |                      | \$41,106,120 | \$7,575,521 | \$17,728,841  | \$22,910,401 | \$0   | \$2,238,976 | \$91,559,859 |            |
| Allocate Rate Revenues for Others     |                         |                      | \$0          | \$0         | \$0           | \$0          | \$0   | \$0         | \$0          |            |
| NON RATE REVENUE                      |                         |                      | \$746,413    | \$137,558   | \$382,853     | \$442,966    | \$0   | \$40,656    | \$1,750,446  |            |
| Interruptible Credit                  |                         |                      | \$0          | \$0         | (\$4,927)     | (\$12,317)   | \$0   | \$0         | (\$17,244)   |            |
| OffSystem Revenue                     |                         |                      | \$1,499,451  | \$212,525   | \$716,656     | \$1,132,799  | \$0   | \$30,162    | \$3,591,593  |            |
| Excess Facility Revenue               |                         |                      | \$0          | \$0         | \$0           | \$0          | \$0   | \$0         | \$0          |            |
| Sale of Emission                      |                         |                      | \$0          | \$0         | \$0           | \$0          | \$0   | \$0         | \$0          |            |
| Allocate Non Rate Revenues for Others |                         |                      | \$0          | \$0         | \$0           | \$0          | \$0   | \$0         | \$0          |            |
| TOTAL REVENUE                         |                         |                      | \$43,351,984 | \$7,925,604 | \$18,823,423  | \$24,473,849 | \$0   | \$2,309,794 | \$96,884,654 |            |
| %                                     |                         |                      | 44.75%       | 8.18%       | 19.43%        | 25.26%       | 0.00% | 2.38%       | 100%         |            |
| REVENUE DEFICIENCY                    |                         |                      | \$2,066,124  | (\$989,163) | (\$1,704,135) | \$569,029    | \$0   | \$58,144    | \$0          |            |
| %                                     |                         |                      |              |             |               |              |       |             |              |            |
| % CHANGE                              |                         |                      | 5.03%        | -13.06%     | -9.61%        | 2.48%        |       | 2.60%       | 0.00%        |            |