EXHIBIT

Exhibit No.:	
Issue(s):	Cost of Service
Witness:	Barbara Meisenheimer
Type of Exhibit:	Direct
Sponsoring Party:	Public Counsel
Case Number:	ER-2005-0436
Date Testimony Prepared:	October 28, 2005

DIRECT TESTIMONY

OF

BARBARA MEISENHEIMER

Submitted on Behalf of
the Office of the Public Counsel

AQUILA, INC.

Case No. ER-2005-0436

October 28, 2005

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Tariff Filing of Aquila, Inc., to Implement a General Rate Increase for Retail Electric Service Provided to Customers in its MPS and L&P Missouri Service Areas.	))))	Case No. ER-2005-0436

AFFIDAVIT OF BARBARA MEISENHEIMER

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Barbara Meisenheimer, of lawful age and being first duly sworn, deposes and states:

1. My name is Barbara A. Meisenheimer. I am Chief Utility Economist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my direct testimony consisting of pages 1 through 15 and schedules.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

Barbara Meisenheimer

Subscribed and sworn to me this 28th day of October 2005.

JERENE A. BUCKMAN
My Commission Expires
August 10, 2009
Cole County
Commission #05754036

Jerene A. Buckman
Notary Public

My commission expires August 10, 2009.

Aquila Networks-MPS and Aquila Networks-L&P
Electric and Steam Rate Cases

ER-2005-0436

Direct Testimony
of
Barbara Meisenheimer

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.

A. Barbara A. Meisenheimer, Chief Utility Economist, Office of the Public Counsel, P. O. 2230, Jefferson City, Missouri 65102. I am also an adjunct instructor for William Woods University.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL AND EMPLOYMENT BACKGROUND.

A. I hold a Bachelor of Science degree in Mathematics from the University of Missouri-Columbia (UMC) and have completed the comprehensive exams for a Ph.D. in Economics from the same institution. My two fields of study are Quantitative Economics and Industrial Organization. My outside field of study is Statistics. I have taught economics courses for the University of Missouri-Columbia, William Woods University, and Lincoln University, mathematics for the University of Missouri-Columbia and statistics for William Woods University.

Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE THIS COMMISSION?

A. Yes, I have testified on numerous issues before the Missouri Public Service Commission. (PSC or Commission). I have testified on issues in the areas of telecommunications, natural gas, water, electric and sewer. I have prepared and supervised the preparation of cost of service studies on behalf of Public Counsel for over eight years. These include class cost of service studies related to natural gas, water and electric utilities and services cost studies related to telecommunications carriers.

Q. WHAT IS THE PURPOSE OF THIS CASE?

A. This case the Commission will consider Aquila, Inc.'s request to implement a general rate increase for retail electric service throughout its Missouri service territory and to implement a general rate increase for retail steam heat service in its L&P service area.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my direct testimony is to present Public Counsel's Class Cost of Service (CCOS) study results and preliminary inter-class class rate design recommendations. My CCOS study results are provided in Schedule BAM Direct MPS Page 1 and Schedule BAM Direct LP Page 1. Illustrative class rate design examples are provided in Schedule BAM Direct MPS Page 2 and Schedule BAM Direct LP Page 2.

Q. ARE ISSUES OF COST OF SERVICE AND RATE DESIGN RELEVANT TO THIS CASE?

A. Yes. The Commission should consider the cost of service and the impact of any overall revenue requirement increase or decrease resulting from this case as well

as other relevant factors prior to adopting particular rates. The Commission has long recognized that in establishing rates it is appropriate to consider all relevant factors. CCOS study results provide the Commission with a general guide to the just and reasonable rate for the provision of service based on costs. In addition, other factors that are also relevant considerations when setting rates include but are not limited to the value of a service, affordability, rate impact, and rate continuity. A determination as to the particular manner in which all relevant factors are balanced in setting rates can only be determined on a case-by-case basis once the potential impacts are known.

Q. WHAT IS THE RELATIONSHIP BETWEEN THIS CASE AND EO-2002-384?

A. Case EO-2002-384 was established as a result of the Stipulation and Agreement in ER-2002-672 that addressed UtiliCorp United, Inc.'s (later known as Aquila's) Missouri Public Service (MPS) service area. Aquila purchased St. Joseph Light and Power Company (L&P) subsequent to the Stipulation and Agreement in ER-2002-672, however, the cost of service and rate design are also being examined in EO-2002-384. The cost data utilized in EO-2002-384 is not based on the Company's currently proposed revenue requirement. Therefore, while the information can provide some guidance in designing rates and I have incorporated it into this testimony, the additional factors discussed above should also be considered prior to establishing rates in this case.

II. CLASS COST OF SERVICE

Q. WHAT IS THE MAIN PURPOSE OF PERFORMING A CCOS STUDY?

A. The primary purpose of a CCOS study is to determine the relative class cost responsibility for each customer class by allocating costs among the classes based on principles of cost causation. CCOS study results provide guidance for determining how rates (e.g., customer charges) should be designed to collect revenues from customers within a class, depending on customer usage levels and patterns of use.

Q. PLEASE OUTLINE THE BASIC ELEMENTS OF PREPARING A CCOS STUDY.

A. A CCOS Study is designed to functionalize, classify, and allocate costs.

Functionalizing costs involves categorizing accounts by the type of electric utility functions with which each account is associated. The categories of accounts include Production, Transmission, Distribution, Customer Accounts, Administrative and General, etc.

The next step is to classify costs as customer related, demand related, commodity related, or "other" costs. Customer related costs vary in relation to the number of customers. Demand related costs vary with usage during different periods such as peak and average load periods. Commodity related costs vary with annual energy consumption. For example, the cost associated with customer records and collection expense, meter plant, and meter reading expense are considered to be customer-related because they vary primarily based on the number of customers served and might occur whether or not the customer uses any electricity.

The final step in the CCOS is to develop and apply allocation factors that apportion a reasonable share of jurisdictional costs to each customer class. Allocation factors should be developed in a manner that is consistent with the functionalization and classification of costs described above. For example, customer related cost allocation factors are expressed as ratios that reflect the proportion of customers in a particular class to the total number of customers that contribute to the causation of the relevant cost. Likewise, demand related allocators should reflect each class's use during peak periods and commodity related allocators should reflect each class's annual consumption. In simpler terms, if the cost for a particular activity were thought of as a pie, then allocators would represent the size of the slices of "cost" pie that each class would be assigned.

Q. WHICH CUSTOMER CLASSES ARE USED IN YOUR CCOS STUDY?

A. For Aquila's MPS system, I used a Residential Class (RG), a Small General Service Class (SGS), a Large General Service Class (LGS), a Large Power Service Class (LPS), and a Special Contract Class (SC). For Aquila's L&P system, I used a Residential Class (RG), a Small General Service Class (SGS), a Large General Service Class (LGS), and a Large Power Service Class (LPS). Both studies exclude Lighting as a class. I have allocated both direct cost and revenues associated with lighting to the other classes in proportion to overall cost of service.

Q. ON WHAT DATA ARE YOUR CCOS STUDIES BASED?

A. My CCOS study is based on common data agreed to by the Company and Staff including data related to investments, expenses and revenues, peak demand, customer counts and energy use.

Q. HOW IS INTANGIBLE PLANT ALLOCATED?

A. Intangible Plant (FERC Account No. 301) pertains to organization cost. It includes all fees paid to federal or state governments for the privilege of incorporation along with related expenditures. It should be allocated to each customer class according to the benefits each receives from the existence of this business, or according to the extent to which each class contributes to the overall cost of conducting the business. Therefore, my method applies a composite total cost of service allocator to Intangible Plant.

Q. HOW IS PRODUCTION PLANT ALLOCATED?

A. Production Plant includes the cost of land, structures and equipment used in connection with power generation. Both demand and energy characteristics of a system's loads are important determinants of production plant costs. I allocate the Production Plant according to 12-month non-coincident peak (NCP) average and peak allocators. This allocation method is a reasonably close approximation to a TOU method which the Commission has previously determined reasonable. The details of my calculations are provided in Schedule BAM Direct MPS Page 3 and Schedule BAM Direct LP Page 3.

Q. HOW DID YOU ALLOCATE TRANSMISSION PLANT?

A. Transmission Plant includes the cost of land, structures and equipment used in connection with transmission operations. Transmission facilities are installed to provide reliable service throughout the year including periods of scheduled maintenance. It can also, at times, substitute for generation and can minimize the cost of generation facilities through the sales or purchase of power. Therefore, Transmission Plant costs can be equitably allocated on the same basis as the Production Plant. Accordingly, I chose to use the same 12-month NCP average and peak allocators that I used for Production Plant to allocate Transmission Plant.

Q. HOW DID YOU ALLOCATE DISTRIBUTION PLANT?

A. Distribution Plant includes the cost of land, structures and equipment used in connection with distribution operations. Distribution plant equipment reduces high-voltage energy from the transmission system to lower voltages, delivers it to the customer and monitors the amounts of energy used by the customer. Many of the distribution costs associated with providing service to electric utility customers are not directly associated with or reasonable assignable to a particular class with precision. For example, with the exception of service drops and meters, most of the facilities between the utility customer's point-of-service and the distribution substation are shared facilities. Since no portion of such facilities are directly related to the number of customers the associated costs are best classified as demand related, rather than customer related. Furthermore, since distribution systems are designed to meet more localized peak demand instead of

system-wide peak demand, such costs are best allocated based upon non-coincident peak demand.

In the functionalization and allocation of Distribution Plant, my study also reflects that distribution facilities provide service at two voltage levels: primary and secondary, and that some large industrial customers may choose to take service at primary voltages because of their large electrical requirements. Different allocation factors were used for allocating costs at different levels of the distribution system.

Meter facilities costs are generally related to each individual customer. New investment occurs when a new customer is added to the system. Therefore, meter costs are usually classified as customer related. Since large customers require large meters and some large customers use multiple meters, I allocated the meters account based upon meter numbers weighted to reflect the proportional meter cost associated with the customers represented in the various classes based on data available from a Company meter cost study.

Service facilities are also classified as customer related. The NARUC Electric Utility Cost Allocation Manual recognizes that service cost vary with customer size. However, I did not have specific data available to develop the weighted cost as was true for meters. It seems likely that services vary to a lesser extent with customer size than do meters, therefore I applied a fourth root formula to the meter weights to reflect that the cost increase with size but at a declining rate. Since primary customers take service directly at primary voltages, no cost of service drops were allocated to the Primary class.

The functional categories for Distribution Plant and classifications are as follows:

360-362	Distribution Substations	Demand at Primary Station
364	Poles Towers and Fixtures	Demand at Primary Demand at Secondary
365	Overhead Conductors & Devices	Demand at Primary Demand at Secondary
366	Underground Conduit	Demand at Primary Demand at Secondary
367	Underground Conductors & Devices	Demand at Primary Demand at Secondary
368	Line Transformers	Transformer Demand
369	Services	Weighted Customer Count
370	Meters	Weighted Meter Count
371	Installation on Customer Premises	Direct Assign to Industrial

Q. HOW DID YOU ALLOCATE GENERAL PLANT?

A. General Plant includes land, structures and equipment used in support of Production, Transmission and Distribution Plant. Therefore, it was allocated using a composite allocator based on previously allocated net non-general plant.

Q. PLEASE DISCUSS THE METHODS THAT YOU USED TO ALLOCATE EXPENSES.

A. Expenses were directly assigned if possible. For the expenses that could not be directly assigned, consistent with the principle that "expenses follow plant", the allocators that were applied to the expenses accounts were the same as those applied to the Production, Transmission, and Distribution Plant accounts to which the expenses are related.

Q. HOW DID YOU ALLOCATE POWER PRODUCTION EXPENSES?

A. Power Production Expenses were broken down into demand-related and energy-related production and purchased power costs. The demand-related expenses were allocated based on the 12-month NCP average and peak allocators. The energy-related expenses were allocated based on kWhs at generation.

Q. HOW WERE TRANSMISSION EXPENSES ALLOCATED?

A. Transmission Expenses were allocated according to the "expenses follow plant" principle. The allocators applied to transmission expenses were the same as those I applied to the plant associated with those expenses.

Q. HOW WERE DISTRIBUTION EXPENSES ALLOCATED?

A. Distribution Expenses were allocated according to the "expenses follow plant" principle. The allocators applied to distribution expenses were the same as those I applied to the plant associated with those expenses. For expenses that are not associated with any particular category of distribution plant, such as supervision and engineering, I used an allocator based on the corresponding allocated distribution expenses.

Q. HOW DID YOU ALLOCATE CUSTOMER ACCOUNTS EXPENSES?

A. I allocated Customer Records & Collections (Account 903) to all customer classes based on unweighted customer numbers. I used Staff data to determine the allocators for Meter Reading (Account 902). I used rate revenues to allocate Uncollectible Accounts (Account 904).

Q. HOW DID YOU ALLOCATE CUSTOMER SERVICE EXPENSES AND SALES EXPENSES?

A. Customer Service Expenses including Accounts 907, 909 and 910 were allocated to all customers based on weighted customer numbers. Customer Sales Expenses including Accounts 911, 912, 913 and 916 were allocated to all customer classes based on overall cost of service.

Q. HOW ARE ADMINISTRATIVE AND GENERAL (A & G) EXPENSES ALLOCATED?

A. Property Insurance expense (Account 924) was allocated on the basis of gross plant. Injuries and Damages and Employee Pensions and Benefits (Accounts 925 and 926) are both payroll related expenses so I allocated them based on a payroll expense allocator that I developed based on Company information. The remaining A & G accounts are allocated based on each class's share of total cost of service.

Q. HOW DID YOU ALLOCATE PROPERTY TAXES?

A. I allocated property taxes on the basis of allocated total gross plant.

Q. HOW DID YOU ALLOCATE STATE AND FEDERAL INCOME TAXES?

A. These taxes were allocated on the basis of rate base since a utility company's income taxes will be a function of the size of its rate base, and thus each class should contribute revenues for income taxes in proportion with the amount of rate base that is necessary to serve it.

Q. PLEASE DESCRIBE THE RESULTS OF PUBLIC COUNSEL'S CLASS COS STUDY.

A. Schedule BAM RC-Direct MPS Page 1 and Schedule BAM RC-Direct LP Page 1 show the results of Public Counsel's Class COS Study. Since a CCOS study is designed to determine the relative cost responsibility of customer classes, Schedule BAM RC-Direct MPS Page 1 and Schedule BAM RC-Direct LP Page 1 are based on the assumption that total company revenues remain constant. Line 13 of each schedule shows the revenue percentage by class. Line 15 of each schedule shows the class revenue percentage assuming equalized rates of return. For MPS, the results show that the Residential class is just above cost. The SGS and LGS classes are above cost by a greater amount ranging from approximately 1/2% to over 3%. The SC and LP classes, on the other hand, are well below cost of service at approximately 9% (SC) and 23% (LP). For the L&P system, the Residential class is about 1% below cost while the SGS and LGS classes are significantly above cost at approximately 17% for SGS and 5% for LGS. The LP class is below cost of service by over 8%.

The tables below summarize each class's percent of revenue as well as the amount and percentage change required to equalize the rates of return.

Table 1. CCOS Results Aquila Systems -MPS

	Residential	SGS	LGS	LPS	SC
Class Revenue %	53.18%	16.83%	13.81%	16.00%	0.18%
Revenue Neutral Shift	($352,310)	($2,978,263)	($1,517,050)	$4,714,387	$133,235
% Change	-0.20%	-5.45%	-3.38%	9.07%	23.15%

Table 2. CCOS Results Aquila Systems -LP

	Residential	SGS	LGS	LPS
Class Revenue %	46.02%	8.45%	19.83%	25.70%
Revenue Neutral Shift	$294,102	($1,333,277)	($948,679)	$1,987,854
% Change	0.70%	-17.26%	-5.23%	8.45%

III. RATE DESIGN

Q. HOW DO YOU RECOMMEND THAT THE COMMISSION ACCOMMODATE FACTORS SUCH AS AFFORDABILITY, RATE IMPACT, AND RATE CONTINUITY IN DETERMINING RATE DESIGN?

A. Generally, I recommend that the Commission adopt a rate design that balances movement toward cost of service with rate impact and affordability considerations. To reach this balance, I believe that in cases where the existing revenue structure departures greatly from the class cost of service, the Commission should impose, at a maximum, class revenue shifts equal to one half of the "revenue neutral shifts" indicated by Public Counsel's Class Cost of Service studies. Revenue neutral shifts are shifts that hold overall company revenue at the existing level but allow for the share attributed to each class to be adjusted to reflect the cost responsibility of the class. In addition to moving half way to the revenue neutral shifts, I recommend that if the Commission determines that an overall increase in revenue requirement is necessary, then no customer

class should receive a net decrease as the combined result of: (1) the revenue neutral shift that is applied to that class, and (2) the share of the total revenue increase that is applied to that class. Likewise, if the Commission determines that an overall decrease in revenue requirement is necessary, then no customer class should receive a net increase as the combined result of: (1) the revenue neutral shift that is applied to that class, and (2) the share of the total revenue decrease that is applied to that class.

Q. HAVE YOU PROVIDED EXAMPLES OF THIS RATE DESIGN METHOD?

A. Yes. In Schedule BAM RC-Direct MPS Page 2 and Schedule BAM RC-Direct LP Page 3, I have illustrated the steps described above. Line 9 shows half the revenue neutral shifts indicated by my CCOS study. On each schedule, lines 13 to 32 show examples of the combined impact of spreading among the classes either an increase or a decrease in revenue requirement and half the revenue neutral shift indicated by my CCOS studies. Line 26 shows the adjustment that insures that no class either receives an increase when others are receiving a decrease or receives a decrease when others receive an increase. This method promotes movement toward cost of service while avoiding unnecessary adverse impacts on any particular customer class.

Q. DID YOU PERFORM ANY ANALYSIS OF THE CUSTOMER-RELATED COSTS THAT ARE ATTRIBUTABLE TO THE TYPICAL RESIDENTIAL CUSTOMER?

A. Yes, my analysis showed that Aquila's current $6.95 customer charge exceeds the customer-related costs for both the MPS and LP systems.

Q. WHAT CATEGORIES OF COSTS WERE INCLUDED IN YOUR CUSTOMER CHARGE ANALYSIS?

A. I included costs that are related to services, meters, meter installations, and customer accounts expenses. The costs associated with services, meters, and meter installations include the return on rate base for the relevant plant accounts, distribution operation and maintenance expenses associated with services, meters, and meter installations, plus the depreciation expense, payroll benefits, and property taxes associated with services and meters.

Q. DO YOU ANTICIPATE MAKING ADDITIONAL RATE DESIGN RECOMMENDATIONS IN THIS PROCEEDING?

A. Yes. Depending on the testimony of other parties, I may make additional recommendations in this case.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

Aquila Networks-MPS
ER-2005-0436
Summary of OPC Class Cost of Service Study Results

			TOTAL	Residential	Small GS	Large GS	LPS	SC Modine/Thermal
1	O & M EXPENSES		$ 222,063,207	$ 112,510,064	$ 34,733,146	$ 31,303,679	$ 43,008,175	$ 508,143
2	DEPREC. & AMORT. EXPENSE		$ 34,727,256	$ 19,944,282	$ 5,631,214	$ 4,200,014	$ 4,882,841	$ 68,904
3	TAXES		$ 29,783,319	$ 16,905,036	$ 4,908,443	$ 3,644,859	$ 4,264,925	$ 60,056
4	Subtotal - Expenses and Taxes		$ 286,573,782	$ 149,359,383	$ 45,272,803	$ 39,148,553	$ 52,155,941	$ 637,103
5	TOTAL RATE BASE		663,236,221	376,321,223	109,864,220	81,198,537	94,513,519	1,338,722
6	IMPLICIT RATE OF RETURN	8.62%						
7	REQUIRED OPERATING INCOME TO EQUALIZE CLASS RATES OF RETURN		$ 57,139,483	$ 32,421,028	$ 9,465,081	$ 6,995,460	$ 8,142,579	$ 115,334
8	Non-rate rev (except off-sys.)		$ 3,887,748	$ 2,067,424	$ 654,269	$ 536,995	$ 622,175	$ 6,885
9	Off-system sales rev.		$ 14,884,205	$ 7,268,210	$ 2,377,506	$ 2,241,561	$ 2,960,040	$ 36,888
10	OFFSETTING REVENUES		$ 18,771,953	$ 9,335,634	$ 3,031,775	$ 2,778,556	$ 3,582,215	$ 43,773
11	REQ. OPER. INCOME LESS OFFSETTING REV.		$ 38,367,530	$ 23,085,394	$ 6,433,306	$ 4,216,904	$ 4,560,364	$ 71,562
12	CURRENT RATE REVENUE*		$ 324,941,312	$ 172,797,087	$ 54,684,371	$ 44,882,506	$ 52,001,918	$ 575,429
	*Includes Rev. Adj (Lighting & Unaccounted)	$ 5,167,156						
13	CURRENT REVENUE PERCENTAGES		100.00%	53.18%	16.83%	13.81%	16.00%	0.18%
14	RATE REVENUE DEFICIENCY		$ -	$ (352,310)	$ (2,978,263)	$ (1,517,050)	$ 4,714,387	$ 133,235
15	REQUIRED % INCREASE IN RATE REVENUES TO EQUALIZE CLASS RATES OF RETURN		0.00%	-0.20%	-5.45%	-3.38%	9.07%	23.15%
16	REV. % WITH EQUALIZED ROR		100.00%	53.07%	15.91%	13.35%	17.45%	0.22%

Aquila Networks-MPS
ER-2005-0436
Summary of OPC Class Cost of Service Study Results

		Total	Residential	Small GS	Large GS	LPS	SC Modine/Thermal
1	Revenue Neutral Shifts (RNS) to Equalize Class						
2	Rates of Return (ROR)	$0	$ (352,310)	$ (2,978,263)	$ (1,517,050)	$ 4,714,387	$ 133,235
3	Percentage Revenue Change to Equalize Class ROR		-0.20%	-5.45%	-3.38%	9.07%	23.15%
4							
5	Current Class Revenue Percentages		53.18%	16.83%	13.81%	16.00%	0.18%
6							
7	COS Indicated Class Revenue Percentages	100.00%	53.07%	15.91%	13.35%	17.45%	0.22%
8							
9	OPC's Recommended Revenue Neutral Shifts	0	$ (176,155)	$ (1,489,131)	$ (758,525)	$ 2,357,194	$ 66,618
10	OPC Recommended Revenue Neutral Shift Percentage		-0.10%	-2.72%	-1.69%	4.53%	11.58%
11							
12	OPC's Recommended Revenue Percentages	100.00%	53.12%	16.37%	13.58%	16.73%	0.20%
13							
14	**Spread of Possible Rate Change**						
15	$2 Million Rate Reduction	(5,000,000)	(2,656,186)	(818,536)	(678,953)	(836,445)	(9,879)
16	$2 Million Rate Increase	5,000,000	2,656,186	818,536	678,953	836,445	9,879
17							
18	**Combined Impact of Revenue Decrease and OPC's RNS**						
19	Combined Impact $2 Million Decrease and OPC Shifts	(5,000,000)	(2,832,341)	(2,307,667)	(1,437,478)	1,520,748	56,738
20	Combined Impact $2 Million Increase and OPC Shifts	5,000,000	2,480,031	(670,595)	(79,572)	3,193,639	76,497
21							
22	**Percentage Change in Class Rate Revenue**						
23	Combined Impact $2 Million Decrease and OPC Shifts	-1.54%	-1.64%	-4.22%	-3.20%	2.92%	9.86%
24	Combined Impact $2 Million Increase and OPC Shifts	1.54%	1.44%	-1.23%	-0.18%	6.14%	13.29%
25							
26	**Adjusted Impact of Revenue Decrease and OPC's RNS**						
27	Combined Impact $2 Million Decrease and OPC Shifts	(5,000,000)	-2153057	(1,754,217)	-1092726	-	-
28	Combined Impact $2 Million Increase and OPC Shifts	5,000,000	2156486	-	0	2,776,996	66,517
29							
30	**Adjusted Percentage Change in Class Rate Revenue**						
31	Combined Impact $2 Million Decrease and OPC Shifts	-1.54%	-1.25%	-3.21%	-2.43%	0.00%	0.00%
32	Combined Impact $2 Million Increase and OPC Shifts	1.54%	1.25%	0.00%	0.00%	5.34%	11.56%

Aquila Networks-LP
ER-2005-0436
Summary of OPC Class Cost of Service Study Results

			TOTAL	Residential	Small GS	Large GS	LPS
1	O & M EXPENSES		$ 64,998,991	$ 28,874,971	$ 4,354,277	$ 12,480,938	$ 19,288,804
2	DEPREC. & AMORT. EXPENSE		$ 9,880,499	$ 4,878,162	$ 728,710	$ 1,814,723	$ 2,458,904
3	TAXES		$ 7,084,342	$ 3,502,159	$ 532,109	$ 1,297,249	$ 1,752,825
4	Subtotal - Expenses and Taxes		$ 81,963,832	$ 37,255,291	$ 5,615,097	$ 15,592,911	$ 23,500,534
5	TOTAL RATE BASE		$ 173,865,418	$ 87,222,365	$ 13,414,895	$ 31,398,278	$ 41,829,880
6	IMPLICIT RATE OF RETURN	8.58%					
7	REQUIRED OPERATING INCOME TO EQUALIZE CLASS RATES OF RETURN	$ 14,920,822	$ 14,920,822	$ 7,485,269	$ 1,151,242	$ 2,694,545	$ 3,589,766
8	Non-rate rev (except off-sys.)		$ 1,823,180	$ 839,108	$ 153,987	$ 361,457	$ 468,628
9	Off-system sales rev.		$ 3,591,593	$ 1,508,847	$ 220,025	$ 740,201	$ 1,122,520
10	OFFSETTING REVENUES		$ 5,414,773	$ 2,347,955	$ 374,012	$ 1,101,658	$ 1,591,148
11	REQ. OPER. INCOME LESS OFFSETTING REV.		$ 9,506,049	$ 5,137,314	$ 777,230	$ 1,592,887	$ 1,998,618
12	CURRENT RATE REVENUE*		$ 91,469,881	$ 42,098,503	$ 7,725,604	$ 18,134,476	$ 23,511,298
	*Includes Rev. Adj (Lighting & Unaccounted)	$ 2,148,998					
13	CURRENT REVENUE PERCENTAGES		100.00%	46.02%	8.45%	19.83%	25.70%
14	RATE REVENUE DEFICIENCY		$ (0)	$ 294,102	$ (1,333,277)	$ (948,679)	$ 1,987,854
15	REQUIRED % INCREASE IN RATE REVENUES TO EQUALIZE CLASS RATES OF RETURN		0.00%	0.70%	-17.26%	-5.23%	8.45%
16	REV. % WITH EQUALIZED ROR		100.00%	46.35%	6.99%	18.79%	27.88%

Aquila Networks-LP
ER-2005-0436
Summary of OPC Class Cost of Service Study Results

		Total	Residential	Small GS	Large GS	LPS
1	Revenue Neutral Shifts (RNS) to Equalize Class					
2	Rates of Return (ROR)	$0	$294,102	($1,333,277)	($948,679)	$1,987,854
3	Percentage Revenue Change to Equalize Class ROR		0.70%	-17.26%	-5.23%	8.45%
4						
5	Current Class Revenue Percentages		46.02%	8.45%	19.83%	25.70%
6						
7	COS Indicated Class Revenue Percentages	100.00%	46.35%	6.99%	18.79%	27.88%
8						
9	OPC's Recommended Revenue Neutral Shifts	$ 0	$ 147,051	$ (666,639)	$ (474,339)	$ 993,927
10	OPC Recommended Revenue Neutral Shift Percentage		$ 0	-8.63%	-2.62%	4.23%
11						
12	OPC's Recommended Revenue Percentages	100.00%	46.19%	7.72%	19.31%	26.79%
13						
14	**Spread of Possible Rate Change**					
15	$2 Million Rate Reduction	(2,000,000)	(923,704)	(154,345)	(386,141)	(535,810)
16	$2 Million Rate Increase	2,000,000	923,704	154,345	386,141	535,810
17						
18	**Combined Impact of Revenue Decrease and OPC's RNS**					
19	Combined Impact $2 Million Decrease and OPC Shift	(2,000,000)	(776,653)	(820,984)	(860,480)	458,117
20	Combined Impact $2 Million Increase and OPC Shifts	2,000,000	1,070,755	(512,294)	(88,198)	1,529,737
21						
22	**Percentage Change in Class Rate Revenue**					
23	Combined Impact $2 Million Decrease and OPC Shift	-2.19%	-1.84%	-10.63%	-4.74%	1.95%
24	Combined Impact $2 Million Increase and OPC Shifts	2.19%	2.54%	-6.63%	-0.49%	6.51%
25						
26	**Adjusted Impact of Revenue Decrease and OPC's RNS**					
27	Combined Impact $2 Million Decrease and OPC Shift	(2,000,000)	(631,909)	(667,978)	(700,113)	-
28	Combined Impact $2 Million Increase and OPC Shifts	2,000,000	823,502	-	-	1,176,498
29						
30	**Adjusted Percentage Change in Class Rate Revenue**					
31	Combined Impact $2 Million Decrease and OPC Shift	-2.19%	-1.50%	-8.65%	-3.86%	0.00%
32	Combined Impact $2 Million Increase and OPC Shifts	2.19%	1.96%	0.00%	0.00%	5.00%