Schedule No:	
Issues:	• Updated Schedules • Class Cost of Service • Rate Design
Witness:	Thomas J. Sullivan
Type of Schedule:	Rebuttal Testimony
Sponsoring Party:	Aquila
Case No:	GR-2004-0072
Date Testimony To Be Filed:	February 12, 2004

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. GR-2004-0072

REBUTTAL TESTIMONY

OF

THOMAS J. SULLIVAN

FILED[3]

JUN 2 1 2004

Missouri Public
Service Commission

ON BEHALF OF

AQUILA, INC.
d/b/a
AQUILA NETWORKS – MPS
and
AQUILA NETWORKS – L&P

Kansas City, Missouri
February 2004

Exhibit No. 24
Date 3-31-04 Case No. GR-2004-0072
Reporter KF

2/12/2004

State of KANSAS)
) ss
County of JOHNSON)

AFFIDAVIT OF THOMAS J. SULLIVAN

Thomas J. Sullivan, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony and schedules entitled "Rebuttal Testimony of Thomas J. Sullivan"; that said testimony was prepared by him and/or under his direction and supervision; that if inquiries were made as to the facts in said testimony and schedules, he would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of his knowledge, information, and belief.

Thomas J. Sullivan

Subscribed and sworn to before me this 12th day of February, 2004.

Carole L. Bielefeld
Notary Public

My Commission expires:

1-16-2007

OFFICIAL SEAL
CAROLE L. BIELEFELD
MY COMMISSION EXPIRES
January 16, 2007

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REBUTTAL TESTIMONY OF THOMAS J. SULLIVAN

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Thomas J. Sullivan, 11401 Lamar, Overland Park, Kansas 66211.

Q. ARE YOU THE SAME THOMAS J. SULLIVAN WHO PREVIOUSLY FILED DIRECT TESTIMONY IN THIS MATTER?

A. Yes, I am.

Q. DO YOU SPONSOR ANY UPDATED SCHEDULES FROM YOUR DIRECT TESTIMONY?

A. Yes, I do. I have updated several schedules from my direct testimony to reflect Company activity through September 30, 2003. These schedules include:

Schedule TJS-14 Updated Class Cost of Service Study – MPS

Schedule TJS-15 Updated Functionally Classified Cost of Service by Class – MPS

Schedule TJS-16 Updated Class Cost of Service Study – L&P

Schedule TJS-17 Updated Functionally Classified Cost of Service by Class – L&P

Schedule TJS-18 Updated Proposed Rates – MPS

Schedule TJS-19 Updated Revenues Under Proposed Rates - MPS

Schedule TJS-20 Updated Proposed Rates – L&P

Schedule TJS-21 Updated Revenues Under Proposed Rates – L&P

The MPS schedules referred to above and in my direct testimony include the Company's MPS North, South and East service areas.

In addition to the updated schedules listed above for the three combined MPS service areas, I am sponsoring four new schedules that include the Company's MPS North and South service areas only. These schedules are:

Schedule TJS-22 Class Cost of Service Study – MPS (North and South Only)

Schedule TJS-23 Functionally Classified Cost of Service by Class – MPS (North and South Only)

Schedule TJS-24 Proposed Rates – MPS (North and South Only)

Schedule TJS-25 Revenues Under Proposed Rates (North and South Only)

All schedules were either prepared by me or under my direct supervision.

Q. HOW DO UPDATED SCHEDULES TJS-14 THROUGH TJS-21 DIFFER FROM WHAT WAS SUBMITTED WITH YOUR DIRECT TESTIMONY?

A. In my direct testimony, Schedules 14 through 21 are based on test year ending December 31, 2002. At the Company's request, I have updated these schedules to reflect a test year updated through September 30, 2003.

Updated Proposed Rates – MPS

Q. HOW DOES THE RATE DESIGN IN YOUR UPDATED MPS' RATES DIFFER FROM WHAT YOU SPONSORED IN YOUR DIRECT TESTIMONY?

A. I rely upon the same general guidelines in the design of updated proposed rates as I discussed in my direct testimony on Pages 30 through 35. However, the levels of the energy charges have been changed to recognize a different rate increase.

Q. WHAT IS THE OVERALL INCREASE THAT THE UPDATED MPS PROPOSED RATES ARE DESIGNED TO PRODUCE?

A. Approximately $6.7 million.

Q. PLEASE DISCUSS HOW YOUR UPDATED MPS RESIDENTIAL RATE DIFFERS FROM WHAT YOU SPONSORED IN YOUR DIRECT TESTIMONY.

A. I am still recommending that the Residential customer charge be increased from $9.00 per month to $15.00 per month. The $19.01 of customer related cost per bill determined in my updated class cost of service study compares to the $17.84 per bill determined in the class cost of service study filed with my direct testimony.

I am recommending that the energy charge be increased from $0.22295 per Ccf to $0.29140 per Ccf. This is the level required with the $15.00 per month customer charge such that the Company earns a rate of return of 9.74 percent on the Residential class, which is the Company's

overall requested rate of return. In my direct testimony, I recommended an energy charge of $0.26825 per Ccf.

Q. PLEASE DISCUSS HOW YOUR UPDATED MPS NON-RESIDENTIAL RATES DIFFER FROM WHAT YOU SPONSORED IN YOUR DIRECT TESTIMONY.

A. I am still recommending that the Small Commercial customer charge be set at $25.00 per month, the Small Volume customer charge be set at $50.00 per month, and the Large Volume customer charge be set at $215.00 per month. These customer charges move in the direction of cost as determined in my updated cost of service study. I am also recommending no change to my proposed demand charge of $0.40000 per Ccf of billing demand per month for Large Volume customers.

I am recommending changes to the energy charges of the non-residential customer classes such that the Company earns its requested rate of return of 9.74 percent on this group. I am recommending that the Small Commercial energy charge be set at $0.28180 per Ccf, the Small Volume energy charge be set at $0.21180 per Ccf, and the Large Volume energy charge be set at $0.03870 per Ccf.

Updated Proposed Rates – L&P

Q. HOW DOES THE RATE DESIGN IN YOUR UPDATED L&P RATES DIFFER FROM WHAT YOU SPONSORED IN YOUR DIRECT TESTIMONY?

A. I rely upon the same general guidelines in the design of updated proposed rates as I discussed in my direct testimony on Pages 30 through 35. However, the levels of the energy charges have been changed to reflect a different rate increase.

Q. WHAT IS THE OVERALL INCREASE THAT THE UPDATED L&P PROPOSED RATES ARE DESIGNED TO PRODUCE?

A. Approximately $1.0 million.

Q. PLEASE DISCUSS HOW YOUR UPDATED L&P RESIDENTIAL RATES DIFFER FROM WHAT YOU SPONSORED IN YOUR DIRECT TESTIMONY.

A. I am still recommending that the Residential customer charge be increased from $6.66 per month ($5.65 per month for Fairfax, Rockport, and Tarkio) to $10.00 per month. The $14.71 of customer related cost per bill determined in my updated class cost of service study compares to the $13.38 per bill determined in the class cost of service study filed with my direct testimony.

I am recommending that the energy charge be increased from $0.16350 per Ccf to $0.25350 per Ccf. This is the level required with the $10.00 per month customer charge such that the Company earns a rate of return of 10.08 percent on the Residential class, which is the Company's overall requested rate of return. In my direct testimony, I recommended an energy charge of $0.22950 per Ccf.

Q. PLEASE DISCUSS HOW YOUR UPDATED L&P NON-RESIDENTIAL RATES DIFFER FROM WHAT YOU SPONSORED IN YOUR DIRECT TESTIMONY.

A. I am still recommending that the Small Commercial customer charge be set at $20.00 per month and the Small Volume customer charge be set at $40.00 per month. I am recommending a slight increase to the Large Volume customer charge from $200.00, which I recommended in my direct testimony, to $215.00 per month. Under existing rates, Large Volume customers are charged a $184.53 per month customer charge. These customer charges move in the direction of actual cost as determined in my updated cost of service study.

I am recommending changes to the energy charges of the non-residential customer classes such that the Company earns its requested rate of return of 10.08 percent on this group. I am recommending that the Small Commercial energy charge be set at $0.22500 per Ccf, the Small Volume energy charge be set at $0.19000 per Ccf, and the Large Volume energy charge be set at $0.03870 per Ccf.

MPS North and South Only

Q. PLEASE DESCRIBE SCHEDULES TJS-22 THROUGH TJS-25.

A. These schedules are based on a test year updated through September 30, 2003 and include the MPS Northern and Southern systems only. Costs, revenues, and billing units related to the Eastern system have been removed.

Schedule TJS-22 develops the cost of service by customer class and Schedule TJS-23 develops functionally classified cost of service by customer class. These schedules are the same as Schedules TJS-14 and 15 (updated) except that the Eastern system has been removed. Schedule 24 summarizes the rates I am proposing for MPS (excluding the Eastern system), and Schedule 25 shows a detailed calculation of revenues under existing and revised proposed rates for MPS (excluding the Eastern system).

Q. WHAT GENERAL GUIDELINES DID YOU FOLLOW IN THE DESIGN OF THE PROPOSED RATES WHEN THE EASTERN SYSTEM IS EXCLUDED?

A. I rely upon the same general guidelines in the design of revised proposed rates as I discussed in my direct testimony on Pages 30 through 35.

Q. WHAT IS THE OVERALL INCREASE THAT THE MPS PROPOSED RATES (LESS EASTERN) ARE DESIGNED TO PRODUCE?

A. Approximately $6.4 million.

Q. HOW DO YOUR RATE DESIGN RECOMMENDATIONS FOR THE MPS RATES (LESS EASTERN) DIFFER FROM YOUR REVISED PROPOSED RATES?

A. I recommend the same customer and demand charges under both scenarios. I recommend that the energy charges be increased under the scenario that does not include the Eastern system such that each customer class (residential and non-residential) results in approximate equal rates of return, or 9.74 percent.

Q. DOES THIS CONCLUDE YOUR UPDATES TO YOUR DIRECT TESTIMONY?

A. Yes, it does.

Rebuttal Testimony

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. In my rebuttal testimony, I will address the following:

1. The allocation of mains related cost and rate design proposed by Ms. Barbara A. Meisenheimer who is testifying on behalf of the Office of Public Counsel ("OPC").
2. The class cost of service study sponsored by Mr. James A. Busch of the OPC and his proposed customer charges.
3. The issues raised regarding my class cost of service study by Mr. Maurice Brubaker who is testifying on behalf of the Sedalia Industrial Energy Users Association ("SIEUA").
4. The class cost of service study and rate design proposed by Mr. Thomas M. Imhoff who is testifying on behalf of the Missouri Public Service Commission Staff ("Staff").

Q. HOW IS YOUR REBUTTAL TESTIMONY ORGANIZED?

A. My rebuttal testimony is organized into the following sections:

1. Class cost of service issues.
2. Rate design issues.

Q. DO YOU SPONSOR ANY SCHEDULES WITH YOUR REBUTTAL TESTIMONY?

A. Yes, I do. Included with my rebuttal testimony, I sponsor Schedule TJS-26 and TJS-27. These two schedules contain copies of my workpapers pertaining to certain allocation bases for the MPS and L&P systems,

respectively. I also sponsor Schedule TJS-28, which is an example of how Mr. Imhoff adjusts his cost of service study for customer charges.

Class Cost of Service

Q. WITH REGARD TO THE CLASS COST OF SERVICE STUDIES PREPARED ON BEHALF OF THE STAFF AND OPC, WHAT AREAS DO YOU ADDRESS IN YOU PREPARED REBUTTAL TESTIMONY?

A. I focus on two issues. Both of these issues concern the allocation of the cost related to mains. One issue relates to the use of an allocator based on 12 monthly coincident peaks (12 CP). Both the Staff and the OPC propose use of a 12 CP based allocation. The other issue relates to the adjustment made by OPC to reflect a "non-linear" relationship between the cost and capacity of mains. While there are other issues with which I might take exception, I limit my discussion to these two issues which appear to have the most significant effect on class cost of service results.

Q. CAN YOU PUT THE DIFFERENCE IN ALLOCATION RESULTS INTO PERSPECTIVE?

A. Yes, I can. First, the costs allocated based on the mains allocator represent the largest component of cost other than purchased gas cost. For example, in my cost of service study, of the total non-gas supply cost, approximately 43 percent and 45 percent are allocated on the basis of the mains allocator for MPS and L&P, respectively.

In the following table, I show the portion of mains allocated to the various customer classes, comparing the allocation basis used by Mr. Imhoff on behalf of the Staff, Mr. Busch on behalf of the OPC, and me.

Allocation of Transmission and Distribution Mains

	MPS North/South			L&P		
	TJS-23	Imhoff	Busch	TJS-17	Imhoff	Busch
Residential	65.23%	43.10%	38.64%	56.09%	57.99%	44.54%
General Service (1)	24.64%	21.29%	19.46%	31.42%	33.19%	31.98%
SV Transportation	0.05%	0.08%	0.09%	0.00%	0.00%	0.00%
LV Transportation	10.09%	35.53%	41.81%	12.49%	8.82%	23.48%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

(1) Includes General Service, Large Volume and Interruptible

Q. IN THE ABOVE TABLE, YOU SHOW THAT WITH THE EXCEPTION OF MR. IMHOFF'S L&P ALLOCATION, MR. IMHOFF AND MR. BUSCH ALLOCATE SUBSTANTIALLY MORE COSTS TO THE LARGE VOLUME TRANSPORTATION CLASS. IS THIS EXPECTED?

A. Yes, it is. Mr. Imhoff's L&P allocation amounts are less than mine due to a difference in the units of service he uses for the Large Volume Transportation class as compared with Mr. Busch and me.

Q. HOW DOES YOUR ALLOCATION BASIS DIFFER FROM THAT PROPOSED BY THE STAFF AND OPC?

A. I allocate mains based on consideration of the nature of the functional use of facilities, the nature of how facility costs are incurred, and how customers are reasonably responsible for the Company incurring such costs as discussed on Page 27 of my direct testimony. Both the Staff and OPC allocate mains cost using a 12 CP type allocator. I see no evidence that the Staff or OPC witnesses examined or considered the functional nature of the facilities being allocated or the nature of the costs incurred.

OPC adds a further dimension by attempting to recognize the non-linear relationship between the cost of mains and capacity. In my allocation approach, I recognize this non-linear relationship. However, as I will subsequently discuss, OPC witnesses have over simplified the nature of gas distribution systems and as a result have failed to reasonably recognize economies of scale that actually exist in delivery (distribution) systems.

Q. DO YOU HAVE ANY GENERAL OBSERVATIONS REGARDING THE ISSUE OF ALLOCATING THE COST OF MAINS IN THE CLASS COST OF SERVICE STUDY?

A. Yes, I do. More often than not, the fundamental issue with regard to the allocation of capacity-related cost is not with the allocation of the cost of capacity used by customers, but with the allocation of the cost associated with capacity that is unused for most of the year as a result of variations in customer loads during the year. This fundamental rule holds true in this case. The issue with regard to the 12 CP allocation basis used by the Staff and OPC witnesses relates to the allocation of costs associated with capacity that is unused for most of the year by virtue of the seasonal space heating load imposed on the system during a few winter months.

Q. DO YOU AGREE WITH THE 12 CP ALLOCATION BASIS RELIED ON BY BOTH THE STAFF AND OPC?

A. No, I do not. Conceptually, the 12 CP allocation approach makes no sense. It fails to recognize the nature of the costs being allocated. It allocates the cost of capacity which is unused during most of the year to customers who

use capacity during low load periods, not to the customers who create the need for capacity to meet winter peak requirements and then fail to utilize it throughout the balance of the year.

Q. DO THE STAFF AND OPC WITNESSES OFFER ANY JUSTIFICATION FOR THE USE OF THE 12 CP APPROACH?

A. Not specifically. Mr. Imhoff states on Page 3, Line 11 of his direct testimony, that "class cost responsibility can be either directly assigned or allocated to customer classes using reasonable methods for determining the class responsibility for that item of cost." He continues on Page 5, Line 18 stating "the value to the customer from the system occurs throughout the year, not just on the peak day. The allocation of the cost of mains should reflect the total value that customers derive from the service throughout the year."

The OPC witnesses do not specifically address the reasonableness of using 12 coincident peaks as an element of their proposed mains allocator, though Mr. Busch does state on Page 8, Line 10 that "all users benefit from the system and should share in the cost." He continues, "the basic idea (of his recommended allocation basis) is to identify the portion of the capacity that corresponds to each month's demand, and then allocate the costs that correspond to that capacity to the customers who use gas in that month that is their portion of the system is used." Ms. Meisenheimer at Page 3, Line 15 of her prepared direct testimony likewise notes that since all customers benefit from the system all should share in its cost.

From this testimony and the use of 12 CP based allocations, I must presume that the Staff and OPC witnesses conclude that class contributions to monthly peak demands represent a proxy for use throughout the year and use of the entire system.

Q. DO CLASS CONTRIBUTIONS TO MONTHLY PEAK PERIOD DEMANDS REPRESENT USE THROUGHOUT THE YEAR?

A. No, contributions to monthly peaks are only estimates of use on 12 days out of 365, or stated differently, one day per month for each of the 12 months of the year.

Q. DO THE STAFF AND OPC WITNESSES IDENTIFY WHY THESE 12 DAYS SHOULD BE SINGLED OUT FOR USE IN THE ALLOCATION?

A. No, they do not.

Q. WHY DO YOU REFER TO THESE MONTHLY PEAKS AS ESTIMATES?

A. The Company does not have metering equipment in place to meter most customers' usage on a daily basis. At best, the Company has metering equipment which allows the Company to determine the usage by customers between meter reading dates. Because the Company reads meters throughout the month, reported monthly usage represents usage for different periods for different customers and customer classes. This timing difference can be significant as a result of the timing of changes in weather conditions.

Q. IS THE COINCIDENTAL SYSTEM ANNUAL PEAK DEMAND THAT YOU USE TO ALLOCATE A PORTION OF MAINS COST ALSO ESTIMATED?

A. Yes, it is. However, the error in developing an estimate for system annual peak day use for gas distribution systems is relatively modest because of the very high correlation between space heating requirements and temperature. For most gas distributors, peak day use is driven by space heating requirements. By recognizing the requirements of various classes for space heating and other temperature sensitive load and by using reasonable and reliable approaches (primarily statistical), reasonable estimates of peak day use can be developed. Developing estimates of daily use for months when heating requirements are not extreme becomes increasingly speculative as a result of changes in load pattern from day to day especially during periods when heating may be utilized during certain portions of the day and not during others.

Q. DO YOU AGREE WITH MR. IMHOFF'S STATEMENT THAT CLASS COST RESPONSIBILITY CAN BE ALLOCATED TO CLASS USING REASONABLE METHODS?

A. Yes, I do. The issue is whether the selected method is reasonable. In my opinion, a 12 CP approach is not a reasonable method. In fact, application of the 12 CP approach as proposed by Staff clearly constitutes an assignment of costs to certain customers associated with facilities which are neither used nor useful to serve those customers.

Q. DO YOU AGREE WITH MR. IMHOFF'S STATEMENT THAT THE VALUE OCCURS THROUGHOUT THE YEAR?

A. Yes, I do. While I agree with Mr. Imhoff that "the value to the customer from the system occurs throughout the year", I would assume that Mr. Imhoff would agree with me that value is not the same on each day, or for that matter on each of the 12 monthly coincident peak days. As an example, the value to a residential customer during the system annual peak day, when the outside temperature falls below zero, is certainly greater than during the peak day in July when the temperature exceeds 100. Not only does value vary throughout the year, value differs from customer class to class.

Q. SHOULD VALUE PLAY A CONSIDERATION IN THE ALLOCATION OF COST?

A. No, it should not. The purpose of a properly structured cost of service study is to identify the costs associated with serving captive customers.

Q. CAN YOU DEMONSTRATE WHAT YOU CONSIDER TO BE THE UNREASONABLENESS OF MR. IMHOFF'S 12 CP ALLOCATION BASIS?

A. Yes, I can. Mr. Imhoff presents an interesting example on Page 4 of his prepared direct testimony. The annual rate of use of the two classes is identical. Thus on an annual basis, classes would share equally in the cost of a system capable of moving 100 MCF. However, due to the inefficient use of capacity by Class 2, the required system capacity amounts to 20 percent more than the capacity required to meet average annual requirements. During peak periods, Class 1 uses 50 MCF and Class 2 uses 70 MCF. The additional 20 MCF of capacity required has nothing to do with Class 1; this additional capacity is required solely to satisfy the requirements in excess of

average for Class 2. Assuming a linear relationship between cost and capacity, Mr. Imhoff would assign nearly 50 percent of the 20 percent increment in cost of capacity required solely to serve the Class 2 customers to Class 1 customers. Clearly, this is inequitable.

Q. ARE THERE ANY OTHER CONSIDERATIONS WITH REGARD TO THE 12 CP APPROACH?

A. Yes, there is. Whether a 12 CP or a single CP approach is followed, the implications of interruptible service need to be considered. Interruptible customers should expect to be interrupted from time to time in consideration of the lower quality of service received. Using a coincidental peak allocation, one normally expects that at the time of system peak, when the requirements of firm customers approach the design capacity of the system, interruptible service will be curtailed. In the event interruptible service is not curtailed, coincidental demands may need to be adjusted to consider the non-firm nature of the interruptible service.

On the other hand, one does not expect that during most months interruptible service will be curtailed. Thus, implicit in the 12 CP approach is the assumption that interruptible service will be allocated a significant portion of the capacity increment required to serve seasonal loads.

Q. IN YOUR DISCUSSION REGARDING INTERRUPTIBLE SERVICE, DOESN'T ELIMINATING INTERRUPTIBLE CUSTOMERS' CONTRIBUTION TO PEAK DEMAND RESULT IN ASSIGNING NO COST RESPONSIBILITY TO INTERRUPTIBLE CUSTOMERS?

A. No, that is not the intent. A variety of approaches can be relied on in order to allocate a reasonable level of capacity cost to interruptible customers so as to recognize their "partial" use of the system. In my class cost of service study, I have done so by allocating a portion of the cost of higher capacity mains on the basis of annual deliveries.

Q. DOES THIS CONCLUDE YOUR PREPARED REBUTTAL TESTIMONY CONCERNING THE 12 CP ALLOCATION METHOD?

A. Yes, it does.

Q. WITH REGARD TO THE SECOND ISSUE, RECOGNITION OF THE NON-LINEAR RELATIONSHIP BETWEEN COST AND CAPACITY, DO YOU CHALLENGE THE CONCEPT THAT A NON-LINEAR RELATIONSHIP EXISTS?

A. No, I do not. In fact, my allocation of all distribution system costs recognizes a non-linear relationship. The issue is not the presence or absence of a non-linear relationship, the problem is with the way that OPC has attempted to recognize it. The OPC witnesses have over simplified the relationship of capacity and cost for natural gas distribution systems.

Q. HOW DO YOU REFLECT A NON-LINEAR RELATIONSHIP BETWEEN COST AND CAPACITY IN YOUR ALLOCATION OF DISTRIBUTION COSTS?

A. Attached as Schedules TJS-26 and TJS-27 are pages from my workpapers which outline my development of various factors relating to my allocation of mains, services, meters, and regulators. Based on my understanding of the

testimony of the Staff and OPC witnesses, both the staff and OPC accepted the development set forth in Schedules TJS-26 and TJS-27 for the allocation of services, meters, and regulators.

With regard to services, meters, and regulators I develop weighting factors which recognize the relative cost level by class. I recognize the non-linear relationship by developing cost relationships based on the size of facility required to serve the various classes and then rely on the reported cost for each of the various sizes. This matching results in recognition of the non-linear relationship as it specifically exists on the Company's system.

With regard to mains, I go through a two step process. I first identify the cost associated with mains which serve a transmission function and allocate costs associated with those mains on the basis of an equal weighting of peak day deliveries and annual deliveries. By so doing, I have allocated a portion of cost to all customers, regardless of their contribution to peak. Again, I identify higher capacity mains based on the costs of capacity that specifically exist in the Company's system.

For the remaining mains which serve a distribution function, I then determine the investment cost relating to capacity. I do this, recognizing economies of scale, by assigning to the capacity component the lowest average unit cost of capacity associated with those distribution mains. I have therefore determined the capacity component recognizing the economies of scale referred to by Ms. Meisenheimer. The remainder of the distribution

investment is split between customer related and annual delivery components.

Q. HOW HAVE THE OPC WITNESSES OVER SIMPLIFIED GAS DISTRIBUTION SYSTEMS?

While the approach used by OPC may be reasonable when applied to a single element of a system used by all customers, it fails to recognize that gas distribution systems consist of a number of elements. One of the characteristics of these elements is that the pipeline system tends to reduce in size (and capacity) as one moves downstream. This is due to the use of capacity (the delivery of gas to customers) as gas flows through the pipeline. Thus the unit cost of capacity tends to increase as one moves downstream.

For gas distribution systems this increase in unit cost relates to two elements. First, gas moves away from sections operating at a higher pressure to sections operating at a lower pressure. Pipe diameter and pressure tend to reduce as capacity requirements are reduced due to the delivery of gas to customers upstream. Both of these features can contribute to higher unit cost as one moves downstream.

Q. HOW DOES THE FLOW OF GAS FROM HIGHER TO LOWER PRESSURE BEAR ON THE ISSUE OF THE ALLOCATION OF MAINS?

A. As Ms. Meisenheimer states, "with other factors held constant, a 4 inch pipe has a flow capacity of about 6 times that of a 2 inch." All factors are not necessarily equal. Based on pipeline flow formulae, capacity of a pipeline segment generally changes in proportion to the inside diameter of the pipe

raised to the 2.5 power, the square-root of the difference in the inlet and outlet pressures squared, and inversely proportional to the square root of the length. A complicating factor is that safety margins for pipe operating in certain areas (one criteria being housing density) are more stringent (See Title 49, Code of Federal Regulations).

While these various factors might be considered in connection with the development of a proper allocation basis, it is OPC's failure to recognize the increasing unit cost as one moves downstream which bears on the reasonableness of OPC's approach. The fact of the matter is that larger use customers can not be served through smaller capacity facilities (smaller diameter and lower pressure). Large customers directly use, or share in the use of higher capacity facilities with smaller use customers. The unit cost of capacity of these higher capacity facilities is less than the unit cost of low capacity lines. OPC's approach fails to make this distinction. While the OPC witnesses attempt to capture the economies of scale, they have done so on a system-wide basis. They have included in the cost of capacity, small diameter pipe which does not have the physical capability to serve large customers. In short, this small diameter pipe is not used and useful in providing service to large volume customers.

Q. DOES THE 12 CP APPROACH USED BY STAFF RECOGNIZE THAT SMALL DIAMETER PIPE IS INCAPABLE OF SERVING LARGE VOLUME CUSTOMERS?

A. No, it does not.

Q. WHAT IS THE IMPACT ON THE VARIOUS CUSTOMER CLASSES IN THE CLASS COST OF SERVICE STUDIES ATTRIBUTABLE TO USE OF A 12 CP ALLOCATION BASIS AND THE APROACH USED BY OPC?

A. As I demonstrated earlier in my rebuttal testimony, the allocation bases relied on by Staff and OPC result in a major shift in cost to higher volume, higher load factor customers. The magnitude of this shift would result in the need to further discount rates for service to certain customers due to competitive factors. I find the approaches proposed by Staff not only unfair and unreasonable and not based on consideration of the costs and facilities being allocated, but unworkable as well.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY REGARDING CLASS COST OF SERVICE ISSUES?

A. Yes, it does.

Rate Design Issues

Q. PLEASE OUTLINE YOUR TESTIMONY WITH REGARDS TO RATE DESIGN ISSUES:

A. I will address the following:

1. Rate design issues raised by Mr. Brubaker with regards to the non-residential customers.
2. Rate design recommendations of Ms. Meisenheimer.
3. Customer charge rates recommended by Mr. Imhoff.
4. Margin rate design recommendations of Mr. Imhoff.

Q. ON PAGE 5, LINES 8 THROUGH 13 OF HIS DIRECT TESTIMONY, MR. BRUBAKER CLAIMS THAT YOUR COST OF SERVICE STUDY SHOWS THAT "THE PROPOSED INCREASE FOR THE LARGE TRANSPORTATION CUSTOMERS IS NEARLY FOUR TIMES WHAT IS JUSTIFIED BY AQUILA'S OWN COST OF SERVICE STUDY". HE FURTHER STATES THAT "THIS SPECIFIC RESULT IS NOT EVEN DISCUSSED IN MPS TESTIMONY." DO YOU AGREE WITH THIS CHARACTERIZATION?

A. No, I do not. I specifically address this issue beginning on Page 37, Line 17 of my direct testimony when I state that "energy charges recognize the relative difference in cost of service of the three groups of customers (Small Commercial, Small Volume, and Large Volume) relative to each other and the Residential class and the overall cost of service of the non-residential customer classes such that the Company earns its requested rate of return of

9.74 percent from this group. Another consideration in the design of the Small Volume and Large Volume rates was to mitigate the magnitude (either up or down) of the impact of the proposed rates."

Further, on Page 1 of Schedule TJS-14, I show that the rate of return under proposed rates for the non-residential group equals the overall requested rate of return of 9.74 percent. Mr. Brubaker confirms this result on Page 4,Lines 9 and 10 of his testimony where he states: "I would note that as between the Residential class and all other sales MPS has, appropriately, followed the results of Mr. Sullivan's cost of service study."

Q. WHAT DID YOU MEAN BY SAYING THAT THE ENERGY CHARGES RECOGNIZE THE RELATIVE DIFFERENCES IN COST OF SERVICE BETWEEN THE SMALL COMMERCIAL, SMALL VOLUME, AND LARGE VOLUME CUSTOMERS?

A. First, the energy charges for comparable sales and transportation services should be the same. In other words, the energy charges for Large Volume Firm (sales service) and Large Volume Transportation should be the same and the energy charges for the Small Volume Firm (sales service) and Small Volume should be the same. There is no difference in the cost of distribution facilities between a comparable customer who takes sales service and one who takes transportation service. A customer who takes small volume firm service can take small volume transportation service, or visa versa. The same holds true for the large volume service. In fact, customers frequently migrate between sales and transportation service. This potential for migration

between sales and transportation service is sufficient justification for charging the same rate.

Second, rates should generally recognize that the unit cost to serve larger customers is generally lower than the cost to serve smaller customers. This is primarily attributable to the fact the larger customers generally only use the larger diameter mains which are used much more efficiently and have a much lower unit cost per volume of throughput than the small diameter mains used to serve residential and small commercial customers. In addition, my cost of service study demonstrates that the distribution charge for general service should be less than the distribution charge for residential service.

In order to explicitly recognize these relative cost considerations, I evaluate cost levels in my cost of service study for non-residential customers as a group rather than by individual rate classes.

Q. WHAT WERE YOUR PRIMARY CONCERNS WITH REGARD TO MITIGATING THE MAGNITUDE OF THE PROPOSED INCREASES OR DECREASES?

A. My primary concern was to develop rates that are relatively stable and don't go up and down as customers' service or usage characteristics change over time. In order to achieve this, rates cannot be designed in a vacuum as Mr. Brubaker proposes. In developing the rates I am proposing, I created a new small volume sales service to parallel the small volume transportation service.

Under the existing rates, the rates charged to small volume sales and transportation customers significantly exceed cost of service as accurately

noted on Page 3, Line 16 of Mr. Brubaker's testimony. I do not believe it is reasonable to reduce the rate to these small volume customers by the magnitude suggested by my cost of service study while customers served under other rates see significant increases. Further, I do not believe it reasonable for the small general service customers to be paying a distribution charge higher than the residential distribution charge.

Q. IS THERE ANOTHER REASON WHY YOU EVALUATED THE COST OF SERVICE OF THE NON-RESIDENTIAL CUSTOMERS AS A GROUP RATHER THAN AS INDIVIDUAL CLASSES?

A. Yes, there is only one customer currently taking service under the large volume sales service and only one customer currently taking service under the small volume transportation service. There are only a relatively small number of customers who take large volume transportation service (approximately 25). Further the larger large volume transportation customer takes service under a special contract rate. These factors further support my rationale for looking at the non-residential customers as a group. To do otherwise would result in "cost based" rates that would be unstable, increasing or decreasing as customers migrate from one service to another or as large customers are added or removed from the group.

Q. DOES MR. BRUBAKER DISCUSS RATES FOR THE SMALL GENERAL SERVICE CUSTOMER?

A. Yes, on Page 5, Lines 5 through 7, he states: "the increase to the General Service class was not held down due to rate impact considerations."

Q. IS THIS STATEMENT ACCURATE?

A. No, it is not. As I stated above, the increase to the general service class was designed so that the distribution charge would be less than the distribution charge for residential service. Whether one calls this a cost of service consideration or a rate impact consideration is simply "wordsmithing". The rates for the small general service customers were a significant consideration in meeting my stated objectives of recognizing the relative cost of service and mitigating rate impact.

Q. WHAT RATE DESIGN RECOMMENDATIONS DOES MS. MEISENHEIMER MAKE ON BEHALF OF THE OPC?

A. Ms. Meisenheimer makes no specific rate recommendations. However, she presents results of her class revenue requirements based on OPC's "usual" rate design methodology. At Page 6, Line 20, she offers the following:

> "If the Commission determines that an increase in district revenue requirement is necessary, then no customer class within the district 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."

Ms. Meisenheimer's application of this methodology to the OPC's recommended revenue requirement is summarized in Table 1 (Page 11 of her prepared direct testimony), which recommends certain percentage increases by customer class but not rates by rate schedule.

Q. ARE MS. MEISENHEIMER'S RECOMMENDATIONS REASONABLE?

A. No, they are not. Her recommendations are based on a flawed class cost of service study. This study cannot be relied upon as a reasonable basis to develop rates as discussed earlier in my rebuttal testimony.

Further, the rate changes she is recommending are disruptive. The magnitude of the increases she is recommending for the MPS transportation class and L&P interruptible class are so large that, on the surface, one must seriously question the analyses upon which these figures are based.

Q. BEGINNING ON PAGE 16 OF HIS PREPARED DIRECT TESTIMONY, MR. IMHOFF LISTS A NUMBER OF RECOMMENDATIONS REGARDING CUSTOMER CHARGES. DO YOU AGREE WITH HIS RECOMMENDATIONS?

A. Some yes and some no. His recommendations with regard to the L&P General Service, L&P Large Service, MPS Small Volume Transportation, and L&P Small Volume Transportation rate classes are the same as mine.

His recommendation with regards to the L&P Large Service class (which I assume is the same as the Large Volume Firm rate) makes little sense in light of his recommendation for the L&P Small Volume Transportation rate. I am proposing the same $200 per month customer charge for all large volume customers on the L&P system. Mr. Imhoff provides no explanation as to why the customer charge for Large Volume Firm service should be different than the customer charge for Large Volume Transportation service.

His recommendations for the Residential and General Service classes appear to be based on the results of his cost of service study. However, it appears that he has adjusted the results of his cost of service study to justify either no change or small changes to the existing customer charge levels.

Q. PLEASE EXPLAIN HOW MR. IMHOFF ADJUSTS HIS COST OF SERVICE STUDY FOR CUSTOMER CHARGES.

A. Mr. Imhoff develops a separate analysis to calculate his recommended customer charges that excludes certain costs that he included in his cost of service study. As an example, Schedule TJS-28 compares the portion of service line costs that Mr. Imhoff includes in his calculation of recommended customer charges with the functionalized service line costs from his MPS-North/South cost of service study. Mr. Imhoff assigns $2.9 million of costs to the service line function; however he only includes $1.9 million in his calculation of customer charge.

Q. PLEASE EXPLAIN HOW THE EXCLUSION OF CERTAIN COSTS AFFECT MR. IMHOFF'S RECOMMENDED CUSTOMER CHARGE FOR THE RESIDENTIAL AND GENERAL SERVICE CLASSES.

A. If Mr. Imhoff were to rely upon the all of the costs that are included in his cost of service study, residential customer related costs are $11.68 per bill, rather than $7.03 per bill as calculated from his supplemental analysis. The general service customer related costs are $27.69 per bill, rather than $15.56 per bill. These charges per bill are more in line with my recommendations. By excluding certain costs, it almost appears as though Mr. Imhoff was trying to

develop an analysis to support his customer charge recommendations rather than basing the customer charges on cost.

Q. DOES MR. IMHOFF MAKE ANY OTHER RECOMMENDATIONS WITH REGARDS TO RATES?

A. Yes. On Page 12, Lines 14 through 16 of his Direct Testimony, Mr. Imhoff states: "Staff recommends an equal percentage increase in class revenues for the remaining classes for revenue collected from margin rates."

Q. DOES MR. IMHOFF PROVIDE ANY RATES THAT ARE BASED ON THIS RECOMMENDATION?

A. No, he does not.

Q. DO YOU AGREE WITH MR. IMHOFF'S RECOMMENDATION WITH REGARDS TO MARGIN RATES?

A. In general, I do not. However, since Mr. Imhoff has not actually provided any rates, it is difficult to know what his recommendation actually is.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY REGARDING RATE DESIGN ISSUES?

A. Yes, it does.

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Class Cost of Service Study
Summary of Cost of Service
Table 1

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS	[E] Residential	[F] General Service	[G] Large Volume	[H] Small Volume Transportation	[I] Large Volume Transportation	[J] Basis of Allocation or Reference
			$	$	$	$	$	$	
1		Total Cost of Service							
2		Return Under Existing Rates	1,727,973	816,727	683,916	505	3,437	223,389	L 21 T 2
3		Rate Base	60,049,137	41,215,325	15,522,236	43,862	18,833	3,248,881	L 24 T 4
4		Proposed Rate of Return	9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	
5		Return Under Proposed Rates	5,847,885	4,013,754	1,511,633	4,271	1,834	316,392	L 3 X L 4
6		Required Increase in Return	4,119,912	3,197,027	827,717	3,766	(1,603)	93,004	L 5 - L 2
7		Incremental Income Taxes							
8		State Tax							
9		Effective Tax Rate		6.25%	6.25%	6.25%	6.25%	6.25%	
10		Incremental Taxes	349,259	271,023	70,168	319	(136)	7,884	
11		Federal							
12		Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	
13		Incremental Taxes	2,217,773	1,720,979	445,565	2,027	(863)	50,064	
14		Required Revenue Increase	6,686,944	5,189,029	1,343,451	6,113	(2,601)	150,952	L 6 + L 10 + L 13
15		Sales Revenue Under Existing Rates	50,105,263	32,900,796	15,942,368	104,758	10,906	1,146,435	L 10 T 2
16		Total Cost of Service	56,792,207	38,089,824	17,285,819	110,872	8,304	1,297,388	L 14 + L 15
17		Proposed Increase - $	6,686,731	5,187,776		1,498,955			
18		Proposed Increase - %	13.35%	15.77%		8.71%			L 17 / L 15
19		Incremental							
20		State Tax	349,248	270,958		78,290			
21		Federal Tax	2,217,701	1,720,562		497,139			
22		Total Proposed Increase in Return	4,119,782	3,196,256		923,526			
23		Rate of Return Under Proposed Rates	9.74%	9.74%		9.74%			
24		Composite GS, LV, SVT, LVT							

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Class Cost of Service Study
Return Under Existing Rates
Table 2

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS	[E] Residential	[F] General Service	[G] Large Volume	[H] Small Volume Transportation	[I] Large Volume Transportation	[J] Basis of Allocation or Reference
			$	$	$	$	$	$	
1		Return Under Existing Rates							
2		Rate Base							
3		Gas Plant in Service	94,795,144	64,822,497	24,029,913	53,455	32,737	5,856,542	L 44 T 3
4		Accumulated Depreciation	39,323,205	26,559,745	10,018,789	24,291	14,371	2,706,028	L 8 T 4
5		Net Plant in Service	55,471,939	38,262,752	14,011,144	29,163	18,366	3,150,514	L 3 - L 4
6		Other Rate Base Items	4,577,198	2,952,573	1,511,092	14,698	467	98,367	L 23 T 4
7		Total Rate Base	60,049,137	41,215,325	15,522,236	43,862	18,833	3,248,881	L 5 + L 6
8		Return Under Existing Rates							
9		Operating Revenues							
10		Sales and Transport. Revenues	50,105,263	32,900,796	15,942,368	104,758	10,908	1,146,435	L 3 T 5
11		Other Operating Revenues	887,131	690,602	162,364	334	209	33,622	L 7 T 8
12		Total Operating Revenues	50,992,394	33,591,398	16,104,733	105,092	11,115	1,180,057	L 10 + L 11
13		Net Gas Supply Expenses	32,589,153	21,161,309	11,340,457	96,868	414	(9,895)	L 9 + L 10 + L 11, T 6
14		Net Revenues	18,403,241	12,430,089	4,764,276	8,424	10,700	1,189,752	L 12 - L 13
15		Operating Revenue Deductions							
16		Operation and Maintenance	12,085,112	8,679,352	2,757,410	6,204	3,751	628,395	L 101 T 6
17		Depreciation Expense	3,556,673	2,474,086	890,124	1,776	1,138	188,649	L 8 T 7
18		Taxes Other Than Income Taxes	1,166,481	808,988	291,677	604	380	64,832	L 14 T 7
19		Income Taxes	(132,998)	(349,964)	131,150	(665)	1,994	84,488	L 26 T 5
20		Total Oper. Rev. Deductions	16,675,268	11,613,362	4,080,360	7,919	7,264	966,364	Sum of L 16 through L 19
21		Return Under Existing Rates	1,727,973	816,727	683,916	505	3,437	223,389	L 14 - L 20
22		Rate of Return	2.878%	1.982%	4.406%	1.152%	18.248%	6.876%	L 21 / L 7

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Class Cost of Service Study
Allocation of Plant in Service by Class
Table 3

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS $	[E] Residential $	[F] General Service $	[G] Large Volume $	[H] Small Volume Transportation $	[I] Large Volume Transportation $	[J] Basis of Allocation or Reference
1		Gas Plant in Service							
2		Intangible Plant							
3	301	Land & Land Rights	1,939	1,382	460	1	1	95	Supervised O & M
4	302	Other Equipment	0	0	0	0	0	0	Supervised O & M
5		Total Intangible Plant	1,939	1,382	460	1	1	95	
6		Transmission Plant							
7	365	Land & Land Rights	234,575	116,889	62,367	446	195	54,677	50% Throughput, 50% Peak
8	366	Structures & Improvements	10,880	5,422	2,893	21	9	2,536	50% Throughput, 50% Peak
9	367	Mains	6,803,690	3,390,288	1,808,924	12,950	5,651	1,585,876	50% Throughput, 50% Peak
10	369	Measuring & Reg. Station Eq.	372,213	185,474	98,962	708	309	86,759	50% Throughput, 50% Peak
11	371	Other Equipment	0	0	0	0	0	0	50% Throughput, 50% Peak
12		Total Transmission Plant	7,421,358	3,698,073	1,973,146	14,126	6,164	1,729,849	Sum of L 7 through L 11
13		Distribution Plant							
14	374	Land & Land Rights	1,774	1,199	439	1	1	134	0.8% Throughput, 53.8% Services, 45.4% Peak
15	375	Structures & Improvements	59,033	39,903	14,601	35	21	4,472	0.8% Throughput, 53.8% Services, 45.4% Peak
16	376	Mains	43,145,382	29,164,048	10,671,121	25,936	15,598	3,268,679	0.8% Throughput, 53.8% Services, 45.4% Peak
17	377	Compressor Station Equipment	0	0	0	0	0	0	50% Throughput, 50% Peak
18	378	Meas. & Reg. Sta. Equip. - Gen.	231,404	115,309	61,524	440	192	53,938	50% Throughput, 50% Peak
19	379	Meas. & Reg. Sta. Equip. - CG	418,109	208,344	111,164	796	347	97,457	50% Throughput, 50% Peak
20	380	Services	24,171,345	18,978,838	5,034,852	4,843	4,843	148,570	Services
21	381	Meters	2,994,383	1,782,542	1,182,169	872	872	27,908	Meters & Regulators
22	382	Meter Installations	3,650,417	2,173,090	1,441,178	1,063	1,053	34,023	Meters & Regulators
23	383	House Regulators	2,981,590	1,774,938	1,177,128	868	868	27,788	Meters & Regulators
24	384	House Regulator Installations	0	0	0	0	0	0	Meters & Regulators
25	385	Indust. Meas. & Reg. Sta. Equip.	352,788	210,001	139,271	103	103	3,288	Meters & Regulators
26	386	Other Property on Cust. Premises	0	0	0	0	0	0	0.8% Throughput, 53.8% Services, 45.4% Peak
27	387	Other Equipment	0	0	0	0	0	0	0.8% Throughput, 53.8% Services, 45.4% Peak
28		Total Distribution Plant	78,006,183	54,448,212	19,833,246	34,758	23,709	3,666,258	Sum of L 14 through L 27
29		General Plant							
30	389	Land & Land Rights	32,969	23,497	7,826	16	10	1,620	Supervised O & M
31	390	Structure & Improvements	2,500,553	1,782,123	593,538	1,220	765	122,907	Supervised O & M
32	391	Office Furniture & Equipment	4,870,795	3,471,375	1,156,146	2,377	1,489	239,409	Supervised O & M
33	392	Transportation Equipment	204,819	145,973	48,616	100	63	10,067	Supervised O & M
34	393	Stores Equipment	1,759	1,254	418	1	1	86	Supervised O & M
35	394	Tools, Shop & Garage Equipment	589,840	420,374	140,006	288	180	28,992	Supervised O & M
36	395	Laboratory Equipment	126,609	90,233	30,052	62	39	6,223	Supervised O & M
37	396	Power Operated Equipment	147,900	105,407	35,106	72	45	7,270	Supervised O & M
38	397	Communication Equipment	832,815	593,540	197,679	406	255	40,934	Supervised O & M
39	398	Miscellaneous Equipment	57,605	41,055	13,673	28	18	2,831	Supervised O & M
40		Total General Plant	9,365,664	6,674,830	2,223,061	4,570	2,864	460,340	Sum of L 30 through L 39
41		Common Plant (1)	0	0	0	0	0	0	Supervised O & M
42		Total Plant in Service	94,795,144	64,822,497	24,029,913	53,455	32,737	5,856,542	L 5 + L 12 + L 28 + L 40 + L 41
43		Construction Work in Progress	0	0	0	0	0	0	L 42 T 3
44		Total Plant in Service	94,795,144	64,822,497	24,029,913	53,455	32,737	5,856,542	L 42 + L 43

(1) Common Plant has been included in General Plant by account.

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Class Cost of Service Study
Allocation of Accumulated Depreciation and Other Rate Base Items by Class
Table 4

[A] Line No.	[B] Accl. No.	[C] Description	[D] Total MPS	[E] Residential	[F] General Service	[G] Large Volume	[H] Small Volume Transportation	[I] Large Volume Transportation	[J] Basis of Allocation or Reference
			$	$	$	$	$	$	
1		Accumulated Depreciation							
2		Accumulated Depreciation							
3		Intangible	126	90	30	0	0	6	L 5 T 3
4		Transmission	4,587,676	2,286,045	1,219,744	8,732	3,811	1,069,344	L 12 - L 7 T 3
5		Distribution	32,807,368	22,899,516	8,341,352	14,618	9,971	1,541,911	L 28 - L 14 T 3
6		General & Common	1,928,035	1,374,094	457,644	941	589	94,766	L 40 T 3
7		Retirement Work in Progress	0	0	0	0	0	0	L 42 T 3
8		Total Accum. Depreciation	39,323,205	26,559,745	10,018,769	24,291	14,371	2,706,028	Sum of L 3 through L 7
9		Net Plant	55,471,939	38,262,752	14,011,144	29,163	18,366	3,150,514	L 44 - L 8 , T3
10		Other Rate Base Items							
11		Cash Working Capital							
12		Gas Storage	3,460,490	2,247,442	1,199,147	13,902	0	0	Sales Allocator
13		Other	(547,351)	(390,092)	(129,921)	(287)	(167)	(26,903)	L 102 T 6
14		Materials & Supplies	1,668,484	1,141,807	423,198	941	577	103,141	L 42 T 3
15		Prepayments	2,957,237	2,039,807	746,941	1,555	979	167,955	L 9 T 4
16		Customer Adv. for Construction	(43,496)	(29,401)	(10,758)	(26)	(16)	(3,295)	L 16 T 3
17		Customer Deposits	(174,192)	(153,230)	(20,324)	(19)	(19)	(600)	Customer Accounts Allocator
18		Accum. Deferred Income Taxes - Depreciation	(3,405,591)	(2,349,067)	(860,187)	(1,790)	(1,126)	(193,420)	L 9 T 4
19		Accum. Deferred Income Taxes - AAO	(458,923)	(310,208)	(113,505)	(276)	(186)	(34,768)	L 16 T 3
20		Accum. Deferred Income Taxes - Synergies to MPS	(72,114)	(49,742)	(18,215)	(38)	(24)	(4,096)	L 9 T 4
21		Unamortized Investment Tax Credit	(3,748)	(2,585)	(947)	(2)	(1)	(213)	L 9 T 4
22		AAO Gas Pipe Replacement	1,195,422	808,043	295,663	719	432	90,565	L 16 T 3
23		Total Other Rate Base	4,577,198	2,952,573	1,511,092	14,898	467	98,367	Sum of L 12 through L 22
24		Total Rate Base	60,049,137	41,215,325	15,522,235	43,862	18,833	3,248,881	L 9 + L 23

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Class Cost of Service Study
Return and Income Taxes Under Existing Rates
Table 5

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS	[E] Residential	[F] General Service	[G] Large Volume	[H] Small Volume Transportation	[I] Large Volume Transportation	[J] Basis of Allocation or Reference
			$	$	$	$	$	$	
1		Return and Income Taxes Under Existing Rates							
2		Operating Revenues							
3		Sales and Transport. Revenues	50,105,263	32,900,796	15,942,368	104,758	10,906	1,146,435	Direct to Class, Includes Trans. Revenues
4		Other Operating Revenues	887,131	690,602	162,364	334	209	33,622	L 7 T 6
5		Total Operating Revenues	50,992,394	33,591,398	16,104,733	105,092	11,115	1,180,057	L 3 + L 4
6		Gas Supply Expenses	32,589,153	21,161,309	11,340,457	96,668	414	(9,695)	L 12 , T 6
7		Net Revenues	18,403,241	12,430,089	4,764,276	8,424	10,700	1,189,752	L 5 - L 6
8		Operating Revenue Deductions							
9		Operation and Maintenance Exp.	12,085,112	8,879,352	2,767,410	6,204	3,751	628,395	L 101 T 6
10		Depreciation Expense	3,556,673	2,474,986	890,124	1,776	1,138	188,649	L 8 T 7
11		Taxes Other Than Income Taxes	1,166,481	808,988	291,877	604	380	64,632	L 14 T 7
12		Total Operating Revenue Deductions	16,808,266	11,963,326	3,949,210	8,584	5,270	881,876	L 9 + L 10 + L 11
13		Net Operating Income (before tax)	1,594,975	466,763	815,066	(160)	5,431	307,876	L 7 - L 12
14		Interest Expense	2,170,176	1,469,522	560,974	1,585	681	117,415	Total 3.614% of Rate Base , L 24 T 4 to Class
15		Net Taxable Income	(575,201)	(1,022,759)	254,092	(1,745)	4,750	190,462	L 13 - L 14
16		Effective State Tax Rate		6.25%	6.25%	6.25%	6.25%	6.25%	
17		State Tax	(35,950)	(63,922)	15,881	(109)	297	11,904	L 15 X L 16
18		Net Tax Adjustment	(4,318)	(2,978)	(1,091)	(2)	(1)	(245)	L 9 T 4
19		Total State Tax	(40,268)	(66,901)	14,790	(111)	295	11,659	L 17 + L 18
20		Effective Federal Income Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	
21		Federal Income Tax	(201,320)	(357,966)	88,932	(611)	1,662	66,662	L 15 X L 20
22		Net Tax Adjustment	(54,930)	(37,889)	(13,874)	(29)	(18)	(3,120)	L 9 T 4
23		Total Federal Income Tax	(256,250)	(395,854)	75,058	(640)	1,644	63,542	L 21 + L 22
24		Deferred Income Taxes	206,012	142,100	52,035	108	68	11,700	L 9 T 4
25		Investment Tax Credits	(42,492)	(29,310)	(10,733)	(22)	(14)	(2,413)	L 9 T 4
26		Total Income Tax	(132,998)	(349,964)	131,150	(665)	1,994	84,488	L 19 + L 23 + L 24 + L 25

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Class Cost of Service Study
Allocation of O&M Expenses by Class
Table 6
Page 1 of 2

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS $	[E] Residential $	[F] General Service $	[G] Large Volume $	[H] Small Volume Transportation $	[I] Large Volume Transportation $	[J] Basis of Allocation or Reference
1		O & M Expenses							
2		Other Gas Supply Expenses							
3	803	Natural Gas Transmission Line Purchases							
4	804	NG City Gate Purchases							
5	805	Other Gas Purchases							
6	805.1	Purchased Gas Cost Adjustment							
7	807	Other Purchased Gas Expenses							
8	810	Gas Used for Compressor Station Fuel							
9		Subtotal Other Gas Supply Exp.	32,620,219	21,175,166	11,347,850	96,754	449	0	Direct to Class
10	812	Gas Used for Other Util. Oper.	(31,351)	(13,984)	(7,461)	(86)	(35)	(9,784)	Throughput Allocator
11	813	Other Gas Supply Expenses	285	127	68	1	0	89	Throughput Allocator
12		Total Other Gas Supply Expenses	32,589,153	21,161,309	11,340,457	96,668	414	(9,695)	L 9 + L 10 + L 11
13		Total Production Expenses	32,589,153	21,161,309	11,340,457	96,668	414	(9,695)	L 12
14		Transmission Expenses							
15		Operation							
16	850	Supervision & Engineering	0	0	0	0	0	0	L 17 through 23
17	851	Sys. Control & Load Dispatch.	26,932	12,013	6,410	74	30	8,405	Throughput Allocator
18	852	Communication System Expenses	0						
19	853	Compressor Sta. Labor & Exp.	0						
20	854	Gas for Compressor Sta. Fuel	0						
21	856	Mains Expenses	34,732	17,307	9,234	66	29	8,096	L 9 T 3
22	857	Meas. & Reg. Sta. Expenses	0						
23	859	Other Expenses	24,650	12,283	6,554	47	20	5,746	L 12 T 3
24	860	Rents	750	374	199	1	1	175	L 12 T 3
25		Total Operation	87,064	41,977	22,397	189	80	22,421	Sum of L 16 through 24
26		Maintenance							
27	861	Supervision & Engineering	0						
28	862	Structures & Improvements	0	0	0	0	0	0	L 8 T 3
29	863	Mains	95,913	47,794	25,501	183	80	22,356	L 9 T 3
30	865	Meas. & Reg. Sta. Equip.	77	38	20	0	0	18	L 10 T 3
31	867	Other Equipment	0	0	0	0	0	0	L 11 T 3
32		Total Maintenance	95,990	47,832	25,521	183	80	22,374	Sum of L 27 through 31
33		Total Transmission Expenses	183,054	89,809	47,918	371	160	44,796	L 25 + L 32
34		Distribution Expenses							
35		Operation							
36	870	Supervision & Engineering	294,675	199,178	82,819	133	92	12,453	L 37 through 46
37	871	Load Dispatching	20,972	9,354	4,991	58	23	6,545	Throughput Allocator
38	872	Compressor Station Labor and Expenses	0	0	0	0	0	0	L 17 T 3
39	873	Compressor Station Fuel and Power	0	0	0	0	0	0	L 17 T 3
40	874	Mains & Services	481,654	344,484	112,375	219	145	24,451	L 16 T 3 and L 20 T 3
41	875	Meas. & Reg. Sta. Equip. - Gen.	83,191	31,488	16,801	120	52	14,729	L 18 T 3
42	876	Meas. & Reg. Sta. Equip. - Ind.	1,208	719	477	0	0	11	L 25 T 3
43	877	Meas. & Reg. Sta. Equip. - CG	11,012	5,487	2,928	21	9	2,567	L 19 T 3
44	878	Meter & House Regulators	566,694	337,352	223,730	185	185	5,282	L 21 T 3 to L 24 T 3
45	879	Customer Installation Expenses	249,200	195,667	51,906	48	48	1,532	L 20 T 3
46	880	Other Expenses	800,139	558,496	203,437	357	243	37,606	L 28 T 3
47	881	Rents	79,571	55,540	20,231	35	24	3,740	L 28 T 3
48		Total Operation	2,568,316	1,737,747	719,695	1,156	803	108,916	Sum of L 36 through 47

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Class Cost of Service Study
Allocation of O&M Expenses by Class
Table 6
Page 2 of 2

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS $	[E] Residential $	[F] General Service $	[G] Large Volume $	[H] Small Volume Transportation $	[I] Large Volume Transportation $	[J] Basis of Allocation or Reference
49		Maintenance							
50	885	Supervision & Engineering	33,502	22,778	8,622	19	12	2,071	L 51 through 59
51	886	Structures & Improvements	6	4	1	0	0	0	L 15 T 3
52	887	Mains	495,616	335,011	122,580	298	179	37,548	L 16 T 3
53	888	Compressor Station Equipment	0	0	0	0	0	0	L 17 T 3
54	889	Meas. & Reg. Sta. Equip. - Gen.	43,244	21,549	11,497	82	36	10,080	L 18 T 3
55	890	Meas. & Reg. Sta. Equip. - Ind.	43,959	26,169	17,355	13	13	410	L 25 T 3
56	891	Meas. & Reg. Sta. Equip. - CG	30,158	15,028	8,018	57	25	7,030	L 19 T 3
57	892	Services	208,821	163,962	43,495	40	40	1,284	L 20 T 3
58	893	Meters & House Regulators	65,477	38,978	25,850	19	19	610	L 21 T 3 to L 24 T 3
59	894	Other Equipment	141,581	98,823	35,997	63	43	6,654	L 28 T 3
60		Total Maintenance	1,062,364	722,302	273,418	591	367	65,687	Sum of L 50 through 59
61		Total Distribution	3,630,680	2,460,049	993,112	1,747	1,169	174,602	L 48 + L 60
62		Customer Accounts Expenses							
63	901	Supervision	34,962	30,755	4,079	4	4	120	L 64 + L 65 + L 67
64	902	Meter Reading Expenses	277,824	244,216	32,392	30	30	956	Customer Accounts Allocator
65	903	Customer Records & Collection	729,574	641,780	85,125	78	78	2,512	Customer Accounts Allocator
66	904	Uncollectible Accounts	850,700	748,330	99,257	92	92	2,929	Customer Accounts Allocator
67	905	Miscellaneous	2	2	0	0	0	0	Customer Accounts Allocator
68		Total Customer Accounts Expenses	1,892,882	1,665,083	220,854	204	204	6,517	Sum of L 63 through 67
69		Customer Service & Information Expenses							
70	907	Supervision	53,438	35,422	9,476	77	33	8,431	L 71 + L 72 + L 73
71	908	Customer Assistance	0	0	0	0	0	0	50% Customer Accts. and 50% Throughput
72	909	Information and Instruction	43,492	28,829	7,713	62	27	6,862	50% Customer Accts. and 50% Throughput
73	910	Miscellaneous	9,898	6,427	1,719	14	6	1,530	50% Customer Accts. and 50% Throughput
74		Total Cust. Service & Inf. Exp.	106,826	70,677	18,908	153	65	16,822	Sum of L 70 through 73
75		Sales Expenses							
76	911	Supervison	9,099	6,031	1,614	13	6	1,436	L 77 + L 78 + L 79
77	912	Demonstrating & Selling	(200)	(133)	(35)	(0)	(0)	(32)	50% Customer Accts. and 50% Throughput
78	913	Advertising	7,771	5,151	1,378	11	5	1,226	50% Customer Accts. and 50% Throughput
79	916	Miscellaneous	20,850	13,821	3,697	30	13	3,289	50% Customer Accts. and 50% Throughput
80		Total Sales Expenses	37,520	24,870	6,654	54	23	5,919	Sum of L 76 through 79
81		Administrative & General Expenses							
82		Operation							
83	920	A & G Salaries	1,419,738	1,011,835	336,993	693	434	69,783	Supervised O & M
84		Regulatory Allowance	36,758	18,396	8,748	101	41	11,472	$0.005 per Mcf, Throughput Allocator
85	921	Office Supplies & Expenses	985,010	702,008	233,805	481	301	48,415	Supervised O & M
86	922	Transfers	(211,161)	(150,493)	(50,122)	(103)	(65)	(10,379)	Supervised O & M
87	923	Outside Services Employed	434,153	309,417	103,052	212	133	21,339	Supervised O & M
88	924	Property Insurance	(1,352)	(933)	(341)	(1)	(0)	(77)	L 9 T 4
89	925	Injuries & Damages	1,712,295	1,220,338	406,435	835	524	84,162	Supervised O & M
90	926	Employee Pensions & Benefits	1,498,822	1,068,198	355,765	731	458	73,670	Supervised O & M
91	927	Franchise Requirements	0	0	0	0	0	0	Supervised O & M
92	928	Regulatory Commission Expense	242,077	107,977	57,612	668	269	75,551	Throughput Allocator
93	929	Duplicate Charges	0	0	0	0	0	0	Supervised O & M
94	930.1	General Advertising	0	0	0	0	0	0	Supervised O & M
95	930.2	Miscellaneous	48,263	34,397	11,456	24	15	2,372	Supervised O & M
96	931	Rents	27,860	19,856	6,613	14	9	1,369	Supervised O & M
97		Total Operation	6,192,463	4,338,997	1,470,015	3,655	2,118	377,678	Sum of L 83 through 96
98	935	Maintenance of General Plant	41,907	29,867	9,947	20	13	2,060	L 40 T 3
99		Total A & G Expenses	6,234,370	4,368,864	1,479,963	3,675	2,131	379,738	L 97 + L 98
100		Total Operation & Maintenance	44,674,265	29,840,681	14,107,867	102,872	4,166	618,699	L 13 + L 33 + L 61 L 68 + L 74 + L 80 + L 99
101		Excluding Other Gas Supply Exp.	12,085,112	8,679,352	2,767,410	6,204	3,751	628,395	L 100 - L 12
102		Supervised O & M before General	4,919,721	3,506,244	1,167,759	2,400	1,504	241,813	(1)
103		Footnotes							
104		(1) L 33+ L 61 + L 68 + L 74 + L 80 - L 20 - L 24 - L 47 - L 88							

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Class Cost of Service Study
Allocation of Depreciation Expense and Other Taxes by Class
Table 7

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS	[E] Residential	[F] General Service	[G] Large Volume	[H] Small Volume Transportation	[I] Large Volume Transportation	[J] Basis of Allocation or Reference
			$	$	$	$	$	$	
1		Depreciation Expense							
2		Transmission	100,918	50,288	26,831	192	84	23,523	L 12 T 3
3		Distribution Plant	2,498,504	1,743,952	635,250	1,113	759	117,429	L 28 T 3
4		General Plant	908,041	645,728	215,060	442	277	44,534	L 40 T 3
5		Common Plant	0	0	0	0	0	0	L 41 T 3
6		Amortization of Ltd Term Gas Plant	30,630	20,945	7,764	17	11	1,892	L 44 T 3
7		Amortization of Other Plant	20,580	14,073	5,217	12	7	1,271	L 44 T 3
8		Total Depreciation Expense	3,556,673	2,474,986	890,124	1,776	1,138	188,649	Sum of L 2 through 7
9		Taxes Other Than Income Taxes							
10		Ad Valorem (Property Taxes)	917,959	627,715	232,697	518	317	56,713	L 42 - L 5 T 3
11		Payroll Taxes	264,098	186,220	62,687	129	81	12,981	Supervised O & M
12		Miscellaneous Tax	(18,963)	(8,458)	(4,513)	(52)	(21)	(5,918)	Throughput Allocator
13		Sales/Use Tax	3,387	1,511	806	9	4	1,057	Throughput Allocator
14		Total Taxes Other	1,166,481	808,988	291,677	604	380	64,832	Sum of L 10 through 13

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Class Cost of Service Study
Allocation of Other Operating Revenues by Class
Table 8

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS $	[E] Residential $	[F] General Service $	[G] Large Volume $	[H] Small Volume Transportation $	[I] Large Volume Transportation $	[J] Basis of Allocation or Reference
1		Other Operating Revenues							
2	487	Forfeited Discounts	203,097	203,097					Direct to Class
3	488	Miscellaneous Service Revenue	104,358	74,376	24,771	51	32	5,129	Supervised O&M
4	493	Rent from Gas Property	0	0	0	0	0	0	L 42 T 3
5	495	Other Gas Revenue	53,184	37,890	12,619	26	16	2,613	Supervised O&M
6		Special Contract Revenues	526,511	375,240	124,974	257	161	25,879	Supervised O&M
7		Total Other Operating Revenue	887,131	690,602	162,364	334	209	33,622	Sum of L 2 through 6

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Class Cost of Service Study
Allocation Factors
Table 9

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS	[E] Residential	[F] General Service	[G] Large Volume	[H] Small Volume Transportation	[I] Large Volume Transportation	[J] Basis of Allocation or Reference
1		Allocation Factors							
2		1. Throughput							
3		Annual Sales - Mcf	5,049,018	3,279,124	1,749,611	20,283	0	0	
4		Transportation - Mcf	2,302,548	0	0	0	8,176	2,294,372	
5		Throughput - Mcf	7,351,566	3,279,124	1,749,611	20,283	8,176	2,294,372	
6		Allocator	1.0000	0.4460	0.2380	0.0028	0.0011	0.3121	
7		2. Sales							
8		Annual Sales - Mcf	5,049,018	3,279,124	1,749,611	20,283	0	0	
9		Allocator	1.0000	0.6495	0.3465	0.0040	0.0000	0.0000	
10		3. Peak Day							
11		Load Factor		20.00%	20.00%	65.00%	50.00%	50.00%	
12		Peak Day - Mcf/day	81,589	44,920	23,967	85	45	12,572	
13		Allocator	1.0000	0.5506	0.2938	0.0010	0.0005	0.1541	
14		4. Services							
15		Number of Customers	46,334	40,878	5,422	1	1	32	
16		Weighting Factor		1	2	10	10	10	
17		Weighted Number of Customers	52,062	40,878	10,844	10	10	320	
18		Allocator	1.0000	0.7852	0.2083	0.0002	0.0002	0.0061	
19		5. Meters & Regulators							
20		Number of Customers	46,334	40,878	5,422	1	1	32	
21		Weighting Factor		1	5	20	20	20	
22		Weighted Number of Customers	68,668	40,878	27,110	20	20	640	
23		Allocator	1.0000	0.5953	0.3948	0.0003	0.0003	0.0093	
24		6. Customer Accounts							
25		Number of Bills	556,008	490,536	65,064	12	12	384	
26		Weighting Factor		1	1	5	5	5	
27		Weighted Number of Customers	557,640	490,536	65,064	60	60	1,920	
28		Allocator	1.0000	0.8797	0.1167	0.0001	0.0001	0.0034	
29		Use per Customer		80	323	20,283	8,176	71,699	

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Functionally Classified Cost of Service Study
Summary of Cost of Service
Table 1

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]
						Transmission/Distribution				Meters &	Customer Accounting				Basis of Allocation
				Commodity	Sales	Commodity	Peak	Customer	Services	Regulators	Meter Reading	Accounting	Other	Direct Assigned	or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Total Cost of Service													
2		Return Under Existing Rates	1,727,973	(302,183)	51,588	(279,057)	(1,485,634)	(1,455,467)	(1,805,815)	(1,380,652)	(387,799)	(1,534,612)	(84,178)	10,391,783	L 21 T 2
3		Rate Base	60,049,137	174,386	3,460,490	2,117,497	14,741,724	15,228,328	15,748,586	7,169,933	407,955	911,686	88,553	0	L 24 T 4
4		Proposed Rate of Return		9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	
5		Return Under Proposed Rates	5,847,885	16,983	337,000	206,212	1,435,623	1,483,011	1,533,676	698,244	39,729	88,785	8,624	0	L 3 x L4
6		Required Increase in Return	4,119,912	319,166	285,412	485,269	2,921,257	2,938,478	3,339,491	2,078,896	427,528	1,623,396	92,801	(10,391,783)	L 5 - L2
7		Incremental Income Taxes													
8		State													
9		Effective Tax Rate		6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	
10		Incremental Taxes	349,259	27,057	24,185	41,138	247,645	249,105	283,100	176,235	36,243	137,621	7,867	(880,948)	
11		Federal													
12		Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	
13		Incremental Taxes	2,217,773	171,809	153,639	261,223	1,572,530	1,581,800	1,797,668	1,119,082	230,141	873,884	49,955	(5,593,958)	
14		Required Revenue Increase	6,686,944	518,032	463,246	787,631	4,741,431	4,769,383	5,420,260	3,374,214	693,912	2,634,901	150,624	(16,866,689)	L 6 + L10 + L13
15		Sales Revenue Under Existing Rates	50,105,263	0	0	0	0	0	0	0	0	0	0	50,105,263	L 10 T 2
16		Total Cost of Service	56,792,207	518,032	463,246	787,631	4,741,431	4,769,383	5,420,260	3,374,214	693,912	2,634,901	150,624	33,238,574	L 14 + L15
					24,203,054	10,298,445	0								

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Return Under Existing Rates
Table 2

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Return Under Existing Rates													
2		Rate Base													
3		Gas Plant in Service	94,795,144	233,810	0	4,711,671	25,209,275	24,725,810	26,115,418	11,677,554	546,971	1,455,907	118,728	0	L 44 T3
4		Accumulated Depreciation	39,323,205	48,126	0	2,643,839	11,000,823	10,080,847	10,566,223	4,546,650	112,585	299,674	24,438	0	L 8 T4
5		Net Plant in Service	55,471,938	185,685	0	2,067,832	14,208,452	14,644,963	15,549,195	7,130,903	434,387	1,156,233	94,290	0	L 3 - L4
6		Other Rate Base Items	4,577,198	(11,299)	3,460,490	49,665	533,272	583,364	199,392	39,030	(26,432)	(244,547)	(5,737)	0	L 23 T4
7		Total Rate Base	60,049,137	174,386	3,460,490	2,117,497	14,741,724	15,228,328	15,748,586	7,169,933	407,955	911,686	88,553	0	L 5 + L6
8		Return Under Existing Rates													
9		Operating Revenues													
10		Sales and Transport. Revenues	50,105,263											50,105,263	
11		Other Operating Revenues	887,131	17,073	0	24,140	113,784	108,136	141,959	124,021	39,941	106,312	8,670	203,097	L 7 T8
12		Total Operating Revenues	50,992,394	17,073	0	24,140	113,784	108,136	141,959	124,021	39,941	106,312	8,670	50,308,360	L 10 + L11
13		Net Gas Supply Expenses	32,589,153	(31,066)	0	0	0	0	0	0	0	0	0	32,620,219	L 9 + L10 + L11 T6
14		Net Revenues	18,403,241	48,139	0	24,140	113,784	108,136	141,959	124,021	39,941	106,312	8,670	17,688,141	L 12 + L13
15		Operating Revenue Deductions													
16		Operation and Maintenance	12,085,112	550,305	0	384,847	1,829,611	1,742,786	2,281,516	1,982,017	635,071	2,541,107	137,852	0	L 101 T6
17		Depreciation Expense	3,556,573	22,741	0	106,452	853,472	901,114	976,338	490,208	53,199	141,603	11,548	0	L 8 T6
18		Taxes Other Than Income Taxes	1,166,481	(6,721)	0	54,946	288,049	281,187	307,701	160,963	20,716	55,142	4,497	0	L 14 T6
19		Income Taxes	(132,998)	(216,002)	(51,588)	(243,049)	(1,371,714)	(1,361,484)	(1,617,781)	(1,128,515)	(281,247)	(1,096,928)	(61,049)	7,296,358	L 26 T6
20		Total Oper. Rev. Deductions	16,675,268	350,323	(51,588)	303,197	1,599,418	1,563,603	1,947,774	1,504,673	427,740	1,640,924	92,847	7,296,358	Sum of L 16 through L 19
21		Return Under Existing Rates	1,727,973	(302,183)	51,588	(278,057)	(1,485,634)	(1,455,467)	(1,805,815)	(1,380,652)	(387,799)	(1,534,612)	(84,178)	10,391,783	L 14 - L20
22		Rate of Return	2.878%	-173.284%	1.491%	-13.179%	-10.078%	-9.558%	-11.467%	-19.256%	-95.059%	-168.327%	-95.059%	#DIV/0!	L 21 / L7

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Gas Plant in Service
Table 3

[A] Line No.	[B] Acct No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Gas Plant in Service													
2		Intangible Plant													
3	301	Land & Land Rights	1,939	48	0	68	323	307	402	352	113	301	25	0	Supervised O & M
4	302	Other Equipment	0	0	0	0	0	0	0	0	0	0	0	0	Supervised O & M
5		Total Intangible Plant	1,939	48	0	68	323	307	402	352	113	301	25	0	Supervised O & M
6		Transmission Plant													
7	365	Land & Land Rights	234,575			117,288	117,288								50% Throughput, 50% Peak
8	366	Structures & Improvements	10,880			5,440	5,440								50% Throughput, 50% Peak
9	367	Mains	6,803,690			3,401,845	3,401,845								50% Throughput, 50% Peak
10	369	Measuring & Reg. Station Eq.	372,213			186,107	186,107								50% Throughput, 50% Peak
11	371	Other Equipment	0			0	0								50% Throughput, 50% Peak
12		Total Transmission Plant	7,421,358	0	0	3,710,679	3,710,679	0	0	0	0	0	0	0	Sum of L 7 through L 11
13		Distribution Plant													
14	374	Land & Land Rights	1,774			14	805	954							0.8% Throughput, 53.8% Services, 45.4% Peak
15	375	Structures & Improvements	59,033			472	26,801	31,760							0.8% Throughput, 53.8% Services, 45.4% Peak
16	376	Mains	43,145,382			345,163	19,588,003	23,212,216							0.8% Throughput, 53.8% Services, 45.4% Peak
17	377	Compressor Station Equipment	0			0	0								50% Throughput, 50% Peak
18	378	Meas. & Reg. Sta. Equip. - Gen.	231,404			115,702	115,702								50% Throughput, 50% Peak
19	379	Meas. & Reg. Sta. Equip. - CG	418,109			209,055	209,055								50% Throughput, 50% Peak
20	380	Services	24,171,345						24,171,345						Services
21	381	Meters	2,994,363							2,994,363					Meters & Regulators
22	382	Meter Installations	3,650,417							3,650,417					Meters & Regulators
23	383	House Regulators	2,981,590							2,981,590					Meters & Regulators
24	384	House Regulator Installations	0							0					Meters & Regulators
25	385	Indust. Meas. & Reg. Sta. Equip.	352,766							352,766					Meters & Regulators
26	386	Other Property on Cust. Premises	0			0	0	0							0.8% Throughput, 53.8% Services, 45.4% Peak
27	387	Other Equipment	0			0	0	0							0.8% Throughput, 53.8% Services, 45.4% Peak
28		Total Distribution Plant	78,006,183	0	0	670,406	19,940,366	23,244,930	24,171,345	9,978,136	0	0	0	0	Sum of L 14 through L 27
29		General Plant													
30	389	Land & Land Rights	32,969	823	0	1,163	5,484	5,212	6,842	5,978	1,925	5,124	418	0	Supervised O & M
31	390	Structure & Improvements	2,500,553	62,412	0	88,245	415,948	395,301	518,944	453,369	146,006	388,634	31,693	0	Supervised O & M
32	391	Office Furniture & Equipment	4,870,795	121,572	0	171,892	810,220	770,001	1,010,844	883,112	284,404	757,016	61,734	0	Supervised O & M
33	392	Transportation Equipment	204,819	5,112	0	7,228	34,070	32,379	42,506	37,135	11,959	31,833	2,596	0	Supervised O & M
34	393	Stores Equipment	1,759	44	0	62	293	278	365	319	103	273	22	0	Supervised O & M
35	394	Tools, Shop & Garage Equipment	589,840	14,722	0	20,816	98,115	93,245	122,410	106,942	34,441	91,673	7,476	0	Supervised O & M
36	395	Laboratory Equipment	126,609	3,160	0	4,468	21,060	20,015	26,275	22,955	7,393	19,677	1,605	0	Supervised O & M
37	396	Power Operated Equipment	147,900	3,692	0	5,219	24,602	23,381	30,694	26,815	8,636	22,987	1,875	0	Supervised O & M
38	397	Communication Equipment	832,815	20,787	0	29,380	138,532	131,656	172,835	150,996	48,628	129,436	10,555	0	Supervised O & M
39	398	Miscellaneous Equipment	57,605	1,438	0	2,033	9,582	9,107	11,955	10,444	3,364	8,953	730	0	Supervised O & M
40		Total General Plant	9,365,664	233,762	0	330,517	1,557,907	1,480,574	1,943,671	1,698,066	546,858	1,455,605	118,704	0	Sum of L 30 through L 39
41		Total Common Plant	0								0			0	Supervised O & M
42		Total Plant in Service	94,795,144	233,810	0	4,711,671	25,209,275	24,725,810	26,115,418	11,677,554	546,971	1,455,907	118,728	0	L 5 + L 12 + L 28 + L 40 + L 41
43		Construction Work in Progress	-	0	0	0	0	0	0	0	0	0	0	0	L 42 T 3
44		Total Plant in Service	94,795,144	233,810	0	4,711,671	25,209,275	24,725,810	26,115,418	11,677,554	546,971	1,455,907	118,728	0	L 42 + L 43

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Accumulated Depreciation and Other Rate Base Items
Table 4

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Accumulated Depreciation													
2		Accumulated Depreciation													
3		Intangible	126	3	0	4	21	20	26	23	7	20	2	0	L 3 T 3
4		Transmission	4,587,676	0	0	2,293,838	2,293,838	0	0	0	0	0	0	0	L 12 - L 7 T 3
5		Distribution	32,807,366	0	0	281,956	8,386,250	9,776,033	10,166,069	4,197,060	0	0	0	0	L 28 - L 14 T 3
6		General & Common	1,928,035	48,123	0	68,041	320,714	304,794	400,128	349,567	112,577	299,654	24,437	0	L 40 T 3
7		Retirement Work in Progress	0	0	0	0	0	0	0	0	0	0	0	0	L 42 T 3
8		Total Accum. Depreciation	39,323,205	48,126	0	2,643,839	11,000,823	10,080,847	10,566,223	4,546,650	112,585	299,674	24,438	0	Sum of L 3 through L 7
9		Net Plant	55,471,939	185,685	0	2,067,832	14,208,452	14,644,963	15,549,195	7,130,903	434,387	1,156,233	94,290	0	L 44 - L 8 , T3
10		Other Rate Base Items													
11		Cash Working Capital													Sales Allocator
12		Gas Storage	3,460,490		3,460,490										Direct
13		Other	(547,351)	(13,562)	0	(19,316)	(91,048)	(86,528)	(113,593)	(89,239)	(31,960)	(85,069)	(6,937)	0	L 107 T 6
14		Materials & Supplies	1,669,464	4,118	0	82,979	443,968	435,453	459,926	205,657	9,633	25,640	2,091	0	L 42 T 3
15		Prepayments	2,957,237	9,899	0	110,237	757,460	780,730	828,935	380,152	23,157	61,639	5,027	0	L 9 T 4
16		Customer Adv. for Construction	(43,496)	0	0	(348)	(19,747)	(23,401)	0	0	0	0	0	0	L 16 T 3
17		Customer Deposits	(174,192)									(174,192)			Customer Accounts Allocator
18		Accum. Deferred Income Taxes - Depreciation	(3,405,591)	(11,400)	0	(126,950)	(872,300)	(898,099)	(954,612)	(437,768)	(26,668)	(70,985)	(5,789)	0	L 9 T 4
19		Accum. Deferred Income Taxes - AAO	(458,923)	0	0	(3,671)	(208,351)	(246,901)	0	0	0	0	0	0	L 16 T 3
20		Accum. Deferred Income Taxes - Synergies to MPS	(72,114)	(241)	0	(2,688)	(18,471)	(19,039)	(20,214)	(9,270)	(565)	(1,503)	(123)	0	L 9 T 4
21		Unamortized Investment Tax Credit	(3,748)	(13)	0	(140)	(960)	(989)	(1,051)	(482)	(29)	(78)	(6)	0	L 9 T 4
22		AAO Gas Pipe Replacement	1,195,422	0	0	9,563	542,722	643,137	0	0	0	0	0	0	L 16 T 3
23		Total Working Capital	4,577,198	(11,299)	3,460,490	49,665	533,272	583,364	199,392	39,030	(26,432)	(244,547)	(5,737)	0	Sum of L 12 through L 22
24		Total Rate Base	60,049,137	174,386	3,460,490	2,117,497	14,741,724	15,228,328	15,748,586	7,169,933	407,955	911,686	88,553	0	L 9 + L 23

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Return and Income Taxes Under Existing Rates
Table 5

[A] Line No.	[B] Acct No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Return and Income Taxes Under Existing Rates													
2		Operating Revenues													
3		Sales and Transport. Revenues	50,105,263											50,105,263	Direct to Class
4		Other Operating Revenues	887,131	17,073	0	24,140	113,784	108,136	141,959	124,021	39,941	106,312	8,670	203,097	L 7 T 8
5		Total Operating Revenues	50,992,394	17,073	0	24,140	113,784	108,136	141,959	124,021	39,941	106,312	8,670	50,308,360	L 3 + L 4
6		Gas Supply Expenses	32,589,153	(31,066)	0	0	0	0	0	0	0	0	0	32,620,219	L 12, T 6
7		Net Revenues	18,403,241	48,139	0	24,140	113,784	108,136	141,959	124,021	39,941	106,312	8,670	17,688,141	L 5 - L 6
8		Operating Revenue Deductions													
9		Operation and Maintenance Exp.	12,085,112	560,305	0	384,847	1,829,611	1,742,786	2,281,516	1,982,017	635,071	2,541,107	137,852	0	L 101 T 6
10		Depreciation Expense	3,556,673	22,741	0	106,452	853,472	901,114	976,338	490,208	53,199	141,603	11,548	0	L 8 T 7
11		Taxes Other Than Income Taxes	1,166,481	(6,721)	0	54,946	288,049	281,187	307,701	160,963	20,716	55,142	4,497	0	L 14 T 7
12		Total Operating Rev. Deductions	16,808,266	566,325	0	546,245	2,971,132	2,925,087	3,565,555	2,633,188	708,986	2,737,852	153,896	0	L 9 + L 10 + L 11
13		Net Operating Income (before tax)	1,594,975	(518,186)	0	(522,106)	(2,857,348)	(2,816,951)	(3,423,597)	(2,509,167)	(669,046)	(2,631,540)	(145,226)	17,688,141	L 7 - L 12
14		Interest Expense	2,170,176	6,302	125,062	76,528	532,766	550,352	569,154	259,121	14,743	32,948	3,200	0	Total 3.614% of Rate Base , L 24 T 4 to Class
15		Net Taxable Income	(575,201)	(524,488)	(125,062)	(598,632)	(3,390,114)	(3,367,303)	(3,992,751)	(2,768,289)	(683,789)	(2,664,488)	(148,427)	17,688,141	L 13 - L 14
16		Effective State Tax Rate		6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	
17		Federal Income Tax	(35,950)	(32,780)	(7,816)	(37,414)	(211,882)	(210,456)	(249,547)	(173,018)	(42,737)	(166,531)	(9,277)	1,105,509	L 15 X L 16
18		Net Tax Adjustment	(4,318)	(14)	0	(161)	(1,106)	(1,140)	(1,210)	(555)	(34)	(90)	(7)	0	L 9 T4
19		Total Single Business Tax	(40,268)	(32,795)	(7,816)	(37,575)	(212,988)	(211,596)	(250,757)	(173,573)	(42,771)	(166,621)	(9,284)	1,105,509	L 17 + L 18
20		Effective Federal Income Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	
21		Federal Income Tax	(201,320)	(183,571)	(43,772)	(209,521)	(1,186,540)	(1,178,556)	(1,397,463)	(968,901)	(239,326)	(932,571)	(51,949)	6,190,849	L 15 X L 20
22		Net Tax Adjustment	(54,930)	(184)	0	(2,048)	(14,070)	(14,502)	(15,397)	(7,061)	(430)	(1,145)	(93)	0	L 9 T4
23		Total Federal Income Tax	(256,250)	(183,755)	(43,772)	(211,569)	(1,200,609)	(1,193,058)	(1,412,860)	(975,962)	(239,756)	(933,716)	(52,043)	6,190,849	L 21 + L 22
24		Deferred Income Taxes	205,012	690	0	7,680	52,767	54,389	57,747	26,483	1,613	4,294	350	0	L 9 T 4
25		Investment Tax Credits	(42,492)	(142)	0	(1,584)	(10,884)	(11,218)	(11,911)	(5,462)	(333)	(886)	(72)	0	L 9 T 4
26		Total Income Tax	(132,998)	(216,002)	(51,588)	(243,049)	(1,371,714)	(1,361,484)	(1,617,781)	(1,128,515)	(281,247)	(1,096,928)	(61,049)	7,296,358	L 19 + L 23 + L 24 + L 25

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Operation and Maintenance Expenses
Table 6
Page 1 of 2

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		O & M Expenses													
2		Other Gas Supply Expenses													
3	803	Natural Gas Transmission Line Purchases													
4	804	NG City Gate Purchases													
5	805	Other Gas Purchases													
6	805.1	Purchased Gas Cost Adjustment													
7	807	Other Purchased Gas Expenses													
8	810.0	Gas Used for Compressor Station Fuel													
9		Subtotal Other Gas Supply Exp	32,620,219											32,620,219	Direct
10	812	Gas Used for Other Util. Oper.	(31,351)	(31,351)											Throughput Allocator
11	813	Other Gas Supply Expenses	285	285											Throughput Allocator
12		Total Other Gas Supply Expenses	32,589,153	(31,066)	0	0	0	0	0	0	0	0	0	32,620,219	L 9 + L 10 + L 11
13		Total Production Expenses	32,589,153	(31,066)	0	0	0	0	0	0	0	0	0	32,620,219	L 12
14		Transmission Expenses													
15		Operation													
16	850	Supervision & Engineering	0	0	0	0	0	0	0	0	0	0	0	0	L 17 through 23
17	851	Sys. Control & Load Dispatch.	26,932	26,932											Throughput Allocator
18	852	Communication System Exp.	0												
19	853	Compressor Sta. Labor & Exp.	0												
20	854	Gas for Compressor Sta. Fuel	0												
21	856	Mains Expenses	34,732	0	0	17,366	17,366	0	0	0	0	0	0	0	L 9 T 3
22	857	Meas. & Reg. Sta. Expenses	0												
23	859	Other Expenses	24,650	0	0	12,325	12,325	0	0	0	0	0	0	0	L 12 T 3
24	860	Rents	750	0	0	375	375	0	0	0	0	0	0	0	L 12 T 3
25		Total Operation	87,064	26,932	0	30,066	30,066	0	0	0	0	0	0	0	Sum of L 16 through L 24
26		Maintenance													
27	861	Supervision & Engineering	0												
28	862	Structures & Improvements	0	0	0	0	0	0	0	0	0	0	0	0	L 8 T 3
29	863	Mains	95,913	0	0	47,957	47,957	0	0	0	0	0	0	0	L 9 T 3
30	865	Meas. & Reg. Sta. Equip.	77	0	0	39	39	0	0	0	0	0	0	0	L 10 T 3
31	867	Other Equipment	0	0	0	0	0	0	0	0	0	0	0	0	L 11 T 3
32		Total Maintenance	95,990	0	0	47,995	47,995	0	0	0	0	0	0	0	Sum of L 27 through L 31
33		Total Transmission Expenses	183,054	26,932	0	78,061	78,061	0	0	0	0	0	0	0	L 25 + L 32
34		Distribution Expenses													
35		Operation													
36	870	Supervision & Engineering	294,675	2,817	0	6,238	51,276	54,328	89,995	90,020	0	0	0	0	L 37 through 46
37	871	Load Dispatching	20,972	20,972											Throughput Allocator
38	872	Compressor Stn. Labor and Exp.	0	0	0	0	0	0	0	0	0	0	0	0	L 17 T 3
39	873	Compressor Stn Fuel and Power	0	0	0	0	0	0	0	0	0	0	0	0	L 17 T 3
40	874	Mains & Services	481,654	0	0	2,470	140,153	166,084	172,947	0	0	0	0	0	L 16 T 3 + L 20 T 3
41	875	Meas. & Reg. Sta. Equip. - Gen.	63,191	0	0	31,596	31,596	0	0	0	0	0	0	0	L 18 T 3
42	876	Meas. & Reg. Sta. Equip. - Ind.	1,208	0	0	0	0	0	0	1,208	0	0	0	0	L 25 T 3
43	877	Meas. & Reg. Sta. Equip. - CG	11,012	0	0	5,506	5,506	0	0	0	0	0	0	0	L 19 T 3
44	878	Meter & House Regulators	566,694	0	0	0	0	0	0	566,694	0	0	0	0	L 21 T 3 to L 24 T 3
45	879	Customer Installation Expenses	249,200	0	0	0	0	0	249,200	0	0	0	0	0	L 20 T 3
46	880	Other Expenses	800,139	0	0	6,877	204,536	238,432	247,935	102,360	0	0	0	0	L 26 T 3
47	881	Rents	79,571	0	0	684	20,340	23,711	24,656	10,179	0	0	0	0	L 28 T 3
48		Total Operation	2,568,316	23,789	0	53,370	453,407	482,556	784,733	770,461	0	0	0	0	Sum of L 36 through L 47

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Operation and Maintenance Expenses
Table 6
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[A] Line No	[B] Acct. No	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
49		Maintenance													
50	885	Supervision & Engineering	33,502	0	0	1,364	9,700	10,056	8,228	4,153	0	0	0	0	L 51 through 59
51	886	Structures & Improvements	6	0	0	0	3	3	0	0	0	0	0	0	L 15 T 3
52	887	Mains	495,616	0	0	3,965	225,010	266,641	0	0	0	0	0	0	L 16 T 3
53	888	Compressor Station Equipment	0	0	0	0	0	0	0	0	0	0	0	0	L 17 T 3
54	889	Meas. & Reg. Sta. Equip. - Gen.	43,244	0	0	21,622	21,622	0	0	0	0	0	0	0	L 18 T 3
55	890	Meas. & Reg. Sta. Equip. - Ind.	43,959	0	0	0	0	0	0	43,959	0	0	0	0	L 25 T 3
56	891	Meas. & Reg. Sta. Equip. - CG	30,158	0	0	15,079	15,079	0	0	0	0	0	0	0	L 19 T 3
57	892	Services	208,821	0	0	0	0	0	208,821	0	0	0	0	0	L 20 T 3
58	893	Meters & House Regulators	65,477	0	0	0	0	0	0	65,477	0	0	0	0	L 21 T 3 to L 24 T 3
59	894	Other Equipment	141,581	0	0	1,217	36,192	42,189	43,871	18,112	0	0	0	0	L 28 T 3
60		Total Maintenance	1,062,364	0	0	43,247	307,606	318,890	260,920	131,701	0	0	0	0	Sum of L 50 through L 59
61		Total Distribution	3,630,680	23,789	0	96,616	761,013	801,447	1,045,653	902,162	0	0	0	0	L 48 + L 60
62		Customer Accounts Expenses													
63	901	Supervision	34,962	0	0	0	0	0	0	0	9,637	25,325	0	0	L 64 + L 65 + L 67
64	902	Meter Reading Expenses	277,624								277,624				*Customer Accounts Allocator*
65	903	Customer Records & Collection	729,574									729,574			Customer Accounts Allocator
66	904	Uncollectible Accounts	850,700									850,700			Customer Accounts Allocator
67	905	Miscellaneous	2									2			Customer Accounts Allocator
68		Total Customer Accounts Expenses	1,892,862	0	0	0	0	0	0	0	287,261	1,605,601	0	0	Sum of L 63 through L 67
69		Customer Service & Information Expenses													
70	907	Supervision	53,438	26,719	0	0	0	0	0	0	0	4,871	21,848	0	L 71 + L 72 + L 73
71	908	Customer Assistance	0	0									0		50% Customer Accts. and 50% Throughput
72	909	Information and Instruction	43,492	21,746									21,746		50% Customer Accts. and 50% Throughput
73	910	Miscellaneous	9,696	4,848								4,848			50% Customer Accts. and 50% Throughput
74		*Total Cust. Service & Inf. Exp.*	106,626	53,313	0	0	0	0	0	0	0	9,719	43,594	0	Sum of L 70 through L 73
75		Sales Expenses													
76	911	Supervison	9,099	4,550	0	0	0	0	0	0	0	0	4,550	0	L 77 + L 78 + L 79
77	912	Demonstrating & Selling	(200)	(100)									(100)		50% Customer Accts. and 50% Throughput
78	913	Advertising	7,771	3,886									3,886		50% Customer Accts. and 50% Throughput
79	916	Miscellaneous	20,850	10,425									10,425		50% Customer Accts. and 50% Throughput
80		Total Sales Expenses	37,520	18,760	0	0	0	0	0	0	0	0	18,760	0	Sum of L 76 through L 79
81		Administrative & General Expenses													
82		Operation													
83	920	A & G Salaries	1,419,738	35,436	0	50,103	236,163	224,440	294,640	257,409	82,898	220,655	17,994	0	Supervised O & M
84		Regulatory Allowance	38,758	38,758											Throughput Allocator
85	921	Office Supplies & Expenses	985,010	24,585	0	34,761	163,849	155,716	204,421	178,590	57,514	153,090	12,484	0	Supervised O & M
86	922	Transfers	(211,161)	(5,270)	0	(7,452)	(35,125)	(33,381)	(43,823)	(38,285)	(12,330)	(32,819)	(2,676)	0	Supervised O & M
87	923	Outside Services Employed	434,153	10,836	0	15,321	72,218	68,633	90,100	78,715	25,350	67,476	5,503	0	Supervised O & M
88	924	Property Insurance	(1,352)	(5)	0	(50)	(346)	(357)	(379)	(174)	(11)	(28)	(2)	0	L 9 T 4
89	925	Injuries & Damages	1,712,295	42,738	0	60,427	284,827	270,689	355,355	310,452	99,980	266,124	21,702	0	Supervised O & M
90	926	Employee Pensions & Benefits	1,488,822	37,410	0	52,894	249,318	236,942	311,053	271,748	87,516	232,946	18,997	0	Supervised O & M
91	927	Franchise Requirements	0	0	0	0	0	0	0	0	0	0	0	0	Supervised O & M
92	928	Regulatory Commission Expense	242,077	242,077											Throughput Allocator
93	929	Duplicate Charges	0	0	0	0	0	0	0	0	0	0	0	0	Supervised O & M
94	930.1	General Advertising	0	0	0	0	0	0	0	0	0	0	0	0	Supervised O & M
95	930.2	*Miscellaneous*	48,263	1,205	0	1,703	8,028	7,630	10,016	8,750	2,818	7,501	612	0	Supervised O & M
96	931	Rents	27,860	695	0	983	4,634	4,404	5,782	5,051	1,627	4,330	353	0	Supervised O & M
97		Total Operation	6,192,463	426,465	0	208,691	983,566	934,714	1,227,166	1,072,257	345,363	919,274	74,966	0	Sum of L 83 through L 96
98	935	*Maintenance of General Plant*	41,907	1,046	0	1,479	6,971	6,625	8,697	7,598	2,447	6,513	531	0	L 40 T 3
99		Total A & G Expenses	6,234,370	427,511	0	210,170	990,537	941,339	1,235,863	1,079,855	347,810	925,787	75,497	0	L 97 + L 98
100		Total Operation & Maintenance	44,674,265	519,239	0	384,847	1,829,611	1,742,786	2,281,516	1,982,017	635,071	2,541,107	137,852	32,620,219	L 13 + L 33 + L 61 L 66 + L 74 + L 80 + L 99
101		Excluding Other Gas Supply Exp.	12,085,112	550,305	0	384,847	1,829,611	1,742,786	2,281,516	1,982,017	635,071	2,541,107	137,852	0	L 100 - L 12
102		Supervised O & M before General (1)	4,819,721	122,794	0	173,618	818,358	777,736	1,020,997	891,983	287,261	764,620	62,354	0	(1)
103		Footnotes (1)													
104		L 33 + L 61 + L 66 + L 74 + L 80 - L 20 - L 24 - L 47 - L 66													

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Depreciation Expense and Taxes Other Than Income Taxes
Table 7

[A] Line No.	[B] Acct No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Depreciation Expense													
2		Transmission	100,918	0	0	50,459	50,459	0	0	0	0	0	0	0	L 12 T 3
3		Distribution Plant	2,498,504	0	0	21,473	638,681	744,525	774,198	319,627	0	0	0	0	L 28 T 3
4		General Plant	906,041	22,614	0	31,974	150,713	143,232	188,032	164,272	52,903	140,816	11,483	0	L 40 T 3
5		Common Plant	0	0	0	0	0	0	0	0	0	0	0	0	L 41 T 3
6		Amortization of Ltd Term Gas Plant	30,630	76	0	1,522	8,146	7,989	8,438	3,773	177	470	38	0	L 44 T 3
7		Amortization of Other Plant	20,580	51	0	1,023	5,473	5,368	5,670	2,535	119	316	26	0	L 44 T 3
8		Total Depreciation Expense	3,556,673	22,741	0	106,452	853,472	901,114	976,338	490,208	53,199	141,603	11,548	0	Sum of L 2 through L 7
9		*Taxes Other Than Income Taxes*													
10		Ad Valorem (Property Taxes)	917,959	2,264	0	45,626	244,119	239,437	252,893	113,080	5,296	14,098	1,150	0	L 42 - L 5 T 3
11		Payroll Taxes	264,098	6,592	0	9,320	43,931	41,750	54,809	47,883	15,421	41,046	3,347	0	Supervised O & M
12		Miscellaneous Tax	(18,963)	(18,963)											Throughput Allocator
13		Sales/Use Tax	3,387	3,387											Throughput Allocator
14		Total Taxes Other	1,166,481	(6,721)	0	54,946	288,049	281,187	307,701	160,963	20,716	55,142	4,497	0	Sum of L 10 through L 13

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Other Operating Revenues
Table 8

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Other Operating Revenues													
2	487	Forfeited Discounts	203,097											203,097	Direct to Class
3	488	Miscellaneous Service Revenue	104,359	2,605	0	3,683	17,359	16,498	21,658	18,921	6,093	16,219	1,323	0	Supervised O&M
4	493	Rent from Gas Property	0	0	0	0	0	0	0	0	0	0	0	0	L 42 T 3
5	495	Other Gas Revenue	53,164	1,327	0	1,876	8,843	8,404	11,033	9,639	3,104	8,263	674	0	Supervised O&M
6		Special Contract Revenues	526,511	13,141	0	18,581	87,581	83,234	109,268	95,460	30,743	81,830	6,673	0	Supervised O&M
7		Total Other Operating Revenue	887,131	17,073	0	24,140	113,784	108,136	141,959	124,021	39,941	106,312	8,670	203,097	Sum of L 2 through L 6

Aquila Networks - MPS
Test Year Ended December 31, 2002 - Update to K&M 9/30/03
Class Summary and Unit Costs
Table 9

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
				Sch TJS-14 Table 9, L 6	Sch TJS-14 Table 9, L 9	Sch TJS-14 Table 9, L 6	Sch TJS-14 Table 9, L 13	Sch TJS-14 Table 9, L 18	Sch TJS-14 Table 9, L 18	Sch TJS-14 Table 9, L 23	Sch TJS-14 Table 9, L 28	Sch TJS-14 Table 9, L 28	Sch TJS-14 Table 9, L 28		
1	Cost of Service														
2		Residential	38,089,824	231,065	300,859	351,318	2,610,435	3,744,820	4,255,875	2,008,666	610,409	2,317,829	132,498	21,526,049	
3		General Service	17,285,819	123,287	160,526	187,449	1,392,826	993,415	1,128,987	1,332,133	80,964	307,433	17,574	11,561,224	
4		Large Volume	110,872	1,429	1,861	2,173	4,968	916	1,041	983	75	284	16	97,126	
5		Small Volume Transportation	8,304	576	0	878	2,603	916	1,041	983	75	284	16	934	
6		Large Volume Transportation	1,297,388	181,674	0	245,814	730,599	29,315	33,316	31,448	2,389	9,072	519	53,241	
7		Total	56,792,207	518,032	463,246	787,631	4,741,431	4,769,383	5,420,260	3,374,214	693,912	2,634,901	150,624	33,238,574	
8		Check for Tie Out	0	0	0	0	0	0	0	0	0	0	0	0	
9	Unit Customer Costs ($/Month)														
10		Residential	19.01						8.68	4.09	1.24	4.73	0.27		
11		General Service	44.07						17.35	20.47	1.24	4.73	0.27		
12		Large Volume	199.85						86.76	81.90	6.22	23.63	1.35		
13		Small Volume Transportation	199.85						86.76	81.90	6.22	23.63	1.35		
14		Large Volume Transportation	199.85						86.76	81.90	6.22	23.63	1.35		
15	Other Unit Costs ($/Mcf) (Excluding Cost of Gas)														
16		Residential	2.21	0.07	0.09	0.11	0.80	1.14							
17		General Service	1.63	0.07	0.09	0.11	0.80	0.57							
18		Large Volume	0.56	0.07	0.09	0.11	0.24	0.05							
19		Small Volume Transportation	0.51	0.07	0.00	0.11	0.32	0.11							
20		Large Volume Transportation	0.51	0.07	0.00	0.11	0.32	0.01							

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Class Cost of Service Study
Summary of Cost of Service
Table 1

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total SJLP	[E] Residential	[F] General Service	[G] Large Volume Sales	[H] Large Volume Transportation	[I] Basis of Allocation or Reference
			$	$	$	$	$	
1		Total Cost of Service						
2		Return Under Existing Rates	249,570	119,995	13,301	58,970	57,304	L 21 T 2
3		Rate Base	8,449,434	5,075,081	2,208,982	596,165	569,206	L 24 T 4
4		Proposed Rate of Return	10.08%	10.08%	10.08%	10.08%	10.08%	
5		Return Under Proposed Rates	851,998	511,746	222,743	60,114	57,396	L 3 X L 4
6		Required Increase in Return	602,428	391,751	209,441	1,144	92	L 5 - L 2
7		Incremental Income Taxes						
8		*State Tax*						
9		Effective Tax Rate		6.25%	6.25%	6.25%	6.25%	
10		Incremental Taxes	51,070	33,210	17,755	97	8	
11		Federal						
12		Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	
13		Incremental Taxes	324,291	210,882	112,744	616	49	
14		Required Revenue Increase	977,789	635,843	339,940	1,858	149	L 6 + L 10 + L 13
15		Sales Revenue Under Existing Rates	6,006,898	3,428,164	1,408,937	965,503	204,295	L 10 T 2
16		Total Cost of Service	6,984,687	4,064,007	1,748,877	967,360	204,444	L 14 + L 15
17		Proposed Increase - $	977,045	635,440		341,605		
18		Proposed Increase - %	16.27%	18.54%		13.25%		L 17 / L 15
19		Incremental						
20		State Tax	51,031	33,189		17,842		
21		Federal Tax	324,044	210,748		113,298		
22		Total Proposed Increase in Return	601,870	391,503		210,467		
23		Rate of Return Under Proposed Rates	10.08%	10.08%		10.08%		

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Class Cost of Service Study
Return Under Existing Rates
Table 2

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total SJLP	[E] Residential	[F] General Service	[G] Large Volume Sales	[H] Large Volume Transportation	[I] Basis of Allocation or Reference
			$	$	$	$	$	
1		Return Under Existing Rates						
2		Rate Base						
3		Gas Plant in Service	8,649,086	5,222,054	2,274,434	504,710	647,889	L 44 T 3
4		Accumulated Depreciation	3,667,987	2,202,476	968,977	217,064	279,470	L 9 T 4
5		Net Plant in Service	4,981,099	3,019,578	1,305,457	287,645	368,419	L 3 - L 4
6		Other Rate Base Items	3,468,335	2,055,503	903,525	308,520	200,787	L 23 T 4
7		Total Rate Base	8,449,434	5,075,081	2,208,982	596,165	569,206	L 5 + L 6
8		Return Under Existing Rates						
9		Operating Revenues						
10		Sales and Transport. Revenues	6,006,898	3,428,164	1,408,937	965,503	204,295	L 3 T 5
11		Other Operating Revenues	34,571	28,451	4,261	833	1,026	L 7 T 8
12		Total Operating Revenues	6,041,469	3,456,615	1,413,198	966,336	205,320	L 10 + L 11
13		Net Gas Supply Expenses	4,083,157	2,276,471	1,010,497	789,902	6,286	L 9 + L 10 + L 11, T 6
14		Net Revenues	1,958,312	1,180,143	402,701	176,434	199,034	L 12 - L 13
15		Operating Revenue Deductions						
16		Operation and Maintenance	1,256,346	804,890	307,827	83,506	60,123	L 101 T 6
17		Depreciation Expense	373,853	227,829	97,651	21,253	27,120	L 8 T 7
18		Taxes Other Than Income Taxes	122,564	74,782	31,892	6,970	8,919	L 15 T 7
19		Income Taxes	(44,021)	(47,353)	(47,971)	25,735	25,568	L 26 T 5
20		Total Oper. Rev. Deductions	1,708,742	1,060,148	389,399	117,464	141,730	Sum of L 16 through L 19
21		Return Under Existing Rates	249,570	119,995	13,301	58,970	57,304	L 14 - L 20
22		Rate of Return	2.954%	2.364%	0.602%	9.892%	10.067%	L 21 / L 7

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Class Cost of Service Study
Allocation of Plant in Service by Class
Table 3

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]
Line No.	Accl. No.	Description	Total SJLP	Residential	General Service	Large Volume Sales	Large Volume Transportation	Basis of Allocation or Reference
			$	$	$	$	$	
1	Gas Plant in Service							
2		Intangible Plant						
3	301	Land & Land Rights	8,321	5,304	2,100	411	506	Supervised O & M
4	302	Other Equipment	22,760	14,509	5,745	1,123	1,383	Supervised O & M
5		Total Intangible Plant	31,081	19,813	7,845	1,534	1,889	Sum of L 3 through L 4
6		Transmission Plant						
7	365	Land & Land Rights	0	0	0	0	0	
8	366	Structures & Improvements	0	0	0	0	0	
9	367	Mains	0	0	0	0	0	
10	369	Measuring & Reg. Station Eq.	0	0	0	0	0	
11	371	Other Equipment	0	0	0	0	0	
12		Total Transmission Plant	0	0	0	0	0	Sum of L 7 through L 11
13		Distribution Plant						
14	374	Land & Land Rights	34,518	20,172	7,989	2,662	3,695	13.8% Throughput, 28.4% Services, 57.8% Peak
15	375	Structures & Improvements	24,136	14,105	5,586	1,861	2,584	13.8% Throughput, 28.4% Services, 57.8% Peak
16	376	Mains	3,857,851	2,254,353	892,836	297,463	412,999	13.8% Throughput, 28.4% Services, 57.8% Peak
17	377	Compressor Station Equipment	0	0	0	0	0	50% Throughput, 50% Peak
18	378	Meas. & Reg. Sta. Equip. - Gen.	333,113	160,819	71,347	39,516	61,430	50% Throughput, 50% Peak
19	379	Meas. & Reg. Sta. Equip. - CG	475,048	229,342	101,748	56,353	87,605	50% Throughput, 50% Peak
20	380	Services	1,568,852	1,174,632	367,463	20,068	6,689	Services
21	381	Meters	694,266	375,194	293,432	19,230	6,410	Meters & Regulators
22	382	Meter Installations	118,572	64,079	50,115	3,284	1,095	Meters & Regulators
23	383	House Regulators	450,041	243,211	190,210	12,465	4,155	Meters & Regulators
24	384	House Regulator Installations	0	0	0	0	0	Meters & Regulators
25	385	Indust. Meas. & Reg. Sta. Equip.	105,547	57,040	44,610	2,923	974	Meters & Regulators
26	386	Other Property on Cust. Premises	0	0	0	0	0	13.8% Throughput, 28.4% Services, 57.8% Peak
27	387	Other Equipment	5,472	3,198	1,266	422	586	13.8% Throughput, 28.4% Services, 57.8% Peak
28		Total Distribution Plant	7,667,216	4,596,143	2,026,602	456,247	588,223	Sum of L 14 through L 27
29		General Plant						
30	389	Land & Land Rights	3,628	2,311	915	179	220	Supervised O & M
31	390	Structure & Improvements	212,596	135,523	53,661	10,493	12,919	Supervised O & M
32	391	Office Furniture & Equipment	511,353	325,971	129,070	25,239	31,073	Supervised O & M
33	392	Transportation Equipment	14,892	9,493	3,759	735	905	Supervised O & M
34	393	Stores Equipment	81	52	20	4	5	Supervised O & M
35	394	Tools, Shop & Garage Equipment	139,223	88,750	35,141	6,872	8,460	Supervised O & M
36	395	Laboratory Equipment	1,019	650	257	50	62	Supervised O & M
37	396	Power Operated Equipment	6,026	3,841	1,521	297	366	Supervised O & M
38	397	Communication Equipment	37,659	24,006	9,505	1,859	2,288	Supervised O & M
39	398	Miscellaneous Equipment	24,314	15,499	6,137	1,200	1,477	Supervised O & M
40		Total General Plant	950,789	606,098	239,987	46,928	57,776	Sum of L 30 through L 39
41		Common Plant (1)	0	0	0	0	0	Supervised O & M
42		Total Plant in Service	8,649,086	5,222,054	2,274,434	504,710	647,889	L 5 + L 12 + L 28 + L 40 + L 41
43		Construction Work in Progress	0	0	0	0	0	L 42 T 3
44		Total Plant in Service	8,649,086	5,222,054	2,274,434	504,710	647,889	L 42 + L 43

(1) Common Plant has been included in General Plant by account.

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Class Cost of Service Study
Allocation of Accumulated Depreciation and Other Rate Base Items by Class
Table 4

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total SJLP	[E] Residential	[F] General Service	[G] Large Volume Sales	[H] Large Volume Transportation	[I] Basis of Allocation or Reference
			$	$	$	$	$	
1		Accumulated Depreciation						
2		Accumulated Depreciation						
3		Intangible	31,081	19,813	7,845	1,534	1,889	L 5 T 3
4		Transmission	0	0	0	0	0	L 12 - L 7 T 3
5		Distribution	3,577,424	2,144,745	948,118	212,594	273,967	L 28 - L 14 T 3
6		General & Common	59,482	37,918	15,014	2,936	3,615	L 40, T 3
7		Common	0	0	0	0	0	L 41 T 3
8		Retirement Work in Progress	0	0	0	0	0	L 42 T 3
9		Total Accum. Depreciation	3,667,987	2,202,476	968,977	217,064	279,470	Sum of L 3 through L 8
10		Net Plant	4,981,099	3,019,578	1,305,457	287,645	368,419	L 44 - L 9 , T3
11		Other Rate Base Items						
12		Cash Working Capital						
13		Gas Storage	794,925	445,273	197,545	152,106	0	Sales Allocator
14		Other	(48,204)	(30,729)	(12,167)	(2,379)	(2,929)	L 102 T 6
15		Materials & Supplies	23,702	14,311	6,233	1,383	1,775	L 42 T 3
16		Prepayments	3,276,772	1,986,403	858,783	189,225	242,361	L 10 T 4
17		Customer Adv. for Construction	0	0	0	0	0	L 16 T 3
18		Customer Deposits	(37,208)	(31,400)	(4,912)	(536)	(358)	Customer Accounts Allocator
19		Accum. Deferred Income Taxes - Depreciation	(541,654)	(328,355)	(141,958)	(31,279)	(40,063)	L 10 T 4
20		Accum. Deferred Income Taxes - AAO	0	0	0	0	0	L 16 T 3
21		Unamortized Investment Tax Credit	0	0	0	0	0	L 10 T 4
22		AAO Gas Pipe Replacement	0	0	0	0	0	L 16 T 3
23		Total Other Rate Base	3,468,335	2,055,503	903,525	308,520	200,787	Sum of L 13 through L 22
24		Total Rate Base	8,449,434	5,075,081	2,208,982	596,165	569,206	L 10 + L 23

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Class Cost of Service Study
Return and Income Taxes Under Existing Rates
Table 5

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total SJLP	[E] Residential	[F] General Service	[G] Large Volume Sales	[H] Large Volume Transportation	[I] Basis of Allocation or Reference
			$	$	$	$	$	
1		Return and Income Taxes Under Existing Rates						
2		Operating Revenues						
3		Sales and Transport. Revenues	6,006,898	3,428,184	1,408,937	965,503	204,295	Direct to Class, Includes Trans. Revenues
4		Other Operating Revenues	34,571	28,451	4,261	833	1,026	L 7 T 8
5		Total Operating Revenues	6,041,469	3,456,635	1,413,198	966,336	205,320	L 3 + L 4
6		Gas Supply Expenses	4,083,157	2,278,471	1,010,497	789,902	6,286	L 12 , T 6
7		Net Revenues	1,958,312	1,180,163	402,701	176,434	199,034	L 5 - L 6
8		Operating Revenue Deductions						
9		Operation and Maintenance Exp.	1,256,348	804,890	307,827	83,506	60,123	L 101 T 6
10		Depreciation Expense	373,853	227,829	97,851	21,253	27,120	L 8 T 7
11		Taxes Other Than Income Taxes	122,564	74,782	31,892	6,970	8,919	L 15 T 7
12		Total Operating Revenue Deductions	1,752,763	1,107,501	437,370	91,729	116,162	L 9 + L 10 + L 11
13		*Net Operating Income (before tax)*	*205,549*	*72,642*	*(34,669)*	*84,704*	*82,872*	L 7 - L 12
14		Interest Expense	334,513	200,922	87,454	23,602	22,535	Total 3.959% of Rate Base , L 24 T 4 to Class
15		Net Taxable Income	(128,964)	(128,280)	(122,123)	61,102	60,337	L 13 - L 14
16		Effective State Tax Rate		6.25%	6.25%	6.25%	6.25%	
17		State Tax	(8,060)	(8,018)	(7,633)	3,819	3,771	L 15 X L 16
18		Net Tax Adjustment	5,552	3,366	1,455	321	411	L 10 T 4
19		Total State Tax	(2,508)	(4,652)	(6,178)	4,140	4,182	L 17 + L 18
20		Effective Federal Income Tax Rate		35.00%	35.00%	35.00%	35.00%	
21		Federal Income Tax	(45,137)	(44,898)	(42,743)	21,386	21,118	L 15 X L 20
22		Net Tax Adjustment	29,177	17,688	7,647	1,885	2,158	L 10 T 4
23		Total Federal Income Tax	(15,960)	(27,211)	(35,096)	23,071	23,276	L 21 + L 22
24		Deferred Income Taxes	(23,310)	(14,131)	(8,109)	(1,346)	(1,724)	L 10 T 4
25		Investment Tax Credits	(2,243)	(1,380)	(588)	(130)	(166)	L 10 T 4
26		Total Income Tax	(44,021)	(47,353)	(47,971)	25,735	25,568	L 19 + L 23 + L 24 + L 25

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Class Cost of Service Study
Allocation of O&M Expenses by Class
Table 6
Page 1 of 2

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total SJLP $	[E] Residential $	[F] General Service $	[G] Large Volume Sales $	[H] Large Volume Transportation $	[I] Basis of Allocation or Reference
1		O & M Expenses						
2		Other Gas Supply Expenses						
3	803	Natural Gas Transmission Line Purchases						
4	804	NG City Gate Purchases						
5	805	Other Gas Purchases						
6	805.1	Purchased Gas Cost Adjustment						
7	807	Other Purchased Gas Expenses						
8	810	Gas Used for Compressor Station Fuel						
9		Subtotal Other Gas Supply Exp.	4,089,875	2,279,316	1,011,760	790,874	7,925	Direct to Class
10	812	Gas Used for Other Util. Oper	(6,718)	(2,845)	(1,262)	(972)	(1,639)	Throughput Allocator
11	813	Other Gas Supply Expenses	0	0	0	0	0	Throughput Allocator
12		Total Other Gas Supply Expenses	4,083,157	2,276,471	1,010,497	789,902	6,286	L 9 + L 10 + L 11
13		Total Production Expenses	4,083,157	2,276,471	1,010,497	789,902	6,286	L 12
14		Transmission Expenses						
15		Operation						
16	850	Supervision & Engineering	0	0	0	0	0	L 17 through 23
17	851	Sys. Control & Load Dispatch.	0	0	0	0	0	Throughput Allocator
18	852	Communication System Expenses	0					
19	853	Compressor Sta. Labor & Exp.	0					
20	854	Gas for Compressor Sta. Fuel	0					
21	856	Mains Expenses	0	0	0	0	0	L 9 T 3
22	857	Meas. & Reg. Sta. Expenses	0					
23	859	Other Expenses	0	0	0	0	0	L 12 T 3
24	860	Rents	0	0	0	0	0	L 12 T 3
25		Total Operation	0	0	0	0	0	Sum of L 16 through 24
26		Maintenance						
27	861	Supervision & Engineering	0					
28	862	Structures & Improvements	0	0	0	0	0	L 8 T 3
29	863	Mains	0	0	0	0	0	L 9 T 3
30	865	Meas. & Reg. Sta. Equip.	0	0	0	0	0	L 10 T 3
31	867	Other Equipment	0	0	0	0	0	L 11 T 3
32		Total Maintenance	0	0	0	0	0	Sum of L 27 through 31
33		Total Transmission Expenses	0	0	0	0	0	L 25 + L 32
34		Distribution Expenses						
35		Operation						
36	870	Supervision & Engineering	51,881	30,514	15,230	2,781	3,356	L 37 through 45
37	871	Load Dispatching	13	6	2	2	3	Throughput Allocator
38	872	Compressor Station Labor and Expenses	7	3	1	1	1	L 17 T 3
39	873	Compressor Station Fuel and Power	0	0	0	0	0	L 17 T 3
40	874	Mains & Services	97,465	61,588	22,636	5,703	7,538	L 16 T 3 and L 20 T 3
41	875	Meas. & Reg. Sta. Equip. - Gen.	0	0	0	0	0	L 18 T 3
42	876	Meas. & Reg. Sta. Equip. - Ind.	896	484	379	25	8	L 25 T 3
43	877	Meas. & Reg. Sta. Equip. - CG	38,572	18,622	8,261	4,576	7,113	L 19 T 3
44	878	Meter & House Regulators	104,483	56,465	44,160	2,894	965	L 21 T 3 to L 24 T 3
45	879	Customer Installation Expenses	22,301	16,697	5,223	285	95	L 20 T 3
46	880	Other Expenses	110,980	66,527	29,334	6,604	8,514	L 28 T 3
47	881	Rents	1,653	991	437	98	127	L 28 T 3
48		Total Operation	428,251	251,897	125,664	22,969	27,721	Sum of L 36 through 47

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Class Cost of Service Study
Allocation of O&M Expenses by Class
Table 6
Page 2 of 2

[A] Line No.	[B] Acct No.	[C] Description	[D] Total SJLP $	[E] Residential $	[F] General Service $	[G] Large Volume Sales $	[H] Large Volume Transportation $	[I] Basis of Allocation or Reference
49		Maintenance						
50	885	Supervision & Engineering	0	0	0	0	0	L 51 through 59
51	886	Structures & Improvements	0	0	0	0	0	L 15 T 3
52	887	Mains	30,295	17,704	7,012	2,336	3,243	L 16 T 3
53	888	Compressor Station Equipment	0	0	0	0	0	L 17 T 3
54	889	Meas. & Reg. Sta. Equip. - Gen.	23,114	11,159	4,951	2,742	4,263	L 18 T 3
55	890	Meas. & Reg. Sta. Equip. - Ind.	2,383	1,288	1,007	66	22	L 25 T 3
56	891	Meas. & Reg. Sta. Equip. - CG	743	359	159	88	137	L 19 T 3
57	892	Services	7,536	5,642	1,765	96	32	L 20 T 3
58	893	Meters & House Regulators	10,758	5,614	4,547	298	99	L 21 T 3 to L 24 T 3
59	894	Other Equipment	4,934	2,958	1,304	294	379	L 28 T 3
60		Total Maintenance	79,763	44,923	20,745	5,920	8,175	Sum of L 50 through 59
61		Total Distribution	508,014	296,820	146,409	28,889	35,896	L 48 + L 60
62		Customer Accounts Expenses						
63	901	Supervision	14,147	11,940	1,868	204	136	L 64 + L 65 + L 67
64	902	Meter Reading Expenses	41,760	35,261	5,515	602	402	Customer Accounts Allocator
65	903	Customer Records & Collection	75,102	63,383	9,914	1,083	722	Customer Accounts Allocator
66	904	Uncollectible Accounts	58,747	49,580	7,755	847	565	Customer Accounts Allocator
67	905	Miscellaneous	0	0	0	0	0	Customer Accounts Allocator
68		Total Customer Accounts Expenses	189,776	160,163	25,052	2,735	1,824	Sum of L 63 through 67
69		Customer Service & Information Expenses						
70	907	Supervision	8,907	5,645	1,425	709	1,129	L 71 + L 72 + L 73
71	908	Customer Assistance	0	0	0	0	0	50% Customer Accts. and 50% Throughput
72	909	Information and Instruction	7,677	4,885	1,228	611	973	50% Customer Accts. and 50% Throughput
73	910	Miscellaneous	1,189	754	190	95	151	50% Customer Accts. and 50% Throughput
74		Total Cust. Service & Inf. Exp.	17,773	11,283	2,843	1,414	2,253	Sum of L 70 through 73
75		Sales Expenses						
76	911	Supervison	1,375	871	220	109	174	L 77 + L 78 + L 79
77	912	Demonstrating & Selling	(237)	(150)	(38)	(19)	(30)	50% Customer Accts. and 50% Throughput
78	913	Advertising	2,117	1,342	339	168	268	50% Customer Accts. and 50% Throughput
79	916	Miscellaneous	4,787	3,034	766	381	607	50% Customer Accts. and 50% Throughput
80		Total Sales Expenses	8,042	5,096	1,286	640	1,020	Sum of L 76 through 79
81		Administrative & General Expenses						
82		Operation						
83	920	A & G Salaries	155,224	98,950	39,180	7,661	9,432	Supervised O & M
84		Regulatory Allowance	5,366	2,272	1,008	776	1,309	$0.005 per Mcf, Throughput Allocator
85	921	Office Supplies & Expenses	123,276	78,585	31,118	6,085	7,491	Supervised O & M
86	922	Transfers	(20,892)	(13,318)	(5,273)	(1,031)	(1,270)	Supervised O & M
87	923	Outside Services Employed	58,164	37,078	14,681	2,871	3,534	Supervised O & M
88	924	Property Insurance	10,402	6,308	2,726	601	769	L 10 T 4
89	925	Injuries & Damages	73,878	47,095	18,647	3,646	4,489	Supervised O & M
90	926	Employee Pensions & Benefits	79,415	50,625	20,045	3,920	4,826	Supervised O & M
91	927	Franchise Requirements	0	0	0	0	0	Supervised O & M
92	928	Regulatory Commission Expense	30,779	13,035	5,783	4,453	7,508	Throughput Allocator
93	929	Duplicate Charges	0	0	0	0	0	Supervised O & M
94	930.1	General Advertising	0	0	0	0	0	Supervised O & M
95	930.2	Miscellaneous	7,349	4,685	1,855	363	447	Supervised O & M
96	931	Rents	4,123	2,628	1,041	203	251	Supervised O & M
97		Total Operation	527,084	327,940	130,809	29,548	38,787	Sum of L 83 through 96
98	935	Maintenance of General Plant	5,657	3,606	1,428	279	344	L 40 T 3
99		Total A & G Expenses	532,741	331,547	132,237	29,827	39,131	L 97 + L 98
100		Total Operation & Maintenance	5,339,503	3,081,361	1,318,324	853,408	86,410	L 13 + L 33 + L 61 + L 68 + L 74 + L 80 + L 99
101		Excluding Other Gas Supply Exp.	1,256,346	804,890	307,827	63,506	80,123	L 100 - L 12
102		Supervised O & M before General	663,205	422,772	167,398	32,734	40,301	(1)
103		Footnotes						
104		(1) L 33+ L 61 + L 68 + L 74 + L 80 - L 20 - L 24 - L 47 - L 66						

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Class Cost of Service Study
Allocation of Depreciation Expense and Other Taxes by Class
Table 7

[A] Line No	[B] Acct. No.	[C] Description	[D] Total SJLP	[E] Residential	[F] General Service	[G] Large Volume Sales	[H] Large Volume Transportation	[I] Basis of Allocation or Reference
			$	$	$	$	$	
1		Depreciation Expense						
2		Transmission	0	0	0	0	0	L 12 T 3
3		Distribution Plant	270,742	162,297	71,563	16,111	20,771	L 28 T 3
4		General Plant	97,229	61,980	24,541	4,799	5,908	L 40 T 3
5		Common Plant	0	0	0	0	0	L 41 T 3
6		Amortization of Ltd Term Gas Plant	3,632	2,193	955	212	272	L 44 T 3
7		Amortization of Other Plant	2,250	1,358	592	131	169	L 44 T 3
8		Total Depreciation Expense	373,853	227,829	97,651	21,253	27,120	Sum of L 2 through 7
9		Taxes Other Than Income Taxes						
10		Ad Valorem (Property Taxes)	96,566	58,292	25,397	5,638	7,239	L 42 - L 5, T 3
11		City Franchise Tax	(2,033)	(1,227)	(535)	(119)	(152)	L 42 - L 5, T 3
12		Payroll Taxes	27,324	17,418	6,897	1,349	1,660	Supervised O & M
13		Miscellaneous Tax	16	7	3	2	4	Throughput Allocator
14		Sales/Use Tax	691	293	130	100	169	Throughput Allocator
15		Total Taxes Other	122,564	74,782	31,892	8,970	8,919	Sum of L 10 through 14

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Class Cost of Service Study
Allocation of Other Operating Revenues by Class
Table 8

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total SJLP $	[E] Residential $	[F] General Service $	[G] Large Volume Sales $	[H] Large Volume Transportation $	[I] Basis of Allocation or Reference
1		Other Operating Revenues						
2	487	Forfeited Discounts	17,689	17,689				Direct to Class
3	488	Miscellaneous Service Revenue	16,886	10,784	4,262	833	1,026	Supervised O&M
4	493	Rent from Gas Property	0	0	0	0	0	L 42 T 3
5	495	Other Gas Revenue	(4)	(3)	(1)	(0)	(0)	Supervised O&M
6	496	Provision for Rate Refunds	0	0				
7		Total Other Operating Revenue	34,571	28,451	4,261	833	1,026	Sum of L 2 through 6

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Class Cost of Service Study
Allocation Factors
Table 9

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total SJLP	[E] Residential	[F] General Service	[G] Large Volume Sales	[H] Large Volume Transportation	[I] Basis of Allocation or Reference
1		Allocation Factors						
2		1. Throughput						
3		Annual Sales - Mcf	811,376	454,488	201,634	155,254	0	
4		Transportation - Mcf	261,785	0	0	0	261,785	
5		Throughput - Mcf	1,073,161	454,488	201,634	155,254	261,785	
6		Allocator	1.0000	0.4235	0.1879	0.1447	0.2439	
7		2. Sales						
8		Annual Sales - Mcf	811,376	454,488	201,634	155,254	0	
9		Allocator	1.0000	0.5601	0.2485	0.1913	0.0000	
10		3. Peak Day						
11		Load Factor		20.00%	20.00%	40.00%	50.00%	
12		Peak Day - Mcf/day	11,488	6,226	2,762	1,063	1,434	
13		Allocator	1.0000	0.5420	0.2405	0.0926	0.1249	
14		4. Services						
15		Number of Customers	6,116	5,268	824	18	6	
16		Weighting Factor		1	2	5	5	
17		Weighted Number of Customers	7,036	5,268	1,648	90	30	
18		Allocator	1.0000	0.7487	0.2342	0.0128	0.0043	
19		5. Meters & Regulators						
20		Number of Customers	6,116	5,268	824	18	6	
21		Weighting Factor		1	5	15	15	
22		Weighted Number of Customers	9,748	5,268	4,120	270	90	
23		Allocator	1.0000	0.5404	0.4227	0.0277	0.0092	
24		6. Customer Accounts						
25		Number of Bills	73,392	63,216	9,888	216	72	
26		Weighting Factor		1	1	5	10	
27		Weighted Number of Customers	74,904	63,216	9,888	1,080	720	
28		Allocator	1.0000	0.8440	0.1320	0.0144	0.0096	
29		Use per Customer		86	245	8,625	43,631	

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Functionally Classified Cost of Service Study
Summary of Cost of Service
Table 1

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Total Cost of Service													
2		Return Under Existing Rates	249,570	(31,849)	12,982	(86,250)	(198,387)	(72,380)	(125,445)	(193,062)	(51,270)	(128,587)	(12,825)	1,136,643	L 21 T 2
3		Rate Base	8,449,434	26,016	794,925	915,203	2,507,378	1,027,677	1,480,480	1,445,179	94,295	134,695	23,587	0	L 24 T 4
4		Proposed Rate of Return		10.08%	10.08%	10.08%	10.08%	10.08%	10.08%	10.08%	10.08%	10.08%	10.08%	10.08%	
5		Return Under Proposed Rates	851,998	2,623	80,156	92,284	252,831	103,626	149,284	145,725	9,508	13,582	2,378	0	L 3 x L4
6		Required Increase in Return	602,428	34,472	67,174	178,534	451,219	176,005	274,730	338,787	60,778	142,169	15,203	(1,136,643)	L 5 - L2
7		Incremental Income Taxes													
8		State													
9		Effective Tax Rate		6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	
10		Incremental Taxes	51,070	2,922	5,695	15,135	38,251	14,921	23,290	28,720	5,152	12,052	1,289	(96,357)	
11		Federal													
12		Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	
13		Incremental Taxes	324,291	18,557	36,160	96,106	242,894	94,745	147,889	182,371	32,717	76,530	8,184	(611,862)	
14		Required Revenue Increase	977,789	55,951	109,029	289,775	732,364	285,671	445,908	549,878	98,648	230,752	24,676	(1,844,863)	L 6 + L10 + L13
15		Sales Revenue Under Existing Rates	6,006,898	0	0	0	0	0	0	0	0	0	0	6,006,898	L 10 T 2
16		Total Cost of Service	6,984,687	55,951	109,029 2,901,530	289,775 1,307,810	732,364 0	285,671	445,908	549,878	98,648	230,752	24,676	4,162,035	L 14 + L15

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Functionally Classified Cost of Service Study
Return Under Existing Rates
Table 2

[A] Line No.	[B] Acct No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Return Under Existing Rates													
2		Rate Base													
3		Gas Plant in Service	8,649,086	19,131	0	1,041,725	2,882,168	1,187,922	1,704,859	1,600,183	69,342	126,410	17,345	0	L 44 T3
4		Accumulated Depreciation	3,667,987	1,765	0	449,715	1,281,966	524,271	747,861	662,754	6,396	11,659	1,600	0	L 9 T4
5		Net Plant in Service	4,981,099	17,367	0	592,010	1,620,202	663,651	956,998	937,430	62,946	114,751	15,745	0	L 3 - L4
6		Other Rate Base Items	3,468,335	8,649	794,925	323,192	887,176	364,026	523,482	507,749	31,349	19,944	7,842	0	L 23 T4
7		Total Rate Base	8,449,434	26,016	794,925	915,203	2,507,378	1,027,677	1,480,480	1,445,179	94,295	134,695	23,587	0	L 5 + L6
8		Return Under Existing Rates													
9		Operating Revenues													
10		Sales and Transport. Revenues	6,006,698											6,006,698	Exhibit TJS-5, Line 10 T 2
11		Other Operating Revenues	34,571	329	0	1,658	3,633	1,275	2,338	3,985	1,192	2,173	298	17,689	L 7 T8
12		Total Operating Revenues	6,041,469	329	0	1,658	3,633	1,275	2,338	3,985	1,192	2,173	298	6,024,587	L 10 + L11
13		Net Gas Supply Expenses	4,083,157	(6,718)	0	0	0	0	0	0	0	0	0	4,089,875	L 9 + L10 + L11 T6
14		Net Revenues	1,958,312	7,047	0	1,658	3,633	1,275	2,338	3,985	1,192	2,173	298	1,934,712	L 12 + L13
15		Operating Revenue Deductions													
16		Operation and Maintenance	1,256,346	58,577	0	114,334	251,312	88,413	161,550	273,553	81,304	206,965	20,337	0	L 101 T6
17		Depreciation Expense	373,853	1,907	0	43,638	117,197	47,479	70,026	72,359	6,914	12,604	1,729	0	L 8 T6
18		Taxes Other Than Income Taxes	122,564	1,443	0	14,077	37,422	15,068	22,439	23,922	2,666	4,861	667	0	L 15 T6
19		Income Taxes	(44,021)	(23,031)	(12,982)	(84,142)	(203,911)	(77,305)	(126,231)	(172,787)	(38,422)	(93,669)	(9,611)	798,069	L 26 T6
20		Total Oper. Rev. Deductions	1,708,742	38,896	(12,982)	87,908	202,020	73,654	127,784	197,047	52,462	130,761	13,123	798,069	Sum of L 16 through L 19
21		Return Under Existing Rates	249,570	(31,849)	12,982	(86,250)	(198,387)	(72,380)	(125,445)	(193,062)	(51,270)	(128,587)	(12,825)	1,136,643	L 14 - L20
22		Rate of Return	2.954%	-122.421%	1.633%	-9.424%	-7.912%	-7.043%	-8.473%	-13.359%	-54.372%	-95.466%	-54.372%	#DIV/0!	L 21 / L7

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Functionally Classified Cost of Service Study
Gas Plant in Service
Table 3

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Gas Plant in Service													
2		Intangible Plant													
3	301	Land & Land Rights	8,321	162	0	817	1,791	628	1,153	1,964	588	1,071	147	0	Supervised O & M
4	302	Other Equipment	22,760	443	0	2,235	4,898	1,719	3,153	5,372	1,607	2,930	402	0	Supervised O & M
5		Total Intangible Plant	31,081	606	0	3,053	6,689	2,347	4,305	7,336	2,195	4,002	549	0	Sum of L 3 through L 4
6		Transmission Plant													
7	365	Land & Land Rights	0												
8	366	Structures & Improvements	0												
9	367	Mains	0												
10	369	Measuring & Reg. Station Eq.	0												
11	371	Other Equipment	0												
12		Total Transmission Plant	0	0	0	0	0	0	0	0	0	0	0	0	Sum of L 7 through L 11
13		Distribution Plant													
14	374	Land & Land Rights	34,518			4,763	19,951	9,803							13.8% Throughput, 28.4% Services, 57.8% Peak
15	375	Structures & Improvements	24,136			3,331	13,951	6,855							13.8% Throughput, 28.4% Services, 57.8% Peak
16	376	Mains	3,857,651			532,356	2,229,722	1,095,573							13.8% Throughput, 28.4% Services, 57.8% Peak
17	377	Compressor Station Equipment	0			0	0								50% Throughput, 50% Peak
18	378	Meas. & Reg. Sta. Equip. - Gen.	333,113			166,557	166,557								50% Throughput, 50% Peak
19	379	Meas. & Reg. Sta. Equip. - CG	475,048			237,524	237,524								50% Throughput, 50% Peak
20	380	Services	1,568,852						1,568,852						Services
21	381	Meters	694,266							694,266					Meters & Regulators
22	382	Meter Installations	118,572							118,572					Meters & Regulators
23	383	House Regulators	450,041							450,041					Meters & Regulators
24	384	House Regulator Installations	0							0					Meters & Regulators
25	385	Indust. Meas. & Reg. Sta. Equip.	105,547							105,547					Meters & Regulators
26	386	Other Property on Cust. Premises	0			0	0	0							13.8% Throughput, 28.4% Services, 57.8% Peak
27	387	Other Equipment	5,472			755	3,163	1,554							13.8% Throughput, 28.4% Services, 57.8% Peak
28		Total Distribution Plant	7,667,216	0	0	945,286	2,670,868	1,113,785	1,568,852	1,368,426	0	0	0	0	Sum of L 14 through L 27
29		General Plant													
30	389	Land & Land Rights	3,626	71	0	356	780	274	502	856	256	467	64	0	Supervised O & M
31	390	Structure & Improvements	212,596	4,142	0	20,881	45,751	16,052	29,449	50,180	15,014	27,371	3,756	0	Supervised O & M
32	391	Office Furniture & Equipment	511,353	9,964	0	50,225	110,044	38,610	70,832	120,698	36,113	65,834	9,033	0	Supervised O & M
33	392	Transportation Equipment	14,892	290	0	1,463	3,205	1,124	2,063	3,515	1,052	1,917	263	0	Supervised O & M
34	393	Stores Equipment	81	2	0	8	17	6	11	19	6	10	1	0	Supervised O & M
35	394	Tools, Shop & Garage Equipment	139,223	2,713	0	13,675	29,961	10,512	19,285	32,862	9,832	17,924	2,459	0	Supervised O & M
36	395	Laboratory Equipment	1,019	20	0	100	219	77	141	241	72	131	18	0	Supervised O & M
37	396	Power Operated Equipment	6,026	117	0	592	1,297	455	835	1,422	426	776	106	0	Supervised O & M
38	397	Communication Equipment	37,659	734	0	3,699	8,104	2,843	5,216	8,889	2,660	4,848	665	0	Supervised O & M
39	*398*	*Miscellaneous Equipment*	*24,314*	*474*	*0*	*2,388*	*5,232*	*1,836*	*3,368*	*5,739*	*1,717*	*3,130*	*430*	*0*	*Supervised O & M*
40		Total General Plant	950,789	18,526	0	93,387	204,612	71,791	131,702	224,421	67,147	122,409	16,796	0	Sum of L 30 through L 39
41		Total Common Plant	0								0			0	Supervised O & M
42		Total Plant in Service	8,649,086	19,131	0	1,041,725	2,882,168	1,187,922	1,704,859	1,600,183	69,342	126,410	17,345	0	L 5 + L 12 + L 28 + L 40 + L 41
43		Construction Work in Progress	-	0	0	0	0	0	0	0	0	0	0	0	L 42 T 3
44		Total Plant in Service	8,649,086	19,131	0	1,041,725	2,882,168	1,187,922	1,704,859	1,600,183	69,342	126,410	17,345	0	L 42 + L 43

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Functionally Classified Cost of Service Study
Accumulated Depreciation and Other Rate Base Items
Table 4

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Accumulated Depreciation													
2		Accumulated Depreciation													
3		Intangible	31,081	606	0	3,053	6,689	2,347	4,305	7,336	2,195	4,002	549	0	L 5 T 3
4		Transmission	0	0	0	0	0	0	0	0	0	0	0	0	L 12 - L 7 T 3
5		Distribution	3,577,424	0	0	440,820	1,242,477	517,433	735,317	641,377	0	0	0	0	L 28 - L 14 T 3
6		General & Common	59,482	1,159	0	5,842	12,801	4,491	8,239	14,040	4,201	7,658	1,051	0	L 40 T 3
7		Common	0	0	0	0	0	0	0	0	0	0	0	0	L 41 T 3
8		Retirement Work in Progress	0	0	0	0	0	0	0	0	0	0	0	0	L 42 T 3
9		Total Accum. Depreciation	3,667,987	1,765	0	449,715	1,261,966	524,271	747,861	662,754	6,396	11,659	1,600	0	Sum of L 3 through L 8
10		Net Plant	4,981,099	17,367	0	592,010	1,620,202	663,651	956,998	937,430	62,946	114,751	15,745	0	L 44 - L 9 , T3
11		Other Rate Base Items													
12		Cash Working Capital													Sales Allocator
13		Gas Storage	794,925		794,925										Direct
14		Other	(48,204)	(939)	0	(4,735)	(10,374)	(3,640)	(6,677)	(11,378)	(3,404)	(6,206)	(852)	0	L 102 T 6
15		Materials & Supplies	23,702	52	0	2,855	7,898	3,255	4,672	4,385	190	346	48	0	L 42 T 3
16		Prepayments	3,276,772	11,425	0	389,449	1,065,835	436,577	629,553	616,680	41,408	75,488	10,358	0	L 10 T 4
17		Customer Adv. for Construction	0	0	0	0	0	0	0	0	0	0	0	0	L 16 T 3
18		Customer Deposits	(37,206)									(37,206)			Customer Accounts Allocator
19		Accum. Deferred Income Taxes - Depreciation	(541,654)	(1,888)	0	(64,376)	(176,184)	(72,167)	(104,066)	(101,938)	(6,845)	(12,478)	(1,712)	0	L 10 T 4
20		Accum. Deferred Income Taxes - AAC	0	0	0	0	0	0	0	0	0	0	0	0	L 16 T 3
21		Unamortized Investment Tax Credit	0	0	0	0	0	0	0	0	0	0	0	0	L 10 T 4
22		AAO Gas Pipe Replacement	0	0	0	0	0	0	0	0	0	0	0	0	L 16 T 3
23		Total Working Capital	3,468,335	8,649	794,925	323,192	887,176	364,026	523,482	507,749	31,349	19,944	7,842	0	Sum of L 13 through L 22
24		Total Rate Base	8,449,434	26,016	794,925	915,203	2,507,378	1,027,677	1,480,480	1,445,179	94,295	134,695	23,587	0	L 10 + L 23

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Functionally Classified Cost of Service Study
Return and Income Taxes Under Existing Rates
Table 5

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Return and Income Taxes Under Existing Rates													
2		Operating Revenues													
3		Sales and Transport. Revenues	6,006,898											6,006,898	Direct to Class
4		Other Operating Revenues	34,571	329	0	1,658	3,633	1,275	2,338	3,985	1,192	2,173	298	17,689	L 7 T 8
5		Total Operating Revenues	6,041,469	329	0	1,658	3,633	1,275	2,338	3,985	1,192	2,173	298	6,024,587	L 3 + L 4
6		Gas Supply Expenses	4,083,157	(6,718)	0	0	0	0	0	0	0	0	0	4,089,875	L 12, T 6
7		Net Revenues	1,958,312	7,047	0	1,658	3,633	1,275	2,338	3,985	1,192	2,173	298	1,934,712	L 5 - L 6
8		Operating Revenue Deductions													
9		Operation and Maintenance Exp.	1,256,346	58,577	0	114,334	251,312	88,413	181,550	273,553	81,304	206,965	20,337	0	L 101 T 6
10		Depreciation Expense	373,853	1,907	0	43,638	117,197	47,479	70,026	72,359	6,914	12,604	1,729	0	L 8 T 7
11		Taxes Other Than Income Taxes	122,564	1,443	0	14,077	37,422	15,068	22,439	23,922	2,666	4,861	667	0	L 15 T 7
12		Total Operating Rev. Deductions	1,752,763	61,927	0	172,050	405,931	150,960	254,015	369,834	90,884	224,429	22,734	0	L 9 + L 10 + L 11
13		Net Operating Income (before tax)	205,549	(54,880)	0	(170,391)	(402,298)	(149,685)	(251,676)	(365,849)	(89,692)	(222,256)	(22,436)	1,934,712	L 7 - L 12
14		Interest Expense	334,513	1,030	31,471	36,233	99,267	40,686	58,612	57,215	3,733	5,333	934	0	Total 3.959% of Rate Base , L 24 T 4 to Class
15		Net Taxable Income	(128,964)	(55,910)	(31,471)	(206,624)	(501,565)	(190,371)	(310,289)	(423,064)	(93,425)	(227,588)	(23,369)	1,934,712	L 13 - L 14
16		Effective State Tax Rate		6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	
17		Federal Income Tax	(8,060)	(3,494)	(1,967)	(12,914)	(31,348)	(11,898)	(19,393)	(26,441)	(5,839)	(14,224)	(1,461)	120,920	L 15 X L 16
18		Net Tax Adjustment	5,552	19	0	860	1,806	740	1,067	1,045	70	128	16	0	L 10 T4
19		Total Single Business Tax	(2,508)	(3,475)	(1,967)	(12,254)	(29,542)	(11,158)	(18,326)	(25,397)	(5,769)	(14,096)	(1,443)	120,920	L 17 + L 18
20		Effective Federal Income Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	
21		Federal Income Tax	(45,137)	(19,568)	(11,015)	(72,319)	(175,548)	(66,630)	(108,601)	(148,072)	(32,699)	(79,656)	(8,179)	677,149	L 15 X L 20
22		Net Tax Adjustment	29,177	102	0	3,468	9,491	3,887	5,606	5,491	369	672	92	0	L 10 T4
23		Total Federal Income Tax	(15,960)	(19,467)	(11,015)	(68,851)	(166,057)	(62,742)	(102,995)	(142,581)	(32,330)	(78,984)	(8,087)	677,149	L 21 + L 22
24		Deferred Income Taxes	(23,310)	(81)	0	(2,770)	(7,582)	(3,106)	(4,478)	(4,387)	(295)	(537)	(74)	0	L 10 T 4
25		Investment Tax Credits	(2,243)	(8)	0	(267)	(730)	(299)	(431)	(422)	(28)	(52)	(7)	0	L 10 T 4
26		Total Income Tax	(44,021)	(23,031)	(12,982)	(84,142)	(203,911)	(77,305)	(126,231)	(172,787)	(38,422)	(93,669)	(9,611)	798,069	L 19 + L 23 + L 24 + L 25

Aquila Networks - L&P (formerly St Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Functionally Classified Cost of Service Study
Operation and Maintenance Expenses
Table 6
Page 1 of 2

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		O & M Expenses													
2		Other Gas Supply Expenses													
3	803	Natural Gas Transmission Line Purchases													
4	804	NG City Gate Purchases													
5	805	Other Gas Purchases													
6	805.1	Purchased Gas Cost Adjustment													
7	807	Other Purchased Gas Expenses													
8	810 0	Gas Used for Compressor Station Fuel													
9		Subtotal Other Gas Supply Exp.	4,089,875											4,089,875	Direct
10	812	Gas Used for Other Util. Oper.	(6,718)	(6,718)											Throughput Allocator
11	813	Other Gas Supply Expenses	0	0											Throughput Allocator
12		Total Other Gas Supply Expenses	4,083,157	(6,718)	0	0	0	0	0	0	0	0	0	4,089,875	L 9 + L 10 + L 11
13		Total Production Expenses	4,083,157	(6,718)	0	0	0	0	0	0	0	0	0	4,089,875	L 12
14		Transmission Expenses													
15		Operation													
16	850	Supervision & Engineering	0	0	0	0	0	0	0	0	0	0	0	0	L 17 through 23
17	851	Sys. Control & Load Dispatch.	0	0											Throughput Allocator
18	852	Communication System Exp.	0												
19	853	Compressor Sta. Labor & Exp.	0												
20	854	Gas for Compressor Sta. Fuel	0												
21	856	Mains Expenses	0	0	0	0	0	0	0	0	0	0	0	0	L 9 T 3
22	857	Meas. & Reg. Sta. Expenses	0												
23	859	Other Expenses	0	0	0	0	0	0	0	0	0	0	0	0	L 12 T 3
24	860	Rents	0	0	0	0	0	0	0	0	0	0	0	0	L 12 T 3
25		Total Operation	0	0	0	0	0	0	0	0	0	0	0	0	Sum of L 16 through L 24
26		Maintenance													
27	861	Supervision & Engineering	0												
28	862	Structures & Improvements	0	0	0	0	0	0	0	0	0	0	0	0	L 8 T 3
29	863	Mains	0	0	0	0	0	0	0	0	0	0	0	0	L 9 T 3
30	865	Meas. & Reg. Sta. Equip	0	0	0	0	0	0	0	0	0	0	0	0	L 10 T 3
31	867	Other Equipment	0	0	0	0	0	0	0	0	0	0	0	0	L 11 T 3
32		Total Maintenance	0	0	0	0	0	0	0	0	0	0	0	0	Sum of L 27 through L 31
33		Total Transmission Expenses	0	0	0	0	0	0	0	0	0	0	0	0	L 25 + L 32
34		Distribution Expenses													
35		Operation													
36	870	Supervision & Engineering	51,881	2	0	5,889	13,568	4,957	10,133	17,333	0	0	0	0	L 37 through 46
37	871	Load Dispatching	13	13											Throughput Allocator
38	872	Compressor Stn. Labor and Exp.	7			4	4								L 17 T 3
39	873	Compressor Stn Fuel and Power	0	0	0	0	0	0	0	0	0	0	0	0	L 17 T 3
40	874	Mains & Services	97,465	0	0	9,562	40,048	19,677	28,178	0	0	0	0	0	L 16 T 3 + L 20 T 3
41	875	Meas. & Reg. Sta. Equip. - Gen.	0	0	0	0	0	0	0	0	0	0	0	0	L 18 T 3
42	876	Meas. & Reg. Sta. Equip. - Ind.	896	0	0	0	0	0	0	896	0	0	0	0	L 25 T 3
43	877	Meas. & Reg. Sta. Equip. - CG	38,572	0	0	19,286	19,286	0	0	0	0	0	0	0	L 19 T 3
44	878	Meter & House Regulators	104,483	0	0	0	0	0	0	104,483	0	0	0	0	L 21 T 3 to L 24 T 3
45	879	Customer Installation Expenses	22,301	0	0	0	0	0	22,301	0	0	0	0	0	L 20 T 3
46	880	Other Expenses	110,980	0	0	13,683	38,660	16,122	22,709	19,807	0	0	0	0	L 28 T 3
47	881	Rents	1,653	0	0	204	576	240	338	295	0	0	0	0	L 28 T 3
48		Total Operation	428,251	15	0	48,627	112,141	40,996	83,659	142,814	0	0	0	0	Sum of L 36 through L 47

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Functionally Classified Cost of Service Study
Operation and Maintenance Expenses
Table 6
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[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
49		Maintenance													
50	885	Supervision & Engineering	0	0	0	0	0	0	0	0	0	0	0	0	L 51 through 59
51	886	Structures & Improvements	0	0	0	0	0	0	0	0	0	0	0	0	L 15 T 3
52	887	Mains	30,295	0	0	4,181	17,511	8,604	0	0	0	0	0	0	L 16 T 3
53	888	Compressor Station Equipment	0	0	0	0	0	0	0	0	0	0	0	0	L 17 T 3
54	889	Meas. & Reg. Sta. Equip. - Gen.	23,114	0	0	11,557	11,557	0	0	0	0	0	0	0	L 18 T 3
55	890	Meas. & Reg. Sta. Equip. - Ind.	2,383	0	0	0	0	0	0	2,383	0	0	0	0	L 25 T 3
56	891	Meas. & Reg. Sta. Equip. - CG	743	0	0	372	372	0	0	0	0	0	0	0	L 19 T 3
57	892	Services	7,536	0	0	0	0	0	7,536	0	0	0	0	0	L 20 T 3
58	893	Meters & House Regulators	10,758	0	0	0	0	0	0	10,758	0	0	0	0	L 21 T 3 to L 24 T 3
59	894	Other Equipment	4,934	0	0	608	1,719	717	1,010	881	0	0	0	0	L 26 T 3
60		Total Maintenance	79,763	0	0	16,718	31,158	9,321	8,546	14,022	0	0	0	0	Sum of L 50 through L 59
61		Total Distribution	508,014	15	0	65,344	143,299	50,316	92,204	156,836	0	0	0	0	L 48 + L 60
62		Customer Accounts Expenses													
63	901	Supervision	14,147	0	0	0	0	0	0	0	5,057	9,090	0	0	L 64 + L 65 + L 67
64	902	Meter Reading Expenses	41,780								41,780				Customer Accounts Allocator
65	903	Customer Records & Collection	75,102									75,102			Customer Accounts Allocator
66	904	Uncollectible Accounts	58,747									58,747			Customer Accounts Allocator
67	905	Miscellaneous	0									0			Customer Accounts Allocator
68		Total Customer Accounts Expenses	189,776	0	0	0	0	0	0	0	46,837	142,939	0	0	Sum of L 63 through L 67
69		Customer Service & Information Expenses													
70	907	Supervision	8,907	4,454	0	0	0	0	0	0	0	597	3,856	0	L 71 + L 72 + L 73
71	908	Customer Assistance	0	0									0		50% Customer Accts. and 50% Throughput
72	909	Information and Instruction	7,677	3,839									3,839		50% Customer Accts. and 50% Throughput
73	910	Miscellaneous	1,189	595								595			50% Customer Accts. and 50% Throughput
74		Total Cust. Service & Inf. Exp.	17,773	8,887	0	0	0	0	0	0	0	1,192	7,695	0	Sum of L 70 through L 73
75		Sales Expenses													
76	911	Supervison	1,375	688	0	0	0	0	0	0	0	0	688	0	L 77 + L 78 + L 79
77	912	Demonstrating & Selling	(237)	(119)									(119)		50% Customer Accts. and 50% Throughput
78	913	Advertising	2,117	1,059									1,059		50% Customer Accts. and 50% Throughput
79	916	Miscellaneous	4,787	2,394									2,394		50% Customer Accts. and 50% Throughput
80		Total Sales Expenses	8,042	4,021	0	0	0	0	0	0	0	0	4,021	0	Sum of L 76 through L 79
81		Administrative & General Expenses													
82		Operation													
83	920	A & G Salaries	155,224	3,024	0	15,246	33,405	11,720	21,501	36,639	10,962	19,984	2,742	0	Supervised O & M
84		Regulatory Allowance	5,366	5,366											Throughput Allocator
85	921	Office Supplies & Expenses	123,276	2,402	0	12,108	26,529	9,308	17,076	29,098	8,706	15,871	2,178	0	Supervised O & M
86	922	Transfers	(20,892)	(407)	0	(2,052)	(4,496)	(1,577)	(2,894)	(4,931)	(1,475)	(2,690)	(369)	0	Supervised O & M
87	923	Outside Services Employed	58,164	1,133	0	5,713	12,517	4,392	8,057	13,729	4,108	7,488	1,027	0	Supervised O & M
88	924	Property Insurance	10,402	36	0	1,236	3,383	1,386	1,998	1,958	131	240	33	0	L 10 T 4
89	925	Injuries & Damages	73,878	1,439	0	7,256	15,899	5,578	10,233	17,438	5,217	9,511	1,305	0	Supervised O & M
90	926	Employee Pensions & Benefits	79,415	1,547	0	7,800	17,090	5,996	11,000	18,745	5,608	10,224	1,403	0	Supervised O & M
91	927	Franchise Requirements	0	0	0	0	0	0	0	0	0	0	0	0	Supervised O & M
92	928	Regulatory Commission Expense	30,779	30,779											Throughput Allocator
93	929	Duplicate Charges	0	0	0	0	0	0	0	0	0	0	0	0	Supervised O & M
94	930.1	General Advertising	0	0	0	0	0	0	0	0	0	0	0	0	Supervised O & M
95	930.2	Miscellaneous	7,349	143	0	722	1,582	555	1,018	1,735	519	946	130	0	Supervised O & M
96	931	Rents	4,123	80	0	405	887	311	571	973	291	531	73	0	Supervised O & M
97		Total Operation	527,084	45,544	0	48,435	106,796	37,669	68,562	115,382	34,068	62,106	8,522	0	Sum of L 83 through L 96
98	935	Maintenance of General Plant	5,657	110	0	556	1,217	427	784	1,335	400	728	100	0	L 40 T 3
99		Total A & G Expenses	532,741	45,654	0	48,990	108,013	38,097	69,345	116,717	34,467	62,834	8,622	0	L 97 + L 98
100		Total Operation & Maintenance	5,339,503	51,859	0	114,334	251,312	88,413	161,550	273,553	81,304	206,965	20,337	4,089,875	L 13 + L 33 + L 61 L 68 + L 74 + L 80 + L 99
101		Excluding Other Gas Supply Exp.	1,256,346	58,577	0	114,334	251,312	88,413	161,550	273,553	81,304	206,965	20,337	0	L 100 - L 12
102		Supervised O & M before General (1)	663,205	12,922	0	65,140	142,723	50,076	91,866	156,541	46,837	85,384	11,716	0	(1)
103		Footnotes (1)													
104		L 33 + L 61 + L 68 + L 74 + L 80 - L 20 - L 24 - L 47 - L 66													

Aquila Networks - L&P (formerly St Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Functionally Classified Cost of Service Study
Depreciation Expense and Taxes Other Than Income Taxes
Table 7

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]
						Transmission/Distribution				Meters &	Customer Accounting				Basis of Allocation
				Commodity	Sales	Commodity	Peak	Customer	Services	Regulators	Meter Reading	Accounting	Other	Direct Assigned	or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Depreciation Expense													
2		Transmission	0	0	0	0	0	0	0	0	0	0	0	0	L 12 T 3
3		Distribution Plant	270,742	0	0	33,380	94,313	39,330	55,399	48,321	0	0	0	0	L 28 T 3
4		General Plant	97,229	1,894	0	9,550	20,924	7,341	13,468	22,950	6,867	12,518	1,718	0	L 40 T 3
5		Common Plant	0	0	0	0	0	0	0	0	0	0	0	0	L 41 T 3
6		Amortization of Ltd Term Gas Plant	3,632	8	0	437	1,210	499	716	672	29	53	7	0	L 44 T 3
7		Amortization of Other Plant	2,250	5	0	271	750	309	444	416	18	33	5	0	L 44 T 3
8		Total Depreciation Expense	373,853	1,907	0	43,638	117,197	47,479	70,026	72,359	6,914	12,604	1,729	0	Sum of L 2 through L 7
9		*Taxes Other Than Income Taxes*													
10		Ad Valorem (Property Taxes)	96,566	208	0	11,638	32,220	13,285	19,055	17,848	752	1,372	188	0	L 42 - L 5, T 3
11		City Franchise Tax	(2,033)	(4)	0	(245)	(678)	(280)	(401)	(376)	(16)	(29)	(4)	0	L 42 - L 5, T 3
12		Payroll Taxes	27,324	532	0	2,684	5,860	2,063	3,785	6,449	1,930	3,518	483	0	Supervised O & M
13		Miscellaneous Tax	16	16											Throughput Allocator
14		Sales/Use Tax	691	691											Throughput Allocator
15		Total Taxes Other	122,564	1,443	0	14,077	37,422	15,068	22,439	23,922	2,666	4,861	667	0	Sum of L 10 through L 14

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31, 2002
Functionally Classified Cost of Service Study
Other Operating Revenues
Table 8

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Other Operating Revenues													
2	487	Forfeited Discounts	17,689											17,689	Direct to Class
3	488	Miscellaneous Service Revenue	16,886	329	0	1,659	3,634	1,275	2,339	3,986	1,193	2,174	298	0	Supervised O&M
4	493	Rent from Gas Property	0	0	0	0	0	0	0	0	0	0	0	0	L 42 T 3
5	495	*Other Gas Revenue*	*(4)*	*(0)*	*0*	*(0)*	*(1)*	*(0)*	*(1)*	*(1)*	*(0)*	*(1)*	*(0)*	*0*	*Supervised O&M*
6	496	Provision for Rate Refunds	0												
7		Total Other Operating Revenue	34,571	329	0	1,658	3,633	1,275	2,338	3,985	1,192	2,173	298	17,689	Sum of L 2 through L 6

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Test Year Ended December 31 2002
Functionally Classified Cost of Service Study
Class Summary and Unit Costs
Table 9

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
				$	$	$	$	$	$	$	$	$	$	$	
				Sch TJS-16 Table 9, L 6	Sch TJS-16 Table 9, L 9	Sch TJS-16 Table 9, L 6	Sch TJS-16 Table 9, L 13	Sch TJS-16 Table 9, L 18	Sch TJS-16 Table 9, L 18	Sch TJS-16 Table 9, L 23	Sch TJS-16 Table 9, L 28	Sch TJS-16 Table 9, L 28	Sch TJS-16 Table 9, L 28		
1	Cost of Service														
2		Residential	4,064,007	23,696	61,072	122,721	396,977	213,888	333,861	297,164	83,255	194,745	20,825	2,315,802	
3		General Service	1,748,877	10,513	27,095	54,445	176,119	66,911	104,442	232,406	13,022	30,461	3,257	1,030,205	
4		Large Volume	967,360	8,094	20,862	41,922	67,804	3,654	5,704	15,231	1,422	3,327	356	798,984	
5		Transportation	204,444	13,649	0	70,687	91,464	1,218	1,901	5,077	948	2,218	237	17,045	
6		Total	6,984,687	55,951	109,029	289,775	732,364	285,671	445,908	549,878	98,648	230,752	24,676	4,162,035	
7		Check for Tie Out	0	0	0	0	0	0	0	0	0	0	0	0	
8	Unit Customer Costs ($/Month)														
9		Residential	14.71						5.28	4.70	1.32	3.08	0.33		
10		General Service	38.79						10.56	23.50	1.32	3.08	0.33		
11		Large Volume	120.55						26.41	70.51	6.58	15.40	1.65		
12		Transportation	144.19						26.41	70.51	13.17	30.81	3.29		
13	Other Unit Costs ($/Mcf) (Excluding Cost of Gas)														
14		Residential	1.80	0.05	0.13	0.27	0.87	0.47							
15		General Service	1.66	0.05	0.13	0.27	0.87	0.33							
16		Large Volume	0.92	0.05	0.13	0.27	0.44	0.02							
17		Transportation	0.68	0.05	0.00	0.27	0.35	0.00							

Aquila Networks - MPS
Proposed Rates

[A]	[B]	[C]	[D]	[E]	[F]	[G]
			Proposed			
				Small Comm.	Small Vol.	Large Vol.
Line No.	Description	Existing	Residential	<5000 Ccf	>=5000 <40000 Ccf	>=40000 Ccf
1	**Residential**					
2	Customer Charge	9.00	15.00			
3	Energy Charge, per Ccf	0.22295	0 29140			
4						
5	**General Service**					
6	Customer Charge	15.00		25.00	50.00	215.00
7	Energy Charge, per Ccf					
8	First 600	0.24008		0.28180	0.21180	0.03870
9	Next 800	0.22208		0.28180	0.21180	0.03870
10	Next 1,000	0.20405		0.28180	0.21180	0.03870
11	Excess	0.07546		0.28180	0.21180	0.03870
12	Demand Charge, per Ccf of billing demand					0.40000
13						
14	**Large Volume Firm**					
15	Customer Charge	215.00				215.00
16	Energy Charge, per Ccf					
17	First 200,000 Ccf	0.02460				0.03870
18	Excess	0.01000				0.03870
19	Demand Charge, per Ccf of billing demand	0.39000				0.40000
20						
21	**Large Volume Interruptible**					
22	Customer Charge	215.00				215.00
23	Energy Charge, per Ccf					
24	First 200,000 Ccf	0.02460				0.03870
25	Excess	0.01000				0.03870
26	Demand Charge, per Ccf of billing demand	0.39000				0.40000
27						
28	**Large Volume Transportation**					
29	Customer Charge	215.00				215.00
30	Transport Charge, per Ccf					
31	First 200,000 Ccf	0.02460				0.03870
32	Excess	0.01000				0.03870
33	Demand Charge, per Ccf of billing demand	0.39000				0.40000
34						
35	**Small Volume Transportation**					
36	Customer Charge	15.00			50.00	
37	Energy Charge, per Ccf					
38	First 600	0.23908			0.21180	
39	Next 800	0.22108			0.21180	
40	Next 1,000	0.20305			0.21180	
41	Excess	0.07546			0.21180	

Aquila - Missouri Public System
Sales Revenues Under Proposed Rates

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]	[W]	[X]	[Y]	[Z]	[AA]	[AB]	[AC]
			Number of Customers				Throughput				Test Year Sales Revenues Under Existing Rates							Proposed Rates			Test Year Sales Revenues Under Proposed Rates						Difference	
												Weather Adjustment		Annualization Adjustmen														
Line No	Rate Schedule	Rate Code	Per Books	Annual Adjustment	Total Adjusted Number of Customers	Annual Billing Demand	Per Books	Weather Adjustment	Annual Adjustment	Total Adjusted Throughput	Synchron. Revenues	Margin	Cost of Gas	Customer Charge	Distribution Charge	Cost of Gas	Total Revenues	Customer Charge	Distribution Charge	Billing Demand	Customer Charge	Distribution Charge	Billing Demand	Total Margin	Cost of Gas	Total Revenues		
						Mcf	Mcf	Mcf	Mcf	Mcf	$	$	$	$	$	$	$			$/Mcf	$	$	$	$	$	$	$	%
			Sch TJS-8	Sch TJS-10	[D]+[E]	Sch TJS-8	Sch. TJS-8	Sch. TJS-4	Sch. TJS-10	[H]+[I]+[J]	Sch. TJS-8	Sch. TJS-4	Sch TJS-4	Sch TJS-10	Sch TJS-10	Sch. TJS-10	[L] thru [Q]	$/Meter	Sch. TJS-20		12X[F]X[S]	[K]X[T]	[G]X[U]	[V]+[W]+[X]	[O]+[N]+ Sch. TJS-8 [O]	[Y]+[Z]	[AA]-[R]	([AA]/[R])-1
1	RESIDENTIAL																											
2	Southern System	MO001	27,984	186	28,170		2,153,362	66,984	14,891	2,235,237	21,239,627	193,930	542,088	20,068	33,199	82,800	22,121,730	15.00	2.91400		5,070,600	6,571,759		11,642,359	14,051,320	25,693,679	3,571,949	16.15%
3	Northern System	MO002	9,143	(4)	9,139		737,314	51,292	(345)	788,261	7,101,662	114,355	310,848	(432)	(769)	(2,091)	7,523,570	15.00	2.91400		1,645,020	2,296,992		3,942,012	4,779,131	8,721,143	1,197,572	15.92%
4	Eastern System	MO003	3,556	3	3,559		224,338	11,090	198	235,626	3,117,552	24,725	110,480	324	442	1,973	3,255,496	15.00	2.91400		642,420	686,615		1,329,035	2,344,715	3,673,750	418,254	12.85%
5	Total Residentia		40,693	185	40,878		3,115,014	149,366	14,744	3,279,124	31,458,840	333,011	963,412	19,980	32,871	82,682	32,900,796				7,358,040	9,555,366		16,913,406	21,175,166	38,088,572	5,187,776	15.77%
6																												
7	EXISTING RATE STRUCTURE																											
8	GENERAL SERVICE																											
9	Commercial																											
10	Southern System	MO051	3,531	5	3,536		1,068,637	40,032	1,598	1,130,268	9,676,001	82,970	249,483	900	3,312	9,960	10,022,627											
11	Northern System	MO052	1,382	(3)	1,379		387,257	23,169	(891)	409,535	3,415,018	49,122	140,413	(540)	(1,888)	(5,399)	3,596,727											
12	Eastern System	MO053	457	15	472		127,373	5,328	4,356	137,057	1,632,648	11,667	53,081	2,700	9,537	43,391	1,753,023											
13	Total Commercial		5,370	17	5,387		1,803,267	68,530	5,063	1,876,860	14,723,667	143,760	442,978	3,060	10,961	47,952	15,372,377											
14																												
15	Industrial																											
16	Southern System	MO051	22		22		62,994	1,749	0	64,743	488,337	2,447	10,901	0	0	0	501,685											
17	Northern System	MO052	6		6		5,686	391	0	6,077	46,850	798	2,371	0	0	0	50,020											
18	Total Industria		28	0	28		68,680	2,140	0	70,820	535,187	3,245	13,272	0	0	0	551,705											
19																												
20	Interdepartmental																											
21	Southern System	MO051	7		7		1,931		0	1,931	18,287	0	0	0	0	0	18,287											
22																												
23	Total General Service		5,405	17	5,422		1,673,878	70,670	5,063	1,749,611	15,277,141	147,005	456,250	3,060	10,961	47,952	15,942,368											
24																												
25	PROPOSED RATE STRUCTURE																											
26	Small Commercial		4,676	17	4,693		591,679	24,989	5,063	621,931								25.00	2.81800		1,407,900	1,752,601		3,160,501				
27	Small Volume		685		685		795,667	33,593		829,260								50.00	2.11800		411,000	1,756,436		2,167,436				
28	Large Volume		44		44	29,692	286,302	12,088		298,390								215.00	0.38700	4.00000	113,520	115,477	118,768	347,765				
29	Total		5,405	17	5,422	29,692	1,673,878	70,670	5,063	1,749,611	15,277,141	147,005	456,250	3,060	10,961	47,952	15,942,368				1,932,420	3,624,514	118,768	5,675,703	11,347,850	17,023,553	1,081,185	6.78%
30																												
31	LARGE VOLUME FIRM																											
32	Northern System	MO282	1		1	112	19,812	0	0	19,812	102,737	0	0	0	0	0	102,737	215.00	0.38700	4.00000	2,580	7,667	446	10,693	94,848	105,541	2,805	2.73%
33	Total Large Volume Firm		1	0	1	112	19,812	0	0	19,812	102,737	0	0	0	0	0	102,737				2,580	7,667	446	10,693	94,848	105,541	2,805	2.73%
34																												
35	LARGE VOLUME INTERRUPTIBLE																											
36	Northern System	MO282	0		0	0	471	0	0	471	2,022	0	0	0	0	0	2,022	215.00	0.38700	4.00000	0	182	0	182	1,906	2,088	66	3.26%
37	Total Large Volume Interr		0	0	0	0	471	0	0	471	2,022	0	0	0	0	0	2,022				0	182	0	182	1,906	2,088	66	3.26%
38																												
39	TOTAL SALES		46,099	202	46,301	29,804	4,809,175	220,036	19,807	5,049,017	46,640,739	480,016	1,419,662	23,040	43,832	140,634	48,947,923				9,293,040	13,187,730	119,214	22,599,984	32,619,770	55,219,755	6,271,832	12.81%
40	Total Transportation		47	0	47	157,255	8,881,533	41,901	0	8,923,434	1,874,878	8,974	0	0	0	0	1,883,852				124,485	1,347,640	626,626	2,098,751	0	2,098,751	414,899	24.64%
41	Total MPS		46,146	202	46,348	187,059	13,690,708	261,936	19,807	13,972,451	48,515,617	488,989	1,419,662	23,040	43,832	140,634	50,831,774				9,417,525	14,535,370	745,840	24,698,735	32,619,770	57,318,506	6,686,731	13.21%

Aquila - Missouri Public System
Transportation Revenues Under Proposed Rates

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]	[W]	[X]	[Y]	[Z]	[AA]
			Annual Number of Cust Charges			Annual Billing Demand			Throughput				Test Year Sales Revenues Under Existing Rates					Proposed Rates			Test Year Sales Revenues Under Prop. Rates				Difference	
Line No.	Rate Schedule	Rate Code	Per Books	Annual Adjustment	Total Adjusted Number of Customers	Per Books	Adjustment to Billing Demand	Total	Per Books	Weather Adjustment	Annual Adjustment	Total Adjusted Throughput	Synchron. Revenues	Weather Adjustment Margin	Annualization Adjustment Customer Charge	Annualization Adjustment Energy Charge	Total Revenues	Customer Charge	Energy Charge	Billing Demand	Customer Charge	Energy Charge	Billing Demand	Total		
									Mcf	Mcf	Mcf	Mcf	$	$	$	$	$	$/Meter	$/Mcf	$/Mcf	$	$	$	$	$	%
			Sch. TJS-8	Sch. TJS-10	[D]+[E]	Sch. TJS-8		[G]+[H]	Sch. TJS-8	Sch. TJS-3	Sch. TJS-10	[J]+[L]	Sch. TJS-8	Sch. TJS-3	Sch. TJS-10	Sch. TJS-10	[N]+[O]		Sch. TJS-20		[F]X[S]	[M]X[T]	[G]X[U]	[V]+[W]+[X]	[Y]-[R]	([Y]/[R])-1
1	LARGE VOLUME TRANSPORTATION																									
2	Southern System	MO501	305		305	108,287		108,287	1,670,552	9,070		1,679,622	841,485	1,920			843,405	215.00	0.38700	4.00000	65,575	650,014	433,147	1,148,736	305,330	36.20%
3	First 20,000 Mcf																									
4	Excess																									
5	Northern System	MO502	72		72	36,649		36,649	543,425	29,966		573,391	273,509	6,347			279,856	215.00	0.38700	4.00000	15,480	221,902	146,596	383,978	104,122	37.21%
6	First 20,000 Mcf																									
7	Excess																									
8	Eastern System	MO503	12		12	2,672		2,672	41,359	0		41,359	23,174	0			23,174	215.00	0.38700	4.00000	2,580	16,006	10,687	29,273	6,099	26.32%
9	First 20,000 Mcf																									
10	Excess																									
11	Total Large Volume Transportation		389	0	389	147,607	0	147,607	2,255,336	39,036	0	2,294,372	1,138,169	8,267	0	0	1,146,435				83,635	887,922	590,429	1,561,986	415,551	36.25%
12																										
13	SMALL VOLUME TRANSPORTATION (1)																									
14	Southern System																									
15	Schreiber Food	MO01E	12		12	0	1,127	1,127	8,176			8,176	10,906				10,906	215.00	0.38700	4.00000	2,580	3,164	4,510	10,254	(652)	-5.98%
16	First 60 Mcf																									
17	Next 80 Mcf																									
18	Next 100 Mcf																									
19	Excess																									
20	PGA (L&U)																									
21	Total Small Volume Transportation		12	0	12	0	1,127	1,127	8,176	0	0	8,176	10,906	0	0	0	10,906				2,580	3,164	4,510	10,254	(652)	-5.98%
22																	1,157,341									
23	SPECIAL CONTRACT TRANSPORTATION																									
24	Southern System																									
25	Pittsburgh Corning Co	MO521	12		12	0		0	455,906			455,906	134,793				134,793	215.00		0.0000	2,580	132,213	0	134,793	0	0.00%
26	First 50,000 Mcf [1]																		0.29000							
27	Excess																		0.13000							
28																										
29	Tyson Foods Processing	MO522	12		12	0		0	670,458	519		670,977	150,081	114			150,195	215.00	0.22000	0.0000	2,580	147,615	0	150,195	0	0.00%
30																										
31	Tyson Foods Feed Mill	MO523	12		12	0		0	45,301	182		45,483	12,546	40			12,586	215.00	0.22000	0.0000	2,580	10,006	0	12,586	0	0.00%
32																										
33	Tyson Foods Hatchery	MO524	12		12	0		0	12,839	206		13,045	5,405	45			5,450	215.00	0.22000	0.0000	2,580	2,870	0	5,450	0	0.00%
34																										
35	Excel Corporion	MO525	12		12	0		0	13,255			13,255	3,243				3,243	215.00	0.05000	0.0000	2,580	663	0	3,243	0	0.00%
36																										
37	Marshall Municipal Utilities	MO526	12		12	0		0	49,357			49,357	21,336				21,336	215.00		0.0000	2,580	18,756	0	21,336	0	0.00%
38	First 50,000 Mcf [2]																		0.38000							
39	Excess																		0.03000							
40	Total Southern System		72	0	72	0	0	0	1,247,116	907	0	1,248,023	327,403	199	0	0	327,602				15,480	312,122	0	327,602	0	0.00%
41																										
42	Northern System																									
43	Chillicothe Municipal Utilities	MO527	12		12	812		812	30,080			30,080	11,604				11,604	215.00		2.0000	2,580	7,400	1,625	11,604	0	0.00%
44	First 20,000 Mcf [3]																		0.24600							
45	Excess																		0.10000							
46	Glen Gery Brick	MO528	12		12	5,273		5,273	175,631			175,631	66,352				66,352	215.00		3.9000	2,580	43,205	20,567	66,352	0	0.00%
47	First 20,000 Mcf [4]																		0.24600							
48	Excess																		0.10000							
49	Wire Rope Corp	MO529	10		10	2,435		2,435	91,601			91,601	34,180				34,180	215.00		3.9000	2,150	22,534	9,496	34,180	0	0.00%
50	First 20,000 Mcf																		0.24600							
51	Excess																		0.10000							
52	Total Northern System		34	0	34	8,521	0	8,521	297,312	0	0	297,312	112,136	0	0	0	112,136				7,310	73,139	31,687	112,136	0	0.00%
53																										
54	Eastern System																									
55	Phelps County Medical Center [5]	MO530	12		12	0		0	37,193	494		37,687	11,878	123			12,002	215.00	0.25000	0.0000	2,580	9,422	0	12,002	0	0.00%
56																										
57	University of MO - TJ Hall	MO531	12		12	0		0	11,315	361		11,676	5,975	108			6,083	215.00	0.30000	0.0000	2,580	3,503	0	6,083	0	0.00%
58																										
59	Royal Canine USA, Inc. [6]	MO532	12		12	0		0	54,654			54,654	16,244				16,244	215.00	0.25000	0.0000	2,580	13,664	0	16,244	0	0.00%
60																										
61	Briggs & Stratton [7]	MO533	12		12	0		0	109,316	1,103		110,419	29,909	276			30,185	215.00	0.25000	0.0000	2,580	27,605	0	30,185	0	0.00%
62																										
63	Busy Bee Laundry [8]	MO534	12		12	0		0	21,578			21,578	9,053				9,053	215.00	0.30000	0.0000	2,580	6,473	0	9,053	0	0.00%
64																										
65	Vonhoffmann Graphics	MO535	12		12	0		0	30,362			30,362	13,207				13,207	215.00	0.35000	0.0000	2,580	10,627	0	13,207	0	0.00%
66	Total Eastern System		72	0	72	0	0	0	264,418	1,958	0	266,376	86,265	508	0	0	86,773				15,480	71,293	0	86,773	0	0.00%
67																										
68	Total Special Contract Transportation		178	0	178	8,521	0	8,521	1,808,846	2,864	0	1,811,710	525,804	707	0	0	526,511				38,270	456,554	31,687	526,511	0	0.00%
69																										
70	Total Transportation		579	0	579	156,128	1,127	157,255	4,072,358	41,901	0	4,114,259	1,674,878	8,974	0	0	1,683,852				124,485	1,347,640	626,676	2,098,751	414,899	24.64%

(1) Existing small volume transportation customer qualifies as a large volume customer under proposed rates. Therefore, rates shown in this table are large volume rates

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Proposed Rates

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
		Existing		Proposed			
Line No.	Description	Balance[1]	FRT[2]	Residential	Small Comm. <5000 Ccf	Small Vol. >=5000 <40000 Ccf	Large Vol. >=40000 Ccf
1	**Residential**						
2	Customer Charge	6.66	5.65	10.00			
3	Energy Charge, per Ccf	0.16350	0.16350	0.25350			
4							
5	**General Service**						
6	Customer Charge	12.31	9.39		20.00	40.00	215.00
7	Energy Charge, per Ccf	0.14010	0.14010		0.22500	0.19000	0.03870
8	Demand Charge, per Ccf of billing demand						0.40000
9							
10	**Large Volume Firm**						
11	Customer Charge	184.53	184.53				215.00
12	Energy Charge, per Ccf	0.07290	0.07290				0.03870
13	Demand Charge, per Ccf of billing demand	N/A	N/A				0.40000
14							
15	**Large Volume Interruptible**						
16	Customer Charge	N/A	N/A				215.00
17	Energy Charge, per Ccf						0.03870
18	Demand Charge, per Ccf of billing demand	N/A	N/A				0.40000
19							
20	**Large Volume Transportation**						
21	Customer Charge[3]	47.25	47.25				215.00
22	Transport Charge, per Ccf	0.07290	0.07290				0.03870
23	Demand Charge, per Ccf of billing demand	N/A	N/A				0.40000
24							
25	**Small Volume Transportation**						
26	Customer Charge					40.00	
27	Energy Charge, per Ccf					0.19000	

(1) All service territory excluding Fairfax, Rock Port, and Tarkio.
(2) Fairfax, Rock Port, and Tarkio.
(3) The $47.25 charge is for each meter. Customers are also charged the Large Volume sales customer charge under existing rates.

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Revenues Under Proposed Rates - L&P

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]	[W]	[X]	[Y]	[Z]	[AA]	[AB]	[AC]
			Number of Customers				Throughput				Test Year Sales Revenues Under Existing Rate							Proposed Rates			Test Year Sales Revenues Under Proposed Rate:							
												Weather Adjustment		Annualization Adjustment														
Line No	Rate Schedule	Rate Code	Per Books	Annual Adjustment	Total Adjusted Number of Customers	Annual Billing Demand	Per Books	Weather Adjustment	Annual Adjustment	Total Adjusted Throughput	Synchron. Revenues	Margin	Cost of Gas	Customer Charge	Energy Charge	Cost of Gas	Total Revenues	Customer Charge	Energy Charge	Demand Charge	Customer Charge	Energy Charge	Demand Charge	Total Margin	Cost of Gas	Total Revenues	Difference	
						Mcf	Mcf	Mcf	Mcf	Mcf	$	$	$	$	$	$	$	$/Meter	$/Mcf	$/Mcf	$	$	$	$	$	$	$	%
			Sch TJS-9	Sch TJS-11	[D]+[E]		Sch TJS-9	Sch TJS-5	Sch TJS-11	[H]+[I]+[J]	Sch TJS-9	Sch TJS-5	Sch TJS-5	Sch TJS-11	Sch TJS-11	Sch TJS-11	[L] thru [Q]		Sch TJS-21		12X[F]X[S]	[K]X[T]	[G]X[U]	[V] thru [X]	[Q]+[N]+ Sch 9 [K]	[Y]+[Z]	[AA]-[R]	([AA]/[R])-1
1	RESIDENTIAL																											
2	Rate Schedule 910	MO004	4,026	(17)	4,009		328,376	17,384	(1,460)	344,300	2,507,898	28,423	87,490	(1,359)	(2,387)	(7,348)	2,612,717	10.00	2.53500		481,080	872,801		1,353,881	1,729,387	3,083,268	470,551	18.01%
3	Rate Schedule 911 - FR	MO005	1,258	1	1,259		104,639	5,461	88	110,188	778,380	8,929	27,486	68	143	440	815,447	10.00	2.53500		151,080	279,326		430,406	549,929	980,328	164,889	20.22%
4	Total Residentia		5,284	(16)	5,268		433,015	22,846	(1,372)	454,488	3,286,278	37,352	114,976	(1,291)	(2,244)	(6,907)	3,428,164				632,160	1,152,127		1,784,287	2,279,316	4,063,604	635,440	18.54%
5																												
6	EXISTING RATE STRUCTURE																											
7	GENERAL SERVICE																											
8	Commercial																											
9	Rate Schedule 920	MO054	605	3	608		145,079	7,413	756	153,248	1,022,623	10,385	37,306	443	1,059	3,806	1,075,823											
10	Rate Schedule 921 - FR	MO055	215	(2)	213		45,070	2,626	(444)	47,252	312,774	3,679	13,215	(225)	(622)	(2,233)	326,588											
11	Total Commercial		820	1	821		190,149	10,039	312	200,500	1,335,398	14,064	50,521	218	438	1,573	1,402,211											
12																												
13	Industrial																											
14	Rate Schedule 920	MO054	2		2		804	33	0	837	5,522	46	164	0	0	0	5,731											
15	Total Industria		2	0	2		804	33	0	837	5,522	46	164	0	0	0	5,731											
16																												
17	Interdepartmental	MO454	1		1		297	0	0	297	995	0	0	0	0	0	995											
18																												
19	Total General Service		823	1	824		191,250	10,071	312	201,634	1,341,914	14,110	50,685	218	438	1,573	1,408,937											
20																												
21	LARGE VOLUME FIRM																											
22	Commercial																											
23	Rate Schedule 930	MO284	7		7		49,758	1,457	0	51,215	303,530	1,062	7,333	0	0	0	311,925											
24	Rate Schedule 930	MO285	1		1		2,316		0	2,316	16,341	0	0	0	0	0	16,341											
25	Total Commercial		8	0	8		52,074	1,457	0	53,531	319,871	1,062	7,333	0	0	0	328,266											
26																												
27	Industrial																											
28	Rate Schedule 930	MO284	4		4		22,542		0	22,542	141,134	0	0	0	0	0	141,134											
29	Rate Schedule 930	MO285	6		6		79,181		0	79,181	474,513	0	0	0	0	0	474,513											
30	Total Commercia		10	0	10		101,723	0	0	101,723	615,647	0	0	0	0	0	615,647											
31																												
32	Transportation										21,590						21,590											
33																												
34	Total Large Volume Firm		18	0	18		153,797	1,457	0	155,254	957,108	1,062	7,333	0	0	0	965,503											
35																												
36	PROPOSED RATE STRUCTURE																											
37	Small Commercial		745	1	746		97,320	3,251	312	100,884								20.00	2.25000		179,040	226,988		406,028				
38	Small Volume		88		88		112,687	3,765		116,452								40.00	1.90000		42,240	221,259		263,499				
39	Large Volume		8		8	21,221	135,040	4,512		139,552								215.00	0.38700	4.00000	20,640	54,007	84,882	159,529				
40	Total		841	1	842	21,221	345,047	11,528	312	356,887	2,299,022	15,172	58,018	218	438	1,573	2,374,440				241,920	502,253	84,882	829,055	1,802,834	2,831,689	257,249	10.83%
41																												
42	Total Sales		6,125	(15)	6,110	21,221	778,062	34,374	(1,060)	811,376	5,585,300	52,524	172,994	(1,073)	(1,806)	(5,335)	5,802,604				874,080	1,654,381	84,882	2,613,343	4,081,950	6,695,293	892,689	15.38%
43	Total Transportation (page 2)		6		6	40,984	261,785			261,785	204,295						204,295				15,480	101,311	163,934	280,725	7,925	288,650	84,356	41.29%
44	Total SJPL		6,131	(15)	6,116	62,204	1,039,847	34,374	(1,060)	1,073,161	5,789,594	52,524	172,994	(1,073)	(1,806)	(5,335)	6,006,898				889,560	1,755,691	248,816	2,894,068	4,089,875	6,983,943	977,045	16.27%

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Transportation Revenues Under Proposed Rates

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]	[W]	[X]	[Y]	[Z]
			Annual Number of Meter Charges			Throughput					Test Year Sales Revenues Under Existing Rates					Proposed Rates			Test Year Sales Revenues Under Proposed Rates						
													Annualization Adjustment												
Line No.	Rate Schedule	Rate Code	Per Books	Annual. Adjustment	Total Adjusted Meter Charges	Per Books	Weather Adjustment	Annual. Adjustment	Total Adjusted Throughput	Annual Billing Demand	Synchron. Revenues	Weather Adjustment Margin	Meter Charge	Energy Charge	Total Revenues	Customer Charge	Energy Charge	Demand Charge	Customer Charge	Energy Charge	Demand Charge	Transition Charge	Total	Difference	
			Mcf			Mcf	Mcf	Mcf	Mcf	Mcf	$	$	$	$	$	$/Meter	$/Mcf	$/Mcf	$	$	$	$	$	$	%
			Sch. TJS-9		[D]+[E]	Sch. TJS-9			[G]+[I]						[L]+[O]		Sch. TJS-21		12 X 6 Cust X [Q]	[J]X[R]	[K]X[S]	Sch. TJS-9	[T] thru [W]	[X]-[P]	([X]/[P])-1
1	TRANSPORTATION MO504		117		117	261,785			261,785	40,984	204,295				204,295	215.00	0.38700	4.00000	15,480	101,311	163,934	7,925	288,650	84,356	41.29%

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Class Cost of Service Study
Summary of Cost of Service
Table 1

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS	[E] Residential	[F] General Service	[G] Large Volume	[H] Small Volume Transportation	[I] Large Volume Transportation	[J] Basis of Allocation or Reference
			$	$	$	$	$	$	
1		Total Cost of Service							
2		Return Under Existing Rates	1,323,726	544,618	578,334	291	3,319	197,165	L 21 T 2
3		Rate Base	54,107,748	37,363,701	13,711,252	43,513	17,988	2,971,313	L 24 T 4
4		Proposed Rate of Return	9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	
5		Return Under Proposed Rates	5,269,283	3,638,664	1,335,270	4,238	1,750	289,361	L 3 X L 4
6		Required Increase in Return	3,945,557	3,094,046	756,937	3,947	(1,569)	92,196	L 5 - L 2
7		Incremental Income Taxes							
8		State Tax							
9		Effective Tax Rate		6.25%	6.25%	6.25%	6.25%	6.25%	
10		Incremental Taxes	334,479	262,293	64,158	335	(133)	7,816	
11		Federal							
12		Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	
13		Incremental Taxes	2,123,917	1,665,543	407,464	2,124	(844)	49,630	
14		Required Revenue Increase	6,403,952	5,021,882	1,228,568	6,406	(2,546)	149,642	L 6 + L 10 + L 13
15		Sales Revenue Under Existing Rates	45,073,571	29,845,300	14,189,346	104,758	10,906	1,123,261	L 10 T 2
16		Total Cost of Service	51,477,523	34,867,182	15,417,914	111,164	8,359	1,272,903	L 14 + L 15
17		Proposed Increase - $	6,403,914	5,025,176		1,378,739			
18		Proposed Increase - %	14.21%	16.95%		8.94%			L 17 / L 15
19		Incremental							
20		State Tax	334,476	262,465		72,012			
21		Federal Tax	2,123,903	1,666,635		457,268			
22		Total Proposed Increase in Return	3,945,535	3,096,076		849,459			
23		Rate of Return Under Proposed Rates	9.74%	9.74%		9.73%			
24		Composite GS, LV, SVT, LVT							

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Class Cost of Service Study
Return Under Existing Rates
Table 2

[A] Line No.	[B] Acct. No	[C] Description	[D] Total MPS	[E] Residential	[F] General Service	[G] Large Volume	[H] Small Volume Transportation	[I] Large Volume Transportation	[J] Basis of Allocation or Reference
			$	$	$	$	$	$	
1		Return Under Existing Rates							
2		Rate Base							
3		Gas Plant in Service	79,192,416	54,334,293	19,605,406	48,794	29,618	5,174,306	L 44 T 3
4		Accumulated Depreciation	27,988,418	18,772,731	8,977,598	20,203	11,556	2,206,331	L 8 T 4
5		Net Plant in Service	51,203,998	35,561,561	12,627,808	28,591	18,062	2,967,975	L 3 - L 4
6		Other Rate Base Items	2,903,750	1,802,139	1,083,444	14,922	(94)	3,338	L 23 T 4
7		Total Rate Base	54,107,748	37,363,701	13,711,252	43,513	17,968	2,971,313	L 5 + L 6
8		Return Under Existing Rates							
9		Operating Revenues							
10		Sales and Transport. Revenues	45,073,571	29,645,300	14,189,346	104,758	10,906	1,123,261	L 3 T 5
11		Other Operating Revenues	800,358	629,561	138,702	320	199	31,577	L 7 T 8
12		Total Operating Revenues	45,873,929	30,274,861	14,328,048	105,079	11,104	1,154,838	L 10 + L 11
13		Net Gas Supply Expenses	28,879,912	18,818,329	9,973,467	96,673	415	(8,974)	L 9 + L 10 + L 11, T 6
14		Net Revenues	16,994,017	11,456,532	4,354,580	8,405	10,688	1,163,812	L 12 - L 13
15		Operating Revenue Deductions							
16		Operation and Maintenance	11,383,989	8,170,082	2,561,968	6,481	3,867	641,613	L 101 T 8
17		Depreciation Expense	3,320,370	2,326,440	811,137	1,763	1,133	179,897	L 8 T 7
18		Taxes Other Than Income Taxes	1,029,490	717,191	251,286	578	362	60,073	L 14 T 7
19		Income Taxes	(83,558)	(301,799)	151,856	(688)	2,008	85,064	L 26 T 5
20		Total Oper. Rev. Deductions	15,670,291	10,911,914	3,776,247	8,114	7,369	966,647	Sum of L 16 through L 19
21		Return Under Existing Rates	1,323,726	544,618	578,334	291	3,319	197,165	L 14 - L 20
22		Rate of Return	2.446%	1.458%	4.218%	0.669%	18.469%	6.636%	L 21 / L 7

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Class Cost of Service Study
Allocation of Plant in Service by Class
Table 3

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS $	[E] Residential $	[F] General Service $	[G] Large Volume $	[H] Small Volume Transportation $	[I] Large Volume Transportation $	[J] Basis of Allocation or Reference
1		Gas Plant in Service							
2		Intangible Plant							
3	301	Land & Land Rights	1,939	1,385	450	1	1	103	Supervised O & M
4	302	Other Equipment	0	0	0	0	0	0	Supervised O & M
5		Total Intangible Plant	1,939	1,385	450	1	1	103	
6		Transmission Plant							
7	365	Land & Land Rights	234,575	115,578	61,238	474	207	57,078	50% Throughput, 50% Peak
8	366	Structures & Improvements	10,880	5,361	2,840	22	10	2,647	50% Throughput, 50% Peak
9	367	Mains	6,803,690	3,352,270	1,776,153	13,760	6,008	1,655,500	50% Throughput, 50% Peak
10	369	Measuring & Reg. Station Eq.	372,214	183,395	97,169	753	329	90,569	50% Throughput, 50% Peak
11	371	Other Equipment	0	0	0	0	0	0	50% Throughput, 50% Peak
12		Total Transmission Plant	7,421,359	3,656,603	1,937,400	15,009	6,553	1,805,794	Sum of L 7 through L 11
13		Distribution Plant							
14	374	Land & Land Rights	1,774	1,209	430	1	1	133	1.06% Throughput, 57.01% Services, 41.93% Peak
15	375	Structures & Improvements	59,033	40,220	14,324	37	22	4,430	1.06% Throughput, 57.01% Services, 41.93% Peak
16	376	Mains	33,615,570	22,902,880	8,156,751	20,875	12,732	2,522,532	1.06% Throughput, 57.01% Services, 41.93% Peak
17	377	Compressor Station Equipment	0	0	0	0	0	0	50% Throughput, 50% Peak
18	378	Meas. & Reg. Sta. Equip. - Gen.	214,588	105,729	56,019	434	189	52,214	50% Throughput, 50% Peak
19	379	Meas. & Reg. Sta. Equip. - CG	418,109	206,008	109,150	846	369	101,736	50% Throughput, 50% Peak
20	380	Services	21,367,040	16,769,030	4,449,688	4,495	4,495	139,334	Services
21	381	Meters	2,738,260	1,628,880	1,080,565	873	873	27,069	Meters & Regulators
22	382	Meter Installations	1,718,652	1,022,357	678,210	548	548	16,989	Meters & Regulators
23	383	House Regulators	2,272,058	1,351,556	896,593	725	725	22,460	Meters & Regulators
24	384	House Regulator Installations	0	0	0	0	0	0	Meters & Regulators
25	385	Indust. Meas. & Reg. Sta. Equip.	315,383	187,609	124,456	101	101	3,118	Meters & Regulators
26	386	Other Property on Cust. Premises	0	0	0	0	0	0	1.06% Throughput, 57.01% Services, 41.93% Peak
27	387	Other Equipment	0	0	0	0	0	0	1.06% Throughput, 57.01% Services, 41.93% Peak
28		Total Distribution Plant	62,720,465	44,215,276	15,566,186	28,933	20,054	2,890,015	Sum of L 14 through L 27
29		General Plant							
30	389	Land & Land Rights	32,969	23,541	7,656	18	11	1,743	Supervised O & M
31	390	Structure & Improvements	2,435,530	1,739,047	565,603	1,306	810	128,764	Supervised O & M
32	391	Office Furniture & Equipment	4,725,571	3,374,209	1,097,420	2,533	1,572	249,837	Supervised O & M
33	392	Transportation Equipment	204,819	146,247	47,565	110	68	10,829	Supervised O & M
34	393	Stores Equipment	1,759	1,256	408	1	1	93	Supervised O & M
35	394	Tools, Shop & Garage Equipment	582,039	401,314	130,522	301	187	29,715	Supervised O & M
36	395	Laboratory Equipment	104,939	74,930	24,370	56	35	5,548	Supervised O & M
37	396	Power Operated Equipment	131,787	94,086	30,600	71	44	6,966	Supervised O & M
38	397	Communication Equipment	802,143	572,756	186,282	430	267	42,409	Supervised O & M
39	398	Miscellaneous Equipment	47,117	33,643	10,942	25	16	2,491	Supervised O & M
40		Total General Plant	9,048,653	6,461,029	2,101,370	4,850	3,010	478,395	Sum of L 30 through L 39
41		Common Plant (1)	0	0	0	0	0	0	Supervised O & M
42		Total Plant in Service	79,192,416	54,334,293	19,605,406	48,794	29,618	5,174,306	L 5 + L 12 + L 28 + L 40 + L 41
43		Construction Work in Progress	0	0	0	0	0	0	L 42 T 3
44		Total Plant in Service	79,192,416	54,334,293	19,605,406	48,794	29,618	5,174,306	L 42 + L 43

(1) Common Plant has been included in General Plant by account.

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Class Cost of Service Study
Allocation of Accumulated Depreciation and Other Rate Base Items by Class
Table 4

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS	[E] Residential	[F] General Service	[G] Large Volume	[H] Small Volume Transportation	[I] Large Volume Transportation	[J] Basis of Allocation or Reference
			$	$	$	$	$	$	
1		Accumulated Depreciation							
2		Accumulated Depreciation							
3		Intangible	126	90	29	0	0	7	L 5 T 3
4		Transmission	4,587,676	2,260,410	1,197,648	9,278	4,051	1,116,291	L 12 - L 7 T 3
5		Distribution	21,662,522	15,271,177	5,376,284	9,993	6,926	998,141	L 28 - L 14 T 3
6		General & Common	1,738,094	1,241,055	403,638	932	578	91,892	L 40 T 3
7		Retirement Work in Progress	0	0	0	0	0	0	L 42 T 3
8		Total Accum. Depreciation	27,988,418	18,772,731	6,977,598	20,203	11,556	2,206,331	Sum of L 3 through L 7
9		Net Plant	51,203,998	35,561,561	12,627,808	28,591	18,062	2,967,975	L 44 - L 8 , T3
10		Other Rate Base Items							
11		Cash Working Capital							
12		Gas Storage	3,460,490	2,252,190	1,193,291	15,009	0	0	Sales Allocator
13		Other	(468,796)	(334,735)	(108,869)	(251)	(156)	(24,785)	L 102 T 6
14		Materials & Supplies	1,659,577	1,138,644	410,856	1,023	621	108,434	L 42 T 3
15		Prepayments	2,957,237	2,053,823	729,307	1,651	1,043	171,413	L 9 T 4
16		Customer Adv. for Construction	(43,496)	(29,634)	(10,554)	(27)	(16)	(3,264)	L 16 T 3
17		Customer Deposits	(168,433)	(148,125)	(19,653)	(20)	(20)	(615)	Customer Accounts Allocator
18		Accum. Deferred Income Taxes - Depreciation	(5,153,466)	(3,578,121)	(1,270,936)	(2,878)	(1,818)	(298,714)	L 9 T 4
19		Accum. Deferred Income Taxes - AAO	(458,923)	(312,670)	(111,357)	(285)	(174)	(34,438)	L 16 T 3
20		Accum. Deferred Income Taxes - Synergies to MPS	(72,114)	(50,084)	(17,785)	(40)	(25)	(4,180)	L 9 T 4
21		Unamortized Investment Tax Credit	(3,748)	(2,603)	(924)	(2)	(1)	(217)	L 9 T 4
22		AAO Gas Pipe Replacement	1,195,422	814,455	290,067	742	453	89,705	L 16 T 3
23		Total Other Rate Base	2,903,750	1,802,139	1,083,444	14,922	(94)	3,338	Sum of L 12 through L 22
24		Total Rate Base	54,107,748	37,363,701	13,711,252	43,513	17,968	2,971,313	L 9 + L 23

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Class Cost of Service Study
Return and Income Taxes Under Existing Rates
Table 5

[A] Line No.	[B] Acct No.	[C] Description	[D] Total MPS	[E] Residential	[F] General Service	[G] Large Volume	[H] Small Volume Transportation	[I] Large Volume Transportation	[J] Basis of Allocation or Reference
			$	$	$	$	$	$	
1		Return and Income Taxes Under Existing Rates							
2		Operating Revenues							
3		Sales and Transport. Revenues	45,073,571	29,645,300	14,189,345	104,758	10,906	1,123,261	Direct to Class, Includes Trans. Revenues
4		Other Operating Revenues	800,358	629,561	138,702	320	199	31,577	L 7 T 8
5		Total Operating Revenues	45,873,929	30,274,861	14,328,048	105,079	11,104	1,154,838	L 3 + L 4
6		Gas Supply Expenses	28,879,912	18,818,329	9,973,467	98,673	416	(8,974)	L 12 , T 6
7		Net Revenues	16,994,017	11,456,532	4,354,580	6,405	10,688	1,163,812	L 5 - L 6
8		Operating Revenue Deductions							
9		Operation and Maintenance Exp.	11,383,989	8,170,082	2,561,968	6,461	3,867	641,613	L 101 T 6
10		Depreciation Expense	3,320,370	2,326,440	811,137	1,763	1,133	179,897	L 8 T 7
11		Taxes Other Than Income Taxes	1,029,490	717,191	251,286	578	362	60,073	L 14 T 7
12		Total Operating Revenue Deductions	15,733,849	11,213,713	3,624,391	8,802	5,361	881,582	L 9 + L 10 + L 11
13		Net Operating Income (before tax)	1,260,168	242,819	730,190	(397)	5,327	282,229	L 7 - L 12
14		Interest Expense	1,955,454	1,350,324	495,525	1,573	849	107,383	Total 3.814% of Rate Base , L 24 T 4 to Class
15		Net Taxable Income	(695,286)	(1,107,505)	234,665	(1,969)	4,477	174,846	L 13 - L 14
16		Effective State Tax Rate		6.25%	6.25%	6.25%	6.25%	6.25%	
17		State Tax	(43,455)	(69,219)	14,667	(123)	292	10,928	L 15 X L 16
18		Net Tax Adjustment	22,673	15,747	5,592	13	8	1,314	L 9 T 4
19		Total State Tax	(20,782)	(53,472)	20,258	(110)	300	12,242	L 17 + L 18
20		Effective Federal Income Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	
21		Federal Income Tax	(243,350)	(387,627)	82,133	(689)	1,637	61,196	L 15 X L 20
22		Net Tax Adjustment	111,098	77,158	27,399	62	39	6,440	L 9 T 4
23		Total Federal Income Tax	(132,252)	(310,468)	109,531	(627)	1,676	67,636	L 21 + L 22
24		Deferred Income Taxes	131,988	91,653	32,546	74	47	7,649	L 9 T 4
25		Investment Tax Credits	(42,492)	(29,511)	(10,479)	(24)	(15)	(2,463)	L 9 T 4
26		Total Income Tax	(63,556)	(301,799)	151,856	(688)	2,008	85,064	L 19 + L 23 + L 24 + L 25

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Class Cost of Service Study
Allocation of O&M Expenses by Class
Table 6
Page 1 of 2

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS $	[E] Residential $	[F] General Service $	[G] Large Volume $	[H] Small Volume Transportation $	[I] Large Volume Transportation $	[J] Basis of Allocation or Reference
1		Q & M Expenses							
2		Other Gas Supply Expenses							
3	803	Natural Gas Transmission Line Purchases							
4	804	NG City Gate Purchases							
5	805	Other Gas Purchases							
6	805.1	Purchased Gas Cost Adjustment							
7	807	Other Purchased Gas Expenses							
8	810	Gas Used for Compressor Station Fuel							
9		Subtotal Other Gas Supply Exp.	28,907,544	18,830,451	9,979,880	96,754	449	0	Direct to Class
10	812	Gas Used for Other Util. Oper.	(27,917)	(12,247)	(6,489)	(82)	(33)	(9,066)	Throughput Allocator
11	813	Other Gas Supply Expenses	285	125	86	1	0	93	Throughput Allocator
12		Total Other Gas Supply Expenses	28,879,912	18,818,329	9,973,467	96,673	416	(8,974)	L 9 + L 10 + L 11
13		Total Production Expenses	28,879,912	18,818,329	9,973,467	96,673	416	(8,974)	L 12
14		Transmission Expenses							
15		Operation							
16	850	Supervision & Engineering	0	0	0	0	0	0	L 17 through 23
17	851	Sys. Control & Load Dispatch.	26,932	11,815	6,260	79	32	8,746	Throughput Allocator
18	852	Communication System Expenses	0						
19	853	Compressor Sta. Labor & Exp.	0						
20	854	Gas for Compressor Sta. Fuel	0						
21	856	Mains Expenses	34,732	17,113	9,067	70	31	8,451	L 9 T 3
22	857	Meas. & Reg. Sta. Expenses	0						
23	859	Other Expenses	24,650	12,145	6,435	50	22	5,998	L 12 T 3
24	860	Rents	0	0	0	0	0	0	L 12 T 3
25		Total Operation	86,314	41,073	21,762	198	84	23,195	Sum of L 16 through 24
26		Maintenance							
27	861	Supervision & Engineering	0						
28	862	Structures & Improvements	0	0	0	0	0	0	L 8 T 3
29	863	Mains	95,913	47,258	25,039	194	85	23,338	L 9 T 3
30	865	Meas. & Reg. Sta. Equip.	77	38	20	0	0	19	L 10 T 3
31	867	Other Equipment	0	0	0	0	0	0	L 11 T 3
32		Total Maintenance	95,990	47,296	25,059	194	85	23,357	Sum of L 27 through 31
33		Total Transmission Expenses	182,304	88,369	46,821	393	169	46,552	L 25 + L 32
34		Distribution Expenses							
35		Operation							
36	870	Supervision & Engineering	282,745	192,753	77,166	138	95	12,593	L 37 through 46
37	871	Load Dispatching	20,972	9,200	4,875	61	25	6,811	Throughput Allocator
38	872	Compressor Station Labor and Expenses	0	0	0	0	0	0	L 17 T 3
39	873	Compressor Station Fuel and Power	0	0	0	0	0	0	L 17 T 3
40	874	Mains & Services	402,599	290,488	92,308	166	126	19,491	L 16 T 3 and L 20 T 3
41	875	Meas. & Reg. Sta. Equip. - Gen.	61,609	30,356	16,083	125	54	14,991	L 18 T 3
42	876	Meas. & Reg. Sta. Equip. - Ind.	1,208	719	477	0	0	12	L 25 T 3
43	877	Meas. & Reg. Sta. Equip. - CG	11,012	5,426	2,875	22	10	2,679	L 19 T 3
44	878	Meter & House Regulators	429,188	255,305	169,384	137	137	4,243	L 21 T 3 to L 24 T 3
45	879	Customer Installation Expenses	214,475	188,322	44,664	45	45	1,399	L 20 T 3
46	880	Other Expenses	777,650	548,210	193,000	359	249	35,832	L 28 T 3
47	881	Rents	48,876	34,315	12,081	22	16	2,243	L 28 T 3
48		Total Operation	2,250,132	1,535,094	612,892	1,095	757	100,294	Sum of L 36 through 47

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Class Cost of Service Study
Allocation of O&M Expenses by Class
Table 6
Page 2 of 2

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS $	[E] Residential $	[F] General Service $	[G] Large Volume $	[H] Small Volume Transportation $	[I] Large Volume Transportation $	[J] Basis of Allocation or Reference
49		Maintenance							
50	885	Supervision & Engineering	33,502	22,630	8,630	20	13	2,209	L 51 through 59
51	886	Structures & Improvements	6	4	1	0	0	0	L 15 T 3
52	887	Mains	467,910	318,793	113,537	291	177	35,112	L 16 T 3
53	888	Compressor Station Equipment	0	0	0	0	0	0	L 17 T 3
54	889	Meas. & Reg. Sta. Equip. - Gen.	43,244	21,307	11,289	87	38	10,522	L 18 T 3
55	890	Meas. & Reg. Sta. Equip. - Ind.	43,959	26,149	17,347	14	14	435	L 25 T 3
56	891	Meas. & Reg. Sta. Equip. - CG	29,660	14,614	7,743	60	26	7,217	L 19 T 3
57	892	Services	141,745	111,243	29,518	30	30	924	L 20 T 3
58	893	Meters & House Regulators	65,477	38,950	25,838	21	21	647	L 21 T 3 to L 24 T 3
59	894	Other Equipment	133,119	93,843	33,036	61	43	6,134	L 28 T 3
60		Total Maintenance	958,622	647,532	246,943	585	362	63,201	Sum of L 50 through 59
61		Total Distribution	3,208,754	2,182,626	859,835	1,880	1,118	163,494	L 48 + L 60
62		Customer Accounts Expenses							
63	901	Supervision	34,962	30,747	4,079	4	4	128	L 64 + L 65 + L 67
64	902	Meter Reading Expenses	239,795	210,883	27,979	28	28	876	Customer Accounts Allocator
65	903	Customer Records & Collection	678,708	596,877	79,191	80	80	2,480	Customer Accounts Allocator
66	904	Uncollectible Accounts	714,425	628,288	83,359	84	84	2,610	Customer Accounts Allocator
67	905	Miscellaneous	2	2	0	0	0	0	Customer Accounts Allocator
68		Total Customer Accounts Expenses	1,667,892	1,466,797	194,608	197	197	6,094	Sum of L 63 through 67
69		Customer Service & Information Expenses							
70	907	Supervision	53,438	35,219	9,328	61	35	8,775	L 71 + L 72 + L 73
71	908	Customer Assistance	0	0	0	0	0	0	50% Customer Accts. and 50% Throughput
72	909	Information and Instruction	43,492	28,664	7,592	66	28	7,142	50% Customer Accts. and 50% Throughput
73	910	Miscellaneous	9,696	6,390	1,693	15	6	1,592	50% Customer Accts. and 50% Throughput
74		Total Cust. Service & Inf. Exp.	106,626	70,274	18,613	162	69	17,509	Sum of L 70 through 73
75		Sales Expenses							
76	911	Supervison	9,099	5,997	1,588	14	6	1,494	L 77 + L 78 + L 79
77	912	Demonstrating & Selling	(200)	(132)	(35)	(0)	(0)	(33)	50% Customer Accts. and 50% Throughput
78	913	Advertising	5,812	3,830	1,015	9	4	954	50% Customer Accts. and 50% Throughput
79	916	Miscellaneous	20,850	13,742	3,640	32	14	3,424	50% Customer Accts. and 50% Throughput
80		Total Sales Expenses	35,561	23,437	6,208	54	23	5,839	Sum of L 76 through 79
81		Administrative & General Expenses							
82		Operation							
83	920	A & G Salaries	1,421,805	1,015,215	330,186	782	473	75,170	Supervised O & M
84		Regulatory Allowance	34,688	15,217	8,063	101	41	11,265	$0.005 per Mcf, Throughput Allocator
85	921	Office Supplies & Expenses	984,618	703,049	228,658	528	327	52,056	Supervised O & M
86	922	Transfers	(211,161)	(150,776)	(49,038)	(113)	(70)	(11,164)	Supervised O & M
87	923	Outside Services Employed	432,265	308,651	100,385	232	144	22,853	Supervised O & M
88	924	Property Insurance	(1,362)	(946)	(336)	(1)	(0)	(79)	L 9 T 4
89	925	Injuries & Damages	1,713,830	1,223,730	398,003	919	570	90,609	Supervised O & M
90	926	Employee Pensions & Benefits	1,448,089	1,033,982	336,290	776	482	76,559	Supervised O & M
91	927	Franchise Requirements	0	0	0	0	0	0	Supervised O & M
92	928	Regulatory Commission Expense	242,077	108,199	58,268	708	285	78,616	Throughput Allocator
93	929	Duplicate Charges	0	0	0	0	0	0	Supervised O & M
94	930.1	General Advertising	0	0	0	0	0	0	Supervised O & M
95	930.2	Miscellaneous	48,236	34,442	11,202	26	16	2,550	Supervised O & M
96	931	Rents	27,660	19,893	6,470	15	9	1,473	Supervised O & M
97		Total Operation	6,140,945	4,308,656	1,426,151	3,953	2,277	399,909	Sum of L 83 through 96
98	935	Maintenance of General Plant	41,907	29,923	9,732	22	14	2,216	L 40 T 3
99		Total A & G Expenses	6,182,852	4,338,579	1,435,883	3,975	2,291	402,124	L 97 + L 98
100		Total Operation & Maintenance	40,263,901	26,988,410	12,535,435	103,134	4,283	632,639	L 13 + L 33 + L 61 + L 68 + L 74 + L 80 + L 99
101		Excluding Other Gas Supply Exp.	11,383,989	8,170,082	2,561,968	6,461	3,867	641,613	L 100 - L 12
102		Supervised O & M before General	4,438,036	3,168,900	1,030,646	2,379	1,476	234,635	(1)
103		Footnotes							
104		(1) L 33+ L 61 + L 68 + L 74 + L 80 - L 20 - L 24 - L 47 - L 66							

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Class Cost of Service Study
Allocation of Depreciation Expense and Other Taxes by Class
Table 7

[A] Line No.	[B] Acct No.	[C] Description	[D] Total MPS	[E] Residential	[F] General Service	[G] Large Volume	[H] Small Volume Transportation	[I] Large Volume Transportation	[J] Basis of Allocation or Reference
			$	$	$	$	$	$	
1		Depreciation Expense							
2		Transmission	100,918	49,724	26,345	204	89	24,556	L 12 T 3
3		Distribution Plant	2,280,244	1,607,476	565,919	1,052	729	105,068	L 28 T 3
4		General Plant	889,657	635,244	206,605	477	296	47,035	L 40 T 3
5		Common Plant	0	0	0	0	0	0	L 41 T 3
6		Amortization of Ltd Term Gas Plant	28,971	19,877	7,172	18	11	1,893	L 44 T 3
7		Amortization of Other Plant	20,580	14,120	5,095	13	8	1,345	L 44 T 3
8		Total Depreciation Expense	3,320,370	2,326,440	811,137	1,763	1,133	179,897	Sum of L 2 through 7
9		Taxes Other Than Income Taxes							
10		Ad Valorem (Property Taxes)	796,186	546,266	197,109	491	298	52,022	L 42 - L 5 T 3
11		Payroll Taxes	249,059	177,836	57,839	134	83	13,168	Supervised O & M
12		Miscellaneous Tax	(19,142)	(8,398)	(4,449)	(56)	(23)	(6,217)	Throughput Allocator
13		Sales/Use Tax	3,387	1,486	787	10	4	1,100	Throughput Allocator
14		Total Taxes Other	1,029,490	717,191	251,286	578	362	60,073	Sum of L 10 through 13

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Class Cost of Service Study
Allocation of Other Operating Revenues by Class
Table 8

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS $	[E] Residential $	[F] General Service $	[G] Large Volume $	[H] Small Volume Transportation $	[I] Large Volume Transportation $	[J] Basis of Allocation or Reference
1		Other Operating Revenues							
2	487	Forfeited Discounts	203,097	203,097					Direct to Class
3	488	Miscellaneous Service Revenue	104,359	74,516	24,235	56	35	5,517	Supervised O&M
4	493	Rent from Gas Property	0	0	0	0	0	0	L 42 T 3
5	495	Other Gas Revenue	53,164	37,961	12,346	28	18	2,811	Supervised O&M
6		Special Contract Revenues	439,738	313,987	102,120	236	146	23,249	Supervised O&M
7		Total Other Operating Revenue	800,358	629,561	138,702	320	199	31,577	Sum of L 2 through 6

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Class Cost of Service Study
Allocation Factors
Table 9

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total MPS	[E] Residential	[F] General Service	[G] Large Volume	[H] Small Volume Transportation	[I] Large Volume Transportation	[J] Basis of Allocation or Reference
1		Allocation Factors							
2		1. Throughput							
3		Annual Sales - Mcf	4,676,335	3,043,497	1,612,554	20,283	0	0	
4		Transportation - Mcf	2,261,189	0	0	0	8,176	2,253,013	
5		Throughput - Mcf	6,937,524	3,043,497	1,612,554	20,283	8,176	2,253,013	
6		Allocator	1.0000	0.4387	0.2324	0.0029	0.0012	0.3248	
7		2. Sales							
8		Annual Sales - Mcf	4,676,335	3,043,497	1,612,554	20,283	0	0	
9		Allocator	1.0000	0.6508	0.3448	0.0043	0.0000	0.0000	
10		3. Peak Day							
11		Load Factor		20.00%	20.00%	65.00%	50.00%	50.00%	
12		Peak Day - Mcf/day	76,257	41,692	22,090	85	45	12,345	
13		Allocator	1.0000	0.5467	0.2897	0.0011	0.0006	0.1619	
14		4. Services							
15		Number of Customers	42,292	37,309	4,950	1	1	31	
16		Weighting Factor		1	2	10	10	10	
17		Weighted Number of Customers	47,539	37,309	9,900	10	10	310	
18		Allocator	1.0000	0.7848	0.2083	0.0002	0.0002	0.0065	
19		5. Meters & Regulators							
20		Number of Customers	42,292	37,309	4,950	1	1	31	
21		Weighting Factor		1	5	20	20	20	
22		Weighted Number of Customers	62,719	37,309	24,750	20	20	620	
23		Allocator	1.0000	0.5949	0.3948	0.0003	0.0003	0.0099	
24		6. Customer Accounts							
25		Number of Bills	507,504	447,708	59,400	12	12	372	
26		Weighting Factor		1	1	5	5	5	
27		Weighted Number of Customers	509,088	447,708	59,400	60	60	1,860	
28		Allocator	1.0000	0.8794	0.1167	0.0001	0.0001	0.0037	
29		Use per Customer		82	326	20,283	8,176	72,678	

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Functionally Classified Cost of Service Study
Summary of Cost of Service
Table 1

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Total Cost of Service													
2		Return Under Existing Rates	1,330,094	(312,745)	51,638	(289,854)	(1,370,685)	(1,485,716)	(1,783,290)	(1,189,949)	(358,099)	(1,449,774)	(88,293)	9,816,860	L 21 T 2
3		Rate Base	54,055,149	184,546	3,460,490	2,087,103	12,139,110	13,946,579	15,209,994	5,647,051	376,267	911,235	92,773	0	L 24 T 4
4		Proposed Rate of Return		9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	9.74%	
5		Return Under Proposed Rates	5,264,161	17,972	337,000	203,253	1,182,167	1,358,188	1,481,225	549,938	36,643	88,741	9,035	0	L 3 x L4
6		Required Increase in Return	3,934,067	330,717	285,361	503,107	2,552,852	2,843,904	3,264,516	1,739,887	394,742	1,538,514	97,328	(9,816,860)	L 5 - L2
7		Incremental Income Taxes													
8		State													
9		Efective Tax Rate		6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	
10		Incremental Taxes	333,505	28,036	24,191	42,650	216,414	241,088	276,744	147,496	33,464	130,425	8,251	(815,255)	
11		Federal													
12		Effective Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	
13		Incremental Taxes	2,117,731	178,027	153,612	270,825	1,374,216	1,530,890	1,757,308	936,591	212,492	828,191	52,392	(5,176,813)	
14		Required Revenue Increase	6,385,303	536,779	463,164	816,582	4,143,482	4,615,882	5,298,568	2,823,974	640,697	2,497,131	157,971	(15,808,928)	L 6 + L10 + L13
15		Sales Revenue Under Existing Rates	45,073,571	0	0	0	0	0	0	0	0	0	0	45,073,571	L 10 T 2
16		Total Cost of Service	51,458,874	536,779	463,164	816,582	4,143,482	4,615,882	5,298,568	2,823,974	640,697	2,497,131	157,971	29,464,643	L 14 + L15

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Return Under Existing Rates
Table 2

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Return Under Existing Rates													
2		Rate Base													
3		Gas Plant in Service	79,112,404	248,977	0	4,663,541	19,607,614	20,734,038	23,250,201	8,518,822	507,634	1,456,614	125,163	0	L 44 T3
4		Accumulated Depreciation	27,961,692	47,817	0	2,568,719	7,560,369	6,925,625	7,741,673	2,716,204	97,494	279,751	24,038	0	L 8 T4
5		Net Plant in Service	51,150,712	201,159	0	2,094,822	12,047,245	13,808,412	15,508,528	5,802,618	410,140	1,176,863	101,125	0	L 3 - L4
6		Other Rate Base Items	2,904,438	(16,613)	3,460,490	(7,719)	91,865	138,167	(298,534)	(155,367)	(33,872)	(265,627)	(8,352)	0	L 23 T4
7		Total Rate Base	54,055,149	184,546	3,460,490	2,087,103	12,139,110	13,946,579	15,209,994	5,647,051	376,267	911,235	92,773	0	L 5 + L6
8		Return Under Existing Rates													
9		Operating Revenues													
10		Sales and Transport. Revenues	45,073,571											45,073,571	
11		Other Operating Revenues	799,967	16,430	0	23,337	96,353	101,306	124,272	97,289	33,499	96,124	8,260	203,097	L 7 T8
12		Total Operating Revenues	45,873,538	16,430	0	23,337	96,353	101,306	124,272	97,289	33,499	96,124	8,260	45,276,668	L 10 + L11
13		Net Gas Supply Expenses	28,879,912	(27,632)	0	0	0	0	0	0	0	0	0	28,907,544	L 9 + L10 + L11 T6
14		Net Revenues	16,993,626	44,062	0	23,337	96,353	101,306	124,272	97,289	33,499	96,124	8,260	16,369,124	L 12 + L13
15		Operating Revenue Deductions													
16		Operation and Maintenance	11,377,161	561,358	0	404,637	1,679,864	1,769,304	2,158,760	1,690,509	580,251	2,379,409	143,068	0	L 101 T6
17		Depreciation Expense	3,317,094	24,630	0	109,927	731,125	861,876	976,487	406,356	50,217	144,095	12,382	0	L 8 T6
18		Taxes Other Than Income Taxes	1,028,523	(6,401)	0	56,618	237,312	250,703	285,577	126,213	19,072	54,726	4,702	0	L 14 T6
19		Income Taxes	(59,246)	(222,780)	(51,638)	(247,992)	(1,181,263)	(1,294,861)	(1,523,261)	(935,841)	(257,943)	(1,032,332)	(63,599)	6,752,264	L 26 T6
20		Total Oper. Rev. Deductions	15,663,532	356,807	(51,638)	323,191	1,467,038	1,587,022	1,897,563	1,287,238	391,598	1,545,898	96,553	6,752,264	Sum of L 16 through L 19
21		Return Under Existing Rates	1,330,094	(312,745)	51,638	(299,854)	(1,370,685)	(1,485,716)	(1,783,290)	(1,189,949)	(358,099)	(1,449,774)	(88,293)	9,616,860	L 14 - L20
22		Rate of Return	2.461%	-169.467%	1.492%	-14.367%	-11.291%	-10.653%	-11.724%	-21.072%	-95.171%	-159.100%	-95.171%	#DIV/0!	L 21 / L7

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Gas Plant in Service
Table 3

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Gas Plant in Service													
2		Intangible Plant													
3	301	Land & Land Rights	1,938	53	0	76	313	329	403	316	109	312	27	0	Supervised O & M
4	302	Other Equipment	0	0	0	0	0	0	0	0	0	0	0	0	Supervised O & M
5		Total Intangible Plant	1,938	53	0	76	313	329	403	316	109	312	27	0	Supervised O & M
6		Transmission Plant													
7	365	Land & Land Rights	234,575			117,288	117,288								50% Throughput, 50% Peak
8	366	Structures & Improvements	10,880			5,440	5,440								50% Throughput, 50% Peak
9	367	Mains	6,803,690			3,401,845	3,401,845								50% Throughput, 50% Peak
10	369	Measuring & Reg. Station Eq.	372,214			186,107	186,107								50% Throughput, 50% Peak
11	371	Other Equipment	0			0	0								50% Throughput, 50% Peak
12		Total Transmission Plant	7,421,359	0	0	3,710,680	3,710,680	0	0	0	0	0	0	0	Sum of L 7 through L 11
13		Distribution Plant													
14	374	Land & Land Rights	1,770			15	744	1,011							1.06% Throughput, 57.01% Services, 41.93% P
15	375	Structures & Improvements	58,903			496	24,753	33,655							1.06% Throughput, 57.01% Services, 41.93% P
16	376	Mains	33,541,616			282,371	14,095,009	19,164,236							1.06% Throughput, 57.01% Services, 41.93% P
17	377	Compressor Station Equipment	0			0	0								50% Throughput, 50% Peak
18	378	Meas. & Reg. Sta. Equip. - Gen.	214,586			107,293	107,293								50% Throughput, 50% Peak
19	379	Meas. & Reg. Sta. Equip. - CG	418,109			209,055	209,055								50% Throughput, 50% Peak
20	380	Services	21,367,040						21,367,040						Services
21	381	Meters	2,738,260							2,738,260					Meters & Regulators
22	382	Meter Installations	1,718,652							1,718,652					Meters & Regulators
23	383	House Regulators	2,272,058							2,272,058					Meters & Regulators
24	384	House Regulator Installations	0							0					Meters & Regulators
25	385	Indust. Meas. & Reg. Sta. Equip.	315,383							315,383					Meters & Regulators
26	386	Other Property on Cust. Premises	0			0	0	0							1.06% Throughput, 57.01% Services, 41.93% P
27	387	Other Equipment	0			0	0	0							1.06% Throughput, 57.01% Services, 41.93% P
28		Total Distribution Plant	62,646,377	0	0	599,229	14,436,852	19,198,903	21,367,040	7,044,353	0	0	0	0	Sum of L 14 through L 27
29		General Plant													
30	389	Land & Land Rights	32,947	907	0	1,288	5,319	5,592	6,860	5,370	1,849	5,306	456	0	Supervised O & M
31	390	Structure & Improvements	2,433,936	67,000	0	95,163	392,911	413,108	506,762	396,728	136,605	391,977	33,682	0	Supervised O & M
32	391	Office Furniture & Equipment	4,722,478	129,998	0	184,642	762,351	801,538	983,252	769,758	265,050	760,539	65,351	0	Supervised O & M
33	392	Transportation Equipment	204,685	5,634	0	8,003	33,042	34,741	42,617	33,363	11,488	32,964	2,832	0	Supervised O & M
34	393	Stores Equipment	1,758	48	0	69	284	298	366	287	99	283	24	0	Supervised O & M
35	394	Tools, Shop & Garage Equipment	561,671	15,461	0	21,960	90,671	95,331	116,944	91,552	31,524	90,455	7,773	0	Supervised O & M
36	395	Laboratory Equipment	104,870	2,887	0	4,100	16,929	17,799	21,835	17,094	5,886	16,889	1,451	0	Supervised O & M
37	396	Power Operated Equipment	131,681	3,625	0	5,149	21,257	22,350	27,417	21,464	7,391	21,207	1,822	0	Supervised O & M
38	397	Communication Equipment	801,618	22,067	0	31,342	129,405	136,057	166,902	130,663	44,991	129,098	11,093	0	Supervised O & M
39	398	Miscellaneous Equipment	47,086	1,296	0	1,841	7,601	7,992	9,804	7,675	2,643	7,583	652	0	Supervised O & M
40		Total General Plant	9,042,730	248,924	0	353,557	1,459,770	1,534,806	1,882,758	1,473,953	507,525	1,456,302	125,136	0	Sum of L 30 through L 39
41		Total Common Plant	0								0			0	Supervised O & M
42		Total Plant in Service	79,112,404	248,977	0	4,663,541	19,607,614	20,734,038	23,250,201	8,518,622	507,634	1,456,614	125,163	0	L 5 + L 12 + L 28 + L 40 + L 41
43		Construction Work in Progress	-	0	0	0	0	0	0	0	0	0	0	0	L 42 T 3
44		Total Plant in Service	79,112,404	248,977	0	4,663,541	19,607,614	20,734,038	23,250,201	8,518,622	507,634	1,456,614	125,163	0	L 42 + L 43

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Accumulated Depreciation and Other Rate Base Items
Table 4

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Accumulated Depreciation													
2		Accumulated Depreciation													
3		Intangible	126	3	0	5	20	21	26	21	7	20	2	0	L 3 T 3
4		Transmission	4,587,676	0	0	2,293,838	2,293,838	0	0	0	0	0	0	0	L 12 - L 7 T 3
5		Distribution	21,636,934	0	0	206,964	4,986,114	6,630,794	7,380,001	2,433,062	0	0	0	0	L 28 - L 14 T 3
6		General & Common	1,736,956	47,814	0	67,912	280,397	294,810	361,646	283,122	97,487	279,731	24,037	0	L 40 T 3
7		Retirement Work in Progress	0	0	0	0	0	0	0	0	0	0	0	0	L 42 T 3
8		Total Accum. Depreciation	27,961,692	47,817	0	2,568,719	7,560,369	6,925,625	7,741,673	2,716,204	97,494	279,751	24,038	0	Sum of L 3 through L 7
9		Net Plant	51,150,712	201,159	0	2,094,822	12,047,245	13,808,412	15,508,528	5,802,418	410,140	1,176,883	101,125	0	L 44 - L 8 , T3
10		Other Rate Base Items													
11		Cash Working Capital													Sales Allocator
12		Gas Storage	3,460,490		3,460,490										Direct
13		Other	(468,796)	(12,905)	0	(18,329)	(75,678)	(79,568)	(97,607)	(76,413)	(26,311)	(75,498)	(6,487)	0	L 102 T 6
14		Materials & Supplies	1,657,900	5,218	0	97,730	410,902	434,508	487,237	176,518	10,638	30,525	2,623	0	L 42 T 3
15		Prepayments	2,954,159	11,618	0	120,984	695,777	797,491	895,880	335,113	23,687	67,969	5,840	0	L 9 T 4
16		Customer Adv. for Construction	(43,496)	0	0	(366)	(18,276)	(24,852)	0	0	0	0	0	0	L 16 T 3
17		Customer Deposits	(168,433)									(168,433)			Customer Accounts Allocator
18		Accum. Deferred Income Taxes - Deprecration	(5,148,103)	(20,245)	0	(210,835)	(1,212,504)	(1,389,758)	(1,560,868)	(583,989)	(41,279)	(118,446)	(10,178)	0	L 9 T 4
19		Accum. Deferred Income Taxes - AAO	(458,923)	0	0	(3,863)	(192,851)	(262,209)	0	0	0	0	0	0	L 16 T 3
20		Accum. Deferred Income Taxes - Synergies to MPS	(72,039)	(283)	0	(2,950)	(16,967)	(19,447)	(21,842)	(8,172)	(578)	(1,657)	(142)	0	L 9 T 4
21		Unamortized Investment Tax Credit	(3,744)	(15)	0	(153)	(882)	(1,011)	(1,135)	(425)	(30)	(86)	(7)	0	L 9 T 4
22		AAO Gas Pipe Replacement	1,195,422	0	0	10,064	502,346	683,013	0	0	0	0	0	0	L 16 T 3
23		Total Working Capital	2,904,436	(16,613)	3,460,490	(7,719)	91,865	138,167	(298,534)	(155,367)	(33,872)	(265,627)	(8,352)	0	Sum of L 12 through L 22
24		Total Rate Base	54,055,149	184,546	3,460,490	2,087,103	12,139,110	13,946,579	15,209,994	5,647,051	376,267	911,235	92,773	0	L 9 + L 23

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Return and Income Taxes Under Existing Rates
Table 5

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Return and Income Taxes Under Existing Rates													
2		Operating Revenues													
3		Sales and Transport. Revenues	45,073,571											45,073,571	Direct to Class
4		Other Operating Revenues	799,967	16,430	0	23,337	96,353	101,306	124,272	97,289	33,499	96,124	8,260	203,097	L 7 T 8
5		Total Operating Revenues	45,873,538	16,430	0	23,337	96,353	101,306	124,272	97,289	33,499	96,124	8,260	45,276,668	L 3 + L 4
6		Gas Supply Expenses	28,879,912	(27,632)	0	0	0	0	0	0	0	0	0	28,907,544	L 12, T 6
7		Net Revenues	16,993,626	44,062	0	23,337	96,353	101,306	124,272	97,289	33,499	96,124	8,260	16,369,124	L 5 - L 6
8		Operating Revenue Deductions													
9		Operation and Maintenance Exp.	11,377,161	561,358	0	404,637	1,679,864	1,769,304	2,158,760	1,690,509	580,251	2,379,409	143,068	0	L 101 T 6
10		Depreciation Expense	3,317,094	24,630	0	109,927	731,125	861,876	976,487	406,356	50,217	144,095	12,382	0	L 8 T 7
11		Taxes Other Than Income Taxes	1,028,523	(6,401)	0	56,618	237,312	250,703	285,577	126,213	19,072	54,726	4,702	0	L 14 T 7
12		Total Operating Rev. Deductions	15,722,778	579,587	0	571,182	2,648,301	2,881,883	3,420,824	2,223,078	649,541	2,578,230	160,152	0	L 9 + L 10 + L 11
13		Net Operating Income (before tax)	1,270,848	(535,525)	0	(547,845)	(2,551,949)	(2,780,577)	(3,306,551)	(2,125,789)	(616,041)	(2,482,106)	(151,892)	16,369,124	L 7 - L 12
14		Interest Expense	1,955,454	6,676	125,184	75,501	439,134	504,520	550,224	204,283	13,612	32,964	3,356	0	Total 3.614% of Rate Base , L 24 T 4 to Class
15		Net Taxable Income	(684,606)	(542,201)	(125,184)	(623,347)	(2,991,083)	(3,285,097)	(3,856,775)	(2,330,072)	(629,653)	(2,515,070)	(155,248)	16,369,124	L 13 - L 14
16		Effective State Tax Rate		6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	
17		Federal Income Tax	(42,788)	(33,888)	(7,824)	(38,959)	(186,943)	(205,319)	(241,048)	(145,630)	(39,353)	(157,192)	(9,703)	1,023,070	L 15 X L 16
18		Net Tax Adjustment	22,673	89	0	929	5,340	6,121	6,874	2,572	182	522	45	0	L 9 T 4
19		Total Single Business Tax	(20,114)	(33,798)	(7,824)	(38,031)	(181,603)	(199,198)	(234,174)	(143,058)	(39,172)	(156,670)	(9,658)	1,023,070	L 17 + L 18
20		Effective Federal Income Tax Rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	
21		Federal Income Tax	(239,612)	(189,770)	(43,814)	(218,171)	(1,046,879)	(1,149,784)	(1,349,871)	(815,525)	(220,379)	(880,275)	(54,337)	5,729,193	L 15 X L 20
22		Net Tax Adjustment	111,098	437	0	4,550	26,166	29,992	33,684	12,603	891	2,556	220	0	L 9 T4
23		Total Federal Income Tax	(128,514)	(189,333)	(43,814)	(213,621)	(1,020,713)	(1,119,792)	(1,316,187)	(802,923)	(219,488)	(877,718)	(54,117)	5,729,193	L 21 + L 22
24		Deferred Income Taxes	131,831	518	0	5,399	31,049	35,588	39,970	14,955	1,057	3,033	261	0	L 9 T 4
25		Investment Tax Credits	(42,448)	(167)	0	(1,738)	(9,997)	(11,459)	(12,870)	(4,815)	(340)	(977)	(84)	0	L 9 T 4
26		Total Income Tax	(59,246)	(222,780)	(51,638)	(247,992)	(1,181,263)	(1,294,851)	(1,523,261)	(935,841)	(257,943)	(1,032,332)	(63,599)	6,752,264	L 19 + L 23 + L 24 + L 25

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Operation and Maintenance Expenses
Table 6
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[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Q & M Expenses													
2		Other Gas Supply Expenses													
3	803	Natural Gas Transmission Line Purchases													
4	804	NG City Gate Purchases													
5	805	Other Gas Purchases													
6	805.1	Purchased Gas Cost Adjustment													
7	807	Other Purchased Gas Expenses													
8	810.0	Gas Used for Compressor Station Fuel													
9		Subtotal Other Gas Supply Exp.	28,907,544											28,907,544	Direct
10	812	Gas Used for Other Util. Oper.	(27,917)	(27,917)											Throughput Allocator
11	813	Other Gas Supply Expenses	285	285											Throughput Allocator
12		Total Other Gas Supply Expenses	28,879,912	(27,632)	0	0	0	0	0	0	0	0	0	28,907,544	L 9 + L 10 + L 11
13		Total Production Expenses	28,879,912	(27,632)	0	0	0	0	0	0	0	0	0	28,907,544	L 12
14		Transmission Expenses													
15		Operation													
16	850	Supervision & Engineering	0	0	0	0	0	0	0	0	0	0	0	0	L 17 through 23
17	851	Sys. Control & Load Dispatch.	26,932	26,932											Throughput Allocator
18	852	Communication System Exp.	0												
19	853	Compressor Sta. Labor & Exp.	0												
20	854	Gas for Compressor Sta. Fuel	0												
21	856	Mains Expenses	34,732	0	0	17,366	17,366	0	0	0	0	0	0	0	L 9 T 3
22	857	Meas. & Reg. Sta. Expenses	0												
23	859	Other Expenses	24,650	0	0	12,325	12,325	0	0	0	0	0	0	0	L 12 T 3
24	860	Rents	0	0	0	0	0	0	0	0	0	0	0	0	L 12 T 3
25		Total Operation	85,314	26,932	0	29,691	29,691	0	0	0	0	0	0	0	Sum of L 16 through L 24
26		Maintenance													
27	861	Supervision & Engineering	0												
28	862	Structures & Improvements	0	0	0	0	0	0	0	0	0	0	0	0	L 8 T 3
29	863	Mains	95,913	0	0	47,957	47,957	0	0	0	0	0	0	0	L 9 T 3
30	865	Meas. & Reg. Sta. Equip.	77	0	0	39	39	0	0	0	0	0	0	0	L 10 T 3
31	867	Other Equipment	0	0	0	0	0	0	0	0	0	0	0	0	L 11 T 3
32		Total Maintenance	95,990	0	0	47,995	47,995	0	0	0	0	0	0	0	Sum of L 27 through L 31
33		Total Transmission Expenses	182,304	26,932	0	77,686	77,686	0	0	0	0	0	0	0	L 25 + L 32
34		Distribution Expenses													
35		Operation													
36	870	Supervision & Engineering	282,530	3,090	0	6,750	46,937	55,757	93,701	76,294	0	0	0	0	L 37 through 46
37	871	Load Dispatching	20,972	20,972											Throughput Allocator
38	872	Compressor Stn. Labor and Exp.	0	0	0	0	0	0	0	0	0	0	0	0	L 17 T 3
39	873	Compressor Stn Fuel and Power	0	0	0	0	0	0	0	0	0	0	0	0	L 17 T 3
40	874	Mains & Services	402,057	0	0	2,068	103,208	140,326	156,456	0	0	0	0	0	L 16 T 3 + L 20 T 3
41	875	Meas. & Reg. Sta. Equip. - Gen.	61,609	0	0	30,805	30,805	0	0	0	0	0	0	0	L 18 T 3
42	876	Meas. & Reg. Sta. Equip - Ind.	1,208	0	0	0	0	0	0	1,208	0	0	0	0	L 25 T 3
43	877	Meas. & Reg. Sta. Equip. - CG	11,012	0	0	5,506	5,506	0	0	0	0	0	0	0	L 19 T 3
44	878	Meter & House Regulators	429,186	0	0	0	0	0	0	429,186	0	0	0	0	L 21 T 3 to L 24 T 3
45	879	Customer Installation Expenses	214,475	0	0	0	0	0	214,475	0	0	0	0	0	L 20 T 3
46	880	Other Expenses	776,731	0	0	7,430	178,998	238,041	264,923	87,341	0	0	0	0	L 26 T 3
47	881	Rents	46,619	0	0	465	11,204	14,900	16,582	5,467	0	0	0	0	L 26 T 3
48		Total Operation	2,248,399	24,062	0	53,023	376,657	449,024	746,137	599,496	0	0	0	0	Sum of L 36 through L 47

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Operation and Maintenance Expenses
Table 6
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[A] Line No.	[B] Acct. No	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
49		Maintenance													
50	885	Supervision & Engineering	33,459	0	0	1,508	9,535	11,136	6,775	4,505	0	0	0	0	L 51 through 59
51	886	Structures & Improvements	6	0	0	0	3	3	0	0	0	0	0	0	L 15 T 3
52	887	Mains	466,881	0	0	3,930	196,195	266,755	0	0	0	0	0	0	L 16 T 3
53	888	Compressor Station Equipment	0	0	0	0	0	0	0	0	0	0	0	0	L 17 T 3
54	889	Meas. & Reg. Sta. Equip. - Gen.	43,244	0	0	21,622	21,622	0	0	0	0	0	0	0	L 18 T 3
55	890	Meas. & Reg. Sta. Equip. - Ind	43,959	0	0	0	0	0	0	43,959	0	0	0	0	L 25 T 3
56	891	Meas. & Reg. Sta. Equip. - CG	29,660	0	0	14,830	14,830	0	0	0	0	0	0	0	L 19 T 3
57	892	Services	141,745	0	0	0	0	0	141,745	0	0	0	0	0	L 20 T 3
58	893	Meters & House Regulators	65,477	0	0	0	0	0	0	65,477	0	0	0	0	L 21 T 3 to L 24 T 3
59	894	Other Equipment	132,962	0	0	1,272	30,641	40,748	45,350	14,951	0	0	0	0	L 28 T 3
60		Total Maintenance	957,392	0	0	43,163	272,825	318,643	193,870	128,892	0	0	0	0	Sum of L 50 through L 59
61		Total Distribution	3,205,792	24,062	0	96,186	649,462	767,667	940,007	728,387	0	0	0	0	L 48 + L 60
62		Customer Accounts Expenses													
63	901	Supervision	34,962	0	0	0	0	0	0	0	9,128	25,834	0	0	L 64 + L 65 + L 67
64	902	Meter Reading Expenses	239,795								239,795				Customer Accounts Allocator
65	903	Customer Records & Collection	678,708									678,708			Customer Accounts Allocator
66	904	Uncollectible Accounts	714,425									714,425			Customer Accounts Allocator
67	905	Miscellaneous	2									2			Customer Accounts Allocator
68		Total Customer Accounts Expenses	1,667,892	0	0	0	0	0	0	0	248,923	1,418,969	0	0	Sum of L 63 through L 67
69		Customer Service & Information Expenses													
70	907	Supervision	53,438	26,719	0	0	0	0	0	0	0	4,871	21,848	0	L 71 + L 72 + L 73
71	908	Customer Assistance	0	0									0		50% Customer Accts. and 50% Throughput
72	909	Information and Instruction	43,492	21,746									21,746		50% Customer Accts. and 50% Throughput
73	910	Miscellaneous	9,696	4,848								4,848			50% Customer Accts. and 50% Throughput
74		Total Cust. Service & Inf. Exp.	106,626	53,313	0	0	0	0	0	0	0	9,719	43,594	0	Sum of L 70 through L 73
75		Sales Expenses													
76	911	Supervison	9,099	4,550	0	0	0	0	0	0	0	0	4,550	0	L 77 + L 78 + L 79
77	912	Demonstrating & Selling	(200)	(100)									(100)		50% Customer Accts. and 50% Throughput
78	913	Advertising	5,812	2,906									2,906		50% Customer Accts. and 50% Throughput
79	916	Miscellaneous	20,850	10,425									10,425		50% Customer Accts. and 50% Throughput
80		Total Sales Expenses	35,561	17,781	0	0	0	0	0	0	0	0	17,781	0	Sum of L 76 through L 79
81		Administrative & General Expenses													
82		Operation													
83	920	A & G Salaries	1,420,875	39,113	0	55,554	229,372	241,163	295,836	231,601	79,747	228,827	19,663	0	Supervised O & M
84		Regulatory Allowance	34,688	34,688											Throughput Allocator
85	921	Office Supplies & Expenses	983,974	27,086	0	38,472	158,843	167,008	204,870	160,386	55,226	158,466	13,617	0	Supervised O & M
86	922	Transfers	(211,023)	(5,809)	0	(8,251)	(34,065)	(35,817)	(43,936)	(34,396)	(11,844)	(33,985)	(2,920)	0	Supervised O & M
87	923	Outside Services Employed	431,982	11,891	0	16,890	69,735	73,320	89,942	70,413	24,245	69,569	5,978	0	Supervised O & M
88	924	Property Insurance	(1,361)	(5)	0	(56)	(320)	(367)	(413)	(154)	(11)	(31)	(3)	0	L 9 T 4
89	925	Injuries & Damages	1,712,708	47,147	0	66,964	276,483	290,695	356,597	279,169	96,126	275,826	23,701	0	Supervised O & M
90	926	Employee Pensions & Benefits	1,447,141	39,836	0	56,581	233,612	245,621	301,305	235,882	81,221	233,057	20,026	0	Supervised O & M
91	927	Franchise Requirements	0	0	0	0	0	0	0	0	0	0	0	0	Supervised O & M
92	928	Regulatory Commission Expense	242,077	242,077											Throughput Allocator
93	929	Duplicate Charges	0	0	0	0	0	0	0	0	0	0	0	0	Supervised O & M
94	930.1	General Advertising	0	0	0	0	0	0	0	0	0	0	0	0	Supervised O & M
95	930.2	Miscellaneous	48,204	1,327	0	1,885	7,782	8,182	10,036	7,857	2,705	7,763	667	0	Supervised O & M
96	931	Rents	27,842	766	0	1,089	4,495	4,726	5,797	4,538	1,563	4,484	385	0	Supervised O & M
97		Total Operation	6,137,107	436,117	0	229,128	945,935	994,529	1,220,034	955,296	328,978	943,977	81,113	0	Sum of L 83 through L 96
98	935	Maintenance of General Plant	41,880	1,153	0	1,637	6,761	7,108	8,720	6,826	2,350	6,745	580	0	L 40 T 3
99		Total A & G Expenses	6,178,987	439,270	0	230,765	952,696	1,001,637	1,228,753	962,122	331,329	950,721	81,693	0	L 97 + L 98
100		Total Operation & Maintenance	40,257,073	533,726	0	404,637	1,679,864	1,769,304	2,168,760	1,690,509	580,251	2,379,409	143,068	28,907,544	L 13 + L 33 + L 61 + L 68 + L 74 + L 80 + L 99
101		Excluding Other Gas Supply Exp.	11,377,161	561,358	0	404,637	1,679,864	1,769,304	2,168,760	1,690,509	580,251	2,379,409	143,068	0	L 100 - L 12
102		Supervised O & M before General (1)	4,435,131	122,088	0	173,407	715,964	752,767	923,424	722,921	248,923	714,263	61,375	0	(1)
103		Footnotes (1)													
104		L 33 + L 61 + L 68 + L 74 + L 80 - L 20 - L 24 - L 47 - L 66													

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Depreciation Expense and Taxes Other Than Income Taxes
Table 7

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Depreciation Expense													
2		Transmission	100,918	0	0	50,459	50,459	0	0	0	0	0	0	0	L 12 T 3
3		Distribution Plant	2,277,550	0	0	21,785	524,861	697,989	776,813	256,102	0	0	0	0	L 28 T 3
4		General Plant	869,075	24,474	0	34,761	143,523	150,901	185,111	144,918	49,899	143,183	12,303	0	L 40 T 3
5		Common Plant	0	0	0	0	0	0	0	0	0	0	0	0	L 41 T 3
6		Amortization of Ltd Term Gas Plant	28,971	91	0	1,708	7,180	7,593	8,514	3,120	186	533	46	0	L 44 T 3
7		Amortization of Other Plant	20,580	65	0	1,213	5,101	5,394	6,048	2,216	132	379	33	0	L 44 T 3
8		Total Depreciation Expense	3,317,094	24,630	0	109,927	731,125	861,876	976,487	406,356	50,217	144,095	12,382	0	Sum of L 2 through L 7
9		Taxes Other Than Income Taxes													
10		Ad Valorem (Property Taxes)	795,382	2,503	0	46,887	197,133	208,458	233,755	85,644	5,103	14,642	1,258	0	L 42 - L 5 T 3
11		Payroll Taxes	248,896	6,851	0	9,731	40,179	42,245	51,822	40,570	13,969	40,084	3,444	0	Supervised O & M
12		Miscellaneous Tax	(19,142)	(19,142)											Throughput Allocator
13		Sales/Use Tax	3,387	3,387											Throughput Allocator
14		Total Taxes Other	1,028,523	(6,401)	0	56,618	237,312	250,703	285,577	126,213	19,072	54,726	4,702	0	Sum of L 10 through L 13

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Other Operating Revenues
Table 8

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
1		Other Operating Revenues													
2	487	Forfeited Discounts	203,097											203,097	Direct to Class
3	488	Miscellaneous Service Revenue	104,291	2,871	0	4,078	16,836	17,701	21,714	18,999	5,853	16,796	1,443	0	Supervised O&M
4	493	Rent from Gas Property	0	0	0	0	0	0	0	0	0	0	0	0	L 42 T 3
5	495	Other Gas Revenue	53,129	1,463	0	2,077	8,577	9,018	11,062	8,660	2,982	8,556	735	0	Supervised O&M
6		Special Contract Revenues	439,450	12,097	0	17,182	70,941	74,587	91,497	71,630	24,664	70,772	6,081	0	Supervised O&M
7		Total Other Operating Revenue	799,967	16,430	0	23,337	96,353	101,306	124,272	97,289	33,499	96,124	8,260	203,097	Sum of L 2 through L 6

Aquila Networks - MPS - w/o Eastern System
Test Year Ended December 31, 2002, Update to K&M 9/30/03
Class Summary and Unit Costs
Table 9

[A] Line No.	[B] Acct. No.	[C] Description	[D] Total	[E] Commodity	[F] Sales	[G] Transmission/Distribution Commodity	[H] Transmission/Distribution Peak	[I] Transmission/Distribution Customer	[J] Services	[K] Meters & Regulators	[L] Customer Accounting Meter Reading	[M] Customer Accounting Accounting	[N] Customer Accounting Other	[O] Direct Assigned	[P] Basis of Allocation or Reference
			$	$	$	$	$	$	$	$	$	$	$	$	
				Sch TJS-14 Table 9, L 6	Sch TJS-14 Table 9, L 9	Sch TJS-14 Table 9, L 6	Sch TJS-14 Table 9, L 13	Sch TJS-14 Table 9, L 18	Sch TJS-14 Table 9, L 18	Sch TJS-14 Table 9, L 23	Sch TJS-14 Table 9, L 28	Sch TJS-14 Table 9, L 28	Sch TJS-14 Table 9, L 28		
1	Cost of Service														
2		Residential	34,658,788	235,485	301,441	358,235	2,265,350	3,622,582	4,158,360	1,679,868	563,449	2,196,056	138,925	19,139,036	
3		General Service	15,413,559	124,769	159,714	189,806	1,200,264	961,258	1,103,427	1,114,389	74,756	291,363	18,432	10,175,381	
4		Large Volume	111,111	1,569	2,009	2,387	4,645	971	1,115	901	76	294	19	97,126	
5		Small Volume Transportation	8,338	633	0	962	2,434	971	1,115	901	76	294	19	934	
6		Large Volume Transportation	1,267,078	174,323	0	285,191	670,789	30,100	34,552	27,916	2,341	9,123	577	52,165	
7		Total	51,458,874	536,779	463,164	816,582	4,143,482	4,615,882	5,298,568	2,823,974	640,697	2,497,131	157,971	29,464,643	
8		Check for Tie Out	0	0	0	0	0	0	0	0	0	0	0	0	
9	Unit Customer Costs ($/Month)														
10		Residential	19.51						9.29	3.75	1.26	4.91	0.31		
11		General Service	43.81						18.58	18.76	1.26	4.91	0.31		
12		Large Volume	200.29						92.88	75.04	6.29	24.53	1.55		
13		Small Volume Transportation	200.29						92.88	75.04	6.29	24.53	1.55		
14		Large Volume Transportation	200.29						92.88	75.04	6.29	24.53	1.55		
15	Other Unit Costs ($/Mcf) (Excluding Cost of Gas)														
16		Residential	2.23	0.08	0.10	0.12	0.74	1.19							
17		General Service	1.63	0.08	0.10	0.12	0.74	0.60							
18		Large Volume	0.57	0.08	0.10	0.12	0.23	0.05							
19		Small Volume Transportation	0.61	0.08	0.00	0.12	0.30	0.12							
20		Large Volume Transportation	0.51	0.08	0.00	0.12	0.30	0.01							

Aquila Networks - MPS - w/o Eastern System
Proposed Rates

[A]	[B]	[C]	[D]	[E]	[F]	[G]
			Proposed			
Line No.	Description	Existing	Residential	Small Comm. <5000 Ccf	Small Vol. >=5000 <40000 Ccf	Large Vol. >=40000 Ccf
1	**Residential**					
2	Customer Charge	9.00	15.00			
3	Energy Charge, per Ccf	0.22295	0.29980			
4						
5	**General Service**					
6	Customer Charge	15.00		25.00	50.00	215.00
7	Energy Charge, per Ccf					
8	First 600	0.24008		0.28350	0.20850	0.03870
9	Next 800	0.22208		0.28350	0.20850	0.03870
10	Next 1,000	0.20405		0.28350	0.20850	0.03870
11	Excess	0.07546		0.28350	0.20850	0.03870
12	Demand Charge, per Ccf of billing demand					0.40000
13						
14	**Large Volume Firm**					
15	Customer Charge	215.00				215.00
16	Energy Charge, per Ccf					
17	First 200,000 Ccf	0.02460				0.03870
18	Excess	0.01000				0.03870
19	Demand Charge, per Ccf of billing demand	0.39000				0.40000
20						
21	**Large Volume Interruptible**					
22	Customer Charge	215.00				215.00
23	Energy Charge, per Ccf					
24	First 200,000 Ccf	0.02460				0.03870
25	Excess	0.01000				0.03870
26	Demand Charge, per Ccf of billing demand	0.39000				0.40000
27						
28	**Large Volume Transportation**					
29	Customer Charge	215.00				215.00
30	Transport Charge, per Ccf					
31	First 200,000 Ccf	0.02460				0.03870
32	Excess	0.01000				0.03870
33	Demand Charge, per Ccf of billing demand	0.39000				0.40000
34						
35	**Small Volume Transportation**					
36	Customer Charge	15.00			50.00	
37	Energy Charge, per Ccf					
38	First 600	0.23908			0.20850	
39	Next 800	0.22108			0.20850	
40	Next 1,000	0.20305			0.20850	
41	Excess	0.07546			0.20850	

Aquila - Missouri Public System
Sales Revenues Under Proposed Rates

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]	[W]	[X]	[Y]	[Z]	[AA]	[AB]	[AC]
			Number of Customers				Throughput				Test Year Sales Revenues Under Existing Rate							Proposed Rates			Test Year Sales Revenues Under Proposed Rates						Difference	
												Weather Adjustment		Annualization Adjustmen														
Line No.	Rate Schedule	Rate Code	Per Books	Annual Adjustment	Total Adjusted Number of Customers	Annua Billing Demand	Per Books	Weather Adjustment	Annual Adjustment	Total Adjusted Throughput	Synchron. Revenues	Margin	Cost of Gas	Customer Charge	Distributor Charge	Cost of Gas	Total Revenues	Customer Charge	Distributor Charge	Billing Demand	Customer Charge	Distributor Charge	Billing Demand	Total Margin	Cost of Gas	Total Revenues	$	%
						Mcf	Mcf	Mcf	Mcf	Mcf	$	$	$	$	$	$	$	$/Meter	$/Mcf	$/Mcf	$	$	$	$	$	$		
			Sch. TJS-8	Sch. TJS-10	[D]+[E]	Sch. TJS-8	Sch. TJS-8	Sch. TJS-4	Sch. TJS-10	[H]+[I]+[J]	Sch. TJS-8	Sch. TJS-4	Sch. TJS-4	Sch. TJS-10	Sch. TJS-10	Sch. TJS-10	[L] thru [Q]	Sch. TJS-20			12X[F]X[S]	[K]X[T]	[G]X[U]	[V]+[W]+[X]	[Q]+[N]+ Sch. TJS-8 [O]	[Y]+[Z]	[AA]-[R]	([AA]/[R])-1
1	RESIDENTIAL																											
2	Southern System	MO001	27,984	186	28,170		2,153,362	86,984	14,891	2,255,237	21,239,627	193,930	542,086	20,088	33,199	92,800	22,121,730	15.00	2.99800		5,070,600	8,761,199		11,831,799	14,051,320	25,883,119	3,761,389	17.00%
3	Northern System	MO002	9,143	(4)	9,139		737,314	51,292	(345)	788,261	7,101,662	114,355	310,846	(432)	(769)	(2,091)	7,523,570	15.00	2.99800		1,645,020	2,363,206		4,008,226	4,779,131	8,787,357	1,263,788	16.80%
4	Eastern System	MO003																										
5	Total Residenta		37,127	182	37,309		2,890,676	138,276	14,546	3,043,497	28,341,288	308,285	852,932	19,656	32,430	90,709	29,645,300				6,715,620	9,124,405		15,840,025	18,830,451	34,670,476	5,025,176	16.95%
6																												
7	EXISTING RATE STRUCTURE																											
8	GENERAL SERVICE																											
9	Commercial																											
10	Southern System	MO051	3,531	5	3,536		1,088,637	40,032	1,598	1,130,268	9,676,001	82,970	249,483	900	3,312	9,960	10,022,627												
11	Northern System	MO052	1,382	(3)	1,379		387,257	23,169	(891)	409,535	3,415,019	49,122	140,413	(540)	(1,889)	(5,399)	3,596,727												
12	Eastern System	MO053																										
13	Total Commercial		4,913	2	4,915		1,475,894	63,202	707	1,539,803	13,091,021	132,093	389,896	360	1,424	4,561	13,619,354												
14																												
15	Industrial																											
16	Southern System	MO051	22		22		62,994	1,749	0	64,743	488,337	2,447	10,901	0	0	0	501,685												
17	Northern System	MO052	6		6		5,686	391	0	6,077	46,850	798	2,371	0	0	0	50,020												
18	Total Industria		28	0	28		68,680	2,140	0	70,820	535,187	3,245	13,272	0	0	0	551,705												
19																												
20	Interdepartmental																											
21	Southern System	MO051	7		7		1,931		0	1,931	18,287	0	0	0	0	0	18,287												
22																												
23	Total General Service		4,948	2	4,950		1,546,505	65,342	707	1,612,554	13,644,495	135,338	403,168	360	1,424	4,561	14,189,346												
24																												
25	PROPOSED RATE STRUCTURE																											
26	Small Commercial		4,287	2	4,289		544,272	22,996	707	567,975								25.00	2.83500		1,286,700	1,610,210		2,896,910				
27	Small Volume		619		619		724,247	30,601		754,848								50.00	2.08500		371,400	1,573,858		1,945,258				
28	Large Volume		42		42	28,487	277,986	11,745		289,731								215.00	0.38700	4.00000	108,360	112,125	113,869	334,355				
29	Total		4,948	2	4,950	28,487	1,546,505	65,342	707	1,612,554	13,644,495	135,338	403,168	360	1,424	4,561	14,189,346				1,766,460	3,296,194	113,869	5,176,523	9,979,890	15,156,413	967,067	6.82%
30																												
31	LARGE VOLUME FIRM																											
32	Northern System	MO282	1		1	112	19,812	0	0	19,812	102,737	0	0	0	0	0	102,737	215.00	0.38700	4.00000	2,580	7,667	446	10,693	94,848	105,541	2,805	2.73%
33	Total Large Volume Firm		1	0	1	112	19,812	0	0	19,812	102,737	0	0	0	0	0	102,737				2,580	7,667	446	10,693	94,848	105,541	2,805	2.73%
34																												
35	LARGE VOLUME INTERRUPTIBLE																											
36	Northern System	MO262	0		0	0	471	0	0	471	2,022	0	0	0	0	0	2,022	215.00	0.38700	4.00000	0	182	0	182	1,906	2,088	66	3.26%
37	Total Large Volume Interr		0	0	0	0	471	0	0	471	2,022	0	0	0	0	0	2,022				0	182	0	182	1,906	2,088	66	3.26%
38																												
39	TOTAL SALES		42,076	184	42,260	28,579	4,457,464	203,618	15,253	4,676,335	42,090,541	443,623	1,256,100	20,016	33,853	95,270	43,939,404				8,484,660	12,428,448	114,315	21,027,423	28,907,095	49,934,518	5,995,114	13.64%
40	Total Transportation		47	0	47	154,584	8,224,045	39,943	0	8,263,988	1,565,439	8,468	0	0	0	0	1,573,905				106,425	1,260,341	615,939	1,982,705	0	1,982,705	408,800	25.97%
41	Total MPS		42,123	184	42,307	183,162	12,681,509	243,560	15,253	12,940,322	43,655,980	452,089	1,256,100	20,016	33,853	95,270	45,513,309				8,591,085	13,688,790	730,254	23,010,128	28,907,095	51,917,224	6,403,914	14.07%

Aquila - Missouri Public System - w/o Eastern System
Transportation Revenues Under Proposed Rates

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]	[V]	[W]	[X]	[Y]	[Z]	[AA]
			Annual Number of Cust. Charges			Annual Billing Demand			Throughput				Test Year Sales Revenues Under Existing Rates					Proposed Rates			Test Year Sales Revenues Under Prop. Rates					
Line No	Rate Schedule	Rate Code	Per Books	Annual Adjustment	Total Adjusted Number of Customers	Per Books	Adjustment to Billing Demand	Total	Per Books	Weather Adjustment	Annual Adjustment	Total Adjusted Throughput	Synchron Revenues	Weather Adjustment Margin	Annualization Adjustment Customer Charge	Annualization Adjustment Energy Charge	Total Revenues	Customer Charge	Energy Charge	Billing Demand	Customer Charge	Energy Charge	Billing Demand	Total	Difference	
									Mcf	Mcf	Mcf	Mcf	$	$	$	$	$	$/Meter	$/Mcf	$/Mcf	$	$	$	$	$	%
			Sch. TJS-8	Sch. TJS-10	[D]+[E]	Sch. TJS-8		[G]+[H]	Sch. TJS-8	Sch. TJS-3	Sch. TJS-10	[J]+[L]	Sch. TJS-8	Sch. TJS-3	Sch. TJS-10	Sch. TJS-10	[N]+[Q]		Sch. TJS-20		[F]X[S]	[M]X[T]	[G]X[U]	[V]+[W]+[X]	[Y]-[R]	([Y]/[R])-1
1	LARGE VOLUME TRANSPORTATION																									
2	Southern System	MO501	305		305	108,287		108,287	1,670,552	9,070		1,679,622	841,485	1,920			843,405	215.00	0.38700	4.00000	65,575	650,014	433,147	1,148,736	305,330	36.20%
3	First 20,000 Mcf																									
4	Excess																									
5	Northern System	MO502	72		72	36,649		36,649	543,425	29,966		573,391	273,509	6,347			279,856	215.00	0.38700	4.00000	15,480	221,902	146,596	383,978	104,122	37.21%
6	First 20,000 Mcf																									
7	Excess																									
8	Eastern System	MO503																								
9	First 20,000 Mcf																									
10	Excess																									
11	Total Large Volume Transportation		377	0	377	144,936	0	144,936	2,213,977	39,036	0	2,253,013	1,114,995	8,267	0	0	1,123,261				81,055	871,916	579,742	1,532,714	409,452	36.45%
12																										
13	SMALL VOLUME TRANSPORTATION (1)																									
14	Southern System																									
15	Schreiber Food	MO01E	12		12	0	1,127	1,127	8,176			8,176	10,906				10,906	215.00	0.38700	4.00000	2,580	3,164	4,510	10,254	(652)	-5.98%
16	First 80 Mcf																									
17	Next 80 Mcf																									
18	Next 100 Mcf																									
19	Excess																									
20	PGA (L&U)																									
21	Total Small Volume Transportation		12	0	12	0	1,127	1,127	8,176	0	0	8,176	10,906	0	0	0	10,906				2,580	3,164	4,510	10,254	(652)	-5.98%
22																	1,134,167									
23	SPECIAL CONTRACT TRANSPORTATION																									
24	Southern System																									
25	Pittsburgh Corning Co	MO521	12		12	0		0	455,908			455,908	134,793				134,793	215.00		0.0000	2,580	132,213	0	134,793	0	0.00%
26	First 50,000 Mcf (1)																		0.29000							
27	Excess																		0.13000							
28																										
29	Tyson Foods Processing	MO522	12		12	0		0	670,458	519		670,977	150,081	114			150,195	215.00	0.22000	0.0000	2,580	147,615	0	150,195	0	0.00%
30																										
31	Tyson Foods Feed Mill	MO523	12		12	0		0	45,301	182		45,483	12,546	40			12,586	215.00	0.22000	0.0000	2,580	10,006	0	12,586	0	0.00%
32																										
33	Tyson Foods Hatchery	MO524	12		12	0		0	12,839	206		13,045	5,405	45			5,450	215.00	0.22000	0.0000	2,580	2,870	0	5,450	0	0.00%
34																										
35	Excel Corporation	MO525	12		12	0		0	13,255			13,255	3,243				3,243	215.00	0.05000	0.0000	2,580	663	0	3,243	0	0.00%
36																										
37	Marshall Municipal Utilities	MO526	12		12	0		0	49,357			49,357	21,336				21,336	215.00		0.0000	2,580	16,756	0	21,336	0	0.00%
38	First 50,000 Mcf (1)																		0.38000							
39	Excess																		0.03000							
40	Total Southern System		72	0	72	0	0	0	1,247,116	907	0	1,248,023	327,403	199	0	0	327,602				15,480	312,122	0	327,602	0	0.00%
41																										
42	Northern System																									
43	Chillicothe Municipal Utilities	MO527	12		12	812		812	30,080			30,080	11,604				11,604	215.00		2.0000	2,580	7,400	1,625	11,604	0	0.00%
44	First 20,000 Mcf (3)																		0.24600							
45	Excess																		0.10000							
46	Glen Gery Brick	MO528	12		12	5,273		5,273	175,631			175,631	66,352				66,352	215.00		3.9000	2,580	43,205	20,567	66,352	0	0.00%
47	First 20,000 Mcf (4)																		0.24600							
48	Excess																		0.10000							
49	Wire Rope Corp	MO529	10		10	2,435		2,435	91,601			91,601	34,180				34,180	215.00		3.9000	2,150	22,534	9,496	34,180	0	0.00%
50	First 20,000 Mcf																		0.24600							
51	Excess																		0.10000							
52	Total Northern System		34	0	34	8,521	0	8,521	297,312	0	0	297,312	112,136	0	0	0	112,136				7,310	73,139	31,687	112,136	0	0.00%
53																										
54	Eastern System																									
55	Phelps County Medical Center (5)	MO530																								
56																										
57	University of MO - TJ Hall	MO531																								
58																										
59	Royal Canine USA, Inc (6)	MO532																								
60																										
61	Briggs & Stratton (7)	MO533																								
62																										
63	Busy Bee Laundry (8)	MO534																								
64																										
65	Vonhoffmann Graphics	MO535																								
66	Total Eastern System		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	0	#DIV/0!
67																										
68	Total Special Contract Transportation		106	0	106	8,521	0	8,521	1,544,428	907	0	1,545,335	439,539	199	0	0	439,738				22,790	385,261	31,687	439,738	0	0.00%
69																										
70	Total Transportation		495	0	495	153,456	1,127	154,584	3,766,581	39,943	0	3,806,524	1,565,439	8,468	0	0	1,573,905				106,425	1,260,341	615,939	1,982,705	408,800	25.97%

(1) Existing small volume transportation customer qualifies as a large volume customer under proposed rates. Therefore, rates shown in this table are large volume rates

Schedule TJS-26
P 1/13 wp-TJS-2

BLACK & VEATCH

MEMORANDUM

Aquila Networks - MPS
Development of Customer Weighting Factors

B & V Project 134814.100
June 23, 2003

To: File

From: Larry Loos/Jerrad Hammer

The purpose of this memorandum is to discuss the development of the mains classification and customer weighting factors for the Aquila Networks – MPS class cost of service study. The following relationships are analyzed.

1. Accounts 367 and 376 Mains – A factor is developed which recognizes the proportion of investment in Accounts 367 and 376 which should be classified for allocation purposes as customer related, capacity (peak) related, and commodity (throughput) related.

2. Account 380 Services – A weighting factor is developed which recognizes the relative difference in the unit cost of service lines used to serve each customer class.

3. Accounts 381 through 385 – A composite weighting factor is developed which recognizes the relative difference in the unit cost to serve each customer class for the following elements:

   A. Accounts 381 and 385 Meters

   B. Accounts 382 and 385 Meter Installations

   C. Accounts 383 and 385 Regulators

All workpapers used in connection with these analyses are attached.

Throughout our analyses, relative relationships are developed based on costs restated to current cost levels. We restate embedded cost to current cost levels using Handy-Whitman trend factors. By developing relationships at current cost levels, inflationary impacts do not affect the analyses. This analysis is based on plant investment as of December 31, 2002.

Mains

There are three components of cost associated with service from a gas distribution system. These cost components are customer related, capacity (peak) related, and energy (commodity or throughput) related. Investment in mains is generally related to all three components of cost.

Aquila Networks - MPS
Development of Customer Weighting Factors

B & V Project 134814.100
June 23, 2003

Providing retail natural gas service involves a number of functions. These functions include gas supply, peaking supply, transmission, distribution, and customer related (customer specific).[1] For gas distribution systems, distribution mains usually serve both a transmission and a distribution function.

As a functional classification, transmission represents the movement of natural gas from sources of supply to general areas of consumption. The distribution function on the other hand represents the movement of gas within general areas of consumption.

Unlike most gas distribution systems, we have worked with; MPS has a significant investment in transmission mains (Account 367). Most systems have little if any investment in this account. Since MPS has a significant transmission mains investment, and based on the relative capacity of MPS's transmission versus distribution mains, we have concluded to treat distribution and transmission investment separately as opposed to aggregating investment for analysis purposes.

The allocation of investment in facilities serving a transmission function should recognize that these facilities are used to meet both peak and annual requirements of customers. These facilities, though sized to meet system peak requirements, are also used to meet annual requirements, to recognize this dual use the cost of these facilities should be allocated on a basis that recognizes both peak and annual use of the facilities. A variety of methods have been used to recognize the dual nature of these facilities. For the purpose of allocating costs on the MPS system, we use an equal weighting (Atlantic Seaboard) of peak and annual considerations.

If we examine transmission mains in total we find that the trended original cost of mains in service as of December 31, 2002 is $30,679,470 (See Attachment A). Using the Atlantic Seaboard classification, 50 percent ($15,339,735) is allocated on capacity (peak) and 50 percent ($15,339,735) on commodity (throughput).

The allocation of investment in facilities serving a distribution function should recognize that the cost of these facilities is driven by two principle factors. First is the cost of extending the system to connect individual customers. Second is the cost associated with the capacity (peak day) requirements of the customers connected. Though facilities

[1] The customer related function is not the same as the customer related cost component. Likewise, though there is a great deal of similarity between the functions of a gas distribution system, and primary accounts used in connection with accounting systems, the two are not the same. For example, within the distribution primary account are the services, meters, and regulators used to serve individual customers. Costs associated with these items are considered customer related. There is also a customer component of distribution mains, which recognizes the implication of the distance between individual customers.

serving a distribution function are also used to meet customers' annual requirements, due to the local nature of the facilities and their customer specific cost, we do not allocate any cost associated with the distribution function on the basis of annual throughput. By allocating costs of facilities, which are functionally classified as distribution on the basis of number of customers and peak period requirements, reasonable results are achieved.

In other gas rate cases, we have used a classification/allocation basis for distribution mains that recognizes the functional use (transmission/distribution) of these facilities by classifying costs on a basis that recognizes the customer, capacity, and commodity related components of cost embedded in the distribution mains investment. Development of this classification takes two steps. First, we define what facilities serve a transmission function. Normally we conclude that mains of a certain size or larger (usually 6 inches) serve a transmission function. In the second step we determine how the remaining investment (distribution function) should be split between customer and capacity. In our prior analysis, we have analyzed these relationships based on examination of relative capacity and cost relationships.

In evaluating what facilities serve a distribution function, we examine the relative capacity provided by various pipe sizes. Pipeline flow formulas generally suggest that the capacity of a pipeline is proportional to its diameter to something on the order of the 2.5 power. Raising the diameter to the 2.5 power and multiplying by distance results in an indication of the relative capacity of the system. In Attachment A, we show this development in column E. As shown, the relative capacity of distribution mains less than or equal to 6 inch amounts to 96 percent of the total capacity of distribution mains.

With respect to MPS's distribution mains, the trended original cost of 6 inch mains amounts to $8,231,555. The relative capacity of 6 inch mains amounts to 3,758,346 units; thus, the relative unit cost of capacity (6 inch distribution mains) amounts to about $2.19 per unit. The total relative capacity of mains under 8 inches is 13,748,659 units. Therefore, the cost of capacity associated with mains under 8 inches can be considered to be $30,112,407 (2.19 X 13,748,659) or 45.4 percent (30,112,407 / 66,406,154) of the trended original cost of mains under 8 inches. With 45.4 percent of cost related to capacity, the remainder (54.6 percent) is customer related. If 54.6 percent of the cost of mains under 8 inches is customer related and the cost of mains under 8 inches amount to 98.5 percent of the total, the customer component amounts to 53.8 percent (.985 X .546) of the cost of distribution mains (See Attachment A).

Combining the cost of 6 inch and smaller distribution mains with the 8 inch and larger ones, which we conclude serve a transmission function, we find that 0.8 percent of the total investment in distribution mains should be allocated on the basis of annual throughput

(commodity), 45.4 percent on the basis of capacity (peak), and 53.8 on the basis of number of customers (See lines 30-32 of Attachment A).

In summary, since MPS has a significant transmission mains investment, our classification of mains should not be aggregated but should treat distribution and transmission separately. Therefore, we find that 50 percent of the investment in transmission mains (Account 367) should be allocated on the basis of capacity and 50 percent on the basis of throughput (commodity). With respect to distribution mains (Account 376) .8 percent of mains should be allocated on the basis of throughput, 53.8 percent on the basis of number of customers, and the balance (45.4 percent) on the basis of capacity.

Services

Plant investment in service lines is allocated to customer classes based on the number of customers weighted to recognize the relative differences in the unit investment cost in service lines used to connect customers in that class. The investment incurred to connect customers is a function of: 1) the average length of services and 2) the unit cost per foot. The unit cost per foot is primarily a function of the size of the service required. In Attachment B, we show available information regarding services provided by MPS. Attachment B lines 44 through 46 shows the calculated average service line length and the calculated trended per foot cost. From these values we calculate the average cost of service lines for the three respective sizes of services.

These calculated values do not correspond to our expectations. Specifically, we expect the service length and trended cost per service to increase as the size of the service increases. In order to recognize more reasonable relationships, for the purpose of this analysis we will assume an average service length of 60 feet for the 1 inch and less services, 300 feet for the 2 inch services, and 350 feet for the 3 inch and greater services. We then calculate the unit cost per service for each of the customer classes (See lines 59-62 of Attachment B) based on service costs derived from these estimated service line lengths and on the unit cost per foot.

We assume for the purpose of this analysis that smaller diameter services are used to serve small customers with progressively larger services being used to serve larger customers. Therefore, we assume that all residential customers are served by 1 inch or less services, general service customers are served by the remainder of the 1 inch or less services, some 2 inch services, and some 3 inch or greater services; large volume customers are served by 2 inch services and some 3 inch or greater services; and special contract transportation customers are all served by 3 inch or greater services (See lines 59-62 of Attachment B).

Based on the previously identified assumptions, we find that the average cost per service for the respective customer classes is as follows:

Customer Class	Service Cost	Relative Cost
Residential	705	1.0
General Service	1,216	1.7
Large Volume[2]	7,164	10.2
Special Contract Trans.	14,806	21.0

Therefore, we find that weighting factors of 1, 2, 10, and 20 should be used in connection with the service investment for the residential, general service, large volume and special contract transportation customers respectively.

Accounts 381 through 385

We do not distinguish between individual accounts because of the lack of detailed information available for the items contained within these accounts. Specifically, meter installations in account 382 and 385 are either classified as residential, commercial/industrial, or unclassified and there are only three different classifications of regulators in accounts 383 and 385. This lack of detail makes it difficult to develop weighting factors for these accounts that fairly represent the costs associated with the respective customer classes. As a result, we include these costs with the meter costs and develop a single weighting factor for each respective customer class.

Meters (Accounts 381 and 385). Account 381 contains all of MPS's small volume meters and some large meters and account 385 contains many of the large volume meters. There is no information regarding which customers were served with meters charged to account 385. Furthermore, 38.5 percent of the trended unit cost (of account 381) is attributed to meters not classified by size (See line 9 of Attachment C).

Based on the estimated number of customers using the various size meters, as well as the estimated number of meters in inventory by size, we determined the average trended meter cost by class. As shown in Attachment C, we find that the average cost per meter for the respective customer classes is as follows:

Customer Class	Meter Cost

[2] The large volume class in this study includes the large volume sales, small volume transportation, and large volume transportation customer classes. These classes were combined because of the relatively small number of customers contained within each class and similar usage characteristics. A single weighting factor was developed to be used for the three customer classes.

Residential	75
General Service	300
Large Volume	1,231
Special Contract Trans.	6,503

These average unit costs are based on the following assumptions:

1) The number of meters estimated in inventory represent the total number of meters less the number of customers. Meters in inventory are distributed by size based on the total number of meters.
2) The residential customers use all of the meters less than 750 cf per hour and 19,210 meters listed not classified by size (note the relatively low unit cost per meter of these unclassified meters ($82) which is comparable to the $69 unit cost of the less than 750 cf per hour meters).
3) The general service customers use the all of the meters between 750 and 9,999 cf per hour, the not classified by size meters not assigned to the residential customers (2,400), and 229 meters between 10,000 and 19,999 cf per hour.
4) The 33 large volume customers all use meters between 10,000 and 19,999 cf per hour.
5) The 15 special contract transportation customers use 4 meters between 20,000 and 29,999 cf per hour, 9 meters between 30,000 and 39,999 cf per hour, and the 2 meters between 50,000 and 150,000 cf per hour.

Meter Installations (Accounts 382 and 385). The meter installations in this accounts are classified as residential, commercial/industrial, or unclassified. Examination of the accounts shows a total of 46,063 meter installations (40,508 unclassified, 5,539 residential, and 16 commercial/industrial). The large number of unclassified installations, as well as, their low unit cost per installation compared to residential installations suggests that the residential customers use the unclassified meter installations. The data also suggest that both the general service and large volume customer classes use some meter installations classified as residential.

An examination of the accounts (See Attachment D) suggests the following average cost of the meter installation attributable to each customer class:

Customer Class	Meter Inst. Cost

Residential	79
General Service	457
Large Volume	605
Special Contract Trans.	5,364

Regulators (Accounts 383 and 385). The investment analyzed includes both the regulator and the regulator installations. We therefore use a composite trend factor to trend original cost. This composite trend factor was developed assuming that 85 percent of the cost is attributable to the regulator and 15 percent to the installation. The number of regulators included in these accounts (74,795) is about 33 percent greater than the number of customers (46,146). Therefore, we assigned a weighted number of regulators to each customer class (See lines 27-30 of Attachment E).

An examination of the accounts (See Attachment E) suggests the following average cost of the regulator and regulator installation attributable to each customer class:

Customer Class	Regulator Cost
Residential	31
General Service	107
Large Volume	1,318
Special Contract Trans.	1,607

Weighting Factor. Combining the above costs per customer yield the following:

	Res.	Gen. Serv.	Large Vol.	Spec. Cont.
Meter	75	300	1,231	6,503
Meter Install.	79	457	605	5,364
Regulator	31	107	1,318	1,607
Total Cost	185	864	3,154	13,474
Relative Cost	1.0	4.7	17.1	73.1

Therefore, based on the average costs we developed for meters, meter installations, and regulators we find that weighting factors of 1, 5, 20, and 50 should be used in connection with plant investment in accounts 381 through 385 for the residential, general service, large volume, and special contract transportation customers respectively. See Attachment F for a summary of the average throughput per customer for each of the customer classes, as well as, the relative costs to serve each customer class and the weighting factors assigned to each respective customer class.

Aquila Networks - MPS
Analysis of Mains (Account 367 and 376)
For Year Ended Dec. 31, 2002

	[A] Description	[B] Diameter	[C] Original Cost $	[D] Length ft.	[E] "Capacity" (1) ([B]/2)^2.5*[D]	[F] Cumulative Relative "Capacity"	[G] Trended Original Cost $	[H] Trended Cost per Foot [G]/[D]	[I] $ Per Capacity Unit [G]/[E]	[J] Cumulative Relative TOC
	Account 367: Transmission Mains									
1	2-inch	2	82,227.75	51,762.00	51,762	0.11%	411,069.23	7.94	7.94	1.34%
2	3-inch	3	66,240.23	41,205.00	113,548	0.35%	444,876.46	10.80	3.92	2.79%
3	4-inch	4	169,263.56	33,495.00	189,476	0.76%	519,568.50	15.51	2.74	4.48%
4	6-inch	6	1,476,474.15	140,462.00	2,189,588	5.43%	2,298,152.04	16.36	1.05	11.97%
5	8-inch	8	1,003,190.81	212,471.00	6,799,072	19.92%	5,634,354.50	26.52	0.83	30.34%
6	10-inch	10	3,136,094.39	613,647.00	34,303,910	93.07%	20,989,936.75	34.21	0.61	98.76%
7	12-inch	12	346,571.62	36,674.00	3,251,609	100.00%	381,512.46	10.35	0.12	100.00%
8	Total Account 367		6,279,062.51	1,129,916	46,898,963		30,679,469.95	27.15	0.65	
9										
10	Account 376: Distribution Mains									
11	<= 1-inch	1	374,342.08	38,606	6,825	0.05%	514,113.86	13.32	75.33	0.76%
12	2-inch	2	22,980,009.67	3,458,081	3,458,081	24.16%	38,676,143.16	11.18	11.18	58.11%
13	3-inch	3	13,454.47	2,096	5,776	24.21%	51,925.24	24.77	8.99	58.18%
14	4-inch	4	12,335,961.47	1,152,519	6,519,632	69.67%	18,932,417.54	16.43	2.90	88.26%
15	6-inch	6	4,172,941.74	241,098	3,756,346	95.89%	8,231,554.66	34.14	2.19	98.46%
16	8-inch	8	540,224.86	16,998	543,936	99.68%	864,746.81	50.87	1.59	99.74%
17	10-inch	10	153,083.44	800	44,721	99.99%	171,666.56	214.58	3.84	100.00%
18	12-inch	12	1,215.79	15	1,323	100.00%	1,425.16	95.01	1.08	100.00%
19	Total Account 376		40,571,233.52	4,910,213	14,338,639		67,443,993.00	13.74	4.70	
20										
21	Total Mains		46,850,296.03	6,040,129	61,237,603		98,123,462.94			
22										
23	Functional Classification									
24	Transmission									
25	Capacity	50.00%	3,139,531.26				15,339,734.97			50.00%
26	Commodity		3,139,531.26				15,339,734.97			50.00%
27	Total		6,279,062.51	1,129,916	46,898,963	100.00%	30,679,469.95	27.15	0.65	100.00%
28										
29	Distribution									
30	Capacity		18,397,353.63				30,583,023.53			45.35%
31	Customer		21,832,664.82				36,293,747.21			53.81%
32	Commodity		341,215.07				567,222.26			0.84%
33	Total		40,571,233.52	4,910,213	14,338,639	100.00%	67,443,993.00	13.74	4.70	100.00%
34										
35	(1) Relative to 2-inch.									
36										
37	Calculations		Distribution System							
38			13,746,659	Sum of [E] through 6"						
39			2.19	[G]/[E] of 6"						
40			30,112,407.26	Line 44 * Line 45						
41			66,406,154.47	Sum of [G] through 6"						
42		Capacity	45.35%	Line 46 / Line 47						
43			54.65%	1 - Line 46						
44		Customer	53.81%	Line 49 * [J] of 6"						
45		Commodity	0.84%	Line 49 - Line 50						

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Schedule TJS-26
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Attachment B

Aquila Networks - MPS
Summary of Services
For Year Ended Dec. 31, 2002

	[A] Description	[B]	[C] Quantity	[D] Original Cost	[E] Original Unit Cost	[F] Trended Original Cost	[G] Trended Unit Cost	[H] % of Total
			ft.	$	$	$	$	
	Iron Services							
1	<= 1-inch		696,907	4,797,112.25	6.88	8,392,543.96	12.04	69.37%
2	2-inch		202,640	667,668.19	3.29	3,684,721.13	18.18	30.45%
3	>= 3-inch		715	5,524.89	7.73	21,705.35	30.36	0.18%
4	Total Iron Services		900,262	5,470,305.33	6.08	12,098,970.45	13.44	100.00%
5								
6	PE Services							
7	<= 1-inch		281,669	2,588,702.68	9.19	2,749,108.94	9.76	91.65%
8	2-inch		12,895	193,238.37	14.99	202,171.30	15.68	6.74%
9	>= 3-inch		2,003	45,061.67	22.50	48,326.17	24.13	1.61%
10	Total PE Services		296,567	2,827,002.72	9.53	2,999,606.41	10.11	100.00%
11								
12	Plastic Services							
13	<= 1-inch		2,064,881	14,280,839.77	6.92	24,631,313.24	11.93	82.48%
14	2-inch		291,844	1,016,945.82	3.48	5,040,465.00	17.27	16.88%
15	>= 3-inch		3,445	38,366.86	11.14	190,684.17	55.35	0.64%
16	Total Plastic Services		2,360,170	15,336,152.45	6.50	29,862,462.41	12.65	100.00%
17								
18	Steel Services							
19	<= 1-inch		2,302	10,912.64	4.74	11,461.31	4.98	84.55%
20	2-inch		61	1,962.51	32.17	2,094.53	34.34	15.45%
21	Total Steel Services		2,363	12,875.15	5.45	13,555.84	5.74	100%
22								
23	Other Services							
24	<= 1-inch		1,957	31,514.48	16.10	35,370.57	18.07	100.00%
25								
26	Total Services							
27	<= 1-inch		3,047,716	21,709,081.82	7.12	35,819,798.02	11.75	79.58%
28	2-inch		507,440	1,879,814.89	3.70	8,929,451.96	17.60	19.84%
29	>= 3-inch		6,163	88,953.42	14.43	260,715.70	42.30	0.58%
30	Total Total Services		3,561,319	23,677,850.13	6.65	45,009,965.68	12.64	100.00%
31								
32	DOT Report - Number of Services							
33								

34	Material	1" or Less	2"	>= 3"	Total
35	Steel	10,423	246	9	10,678
36	PE	38,353	417	18	38,788
37	Total	48,776	663	27	49,466

38									
39	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]
40	Service	Number		Average	Trended	Trended Cost	Trended Cost	Relative Cost	
41	Classifications	of Services	Quantity	Service Length	Cost	per Foot	per Service	per foot	per Service
42			ft.	ft.	$	$	$		
43	**Actual Data**								
44	<= 1-inch	48,776	3,047,716	62.48	35,819,798.02	11.75	734.37	1.00	1.00
45	2-inch	663	507,440	765.37	8,929,451.96	17.60	13,468.25	1.50	18.34
46	>= 3-inch	27	6,163	228.26	260,715.70	42.30	9,656.14	3.60	13.15
47	Total	49,466	3,561,319	72.00	45,009,965.68	12.64	909.92		
48									
49	**Adjusted Data**								
50	<= 1-inch	48,776	2,926,560	60.00	34,395,851.88	11.75	705.18	1.00	1.00
51	2-inch	663	198,900	300.00	3,500,055.17	17.60	5,279.12	1.50	7.49
52	>= 3-inch	27	9,450	350.00	399,766.89	42.30	14,806.18	3.60	21.00
53	Total	49,466	3,134,910	63.38	38,295,673.94	12.22	774.18		
54									

55	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
56	Customer	Number of	Number of				Unit Cost	Relative
57	Classes	Customers	Services	1" or Less	2"	<= 3"	per Service	Unit Cost
58							$	
59	Residential	40,693	43,621	43,621			705.18	1.00
60	General Service	5,405	5,794	5,155	635	4	1,216.27	1.72
61	LV	33	35		28	7	7,164.37	10.16
62	SC Trans.	15	16			16	14,806.18	21.00
63	Total Number of Customers	46,146	49,466	48,776	663	27		

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Attachment C

Aquila Networks - MPS
Summary of Meters
For Year Ended Dec. 31, 2002

	[A] Description	[B]	[C] Quantity	[D] Original Cost	[E] Original Unit Cost	[F] Trended Original Cost	[G] Trended Unit Cost
				$	$	$	$
	Account 381						
1	<750		21,585	1,290,569.13	59.79	1,479,030.54	68.52
2	750-999		350	90,014.23	257.18	189,995.59	542.84
3	1000-9999		2,303	458,302.43	199.00	816,776.12	354.66
4	10000-19999		221	170,656.08	772.20	281,154.35	1,272.19
5	20000-29999		4	8,971.78	2,242.95	17,457.37	4,364.34
6	30000-39999		5	22,033.42	4,406.68	27,502.14	5,500.43
7	50000-74999		1	7,860.82	7,860.82	8,989.77	8,989.77
8	100000-150000		1	10,854.17	10,854.17	12,347.34	12,347.34
9	Not Classified by Size		21,713	664,978.24	30.63	1,775,093.89	81.75
10	Total Account 381 Meters		46,183	2,724,240.30	58.99	4,608,347.11	99.78
11							
12	Account 385						
13	750-999		37	23,741.90	641.67	24,625.91	665.57
14	1000-9999		99	83,018.05	838.57	120,170.27	1,213.84
15	10000-19999		42	24,852.20	591.72	42,538.05	1,012.81
16	30000-39999		4	22,953.37	5,738.34	31,245.18	7,811.30
17	Total Account 385 Meters		182	154,565.52	849.26	218,579.41	1,200.99
18							
19	Account 381 & 385						
20	<750		21,585	1,290,569.13	59.79	1,479,030.54	68.52
21	750-999		387	113,756.13	293.94	214,621.50	554.58
22	1000-9999		2,402	541,320.48	225.36	936,946.39	390.07
23	10000-19999		263	195,508.28	743.38	323,692.40	1,230.77
24	20000-29999		4	8,971.78	2,242.95	17,457.37	4,364.34
25	30000-39999		9	44,986.79	4,998.53	58,747.33	6,527.48
26	50000-74999		1	7,860.82	7,860.82	8,989.77	8,989.77
27	100000-150000		1	10,854.17	10,854.17	12,347.34	12,347.34
28	Not Classified by Size		21,713	664,978.24	30.63	1,775,093.89	81.75
29	Total Meters		46,365	2,878,805.82	62.09	4,826,926.52	104.11
30							
31	Number of Customers						
32	Residential		40,693				
33	General Service		5,405				
34	LV		33				
35	SC Trans.		15				
36	Total Number of Customers		46,146				
37							

	Meters	Number of Meters	Cost $	Unit Cost $/Meter	Meter Weight	Residential	Gen. Serv.	LV	SC Trans.	Inventory	Total
38											
39											
40											
41											
42	<750	21,585	1,479,030.54	68.52	1.00	21,483				102	21,585
43	750-999	387	214,621.50	554.58	8.09		385			2	387
44	1000-9999	2,402	936,946.39	390.07	5.69		2,391			11	2,402
45	10000-19999	263	323,692.40	1,230.77	17.96		229	33		1	263
46	20000-29999	4	17,457.37	4,364.34	63.69				4	0	4
47	30000-39999	9	58,747.33	6,527.48	95.26				9	0	9
48	50000-74999	1	8,989.77	8,989.77	131.20				1	0	1
49	100000-150000	1	12,347.34	12,347.34	180.20				1	0	1
50	Not Classified by Size	21,713	1,775,093.89	81.75	1.19	19,210	2,400			103	21,713
51	Total Meters	46,365	4,826,926.52	104.11		40,693	5,405	33	15	219	46,365
52											
53				Relative Meter Weights		1.09	4.38	17.96	94.90		
54											
55				$/Meter		74.77	300.43	1,230.77	6,502.79		

Aquila Networks - MPS
Summary of Meter Installations
For Year Ended Dec. 31, 2002

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
	Description	Quantity	Original Cost	Original Unit Cost	Trended Original Cost	Trended Unit Cost	% of Total	Relative Unit Cost
			$	$	$	$		
	Account 382							
1	Meter Installations							
4	Unclassified	40,508	1,426,093.99	35.21	3,143,019.99	77.59	55.46%	1.00
2	Residential	5,527	2,146,223.30	388.32	2,521,386.22	456.19	44.49%	5.88
3	Commercial/Industrial	2	2,753.99	1,376.99	2,789.48	1,394.74	0.05%	17.98
5	Total Meter Installations	46,037	3,575,071.28	77.66	5,667,195.69	123.10	100.00%	
6								
7	Account 385							
8	Meter Installations							
9	Residential	12	684.92	57.08	7,248.74	604.06	8.03%	1.00
10	Commercial/Industrial	14	82699.14	5,907.08	83,038.97	5,931.36	91.97%	9.82
11	Total Meter Installations	26	83,384.06	3,207.08	90,287.71	3,472.60	100.00%	
12								
13	Account 382 & 385 Combined							
14	Meter Installations							
17	Unclassified	40,508	1,426,093.99	35.21	3,143,019.99	77.59	54.59%	1.00
15	Residential	5,539	2,146,908.22	387.60	2,528,634.95	456.51	43.92%	5.88
16	Commercial/Industrial	16	85,453.13	5,340.82	85,828.45	5,364.28	1.49%	69.14
18	Total Meter Installations	46,063	3,658,455.34	79.42	5,757,483.39	124.99	100.00%	
19								
20								

		Number of	Number of	Meter Installations				Relative	
21		Customers	Regulators	Residential	Comm./Ind.	Unclassified	Total	Unit Cost[1]	$/Installation
22									
23									
24	Residential	40,693	40,620	112		40,508	40,620	1.01	78.63
25	General Service	5,405	5,395	5,395			5,395	5.88	456.51
26	LV	33	33	32	1		33	7.80	605.23
27	SC Trans.	15	15		15		15	69.14	5,364.28
28	Total	46,146	46,063	5,539	16	40,508	46,063		

(1) Relative to the trended unit cost of the unclassified meter installations

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Aquila Networks - MPS
Summary of Regulators
For Year Ended Dec. 31, 2002

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
	Description	Quantity	Original Cost	Original Unit Cost	Trended Original Cost	Trended Unit Cost	% of Total	Relative Unit Cost
			$	$	$	$		
1	Account 383							
2	< 2-inch	70,611	982,999	13.92	2,176,560	30.82	70.72%	1.00
3	2-inch	1,950	402,132	206.22	716,426	367.40	23.28%	11.92
4	>= 3-inch	62	66,608	1,074.32	103,170	1,664.03	3.35%	53.98
5	Unclassified	2,168	36,194	16.69	81,580	37.63	2.65%	1.22
6	Total Regulators	74,791	1,487,933.28	19.89	3,077,736.25	41.15	100.00%	
7								
8	Account 385							
9	Regulators							
10	2-inch	1	1,392	1,392.24	1,444	1,444.08	52.63%	1.00
11	>= 3-inch	3	917	305.52	1,300	433.29	47.37%	0.30
12	Total Regulators	4	2,308.81	577.20	2,743.94	685.99	100.00%	
13								
14	Accounts 383 & 385							
15	Regulators							
16	< 2-inch	70,611	982,998.61	13.92	2,176,560.12	30.82	70.66%	1.00
17	2-inch	1,951	403,524.70	206.83	717,870.55	367.95	23.30%	11.94
18	>= 3-inch	65	67,524.54	1,038.84	104,469.53	1,607.22	3.39%	52.14
19	Unclassified	2,168	36,194.24	16.69	81,579.99	37.63	2.65%	1.22
20	Total Regulators	74,795	1,490,242.09	19.92	3,080,480.19	41.19	100.00%	
21								
22								

		Number of	Number of	Regulators					Relative	
23		Customers	Regulators	< 2-inch	2-inch	>= 3-inch	Unclassified	Total	Unit Cost	$/Reg.
24										
25										
26	Customers									
27	Residential	40,693	65,957	65,957				65,957	1.00	30.82
28	General Service	5,405	8,761	4,654	1,939		2,168	8,761	3.47	107.10
29	LV	33	53		12	41		53	42.75	1,317.90
30	SC Trans.	15	24			24		24	52.14	1,607.22
31	Total Customers	46,146	74,795	70,611	1,951	65	2,168	74,795		

07/18/2003

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P12/13

Aquila Networks - MPS
Summary Throughput per Customer
For Year Ended Dec. 31, 2002

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
	Customer Class	Customers	Throughput mcf	Throughput/Cust mcf	Services Weighting Factor Relative	Used	Accts. 381-385 Weighting Factor Relative	Used
1	Residential	40,693	3,115,014	76.55	1.00	1	1.00	1
2	General Service	5,405	1,673,878	309.69	1.72	2	4.69	5
3	LV	33	2,283,795	69,205.91	10.16	10	17.12	20
4	SC Trans.	15	1,808,846	120,589.73	21.00	20	73.14	50
5	Total	46,146	8,881,533	192.47				

Schedule TJS-26
P13/13 w.p. TJS-14

07/18/2003

Schedule TJS-27
P1/13 WP-TJS-193

BLACK & VEATCH

MEMORANDUM

Aquila Networks – L&P (formerly St. Joseph Light & Power Co.)

B & V Project 134814.100

Development of Customer Weighting Factors

June 25, 2003

To: File

From: Larry Loos/Jerrad Hammer

The purpose of this memorandum is to discuss the development of the mains classification and customer weighting factors for the Aquila Networks – L&P class cost of service study. The following relationships are analyzed.

1. Account 376 Distribution Mains – A factor is developed which recognizes the proportion of investment in Account 376 which should be classified for allocation purposes as customer related, capacity (peak) related, and commodity (throughput) related.

2. Account 380 Services – A weighting factor is developed which recognizes the relative difference in the unit cost of service lines used to serve each customer class.

3. Accounts 381 through 385 – A composite weighting factor is developed which recognizes the relative difference in the unit cost to serve each customer class for the following elements:

   A. Accounts 381 and 385 Meters

   B. Accounts 382 and 385 Meter Installations

   C. Accounts 383 Regulators

All workpapers used in connection with these analyses are attached.

Throughout our analyses, relative relationships are developed based on costs restated to current cost levels. We restate embedded cost to current cost levels using Handy-Whitman trend factors. By developing relationships at current cost levels, inflationary impacts do not affect the analyses. This analysis is based on plant investment as of December 31, 2002.

Mains

There are three components of cost associated with service from a gas distribution system. These cost components are customer related, capacity (peak) related, and energy (commodity or throughput) related. Investment in mains is generally related to all three components of cost.

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P2/13 WP-TJS-194

Aquila Networks – L&P (formerly St. Joseph Light & Power Co.)
B & V Project 134814.100
Development of Customer Weighting Factors June 25, 2003

Providing retail natural gas service involves a number of functions. These functions include gas supply, peaking supply, transmission, distribution, and customer related (customer specific).[1] For gas distribution systems, distribution mains usually serve both a transmission and a distribution function.

As a functional classification, transmission represents the movement of natural gas from sources of supply to general areas of consumption. The distribution function on the other hand represents the movement of gas within general areas of consumption. For accounting purposes, most gas distribution systems do not classify any investment in mains as transmission. Gas distribution systems almost by definition must have distribution (and/or transmission) mains that serve a transmission function.

In Attachment A, we summarize basic data relating to distribution mains (Account 376). As shown, L&P has no mains classified as transmission. Examination of available maps of L&P's facilities indicates that there are substantial quantities of cross-country transmission mains. Based on the foregoing, and in consideration of further detail shown in Attachment A we conclude that all mains 6 inches and greater serve a transmission function and that all mains 4 inches and less serve a distribution function.

The allocation of investment in facilities serving a transmission function should recognize that these facilities are used to meet both peak and annual requirements of customers. These facilities, though sized to meet system peak requirements, are also used to meet annual requirements. To recognize this dual use, the cost of these facilities should be allocated on a basis that recognizes both peak and annual use of the facilities. A variety of methods have been used to recognize the dual nature of these facilities. For the purpose of allocating costs on the L&P's system, we use an equal weighting (Atlantic Seaboard) of peak and annual considerations.

If we examine 6 inch and larger mains we find that the trended original cost of mains in service as of December 31, 2002 is $2,246,063 (See Line 13 of Attachment A). Using the Atlantic Seaboard classification, 50 percent ($1,123,031.50) is allocated on capacity (peak) and 50 percent ($1,123,031.50) on commodity (throughput).

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[1] The customer related function is not the same as the customer related cost component. Likewise, though there is a great deal of similarity between the functions of a gas distribution system, and primary accounts used in connection with accounting systems, the two are not the same. For example, within the distribution primary account are the services, meters, and regulators used to serve individual customers. Costs associated with these items are considered customer related. There is also a customer component of distribution mains, which recognizes the implication of the distance between individual customers.

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P3/13 wp. TJS-195

Aquila Networks – L&P (formerly St. Joseph Light & Power Co.)
B & V Project 134814.100
Development of Customer Weighting Factors June 25, 2003

The allocation of investment in facilities serving a distribution function should recognize that the cost of these facilities is driven by two principle factors. First is the cost of extending the system to connect individual customers. Second is the cost associated with the capacity (peak day) requirements of the customers connected. Though facilities serving a distribution function are also used to meet customers' annual requirements, due to the local nature of the facilities and their customer specific cost, we do not allocate any cost associated with the distribution function on the basis of annual throughput. By allocating costs of facilities, which are functionally classified as distribution on the basis of number of customers and peak period requirements, reasonable results are achieved.

In other gas rate cases, we have used a classification/allocation basis for distribution mains that recognizes the functional use (transmission/distribution) of these facilities by classifying costs on a basis that recognizes the customer, capacity, and commodity related components of cost embedded in the distribution mains investment. Development of this classification takes two steps. First, we define what facilities serve a transmission function. Normally we conclude that mains of a certain size or larger (usually 8 inches) serve a transmission function. However, based on the size break down of mains on the L&P system, we have decided that mains 6 inches and larger serve a transmission function. In the second step we determine how the remaining investment (distribution function) should be split between customer and capacity. In our prior analysis, we have analyzed these relationships based on examination of relative capacity and cost relationships.

In evaluating what facilities serve a distribution function, we examine the relative capacity provided by various pipe sizes. Pipeline flow formulas generally suggest that the capacity of a pipeline is proportional to its diameter to something on the order of the 2.5 power. Raising the diameter to the 2.5 power and multiplying by distance results in an indication of the relative capacity of the system. In Attachment A, we show this development in column E. As shown, the relative capacity of distribution mains less than or equal to 4 inch amounts to 71.4 percent of the total capacity of distribution mains.

With respect to L&P's distribution mains, the trended original cost of 4 inch mains amounts to $3,740,522. The relative capacity of 4 inch mains amounts to 897,081 units; thus, the relative unit cost of capacity (4 inch distribution mains) amounts to about $4.17 per unit. The total relative capacity of mains under 6 inches is 1,623,170 units. Therefore, the cost of capacity associated with mains under 6 inches can be considered to be $6,768,618 (4.17 X 1,623,170) or 59.3 percent (6,768,618 /11,415,760) of the trended original cost of mains under 6 inches. With 59.3 percent of cost related to capacity, the remainder (40.7 percent) is customer related. If 40.7 percent of the cost of mains under 6 inches is customer related and the cost of mains under 6 inches amount to 83.6 percent of

the total, the customer component amounts to 34.0 percent (.836 X .407) of the cost of distribution mains (See Attachment A).

Combining the cost of 4 inch and smaller distribution mains with the 6 inch and larger ones, which we conclude serve a transmission function, we find that 13.8 percent of the total investment in distribution mains should be allocated on the basis of annual throughput (commodity), 57.8 percent on the basis of capacity (peak), and 28.4 on the basis of number of customers (See lines 21-25 of Attachment A).

In summary, since L&P has a no investment in mains classified as transmission, our classification of mains realizes that some of the investment classified as distribution mains, in fact serves a transmission function. Therefore, we find that with respect to distribution mains (Account 376) 13.8 percent of mains should be allocated on the basis of throughput, 28.4 percent on the basis of number of customers, and the balance (57.8 percent) on the basis of capacity.

Services

Plant investment in service lines is allocated to customer classes based on the number of customers weighted to recognize the relative differences in the unit investment cost in service lines used to connect customers in that class. The investment incurred to connect customers is a function of: 1) the average length of services and 2) the unit cost per foot. The unit cost per foot is primarily a function of the size of the service required. In Attachment B, we show available information regarding services provided by L&P. Attachment B lines 60 through 62 shows the calculated average service line length and the calculated trended per foot cost. From these values we calculate the average cost of service lines for the three respective sizes of services.

These calculated values do not correspond to our expectations. Specifically, we expect the service length and trended cost per service to increase as the size of the service increases. In order to recognize more reasonable relationships, for the purpose of this analysis we will assume an average service length of 19 feet for the 1 inch and less services, 80 feet for the over 1 inch through 2 inch services, and 100 feet for the over 2 inch through 4 inch services. We then recalculated the unit cost per service for each of the customer classes (See lines 66-68 of Attachment B) based on service costs derived from these estimated service line lengths and on the unit cost per foot.

We assume for the purpose of this analysis that smaller diameter services are used to serve small customers with progressively larger services being used to serve larger customers.

Aquila Networks – L&P (formerly St. Joseph Light & Power Co.)
B & V Project 134814.100
Development of Customer Weighting Factors
June 25, 2003

Therefore, we assume that all residential customers are served by 1 inch or less services, general service customers are served by the remainder of the 1 inch or less services and some over 1 inch through 2 inch services, and the large volume customers are served by some over 1 inch through 2 inch services and some over 2 inch through 4 inch services (See lines 75-77 of Attachment B).

Based on the previously identified assumptions, we find that the average cost per service for the respective customer classes is as follows:

Customer Class	Service Cost	Relative Cost
Residential	369	1.0
General Service	490	1.3
Large Volume[2]	1,946	5.3

Therefore, we find that weighting factors of 1, 2, and 5 should be used in connection with the service investment for the residential, general service, and large volume customers respectively.

Accounts 381 through 385

We do not distinguish between individual accounts because of the lack of detailed information available for the items contained within these accounts. Specifically, meter installations in account 382 and 385 are either classified as commercial, commercial/industrial, or unclassified and there are only three different classifications of regulators in accounts 383 and 385. This lack of detail makes it difficult to develop weighting factors for these accounts that fairly represent the costs associated with the respective customer classes. As a result, we include these costs with the meter costs and develop a single weighting factor for each respective class.

Meters (Accounts 381 and 385). Account 381 contains most of L&P's small volume meters and some large meters and account 385 contains many of the large volume meters. There is no information regarding which customers were served with meters charged to account 385. Furthermore, 17.3 percent of the trended unit cost (of account 381) is attributed to meters not classified by size (See line 4 of Attachment C).

[2] The large volume class in this study includes the large volume sales and large volume transportation customer classes. These classes were combined because of the relatively small number of customers contained within each class and similar usage characteristics. A single weighting factor was developed to be used for the three customer classes.

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Development of Customer Weighting Factors June 25, 2003

Based on the estimated number of customers using the various size meters we determine the average trended meter cost by class. As shown in Attachment C, we find that the average cost per meter for the respective customer classes is as follows:

Customer Class	Meter Cost
Residential	99
General Service	475
Large Volume	964

These average unit costs are based on the following assumptions:

1) The total number of meters listed in accounts 381 and 385 is less than the total number of customers. Therefore, the number of meters aggregated to the various customer classes represents a weighted total based on the total number of customers and total number of meters listed (See Lines 18-20 of Attachment C.
2) The residential customers all use meters less than 750 cf per hour.
3) The general service customers use the remaining less than 750 cf per hour meters, all of the meters between 750 and 999 cf per hour, the not classified by size meters, and 220 meters between 1,000 and 9,999 cf per hour.
4) The large volume customers all use meters between 1,000 and 9,999 cf per hour.

Meter Installations (Accounts 382 and 385). The meter installations in this accounts are classified as commercial, commercial/industrial, or unclassified. Examination of the accounts shows a total of 5,220 meter installations (5,165 unclassified, 53 commercial, and 2 commercial/industrial). The large number of unclassified installations, as well as, their low unit cost per installation compared to the commercial/industrial installations suggests that the residential customers use the unclassified meter installations. The data also suggest that some of the general service customers also use meters listed as not classified.

An examination of the accounts (See Lines 17-19 of Attachment D) suggests the following average cost of the meter installation attributable to each customer class:

Customer Class	Meter Inst. Cost
Residential	85
General Service	144
Large Volume	1,275

Regulators (Accounts 383 and 385). The investment analyzed includes both the regulator and the regulator installations. We therefore use a composite trend factor to trend original cost. This composite trend factor was developed assuming that 85 percent of the cost is attributable to the regulator and 15 percent to the installation. The number of regulators included in these accounts (7,216) is about 18 percent greater than the number of customers (6,130). Therefore, we assigned a weighted number of regulators to each customer class (See lines 11-13 of Attachment E).

An examination of the accounts (See Attachment E) suggests the following average cost of the regulator and regulator installation attributable to each customer class:

Customer Class	Regulator Cost
Residential	36
General Service	466
Large Volume	614

Weighting Factor. Combining the above costs per customer yield the following:

	Res.	Com.	Ind.
Meter	99	475	964
Meter Install.	85	1 44	1,275
Regulator	36	466	614
Total Cost	220	1,082	2,756
Relative Cost	1.0	4.9	13.0

Therefore, based on the average costs we developed for meters, meter installations, and regulators we find that weighting factors of 1, 5, and 15 should be used in connection with plant investment in accounts 381 through 385 for the residential, general service, and large volume customers respectively. See Attachment F for a summary of the average throughput per customer for each of the customer classes, as well as, the relative costs to serve each customer class and the weighting factors assigned to each respective customer class.

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Analysis of Mains (Account 376)
For Year Ended Dec. 31, 2002

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
	Description	Diameter	Original Cost	Length	"Capacity"	Cumulative Relative "Capacity"	Trended Original Cost	Trended Cost per Foot	$ Per Capacity Unit	Cumulative Relative TOC
			$	ft.	(1) ([B]/2)^2.5*[D]		$	[G]/[D]	[G]/[E]	
	Account 376: Distribution Mains									
1	<= 1-inch	1	36,206.88	6,794	1,201	0.05%	45,563.21	6.71	37.94	0.33%
2	> 1-inch and <= 2-inch	2	1,383,866.02	468,621	468,621	20.68%	5,377,684.95	11.48	11.48	39.70%
3	> 2-inch and <= 3-inch	3	421,522.08	92,996	256,267	31.95%	2,251,989.17	24.22	8.79	56.18%
4	4-inch	4	1,393,748.10	158,583	897,081	71.43%	3,740,522.21	23.59	4.17	83.56%
5	6-inch	6	225,221.96	14,969	233,344	81.70%	1,531,186.05	102.29	6.56	94.77%
6	>= 8-inch	8	77,959.40	12,996	415,872	100.00%	714,876.89	55.01	1.72	100.00%
7	Total Acount 376		3,538,524.44	754,959	2,272,385		13,661,822.49	18.10	6.01	
8										
9	Functional Classification									
10	Transmission (6" and Larger)									
11	Capacity		151,590.68				1,123,031.47			50.00%
12	Commodity		151,590.68				1,123,031.47			50.00%
13	Total		303,181.36	27,965	649,216	28.57%	2,246,062.95	80.32	3.46	100.00%
14										
15	Distribution (4" and Smaller)									
16	Capacity		1,918,295.61				6,768,617.98			59.29%
17	Customer		1,100,519.15				3,883,131.30			34.02%
18	Commodity		216,528.32				764,010.25			6.69%
19	Total		3,235,343.08	726,994	1,623,170	71.43%	11,415,759.54	15.70	7.03	100.00%
20										
21	System Total									
22	Capacity		2,069,886.29				7,891,649.46			57.76%
23	Customer		1,100,519.15				3,883,131.30			28.42%
24	Commodity		368,119.00				1,887,041.73			13.81%
25	Total		3,538,524.44	754,959	2,272,385	100.00%	13,661,822.49	18.10	6.01	100.00%
26										

			Distribution System	
27	Calculations			
28			1,623,170	Sum of [E] through 4"
29			4.17	[G]/[E] of 4"
30			6,768,617.98	Line 28 * Line 29
31			11,415,759.54	Sum of [G] through 4"
32		Capacity	59.29%	Line 30 / Line 31
33			40.71%	1 - Line 32
34		Customer	34.02%	Line 33 * [J] of 4"
35		Commodity	6.69%	Line 33 - Line 34

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wp-TJS-200
P813

Schedule TJS-27
P9/13 WP-TJS-201
Attachment B

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Summary of Services
For Year Ended Dec. 31, 2002

	[A] Description	[B]	[C] Quantity ft.	[D] Original Cost $	[E] Original Unit Cost $	[F] Trended Original Cost $	[G] Trended Unit Cost $	[H] % of Total
1	Plastic Services							
2	<= 1-inch		5,425	326,096.01	60.11	501,243.47	92.40	88.94%
3	1 1/4-inch		304	13,939.81	45.85	16,876.96	55.52	2.99%
4	2-inch		24	32,504.47	1,354.35	45,452.87	1,893.87	8.07%
5	Total Plastic Services		5,753	372,540.29	64.76	563,573.30	97.96	100.00%
6								
7	Poly Services							
8	1/2-inch		64	91.02	1.42	318.69	4.98	3.60%
9	5/8-inch		535	2,437.70	4.56	5,779.73	10.80	65.30%
10	3/4-inch		14	5.73	0.41	28.41	2.03	0.32%
11	1-inch		232	1,354.96	5.84	2,724.09	11.74	30.78%
12	Total Poly Services		845	3,889.41	4.60	8,850.93	10.47	100.00%
13								
14	PVC Services							
15	<= 1-inch		6	4,997.79	832.96	6,050.84	1,008.47	100.00%
16								
17	PE Services							
18	<=1-inch		12,326	557,680.22	45.24	660,830.90	53.61	92.16%
19	2-inch		2,990	48,870.24	16.34	56,200.66	18.80	7.84%
20	Total PE Services		15,316	606,550.46	39.60	717,031.55	46.82	100.00%
21								
22	Steel Services							
23	<= 1-inch		102,795	155,831.88	1.52	973,196.79	9.47	93.66%
24	1 1/4-inch		4,851	9,553.49	1.97	61,644.60	12.71	5.93%
25	2-inch		245	1,085.00	4.43	4,273.74	17.44	0.41%
26	Total Steel Services		107,891	166,470.37	1.54	1,039,115.14	9.63	100.00%
27								
28	Plasticoated Steel Services							
29	2-inch		4	1,719.44	429.86	4,804.04	1,201.01	100.00%
30								
31	Black Coated Services							
32	2-inch		42	840.06	20.00	973.11	23.17	100.00%
33								
34	Other Services							
35	3/4-inch		2,695	41,554.19	15.42	248,427.61	92.18	18.76%
36	1-inch		15	2,318.58	154.57	8,595.24	573.02	0.65%
37	2-inch		21	6,313.51	300.64	15,226.59	725.08	1.15%
38	Unclassified		14,974	313,141.93	20.91	1,051,833.23	70.24	79.44%
39	Total Other Services		17,705	363,328.21	20.52	1,324,082.66	74.79	100.00%
40								
41	Total Services							
42	<= 1-inch		124,107	1,092,368.08	8.80	2,407,195.77	19.40	65.69%
43	>= 1-inch and <= 2-inch		5,155	23,493.30	4.56	78,521.56	15.23	2.14%
44	>= 2-inch		3,326	91,332.72	27.46	126,931.01	38.16	3.46%
45	Unclassified		14,974	313,141.93	20.91	1,051,833.23	70.24	28.70%
46	Total Total Services		147,562	1,520,336.03	10.30	3,664,481.57	24.83	100.00%
47								

48 DOT Report - Number of Services

	Material	1" or Less	Over 1" thru 2"	Over 2" thru 4"	Total
50					
51	Steel	4,271	115	7	4,393
52	PE	2,109	28	-	2,137
53	Total	6,380	143	7	6,530
54					

	[A] Service Classifications	[B] Number of Services	[C] Quantity ft.	[D] Average Service Length ft.	[E] Trended Cost $	[F] Trended Cost per Foot $	[G] Trended Cost per Service $	[H] Relative Cost per Foot	[I] Relative Cost per Service
55									
56									
57									
58									
59	**Actual Data**								
60	1" or Less	6,380	124,107	19.45	2,407,195.77	19.40	377.30	1.00	1.00
61	Over 1" thru 2"	143	5,155	36.05	78,521.56	15.23	549.10	0.79	1.46
62	Over 2" thru 4"	7	3,326	475.14	126,931.01	38.16	18,133.00	1.97	48.06
63	Total	6,530	132,588	20.30	2,612,648.34	19.71	400.10		
64									
65	**Adjusted Data**								
66	1" or Less	6,380	121,220	19.00	2,351,199.14	19.40	368.53	1.00	1.00
67	Over 1" thru 2"	143	11,440	80.00	174,255.41	15.23	1,218.57	0.79	3.31
68	Over 2" thru 4"	7	700	100.00	26,714.28	38.16	3,816.33	1.97	10.36
69	Total	6,530	133,360	20.42	2,552,168.83	19.14	390.84		
70									
71									

	Customer Classes	Number of Customers	Number of Services	Service Size 1" or Less	Service Size Over 1" thru 2"	Service Size Over 2" thru 4"	Unit Cost per Service $	Relative Unit Cost
72								
73								
74								
75	Residential	5,284	5,628	5,628			368.53	1.00
76	General Service	823	877	752	125		489.68	1.33
77	LV	24	25		18	7	1,945.94	5.28
78	Total	6,131	6,530	6,380	143	7		

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Summary of Meters
For Year Ended Dec. 31, 2002

	[A] Description	[B]	[C] Quantity	[D] Original Cost $	[E] Original Unit Cost $	[F] Trended Original Cost $	[G] Trended Unit Cost $	[H] % of Total
	Account 381							
1	<750		5,415	398,516.90	73.59	538,453.53	99.44	75.56%
2	750-999		33	12,307.54	372.96	20,115.15	609.55	2.82%
3	1,000-9,999		173	22,976.82	132.81	31,025.82	179.34	4.35%
4	Not Available		288	83,860.86	291.18	122,984.75	427.03	17.26%
5	Total Account 381 Meters		5,909	517,662.12	87.61	712,579.25	120.59	100.00%
6								
7	Account 385							
8	1,000-9,999		70	75,638.34	1,080.55	203,324.96	2,904.64	100.00%
9								
10	Total Meters							
11	<750		5,415	398,516.90	73.59	538,453.53	99.44	58.79%
12	750-999		33	12,307.54	372.96	20,115.15	609.55	2.20%
13	1,000-9,999		243	98,615.16	405.82	234,350.78	964.41	25.59%
14	Not Available		288	83,860.86	291.18	122,984.75	427.03	13.43%
15	Total		5,979	593,300.46	99.23	915,904.21	9,230.05	100.00%

16			
17	Number of Customers		Meters
18	Residential	5,284	5,153
19	General Service	823	803
20	LV	24	23
21	Total	6,131	5,979

	Meters	Number of Meters	Cost $	Unit Cost	Meter Weight	Residential	Gen. Serv.	LV	Total
22									
23									
24									
25									
26									
27	<750	5,415	538,453.53	99.44	1.00	5,153	262		5,415
28	750-999	33	20,115.15	609.55	6.13		33		33
29	1,000-9,999	243	234,350.78	964.41	9.70		220	23	243
30	Not Available	288	122,984.75	427.03	4.29		288		288
31	Total Meters	5,979	915,904.21	153.19		5,153	803	23	5,979
				Relative Meter Weights		1.00	4.78	9.70	
				$/Meter		99.44	474.87	964.41	

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Schedule TJS-27
P10/13 WP-TJS-203

Attachment D

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Summary of Meter Installations
For Year Ended Dec. 31, 2002

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
	Description	Quantity	Original Cost	Original Unit Cost	Trended Original Cost	Trended Unit Cost	% of Total	Relative Unit Cost
			$	$	$	$		
1	Account 382							
2	Unclassified	5,165	117,780.86	22.80	439,768.19	85.14	99.79%	1.00
3	Commercial/Industrial	2	790.88	395.44	913.21	456.61	0.21%	5.36
4	Total Meter Installations	5,167	118,571.74	22.95	440,681.40	85.29	100.00%	
5								
6	Account 385							
7	Commercial	53	21,965.90	414.45	69,184.62	1,305.37		1.00
8								
9	Account 382 & 385 Combined							
10	Unclassified	5,165	117,780.86	22.80	439,768.19	85.14	86.25%	1.00
11	Commercial/Industrial	55	22,756.78	413.76	70,097.84	1,274.51	13.75%	14.97
12	Total Meter Installations	5,220	140,537.64	26.92	509,866.03	97.68	100.00%	
13								

		Number of	Number of	Meter Installations			Relative	
14		Customers	Regulators	Unclassified	Com./Ind.	Total	Unit Cost	$/Installation
15								
16								
17	Residential	5,284	4,499	4,499		4,499	1.00	85.14
18	General Service	823	701	666	35	701	1.69	143.82
19	LV	24	20		20	20	14.97	1,274.51
20	Total	6,131	5,220	5,165	55	5,220		

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Schedule TJS-27
P11/13 wp-TJS-203

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Summary of Regulators
For Year Ended Dec. 31, 2002

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
	Description	Quantity	Original Cost	Original Unit Cost	Trended Original Cost	Trended Unit Cost	% of Total	Relative Unit Cost
1	Account 383							
2	< 2-inch	6,372	106,530.15	16.72	226,858.74	35.60	32.88%	1.00
3	2-inch	350	159,306.43	455.16	224,038.77	640.11	32.47%	17.98
4	>= 3-inch	3	1,069.23	356.41	1,181.01	393.67	0.17%	11.06
5	Unclassified	491	130,365.94	265.51	237,867.69	484.46	34.48%	13.61
6	Total Regulators	7,216	397,271.75	55.05	689,946.21	95.61	100.00%	
7								

		Number of	Number of	Regulators					Relative	
8		Customers	Regulators	< 2-inch	2-inch	>= 3-inch	Unclassified	Total	Unit Cost	$/Reg.
9										
10										
11	Residential	5,284	6,219	6,219				6,219	1.00	35.60
12	General Service	823	969	153	325		491	969	13.08	465.79
13	LV	24	28		25	3		28	17.24	613.94
14	Total	6,131	7,216	6,372	350	3	491	7,216		

Schedule TJS-27
P12/13 wp. TJS-204

Aquila Networks - L&P (formerly St. Joseph Light & Power Co.)
Summary Throughput per Customer
For Year Ended Dec. 31, 2002

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
	Customer Class	Customers	Throughput	Throughput/Cust	Services Weighting Factors Relative	Services Weighting Factors Used	Accts 381-385 Weighting Factors Relative	Accts 381-385 Weighting Factors Used
			mcf	mcf				
1	Residential	5,284	433,015	81.95	1.00	1	1.00	1
2	General Service	823	191,250	232.38	1.33	2	4.93	5
3	LV	24	415,582	17,315.92	5.28	5	12.96	15
4	Total	6,131	1,039,847	169.60				

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Schedule TJS-27
P13/13 WP-TJS-205

MPS-NS District **Service Line Function**	Imhoff's Direct Service Line Costs (1)	Imhoff's Functionalization Summary (2)
	$1,950,318	$2,868,239
Depreciation Expense		
380 Services	$474,348	$474,348
	$474,348	$474,348
O&M Expense		
870 Supervision & Engineering		$41,866
871 Load Dispatch		$3,025
874 Main & Services	$126,153	$163,694
879 Customer Install. - Other	$148,165	$148,165
880 Other Operation Expenses		$100,162
881 Rents		$11,926
885 Supervision & Engineering		$6,616
892 Services	$142,484	$142,484
894 Other Equipment Maint.		-$1,732
Total Distribution O&M Expense	$416,802	$616,205
Administrative and General Expenses	$0	$365,923
Total O&M Expense	$416,802	$982,128
Total Taxes Other Than Income		$280,826
Total Income Taxes		$214,326
Total Rate Base Alloc. To Service Line Function	$11,071,040	$11,205,511
Rate of Return	8.18%	8.18%
Return on Rate Base	$905,611	$916,611
Tax Multiplier	1.1696	
Total Return on Rate Base	$1,059,168	
Total	$1,950,318	$2,868,239

(1) Direct service line costs shown in Imhoff's Schedule 5 ($1,950,318), Customer Charge Table. Detail from Imhoff's electronic cost of service file, "cos for MPS-NS district - 1.10.04 Imhoff Work Paper.xls"

(2) Source: Imhoff's electronic cost of service file, "cos for MPS-NS district - 1.10.04 Imhoff Work Paper.xls"