EXECUTIVE SUMMARY
SURREBUTTAL TESTIMONY OF DAVID L. STOWE
DOCKET NO. EO-2002-384

In his surrebuttal testimony, Aquila witness David L. Stowe addresses the rebuttal testimony of the Missouri Public Service Commission Staff ("Staff") and Office of the Public Counsel ("OPC"). Stowe explains the foundations of the capacity utilization method of allocating costs, and describes how Staff's time-of-use ("TOU") allocator departs from those foundations. Stowe also describes inconsistencies in the Staff's and OPC's logic, and shows how that flawed logic has led them to faulty conclusions.

SECTION I: Update of Cost of Service Studies.

This section states the fact that certain parties made changes to the inputs to their COS studies and introduces Surrebuttal Schedule DLS-1 which is a tabular comparison of the parties' results.

SECTION II: Introduction and Recommendations

In this section, Aquila witness David L. Stowe is reintroduced and explains the purpose of his surrebuttal testimony. Stowe concludes the section with the recommendation that the Commission endorse Aquila's COS methods and approve the COS results for use in Aquila's rate design.

SECTION III: Allocation of Fixed Production Costs

In this section, Aquila witness Stowe discusses Staff's TOU allocation of production costs. Stowe emphasizes these facts: 1. Capacity utilization-like allocations (like Staff's TOU method) are not commonly used by anyone in the industry; 2. Staff rejects the use of "peak responsibility" methods, which are commonly used, as unrealistic; 3. Staff combines methods based on cost causation and capacity utilization, creating a hybrid method composed of both concepts; 4. Staff's COS relies on "peak responsibility" allocators to distribute certain costs; and 5. Staff's TOU method is significantly different from the typical capacity utilization method.

SECTION IV: A Properly Completed Capacity Utilization Study

In this section, Stowe outlines the steps needed to complete a proper capacity utilization study. The data requirements necessary to complete each step are also described. Stowe shows that Staff calculated its "capacity utilization-like" allocators without the aid of the critical supporting studies, and demonstrates that Staff has, in the past and when sufficient data was not available for the TOU study, used peak responsibility methods.

SECTION V: Allocation of Fixed Transmission Costs

In this section, Stowe explains the illogic of defining baseload, intermediate, and peaking functions for the transmission system. Stowe shows that these functions are defined by Staff simply to justify its use of the TOU allocators to distribute fixed transmission costs.

SECTION VI: Classification of Distribution System Costs

In this section Stowe describes a variety of concerns with respect to the OPC's inconsistent classification of primary and secondary fixed costs.

Exhibit No.:	
Issues:	Fixed Production Costs Allocation, Fixed Transmission Costs Allocation, Distribution Cost Classification
Witness:	David L. Stowe
Sponsoring Party:	Aquila Networks – L&P Aquila Networks – MPS
Case No.:	EO-2002-384

Before the Public Service Commission
Of the State of Missouri

Surrebuttal Testimony

Of

David L. Stowe

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BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI
SURREBUTTAL TESTIMONY OF DAVID STOWE
ON BEHALF OF AQUILA INC.
DOCKET NO. EO-2002-384

SECTION I: Introduction and Recommendations

Q. Please state your name and business address.

A. My name is David Stowe and my business address is 10700 East 350 Highway, Kansas City, Missouri 64138.

Q. Are you the same David Stowe that filed direct and rebuttal testimony in this case on behalf of Aquila, Inc. ("Aquila", or "Company")?

A. Yes, I am.

Q. What is the purpose of your surrebuttal testimony in this case before the Missouri Public Service Commission ("Commission")?

A. My surrebuttal testimony will respond to the rebuttal testimony of Commission Staff ("Staff") regarding Staff's time-of-use ("TOU") allocation method. I will also respond to the rebuttal testimony of the Office of the Public Counsel ("OPC") regarding the classification of distribution costs.

Q. What are your recommendations?

A. I recommend that the Commission:

- Reject the Staff's cost of service ("COS") study due to Staff's misuse of the hybrid TOU allocation of fixed production and transmission costs.
- Reject the OPC's COS due to the numerous errors and inconsistencies found in the methods and supporting data.

- Adopt Aquila's COS study and use the resulting revenues as a basis for designing new rates in this case.

SECTION II: Update of Cost of Service Studies

Q. Have the parties made changes to their COS studies since the original filing of direct testimony?

A. Yes, the Staff, the OPC, and the Sedalia Industrial Energy Users Association ("SIEUA") made minor changes to their COS study inputs. The reasons for those changes are described in each parties' rebuttal testimony.

Q. How did these changes affect the results of the Staff's, the OPC's, and the SIEUA's COS studies?

A. Surrebuttal Schedule DLS-1 briefly lists the COS latest results. Staff distributed updated work papers too late to fully analyze, but I believe the results shown in Surrebuttal Schedule DLS-1 for the Staff to be reasonably accurate.

Q. Has Aquila made changes to its COS study since the original filing of direct testimony?

A. No, but the COS results of certain classes were combined in Surrebuttal Schedule DLS-1 for uniformity and comparison purposes.

SECTION III: Allocation of Fixed Production Costs

Q. Have you read the rebuttal testimony of Staff witness James Watkins?

A. Yes.

Q. What allocation method does the Staff support for distributing fixed production costs?

A. Staff supports the time-of-use ("TOU") allocation of fixed production costs.

Q. Is the Staff's TOU allocation method commonly used to distribute fixed costs?

A. No. In response to data request 12 from the Sedalia Industrial Energy Users Association (SIEUA), Staff responded, "Staff is unaware of any other Commission that utilized the generation allocation method, except for the MoPSC[1]".

Q. Does Staff explain its reasons for supporting the TOU allocation method for distributing fixed production costs?

A. Somewhat. In his rebuttal testimony, Staff witness Watkins attempts to explain the shortcoming of what he terms the "peak responsibility" methods. The implication is that the TOU allocation method does not have this shortcoming.

Q. What is the shortcoming of the "peak responsibility" methods according to witness Watkins?

A. He claims that "peak responsibility" methods do not consider how capacity is utilized throughout the year, and because of this, these methods "have no basis in reality.[2]"

Q. Does Staff explain how capacity costs are utilized throughout the year?

A. In his rebuttal testimony, Staff witness Watkins writes,

> "An electric utility's resource planning process considers the tradeoff between the higher capacity cost and *lower running costs of coal* fired generation and the lower capacity cost, but *higher running costs of natural gas*-fired generation in

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[1] Copies of the data requests cited in this surrebuttal are attached as Surrebuttal Schedule DLS-1.
[2] Rebuttal testimony of James C. Watkins, pg. 4.

determining what type of capacity it should add next. Furthermore, in dispatching generation to serve load, the *lowest running cost units* are dispatched first, and the *highest running cost units* are dispatched last. This results in the *lowest running cost units* being utilized in every hour throughout the year that they are available, and *the highest running cost units* being reserved to meet reserve margins (*i.e.*, available, but not running) except in the few hour of the year when no cheaper alternatives are available.[3]" [emphasis added]

While the excerpt from Staff witness Watkins' testimony mentions capacity (i.e., fixed) costs, his explanation focuses primarily on the running costs. By doing so, the quote reveals something remarkable about the basis of Staff's allocation of fixed costs.

Q. What does the quote reveal?

A. It reveals a reversal of logic.

Q. Please explain.

A. When Staff shifts the focus from the cause of fixed capacity costs to emphasize the "running" or variable costs instead, it implies that the issue is no longer about fixed costs and their cause. Staff suggests that the issue is now about the variable

[3] Id. pg. 4.

costs involved in running, dispatching, and utilizing the power plants, and the utilization of their capacity.

Q. What about the actual cause of the costs?

A. The true cause of the costs, (i.e., the capacity of the equipment), is obscured by the notion that capacity utilization trumps cost causation. Staff "supports" this reversal of logic by insisting in direct and rebuttal testimony that loads throughout the year determines fixed costs, an idea that is demonstratively incorrect. The inconsistency of using two fundamentally different allocation methods in the same COS, as I explain in more detail later in this testimony, is never explained by Staff witnesses. Yet, Staff relies on its questionable assumptions to justify the move from a COS based on cost causation, to a hybrid COS based loosely on capacity utilization.

Q. What assumptions does the Staff accept that allows it to move from cost causation to capacity utilization?

A. Staff attempts to tie fixed and variable costs together by making one critical assumption: Units that cost less to operate will run throughout more of the year. Thus the costs of those units, which tend to be the most expensive to build, should be allocated to the customers according to the "utilization" of the capacity. This is one of the fundamental concepts behind the capacity utilization method. Staff assumes its TOU allocation is equivalent to this method.

Q. Do you agree that the Staff's TOU allocation is equivalent to the capacity utilization method?

A. No. Staff's TOU allocators distribute all fixed costs as baseload capacity costs whereas the capacity utilization method assigns the costs of baseload, intermediate, and peaking units separately to the classes that caused them to operate.

SECTION IV: A Properly Completed Capacity Utilization Study

Q. Earlier you discussed the Staff's inconsistency of using two fundamentally different allocation methods in the same COS. Please explain what you meant.

A. Every party in this case has testified that costs should be distributed to the classes using a method which considers the cause of those costs. Consistent with this, costs classified as "demand" related were distributed using demand allocators. Fuel and purchased power expenses, which were classified as "energy", were distributed using energy allocators, and meter and services costs were classified as "customer" and distributed using customer weighted allocators. This is the basic premise of any embedded COS study.

Inexplicably, after following this process for much of its COS study, Staff attempts to allocate millions of dollars in fixed, demand related, costs based on capacity utilization; a method that is inconsistent with the Staff's own classification of these costs, and is clearly unrelated to the cause of the costs. To complicate the matter, Staff's TOU allocators are applied in a manner which is inconsistent with typical capacity utilization techniques. Time-differentiated methods, such as the capacity utilization method Staff's TOU method, require radically different datasets than were used in this case.

Q. Please explain what you mean.

A. A simple example can be used to illustrate the techniques and data requirements of a proper capacity utilization study. Consider a utility with three types of generation facilities. We will name them baseload, intermediate, and peaking units. Suppose that the baseload units operate during every hour of the year, and that they are the most expensive units to build. Analysis finds the fixed costs of these units equal 50% of the total fixed production costs. A proper capacity utilization study requires that the fixed costs of the baseload units be distributed to the classes using a proper allocator over the proper time period. Since the baseload units operate in every hour of the year, and since the fixed costs are caused by the capacity of the baseload unit, it is proper to use an allocator based on hourly demands for every hour of the year.

Q. Did the Staff identify the costs associated with the baseload units?

A. No. Staff used total fixed costs which included the costs of all of Aquila's generation units when distributing fixed production costs to the classes.

Q. Please continue.

A. The second step in a proper capacity utilization study is to allocate the fixed costs of intermediate units. Just as in the preceding step, these fixed costs need to be separately identified and allocated. An additional study is required to determine how many hours of the year the intermediate units operate. Suppose that the correct analyses are completed, and the fixed costs of the intermediate units are found to be 25% of total fixed production costs. In addition, the intermediate units are found to run for 12 hours each day, beginning at 6:00 a.m. The units'

fixed costs must now be distributed to the customers who caused those units to operate, based on their hours of operation.

The lighting class should be excluded from sharing these costs because intermediate units are not generally operated to service nighttime loads. There may be other classes which could be excluded from sharing the intermediate unit fixed costs as well, but an adequate study is required to identify them. Once the remaining classes are identified, the intermediate units' fixed costs are distributed using a method that fairly allocates the costs.

Q. In calculating its TOU allocators, did Staff attempt to identify the fixed costs of the intermediate units, their hours of operation, or the classes which utilize their capacity?

A. No.

Q. Please continue.

A. In the final step, the fixed costs of the peaking units are allocated. These fixed costs are simply the remainder of the total fixed production costs. Again, certain analyses are needed to identify the classes that share these units' costs and the hours in which they operate. The lighting class did not share in the intermediate costs, so it is also exempt from sharing these costs, and due to its high load factor, the industrial class would probably be excluded as well. If analyses found the peaking units to be in operation for 2 hours a day, the final 25% of the fixed production costs would be distributed to the remaining classes using a method that fairly allocates the costs over that period of time. In this case, an allocator that considers the few hours of operation and allocates on the demand ratios

during those few hours. Such an allocator is, by definition, a "peak responsibility" allocator.

Q. In calculating its TOU allocators, did Staff identify the fixed costs of the peaking units, their hours of operation, or the customer classes which utilized their capacity?

A. No.

Q. Did Staff attempt to allocate any portion of the fixed production costs using a "peak responsibility" allocator?

A. No.

Q. Are "peak responsibility" allocation methods commonly used by cost analysts to distribute fixed production costs?

A. Yes. A "peak responsibility" method should be used to distribute some or all of the fixed production costs as part of *any* COS study, including those using the capacity utilization method.

Q. Did the Staff use a "peak responsibility" allocation method to distribute any fixed costs, other than those associated with production, in this case?

A. Yes. Staff distributed millions of dollars in distribution fixed costs using methods that considered the class peak and customer peak demand.

Q. In the past, has the Staff ever used a "peak responsibility" allocation method to distribute fixed production costs?

A. Yes. Staff witness James Watkins responded to data request number 3 from SIEUA by stating, "I believe that *hourly data was not available in those cases,* and the Staff's *"Average and Peak" method using 12 Class Peaks was*

adopted..." Clearly, the precedent has been established that when the proper data is not available for a complete TOU analysis, the Staff proposed and the Commission adopted a "peak responsibility" method.

Just as adequate data was not available for a complete TOU analysis in *that* case, adequate data is also not available in *this* case. Neither has Staff completed the supporting studies to obtain that data. Even so, Staff continues to support its TOU allocators in this case, based on assumptions and approximations, as the proper and reasonable way to distribute fixed production costs.

The Commission should reject Staff's COS as unreliable because it is a hybrid of two fundamentally different allocation methods which do not support each other, and contains significant errors and inconsistencies.

SECTION V: Allocation of Fixed Transmission Costs

Q. Does the Staff use its TOU allocation method to distribute fixed transmission costs?

A. Yes.

Q. Does Staff witness Watkins explain his reasons for supporting the TOU allocation method for fixed transmission costs?

A. Yes. In his rebuttal testimony, he states:

> "Even though the cost per kW of each kW of transmission capacity is the same, a portion of the transmission capacity serves a baseload function, *i.e.*, it is required to carry load in every hour of the year that it is available, a portion serves an intermediate function, and a portion serves a peaking function, *i.e.*, that portion

of the transmission capacity is required only to carry the peak loads.[4]"

Q. Is it common practice to identify baseload, intermediate, and peaking functions of the transmission system?

A. No. In fact, to my knowledge, it is unprecedented. In recent discussions with Aquila's transmission planning group I found nobody in that group was familiar with the concept of subdividing the transmission system into functions. The notion that a portion of the transmission serves a base or intermediate load is nonsensical and defies the physics of the system.

Q. How does it defy the physics of the system?

A. Transmission systems are designed and operated to carry power at specific high voltages (e.g., 245 KV). As the loads change throughout the year, these high voltages remain the same. Only the electrical current on the lines will change. Due of the high voltages, larger distances are needed, between the conductors and other conductors, towers, buildings or the ground, to prevent arcing. Thus, much of the transmission fixed costs are used to build these distances into the transmission system and are directly related to the specified *voltage*. The remainder of the fixed cost is used to purchase and install transmission equipment (e.g., transformers) which must be capable of handling the *maximum load.* In other words, the transmission system is designed to transmit the maximum power at sustained operating voltages. There is no parameter or characteristic that

[4] Id. pg. 5

suggests a baseload, intermediate, or peaking function of the transmission system. Staff witness Watkins has imagined "functions" of the transmission system that truly do not exist in the physical world.

Q. Is there any real benefit for dividing the fixed transmission costs into baseload, intermediate, and peaking functions?

A. None whatsoever. Staff recognizes this fact when witness Watkins writes, "While, unlike generating capacity, there is only one type of transmission capacity..." However, after this admission, he concludes, "... its utilization throughout the year should be accounted for in allocating transmission capacity costs.[5]" Here again, Staff makes a critical assumption which is never explained or justified. However, when that assumption is accepted, the way is opened for the TOU allocators, with all their inconsistencies, to distribute fixed transmission costs.

SECTION VI: Classification of Distribution System Costs

Q. Have you read OPC witness Barb Meisenheimer's rebuttal testimony wherein she describes the classification of primary and secondary distribution costs?

A. Yes, I have.

Q. How does the OPC classify primary and secondary distribution costs?

A. The OPC classifies all primary distribution costs as demand related, and all secondary distribution costs as demand and customer related.

Q. What reason does the OPC give for classifying primary costs as demand related rather than demand and customer related?

A. A couple of reasons are given. OPC witness Meisenheimer states:

> "First, from a network perspective, most residential and business customers receive electricity from secondary distribution lines. Therefore, these facilities are most closely linked to customers and are less likely to have flexibility in alternative service arrangements.[6]"

Q. Do you agree with this statement?

A. Yes and no. It is correct to say that most of Aquila's customers take service at secondary voltages. However, one could just as correctly say that *every* customer receives electricity from the primary system. This is because the primary system serves the secondary system. Every customer served by the secondary is also served by the primary. The OPC's contrivance of a "closer link" between the secondary and the customer ignores the fact that some portion of the entire distribution system is necessary to serve the customer.

The phrase, "flexibility in alternative service arrangements" is also very unusual and out of place in this discussion. The OPC never explains what "alternative service arrangements" are, or how they gain and lose flexibility. One is left to guess at the witness' meaning. Aquila does offer *alternative rates*, but these are typically offered based on the customer's load and usage characteristics, not on an arbitrary "link" to the customer.

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[5] Id. pg. 5
[6] Rebuttal testimony of Barbara Meisenheimer, pg. 8

Q. What other reasons does the OPC give for classifying primary distribution differently than secondary?

A. OPC witness Meisenheimer states:

> "Next, secondary, defined as service provided at lower voltage is, therefore, less able to accommodate a large number of users.[7]"

Q. Do you agree with this statement?

A. No.

Q. Why not?

A. The quote states that the secondary system is less able to accommodate as many customers as the primary system. Yet the OPC's previous point was that the *majority* of customers are served from the secondary system. The two statements are incompatible. Either the secondary serves the majority and is therefore able to accommodate large numbers of users, or the secondary serves the *minority* and is *unable* to accommodate large numbers of users. The secondary cannot both serve the majority, and be **unable** to accommodate large numbers of users at the same time.

Q. Is there another possible interpretation?

A. It is possible that the OPC is only suggesting that individual secondary conductors serve fewer customers than individual primary conductors. If that is the intent, I would confirm that a segment of conductor can indeed carry more power at higher voltages than at lower voltages. However, the issue involves more than just the

conductors. Distribution costs are incurred to purchase conductors, poles, cross-arms, guy wires, circuit reclosers, transformers, capacitors, conduit, insulators, fuses, etc. Some of these components operate at primary voltages, some at secondary voltages, and all are used to serve Aquila's large number of customers.

Q. How does the OPC describe the impact of allocating distribution costs as customer related?

A. OPC witness Meisenheimer states:

> "The results of such allocations of distribution costs would be to place an unfair and unjustified burden on the smaller consumers, resulting in subsidies among classes and within classes...many cost analysts agree that classification by the minimum-size system method results in a double allocation of costs to low usage customers. This same problem is also inherent in any other technique, including the minimum-intercept method, which seeks to split the distribution investment into portions which depend separately upon demand and numbers of customers.[8]"

The first sentence in this quote is nearly identical to a statement by Davis J. Lessels' in an article published in *Public Utilities Fortnightly*[9]. Mr. Lessels' statement was applied to *every* method that classified any distribution costs other

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[7] Id. pg. 8
[8] Id. pg. 10
[9] "The results of these allocations of consumer costs were to place an unfair and unjustified burden on the smaller consumers, resulting in subsidies among classes and within classes." Davis J. Lessels, *Public Utilities Fortnightly*, Vol. 106 (#12), December 4, 1980 pg. 39.

than meters and services as customer related. While I disagree with Mr. Lessels conclusions, I find it noteworthy that the OPC attempts to support its position with comments that oppose the method the OPC used.

Q. Since Mr. Lessels' article was published, which regulatory Commissions have adopted the classification of distribution costs as both customer and demand?

A. The state regulatory Commissions that have approved this method of classification include Colorado, Connecticut, Florida, Maine, Missouri, New York, North Carolina, Pennsylvania, Utah, and Wisconsin. These are only the Commissions I have been able to identify in a brief search. The list could be much longer.

Q. Do Mr. Lessels' research and comments address utilities like Aquila?

A. No. In the *Public Utilities Fortnightly* article, Mr. Lessels, a longtime employee of the Rural Electrification Administration writes, "Our studies covered a population of primarily rural electric systems. *We do not assert that similar results would be obtained on distribution systems of all electric utilities.*[10]"

Q. Will Aquila's classification of distribution costs place an unfair or unjustified burden on certain customers?

A. Not at all. It has been the stated goal of every party to allocate costs to the customers for whom the costs were incurred to serve. If more costs are shown by the COS studies to be the responsibility of a certain class of customers, then those added costs will be the fair and justified burden which that class should bear.

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[10] Id. pg. 39 [emphasis added]

Q. Which parties have allocated distribution costs into portions which "depend separately upon demand and the number of customers[11]"?

A. Every party, including the OPC, has classified distribution costs as both demand and customer.

Q. What techniques were used by the parties to determine the customer and demand portions of distribution costs?

A. Every party, including the OPC, used values provided by Aquila from our zero-intercept study.

Q. Does this conclude your surrebuttal testimony?

A. Yes.

[11] Rebuttal testimony of Barbara Meisenheimer, pg. 10

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of an Examination of Class Cost of Service And Rate Design in the Missouri Jurisdictional Electric Service Operations of Aquila, Inc., formerly known as UtiliCorp United Inc.	))))	Case No. EO-2002-384

County of Jackson)
) ss
State of Missouri)

AFFIDAVIT OF DAVID L. STOWE

David L. Stowe, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Surrebuttal Testimony of David L. Stowe;" that said testimony was prepared by him and 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.

David L. Stowe

Subscribed and sworn to before me this 27th day of October 2005.

Notary Public
Terry D. Lutes

My Commission expires:

8-20-2008

Notary Public Notary Seal State of Missouri

TERRY D. LUTES
Jackson County
My Commission Expires
August 20, 2008

Cost of Service Result Comparison

Aquila Networks - MPS Service Territory

Aquila				Staff			BAI			OPC		
MPS	**($)**	**(%)**		**MPS**	**($)**	**(%)**	**MPS**	**($)**	**(%)**	**MPS**	**($)**	**(%)**
RES-GEN	$15,898,191	13.09%	8.22%	RES	$4,533,994	2.67%	RES	$15,767,357	9.27%	RES	($352,310)	-0.20%
RES-SH	($1,911,037)	-3.93%										
SGS-S	($5,185,134)	-9.64%	-9.66%	SGS	($2,245,612)	-4.17%	SGS	($5,457,184)	-10.13%	SGS S&C Muni	($2,978,263)	-5.45%
SGS-P	($15,562)	-20.70%										
LGS-S	($6,570,348)	-15.46%	-14.91%	LGS	($3,738,907)	-8.46%	LGS	($5,971,419)	-13.51%	LGS	($1,517,050)	-3.38%
LGS-P	($18,370)	-4.27%										
LPS-S	($2,249,538)	-8.62%	-6.86%	LPS	$1,103,191	2.16%	LP	($4,375,026)	-8.56%	LPS	$4,714,387	9.07%
LPS-P	($1,255,689)	-5.03%										
OTHER	$44,097	7.82%	7.82%	Other	$69,555	12.33%	SC	$36,272	14.16%	SC	$133,235	23.15%
LIGHTS	$1,263,390	24.47%	24.47%	Lighting	$277,779	5.38%						

Aquila Networks - L&P Service Territory

Aquila				Staff			BAI			OPC		
L&P	**($)**	**(%)**		**L&P**	**($)**	**(%)**	**L&P**	**($)**	**(%)**	**L&P**	**($)**	**(%)**
RES-GEN	$1,676,021	7.88%	6.88%	RES	$2,066,124	5.03%	RES	$5,572,654	13.56%	RES	$294,102	0.70%
RES-H2O	$692,940	13.38%										
RES-HEAT	$465,482	3.15%										
SGS	($936,669)	-12.34%	-12.34%	SGS	($989,163)	-13.06%	SGS	($1,112,518)	-14.69%	SGS	($1,333,277)	-17.26%
LGS-S	($1,235,591)	-7.14%	-7.76%	LGS	$1,704,135	-9.61%	LGS	($2,423,500)	-13.67%	LGS	($948,679)	-5.23%
LGS-P	($124,253)	-59.37%										
LPS-S	($80,977)	-0.42%	-1.48%	LPS	$569,029	2.48%	LPS	($2,036,637)	-8.89%	LPS	$1,987,854	8.45%
LPS-P	($259,760)	-7.32%										
LIGHTS	($197,193)	-8.79%	-8.79%	LIGHTS	$58,144	2.60%						

Surrebuttal Schedule DLS-1: Comparison of COS Results

AQUILA NETWORKS, INC. D/B/A AQUILA MPS AND SJLP
EO-2002-384
Data Request
of
SIEUA and AGP
to
Missouri Public Service Commission Staff
September 27, 2005

Item No. Description

3. At page 12 of his testimony, line 14, Mr. Busch states that "The TOU allocation methodology has been favored by past Commissions." With respect to this statement, please:

a. Describe fully the TOU allocation methodology that has been favored by past Commissions.

Staff Response:

It is my understanding that past Commissions have expressed the position that costs are caused by the utilization of the system each hour and the proper method of allocating those costs is on an hourly basis. I believe that hourly data was not available in those cases, and the Staff's "Average and Peak" method using 12 Class Peaks was adopted as most closely approximating the more preferable hourly TOU method.

b. Compare each element of methodology with the methodology being proposed in this proceeding.

Staff Response:

As I stated in response to part a, the Commission adopted a principle, not a methodology. The methods used by the Staff in this case are based on that principle, and are made possible by the availability of hourly class load data in this case.

c. Provide citations and copies of relevant portions of Orders for each instance in which the TOU allocation methodology was favored by past Commissions.

Staff Response:

The following is a list of case number, name of utility and date of Commission Orders that I'm aware of:

(1) Case No. ER-81-364 (Arkansas Power & Light Company), April 20, 1982
(2) Case No. EO-78-161 (Kansas City Power & Light Company), February 28, 1983
(3) Case Nos. EO-85-17 and ER-85-160 (Union Electric Company), March 29, 1985

"...The Commission has indicated in recent cases that it believes the TOU [time of use] cost of service study most closely reflects cost causation of a utility's production and transmission facilities. Staff presented the same method to the Commission in Case No. ER-81-364 involving Arkansas Power & Light Company (AP&L), issued April 20, 1982. In that case, the Commission was presented with the same question of which theory properly reflected cost causation, TOU or CP. The Commission adopted the TOU/AP method. The Commission also adopted the TOU over the CP method of allocating costs in Case No.EO-78-161, which involved Kansas City Power & Light Company....The Commission considers its reasoning from the AP&L case to be supported by the evidence in this case. The Commission reaffirms its position that costs are caused by the utilization of the system each hour, and the proper method of allocating these costs is on an hourly basis. Here, as in AP&L, there is no hourly load data, so Staff's study utilizing TOU monthly data and AP [average and peak] allocation within the month is found to most closely approximate the more preferable hourly TOU... " [Case Nos. EO-85-17 and ER-85-160, pages 154-155]

The attached or above information provided to the requesting party or parties in response to this data or information request is accurate and complete and contains no material misrepresentations or omissions, based upon present facts to the best of the knowledge, information or belief of the undersigned. The undersigned agrees to immediately inform the requesting party or parties if during the pendency of this case any matters are discovered which would materially affect the accuracy or completeness of the attached information and agrees to regard this as a continuing data request.
As used in this request the term "document" includes publications in any format, work papers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data recordings, transcriptions and printer, typed or written materials of every kind in your possession, custody or control or within your knowledge. The pronoun "you" or "your" refers to the party to whom this request is tendered and named above and includes its employees, contractors,
agents or others employed by or acting in its behalf.

Signed: James C. Watkins

Date: 10/14/05

AQUILA NETWORKS, INC. D/B/A AQUILA MPS AND SJLP

EO-2002-384

Data Request
of
SIEUA and AGP
to
Missouri Public Service Commission Staff

September 27, 2005

Item No.	Description
12.	Please identify all commissions of which you are aware that utilize the generation allocation method that Staff has proposed in this case. Provide a copy or citation to any case approving the use of such method.

STAFF IS UNAWARE of ANY other Commission that utilizes the generation allocation method, except for the Mo PSC.

The attached or above information provided to the requesting party or parties in response to this data or information request is accurate and complete and contains no material misrepresentations or omissions, based upon present facts to the best of the knowledge, information or belief of the undersigned. The undersigned agrees to immediately inform the requesting party or parties if during the pendency of this case any matters are discovered which would materially affect the accuracy or completeness of the attached information and agrees to regard this as a continuing data request.

As used in this request the term "document" includes publications in any format, work papers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data recordings, transcriptions and printer, typed or written materials of every kind in your possession, custody or control or within your knowledge. The pronoun "you" or "your" refers to the party to whom this request is tendered and named above and includes its employees, contractors, agents or others employed by or acting in its behalf.

Signed: [signature]

Date: 10/13/05