BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI
* * * *

In the Matter of an Examination of the ）
Class Cost of Service and Rate Design ） **Case No. EO-2002-384**
in the Missouri Jurisdictional Electric ）
Service Operations of Aquila, Inc ）

POST-HEARING BRIEF OF THE FEDERAL EXECUTIVE AGENCIES

I. BACKGROUND

The FEA Average and Excess (A&E) 3 non-coincident peak (NCP) method for allocating production/generation and transmission costs is a reasonable approach which fairly balances the interests of Aquila customers, Federal and non-Federal alike. One of the largest Aquila Federal customers is Whiteman Air Force. Whiteman is also one of the largest employers in Central Missouri. Whiteman AFB is a Large Power Service (LPS) customer on the Aquila Missouri Public Service (MPS) system.

The Federal Executive Agencies' (FEA) cost of service study shows that the MPS LPS class is paying above its cost of service based on current rates. The LPS class is overpaying by 8.56%, Hearing Exhibit 25. The FEA and Aquila cost-of-service studies both indicate that the LPS class is overpaying. The FEA study also shows that the large general service and the small general service classes are overpaying and should receive reductions in relative revenue responsibility.

The Federal Executive Agencies recommend that the increase to any customer class be capped at between 4 and 6%. As explained in the direct testimony of Maurice Brubaker (pages 29 through 33), the appropriate inter-class revenue adjustments would follow the results of the cost of service study with mitigation to the extent that no class would receive an increase of more than 4%-6% on a revenue neutral basis.

II. STATEMENT OF POSITION

What is the appropriate method for allocating generation-related costs to customer classes?

FEA Position: Fixed generation costs should be allocated to customer classes on the basis of the average and excess summer non-coincident peak (A&E - summer NCP) method. Variable costs should be allocated on the basis of class energy adjusted for losses.

What is the appropriate method for allocating transmission-related costs to customer classes?

FEA Position: Transmission costs should be allocated to classes using the A&E - summer NCP method.

What is the appropriate method for allocating distribution-related costs to customer classes?

FEA POSITION: Distribution substations and feeder lines should be allocated based on class peaks at the primary voltage level, where each rate schedule is a separate class.

For Accounts 364 through 368:

1. The customer component of the primary distribution system should be allocated to all customers on weighted customers (primary plus secondary customers).

2. The demand component of the primary distribution system should be allocated to all customers using class demands at the primary voltage level, with classes defined as rate schedules.

3. The customer component of the secondary distribution system should be allocated on weighted secondary customers.

4. The demand component of the secondary distribution system should be allocated using individual customer peaks at the secondary voltage level.

What is the appropriate classification of distribution plant into the categories of primary demand, secondary demand, primary customer-related and secondary customer-related?

FEA POSITION: The methodology employed by Aquila and explained in the direct testimony of David Stowe should be used.

What is the appropriate method for allocating administrative and general expenses to customer classes?

FEA POSITION: Account Nos. 920 (A&G Salaries), 921 (Office Suppliers), 922 (Administrative Expenses Transferred), 925 (Injuries & Damages), 926 (Employee Pensions and Benefits), and 931 (Rents) should be allocated on the labor component of the O&M expense in other functional categories allocated to customer classes. Account Nos. 924 (Property Insurance) and 935 (Maintenance of General Plant) should be allocated on gross plant from other functions as allocated to customer classes. Account Nos. 923 (Outside Services), 928 (Regulatory Commission Expenses), 929 (Duplicate Charges Credited), and 930 (Miscellaneous) should be allocated on total revenue.

Should inter-class revenue adjustments be determined in this case and should inter-class revenue adjustments be implemented in this case?

FEA POSITION: Inter-class revenue adjustments should be determined in this case, but implemented in conjunction with the rate increase in Case No. ER-2005-0436.

1. What are the appropriate inter-class revenue adjustments? Or

2. What is the appropriate method to determine them?

a. As explained in the direct testimony of Maurice Brubaker (pages 29 through 33), the appropriate inter-class revenue adjustments would follow the results of the cost of service study with mitigation to the extent that no class would receive

an increase of more than 4%-6% on a revenue neutral basis. See Schedule 6 attached to Mr. Brubaker's direct testimony.

b.   N/A

What rate schedules should be combined, eliminated or added?

FEA POSITION: The large power tariffs of MPS and L&P should remains separate tariffs.

What changes to the rate structure on each rate schedule are appropriate?

FEA POSITION: The existing rate relationships within the large power tariffs of MPS and L&P are appropriate and should not be modified.

How should the appropriate rate values for each rate schedule be determined?

FEA POSITION: Within the large power tariff, any change in revenue level should be incorporated as an equal percentage to each block.

How should income taxes be allocated?

FEA POSITION:. Income taxes should be allocated to classes based on their allocated rate base.

III. DISCUSSION OF PRODUCTION AND TRANSMISSION

ALLOCATOR

A. PARTIES PRODUCTION AND TRANSMISSION ALLOCATORS

The main reason that parties reached different results in their cost-of-service studies is the production/generation and transmission allocator used by the parties, *see* David L. Stowe Rebuttal Pg 16 line 5-10. The FEA uses the Average and Excess (A&E) Methodology with 3 NCP, and Aquila uses the A&E methodology with 3 coincident peaks. Staff and OPC used Staff's allocators; OPC modified Staff's input values, *id*.

B. THE FEA A&E METHOD IS A REASONABLE METHOD THAT ENJOYS WIDESPREAD ACCEPTANCE AND BALANCES THE INTERESTS OF ALL CUSTOMERS

The FEA Average and Excess (A&E) non-coincident peak (NCP) method of allocation is a reasonable method that enjoys widespread acceptance and balances the interests of all Aquila customers. Staff, Mr. Busch, testified that according to the NARUC Manual the A&E method is a reasonable method to use, Tr pg. 282 ln 1 - 6. Mr. Brubaker who conducted the cost-of-service study on behalf of the FEA is a respected and experienced expert in cost-of-service matters. The A&E method is one of the most widely used methods in the country,

Tr. pg. 150 ln 7 – 8 (Mr. Tracy). The A&E method has been used by a significant

number, at least fourteen, Commissions as indicated in the attachment to this

brief, Summary of Cases Using the A&E Method. The Colorado, Iowa,

Connecticut, Idaho, Illinois, Indiana, Louisiana, Maryland, Minnesota, New

Jersey, Oklahoma, Pennsylvania, Texas, and Virginia Commissions have all used

the A&E method for allocation of generation and transmission costs. Two cases

in particular address issues related to the A&E method that the Commission may

find useful. The Pennsylvania Commission found that the A&E method was not a

"peak responsibility" method and they found that the A&E method allocated

some production and transmission costs on the basis of energy. In *Pennsylvania*

Public Utility Commission v. Duquesne Light Company, R-821945 et al.,

Pennsylvania Public Utility Commission, 1983 Pa. PUC LEXIS 84; 57 Pa. PUC

1; 51 P.U.R.4th 198, January 27, 1983, the Commission approved classification of

production plant and expenses using the average and excess demand method. The

Commission stated that the method was described in Duquesne Ex. No. IV as

follows:

> Average and Excess Demand Method
>
> In support of the reasonableness of the average and excess
> methodology as the method of allocating demand-related
> production plant and expenses, Duquesne stated that the important
> factor to remember is that, unlike peak demand methodologies, the
> average and excess method, as its descriptive name indicates,
> allocates a portion of total demand responsibility on an average
> demand or energy basis (Duquesne Statement No. 22, p. 31),

thereby reducing the totality of costs allocated on a demand, as opposed to an energy, basis. Duquesne also states that the commission has expressed a preference for demand allocation methodologies which give some recognition to average demand as compared with those methodologies which rely solely on peak demand allocators, and that its average and excess demand methodology was considered and approved in its last two rate proceedings at R-80011069 and R-811470.

In a Colorado case, *Matter of the Application of Public Service Company of Colorado for an Order Determining Whether the Size and Load Impact of the Demand Side Management and Renewables Segments of its 1999 Integrated Resource Plan Maximize the Public Interest.*, Decision No. C00-1057; Docket No. 00A-008E, Colorado Public Utilities Commission, 2000 Colo. PUC LEXIS 1093, September 26, 2000, the Commission found that the A&E method reflects the costs of serving various customer classes at the time of system peak. The A&E method proposed by the FEA would make good policy because it would not unduly allocate costs based on the system peak but it would at the same time result in rates which reflected the cost of serving customers at the peak. Or in other words rates would capture, to an appropriate extent, the cost of serving customers at the peak. But it would not allocate all generation and transmission costs based on coincident peak. As the testimony indicates Aquila's MPS system has a significant peaking problem. The FEA A&E method would be an important step toward allocating costs to those who cause the costs.

On Aquila's system, the summer season is the big peak that the Company

has to have sufficient generation to meet, Tr. pg. 128 ln 1 – 11, and Mr. Tracy

Rebuttal Testimony Exhibits JMT 2. The residential customers have a massive

peak compared to their base load in the summer, and that drives up the cost of

both the St. Joe and the Missouri Public Service systems, Tr. pg. 126 ln 5 – 8

(Mr. Tracy). Residential air conditioning load is the major contributor to the

system peak which occurs around 5:00 or 6:00 in the evening during the summer

when people come home from work, and "turn on all their stuff", that's when the

Aquila system peaks and that is when the residential class peaks, Tr. Pg 129 ln 3 -

7. Mr. Tracy testified that his graphs show this peak, Rebuttal Testimony Exhibit

JMT-2. Staff's methodology would unjustifiably result in the LPS customers

subsidizing the residential customers because the residential customers are

predominantly causing that summer peak.

C. STAFF HAS NOT FOLLOWED THE CASES ON WHICH IT RELIES

The cost-of-service method which best reflects cost causation on the

Aquila system should be used in this case. As stated in *Re Union Electric*

Company, 66 PUR 4th 202, 27 Mo. P.S.C. (N.S.) 166, Case Nos. EO-85-17, ER-

85-160 (Missouri Commission, Report and Order March 29, 1985) at pg 281

bottom and 283 top – the main concern of the commission is to determine which

theory most reasonably reflects the causation of production costs on the system.

Staff has acted contrary to the Commission guidance in *Union Electric* because it

has not evaluated the Aquila system to select the method which best reflects cost

causation on the Aquila system, *see Re Union Electric Company*, 66 PUR 4th

202, 27 Mo. P.S.C. (N.S.) 166, Case Nos. EO-85-17, ER-85-160. Staff's method

is not even based on cost causation, *see* Tr. Pg. 279 ln. 18 –21 (Mr. Watkins).

Staff made no attempt to evaluate other methods or to select a method that

reasonably reflects cost causation on the Aquila system, *see* Exhibit 28 and Tr. pg

287 ln 7 – 9. As stated in Hearing Exhibit 28 Staff considered no other

methodology other than it's own method. Contrary to the *Union Electric* case,

Staff did not select the method that best reflects cost causation on the Aquila

system.

D. THE FEA A&E NCP METHOD IS NOT A PEAK RESPONSIBILITY
METHOD

        According to the NARUC Manual our A&E non-coincident peak (NCP)

method is not a peak responsibility method. Staff testified that the NARUC Cost

Allocation Manual does not place the A&E method in the peak responsibility

category, Tr pg. 281 ln 13 – 18 (Mr. Busch). The FEA is not using a peak

responsibility method. As stated in the 1992 NARUC Electric Utility Cost

Allocation Manual, the A&E method is an energy weighting method which according to NARUC is used to incorporate energy weighing into the cost allocator, *see* 1992 NARUC Electric Utility Cost Allocation Manual pg. 49. According to the NARUC Manual "Peak Responsibility" methods include the 1 CP method, 3 summer and 3 winter peak method, 12 CP method, and the all peak hours approach, NARUC Electric Utility Cost Allocation Manual (1992) pg. 48, not the A&E method. The A&E method allocates production plant costs to rate classes using factors that combine the classes' average demands and non-coincident peak (NCP) demands, NARUC Manual pg. 49. The method does not use coincident peak demands or any of the other methods considered "peak responsibility" methods.

Staff has improperly labeled the FEA methodology a "peak responsibility" method. On page 18 of Staff's Pre-Hearing Brief Counsel states, "The Commission should reject the proposals of Aquila, AG Processing, Inc., the Federal Executive Agencies and the Sedalia Industrial Energy Users' Association because they, by relying on a peak responsibility method, assume that all generation is added to serve peak load." It is incorrect to state that the FEA A&E method assumes all generation is added to serve peak load, *see Pennsylvania Public Utility Commission v. Duquesne Light Company,* R-821945 et al., Pennsylvania Public Utility Commission, 1983 Pa. PUC LEXIS 84; 57 Pa. PUC 1; 51 P.U.R.4th 198, January 27, 1983.

Staff has labeled the FEA study as a "peak responsibility" study so that the Commission will reject the FEA methodology as it rejected "peak responsibility" methods in three cases which are all over 20 years old (*In the matter of Arkansas Power & Light Company of Little Rock, Arkansas*, Case No. ER-81-364 (Report and Order, April 20, 1982), 25 Mo. P.S.C. (N.S.) 101; *Re Kansas City Power and Light Company*, 53 PUR 4th 315, 25 Mo. and, *Re Union Electric Company*, 66 PUR 4th 202, 27 Mo. P.S.C. (N.S.) 166, Case Nos. EO-85-17, ER-85-160 (Missouri Commission, Report and Order March 29, 1985). In the cases cited by Staff the Commission was faced with a choice between a "peak responsibility" method and the method proposed by Staff at that time (which incidentally is not the same method proposed by Staff in this case). But in this cost-of-service case the FEA have presented a reasonable approach which contrary to Staff's assertions does not assume all generation is used to serve peak load.

E. THE STAFF HAS NOT PRESENTED EVIDENCE (A METHOD FOR ALLOCATING PRODUCTION AND TRANSMISSION COSTS) UPON WHICH THE COMMISSION CAN REASONABLY RELY

The Staff method suffers from a lack of acceptance and a lack of peer review. This is first time the method has been used anywhere including Missouri, Tr. Pg. 334 ln 1-6. The FEA recommends the Commission act cautiously and

carefully in considering Staff's method. The evidentiary viability of Staff's

method is questionable.

The method Staff used for allocation of generation and transmission costs

is not described in the NARUC cost allocation manual, nor has Mr Brubaker seen

this particular method used in any other jurisdiction, Maurice Brubaker (MEB)

Rebuttal pg 10 line 12 -14. The lack of widespread acceptance of the Staff

method means that it has not been tested or verified, MEB Rebuttal pg 5 line 15.

The evidentiary value of expert testimony based on untested and unverified

methods is questionable.

In *State ex rel. GS Technologies Operating Co., Inc. d/b/a GST Steel

Company v. The Public Service Commission*, 116 S.W.3d 680 (Mo.App. 2003),

the court held that Mo Rule of Evidence 490.065, Revised Statues of Missouri

490.065 R.S.Mo, was applicable to Commission proceedings. Section 3 of

490.065 states in part: "The facts or data in a particular case upon which an expert

bases an opinion or inference may be those perceived by or made known to him at

or before the hearing and must be of a type **reasonably relied** upon by experts in

the field in forming opinions or inferences upon the subject and must be otherwise

reasonably reliable." Federal Rule of Evidence Rule 702, Testimony by Experts

states that if scientific, technical, or other specialized knowledge will assist the

trier of fact to understand the evidence or to determine a fact in issue, a witness

qualified as an expert by knowledge, skill, experience, training, or education, may

testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the **product of reliable principles and methods**, and (3) the witness has applied the principles and methods reliably to the facts of the case.

The majority in Daubert, *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 [125 L. Ed. 2d 469] (1993), set forth a five-factor, nondispositive, nonexclusive, "flexible" test to be employed by the Trial Court under Rule 702 in determining the "validity" of scientific evidence. These factors are:

(1) whether the technique or theory can be or has been tested;

(2) whether the theory or technique has been subject to peer review and publication;

(3) the known or potential rate of error;

(4) the existence and maintenance of standards and controls; and

(5) the degree to which the theory or technique has been generally accepted in the scientific community.

Staff is unaware of any other Commission that utilized it's generation allocation method, *see* David L. Stowe Surrebuttal pg 3 line 3 -5 and DR 12 from SIEUA attached to his testimony, and Maurice E Brubaker (MEB) Surrebuttal Pg 6 line 1- 19. The Missouri cases relied on by Staff Counsel at the hearing and in

his Pre-Hearing Brief are dated; all are over 20 years old. In addition, Staff has

departed from the methodology in those cases and is using a methodology that has

never been approved by the Missouri Commission or any other Commission, Tr

pg 334 ln 1 - 6. As a result Staff has not presented a method upon which the

Commission can reasonably rely in making it's findings in this case.

F. CONTRARY TO STAFF'S ASSERTION, STAFF'S METHOD FOR

ALLOCATING PRODUCTION AND TRANSMISSION COSTS IS NOT

FOUND IN THE NARUC ELECTRIC UTILITY COST ALLOCATION

MANUAL

Staff has asserted that it's method for allocating production and

transmission costs is found in the NARUC Electric Utility Cost Allocation

Manual. Mr. Watkins (Mr. Watkin's Surrebuttal ppg. 1 and 2) quotes the

NARUC Cost Allocation Manual as a basis for Staff's methodology as follows:

> The probability of dispatch (POD) method is primarily a tool for
> analyzing cost of service by time periods. The method requires
> analyzing an actual or estimated hourly load curve for the utility
> and identifying the generating units that would normally be used to
> serve each hourly load. **The annual revenue requirement of each
> generating unit** (*emphasis added)* is divided by the number of
> hours in the year that it operates, and that "per hour cost" is
> assigned to each hour that it runs. In allocating production plant
> costs to classes, the total cost for all units for each hour is allocated
> to the classes according to the KWH use in each hour. The total

production plant cost allocated to each class is then obtained by summing the hourly cost over all hours of the year. These costs may then be recovered via an appropriate combination of demand and energy charges. It must be noted that **this method has substantial input data** and analysis requirements that may make it prohibitively expensive for utilities that do not develop and maintain the required data.

But Staff did not determine the revenue requirement of each generating plant, Tr. pg. 299 ln 13 – 17 (Mr. Busch). Staff's allocation approach for generation plant requires an analysis to determine which technologies would be installed if the utility served each customer class independently, Maurice E. Brubaker (MEB) Rebuttal pg 12 Line 5 - 7. The results would need to be analyzed to determine the actual costs for each customer class of the technologies that were selected MEB Rebuttal Pg 12 line 14 – 17. Staff has not done the proper analysis, MEB Rebuttal pg 12 line 20 -21. Staff's allocator is not supported by the required base level of load and generation mix studies, David L. Stowe (DLS), Rebuttal Pg 11 line 20- 22 and pg 13 Line 4 – 17. Even Staff recognizes that it's methodology is not recognized by NARUC, Tr. pg. 386 ln 17 – 20, in which Mr Watkins testified that the combination of class peak and customer maximum demand used by Staff is "likely not in the NARUC manual."

Staff incorrectly claims that it is using a Probability of Dispatch (POD) method. The Staff method allocates generation and transmission capacity costs across all hours of the year even off-peak and even though use at times is so low that it would not cause the need for addition of generation or transmission

capacity, MEB Rebuttal pg 10 line 19-20. As a result Staff's method de-emphasizes the requirement of Aquila to have sufficient generation to meet the peak, and shifts costs from those who cause the peak to those who use this generation capacity off-peak. Use during off-peak hours benefits all customers by contributing to overall revenue. Once the break even point between two different technologies has been reached, additional hours of operation does not change the decision of what type of technology to install, MEB Rebuttal pg. 13 line 16 -17. Staff's method allocates above average energy charges to above average load factor customers whose loads are less seasonal and more off-peak that average, MEB Rebuttal pg 17 line 3 – 5 and pg 15 ln 15 – 18.

The staff method of allocating capacity costs does not properly or accurately reflect the reason Aquila installs capacity because it assigns costs based on the hours of the year regardless of whether loads in that hour had anything at all to do with the decision to install capacity, MEB Surrebuttal, pg 2 ln 1. For example, capacity cost or demand is allocated to each and every one of 8,760 hours per year, even though 7,760 of those hours had absolutely nothing to do with the decision to install the combined cycle unit as contrasted to a peaking unit, MEB Surrebuttal Pg 6 ln 7 – 9. This result is contrary to the POD method because it does not match customer load to the generating plant needed to meet that load.

G. CONTRARY TO MISSOURI REGULATION POLICY STAFF USED MARGINAL COST IN IT'S ALLOCATOR

On the MPS system the LGS customers are the bulk of the base load and by using marginal costs in its allocator, which is the cost of the last most expensive unit, Staff shifts a substantial amount of cost based on energy to the LPS customers, Tr. pg. 139 ln 3 – pg. 140 ln 11 (Mr. Tracy). Staff's methodology charges all customers marginal cost, not average or minimum cost, as a result the LPS customers subsidize the residential customers under Staffs' methodology, Tr. pg. 170 ln 21 – pg. 171 ln 2 (Mr. Tracy).

Use of marginal cost is surprising because Staff testified that Missouri regulates utilities on the basis of embedded costs, Tr. pg 285 ln 8 – 13. Staff never explained why it used marginal energy costs. Staff offered no justification from the NARUC Manual for using marginal cost even though Mr Busch testified that the only material relied on selecting the embedded cost methodology relied on by Staff was the NARUC Manual, *see* Tr. pg. 279 ln 18 – 21 and Hearing Exhibit 27. It is also surprising that Staff testified that it's method does not rely on cost causation, Tr. pg. 325 ln 12 -13 (Mr. Watkins). Staff has no good explanation for how it's method accounts for capacity costs to serve customers

who are inconsistent in their load except to say the Staff method is just better

because it is just better. During the hearing the Judge asked the following

question:

> I would assume that the argument would be that when you've got
> consumers that are more inconsistent in their load, that you've got
> infrastructure that's out there that has to be available to use
> whenever there is someone ready to turn the light switch on, and
> that it has to be paid for whether it's being used or not. So why
> shouldn't there be more of a -- of a measure of expense that is cost
> on those that are not using the system because it has to be
> available? How do you respond to that in regard to Staff's model?
> What does Staff's model do that takes some of that into account?
> You can challenge the assumption of my question, too, if you wish
> in your answer.

> Answer by Mr. Watkins: It's really impossible to take that into
> account, I think, because what you're saying is, I should -- I --
> conceptually I should allocate some of these costs to load that I --
> that isn't measured as actually occurring but potentially could. I
> don't know that we have a good way of figuring out what load
> potentially could be served. So we can't directly take that into
> account. But certainly the effect of allocating those costs
> throughout each hour of the year for those co-- where the facilities
> are utilized has the effect of accounting for it much better than had
> I just allocated those costs to the summer peak. Tr. pg 328 ln 11 –
> pg. 329 ln. 12.

Staff's allocators distribute all fixed costs as base load capacity costs

whereas the POD method (allegedly used by staff) assigns the costs of base load,

intermediate, and peaking units separately to the classes that caused them to

operate, DLS Surrebuttal pg 6 line 1 – 4. Staff did not identify the costs

associated with the base load units, it used the total fixed costs which included the

costs of all of Aquila's generation units when distributing fixed production costs, DLS Surrebuttal Pg 7 line 13-14.

If the Staff had identified the base load for residential, although it's fairly low, and then identified the intermediate load rate and the peaking load rate, that would be reasonable, Tr. pg. 139 ln 3 – pg. 140 ln 11 (Mr. Tracy). But they charged everybody at the margin all the time, and that inappropriately allocates costs to LPS customers beyond what it costs Aquila to serve them, Tr. pg. 139 ln 3 – pg. 140 ln 11 (Mr. Tracy). The LPS customers, in fact, benefit the system and help keep costs down so Staff's allocation is entirely inappropriate, Tr. pg. 139 ln 3 – pg. 140 ln 11 (Mr. Tracy). Staff's method would result in an increase in revenue responsibility for the most efficient customers, a result that hardly makes sense. In fact Staff even agreed that it would make the system more efficient to have more LPS customers on the system, Tr. pg. 283 ln 11- 20, (Mr. Busch). But Staff's method creates an incentive for less, not more LPS customers by artificially causing those customers to pay more than they should for power.

H. STAFF'S METHOD PROMOTES INEFFICIENCY AND SENDS THE WRONG PRICE SIGNAL

The Missouri MPS system has a poor load factor of 47%, which indicates inefficient use of the system, Tr. pg. 129 ln 10 - 17. Load factor is the ratio of the average usage to the peak usage, Tr. pg. 30 ln 7 – 10. The Large Power Service

(LPS) load factor is 69% radically higher than other customers, LPS customers use the system more efficiently than those with below average load factor, Tr. Pg. 134, ln 1 – 6. The residential load factor is 32%, which is not very good, Tr. pg. 30 ln 7 - 10.

The LPS customers, in fact, benefit the system and help keep costs down, Tr. pg. 139 ln 3 – pg. 140 ln 11 (Mr. Tracy). They are the most efficient users of the system and even Staff agreed that it would make the system more efficient to have more LPS customers on the system, Tr. pg. 283 ln 11- 20, (Mr. Busch).

If they are the most efficient users then why does the Staff cost-of-service study increase their rates in comparison to other customer classes? The simple answer is that Staff's study promotes inefficiency. Staff is promoting inefficiency by placing too much emphasis on energy charges in it's generation allocators. The greater the proportion of costs classified as energy related, the greater is the revenue responsibility of high load factor classes and the less is the revenue responsibility of low load factor customers, Tr. pg. 284 ln 5 – 12 (Mr Busch), and pg. 64 NARUC Electric Utility Cost Allocation Manual (1992). Staff proposes an increase in relative revenue responsibility for LPS customers. They are doing this by over inflating the energy costs of the LPS class. This sends an incorrect inefficient price signal.

Proper price signals will encourage more efficient use of the system (Tr. pg. 192 ln 23 – pg. 193 ln 5, Mr. Tracy), and the cost-of-service study that best

matches the costs to revenue will encourage conservation because those who cause the higher costs will pay those costs and will be encouraged to be more efficient, Tr. pg 191 ln 7 – 17 (Mr. Tracy). Customers who do not pay the actual cost for their electricity overuse electricity and are less likely to implement conservation measures, J. Matt Tracy Rebuttal pg 6 line 19 -20. Staff's methodology would increase the relative costs to the customers who make the most efficient use of the system. Staff's study asserts that MPS LPS customers should receive an increase in their percentage of revenue responsibility. Thus sending the wrong price signal and potentially causing the summer peak to become even higher.

Mr. Tracy's graphs illustrate how staff's demand allocators will impact load shapes, J. Matt Tracy Rebuttal Pg 12 line 15-17 and JMT -2 Rebuttal. Staff and OPC increase the relative cost responsibility for customers with the highest load factor and decrease costs for customers with the lowest load factors, J. Matt Tracy Rebuttal Pg 12 line 17 – 19, this will encourage increased use by those customers with low load factors relative to those customers with a high load factor, and decrease use for customers with high load factors. This is a surprising result since the load shapes clearly show that the residential customers are the primary class causing the summer peak. It is common sense that more efficient use of the system and proper price signals should be sent to the customers who are

most inefficient and those who are most efficient should not pay more.

Inefficiency causes waste.

I. OPC METHOD

All parties have offered criticism of the OPC method. In Hearing Exhibit 33 OPC confirmed that it is not aware of any Commission that has used it's proposed method for allocation of generation capacity. The OPC allocation method for generation and transmission plant is not in the NARUC cost allocation manual or any other reference, MEB Rebuttal pg 5 Line 10. As stated by Mr Stowe, Rebuttal Pg 19 Line 7-8, OPC has modified Staff's allocators to achieve a "demand " allocator which is shifted to the extreme side of energy allocator values (citing Meisenheimer Direct pg 5 line 20 -21).

The OPC witness relies on an Article 30 years old written about rural electric systems of questionable application to Aquila because it is questionable whether the characteristics of a rural electric system are applicable to Aquila. A large part of Aquila's system can not be defined as rural, MEB Surrebuttal pg 9 line 4 -8. pg 10 line 3. Aquila's customers are primarily residential, not rural. The study relied on by OPC found that investment per customer decreased as customers were added. This provides no basis for the conclusion that OPC witness Ms. Meisenheimer has drawn, namely that investment in certain aspects

of the distribution system are not related to the number of customers. The article simply confirms the existence of economies of scale, MEB Surrebuttal pg 10 ln 4 – 9

IV. CONCLUSION

The FEA A&E method is reasonable and fairly balances the interests of all customer classes. Staff agrees that the FEA method is reasonable, Tr. pg. 282 ln 1 – 6 (Mr. Busch).

Staff's method is not reasonable. Staff's method is not based on cost causation, TR. pg 279 ln. 18 – 21. Staff has not determined the revenue requirement for each generating unit as required by the NARUC Electric Utility Cost Allocation Manual for a valid Probability of Dispatch (POD) cost-of-service study, Tr. pg 299 ln. 13 - 17. Even Staff recognizes that it's methodology is probably not recognized by NARUC, Tr. pg. 386 ln 17 – 20.

The allocation method used by Staff has never been used by any Commission, not even the Missouri Commission and not even in the cases cited by Staff Counsel. The Commission is being asked by Staff to approve it's radical method for the first time anywhere, Tr. pg. 334 ln 1-6 (Mr. Watkins).

The FEA A&E method of allocating production and transmission costs has widespread acceptance through the industry. It will send appropriate price signals and will create appropriate cost incentives. The FEA method would be an important step into mainstream cost-of-service utility regulation.

Respectfully submitted,

/s/Craig Paulson
CRAIG PAULSON, Major, USAF
Utility Litigation and Negotiation Attorney
For Federal Executive Agencies
Telephone: (850) 283-6350
FAX: (850) 283-6219
e-mail: craig.paulson@tyndall.af.mil
TX Atty #24030340
MN Atty# 0164823

DATED: December 19, 2005

Summary of Cases Using the A&E Method

Colorado

Re: The Investigation and Suspension of Tariff Sheets Filed by Public Service Company, Electric, Decision No. C05-0412; DOCKET NO. 04S-164E, Colorado Public Utilities Commission, 2005 Colo. PUC LEXIS 359; 240 P.U.R.4th 323, March 17, 2005, Adopted; April 11, 2005. The Commission approved use of the A&E demand allocation method.

Re: The Investigation and Suspension of Tariff Sheets Filed by Aquila, Inc, Decision No. C04-1060; Docket No. 03S-539E, Colorado Public Utilities Commission, 2004 Colo. PUC LEXIS 965, August 3, 2004. The Commission found argument's for the A&E method compelling and therefore adopted the use of the A&E method using NCP to calculate the excess portion for allocation of production and transmission plant and associated expenses.

In the Matter of the Application of Public Service Company of Colorado for an Order Determining Whether the Size and Load Impact of the Demand Side Management and Renewables Segments of its 1999 Integrated Resource Plan Maximize the Public Interest., Decision No. C00-1057; Docket No. 00A-008E,

Colorado Public Utilities Commission, 2000 Colo. PUC LEXIS 1093, September 26, 2000.

The Commission stated that the dissent was mistaken in its assertion that current rates are not reflective of system peaking costs. The electric rates for the Company were approved by the Commission and were based, in part, upon the **average and excess** demand cost allocation method. This Commission found that the A&E method reflects the costs of serving various customer classes at the time of system peak. There was nothing in the record that indicates that the "solution" to the growth in demand for electricity is simple modification of the electric rate design. Given the growth in demand on Public Service's system, the Commission stated it would be reckless to reject the Stipulation reached in the case, in part, in the unsupported and unexamined hope that future adjustments to rates will decrease future demand for electricity at times of system peak.

Investigation of Proposed Changes to Electric and Steam Rates Public Service Company of Colorado, (Decision No. C96-134); Docket No. 95i-513e, Colorado Public Utilities Commission, 1996 Colo. PUC LEXIS 348, January 31, 1996. The Commission stated: "The Intervenor Cities argue in their application that, instead of the **Average and Excess** Demand method, we should utilize a Coincident Peak cost allocation methodology in the present case. For the reasons

articulated in Decision No. C95-1098, pages 15 through 18, we will deny this request."

Connecticut

DPUC Review of the Connecticut Light and Power Company's Rates and Charges, Docket No. 98-01-02, Connecticut Department of Public Utility Control, 1999 Conn. PUC LEXIS 1,

191 P.U.R.4th 373, February 5, 1999

The Department determined that the **Average and Excess** Demand ("AED") methodology has historically been found by the Department to be an acceptable and appropriate cost-of-service methodology for the CL&P system. In past proceedings the Department found the Company's application of the AED/12CP-NCP method to be reasonable and no new evidence was presented to convince the Department that it is appropriate to amend the cost-of-service study at this time.

Idaho

In the Matter of the Petition by FMC Corporation Seeking Resolution of a Deadlock in Negotiations Between FMC Corporation and Idaho Power Company Pursuant to the Special Contract for Electric Service to FMC Corporation, Case

No. U-1006-158; ORDER NO. 15977, Idaho Public Utilities Commission, 1980

Ida. PUC LEXIS 1, December, 1980.

The Commission states that the average and excess method has been the only

method presented for consideration in recent Idaho Power rate cases. The

Commission continued to use the A&E methodology.

Iowa

In Re: Interstate Power and Light Company, Docket No. RPU-04-1, Iowa Utilities

Board, 2005 Iowa PUC LEXIS 17; 239 P.U.R.4th 309, January 14, 2005. The

Board rejected proposed changes to the A&E methodoly used previously in Iowa.

In Re: Interstate Power and Light Company, Docket Nos. RPU-02-3; RPU-02-8;

ARU-02-1, Iowa Utilities Board, 2003 Iowa PUC LEXIS 140; 225 P.U.R.4th 165,

April 15, 2003, Issued; April 15, 2003. The IA Board stated that it would

continue to use the A&E method for transmission and generation allocation.

Illinois

MidAmerican Energy Company Petition to Renew Decommissioning Nuclear

Power Plant Expense Rider MidAmerican Energy Company Petition to Renew

Decommissioning Nuclear Power Plant Expense Rider, 98-0757; (Cons.); 99-

0577, Illinois Commerce Commission, 2003 Ill. PUC LEXIS 426, May 21, 2003.

The Ill Commission applied the A&E method to nuclear plant decommissioning

costs.

MidAmerican Energy Company: Petition for Decommissioning Expense

Adjustment Under Rider 12, 97-0569, Illinois Commerce Commission, 1999 Ill.

PUC LEXIS 499, July 8, 1999.

The Ill Commission approved use of the A&E method for decommissioning costs.

Indiana

In the Matter of the Petition of Harrison County Rural Electric Membership

Corporation to Increase its Rates and Charges for Electric Service, Cause No.

36873, Public Service Commission of Indiana, 1982 Ind. PUC LEXIS 236,

August 11, 1982.

The Indiana PSC approved the use of the A&E method.

Louisiana

Gulf States Utilities Company, ex parte, ORDER NO. U-14495-B, Louisiana

Public Service Commission, 1980 La. PUC LEXIS 84; 40 P.U.R.4th 593,

November 17, 1980.

The Commission approved the A&E method recommended by the company.

Maryland

Re Potomac Electric Power Company Intervenors: Office of People's Counsel,

Apartment and Office Building Association of Metropolitan Washington, Inc.,

General Services Administration, Washington Metropolitan Area Transit

Authority, Sumner Village Condominium No. One, Inc., Sumner Village

Condominium No. Two, Inc., and Sumner Village Community Association, Case

No. 7384, Order No. 64268, Maryland Public Service Commission, 1980 Md.

PSC LEXIS 79; 71 Md. P.S.C. 157, April 14, 1980.

The Maryland Public Service Commission notes the A&E method is used in

Maryland, Virginia, and Washington DC for PEPCO.

In the Matter of the Potomac Electric Power Company's Proposed: (A) Stranded

Cost Quantification Mechanism; (B) Price Protection Mechanism; and (C)

Unbundled Rates, Case No. 8796, PHASES I & II, ORDER NO. 75850,

Maryland Public Service Commission, 1999 Md. PSC LEXIS 47; 198 P.U.R.4th

1, December 22, 1999

The Commission allocated the ratepayers' share of a credit on the basis of

production allocation factors computed using the average and excess (4 coincident

peak) method.

Minnesota

In the Matter of the Petition of Interstate Power Company for Authority to

Increase its Rates For Electric Service in Minnesota, DOCKET NO. E.-001/GR-

86-384, Minnesota Public Utilities Commission, 1987 Minn. PUC LEXIS 43,

May 1, 1987.

The Minnesota PUC adopted the A&E method as the most reasonable for

production and transmission.

In the Matter of the Petition of Minnesota Power & Light Company, 30 West

Superior Street, Duluth, Minnesota 55802, for Authority to Change its Schedule

of Rates for Electric Services Furnished to its Customers in the State of

Minnesota, DOCKET NO. E-015/GR-80-76, Minnesota Public Utilities

Commission, 1981 Minn. PUC LEXIS 14; 41 P.U.R.4th 554, January 30, 1981.

The Commission directed the company to use the A&E methodology for its cost-of-service study.

New Jersey

In The Matter of The Verified Petition of Jersey Central Power & Light Company for Review and Approval of an Increase In and Adjustments to its Unbundled Rates and Charges for Electric Service, and for Approval of Other Proposed Tariff Revisions in Connection Therewith In the Matter of the Verified Petition of Jersey Central Power & Light Company for Review and Approval of its Deferred Balances Relating to the Market Transition Charge and Societal Benefits Charge in the Matter of the Consumer Education Program on Electric Rate Discounts and Energy Competition - Jersey Central Power & Light Company's Verified Petition for Declaratory Ruling in the Matter of the Verified Petition of Jersey Central Power & Light Company for Review and Approval of Costs Incurred for Environmental Remediation of Manufactured Gas Plant Sites and for an Increase in the Remediation Adjustment Clause of its Filed Tariff in Connection Therewith in the Matter of Jersey Central Power & Light Company for Increases in its Levelized Energy Adjustment Clause Charge and Demand Side Factor, DOCKET NO. ER02080506; DOCKET NO. ER02080507; DOCKET NO. EO02070417;

DOCKET NO. ER02030173; DOCKET NO. ER95120633, New Jersey Board of

Public Utilities, 2004 N.J. PUC LEXIS 192, May 17, 2004.

The New Jersey Board used the A&E method.

Oklahoma

Application of Oklahoma Gas and Electric Company for an Order of the

Oklahoma Corporation Commission Amending its Cogeneration Credit Rider

(CCR) Tariff to Recognize Authorized Changes in Capacity Payments to

Qualified Facilities Pursuant To PURPA, Cause No. PUD 200400391; ORDER

NO. 499044, Oklahoma Corporation Commission, 2004 Okla. PUC LEXIS 215,

December 21, 2004.

The appropriate allocation factor to be used in making a fair allocation of

cogeneration capacity and O&M costs and credits among OG&E's Oklahoma

customers was the production demand allocator utilized in OG&E's cost of

service study to allocate production demand related costs based on the **Average

and Excess** methodology, as approved by the Commission in Order No. 470044.

Pennsylvania

Pennsylvania Public Utility Commission v. Pennsylvania Power Company, R-870732, Pennsylvania Public Utility Commission, 1988 Pa. PUC LEXIS 407; 67 Pa. PUC 91; 93 P.U.R.4th 189, May 3, 1988. Challenges to the Company's A&E methodology were rejected by the Commission.

Pennsylvania Public Utility Commission v. Duquesne Light Company, R-842583 et al., Pennsylvania Public Utility Commission, 1985 Pa. PUC LEXIS 68; 59 Pa. PUC 67, January 24, 1985; entered January 25, 1985.

The Commission held that the A&E method was a fair and equitable method of allocating costs.   The Average and Excess Demand Method allocates demand costs in a two-part formula. A portion of demand costs is allocated based on the average demand of the classes. The remaining demand costs are allocated based on the excess of class maximum demands over class average demand. This method has the advantage of recognizing the impact on costs of both energy consumption and maximum demand. By considering both energy and demand, the importance of class load factor, or relative use of facilities, is incorporated into the study. Diversity is also considered with the benefit of diversity allocated on the basis of load factor. The low load factor customers receive a greater

proportion of the benefits of diversity. One of the most important advantages of this method is that stable results are produced.

Pennsylvania Public Utility Commission v Duquesne Light Company, R-821945 et al., Pennsylvania Public Utility Commission, 1983 Pa. PUC LEXIS 84; 57 Pa. PUC 1; 51 P.U.R.4th 198, January 27, 1983

The Commission approved classification of production plant and expenses using the **average and excess** demand method. The method was described was described in Duquesne Exh No. IV as follows:

"Average and Excess Demand Method"

In support of the reasonableness of the **average and excess** methodology as the method of allocating demand-related production plant and expenses, Duquesne stated that the important factor to remember is that, unlike peak demand methodologies, the **average and excess** method, as its descriptive name indicates, allocates a portion of total demand responsibility on an average demand or energy basis (Duquesne Statement No. 22, p. 31), thereby reducing the totality of costs allocated on a demand, as opposed to an energy, basis. Duquesne also states that the commission has expressed a preference for demand allocation methodologies which give some recognition to average demand as compared with those methodologies which rely solely on peak demand allocators, and that its **average and excess** demand methodology was considered and approved in its last two rate proceedings at R-80011069 and R-811470.

Pennsylvania Public Utility Commission v. West Penn Power Company, R-842651 et al., 69 PUR 4th 470, Pennsylvania Public Utility Commission, 1985 Pa. PUC LEXIS 42; 59 Pa. PUC 552; 69 P.U.R.4th 470, August 28, 1985; entered August 28, 1985.

The Commission accepted the Company's A&E methodology as valid and just and reasonable stating that they have approved of the average and excess method many times.

Texas

Application of AEP Texas Central Company for Authority to Change Rates, PUC Docket No. 28840; SOAH DOCKET NO. 473-04-1033, Public Utility Commission of Texas, 2005 Tex. PUC LEXIS 32, August 15, 2005

Nuclear-decommissioning costs were properly allocated using an **average and excess,** four coincident peak (A&E/4CP) allocator.

Application of TXU Electric Company for Approval of Unbundled Cost of Service Rate Pursuant to PURA § 39.201 And Public Utility Commission Substantive Rule § 25.344, PUC Docket No. 22350; SOAH Docket No. 473-00-

1015, Public Utility Commission of Texas, 2001 Tex. PUC LEXIS 68, October 3, 2001.

The Commission affirmed the SOAH ALJ's recommendation that nuclear decommissioning costs be allocated using the same **average and excess** non-coincident peak (A&E-NCP) methodology the Company used in its last cost-of-service study.

Application of Texas Utilities Electric Company for Authority to Change Rates and Investigation of The General Counsel into the Accounting Practices of Texas Utilities Electric Company DOCKET NO. 11735, Public Utility Commission of Texas, 1994 Tex. PUC LEXIS 296; 20 Texas P.U.C. Bulletin 1029, January 28, 1994.

The Commission approved the 4 NCP A&E methodology.

Application of Texas Utilities Electric Company for a Rate Increase; Petitions for Review of Texas Utilities Electric Company from the Final Decision and Action of the City of Lindale, Et Al. (Part 2 of 3), Docket Nos. 5640 and 5661, Public Utility Commission of Texas, 1984 Tex. PUC LEXIS 50; 10 Texas P.U.C. Bulletin 659, November 19, 1984. The Texas Commission used the company's A&E methodology.

Application of El Paso Electric Company for Authority to Change Rates Docket

No. 9945, Public Utility Commission of Texas, 1992 Tex. PUC LEXIS 122; 18

Texas P.U.C. Bulletin 9, February 6, 1992 . The Company was permitted to use

the A&E 4CP method.

Application of Texas Utilities Electric Company for Authority to Change Rates

(Part 8 of 11), Docket No. 9300, Public Utility Commission of Texas, 1991 Tex.

PUC LEXIS 279; 17 Texas P.U.C. Bulletin 2057; 133 P.U.R.4th 604, September

27, 1991. Texas Commission approved use of A&E NCP method.

Application of El Paso Electric Company for Authority to Change Rates,

DOCKET NO. 9165; Public Utility Commission of Texas, 1990 Tex. PUC

LEXIS 188; 16 Texas P.U.C. Bulletin 605, August 22, 1990.

The Company was permitted to use the A&E 4CP method.

Application of Texas Utilities Electric Company for Authority to Change Rates ,

Docket No. 9300, Public Utility Commission of Texas, 1991 Tex. PUC LEXIS

279; 17 Texas P.U.C. Bulletin 2057; 133 P.U.R.4th 604, September 27, 1991.

TU Electric's continued use of the **average and excess** non-coincident peak method was approved; rejected methodologies included the A&E-4CP methodology and the average and peak methodologies.

Application of Gulf States Utilities Company for Authority to Change Rates; Application of Sam Rayburn G&T Electric Coop., Inc. for Sale Transfer or Merger; Appeal of Gulf States Utilities Company from Rate Proceedings of Various Municipalities, Docket No. 8702, Public Utility Commission of Texas, 1991 Tex. PUC LEXIS 231; 17 Texas P.U.C. Bulletin 703, May 2, 1991. The A&E method was approved.

Application of El Paso Electric Company for Authority to Change Rates; Application of El Paso Electric Company For Review of the Sale and Leaseback of Palo Verde Nuclear Generating Station Unit 2; DOCKET NOS. 7460 AND 7172, Public Utility Commission of Texas, 1988 Tex. PUC LEXIS 126, June 16, 1988. Use of the A&E 4CP method was approved.

Petition For Review of Certain Ratemaking Actions of the City of Austin, Docket No. 6560, Public Utility Commission of Texas, 1986 Tex. PUC LEXIS 171; 12 Texas P.U.C. Bulletin 1311, April 25, 1986; On Rehearing June 2, 1986. The TX Commission approved the A&E 4CP method.

Application of Texas Utilities Electric Company for a Rate Increase; Petitions for Review of Texas Utilities Electric Company from the Final Decision and Action of the City of Lindale, Et Al. , Docket Nos. 5640 and 5661, Public Utility Commission of Texas, 1984 Tex. PUC LEXIS 51; 10 Texas P.U.C. Bulletin 659, November 19, 1984. The A&E. method was approved.

Application of Fayette Electric Cooperative, Inc. for a Rate Increase, Docket No. 3578, Public Utility Commission of Texas, 1981 Tex. PUC LEXIS 385; 6 Texas P.U.C. Bulletin 754, April 2, 1981. The Commission approved of the A&E method again.

Application of Texas Electric Service Company for a Rate Increase, Docket No. 3250, Public Utility Commission of Texas, 1980 Tex. PUC LEXIS 111; 6 Texas P.U.C. Bulletin 166, October 3, 1980. The Commission approved the A&E methodology.

Application of Southwestern Public Service Company for a Rate Increase, Docket No. 1861, Public Utility Commission of Texas, 1978 Tex. PUC LEXIS 231; 4 Texas P.U.C. Bulletin 216, September 7, 1978.   The Commission determined it was reasonable to allocate costs using the A&E method proposed by the company.

Virginia

Application of Virginia Electric and Power Company, for a General Increase in Rates, Case No. PUE920041, Virginia State Corporation Commission, 1994 Va. PUC LEXIS 111, February 3, 1994.

The Commission stated that the average and excess method of allocating costs has been the basis of cost of service studies approved in every Virginia Power rate case since the early 1970s. The Commission agreed that the average and excess method of allocating costs should be used in the cost of service study to determine the proper allocation of revenues.