

Exhibit No.:
Witness: Maurice Brubaker
Type of Exhibit: Rebuttal Testimony
Issue: Cost of Service, Revenue
Allocation and Rate Design
Sponsoring Parties: Ford Motor Company,
Praxair, Inc. and Missouri
Industrial Energy Consumers
Case No.: ER-2006-0314

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

In the Matter of the Application of
Kansas City Power & Light Company
for Approval to Make Certain Changes
in its Charges for Electric Service to
Begin the Implementation of Its
Regulatory Plan

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Case No. ER-2006-0314

Rebuttal Testimony of

**Maurice Brubaker
on Cost of Service, Revenue
Allocation and Rate Design**

On Behalf of

**Ford Motor Company
Praxair, Inc. and
Missouri Industrial Energy Consumers**

September 15, 2006



BRUBAKER & ASSOCIATES, INC.
ST. LOUIS, MO 63141-2000

Project 8544

**In the Matter of the Application of
Kansas City Power & Light Company
for Approval to Make Certain Changes
in its Charges for Electric Service to
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STATE OF MISSOURI)
)
COUNTY OF ST. LOUIS) SS

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Begin the Implementation of Its	)	
Regulatory Plan	)	
	)	

Rebuttal Testimony of Maurice Brubaker

1 **Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A Maurice Brubaker. My business address is 1215 Fern Ridge Parkway, Suite 208,
3 St. Louis, Missouri 63141-2000.

4 **Q ARE YOU THE SAME MAURICE BRUBAKER WHO HAS PREVIOUSLY FILED**
5 **TESTIMONY IN THIS PROCEEDING?**

6 A Yes. I have previously filed direct and rebuttal testimony on revenue requirement
7 issues and direct testimony on cost of service, revenue allocation and rate design
8 issues.

9 **Q ARE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE OUTLINED IN**
10 **ANY OF THOSE PRIOR TESTIMONIES?**

11 A Yes. This information is included in Appendix A to my direct testimony on revenue
12 requirement issues.

**Maurice Brubaker
Page 1**

1 **Q HAVE YOU REVIEWED THE TESTIMONY OF COMMISSION STAFF WITNESS**
2 **JANICE PYATTE AND OPC WITNESS BARBARA MEISENHEIMER ON THE**
3 **SUBJECT OF CLASS COST OF SERVICE?**

4 A Yes.

5 **Q DO YOU HAVE REBUTTAL TO THE POSITIONS OF THESE WITNESSES?**

6 A Yes, I do. I disagree with the methods which these witnesses have used for the
7 allocation of production and transmission fixed costs and with respect to the
8 allocation of certain other components of the cost of service. The allocation of the
9 generation and transmission fixed costs is the largest and most important of these
10 issues, and I will address it first. Then, I will address some of the other differences in
11 the allocations.

12 **Q HAVE YOU REVIEWED THE TESTIMONY COMMISSION STAFF WITNESS**
13 **JAMES BUSCH?**

14 A Yes, I have. Mr. Busch proposes a revenue realignment based on the results of
15 Staff's class cost of service study performed by Ms. Pyatte.

16 **Q DO YOU HAVE ANY RESPONSE TO MR. BUSCH'S RECOMMENDATIONS?**

17 A Yes. While I agree with the general direction of Mr. Busch's recommendations, I
18 believe that he does not go far enough in recognizing interclass disparities. Also, as I
19 will discuss in connection with my rebuttal to Staff Witness Pyatte, I believe that even
20 if one were to accept Staff's allocation methodology for production and transmission
21 costs, there are some inconsistencies and erroneous allocations of other costs in

Staff's study. If these were corrected, and Mr. Busch's methodology applied, a larger realignment of class revenues would occur.

Q PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.

A My rebuttal testimony may be summarized as follows:

1. The Average & Peak (A&P) allocation methods applied by both Staff and OPC are not explained as to methodology, supported as to theory or shown to be applicable to the KCPL system. These studies significantly over-allocate costs to large high load factor customers such as those that take service on the Large Power rate.
2. The study which OPC calls "time-of-use (TOU)" is not explained as to methodology, supported as to theory or shown to be applicable to the KCPL system, and allocates fixed costs even more disproportionately (than the A&P studies) to large high load factor customers such as those that take service on the Large Power rate.
3. Neither the A&P methods used by Staff and OPC nor the "TOU" method advanced as an alternative by OPC are traditional, none are used in any other jurisdiction, and none have ever even been adopted by the Missouri PSC.
4. The Staff and OPC cost of service studies are internally inconsistent in that they allocate above average generation capacity costs to high load factor customers, but do not give them the benefit of the lower energy-related costs that correspond to the above average capital cost allocation.
5. The Average & Excess - 3 NCP study that I offered in my direct testimony is the most appropriate allocation method for the KCPL system and is the one that should be adopted by the Commission and used as a guide to distribute any revenue increase found appropriate.
6. In addition to the problems noted above, the OPC A&P study:
 - a. Uses an incorrect (too high) load factor to weight the energy component of the A&P allocator. This appears just to be a mistake.
 - b. Allocates revenues from off-system sales using a demand allocation factor, which is inconsistent with the allocation on an energy basis of the expenses for the fuel and variable purchased power used to supply these sales.
 - c. Fails to recognize any customer-related component in the primary distribution system.

- 1 7. In addition to the above problems, OPC's "TOU" allocation study:
- 2 a. Uses gross (undepreciated) installed capacity costs to develop the basis for
- 3 the capacity allocation factor, rather than the revenue requirements on the
- 4 current net investment in plant in service.
- 5 b. Allocates revenues from off-system sales using a demand allocation factor,
- 6 which is inconsistent with the allocation on an energy basis of the expenses
- 7 for the fuel and variable purchased power used to supply these sales.
- 8 c. Fails to recognize any customer-related component in the primary distribution
- 9 system.
- 10 8. In addition to problems noted above, Staff's study:
- 11 a. Develops a load factor for weighting the average component in the A&P study
- 12 that uses demands that have not been adjusted for losses, and as a result
- 13 overstates the load factor and the weighting given to energy.
- 14 b. Allocates revenues from off-system sales using a demand allocation factor,
- 15 which is inconsistent with the allocation on an energy basis of the expenses
- 16 for the fuel and variable purchased power used to supply these sales.
- 17 c. Allocates certain Administrative and General expense accounts on energy,
- 18 rather than on the more conventionally used salaries and wages.
- 19 9. Adjusting the Staff's study only to correct the load factor, allocate the fuel cost
- 20 portion of the revenue received from off-system sales on an energy basis to
- 21 correspond with the allocation of the expenses, and adjusting the allocation of
- 22 certain Administrative and General expenses would indicate that the Large Power
- 23 Service class should receive a 6% decrease on a revenue neutral basis, even if
- 24 Staff's generation and transmission allocation methodology is utilized.

25 **Allocation of Generation and Transmission Capacity Costs**

26 **Q WHAT METHOD HAS STAFF USED FOR THE ALLOCATION OF GENERATION**

27 **AND TRANSMISSION DEMAND-RELATED COSTS?**

28 **A**Staff has used an A&P allocation method. In particular, Staff uses the 12 monthly

29 non-coincident peak demands of each customer class along with each class's annual

30 energy consumption. The energy component is weighted equal to the system annual

31 load factor.

1 **Q DOES STAFF EXPLAIN THE BASIS FOR SELECTING THIS ALLOCATION**
2 **METHODOLOGY?**

3 A No. Staff neither explains the derivation of the particular allocation factors, nor does it
4 explain or attempt to justify why this particular method is appropriate for KCPL.
5 Rather, Staff compares its 12-month NCP A&P method with KCPL's annual system
6 peak and average allocation methodology. Staff also does not explain why it is
7 appropriate to use class peak demands from every month of the year rather than just
8 from the summer months.

9 Furthermore, Staff determines its weighting of monthly class peak demands
10 by using a methodology that is described in a 1983 article that it simply attaches to its
11 testimony. The author of the article is not presented as a witness in this proceeding,
12 and Staff does not further attempt to explain the basis for the method, how the
13 method works, or why it is appropriate to use in 2006 on the KCPL system.

14 **Q DID YOU ADDRESS THE DEFECTS IN THE A&P METHODOLOGY IN YOUR**
15 **DIRECT TESTIMONY ON COST OF SERVICE?**

16 A Yes, I did. I explained in detail why the annual A&P method which KCPL proposed to
17 use for class cost allocation was inappropriate, contrasted the A&P method to the
18 Average & Excess (A&E) method which I propose, and explained why the A&E
19 method was superior. Also, at pages 23-25 of that testimony, I showed how the A&P
20 method actually double counts average demand and thereby significantly
21 over-allocates costs to high load factor customers, like those on the Large Power
22 rate. The methodology employed by Staff is even worse in this regard because it
23 uses 12 monthly system peaks, which includes many months when the loads are

1 significantly below the peak summer load. This use of 12 monthly peaks adds to the
2 over-allocation of costs to high load factor, non-seasonal customers, such as those
3 on the Large Power rate.

4 **Q WHAT METHOD DID OPC USE FOR ALLOCATING GENERATION AND**
5 **TRANSMISSION CAPACITY COSTS?**

6 A OPC used a 12-month NCP A&P allocator (somewhat similar to Staff's) and also
7 showed what it calls a "TOU" method.

8 **Q WITNESS MEISENHEIMER REFERS TO THE FIRST OF HER ALLOCATION**
9 **METHODS AS A "TRADITIONAL" STUDY. IS THAT AN ACCURATE**
10 **DESCRIPTION?**

11 A No, it is not. There is nothing traditional about either one of her studies. I am
12 somewhat surprised by her statement because less than 12 months ago, in Case No.
13 EO-2002-384, the Aquila class cost of service case, OPC stated in response to a
14 data request, and confirmed on the record, that the so-called "traditional" method
15 which it has proposed to use to allocate generation and transmission capacity costs
16 in this case is, in fact, not used anywhere.

17 **Q DOES MS. MEISENHEIMER SUPPORT OR EXPLAIN WHY SHE BELIEVES THE**
18 **PARTICULAR METHODOLOGIES WHICH SHE HAS CHOSEN ARE**
19 **APPROPRIATE?**

20 A No, she does not. She does not provide any explanation or supporting reason for
21 why either one of her allocation methods is appropriate.

1 Furthermore, she just calls her second study a “TOU” study but provides
2 absolutely no description of the basis for the derivation of the allocation factors, the
3 logic or theory supporting the use of this particular allocation method, or its
4 applicability to the KCPL system. To simply call something a “TOU Study” is not
5 meaningful because there is no conventional methodology or understanding that can
6 be associated with the description: a “TOU Study.”

7 **Q WHAT IS THE SIGNIFICANCE OF THE FACT THAT A METHODOLOGY IS NOT**
8 **USED IN OTHER JURISDICTIONS?**

9 A Cost of service studies for electric systems have been performed for well over 50
10 years. This means that there has been a significant amount of analysis that has gone
11 into the question of determining how best to ascertain cost-causation on electric
12 systems, across a broad spectrum of utility circumstances. Methods that have not
13 had the benefit of that analysis and withstood the test of time must be viewed with
14 skepticism, and proponents of such methods bear a special burden of proving that
15 they do a more accurate job of identifying cost-causation than do recognized
16 methods, and are not merely ad hoc creations designed simply to support a particular
17 result desired by the analyst.

18 **Q HOW MUCH WEIGHTING DOES OPC’S A&P ALLOCATION METHOD GIVE TO**
19 **SUMMER DEMANDS?**

20 A Based on the information presented on Schedule BAM-DIR, page 3, the peak
21 demands occurring during the three summer peak months have a weighting of **less**

1 **than 17%** in her A&P allocation factor. That means that loads at other times are
2 weighted 83%, or nearly five times as much.

3 **Q IS THIS WEIGHTING A REASONABLE ONE FOR SUMMER PEAK DEMANDS?**

4 A No. This low weighting is fundamentally unreasonable. It is summer peak demands
5 that drive the need for the addition of generation capacity and an allocation
6 methodology which gives only 17% weighting to those summer peak demands cannot
7 be regarded as reasonable. OPC's allocations skew the results so that high load
8 factor customers are allocated a significant amount of costs that they are not
9 responsible for causing.

10 **Q TO DEVELOP THE WEIGHTING FOR THE DEMAND COMPONENT AND THE**
11 **ENERGY COMPONENT OF OPC'S A&P ALLOCATION FACTOR, WHAT LOAD**
12 **FACTOR DID OPC USE?**

13 A OPC used a 62% load factor. The worksheet characterizes this as based on annual
14 energy sales and annual system peak demand. It is not.

15 **Q DID OPC USE ANNUAL ENERGY AND THE ANNUAL PEAK?**

16 A No. The load factor which OPC has developed is erroneous. According to OPC's
17 worksheet, the energy used is system (Missouri plus Kansas plus requirements
18 wholesale) energy. However, the "annual system peak" used bears no relationship to
19 the annual total company system peak. In fact, the demand number which OPC uses
20 to calculate the load factor is approximately 600 megawatts (MW) below the total

1 company peak. This is a major discrepancy. The system annual load factor is
2 approximately 51%, not 62%.

3 This error overstates the load factor, thereby overstating the energy
4 component of the A&P allocation factor. Thus, even if one were to accept OPC's
5 method, the allocation factors are wrong. This, too, results in an over-allocation of
6 costs to large high load factor customers such as those served under the Large
7 Power rate.

8 **Q YOU MENTIONED BEFORE THAT OPC'S A&P ALLOCATION METHOD WAS**
9 **NOT USED IN ANY OTHER JURISDICTION. WHAT IS THE SITUATION WITH**
10 **RESPECT TO WHAT OPC CALLS THE "TOU" STUDY?**

11 **A** It is not used anywhere else either. This method is conceptually similar to the method
12 that was advanced by Commission Staff in the previously referenced Aquila class
13 cost of service case. In that case, Staff admitted that this methodology had not been
14 used in any other state and, in fact, **has not ever** been adopted, even in Missouri.

15 This puts the "TOU" study in the same category as Staff's and OPC's A&P
16 studies which I previously criticized, and pointed out have no precedent to support
17 them and certainly no acceptance in the industry.

18 **Q DOES MS. MEISENHEIMER EXPLAIN HOW SHE ALLOCATES CAPACITY AND**
19 **ENERGY COSTS IN THE "TOU" STUDY?**

20 **A** No, she does not. However, a review of her workpapers indicates that an hourly
21 assignment of capacity costs of generation plants was made. It appears that a
22 capacity component was identified for each plant. (I will discuss this in more detail

1 later). Then, a production dispatch model was run to determine the output of each
2 plant during each hour of the year. The dispatch level (output) of each plant, for each
3 hour, was then totaled and divided into the identified capacity component. This per
4 unit capacity component was then multiplied times the output of each plant in each
5 hour in order to allocate capacity costs to each hour that a plant ran. This was
6 repeated for each plant and a total capacity cost was developed for each hour.
7 These hourly capacity costs were then allocated to customer classes based on class
8 loads in each hour.

9 **Q HAVE YOU BEEN ABLE TO ANALYZE THE RESULTS OF OPC'S CAPACITY**
10 **COST ASSIGNMENT TO HOURS?**

11 **A** Yes. Please refer to Schedule 1 COS-R attached to this testimony.

12 **Q PLEASE EXPLAIN THIS GRAPH.**

13 **A** This graph shows an hourly profile of the results of OPC's TOU capacity cost
14 assignment. The average hourly load is represented by the blue line with the large
15 squares. Each point on this chart for the load (left scale) is equal to the sum of the
16 loads in each identified hour (i.e., 1:00 a.m., 2:00 p.m., etc.) of each day, divided by
17 365 days. Accordingly, this represents an average daily load profile.

18 The capacity charge line (red with pyramids) was created in a similar fashion.
19 It shows the hourly assignment of capacity costs under OPC's approach. Note that
20 the capacity cost per hour (right scale) in the middle of the night (4:00 AM) is almost
21 as high as the capacity cost in the middle of the afternoon (5-6 PM), when the peaks
22 occur. Given this profile of capacity cost assignments, OPC's "TOU" method cannot

1 be described as cost-causation at all. There is no reasonable basis to believe that
2 loads in the middle of the night cause installation of generation capacity. Rather, it is
3 the peak loads occurring during the day, especially the highest ones that occur in the
4 summer, that drives the need for capacity additions.

5 Rather than being "cost-causation," OPC's "TOU" allocation methodology is
6 an assignment method which puts the same per kW capacity cost of a generation
7 facility into every hour of the year that it runs.

8 **Q HAS STAFF PREVIOUSLY CHARACTERIZED THIS TYPE OF COST**
9 **ALLOCATION METHODOLOGY?**

10 A Yes. It actually originated with Staff, and a form of it has been adopted by OPC. In
11 the previously mentioned Aquila class cost of service case, Case No. EO-2002-384,
12 Staff witness James Watkins testified that the methodology was not cost-causation at
13 all, but rather was something developed many years ago in an effort to have data that
14 might be used in developing time-of-use rates. Stretching the methodology to use it
15 in allocating costs among customer classes extends it well beyond any reasonable
16 use.

17 **Q YOU MENTIONED THAT OPC IDENTIFIED A CAPACITY COMPONENT FOR**
18 **EACH GENERATING PLANT. WHAT WAS THE BASIS FOR THAT CAPACITY**
19 **COMPONENT?**

20 A It is obvious from the workpapers that the amount used for the capacity component of
21 each plant was the gross original cost of the plant. That is, the total nominal dollars
22 spent to build the plant. It was not even reduced for accumulated reserve for

1 depreciation. It is most unusual to use installed costs (depreciated or not) as a basis
2 to represent and allocate capacity costs. More typically, an annual revenue
3 requirement would be determined by giving consideration to investment net of
4 accumulated depreciation, cost of capital, income tax expense and other fixed costs.
5 Even if there were no other problems with OPC's study, this use of gross original cost
6 is a serious flaw.

7 **Q HOW DOES STAFF ALLOCATE FUEL AND VARIABLE PURCHASED POWER**
8 **COSTS?**

9 A On class energy requirements, adjusted for losses.

10 **Q HOW DOES OPC ALLOCATE FUEL AND VARIABLE PURCHASED POWER**
11 **COSTS?**

12 A On class energy requirements, adjusted for losses.

13 **Q DO YOU HAVE ANY DISAGREEMENT WITH THE ALLOCATION OF FUEL AND**
14 **VARIABLE PURCHASED POWER COSTS ON THE BASIS OF CLASS ENERGY**
15 **REQUIREMENTS, ADJUSTED FOR LOSSES?**

16 A In the context of traditional studies like coincident peak and A&E, I do not. However,
17 in the context of the non-traditional studies that both Staff and OPC have offered, all
18 of which heavily weight the energy component in the allocation of fixed or demand-
19 related generation costs, it is not appropriate.

1 **Q PLEASE EXPLAIN WHY IT IS NOT APPROPRIATE TO ALLOCATE ENERGY**
2 **COSTS IN THIS FASHION WHEN USING STUDIES SUCH AS THOSE ADVANCED**
3 **BY OPC AND STAFF?**

4 **A The OPC and Staff studies allocate significantly more generation fixed costs to high**
5 **load factor customers than do the traditional studies. In other words, the higher the**
6 **load factor of a class, the larger the share of the generation fixed costs that gets**
7 **allocated to the class. If the costs allocated to classes under these methods were**
8 **divided by the contribution of these classes to the system peak demand, or by the**
9 **A&E demand, the result is a higher capital cost per kW for the higher load factor**
10 **classes, and a lower capital cost per kW for the low load factor classes. Effectively,**
11 **this means that the high load factor classes have been allocated an above average**
12 **share of capital cost for generation, and the low load factor customer classes have**
13 **been allocated a below average share.**

14 Given these allocations of capital cost, it is inappropriate to allocate average
15 fuel costs. Rather, the fuel cost allocation should recognize that the higher load
16 factor customer classes should receive below average fuel cost to correspond to the
17 above-average capital cost (similar to base load units) allocated to them, and the
18 lower load factor classes should get an allocation of fuel costs that is above the
19 average, corresponding to the lower than average capital cost (i.e., peaking units)
20 allocated to them.

1 **Q WHY WOULD IT BE APPROPRIATE TO RECOGNIZE A LOWER FUEL COST**
2 **ALLOCATION TO THOSE CLASSES THAT ARE ALLOCATED A HIGHER**
3 **CAPITAL COST?**

4 A It is not only appropriate, but it is essential if the energy-weighted allocations of
5 generation costs are employed. Failure to make this kind of distinction would give
6 high load factor customers the worst of both worlds – above average capital costs
7 and average energy costs; and the low load factor customers the best of both
8 worlds – below average capital cost and average fuel cost.

9 **Q HAVE YOU PREPARED ANY CALCULATIONS AND DEVELOPED A SCHEDULE**
10 **TO ILLUSTRATE THIS?**

11 A Yes, I have. Please refer to Schedule 2 COS-R attached to this testimony. This
12 schedule compares the capacity costs per kW and the energy cost per kilowatthour
13 (kWh) across classes for the traditional allocation methods, Staff's A&P method,
14 OPC's A&P method and OPC's "TOU" method. To establish a common framework of
15 costs for the analysis, so as to isolate the impacts just of allocation methodology, I
16 used the total generation capacity costs and total generation energy costs from
17 Staff's cost of service study and applied Staff and OPC demand and energy
18 allocators to these total amounts. I then divided the results by the A&E capacity
19 kilowatts (kW) and by the class megawatthours (MWh).

20 **Q PLEASE EXPLAIN WHAT THIS SCHEDULE SHOWS.**

21 A The first block of the schedule shows that under traditional allocation methods the
22 capacity costs per kW and the energy costs per kWh allocated to each class are the

1 same. The second block shows the allocation results under Staff's A&P method.
2 Note that the impact is to allocate significantly more capital costs, in fact, 27% more,
3 to the Large Power class than under the traditional approaches, which allocate
4 average capacity costs. Note also that there is virtually no difference among classes
5 as to the energy costs allocated. The differences that do exist are largely a result just
6 of rounding, and the inclusion of minor items that may be allocated slightly differently.
7 The third block shows similar results for OPC's study, except that the capital cost
8 allocated to the LP class is even larger, and, once again, the energy cost is virtually
9 identical.

10 The final block shows the OPC "TOU" study. Predictably, an even heavier
11 allocation of capacity costs is made to the Large Power class, and even less is
12 allocated to the Residential class. Once again, the energy costs across classes,
13 while varying slightly, are nearly identical.

14 **Q YOU INDICATED THAT THE ENERGY COSTS PER KWH ARE NOT**
15 **MEANINGFUL DIFFERENT UNDER THESE ALLOCATIONS. HOW DIFFERENT**
16 **ARE THE ENERGY COSTS OF THE DIFFERENT GENERATING FACILITIES?**

17 **A** They are quite diverse. For example, the fuel cost for the Wolf Creek nuclear plant is
18 less than 0.5¢ per kWh, the base load coal plants have fuel costs in the range of 0.8¢
19 to 1.4¢ per kWh, the combined cycle units have fuel costs in the range of 7¢, and the
20 peaking units have fuel costs over 8¢ per kWh. (Note: These average fuel cost
21 numbers are taken from KCPL's 2005 FERC Form 1 report.) Obviously, if some
22 classes are allocated higher capacity costs than others, they should be entitled to at
23 least an above-average share of the energy output from the higher capital cost, more

1 fuel efficient, base load type generating units. None of the allocation methods
2 advanced by Staff and OPC recognize this correspondence, and as a result over-
3 allocate costs to high load factor customers

4 **Q WHAT DO YOU BELIEVE SCHEDULE 2 COS-R SHOWS?**

5 A I believe it demonstrates that the A&P and the "TOU" methods that have been
6 sponsored in this case by Staff and OPC are highly non-symmetrical. They allocate
7 capacity costs differentially across customer classes as a function of load pattern, but
8 do virtually nothing to offset this higher allocation of capacity costs with a
9 correspondingly (meaningfully) lower allocation of energy costs. Thus, I believe these
10 studies are further flawed for this reason and are entitled to no weight.

11 **Allocation of Certain Administrative and General Expenses**

12 **Q DO YOU HAVE ANY COMMENTS ON THE ALLOCATION OF ANY OF THE**
13 **EXPENSES IN THE ADMINISTRATIVE AND GENERAL CATEGORY?**

14 A Yes. In its study, Staff allocated certain administrative and general expense accounts
15 on energy sales, rather than upon the more appropriate salaries and wages (i.e.,
16 payroll) or gross plant allocation factors. I address the problems with these
17 allocations at page 28 of my direct testimony on cost of service and will only say here
18 that there is no rationale for allocating these particular accounts on energy, it is not
19 conventional to do so, and it should not be done in this case. Please note that this
20 statement applies only to the Staff's studies and not to the OPC studies. OPC used
21 payroll for most of the accounts and gross plant for one of the accounts.

1 **Allocation of Certain Distribution Costs**

2 **Q WHAT IS THE LARGEST DIFFERENCE AMONG THE PARTIES WITH RESPECT**
3 **TO THE ALLOCATION OF COSTS IN THE DISTRIBUTION ACCOUNTS?**

4 A The largest difference among the parties is the issue of whether or not there is a
5 customer component to the primary portion of the distribution system, namely
6 Account 364 (Poles, Towers and Fixtures), Account 365 (Overhead Conductors and
7 Devices), Account 366 (Underground Conduit) and Account 367 (Underground
8 Conductors and Devices). KCPL, Staff and I all recognize the existence of a
9 customer component in the primary portion of these accounts while OPC does not.

10 The general accepted industry practice is to recognize the customer
11 component in the primary distribution system. The text and diagram at pages 11 and
12 12 of my direct testimony generally show the nature of the distribution system and
13 explain why there is a customer component. Briefly, the more geographically
14 dispersed the customers are, and the more of them that there are, the greater the
15 extent of the primary distribution network needed to provide service. It takes much
16 more primary network to serve 10,000 customers that each have a 10 kW load than it
17 does to serve 20 customers that each have a 5,000 kW load.

18 **Q DOES OPC EXPLAIN THE BASIS FOR IGNORING THE ALLOCATION OF**
19 **DISTRIBUTION COSTS TO THE CUSTOMER COMPONENT?**

20 A No. The only statement I can find is two sentences on page 7 of Ms. Meisenheimer's
21 direct testimony. That language is:

22 "For example, with the exception of service drops and meters, most of
23 the facilities between the utility customer's point-of-service and the
24 distribution substation are shared facilities. Since no portion of such
25 facilities are directly related to the number of customers, the

1 associated costs are best classified as demand-related, rather than
2 customer-related."

3 **Q DO THESE STATEMENTS PROVIDE A RATIONALE FOR IGNORING A**
4 **CUSTOMER COMPONENT IN THE PRIMARY DISTRIBUTION SYSTEM?**

5 A No. While it is true that many of these facilities are shared, in the sense that they are
6 used to provide service to many customers, that says nothing about whether there is
7 a customer component. The conclusion in the second sentence above simply does
8 not follow from the previous assertions, and does not support the treatment that OCA
9 gave to the primary distribution system.

10 **Q ARE THERE OTHER ISSUES WITH RESPECT TO THE ALLOCATION OF**
11 **DISTRIBUTION ACCOUNTS?**

12 A Yes, there are other issues with respect to the types of demands used to allocate
13 some of the investments, but in comparison to the other issues in this proceeding,
14 they are relatively minor, and I will not discuss them.

15 **Other Problems in Studies**

16 **Q WHAT WILL YOU ADDRESS IN THIS SECTION OF YOUR TESTIMONY?**

17 A I will address certain other problems, inconsistencies and/or errors that we have
18 identified in Staff's and OPC's cost allocation studies, that I have not previously
19 addressed.

1 **Q DO YOU HAVE ANY COMMENTS OR ISSUES WITH RESPECT TO THE**
2 **ALLOCATION OF REVENUES FROM OFF-SYSTEM SALES?**

3 A Yes. Both Staff and OPC allocate 100% of the fuel and variable purchased power
4 expenses that support these sales on an energy basis. However, they then allocate
5 100% of the revenues from these sales (the identified fuel and variable purchased
6 power cost component plus the margin) on a demand basis. This is fundamentally
7 inconsistent. If Staff and OPC desire to allocate the profit component on a demand
8 basis, they should at least allocate the identified fuel and variable purchased power
9 component of the sales revenue on an energy basis to offset the cost of fuel and
10 variable purchased power that was allocated to classes on an energy basis. Failure
11 to do so will clearly over-allocate costs to high load factor customers such as those
12 served on the Large Power rate.

13 **Q WHAT IS THE APPROXIMATE EFFECT OF CORRECTING FOR THIS**
14 **INCONSISTENCY?**

15 A The impact is to reduce the costs allocated to the Large Power class by
16 approximately \$1.3 million and to reduce the costs allocated to the Large General
17 Service class by approximately \$500,000. The costs allocated to the Residential
18 class increase by approximately \$1.7 million. The costs allocated to the Small
19 General Service and Medium General Service classes change only in minor amounts.

20 **Q IN STAFF'S STUDY, WHAT LOAD FACTOR WAS USED TO WEIGHT THE**
21 **AVERAGE COMPONENT OF THE ALLOCATION FACTOR?**

22 A Staff used a load factor of approximately 53.8%.

1 **Q IS THIS CORRECT ANNUAL LOAD FACTOR?**

2 A No. This load factor was developed by KCPL utilizing class contributions to annual
3 system peak demand that had not been adjusted to the generation level to account
4 for losses. As a result, the demand number in the denominator of the load factor
5 calculation was understated and, consequently, the load factor was overstated. The
6 correct annual load factor to use is the one after adjustment for losses in the
7 demands and is 51% (see Schedule 3 attached to my direct testimony).

8 **Q DOES MAKING THIS CORRECTION HAVE A LARGE IMPACT ON THE**
9 **CLASSES?**

10 A No. The difference is relatively minor in the case of the Staff's study. (Because the
11 error made by OPC is significantly larger, that is not the case in the context of the
12 OPC's studies.) The impact of correcting the Staff's annual load factor is to reduce
13 costs allocated to the Large Power Service class by approximately \$300,000, to
14 reduce costs allocated to the Large General Service class by approximately
15 \$130,000. Costs allocated to the Residential class increase by approximately
16 \$400,000, and there is relatively little impact on the Small General Service and
17 Medium General Service classes.

18 **Q HAVE YOU DEVELOPED ANY SCHEDULES TO SHOW THE RESULTS OF**
19 **MAKING THESE CORRECTIONS?**

20 A Yes. Schedule 3.1 COS-R shows the impact of correcting Staff's study for the energy
21 costs of sales.

1 Schedule 3.2 COS-R shows the impact of that correction plus the correction of
2 the annual load factor.

3 Schedule 3.3 COS-R shows the effect of the two previous corrections plus a
4 change in the allocation of certain Administrative and General expenses, which I
5 discussed earlier in my rebuttal testimony.

6 As compared to Staff's filed study, the impact of these three adjustments is to
7 reduce the costs allocated to the Large Power class by approximately \$3 million, to
8 reduce the costs allocated to the Large General Service class by approximately \$1.2
9 million and to increase the costs allocated to the Residential class by approximately
10 \$3.7 million. There is only a small impact on the costs allocated to the Small General
11 Service and the Medium General Service classes.

12 **Q IF THESE ADJUSTMENTS WERE MADE TO STAFF'S COST OF SERVICE STUDY**
13 **WOULD YOU SUPPORT STAFF'S COST OF SERVICE STUDY?**

14 **A** No, I would not. For reasons previously discussed, I believe that the allocation
15 methodology that Staff has chosen for production and transmission fixed costs
16 substantially over-allocates costs to high load factor customers such as the Large
17 Power Service class. Accordingly, I would not adopt Staff's study even if these
18 changes were made. However, making these corrections does indicate that even
19 with Staff's allocation of generation and transmission fixed costs, the Large Power
20 service class and other non-residential classes are being charged rates even further
21 above their cost of service.

1 **Recommended Revenue Allocation**

2 **Q HAVE YOU REVIEWED THE TESTIMONY OF STAFF WITNESS BUSCH WITH**
3 **RESPECT TO ALLOCATION OF ANY CHANGE IN REVENUES?**

4 A Yes. Mr. Busch recommends making some movement toward class cost of service
5 based on the results of Staff's cost of service study. Specifically, on a revenue
6 neutral basis he proposes to decrease the revenues from each of the non-residential
7 classes by an amount equal to the smallest decrease that Staff calculates would be
8 appropriate to move any of the non-residential classes to cost of service. This turns
9 out to be only 2.76%, which is driven by the Large General Service class. Even
10 Staff's studies indicate decreases larger than this (up to nearly 10%) for other
11 non-residential classes.

12 **Q HAVING REVIEWED THE DIRECT TESTIMONY OF OTHER PARTIES, DO YOU**
13 **HAVE ANY CHANGES IN YOUR RECOMMENDATIONS?**

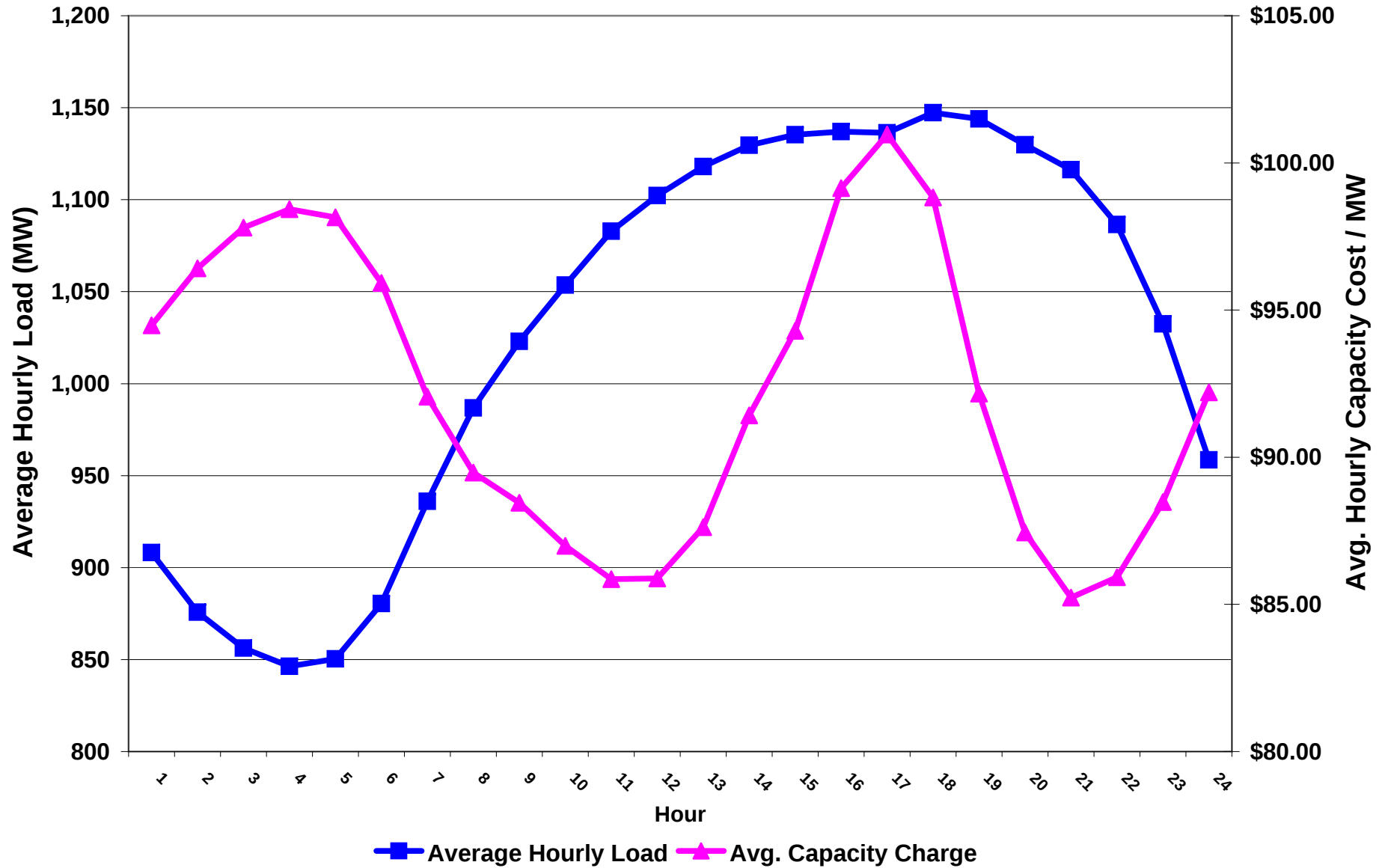
14 A No. I believe the recommendations which I made in my direct testimony concerning
15 cost of service and revenue allocation issues continue to be appropriate. As a result,
16 I believe the Commission should adopt the Average & Excess - 3 NCP cost of service
17 methodology, and should adjust class revenues consistent with the guidelines which I
18 set forth on Schedule 9 attached to my direct testimony on cost of service, revenue
19 allocation and rate design.

20 **Q DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY ON COST OF SERVICE,**
21 **REVENUE ALLOCATION AND RATE DESIGN?**

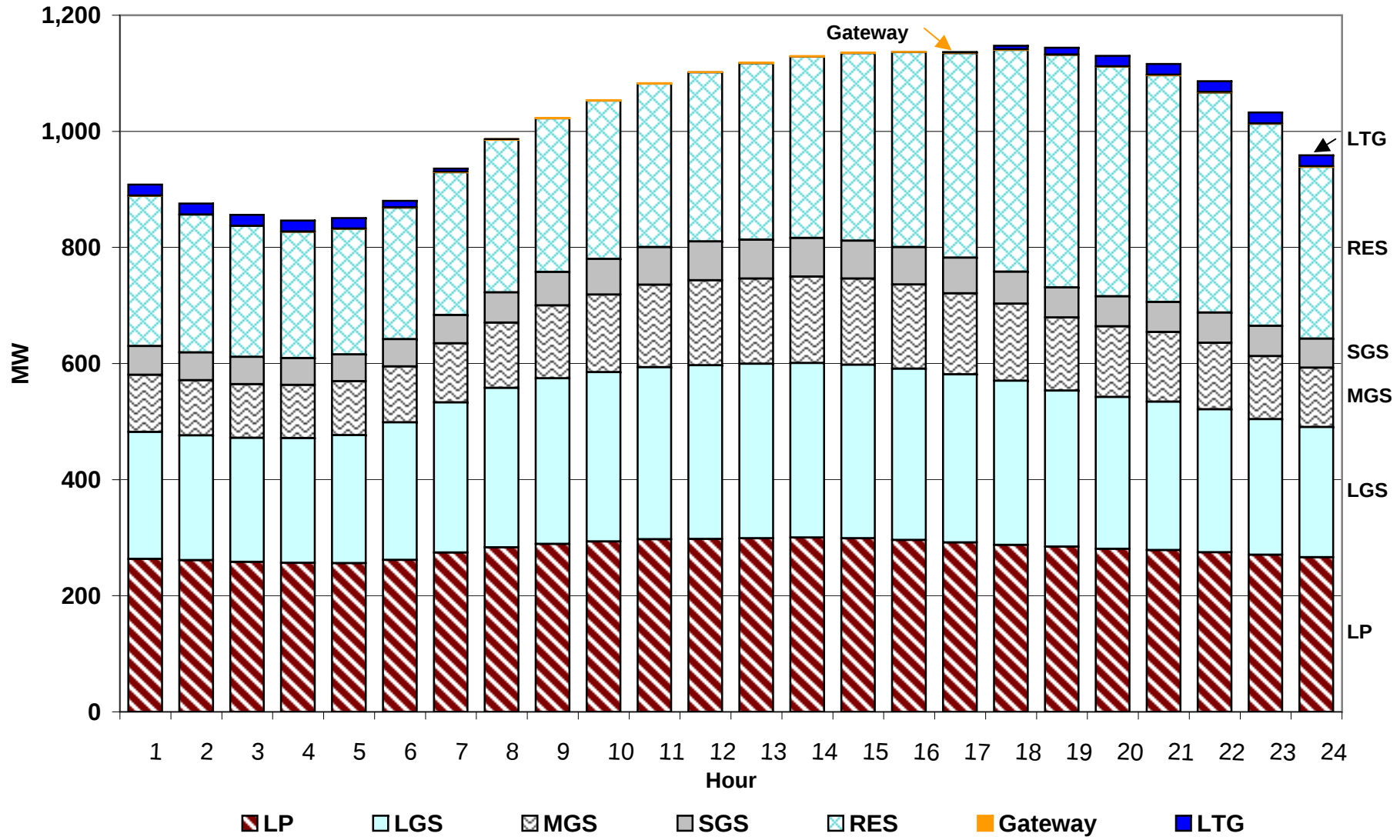
22 A Yes, it does.

KANSAS CITY POWER & LIGHT COMPANY - MISSOURI

OPC'S HOURLY ASSIGNMENT OF GENERATION CAPITAL COSTS



KANSAS CITY POWER & LIGHT COMPANY - MISSOURI
CLASS AVERAGE HOURLY LOAD FROM OPC TOU ALLOCATOR DATA



KANSAS CITY POWER & LIGHT - MISSOURI

COMPARISON OF STAFF'S AND OPC'S GENERATION CAPACITY AND ENERGY CLASS REVENUE REQUIREMENTS WITH TRADITIONAL ALLOCATION METHODOLOGY

Customer Class	<u>Traditional Method</u>				<u>Staff COSS</u>				<u>OPC COSS</u>				<u>OPC TOU-COSS</u>			
	<u>Capacity Rev Req.</u>		<u>Energy Rev Req.</u>		<u>Capacity Rev Req.</u>		<u>Energy Rev Req.</u>		<u>Capacity Rev Req.</u>		<u>Energy Rev Req.</u>		<u>Capacity Rev Req.</u>		<u>Energy Rev Req.</u>	
	Capacity Costs	% Difference From	Energy Costs	% Difference From	Capacity Costs	% Difference From	Energy Costs	% Difference From	Capacity Costs	% Difference From	Energy Costs	% Difference From	Capacity Costs	% Difference From	Energy Costs	% Difference From
	\$ per KW	System Avg.	¢ per kWh	System Avg.	\$ per KW	System Avg.	¢ per kWh	System Avg.	\$ per KW	System Avg.	¢ per kWh	System Avg.	\$ per KW	System Avg.	¢ per kWh	System Avg.
Total MO Retail	108		1.90		108		1.90		108		1.90		108		1.90	
Residential	108	0%	1.90	0%	87	-19%	1.94	2%	84	-22%	1.89	-1%	77	-29%	1.97	4%
Small GS	108	0%	1.90	0%	106	-2%	1.94	2%	103	-5%	1.90	0%	101	-6%	1.90	0%
Medium GS	108	0%	1.90	0%	108	0%	1.94	2%	107	-1%	1.92	1%	106	-2%	1.93	2%
Large GS	108	0%	1.90	0%	125	16%	1.93	2%	125	16%	1.92	1%	129	19%	1.89	-1%
Large Power	108	0%	1.90	0%	137	27%	1.89	0%	140	30%	1.90	0%	152	41%	1.84	-3%

MOPSC STAFF FUNCTIONAL CLASS COST OF SERVICE STUDY - SUMMARY OF RESULTS
KANSAS CITY POWER & LIGHT COMPANY - 12 MONTHS ENDING SEPTEMBER 30, 2005
MOPSC CASE NO. ER-2006-0314

STAFF STUDY WITH ENERGY COST OF SALES ALLOCATED ON ENERGY WITH LOSSES

FUNCTIONAL CATEGORY	MISSOURI RETAIL	RESIDENTIAL	SMALL GENERAL SERVICE	MEDIUM GENERAL SERVICE	LARGE GENERAL SERVICE	LARGE POWER SERVICE	LIGHTING
Production-Capacity	\$217,406,900	\$73,296,551	\$12,261,753	\$25,840,459	\$53,375,957	\$52,632,180	\$0
Production-Energy	\$161,960,634	\$48,619,394	\$8,880,906	\$19,114,535	\$41,528,981	\$43,816,817	\$0
Transmission	\$22,457,045	\$7,571,167	\$1,266,578	\$2,669,190	\$5,513,469	\$5,436,641	\$0
Distribution Substations	\$9,945,346	\$4,371,840	\$575,882	\$1,179,271	\$2,050,386	\$1,767,967	\$0
OH/UG Lines							
Pri-Customer Related	\$14,648,988	\$7,689,620	\$2,547,488	\$2,297,196	\$1,808,593	\$306,091	\$0
Sec-Customer Related	\$8,197,783	\$4,410,867	\$1,459,632	\$1,310,621	\$960,026	\$56,638	\$0
Pri-Demand Related	\$31,031,435	\$14,358,975	\$2,216,676	\$3,609,328	\$7,086,815	\$3,759,643	\$0
Sec-Demand Related	\$14,115,863	\$7,445,682	\$1,146,325	\$1,854,852	\$3,233,350	\$435,654	\$0
Line Transformers							
Sec-Customer Related	\$5,886,637	\$3,167,340	\$1,048,128	\$941,126	\$689,372	\$40,671	\$0
Sec-Demand Related	\$5,490,706	\$3,493,205	\$420,168	\$552,928	\$902,769	\$121,637	\$0
Services	\$3,423,384	\$1,817,375	\$1,167,079	\$322,945	\$114,204	\$1,780	\$0
Meters & Recorders	\$5,693,974	\$3,249,775	\$1,059,865	\$723,381	\$354,838	\$306,115	\$0
Company-Owned Lighting	\$3,691,809	\$0	\$0	\$0	\$0	\$0	\$3,691,809
Meter Reading	\$4,373,305	\$3,732,156	\$393,764	\$82,953	\$30,718	\$133,714	\$0
Customer Records & Collection	\$10,200,785	\$8,098,954	\$1,181,363	\$508,060	\$410,928	\$1,479	\$0
Customer Assistance	\$1,116,892	\$269,897	\$84,412	\$120,796	\$352,792	\$288,995	\$0
Sales Exp	\$926,869	\$486,537	\$161,184	\$145,348	\$114,433	\$19,367	\$0
Uncollectible	\$3,456,580	\$2,998,237	\$343,584	\$114,758	\$0	\$0	\$0
Other Cust Service	\$4,336,006	\$2,276,078	\$754,040	\$679,955	\$535,332	\$90,601	\$0
Customer Deposits	\$46,645	\$26,136	\$17,058	\$2,863	\$490	\$97	\$0
Sales-Related A&G Expenses	\$16,298,282	\$4,855,953	\$887,040	\$1,909,482	\$4,159,921	\$4,485,886	\$0
Miscellaneous Assignments	\$2,456,020	\$1,395,749	\$165,906	\$209,937	\$401,449	\$282,979	\$0
Income Taxes	\$38,237,098	\$16,956,426	\$3,186,533	\$4,495,701	\$7,484,835	\$6,113,603	\$0
	\$585,398,985	\$220,587,916	\$41,225,363	\$68,685,685	\$131,109,658	\$120,098,554	\$3,691,809
Reallocate Lighting Costs	\$0	\$1,399,963	\$261,637	\$435,914	\$832,088	\$762,206	(\$3,691,809)
TOTAL COST OF SERVICE	\$585,398,985	\$221,987,879	\$41,487,000	\$69,121,600	\$131,941,746	\$120,860,760	\$0
CCOS %	100.00%	37.92%	7.09%	11.81%	22.54%	20.65%	0.00%
RATE REVENUE	\$484,517,360	\$171,390,199	\$36,586,080	\$62,437,672	\$109,196,683	\$98,849,995	\$6,056,731
Reallocation of Lighting Revenues	\$0	\$2,296,760	\$429,238	\$715,155	\$1,365,113	\$1,250,465	(\$6,056,731)
TOTAL RATE REVENUE	\$484,517,360	\$173,686,959	\$37,015,318	\$63,152,827	\$110,561,796	\$100,100,460	\$0
Economic Development Credits	(\$466,753)	(\$176,996)	(\$33,079)	(\$55,112)	(\$105,200)	(\$96,365)	\$0
Interruptible (PLCC) Credits	(\$394,655)	(\$133,054)	(\$22,259)	(\$46,908)	(\$96,892)	(\$95,542)	\$0
Revenue from Off-System Sales	\$92,895,816	\$29,584,154	\$5,165,786	\$11,002,029	\$23,318,897	\$23,824,950	\$0
Miscellaneous Revenue	\$8,847,217	\$3,707,411	\$779,455	\$1,087,944	\$1,831,730	\$1,440,676	\$0
TOTAL OPERATING REVENUE	\$585,398,985	\$206,668,473	\$42,905,222	\$75,140,780	\$135,510,331	\$125,174,179	\$0
RATE REVENUE DEFICIENCY	\$0	\$15,319,406	(\$1,418,222)	(\$6,019,181)	(\$3,568,584)	(\$4,313,418)	\$0
Required % Change							
to operating revenue	0.00 %	7.41 %	-3.31 %	-8.01 %	-2.63 %	-3.45 %	0.00 %
to rate revenue	0.00 %	8.82 %	-3.83 %	-9.53 %	-3.23 %	-4.31 %	0.00 %
Changed "Energy Cost of Sales" allocator to ENERGY1 - Run 1 of 3							

MOPSC STAFF FUNCTIONAL CLASS COST OF SERVICE STUDY - SUMMARY OF RESULTS
KANSAS CITY POWER & LIGHT COMPANY - 12 MONTHS ENDING SEPTEMBER 30, 2005
MOPSC CASE NO. ER-2006-0314

STAFF STUDY WITH ENERGY COST OF SALES ALLOCATED ON ENERGY WITH LOSSES & CORRECTED LOAD FACTOR

FUNCTIONAL CATEGORY	MISSOURI RETAIL	RESIDENTIAL	SMALL GENERAL SERVICE	MEDIUM GENERAL SERVICE	LARGE GENERAL SERVICE	LARGE POWER SERVICE	LIGHTING
Production-Capacity	\$217,406,900	\$73,785,114	\$12,282,464	\$25,851,539	\$53,231,794	\$52,255,989	\$0
Production-Energy	\$161,960,634	\$48,619,394	\$8,880,906	\$19,114,535	\$41,528,981	\$43,816,817	\$0
Transmission	\$22,457,045	\$7,621,633	\$1,268,717	\$2,670,335	\$5,498,578	\$5,397,782	\$0
Distribution Substations	\$9,945,346	\$4,371,840	\$575,882	\$1,179,271	\$2,050,386	\$1,767,967	\$0
OH/UG Lines							
Pri-Customer Related	\$14,648,988	\$7,689,620	\$2,547,488	\$2,297,196	\$1,808,593	\$306,091	\$0
Sec-Customer Related	\$8,197,783	\$4,410,867	\$1,459,632	\$1,310,621	\$960,026	\$56,638	\$0
Pri-Demand Related	\$31,031,435	\$14,358,975	\$2,216,676	\$3,609,328	\$7,086,815	\$3,759,643	\$0
Sec-Demand Related	\$14,115,863	\$7,445,682	\$1,146,325	\$1,854,852	\$3,233,350	\$435,654	\$0
Line Transformers							
Sec-Customer Related	\$5,886,637	\$3,167,340	\$1,048,128	\$941,126	\$689,372	\$40,671	\$0
Sec-Demand Related	\$5,490,706	\$3,493,205	\$420,168	\$552,928	\$902,769	\$121,637	\$0
Services	\$3,423,384	\$1,817,375	\$1,167,079	\$322,945	\$114,204	\$1,780	\$0
Meters & Recorders	\$5,693,974	\$3,249,775	\$1,059,865	\$723,381	\$354,838	\$306,115	\$0
Company-Owned Lighting	\$3,691,809	\$0	\$0	\$0	\$0	\$0	\$3,691,809
Meter Reading	\$4,373,305	\$3,732,156	\$393,764	\$82,953	\$30,718	\$133,714	\$0
Customer Records & Collection	\$10,200,785	\$8,098,954	\$1,181,363	\$508,060	\$410,928	\$1,479	\$0
Customer Assistance	\$1,116,892	\$269,897	\$84,412	\$120,796	\$352,792	\$288,995	\$0
Sales Exp	\$926,869	\$486,537	\$161,184	\$145,348	\$114,433	\$19,367	\$0
Uncollectible	\$3,456,580	\$2,998,237	\$343,584	\$114,758	\$0	\$0	\$0
Other Cust Service	\$4,336,006	\$2,276,078	\$754,040	\$679,955	\$535,332	\$90,601	\$0
Customer Deposits	\$46,645	\$26,136	\$17,058	\$2,863	\$490	\$97	\$0
Sales-Related A&G Expenses	\$16,298,282	\$4,855,953	\$887,040	\$1,909,482	\$4,159,921	\$4,485,886	\$0
Miscellaneous Assignments	\$2,456,020	\$1,395,749	\$165,906	\$209,937	\$401,449	\$282,979	\$0
Income Taxes	\$38,237,098	\$16,956,426	\$3,186,533	\$4,495,701	\$7,484,835	\$6,113,603	\$0
	\$585,398,985	\$221,126,945	\$41,248,214	\$68,697,910	\$130,950,604	\$119,683,504	\$3,691,809
Reallocate Lighting Costs	\$0	\$1,403,384	\$261,782	\$435,992	\$831,079	\$759,572	(\$3,691,809)
TOTAL COST OF SERVICE	\$585,398,985	\$222,530,329	\$41,509,996	\$69,133,902	\$131,781,683	\$120,443,076	\$0
CCOS %	100.00%	38.01%	7.09%	11.81%	22.51%	20.57%	0.00%
RATE REVENUE	\$484,517,360	\$171,390,199	\$36,586,080	\$62,437,672	\$109,196,683	\$98,849,995	\$6,056,731
Reallocation of Lighting Revenues	\$0	\$2,302,372	\$429,476	\$715,282	\$1,363,457	\$1,246,144	(\$6,056,731)
TOTAL RATE REVENUE	\$484,517,360	\$173,692,571	\$37,015,556	\$63,152,954	\$110,560,140	\$100,096,139	\$0
Economic Development Credits	(\$466,753)	(\$177,429)	(\$33,097)	(\$55,122)	(\$105,073)	(\$96,032)	\$0
Interruptible (PLCC) Credits	(\$394,655)	(\$133,941)	(\$22,296)	(\$46,928)	(\$96,631)	(\$94,859)	\$0
Revenue from Off-System Sales	\$92,895,816	\$29,687,401	\$5,170,163	\$11,004,371	\$23,288,431	\$23,745,450	\$0
Miscellaneous Revenue	\$8,847,217	\$3,716,240	\$779,829	\$1,088,145	\$1,829,125	\$1,433,878	\$0
TOTAL OPERATING REVENUE	\$585,398,985	\$206,784,842	\$42,910,155	\$75,143,419	\$135,475,993	\$125,084,576	\$0
RATE REVENUE DEFICIENCY	\$0	\$15,745,487	(\$1,400,160)	(\$6,009,517)	(\$3,694,310)	(\$4,641,499)	\$0
Required % Change							
to operating revenue	0.00 %	7.61 %	-3.26 %	-8.00 %	-2.73 %	-3.71 %	0.00 %
to rate revenue	0.00 %	9.07 %	-3.78 %	-9.52 %	-3.34 %	-4.64 %	0.00 %
Changed LF to 50.99 % - Run 2 of 3							

MOPSC STAFF FUNCTIONAL CLASS COST OF SERVICE STUDY - SUMMARY OF RESULTS
KANSAS CITY POWER & LIGHT COMPANY - 12 MONTHS ENDING SEPTEMBER 30, 2005
MOPSC CASE NO. ER-2006-0314

**STAFF STUDY WITH ENERGY COST OF SALES ALLOCATED ON ENERGY WITH LOSSES, CORRECTED LOAD FACTOR,
& REVISED ALLOCATION OF CERTAIN A&G EXPENSES**

FUNCTIONAL CATEGORY	MISSOURI RETAIL	RESIDENTIAL	SMALL GENERAL SERVICE	MEDIUM GENERAL SERVICE	LARGE GENERAL SERVICE	LARGE POWER SERVICE	LIGHTING
Production-Capacity	\$228,004,745	\$77,381,887	\$12,881,193	\$27,111,714	\$55,826,662	\$54,803,290	\$0
Production-Energy	\$162,727,214	\$48,849,516	\$8,922,941	\$19,205,007	\$41,725,543	\$44,024,208	\$0
Transmission	\$22,977,594	\$7,798,301		\$2,732,232	\$5,626,034	\$5,522,901	\$0
Distribution Substations	\$10,061,076	\$4,422,713	\$582,583	\$1,192,994	\$2,074,245	\$1,788,540	\$0
OH/UG Lines							
Pri-Customer Related	\$15,009,491	\$7,878,857	\$2,610,180	\$2,353,728	\$1,853,102	\$313,623	\$0
Sec-Customer Related	\$8,382,909	\$4,510,475	\$1,492,594	\$1,340,218	\$981,706	\$57,918	\$0
Pri-Demand Related	\$32,377,195	\$14,981,690	\$2,312,808	\$3,765,856	\$7,394,153	\$3,922,689	\$0
Sec-Demand Related	\$14,686,208	\$7,746,522	\$1,192,641	\$1,929,796	\$3,363,992	\$453,256	\$0
Line Transformers							
Sec-Customer Related	\$5,942,139	\$3,197,203	\$1,058,010	\$949,999	\$695,872	\$41,054	\$0
Sec-Demand Related	\$5,542,474	\$3,526,140	\$424,129	\$558,141	\$911,280	\$122,784	\$0
Services	\$3,437,303	\$1,824,765	\$1,171,825	\$324,258	\$114,668	\$1,787	\$0
Meters & Recorders	\$5,908,967	\$3,372,480	\$1,099,883	\$750,695	\$368,236	\$317,673	\$0
Company-Owned Lighting	\$3,864,538	\$0	\$0	\$0	\$0	\$0	\$3,864,538
Meter Reading	\$4,636,565	\$3,956,821	\$417,467	\$87,946	\$32,567	\$141,763	\$0
Customer Records & Collection	\$10,626,996	\$8,437,346	\$1,230,723	\$529,288	\$428,098	\$1,541	\$0
Customer Assistance	\$1,245,042	\$300,864	\$94,098	\$134,656	\$393,270	\$322,153	\$0
Sales Exp	\$1,014,177	\$532,367	\$176,367	\$159,039	\$125,212	\$21,191	\$0
Uncollectible	\$3,662,833	\$3,177,142	\$364,086	\$121,606	\$0	\$0	\$0
Other Cust Service	\$4,531,774	\$2,378,841	\$788,084	\$710,655	\$559,502	\$94,691	\$0
Customer Deposits	\$46,645	\$26,136	\$17,058	\$2,863	\$490	\$97	\$0
Sales-Related A&G Expenses	\$19,982	\$5,953	\$1,088	\$2,341	\$5,100	\$5,500	\$0
Miscellaneous Assignments	\$2,456,020	\$1,395,749	\$165,906	\$209,937	\$401,449	\$282,979	\$0
Income Taxes	\$38,237,098	\$16,956,426	\$3,186,533	\$4,495,701	\$7,484,835	\$6,113,603	\$0
	\$585,398,985	\$222,658,194	\$41,488,322	\$68,668,670	\$130,366,017	\$118,353,244	\$3,864,538
Reallocate Lighting Costs	\$0	\$1,479,656	\$275,707	\$456,332	\$866,336	\$786,507	(\$3,864,538)
TOTAL COST OF SERVICE	\$585,398,985	\$224,137,851	\$41,764,029	\$69,125,002	\$131,232,354	\$119,139,750	\$0
CCOS %	100.00%	38.29%	7.13%	11.81%	22.42%	20.35%	0.00%
RATE REVENUE	\$484,517,360	\$171,390,199	\$36,586,080	\$62,437,672	\$109,196,683	\$98,849,995	\$6,056,731
Reallocation of Lighting Revenues	\$0	\$2,319,004	\$432,104	\$715,190	\$1,357,773	\$1,232,659	(\$6,056,731)
TOTAL RATE REVENUE	\$484,517,360	\$173,709,203	\$37,018,184	\$63,152,862	\$110,554,456	\$100,082,654	\$0
Economic Development Credits	(\$466,753)	(\$178,711)	(\$33,299)	(\$55,115)	(\$104,635)	(\$94,993)	\$0
Interruptible (PLCC) Credits	(\$394,655)	(\$133,941)	(\$22,296)	(\$46,928)	(\$96,631)	(\$94,859)	\$0
Revenue from Off-System Sales	\$92,895,816	\$29,687,401	\$5,170,163	\$11,004,371	\$23,288,431	\$23,745,450	\$0
Miscellaneous Revenue	\$8,847,217	\$3,716,240	\$779,829	\$1,088,145	\$1,829,125	\$1,433,878	\$0
TOTAL OPERATING REVENUE	\$585,398,985	\$206,800,192	\$42,912,581	\$75,143,334	\$135,470,747	\$125,072,130	\$0
RATE REVENUE DEFICIENCY	\$0	\$17,337,659	(\$1,148,552)	(\$6,018,332)	(\$4,238,394)	(\$5,932,380)	\$0
Required % Change							
to operating revenue	0.00 %	8.38 %	-2.68 %	-8.01 %	-3.13 %	-4.74 %	0.00 %
to rate revenue	0.00 %	9.98 %	-3.10 %	-9.53 %	-3.83 %	-5.93 %	0.00 %
Allocated certain A&G expenses on salaries and wages, rather than energy - Run 3 of 3							