

Exhibit No.:
Issue(s): Cost of Service/Rate Design
Witness/Type of Exhibit: Meisenheimer/Direct
Sponsoring Party: Public Counsel
Case No.: ER-2009-0089

DIRECT TESTIMONY
OF
BARBARA A. MEISENHEIMER

Submitted on Behalf of the Office of the Public Counsel

Kansas City Power & Light Company

CASE NO. ER-2009-0089

February 25, 2009

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

In the Matter of the Application of Kansas)
City Power and Light Company for)
Approval to Make Certain Changes in its)
Charges for Electric Service To Continue)
the Implementation of Its Regulatory Plan.)

ER-2009-0089

AFFIDAVIT OF BARBARA A. MEISENHEIMER

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

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

1. My name is Barbara A. Meisenheimer. I am Chief Utility Economist for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my direct testimony.
3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

Barbara A. Meisenheimer
Barbara A. Meisenheimer

Subscribed and sworn to me this 25th day of February 2009.



KENDELLE R. SEIDNER
My Commission Expires
February 4, 2011
Cole County
Commission #07004782

Kendelle R. Seidner
Kendelle R. Seidner
Notary Public

My Commission expires February 4, 2011.

KCPL

Class Cost of Service and Rate Design

ER-2009-0089

**Direct Testimony
of
Barbara Meisenheimer**

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

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

5 **Q. PLEASE SUMMARIZE YOUR EDUCATIONAL AND EMPLOYMENT BACKGROUND.**

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

13 **Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE THE COMMISSION?**

14 A. Yes, I have testified on numerous issues before the Missouri Public Service
15 Commission. (PSC or Commission).

16

1 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

2 A. The purpose of my direct testimony is to present Public Counsel's Class Cost of
3 Service (CCOS) studies.

4 **Q. WHAT IS YOUR EXPERIENCE IN THE PREPARATION OF CLASS COST OF SERVICE**
5 **STUDIES?**

6 A. I have prepared and supervised the preparation of cost of service studies on behalf
7 of Public Counsel for over ten years. These include class cost of service studies
8 related to natural gas, water and electric utilities, and cost studies related to
9 telecommunications services.

10 **Q. HAD PUBLIC COUNSEL ANTICIPATED PREPARING A CCOS STUDY FOR THIS CASE?**

11 A. No. In Case No. ER-2007-0271, Public Counsel did not file or update a class cost
12 of service study in compliance with the Stipulation and Agreement resulting from
13 KCPL's Regulatory Plan, Case No. EO-2005-0329. In the Stipulation and
14 Agreement the signatory parties agreed not to file new or updated class cost of
15 service studies or to propose changes to rate structures in the next two optional
16 rate cases. However in the first of those two optional cases, Case No. ER-2007-
17 0271, parties to the Stipulation and Agreement filed updated CCOS study results
18 and proposed rate structure changes that were accepted by the Commission. In
19 Case No. ER-2007-0271, the Commission also required KCPL to file a CCOS
20 study in this case to evaluate the need for additional rate design changes. While
21 Public Counsel is satisfied to adhere to the original agreement in Case No. ER-
22 2007-0271 by proposing no changes to rate design in direct testimony, based on
23 the Commission's decision in ER-2007-0271, Public Counsel is compelled to file

1 a CCOS study in this case in order to be prepared to respond to any proposed
2 inter-class revenue shifts proposed by other parties in this case.

3 **Q. PLEASE DISCUSS YOUR CCOS STUDIES.**

4 A. I have prepared two CCOS studies. The first study uses a traditional method of
5 allocating production costs. The second CCOS study illustrates the results of
6 replacing the traditional allocator with a production allocator based on Time of
7 Use (TOU) similar to the TOU Demand allocator I have filed in previous cases.
8 The results of the traditional study are provided in Schedule DIR-BAM nonTOU.
9 The TOU cost of service study results are provided in Schedule DIR-BAM TOU.

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

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

16 **Q. WHAT IS THE RELATIVE IMPORTANCE OF CCOS STUDY RESULTS IN DEVELOPING
17 RATE DESIGN?**

18 A. CCOS study results provide the Commission with a general guide in setting the
19 just and reasonable rate for the provision of service based on costs. In addition,
20 other factors are also relevant considerations when setting rates including the
21 value of a service, affordability, rate impact, rate continuity, etc. A determination
22 as to the particular manner in which the results of a cost of service study and all

1 the other factors are balanced in setting rates can only be determined on a case-
2 by-case basis.

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

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

5 Functionalizing costs involves categorizing accounts by the type of electric utility
6 function(s) with which each account is associated. The categories of accounts
7 include Production, Transmission, Distribution, Customer Accounts,
8 Administrative and General, etc.

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

17 The final step in the CCOS is to develop and apply allocation factors that
18 apportion a reasonable share of jurisdictional costs to each customer class.
19 Allocation factors should be developed in a manner that is consistent with the
20 functionalization and classification of costs described above. For example,
21 unweighted customer related cost allocation factors are expressed as ratios that
22 reflect the proportion of customers in a particular class to the total number of
23 customers that contribute to the causation of the relevant cost. Likewise, demand

1 related allocators should reflect each class's use during specific time periods and
2 commodity related allocators should reflect each class's annual consumption. In
3 simpler terms, if the cost for a particular activity were thought of as a pie, then
4 allocators would represent the size of the slices of the "cost" pie that each class
5 would be assigned.

6 **Q. WHICH CUSTOMER CLASSES ARE USED IN YOUR CCOS STUDIES?**

7 A. For both studies of the KCPL system, I used a Residential Class (RG), a Small
8 General Service Class (SGS), a Medium General Service Class (MGS), a Large
9 General Service Class (LGS), a Large Power Service Class (LPS), and a Lighting
10 Class (Lighting).

11 **Q. ON WHAT DATA ARE YOUR CCOS STUDIES BASED?**

12 A. My CCOS studies are based primarily on data provided by the Company
13 including data related to investments, expenses and revenues, peak demand,
14 customer counts and energy use.

15 **Q. HOW IS INTANGIBLE PLANT ALLOCATED?**

16 A. Intangible Plant (FERC Account No. 301) pertains to organization cost. It
17 includes all fees paid to federal or state governments for the privilege of
18 incorporation along with related expenditures. Generally, it should be allocated to
19 each customer class according to the benefits each receives from the existence of
20 this business, or according to the extent to which each class contributes to the
21 overall cost of conducting the business. In this case, I have applied a Gross Plant
22 Allocator to Intangible Plant.

23

1 **Q. HOW IS PRODUCTION PLANT ALLOCATED?**

2 A. Production Plant includes the cost of land, structures and equipment used in
3 connection with power generation. Both demand and energy characteristics of a
4 system's loads are important determinants of production plant costs. One of my
5 production allocators assigns Production Plant according to a composite allocator
6 that weights (1) a demand related component and (2) an energy related
7 component. This method uses 3 coincident summer peaks to represent the demand
8 related component and average annual energy use to represent the energy related
9 component.

10 The second production allocation method is a time of use method which
11 assigns demand related fixed plant investments net of depreciation reserve to each
12 hour. The method then sums each class' share of hourly net investments based on
13 only those hours when the class actually used the system. This method involves
14 examining the production and demand for each hour of the year so it reflects both
15 peak period use and average use throughout the year.

16 **Q. REGARDING YOUR FIRST ALLOCATION METHOD, IS A WEIGHTED AVERAGE AND**
17 **COINCIDENT PEAK (A&CP) METHOD THAT ALLOWS DISCRETION IN SELECTION**
18 **OF THE NUMBER OF COINCIDENT PEAKS AMONG THE NARUC-RECOGNIZED**
19 **PRODUCTION CAPACITY COST ALLOCATION METHODS?**

20 A. Yes. Part IV B. of the NARUC Electric Utility Cost Allocation Manual describes
21 methods for developing energy weighted production plant cost allocations.
22 Section 4 of Part IV discusses production cost allocations based on judgmental

1 energy weightings. Page 57-59 of the NARUC Manual specifically recognizes
2 weighted average and coincident peak methods where the coincident peak (CP)
3 may be estimated based on more than one period of peak use. The Manual
4 describes the method as follows:

5 Some regulatory commissions, recognizing that energy loads are
6 an important determinant of production plant costs, require the
7 incorporation of judgmentally-established energy weightings into
8 cost studies. One example is the “peak and average demand”
9 allocator derived by adding together each class’s contribution to
10 the system peak demand (or to a specific group of system peak
11 demands; e.g., the 12 monthly CPs) and its average demand. The
12 allocator is effectively the average of the two numbers: class CP
13 (however measured) and class average demand. Two variants of
14 this allocation method are shown in Tables 4-14 and 4-15.
15

16 The Manual goes on to provide two examples of weighted methods, one
17 based on average demand and a single period of coincident peak use (A&1CP)
18 and another that incorporates average demand and 12 periods of peak use
19 (A&12CP) in developing an allocator.

20 I used an A&3CP method in calculating the production allocator. The
21 3CP I used to represent the peak portion of the allocator falls well within the
22 number of peak periods recognized in the NARUC Manual. I used a measure of
23 load factor (LF) as the weight assigned to the average portion of the allocator and
24 used 1- LF as the weight assigned to the peak portion of the allocator. This is a
25 common method of assigning weights used in the NARUC Manual.

1 **Q. IS A 3CP REPRESENTATIVE OF THE PEAK DEMAND ON THE KCPL SYSTEM?**

2 A. Yes. The 3CP is reasonably representative of the peak demand on KCPL's
3 system. As illustrated in Table 1 the 3CP includes periods when demand was at
4 or in excess of 90% of the system's maximum peak.

	RES	SGS	MGS	LGS	LP	Lighting	Total	% Peak
<i>Jan</i>	337	47	148	301	279	20	1132	57%
<i>Feb</i>	488	56	156	333	277	22	1333	67%
<i>Mar</i>	223	38	119	267	302	0	948	48%
<i>Apr</i>	218	52	183	333	313	0	1099	55%
<i>May</i>	368	42	152	235	241	20	1058	53%
<i>Jun</i>	705	91	239	412	364	0	1809	91%
<i>Jul</i>	845	102	248	417	378	0	1991	100%
<i>Aug</i>	762	92	241	422	404	0	1921	96%
<i>Sep</i>	665	91	226	387	354	0	1723	87%
<i>Oct</i>	282	40	120	212	242	22	919	46%
<i>Nov</i>	246	47	145	282	304	22	1046	53%
<i>Dec</i>	370	41	100	203	183	23	920	46%

5
6 **Q. WHY IS IT REASONABLE TO USE MULTIPLE PEAKS IN DEVELOPING THE MEASURE**
7 **OF COINCIDENT PEAK USED IN THE PRODUCTION CAPACITY ALLOCATOR?**

8 A. A class's relative share of system demand may vary significantly. Using multiple
9 measures of coincident peak reduces the likelihood of relying on an anomalous
10 single peak as the basis of the allocator. In addition, the system is designed to
11 meet a range of system demands and a class's relative share may vary in that
12 range. I believe it is reasonable to include more than simply the highest single
13 peak to reflect the class's relative share of system demand. Allowing for peaks in
14 excess of 85-90% retains the conceptual focus on determining peak demand while
15 also reflecting each class's relative share of variation in system peak demands.

1 **Q. PLEASE REVIEW YOUR SECOND PRODUCTION COST ALLOCATION METHOD.**

2 A. The Time of Use method assigns production costs to each hour of the year that the
3 specific production occurs. The method then sums each class's share of hourly
4 investments based on only those hours when the class actually uses the system.

5 **Q. DO YOU BELIEVE YOUR TIME OF USE METHOD IS CONSISTENT WITH THE METHOD**
6 **DESCRIBED BY NARUC IN ITS 1992 ELECTRIC COST MANUAL?**

7 A. Yes it is. The following is a description method from the NARUC manual which
8 is consistent with the method I used to develop the time of use allocation.

9 4. Probability of Dispatch Method

10
11 The probability of dispatch (POD) method is primarily a tool for analyzing
12 cost of service by time periods. The method requires analyzing an actual
13 or estimated hourly load curve for the utility and identifying the
14 generating units that would normally be used to serve each hourly load.
15 The annual revenue requirement of each generating unit is divided by the
16 number of hours in the year that it operates, and that "per hour cost" is
17 assigned to each hour that it runs. In allocating production plant costs to
18 classes, the total cost for all units for each hour is allocated to the classes
19 according to the KWH use in each hour. The total production plant cost
20 allocated to each class is then obtained by summing the hourly cost over
21 all hours of the year. These costs may then be recovered via an
22 appropriate combination of demand and energy charges. It must be noted
23 that this method has substantial input data and analysis requirements that
24 may make it prohibitively expensive for utilities that do not develop and
25 maintain the required data.

26 **Q. WHAT WAS YOUR SOURCE OF INFORMATION FOR THE HOURLY LOAD CURVE AND**
27 **THE GENERATING UNITS THAT WOULD NORMALLY BE USED TO SERVE EACH**
28 **HOURLY LOAD?**

29 A. I obtained hourly system load information and RealTime production modeling
30 inputs from the Staff. The Staff uses the RealTime model in order to determine

1 fuel costs. The RealTime model simulates generation dispatch for each hour of
2 the year including information for each generation plant that is in operation
3 regarding the amount of generation in MW.

4 **Q. HOW DID YOU SPREAD THE INVESTMENT COSTS OF THE GENERATING UNITS**
5 **THAT WOULD NORMALLY BE USED TO SERVE EACH HOURLY LOAD?**

6 A. I used Staff accounting information on net generation plant investments to
7 determine a cost per MW for each plant. I then spread the plant investment cost
8 to each hour by multiplying the per plant investment cost per MW hour by the
9 MW hours produced by the plant and then summing for all plants in operation
10 during the particular hour.

11 **Q. HOW DID YOU THEN ALLOCATE THESE COSTS TO THE CUSTOMER CLASSES?**

12 A. Based on hourly customer load information I apportioned each hour's total
13 production costs to the customer classes based on each class's share of demand
14 for each hour. In the final steps I summed each class's hourly portion of costs to
15 determine the class's share of total costs.

16 **Q. DO YOU VIEW THE TIME OF USE METHOD AS SUPERIOR TO OTHER PRODUCTION**
17 **COST ALLOCATION METHODS?**

18 Yes. Since it reflects costs and use for all hours of the year I believe it is superior
19 to methods that allocate the total cost based in large part on usage in only a few
20 peak hours. Allocators that overly focus on use in only a few peak hours unfairly
21 over-allocate costs to the residential and small general service class because the

1 capacity costs actually vary by hour depending on the plants in use. The
2 particular pattern of use by each class over all hours of the year appropriately
3 leads to a difference in overall average cost by class.

4 **Q. HOW MUCH DIFFERENCE DOES THE TIME OF USE METHOD MAKE IN ALLOCATING**
5 **PRODUCTION COSTS TO CLASSES?**

6 A. It makes a significant difference to allocate production costs by matching
7 production plant use to customer demand on an hourly basis. Table 2 illustrates
8 the difference between my more limited A&3CP allocator and the Time of Use
9 allocator.

Table 2

	RES	SGS	MGS	LGS	LP
Ave&3CP Allocator	34.7%	5.23%	12.23%	24.0%	23.4%
TOU	30.5%	4.51%	13.2%	25.0%	25.9%

10

11 **Q. HOW DID YOU ALLOCATE TRANSMISSION PLANT?**

12 A. Transmission Plant includes the cost of land, structures and equipment used in
13 connection with transmission operations. Transmission facilities are installed to
14 provide reliable service throughout the year including peak periods and periods of
15 scheduled maintenance. Transmission Plant can also, at times, substitute for
16 generation and can minimize the cost of generation facilities through the sale or
17 purchase of power. Transmission Plant costs can be equitably allocated on the
18 same basis as Production Plant or can be allocated based on another method that

1 reasonably represents its shared service throughout the year. I chose to use each
2 class's sum of monthly coincident peaks (12CP) to allocate Transmission Plant.

3 **Q. HOW DID YOU ALLOCATE DISTRIBUTION PLANT?**

4 A. Distribution Plant includes the cost of land, structures and equipment used in
5 connection with distribution operations. Distribution plant equipment reduces
6 high-voltage energy from the transmission system to lower voltages, delivers it to
7 the customer and monitors the amounts of energy used by the customer. Many of
8 the distribution costs associated with providing service to electric utility
9 customers are not directly associated with or reasonably assignable to a particular
10 class with precision. For example, with the exception of service drops and
11 meters, most of the facilities between the utility customer's point-of-service and
12 the distribution substation are shared facilities. Since such facilities are not
13 directly related to the number of customers, the associated costs are best classified
14 as demand related, rather than customer related.

15 In the functionalization and allocation of Distribution Plant, my studies
16 reflect that distribution facilities provide service at two voltage levels: primary
17 and secondary, and that some large industrial customers may choose to take
18 service at primary voltages because of their large electrical requirements.
19 Different allocation factors were used for allocating costs at different levels of the
20 distribution system. The Company class cost of service study included allocation
21 weights used to apportion costs into primary and secondary plant cost categories
22 for FERC Accounts 364-368. Based on information I had available from a
23 previous KCPL CCOS study, I did further disaggregate secondary plant costs for

1 FERC Accounts 364-368. Primary costs and a portion of secondary costs are
2 treated as demand related costs in my CCOS studies. Demand related costs are
3 assigned to customer classes based on each class's share of non coincident peak
4 demand. The remaining secondary costs are allocated based on each class's
5 maximum month demand.

6 **Q. HOW DID YOU ALLOCATE METER RELATED FACILITIES?**

7 A. Meter facilities costs are generally related to each individual customer. New
8 investment occurs when a new customer is added to the system. Therefore, meter
9 costs are usually classified as customer related. I allocated meter costs based on
10 weighted meter investment by class.

11 **Q. HOW DID YOU ALLOCATE SERVICE RELATED FACILITIES?**

12 Service facilities are classified as customer related. I used the same allocations for
13 services as for meters.

14 **Q. PLEASE SUMMARIZE YOUR TREATMENT OF DISTRIBUTION PLANT COSTS.**

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

16	360-362 Distribution Substations	Demand at Primary Station
17	364 Poles Towers and Fixtures	Demand at Primary and
18		Customer and Demand at
19		Secondary
20	365 Overhead Conductors & Devices	Demand at Primary and
21		Customer and Demand at
22		Secondary
23	366 Underground Conduit	Demand at Primary and
24		Customer and Demand at
25		Secondary
26	367 Underground Conductors & Devices	Demand at Primary and
27		Customer and Demand at
28		Secondary
29	368 Line Transformers	Customer at Secondary

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369	Services	Customer
370	Meters	Customer

Q. HOW DID YOU ALLOCATE GENERAL PLANT?

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

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

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

Q. HOW DID YOU ALLOCATE POWER PRODUCTION EXPENSES?

A. Power Production Expenses were broken down into demand-related and energy-related production and purchased power costs. The demand-related expenses were allocated based on the demand related allocators in my studies. The energy-related expenses were allocated based on class kWhs at generation. The RealTime production model I used to prepare my TOU production allocator also identifies purchased power by hour. I assigned the cost of purchased power to classes based on class use in hours when power was purchased in the RealTime model.

1 **Q. HOW WERE TRANSMISSION EXPENSES ALLOCATED?**

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

5 **Q. HOW WERE DISTRIBUTION EXPENSES ALLOCATED?**

6 A. Distribution Expenses were allocated according to the "expenses follow plant"
7 principle. The allocators applied to distribution expenses were the same as those I
8 applied to the plant associated with those expenses. For expenses that are not
9 associated with any particular category of distribution plant, such as supervision
10 and engineering, I used an aggregate distribution expense allocator based on the
11 sum of distribution expenses assigned to each class.

12 **Q. HOW DID YOU ALLOCATE CUSTOMER ACCOUNTS EXPENSES?**

13 A. I allocated most Account Expense Accounts to all customer classes based on
14 unweighted customer numbers. I used the number of customer meters to allocate
15 Meter Reading (Account 902). I used total cost of service to allocate
16 Uncollectible Accounts (Account 904) consistent with uncollectibles being a
17 normal cost of doing business which is discussed as one position recognized in
18 the NARUC Electric Cost Allocation manual.

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

20 A. Customer Service and Sales Expenses including Accounts 907, 908, 909, 910,
21 911, 912, 913 and 916 were allocated based on the number of customers.

22

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

2 A. Property Insurance expense (Account 924) was allocated on the basis of net non-
3 general plant. Regulatory, franchise, general and miscellaneous expenses were
4 allocated based on total cost of services. Rents and maintenance were allocated
5 based on gross plant. The remaining A & G accounts were allocated on payroll.

6 **Q. HOW DID YOU ALLOCATE TAXES OTHER THAN INCOME TAXES?**

7 A. I allocated taxes other than income taxes on total cost of service.

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

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

13 **Q. HOW DID YOU ALLOCATE REVENUES?**

14 A. The class rate revenues associated with each class were directly assigned to the
15 class. Other revenues were allocated based on the characteristics of production
16 capacity, production energy or transmission with which they most closely align.
17 The RealTime production model I used to prepare my TOU production allocator
18 also identifies off-system sales by hour. In the CCOS study based on TOU I
19 assigned off-system sales revenue based on a capacity allocator and a variable
20 cost allocator.

21

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1 **Q. PLEASE DESCRIBE THE RESULTS OF PUBLIC COUNSEL'S CLASS COSS STUDY.**

2 A. Schedule DIR-BAM nonTOU and Schedule DIR-BAM TOU show the results of
3 Public Counsel's class cost of service studies. Since a CCOS study is designed to
4 determine the relative cost responsibility of customer classes, the results are based
5 on the assumption that total company revenues remain constant. Line 11 of each
6 schedule shows the current revenue percentage by class. Line 16 of each schedule
7 shows the change in class revenue percentage to achieve equalized rates of return.
8 The study results show that the Residential class is 2.2%-5.3% below cost of
9 service. The SGS appears significantly above costs in both studies. The MGS
10 class is 2.71%-8.34% above cost of service. The LGS class is less than 2% above
11 cost of service in both studies. The LP class is 3.75%-6.96% below cost of
12 service. Both studies indicate that the Lighting class is significantly below cost
13 but I believe this is due to a mismatch of customers and costs included in the data
14 for this class.

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

17 A. Yes, I did. I included costs that are related to services, meters, meter installations,
18 and customer accounts expenses. The costs associated with services, meters, and
19 meter installations include the return on rate base for the relevant plant accounts,
20 distribution operation and maintenance expenses associated with services, meters,
21 and meter installations, plus the depreciation expense, payroll benefits, and
22 property taxes associated with services, meters, and regulators. Generally, these

1 costs are used to recommend customer charge changes. My studies indicate that
2 the current customer charge exceeds the customer related costs.

3 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

4 **A. Yes.**

**KCPL
ER-2009-0089**

Summary of OPC Class Cost of Service Study Results

Line	TOTAL	Residential	Small GS	Medium GS	Large GS	LPS	Lighting
1	\$ 356,539,533	\$ 126,170,706	\$ 18,276,850	\$ 44,970,761	\$ 82,051,936	\$ 79,982,391	\$ 5,086,889
2	\$ 84,731,916	\$ 31,184,326	\$ 5,131,545	\$ 11,088,146	\$ 19,005,270	\$ 17,195,858	\$ 1,126,770
3	\$ 39,241,860	\$ 14,751,165	\$ 2,334,087	\$ 5,004,778	\$ 9,006,190	\$ 7,558,641	\$ 586,999
4	\$ 81,896,641	\$ 29,735,080	\$ 5,501,775	\$ 10,558,683	\$ 18,827,716	\$ 16,219,092	\$ 1,054,295
5	\$ 562,409,950	\$ 201,841,277	\$ 31,244,258	\$ 71,622,368	\$ 128,891,112	\$ 120,955,982	\$ 7,854,953
6	\$ 1,266,068,966	\$ 475,920,158	\$ 75,305,185	\$ 161,470,266	\$ 290,568,746	\$ 243,866,133	\$ 18,938,479
7	5.29%	5.29%	5.29%	5.29%	5.29%	5.29%	5.29%
8	\$ 66,992,793	\$ 25,182,847	\$ 3,984,700	\$ 8,544,040	\$ 15,375,159	\$ 12,903,936	\$ 1,002,111
9	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	\$ 86,507,498	\$ 26,964,919	\$ 3,954,708	\$ 11,422,020	\$ 21,438,153	\$ 21,937,354	\$ 790,344
11	\$ 86,507,498	\$ 26,964,919	\$ 3,954,708	\$ 11,422,020	\$ 21,438,153	\$ 21,937,354	\$ 790,344
12	\$ (19,514,705)	\$ (1,782,072)	\$ 29,992	\$ (2,877,979)	\$ (6,062,994)	\$ (9,033,417)	\$ 211,767
13	\$ 542,895,245	\$ 195,759,058	\$ 41,072,116	\$ 70,661,252	\$ 124,277,037	\$ 104,637,563	\$ 6,488,218
14	100.00%	36.06%	7.57%	13.02%	22.89%	19.27%	1.20%
15	\$ -	\$ 4,300,147	\$ (9,797,866)	\$ (1,916,864)	\$ (1,448,919)	\$ 7,285,002	\$ 1,578,501
16	0.00%	2.20%	-23.86%	-2.71%	-1.17%	6.96%	24.33%
17	100.00%	36.85%	5.76%	12.66%	22.62%	20.62%	1.49%

KCPL
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Summary of OPC Class Cost of Service Study Results

Line	TOTAL	Residential	Small GS	Medium GS	Large GS	LPS	Lighting
1	\$ 356,539,533	\$ 129,238,405	\$ 20,544,021	\$ 41,431,454	\$ 82,163,351	\$ 78,495,843	\$ 4,666,459
2	\$ 84,731,916	\$ 33,428,066	\$ 5,505,307	\$ 10,573,087	\$ 18,466,425	\$ 15,875,869	\$ 883,162
3	\$ 39,241,860	\$ 15,652,169	\$ 2,481,317	\$ 4,802,582	\$ 8,788,463	\$ 7,028,024	\$ 489,307
4	\$ 81,896,641	\$ 30,692,260	\$ 5,675,319	\$ 10,316,366	\$ 18,605,012	\$ 15,658,115	\$ 949,568
5	\$ 562,409,950	\$ 209,010,900	\$ 34,205,964	\$ 67,123,489	\$ 128,023,251	\$ 117,057,851	\$ 6,988,496
6	\$ 1,266,068,966	\$ 504,989,442	\$ 80,055,278	\$ 154,946,769	\$ 283,544,160	\$ 226,746,708	\$ 15,786,608
7	5.29%	5.29%	5.29%	5.29%	5.29%	5.29%	5.29%
8	\$ 66,992,793	\$ 26,721,019	\$ 4,236,046	\$ 8,198,856	\$ 15,003,460	\$ 11,998,079	\$ 835,333
9	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	\$ 86,507,498	\$ 29,472,755	\$ 4,552,920	\$ 10,557,116	\$ 20,927,647	\$ 20,489,275	\$ 507,785
11	\$ 86,507,498	\$ 29,472,755	\$ 4,552,920	\$ 10,557,116	\$ 20,927,647	\$ 20,489,275	\$ 507,785
12	\$ (19,514,705)	\$ (2,751,736)	\$ (316,873)	\$ (2,358,260)	\$ (5,924,187)	\$ (8,491,196)	\$ 327,548
13	\$ 542,895,245	\$ 195,759,058	\$ 41,072,116	\$ 70,661,252	\$ 124,277,037	\$ 104,637,563	\$ 6,488,218
14	100.00%	36.06%	7.57%	13.02%	22.89%	19.27%	1.20%
15	\$ -	\$ 10,500,105	\$ (7,183,025)	\$ (5,896,024)	\$ (2,177,974)	\$ 3,929,092	\$ 827,825
16	0.00%	5.36%	-17.49%	-8.34%	-1.75%	3.75%	12.76%
17	100.00%	37.99%	6.24%	11.93%	22.49%	20.00%	1.35%