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# STAFF'S

# **CLASS COST-OF-SERVICE**

**AND** 

**RATE DESIGN** 

**REPORT** 

**FOR** 

KANSAS CITY POWER & LIGHT COMPANY

**CASE NO. ER-2007-0291** 

Case No(s), ER-2001 - D39/

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# STAFF CLASS COST-OF-SERVICE AND RATE DESIGN REPORT

# I. Executive Summary

# A. Staff Class Cost-of-Service and Rate Design Objectives

The Staff's class cost-of-service and rate design objectives in this case are:

- 1. to collect the Commission-ordered overall increase in revenues;
- 2. to reflect a modest, revenue-neutral movement of class revenues in the direction of class cost-of-service (CCOS);
- 3. to retain all of the existing rate schedules, rate structures, and important features of the current rate design.

# B. Staff's Plan to Accomplish These Objectives

To accomplish these three objectives, Staff recommends the following three actions.

- 1. On an overall company, revenue-neutral basis, shift \$3,536,542 of current revenue responsibility from the medium general service (MGS) customer class to the residential class. This shift represents a 5.0% reduction to current MGS revenues and a 1.8% increase to residential revenues. No revenue-neutral changes are proposed for any other classes.
- 2. Reduce MGS energy charge rates and demand charge rates to reflect the reduction in class revenue responsibility. MGS customer charge rates and facilities charge rates would be preserved at existing levels to ensure that the existing relationships between rate values on the MGS rate schedule and on other non-residential rate schedules are maintained.
- 3. Any Commission-ordered overall revenue increase should be implemented as an equal percentage increase to each rate component of each rate schedule.

# II. The Effect of the KCPL Regulatory Plan and Case No. ER-2006-0314 on the Staff's Filing in this Case

# A. The Kansas City Power & Light Company (KCPL) Regulatory Plan

The Stipulation and Agreement approved by the Commission in Case No. EO-2005-0329 (KCPL Regulatory Plan) outlines a series of four annual rate filings contemplated during the construction of Iatan 2, a new coal unit primarily owned by KCPL, anticipated to be completed

by 2010. The first and last of these rate cases are mandatory. The second and third were designated as optional. The Regulatory Plan also specifies the timing and scope of the class cost-of-service studies to be conducted in each of the first three rate filings but not the fourth. The scope and citation for CCOS in the first three rate cases are shown below:

Rate Filing	Scope of CCOS	Citation in S&A	Status	
#1 (2006)	Full CCOS to be done	Sec 3.a.(vii), pg. 33-34 + Appendix I	Case No. ER-2006-0314 (Completed)	
#2 (2007)	No new or updated CCOS allowed 1	Section 3.b.,(iv), pg. 35	Current Case	
#3 (2008)	No new or updated CCOS allowed <sup>2</sup>	Section 4.c.(iv), pg. 39	Future	

Naturally the provisions of the Regulatory Plan only apply to signatory parties.

### B. Case No. ER-2006-0314

Case No. ER-2006-0314, KCPL's last rate case, was Rate Filing #1 in the KCPL Regulatory Plan. In accordance with the regulatory plan schedule, KCPL, Staff, Office of the Public Counsel (OPC), and the Industrial Intervenors (IND)<sup>3</sup> each filed the results of one or more CCOS studies in that case. The four parties who submitted CCOS studies are also all signatories to the KCPL Regulatory Plan.

#### C. Case No. ER-2007-0291

Case No. ER-2007-0291 is Rate Filing #2 in the KCPL Regulatory Plan. As a signatory party to the KCPL Regulatory Plan, which the Commission approved in Case No. EO-2005-329, the Staff agreed not to file either a new CCOS study specific to this case or an updated CCOS study from a prior case. In compliance with that agreement, the Staff's analysis in this case is based on the results of the CCOS study Staff filed on October 6, 2006 in Case No. ER-2006-

<sup>&</sup>lt;sup>1</sup> The exact wording of the stipulation regarding rate filing #2 is:

<sup>&</sup>quot;... (iv) <u>Rate Design</u>. The Signatory Parties agree not to file new or updated class cost of service studies or to propose changes to rate structures in Rate Filing #2..."

<sup>&</sup>lt;sup>2</sup> The wording of the stipulation regarding rate filing #3 is identical to the above wording except that "Rate Filing #3" has been substituted for "Rate Filing #2".

<sup>&</sup>lt;sup>3</sup> Missouri Industrial Energy Consumers (MIEC), Ford Motor Company, and Praxair, Inc.

0314, attached as a schedule to the surrebuttal testimony of Staff witness Janice Pyatte<sup>4</sup>. A copy of this one-page schedule can also be found attached as Schedule 1 to the Appendix of this report.

Because Staff's CCOS in Case No. ER-2006-0314 has played a pivotal role in crafting Staff's recommendations for this case, the Appendix to this Report contains additional information about that particular study. Please note that the intention of the Appendix is solely to provide background material to aid the reader in understanding the Staff's proposal in this case.

## III. The Results of CCOS Studies Filed in Case No. ER-2006-0314

# A. The Results of Staff's CCOS Study

The results of Staff's study show the following percentage increases (+) and decreases (-) to class revenues are required to equate, for each class, the revenues collected through rates from that class with KCPL's cost of providing service to that class:

MO Retail	RES	SGS	MGS	LGS	PWR	LGT
0.00%	8.24%	-3.53%	-8.75%	-2.41%	-4.84%	0.00%

Staff's CCOS study shows the Residential class is contributing significantly less revenue than the cost KCPL is incurring to provide it with service, and four non-residential classes, Small General Service (SGS), MGS, Large General Service (LGS), and Large Power (PWR), are paying more revenue than the cost KCPL incurs to serve them. The Staff assumed the Lighting (LGT) class rates generate revenues equal to the cost of serving that class. <sup>5</sup>

# B. The Results of CCOS Studies Filed by Other Parties

Four parties to Case No. ER-2006-0314 (other than Staff) filed a total of seven additional CCOS studies. The result of each of these studies is shown below:

<sup>&</sup>lt;sup>4</sup> Marked and admitted into evidence as Exhibit No. 130

<sup>&</sup>lt;sup>5</sup> See Appendix to this Report, page 6.

PARTY	RES	SGS	MGS	LGS	PWR	LGT
KCP&L: A&P	9.31%	-3.41%	-10.65%	-5.55%	-2.75%	11.31%
OPC: A&P	5.18%	-15.46%	-13.16%	-2.00%	7.12%	1.41%
OPC: TOU	2.11%	-16.35%	-13.18%	-0.59%	11.70%	-5.93%
IND: A&E	22.94%	-3.53%	-9.83%	-12.65%	-17.13%	-20.98%
IND: 1CP	25.19%	-5.83%	-10.03%	-12.78%	-19.92%	-20.98%
IND: 3CP	24.09%	-7.65%	-11.39%	-11.85%	-17.50%	-20.98%
IND: 4CP	25.14%	-7.88%	-11.88%	-13.01%	-17.64%	-20.98%

What is striking about these study results is how consistently they point in the same direction; namely that Residential class revenues (rates) are too low to cover the cost of serving that class and that the class revenues (rates) from each of the three General Service classes (Small, Medium, Large) exceed KCPL's cost to serve each of them. The results for the Large Power class are mixed. The results for the Lighting class are not comparable because each party's study used a different method of calculating Lighting costs.

# IV. The Effect of the Stipulation and Agreement in Case No.ER-2006-0314 on the Staff's Recommendation in this Case

The Commission approval of the Stipulation and Agreement Regarding Class Cost-of-Service and Rate Design Issues (Rate Design Agreement) in Case No. ER-2006-0314<sup>6</sup> resulted in the following percentage changes to class revenues, on a revenue-neutral basis.

МО						
Retail	RES	SGS	MGS	LGS	PWR	LGT
0.0%	2.00%	-0.45%	-0.45%	-0.45%	-2.54%	0.00%

The revenue shifts between Residential and the three General Service classes are not of the magnitude indicated as appropriate by Staff's CCOS results, but are a movement toward matching class revenues (rates) with class cost-of- service. Based on the results of Staff's CCOS study filed in Case No. ER-2006-0314 (attached as Schedule 2 to the Appendix to this report) and, after accounting for the above-mentioned changes, the Staff has calculated that the remaining changes required to match class revenues with class cost-of-service are:

<sup>&</sup>lt;sup>6</sup> Appendix A to the Stipulation and Agreement is attached to the Appendix to this Report as Schedule 3.

MO						
Retail	RES	SGS	MGS	LGS	PWR	LGT
0.00%	6.2%	-3.1%	-8.4%	-2.0%	-2.4%	0.0%

# V. Staff's Proposed Class Revenue Shifts in this Case

While the rate design agreement in Case No. ER-2006-0314 narrowed the gap between class cost-of-service and class revenues, the Staff's study shows a significant cost justification for further movement on a revenue-neutral basis. In particular, the MGS class needs a substantial reduction and the Residential class needs a further revenue increase. The Staff proposes another gradual movement to match class revenues with class cost-of-service be taken; namely that the following overall revenue-neutral shifts be reflected in the rates that result from this case.

MO						
Retail	RES	SGS	MGS	LGS	PWR	LGT
\$0	\$3,536,542	\$0	(\$3,536,542)	\$0	\$0	\$0
0.0%	1.8%	0.0%	-5.0%	0.0%	0.0%	0.0%

If the Commission adopts the Staff's proposal, then the remaining movement required to match class revenues with class cost-of-service are approximately:

MO						
Retail	RES	SGS	_MGS _	LGS	PWR	LGT
0.0%	4.4%	-3.1%	-3.4%	-2.0%	-2.4%	0.0%

# VI. Staff's Rationale for Moving Towards CCOS in this Case

The Staff recommends additional movement towards matching class revenues to CCOS be made in this case for a number of reasons:

- 1. The Staff's CCOS study indicates that further movement is warranted.
- 2. The CCOS studies done by other parties support the Staff's proposal.
- 3. The modest increase to the Residential class will limit the impact, on a revenue-neutral basis, to those customer's bills.
- 4. Staff's Cost-of-Service study shows an overall increase of less than 3% to KCPL's Cost-of-Service is warranted. This should allow additional class revenue shifts without substantial overall bill impacts on residential customers.

5. The addition of Iatan 2 generating capacity to KCPL's rate base will compound, rather than ameliorate, any current misalignments between class cost-of-service and class revenues.

6. It is also likely that the substantial increase in revenue requirement resulting from adding Iatan 2 to rate base will be too large of a rate impact by itself to justify making any additional movement to better match class revenues with CCOS at that time.

# VII. Staff's Rate Design Proposals

Staff's rate design proposals are to:

1. Retain all existing rate schedules;

2. Retain all existing rate structures; and

3. Retain the existing rate design of the current rate schedules.

## A. Retain the Current Rate Structures

The residential rate schedules consist of the following elements:

Customer Charge \$ per-bill

Energy Charge \$ per kWh by kWh rate block

The non-residential, non-lighting rate schedules consist of the following elements:

Customer Charge \$ per-bill

Facilities Charge \$ per kW of facilities demand
Demand Charge \$ per kW of billed demand

Energy Charge \$ per kWh by hours use rate block

Reactive Charge \$ per kVar

The difference between the rate structure of the standard rate schedules and rate structures of the companion All Electric rate schedules is the treatment of electric space heating. The standard rate schedules require separate metering of electric space heating; the all-electric rate schedules do not.

B. Retain Important Rate Design Features

Within each rate schedule, demand and energy rates should continue to be seasonally

differentiated (i.e., summer rates are higher than winter rates). The remaining rates (customer,

facilities, reactive) should be constant year-round.

The rate schedules should continue to reflect any cost differences associated with service

at different voltage levels (i.e., losses and facilities ownership by customers).

The rate schedules should also retain certain interrelationships among the non-residential

rate schedules that are integral to the KCPL rate design:

1. The value of the customer charge is uniform across rate schedules and is based upon

customer size in kW.

2. The value of the facilities charge is uniform across rate schedules and is based upon

voltage level.

3. The value of the reactive charge is uniform across rate schedules.

4. The value of the separate (additional) meter charge (\$ per meter) is uniform across rate

schedules.

Staff Expert: Janice Pyatte

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#### STAFF CLASS COST-OF-SERVICE AND RATE DESIGN REPORT

#### APPENDIX

#### I. Fundamental Concepts of Electric CCOS and Rate Design

**Cost-of-Service:** Total costs that are prudently incurred by a utility to provide utility services to its customers in a particular jurisdiction.

Cost-of-Service Study: A study that analyzes total company costs, adjusts them in accordance with regulatory principles (annualizations and normalizations), allocates these costs to the relevant jurisdiction, and compares the allocated costs to the revenues the utility is generating from its retail rates, off-system sales and other revenues. The results of a cost-of-service study are expressed in terms of the additional revenue required for the utility to recover its cost-of-service.

Class Cost-of-Service Study (CCOS): A quantitative analysis of the costs incurred by a utility to serve its various classes of customers. A Staff CCOS study consists of these steps: a) costs are categorized (functionalized) based upon the specific role they play in the operations of an integrated electrical system; b) costs are classified by whether they are demand-related, energy-related, or customer-related; and c) functionalized/classified costs are allocated to customer classes. The sum of all allocated costs to a customer class is called the cost-to-serve (cost-of-service) that class.

The cost-of-service of each customer class is compared to the annualized, normalized revenues the utility collects from each class through its rates, plus each class' allocated share of revenues from off-system sales and other revenues. The results of a class cost-of-service study are expressed in terms of the additional revenue required from each class for the utility to recover its cost of serving that class.

Relationship between Cost-of-Service and Class Cost-of-Service: Conceptually, class cost-of-service is a breakdown of cost-of-service. A Cost-of-Service study determines what portion of total company costs is attributable to the retail jurisdiction; a Class Cost-of-Service study determines what portion of retail costs is attributable to each customer class.

Cost Allocation: A procedure by which common or joint costs are apportioned among customers or classes of customers.

Cost Functionalization: The grouping of rate base and expense accounts according to the specific function they play in the operations of an integrated electrical system. The most aggregated functional categories are production, transmission, distribution and customer-related costs, but numerous sub-categories are commonly used.

Customer Class: A group of customers with similar characteristics (usage patterns, conditions of service, usage levels, etc.) that are identified for the purpose of setting rates for electric service.

Rate Design: (1) A process used to determine the rates for an electric utility once total cost-of-service is known; (2) Characteristics such as rate structure, rate values and availability that define a rate schedule and provide the instructions necessary to calculate a customer's electric bill.

Rate Design Study: While a CCOS study focuses on the revenue responsibility of customer classes, a rate design study focuses on the equitable pricing of the individual customers within each class and sending the proper price signal to customers. The Rate Design process attempts to recover costs in each time period (e.g., summer/winter or on-peak/off-peak) from each rate component for each customer in a way that equates the cost of providing service with the amount the customer is billed in accordance with the rate schedule.

Rate Schedule: One or more tariff sheets that describe the availability requirements and prices applicable to a particular type of retail electric service.. A customer class used in a class cost-of-service study may consist of one or more rate schedules.

Rate Structure: Rate structure is composed of the various types of monthly prices charged for the utility's products. At the most basic level there are: a) customer charges, a fixed dollar amount to be paid each month irrespective of the amount of the product taken; b) usage (energy) charges, a price per unit charged on the total units of the product consumed over the month; and c) peak (demand) usage charges, a price per unit charge on the maximum units of the product taken over a short period of time (for electricity, usually 15 minutes or 30 minutes). Onto these three basic rate forms can be added more elaborate variations such as seasonal differentials (different charges for different seasons of the year), time-of-day differentials (different charges for different times during the day), declining block rates (lower per-unit charges for higher usage), hours-use rates (rates which decline as the customer's hours of use – the ratio of monthly usage to maximum hourly usage – increases); and many more. One criterion for setting rate structures has to do with how well the structure tracks costs. Another criterion deals with the ease or difficulty in administrating the rate, as well as the customer's understanding of how the rate works; i.e., what causes the customer to incur a higher or lower monthly bill.

Rate Values (Rates): The per-unit prices the utility charges to provide service to its customers. Rates are expressed as dollars per unit of demand (kilowatt), cents per unit of energy (kWh), etc.

Tariff: A document filed by a regulated entity with either a federal or stare commission, It lists the rates (prices) the regulated entity will charge to provide service to its customers as well as the terms and conditions that it will follow in providing service.

#### Units of Measurement:

Watt: An electrical unit of power or rate of doing work.

kilowatt (kW): One thousand watts

Megawatt (MW): One thousand kilowatts or one million watts.

**kilowatt-hour** (kWh): The basic unit of electrical energy equal to one kilowatt of power supplied to or taken from a circuit steadily for one hour.

Megawatt-hour (MWh): One thousand kilowatt-hours.

#### II. General Description of the CCOS Studies Filed in Case No. ER-2006-0314

The Regulatory Plan laid out certain parameters for the CCOS studies filed in Rate Filing #1 that ensured that the results of the various studies were directly comparable with one another. These parameters were items such as test year and customer classes. In addition, Kansas City Power & Light Company (KCPL) agreed to perform special studies of distribution costs, customer-related costs, and losses by voltage level for use in CCOS studies in this case.

The CCOS studies filed in KCPL's last case were revenue-neutral; e.g., if total Missouri revenues is a "pie" of fixed size, then one class cannot get a smaller "slice" (decreased rates) without one or more other classes getting a larger "slice" (increased rates).

#### III. Important Elements of Staff's CCOS Study in Case No. ER-2006-0314

#### A. Customer Classes

In its CCOS study, the Staff analyzed the costs and revenues of the following customer classes:

- Residential ("RES") [233,632 customers]
- Small General Service ("Small GS" or "SGS") [25,800 customers]
- Medium General Service ("Medium GS" or "MGS") [4.653 customers]
- Large General Service ("Large GS" or "LGS") [1,099 customers]
- Large Power Service ("Large PWR" or "LPS") [93 customers]
- Lighting

Since these customer classes correspond to KCPL's current tariff classifications, it is also correct to refer to them as "rate" classes.

The customers who belong to the Residential class and the Lighting class are well defined. The remaining customers generally belong to one of four main rate classes based upon their load and cost characteristics. The intent was to define customer classes that are homogeneous in the statistical sense; namely, the variation in load and cost characteristics among the individuals within the class is smaller than the variation between the classes. The typical customer in each of the main classes can be described as follows:

- Small General Service: very small (under 25 kilowatt (kW)) commercial or industrial customers with low load factor (average demand divided by peak demand); almost always served at secondary voltage.
- Medium General Service: medium size (25 200 kW) commercial or industrial customer with moderate load factor; customer must have, or be willing to assume, a 25 kW minimum demand; 99% are metered at secondary and 1% are metered at primary voltage.

- Large General Service: large size (200 1000 kW) commercial or industrial customer with higher load factor; customer must have, or be willing to assume, a 200 kW minimum demand; 88% are served at secondary and 12% are served at primary voltage.
- Large Power Service: very large size (1000+ kW) commercial or industrial customer with very high load factor; customer must have, or be willing to assume, a 1000 kW minimum demand; 16% are served at secondary, 55% at primary, 20% at substation and 9% are served at transmission voltage level.

The Staff's CCOS study did not study the costs of providing service to the Lighting class. The uniqueness of the Lighting class makes it very difficult to accurately allocate the cost of providing service to these customers without a special study. Inaccurate analysis of lighting costs in a CCOS study affects the validity of the results of the other classes. The Staff's CCOS avoids this problem by assuming that the Lighting class is already providing the Company with the system average rate of return, so no revenue-neutral change to Lighting class revenues was warranted.

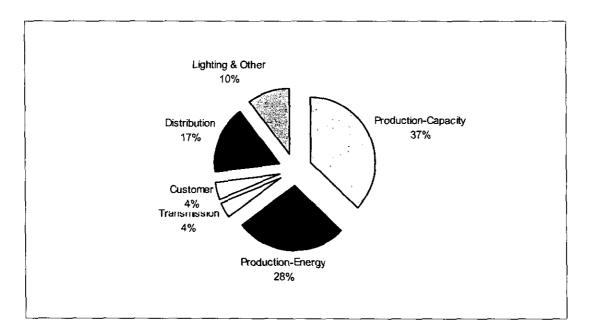
#### **B.** Missouri Costs by Function

Schedule 1, attached to this Appendix, is a diagram of a generic integrated electrical system, showing how power produced at the generating station is then transmitted through high voltage lines and distributed to the home of a residential (secondary voltage) customer. Other (non-secondary voltage) customers are served from various points along the same system.

Staff aggregated annual KCPL costs, defined as the sum of expenses plus the return on rate base, by the function the costs support in the electrical system. The functional cost categories used in Staff's CCOS study correspond to the operations of KCPL's electrical system. The major functions are: (1) the generation (production) of electricity at the power plant; (2) the

"stepping up" (raising) of voltage level and the subsequent transmission of the electricity through the Company's high voltage transmission system; (3) the distribution of electricity to retail customers at various voltage levels; and (4) the Company's provision of non-electricity services (such as billing, customer assistance, etc.) directly to customers.

The chart below shows the percentage of total KCPL Missouri costs associated with each major function:

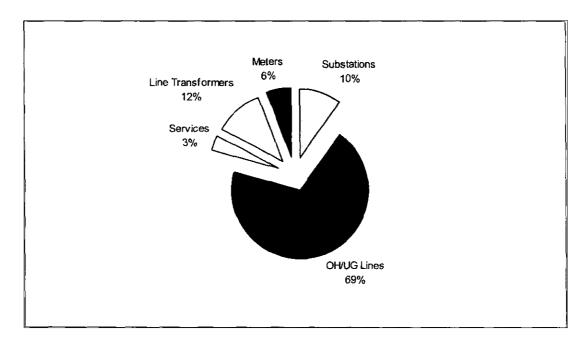


Within the production function, a distinction was made between "production-energy," which includes the costs of fuel and variable operations and maintenance expenses, and "production-capacity," which is KCPL's investment in generating plants. Notice that production-capacity costs constitute the single largest cost component (37%), and total production costs (energy and capacity) represent 65% (37% + 28%) of total cost.

Within the distribution function (17% of KCPL Missouri costs), a number of subcategories were segregated to allow for a more refined cost analysis. The distribution categories used in Staff's CCOS study are: (1) substations that "step down" (lower) voltage level from transmission voltage; (2) overhead ("OH") and underground ("UG") lines that move electricity near the premises of the KCPL customers; (3) line transformers that further lower electricity voltage to that used by the vast majority of customers; (4) the service line that directly connect to the customer's premise; and (5) metering equipment.

The term "lines" in (2) above includes both overhead conductors and underground cables. Overhead "lines" also includes the costs associated with hardware such as poles, towers, insulators, and cross arms. Underground "lines" refer to both direct buried cable and cable installed in conduit.

The chart below shows the percentage of total Missouri distribution costs associated with each KCPL distribution category.



#### C. Results of the Staff's CCOS Study

A one-page summary of Staff's class cost-of-service study in Case No.ER-2006-0314 is attached as Schedule 2 to this Appendix. The summary table shows both the allocation of each functionalized cost to classes and the each class' total allocated costs. The class cost-of-service

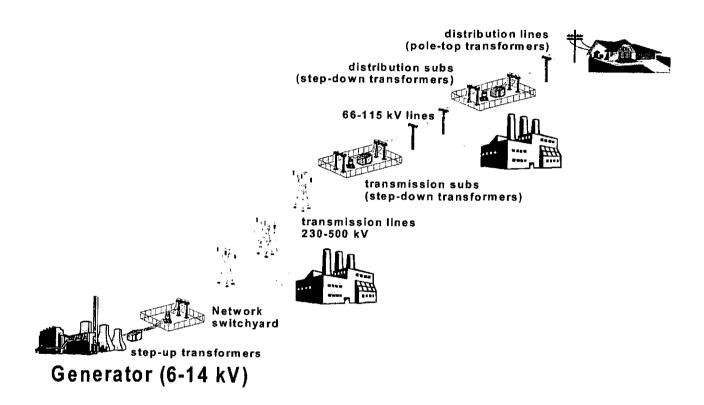
results show that residential class revenues (rates) need to be increased by \$14,305,014 to recover the cost to serve the residential class and the four non-residential (SGS, MGS, LGS, and PWR) classes need their revenues (rates) reduced, in total, by the same dollar amount.

МО					
Retail	RES	SGS	MGS	LGS	PWR
\$0	\$14,305,014	(\$1,305,798)	(\$5,526,204)	(\$2,651,279)	(\$4,821,736)
0.00%	8.24%	-3.53%	-8.71%	-2.41%	-4.84%

The second row of the table shows the results of the Staff's CCOS study measured as the percentage change in each class' revenues required to equate class revenues with class cost-of-service. This comparison is useful when determining which class' revenues are "furthest away" from cost-of-service. In this instance, the MGS and the RES classes are furthest away from cost-of-service.

Staff Expert: Janice Pyatte

# Basic Components of Electricity Production and Delivery



# 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

	MISSOURI		SMALL GENERAL	MEDIUM	LARGE		· · · ·
FUNCTIONAL CATEGORY	RETAIL			GENERAL	GENERAL	LARGE POWER	
TONCTIONAL CATEGORY	RETAIL	RESIDENTIAL	SERVICE	SERVICE	SERVICE	SERVICE	LIGHTING
Production-Capacity	\$228,043,821	\$75,636,403	\$12,805,213	\$27,156,253	\$56,264,347	456 101 60F	
Production-Energy	\$162,730,040	\$48,850,364	\$8,923,096	\$19,205,340	\$41,726,268	\$56,181,605	1
•	,,,,	4.0,050,00	40,523,050	\$15,205,540	¥41,720,20b	\$44,024,972	\$
Transmission	\$22,979,513	\$7,621,727	\$1,290,355	\$2,736,481	\$5,669,644	\$5,661,306	\$
Distribution Substations	\$10,061,502	\$4,402,253	\$579,928	\$1,187,718	\$2,070,447	\$1,821,156	\$
OH/UG Lines							
Pri-Customer Related	\$15,010,820	\$7,879,555	\$2,610,412	\$2,353,937	\$1,853,266	4212 551	
Sec-Customer Related	\$8,383,592	\$4,510,842	\$1,492,715	\$1,340,327		\$313,651	\$
Pri-Demand Related	\$32,382,158	\$14,737,853	\$2,313,783		\$981,786	\$57,922	\$
Sec-Demand Related	\$14,688,311	\$7,642,171	\$1,196,526	\$3,779,897	\$7,546,901	\$4,003,724	\$
The Political Residues	\$17,000,311	\$7,042,171	\$1,196,526	\$1,942,400	\$3,443,275	\$463,939	\$
Line Transformers							
Sec-Customer Related	\$5,942,344	\$3,197,314	\$1,058,046	\$950.032	\$695,896	\$41.056	\$
Sec-Demand Related	\$5,542,665	\$2,959,864	\$388,725	\$791,400	\$1,221,344	\$181,036 \$181,332	\$
• •				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		4101,552	7
Services	\$3,437,355	\$1,824,792	\$1,171,842	\$324,263	\$114,670	\$1,787	\$1
Meters & Recorders	\$5,909,760	\$3,372,933	\$1,100,031	\$750,795	\$368,285	\$317,716	\$1
Company-Owned Lighting	\$3,865,175	\$0	\$0	\$0	\$0	\$0	\$3,865,17
Meter Reading	\$4,637,536	43.057.650	****				
Customer Records & Collection	\$10,628,568	\$3,957,650	\$417,554	\$87,965	\$32,574	\$141,793	\$
Customer Assistance	\$1,245,515	\$8,438,594	\$1,230,905	\$529,366	\$428,161	\$1,541	\$
Sales Exp	\$1,014,499	\$300,979	\$94,134	\$134,707	\$393,420	\$322,276	\$1
Uncollectible	\$3,663,594	\$532,536	\$176,423	\$159,090	\$125,252	\$21,198	\$4
Other Oust Service		\$3,177,801	\$364,161	\$121,631	\$0	\$0	\$(
Customer Deposits	\$4,532,495	\$2,379,220	\$788,210	\$710,768	\$559,591	\$94,706	\$1
cascome ocposits	\$46,645	\$26,136	\$17,058	\$2,863	\$490	\$97	.\$1
Sales-Related A&G Expenses	(\$40,039)	(\$11,929)	(\$2,179)	(\$4,691)	(\$10,219)	(\$11,020)	\$(
Miscellaneous Assignments	\$2,456,020	\$1,395,749	\$165,906	\$209,937	\$401,449	\$282,979	\$(
ncome Taxes	\$38,237,098	\$15,181,581	\$3,010,697	\$4,729,063	\$8,354,558	\$6,776,423	\$184,77
	\$585,398,985	\$218,014,386	\$41,193,541	\$69,199,544	\$132,241,403	\$120,700,160	\$4,049,957
Reallocate Lighting Costs	\$0	\$1,518,791	\$286,974	\$482,077	\$921,256	\$840,854	(\$4,049,952
OTAL COST OF SERVICE	\$585,398,985	\$219,533,177	\$41,480,514	##0 FB# #30	4177 167 677	****	
cos %	100.00%	37.50%	7.09%	\$69,681,620 11.90%	\$133,162,659 22,75%	\$121,541,014 20.76%	<b>\$0</b> 0.009
			,,,,,,,	11.50 //	22.7570	20.76%	0.009
OTAL RATE REVENUE	\$483,655,953	\$173,661,690	\$37,014,983	\$63,152,089	\$110,105,736	\$99,721,455	\$0
liscellaneous Revenue iulk Power Sales:	\$8,847,219	\$3,359,126	\$664,071	\$1,081,368	\$1,987,100	\$1,755,553	\$0
Demand (Capacity)	\$6,517,906	\$2,161,826	\$365,996	\$776,175	\$1,608,137	\$1,605,772	\$0
Energy - Profit on Sales	\$35,757,301	\$10,734,079	\$1,960,706	\$4,220,064	\$9,168,674	\$9,673,777	\$0 \$0
Energy - Cost of Sales	\$46,951,679	\$14,094,550	\$2,574,536	\$5,541,220	\$12,039,070	\$12,702,304	\$0 \$0
Rev on Trans. For KOPL	\$3,618,631	\$1,200,209	\$203,195	\$430,919	\$892,810	\$12,702,304 \$891,498	\$0 \$0
ransmission for Whale Firm Power	\$50,299	\$16,683	\$2,824	\$5,990	\$12,410	\$12,392	\$0 \$0
OTAL OPERATING REVENUE	\$585,398,988	\$205,228,163	\$42,786,312	\$75,207,825	\$135,813,938	\$12,392 \$126,362,750	\$0 <b>\$0</b>
ATE REVENUE DEFICIENCY	(\$3)	\$14,305,014	(\$1,305,798)	(\$5,526,204)	(\$2 6F4 770)		•
equired % Change	(45)	+24/202/014	(4 Times is 20)	(43,320,204)	(\$2,651,279)	(\$4,821,736)	\$0
to operating revenue	0.00%	6.97%	-3.05%	-7.35%	-1.95%	-3.82%	0.00%
to rate revenue	0.00%	8.24%	-3.53%	-8.75%	-2.41%	-4.84%	0.00%

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- (1) No litigation of individual class cost of service issues (choice of allocators, etc.)
- (2) Revenue shifts between the classes will be independent of the final outcome of KCPL's revenue requirement.
- (3) Any revenue-neutral dollar decrease to the non-residential classes will be split between General Service and Large Power.
- (4) Revenues associated with the three general service classes (Small GS, Medium GS, Large GS) will be increased/decreased by a uniform percentage.

Class Revenues @ 0% Increase Revenue-Neutral \$ Change Revenue-Neutral % Change	MO Retail \$483,655,953 \$0 0.0%	Residential \$171,390,326 \$3,427,807 2.00%	\$mall <b>GS</b> \$36,585,812 (\$163,395) -0.45%	Medium GS \$62,431,139 (\$278,823) -0.45%	Large GS \$108,727,991 (\$485,589) -0.45%	\$98,463,950 (\$2,500,000) -2.54%	<b>Lighting</b> \$6,056,735 \$0 0.0%	<b>GS Combined</b> \$207,744,942 (\$927,807)
Post-Shifted Class Rate Revenues	\$483,655,953	\$174,818,133	\$36,422,417	\$62,152,316	\$108,242,402	<b>\$95,</b> 963,950	\$6,056,735	\$206,817,135

(5) Any increase in the overall revenue requirement will be implemented as an equal percentage increase to post-shifted class revenues.

#### COMBINED EFFECT OF CLASS REVENUE SHIFTS AND EQUAL PERCENTAGE REVENUE REQUIREMENT INCREASE

KOPL % Incr to Rate Rev	Overall KCPL	Total RES % Increase	Total RES	Total GS	Total GS	Total PWR	Total PWR	Lighting	Lighting
	Million \$ Increase		\$ Increase	% increase	\$ Increase	% Increase	\$ Increase	% Increase	\$ [ncrease
7.5%	<b>\$36.3</b>	9.7%	<b>\$16.5</b>	7.0%	<b>\$14.6</b>	4.8%	\$4.7	7.5%	<del>\$</del> 0.5
8.0%	\$38.7	10.2%	\$17.4	7.5%	\$15.6	5.3%	<b>\$5.2</b>	8.0%	\$0.5
8.5%	\$41.1	10.7%	\$18.3	8.0%	\$16.7	5.7%	\$5.7	8.5%	\$0.5
9.0%	\$43.5	11.2%	\$19.2	8.5%	\$17.7	6.2%	\$5.1	9.0%	\$0.5
9.5%	\$45.9	11.7%	\$20.0	9.0%	\$18.7	5.7%	\$5.6	9.5%	\$0.6
10.0%	\$48.4	12.2%	\$20.9	9.5%	\$19.8	7.2%	\$7.1	10.0%	\$0.6
10.5%	\$50.8	12.7%	\$21.8	10.0%	\$20.8	7.7%	\$7.6	10.5%	<b>\$0</b> .6
11.0%	\$53.2	13.2%	\$22.7	10.5%	\$21.8	8.2%	\$8.1	11.0%	\$0.7
11.5%	<b>\$55</b> .6	13.7%	\$23.5	11.0%	\$22.9	8.7%	\$8.5	11.5%	\$0.7

(6) The following features of the existing non-residential rate design will be maintained:

The value of the customer charge should remain based upon customer size (kW) and should be uniform across classes.

The value of the facilities charge (\$ per kW) should remain uniform across classes on a voltage-adjusted basis.

The value of the reactive charge (\$ per kVar) should remain uniform across classes.

The value of the separate (additional) meter charge (\$ per meter) should remain uniform across classes.

Within each class, the various demand charges (\$ per kW) and energy charges (\$ per kWh) should only reflect differences in losses between voltage levels (i.e, should be the same on a loss-adjusted basis).

[NOTE: These Issues only arise when non-uniform percentage changes are made to non-residential classes.]

Appendix A

(7) The level of the non-residential customer charges, facilities charges, reactive charges, and additional meter charges will not be subject to change,

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on a revenue-neutral basis (i.e., these charges will ultimately increase by the system average percent).

- (8) The loss adjustments to be reflected in KCPL's non-residential rates will reflect, to the extent possible, the results of the loss study KCPL performed for this case.
- (9) The value of the residential separate (additional) meter charge (\$ per meter) should be the same as for the non-residential classes. (i.e., will ultimately increase by the system average percent).
- (10) The level of the residential, single-meter customer charge should be subject to both the revenue-neutral increase and the revenue requirement increase.
- (11) No planned phase-in of class revenue shifts; consider the issue of further revenue shifts on a case-by-case basis.
- (12) General service space heating and all-electric winter rates will be increased by 5 percentage points more than each class' general application rates.
- (13) The remaining general service space heating and all-electric issues (broadening availability, restricting availability to existing customers or totally eliminating the rate schedules) will be litigated.