MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT

CLASS COST-OF-SERVICE RATE DESIGN



KANSAS CITY POWER & LIGHT CASE NO. ER-2009-0089

Jefferson City, Missouri February 24, 2009

STAFF REPORT CLASS COST-OF-SERVICE RATE DESIGN

TABLE OF CONTENTS

| I. | Executive Summary | . 1 |
|------|---|-----|
| II. | The Effect of the Kansas City Power & Light (KCPL) Regulatory Plan on this case | . 1 |
| III. | The Results of Staff CCOS Study Filed in Case No. ER-2006-0314 | . 3 |
| IV. | The Effect of the Stipulation and Agreement in Case No. ER-2006-0314 | . 4 |
| V. | The Effect of the Commission's Report and Order in Case No. ER-2007-0291 | . 5 |
| VI. | Staff Rate Design Proposal for Case No. ER-2009-0089 | . 7 |

I. Executive Summary

The Staff's rate design recommendations and objective in this case are:

- To provide a method to collect any Commission ordered increase in revenues;
- To recommend that, based on Staff's Class Cost-of-Service study results in Case No. ER-2006-0314, the revenue shifts in Case No. ER-2006-0314 (Stipulation and Agreement) and Case No. ER-2007-0291 are sufficient to adjust each class's revenues to an acceptable level where further revenue shifts are not required in this case;
- To recommend that any Commission-ordered overall revenue increase be implemented as an equal percentage increase to each rate component of each rate schedule, except for the General Service All-Electric winter rates and Separately-Metered space heating provisions;
- To recommend an additional 10% increase for all of the General Service All-Electric winter season energy rates;
- To recommend an additional 5% increase for all of the General Service Separately-Metered space heating provisions;
- To recommend that Separately-Metered space heating customers that switch to the non-heating rate no longer be charged for the additional meter;
- To recommend the elimination of those frozen General Service All-Electric and Separately-Metered space heating rate schedules where no customers are currently served; and
- To recommend retaining all of the existing rate schedules, rate structures, and important features of the current rate design.

II. The Effect of the Kansas City Power & Light (KCPL) Regulatory Plan on this case

The Stipulation and Agreement approved by the Commission in Case No. EO-2005-0329 (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 Regulatory Plan provides a starting point for explaining Staff's Rate Design recommendation in this case. This case (ER-2009-0089) is the third rate filing contemplated in the KCPL Regulatory Plan. The first and last (4th filing) of these rate cases

are mandatory. The second and third (this case) were designated as optional. The Regulatory Plan also specifies the timing and scope of the class cost-of-service (CCOS) studies to be conducted in each of the first three filings but not the fourth. The Regulatory Plan is silent regarding CCOS studies for the last rate case filing. The scopes and citations for the CCOS studies in the first three cases are shown below.

TABLE 1 KCPL Regulatory Plan Citations

| Rate Filing | Scope of CCOS | Citation in S&A | Status |
|-------------|--------------------------------|---------------------------------------|---------------------------------------|
| # 1 (2006) | Full CCOS to be done | Section 3. (p. 29) a.(vii) (p. 33-34) | Case No. ER-2006- 0314 (completed) |
| # 2 (2007) | No new or updated CCOS allowed | Section 3. (p. 29) b.(iv) (p. 35) | Case No. ER-2007- 0291 (completed) |
| # 3 (2008) | No new or updated CCOS allowed | Section 3. (p. 29) c.(iv), (p. 39) | Case No. ER-2009- 0089 (this case) |
| # 4 (2009) | | | Future |

Per the Regulatory Plan, in Rate Filing # 1, Case No. ER-2006-0314, the Commission Staff filed a CCOS study. The results of Staff's study performed in Case No. ER-2006-0314, adjusted to reflect the interclass revenue shifts that occurred in that case and in Rate Filing # 2, Case No. ER-2007-0291, are the basis for Staff's recommendation in this case, Case No. ER-2009-0089.

KCPL, Office of Public Counsel (OPC), and the Industrial Intervenors (Missouri Industrial Energy Consumers (MIEC), Ford Motor Company, and Praxair, Inc.), known collectively as the Parties, each filed the results of one or more CCOS studies in Case No. ER-2006-0314. The parties who submitted CCOS studies were also signatories to the KCPL Regulatory Plan.

Per the Regulatory Plan, in Rate Filing # 2, Case No. ER-2007-0291, the Parties did not perform new or updated studies. However, interclass revenue shifts were proposed and

ordered based on the results of studies from the prior case, adjusted for the revenue shifts ordered in that case.

For this case, Case No. ER-2009-0089, the Regulatory Plan also prescribes that the signatory Parties not file either a new or updated CCOS study. In compliance with the Regulatory Plan agreement, Staff's analysis in this case is based on the results of the CCOS study filed by Staff in Case No. ER-2006-0314 updated for rate design revisions per the Commission's Orders in Rate Filings # 1 (Case No. ER-2006-0314) and Rate Filing # 2 (Case No. ER-2007-0291).

III. The Results of Staff CCOS Study Filed in Case No. ER-2006-0314

In Case No. ER-2006-0314 (Rate Filing # 1 in the KCPL Regulatory Plan), Staff filed a CCOS study (attached hereto as Schedule 1). A positive percentage indicates revenue from that class is less than the cost of providing service to that class and therefore, the revenues collected from that class are not sufficient to cover the cost of serving that class and providing the same return on investment as all other classes, i.e., the class has underpaid. A negative percentage indicates revenue from the class exceeds the cost of providing service to that class, i.e., the class has overpaid.

TABLE 2 Initial Study Results from Case No. ER-2006-0314

| Missouri | | Small | Medium | Large | Large | |
|----------|-------------|---------|---------|---------|---------|----------|
| | | General | General | General | Power | |
| Retail | Residential | Service | Service | Service | Service | Lighting |
| 0.0% | 8.2% | -3.5% | -8.8% | -2.4% | -4.8% | 0.0% |

In Case No. ER-2006-0314 (Rate Filing # 1) Staff's CCOS study showed the Residential class to be contributing significantly less revenue than the cost KCPL was incurring to provide it with service. The four non-residential rate classes, Small General Service (SGS), Medium General Service (MGS), Large General Service (LGS), and Large Power Service

(LPS), were paying more revenue than the cost KCPL incurred to serve them. The Staff's CCOS study assumes that current Lighting class revenues are equal to its costs, i.e., the Lighting class is already providing the company with the system average rate of return.

IV. The Effect of the Stipulation and Agreement in Case No. ER-2006-0314

The Commission's approval of the Stipulation and Agreement regarding CCOS and Rate Design Issues (Rate Design Agreement) in Case No. ER-2006-0314 was a movement towards matching class revenues (rates) with Staff's CCOS study results. The Commission's approval of the Stipulation and Agreement regarding CCOS and Rate Design Issues resulted in the following (see Table 3) percentage changes to class revenues, on a revenue-neutral basis, i.e., before applying the overall rate increase.

TABLE 3
Class Revenue Adjustments in ER-2006-0314

| Missouri | | Small General | Medium General | Large General | Large Power | |
|----------|-------------|------------------|-------------------|------------------|----------------|----------|
| Retail | Residential | Service | Service | Service | Service | Lighting |
| 0.0% | 2.00% | -0.45% | -0.45% | -0.45% | -2.54% | 0.00% |

The revenue shifts between the Residential Class, the three General Service Classes (Small, Medium, and Large) and the Large Power Service Class were not of the magnitude shown in Staff's CCOS study but were a move toward matching class revenues with Staff's CCOS. After accounting for the above-mentioned changes, the Staff has calculated that the remaining changes required to match class revenues with Staff's CCOS would be:

TABLE 4
Initial Study Results Adjusted for Case No. ER-2006-0314 Interclass Revenue

| Missouri | | Small | Medium | Large | Large | |
|----------|-------------|---------|---------|---------|---------|----------|
| | | General | General | General | Power | |
| Retail | Residential | Service | Service | Service | Service | Lighting |
| 0.0% | 6.2% | -3.1% | -8.4% | -2.0% | -2.4% | 0.0% |

Other Rate Design components of the Stipulation and Agreement

The Stipulation and Agreement in Case No. ER-2006-0314 also required that the General Service (Small, Medium, Large) Separately-Metered space heating and General Service All-Electric winter rates would be increased by 5 percentage points more than each class' general application rates (Item 12 of KCPL CCOS & Rate Design Settlement). Item 13 of the Stipulation and Agreement outlined that the remaining General Service Separately-Metered space heating and All-Electric issues (broadening availability, restricting availability to existing customers, or totally eliminating the rate schedules) would be litigated. The Commission, in its Report and Order issued December 21, 2006, stated "[t]he Commission is concerned that during KCPL's winter season, commercial and industrial customers under the All-Electric general service tariffs pay about 23% less for the entire electricity usage than they would otherwise pay under the standard general service tariff, and that commercial and industrial customers under the Separately-Metered space heating provision would pay about 54% less for such usage than they would pay under the standard general service tariff (page 83, Report and Order).

V. The Effect of the Commission's Report and Order in Case No. ER-2007-0291

The Commission's December 6, 2007 Report and Order increased KCPL's revenues by \$35.3 million. While the rate design agreement in Case No. ER-2006-0314 narrowed the gap between the Staff's CCOS study results and class revenue requirements, the Staff's study showed a significant cost justification for further movement on a revenue neutral basis. Therefore, the Staff proposed an additional revenue-neutral shift of 1.8% (+\$3,536,542) increase to the Residential Class and a -5.0% (-\$3,536,542) decrease to the Medium General Service (MGS) Class. The Commission accepted the Staff's recommendation and the

Commission's Report and Order in Case No. ER-2007-0291 ordered a 1.8% increase to the Residential Class and a 5% decrease to the Medium General Service Class on a revenue-neutral basis, i.e., before applying the overall rate increase (Pg 62 and pg 69, Report and Order).

TABLE 5
Commission Order Case No. ER-2007-0291
Interclass Revenue Shifts

| Missouri | | Small | Medium | Large | Large | |
|----------|-------------|--------------------|--------------------|--------------------|------------------|----------|
| Retail | Residential | General Service | General Service | General Service | Power Service | Lighting |
| 0.0% | 1.8% | 0.0% | -5.0% | 0.0% | 0.0% | 0.0% |

TABLE 6
Initial Study Results Adjusted for Case Nos. ER-2006-0314 and ER-2007-0291
Interclass Revenue Shifts

| Missouri | | Small | Medium | Large | Large | |
|----------|-------------|---------|---------|---------|---------|----------|
| | | General | General | General | Power | |
| Retail | Residential | Service | Service | Service | Service | Lighting |
| 0.0% | 4.4% | -3.1% | -3.4% | -2.0% | -2.4% | 0.0% |

Other Rate Design Components of the Report and Order in Case No. ER-2007-0291

Issue 13 in Case No. ER-2007-0291 dealt with whether the General Service (Small, Medium, Large) All-Electric tariff rates and General Service Separately-Metered space heating tariff rates should be increased more than KCPL's General Service rates. The Commission decided that:

- 1. KCPL's General Service All-Electric tariff rates and Separately-Metered space heating rates should be increased by 10% more than KCPL's corresponding general application rates on a revenue neutral basis.
- 2. Any approved reduction in revenue responsibility for the Medium General Service class would not be applied to the Separately-Metered space heating rates.
- 3. KCPL's first block of the All-Electric rates' winter energy blocks would be increased by 10%.
- 4. KCPL's second block of the All-Electric rates' winter energy blocks would be increased by 5%.

VI. Staff Rate Design Proposal for Case No. ER-2009-0089

Because of the interclass revenue shifts in Case Nos. ER-2006-0314 and ER-2007-0291, the results of Staff's CCOS study performed in Case No. ER-2006-0314 no longer rise to such a level of significance that disproportionate adjustments to the rates are required at this time.

On a revenue neutral basis, all of these classes are within approximately 4.4% (see Table 6) of their cost-of-service. Because a CCOS study is not a precise measurement of actual cost-of-service, and should be used only as a guide for rate design, the Staff believes that a revenue neutral deviation of approximately 5% (positive or negative) from the results of the Staff's CCOS study is an acceptable range for rate revenues. Hence, any Commission-ordered overall increase in rates in this case should be implemented as an equal percentage increase to each rate component of each rate schedule except for the General Service All-Electric winter rates and General Service Separately-Metered space heat provisions.

The Staff recommends an additional 10% increase for the winter All-Electric General Service rates (Small, Medium and Large). The Commission has restricted the availability of the All-Electric and Separately-Metered space heating rates to customers currently served on one of those rate schedules, but only for so long as the customer continuously remains on that rate schedule.

The Staff recommends an additional 5% increase for General Service Separately-Metered space heat provisions, i.e., winter season rates and the separate meter customer charge.

Outlined in Table 7 are the General Service Rate Groups (Small, Medium, Large) with the average number of customers before growth and the average cents/kWh normalized. Table 7 shows that customers under the All-Electric General Service rate schedule pay (\$.0078 to \$.0116) less for their electricity usage than they would otherwise pay under the standard

general service rate schedule. Also, Table 6 shows that customers electing to take service on the separately metered space heat rates pay from \$.0018 less to \$.0031 more for their electricity usage than they would otherwise pay under the standard general service rate schedule.

The Staff recommends that any customer served under the frozen separate metered space heat rate provision who switch to the regular General Service rate schedule (one meter rate) would no longer be charged the separate winter season space heat rate and the additional separate meter customer charge.

Finally, some of the frozen All-Electric or Separately-Metered rate schedules currently have no customers served under them. The Staff recommends the elimination of Frozen General Service Tariffs where no customers are currently being served.

TABLE 7
General Service Rate Information

| | | | Average | All | Separate |
|-----------------------------------|-------------------------------|-----------|------------|---|-----------------|
| | | Average | Cents/KWH | Electric | Meter |
| Type of Service / Rate Group | Description | Customers | Normalized | Difference | Difference |
| | | | | | |
| Small General Service - Secondary | | • | T . | | |
| MO SGSS | Service - One Meter | 22,965 | \$0.0985 | | |
| MO SGSSA | All Electric - One Meter | 700 | \$0.0869 | (\$0.0116) | |
| MO SGSSH | Separately Metered Space Heat | 344 | \$0.0967 | | (\$0.0018) |
| Small General Service - Primary | | • | T . | | |
| MO SGSP | Service - One Meter | 26 | \$0.1313 | 1 | |
| MO SGSPA | All Electric - One Meter | 0 | \$0.0000 | No Customers | |
| MO SGSPH | Separately Metered Space Heat | 0 | \$0.0000 | | No Customers |
| MO MGSS | Service - One Meter | 4,675 | \$0.0710 | | |
| Medium General Service - Seconda | | | | | |
| | | | | | |
| MO MGSSA | All Electric - One Meter | 563 | \$0.0626 | (\$0.0084) | |
| MO MGSSH | Separately Metered Space Heat | 130 | \$0.0690 | | (\$0.0020) |
| Medium General Service - Primary | | 1 | ***** | | |
| MO MGSP | Service - One Meter | 25 | \$0.0727 | (0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0. | |
| MO MGSPA | All Electric - One Meter | 2 | \$0.0624 | (\$0.0103) | No |
| MO MGSPH | Separately Metered Space Heat | 0 | \$0.0000 | | Customers |
| | | | | | |
| Large General Service - Secondary | | | | | |
| MO LGSS | Service - One Meter | 691 | \$0.0608 | | |
| MO LGSSA | All Electric - One Meter | 213 | \$0.0530 | (\$0.0078) | |
| MO LGSSH | 39 | \$0.0639 | | \$0.0031 | |
| Large General Service - Primary | | | | | |
| MO LGSP | Service - One Meter | 61 | \$0.0584 | | |
| MO LGSPA | All Electric - One Meter | 12 | \$0.0493 | (\$0.0091) | |
| MO EGGI A | All Electric - One Meter | 12 | ₩0.0473 | (ψ0.00)1) | No |

Staff Expert: Michael Scheperle

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

| | | | SMALL. | MEDIUM | LARGE | | |
|-----------------------------------|----------------------------------|----------------------------------|---------------------------------|---------------------------------|----------------------------------|----------------------------------|-------------|
| | MISSOURI | | GENERAL | GENERAL | GENERAL | LARGE POWER | |
| FUNCTIONAL CATEGORY | RETAIL | RESIDENTIAL | SERVICE | SERVICE | SERVICE | SERVICE | LIGHTING |
| Book at the second | | | | | | | |
| Production-Capacity | \$228,043,821 | \$75,636,403 | \$12,805,213 | \$27,156,253 | \$56,264,347 | \$56,181,605 | \$0 |
| Production-Energy | \$162,730,040 | \$48,850,364 | \$8,923,096 | \$19,205,340 | \$41,726,268 | \$44,024,972 | \$0 |
| Transmission . | \$22,979,513 | \$7,621,727 | \$1,290,355 | \$2,736,481 | \$5,669,644 | \$5,661,306 | \$0 |
| Distribution Substations | \$10,061,502 | \$4,402,253 | \$579,928 | \$1,187,718 | \$2,070,447 | \$1,821,156 | \$0 |
| OH/UG Lines | | | | | | | |
| Pri-Customer Related | \$15,010,820 | \$7,879,555 | \$2,610,412 | \$2,353,937 | \$1,853,266 | \$313,651 | \$0 |
| Sec-Customer Related | \$8,383,592 | \$4,510,842 | \$1,492,715 | \$1,340,327 | \$981,786 | \$57,922 | \$(|
| Pri-Demand Related | \$32,382,158 | \$14,737,853 | \$2,313,783 | \$3,779,897 | | | |
| Sec-Demand Related | \$14,688,311 | \$7,642,171 | \$1,196,526 | \$3,779,897 \$1,942,400 | \$7,546,901 \$3,443,275 | \$4,003,724 \$463,939 | \$(\$(|
| Line Transformers | | | | | | | • |
| Sec-Customer Related | \$5,942,344 | #2 IAT 34 * | ** *** *** | A | <u> </u> | | |
| Sec-Demand Related | | \$3,197,314 | \$1,058,046 | \$950,032 | \$695,896 | \$41,056 | \$0 |
| Sec-Demand Related | \$5,542,665 | \$2,959,864 | \$388,725 | \$791,400 | \$1,221,344 | \$181,332 | \$0 |
| Services | \$3,437,355 | \$1,824,792 | \$1,171,842 | \$324,263 | \$114,670 | \$1,787 | \$0 |
| Meters & Recorders | \$5,909,760 | \$3,372,933 | \$1,100,031 | \$750,795 | \$368,285 | \$317,716 | \$(|
| Company-Owned Lighting | \$3,865,175 | \$0 | \$0 | \$0 | \$0 | \$0 | \$3,865,175 |
| Meter Reading | \$4,637,536 | \$3,957,650 | \$417,554 | 207 005 | A22 F74 | 4444 700 | |
| Customer Records & Collection | \$10,628,568 | | | \$87,965 | \$32,574 | \$141,793 | \$0 |
| Customer Assistance | | \$8,438,594 | \$1,230,905 | \$529,366 | \$428,161 | \$1,541 | \$1 |
| Sales Exp | \$1,245,515 | \$300,979 | \$94,134 | \$134,707 | \$393,420 | \$322,276 | \$0 |
| Uncollectible | \$1,014,499 | \$532,536 | \$176,423 | \$159,090 | \$125,252 | \$21,198 | \$1 |
| | \$3,663,594 | \$3,177,801 | \$364,161 | \$121,631 | \$0 | \$0 | \$1 |
| Other Cust Service | \$4,532,495 | \$2,379,220 | \$788,210 | \$710,768 | \$559,591 | \$94,706 | \$1 |
| Customer Deposits | \$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) | \$i |
| Miscellaneous Assignments | \$2,456,020 | \$1,395,749 | \$165,906 | \$209,937 | \$401,449 | \$282,979 | Ś |
| Income 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 | \$4,049,95 |
| Reallocate Lighting Costs | \$0 | \$1,518,791 | \$286,974 | \$482,077 | \$921,256 | \$840,854 | (\$4,049,95 |
| TOTAL COST OF SERVICE | \$585,398,985 | \$219,533,177 | \$41,480,514 | \$69,681,620 | \$133,162,659 | \$121,541,014 | \$(|
| CCOS % | 100.00% | 37.50% | 7.09% | 11.90% | 22.75% | | 0.00 |
| TOTAL RATE REVENUE | \$483,655,953 | \$173,661,690 | \$37,014,983 | \$63,152,089 | \$110,105,736 | \$99,721,455 | \$(|
| Miscellaneous Revenue | \$8,847,219 | \$3,359,126 | \$664,071 | \$1,081,368 | \$1,987,100 | \$1,755,553 | \$ |
| Bulk Power Sales: | + -, /E - 3 | 70,000,1220 | \$00100 £ | 4 1,001,300 | \$1,707,100 | ********* | * |
| Demand (Capacity) | \$6,517,906 | \$2,161,826 | \$365.996 | \$776,175 | \$1,608,137 | \$1,605,772 | \$ |
| Energy - Profit on Sales | \$35,757,301 | \$10,734,079 | \$1,960,706 | \$4,220,064 | | | |
| Energy - Cost of Sales | \$46.951.679 | \$14,094,550 | | | \$9,168,674 | \$9,673,777 | \$ |
| Rev on Trans. For KCPL | \$3,618,631 | | \$2,574,536 | \$5,541,220 | \$12,039,070 | \$12,702,304 | \$ |
| Transmission for Whale Firm Power | | \$1,200,209 | \$203,195 | \$430,919 | \$892,810 | \$891,498 | \$ |
| TOTAL OPERATING REVENUE | \$50,299 \$585,398,988 | \$16,683 \$205,228,163 | \$2,824 \$42,786,3 12 | \$5,990 \$75,207,82 5 | \$12,410 \$135,813,938 | \$12,392 \$126,362,750 | \$: \$1 |
| RATE REVENUE DEFICIENCY | (\$3) | \$14,305,014 | • | | | | |
| Required % Change | (+3) | 417,000,014 | (\$1,305,798) | (\$5,526,204) | (\$2,651,279) | (\$4,821,736) | \$ |
| 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% | | 0.00 |

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. |) Case No. ER-2009-0089) |
|---|--|
| AFFIDAVIT OF | MICHAEL SCHEPERLE |
| STATE OF MISSOURI)) ss: COUNTY OF COLE) | |
| lawful age and after being duly sworn, stat | souri Public Service Commission, being of tes that he has participated in preparing the, and that the facts therein are true and ef. Michael Schepelle MICHAEL SCHEPERLE |
| Subscribed and affirmed before me this | 24 th day of <u>February</u> 2009. |
| | |