Exhibit No.: MGE-625
Issue: Residential Rate Design
Witness: F. Jay Cummings
Type of Exhibit: Direct Testimony
Sponsoring Party: Missouri Gas Energy
Case No.: ER-2012-0174
Date Testimony Prepared: August 16, 2012

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2012-0174

DIRECT TESTIMONY

OF

F. JAY CUMMINGS

ON BEHALF OF

MISSOURI GAS ENERGY

August 16, 2012

MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. ER-2012-0174

DIRECT TESTIMONY
OF
F. JAY CUMMINGS

TABLE OF CONTENTS

SCHEDULES

SCHEDULES

DIRECT TESTIMONY OF F. JAY CUMMINGS

CASE NO. ER-2012-0174

AUGUST 16, 2012

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is F. Jay Cummings. My business address is 3625 North Hall Street, Suite 750, Dallas, Texas 75219.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am a Senior Economist with Ruhter & Reynolds, Inc., Consulting Economists.

Q. PLEASE SUMMARIZE YOUR EDUCATION AND EXPERIENCE.

A. I have a B.A. degree with a major in economics from Colgate University and a Ph.D. in economics from the University of Virginia. I have more than 27 years of utility regulatory experience gained through private and public sector positions. Since 2003, I have provided regulatory support services to the energy industry as a Senior Economist with Ruhter & Reynolds (2005 - present), an Executive Consultant with R. J. Covington Consulting, LLC (2003-2005) and as a Principal with Navigant Consulting, Inc. (2001-2003). Prior to Navigant Consulting, I was employed by Southern Union Company for more than 11 years. I joined Southern Union as Southern Union Gas' Director of Rates and Regulatory Affairs and became Vice President later that year. When my regulatory responsibilities for

Southern Union expanded to include its Missouri properties in 1994, I became Vice President, Pricing and Economic Analysis, a position I held until leaving Southern Union in 2001.

Prior to joining Southern Union, I was employed by the Arizona Corporation Commission for six years. I held positions as the Utilities Division Assistant Director (1988-1991); Chief, Economics and Research Section (1985-1988); and Chief, Economics and Rates Section (1985). My work with the Arizona Corporation Commission covered regulation of electric, gas, telecommunications and water utilities.

From 1973 through 1985, I was on the economics faculties of George Mason University (1973 - 1975) and the University of Texas at Dallas (1975 - 1985). My teaching and research focused on applied microeconomic analyses, which resulted in professional journal publications and conference and seminar presentations. I have submitted testimony in regulatory proceedings in Arizona, Arkansas, Massachusetts, Missouri, Oklahoma, Texas, and Washington.

1. TESTIMONY PURPOSE AND RECOMMENDATIONS

Q. SUMMARIZE THE PURPOSE OF YOUR TESTIMONY.

A. I have been retained by Southern Union Company, d/b/a Missouri Gas Energy ("MGE") to analyze the Residential rate designs of Kansas City Power & Light

("KCP&L") and to provide recommendations regarding these rate designs to the Missouri Public Service Commission ("Commission") in this case. My analysis and recommendations pertain to (1) cost-based, revenue-neutral Residential rate adjustments at current revenue, (2) the availability of the separate Residential General Use and Space Heat ("Space Heat") schedules, and (3) the design of energy charges for Residential services.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. First, I recommend revenue-neutral adjustments in current rates on the Residential schedules based on KCP&L's cost of service results. These revenue adjustments remove the seasonal inequities in the collection of current revenue by equalizing the Residential rates of return at current rates in the summer and winter. The adjustments also remove the current inequities in the collection of winter revenue among Residential customers taking service on different rate schedules by equalizing the winter rates of return at current revenue on the various Residential rate schedules.

Second, based on ratemaking and public policy considerations, I recommend that the separate Residential Space Heat schedules be eliminated, and the customers served under these schedules be transferred to a consolidated General Use schedule.[1] In the alternative, I recommend that the Residential Space Heat services be scheduled for elimination in a subsequent rate case and that current rates for these services be adjusted based on the recommended Residential revenue-neutral shift in this case. In addition to freezing the prospective availability of these services in this case, this alternative recommendation includes tariff language regarding availability to ensure the effectiveness of freezing the schedules and to simplify their subsequent elimination.

Third, I provide recommendations pertaining to the design of Residential energy charges based on (1) my revenue-neutral revenue adjustments and (2) the revenue change that is ultimately approved by the Commission. I recommend that the winter declining blocks be retained with the current rate differences among blocks, i.e., cents per kWh, for those schedules with blocked rates. If my recommendation to eliminate Space Heat is accepted, the current Space Heat rate blocks and rate block differences are used in the consolidated General Use schedule. If my alternative recommendation to freeze the Space Heat is accepted, I recommend that the current winter rate differences among blocks, i.e., cents per kWh, be retained on the respective schedules. I recommend no change in the

[1] KCP&L offers the following Residential services: General Use, General Use and Space Heat - One Meter, General Use and Space Heat - 2 Meters, Time of Day, and Other Use. General Use and Space Heat - 2 Meters was frozen in January 2007. As explained later in my testimony, the General Use and Space Heat - 2 Meters schedule cannot be consolidated with the General Use schedule because KCP&L has not provided the necessary billing determinants to perform the required rate calculation.

summer rate structures, with all current energy charges adjusted by the same per kWh amount to reflect the summer revenue change required by the recommended revenue-neutral adjustments.

Regarding the Commission-approved base revenue change, I recommend that the base revenue change be assigned to the winter and summer to maintain the equalized seasonal rates of return for the Residential class resulting from my recommended revenue-neutral adjustments to current revenue based on KCP&L's cost of service results. The portion of the base revenue change to be collected from energy charges in each season is divided by each season's kWh and added to my recommended current, adjusted energy charges in all Residential schedules.[2]

2. CURRENT AND PROPOSED KCP&L RESIDENTIAL RATES

Q. PLEASE DESCRIBE CURRENT KCP&L RESIDENTIAL RATES.

A. Schedule FJC-1, columns (b) - (f) provides KCP&L's current Residential rates. I describe General Use and Space Heat services that encompass virtually all of KCP&L's Residential class.[3]

---

[2] My recommendations do not address Residential service charge changes to be implemented with the Commission-approved base revenue change. Rather, I address required energy charge changes after recognizing the revenue changes resulting from approved Residential service charge changes.

[3] The following table shows the average number of customers taking service under each schedule:

	Customers	Percent		Customers	Percent
General Use	188,357	79.12%	Time of Day	41	0.02%
Space Heat - One Meter	38,938	16.36	Other Use	5	< 0.01
Space Heat - 2 Meters	10,712	4.50			

Customer counts are from KCP&L Application, Appendix 1. As a result of the descriptions used in this source, the customer counts for the two Space Heat schedules shown above were confirmed in allocator data contained in KCP&L's Response to Data Request MGE-1.

The summer energy charges are the same for General Use and Space Heat, with a uniform energy rate for all usage.[4] Summer energy charges are higher than winter energy rates in corresponding schedules. In the winter, both General Use and General Use and Space Heat - One Meter have declining block energy charges. The Space General Use and Space Heat - One Meter winter energy charges are lower in each rate block than the General Use winter energy charges. Stated differently, average winter energy prices, i.e., the winter energy charge at a specific kWh usage based on the blocked rates divided that kWh usage, are lower for Space Heat - One Meter than for General Use. The non-heat portion of a customer's usage on frozen Space Heat - 2 Meters is priced the same as General Use in the winter; however, the space heat usage on the separate meter for Space Heat - 2 Meters schedule is priced significantly below General Use.

Q. DOES KCP&L PROPOSE TO RETAIN THE LOWER AVERAGE WINTER ENERGY PRICES FOR SPACE HEATING?

A. Yes. In fact, KCP&L requests an increase in the current winter energy price differences between General Use and Space Heat - One Meter and General Use through its proposed rates.[5] For example, the current average winter energy price is 0.94 cents per kWh lower for Space Heat - One Meter than General Use at 1000 kWh.[6] This differential grows to 1.09 cents per kWh under its proposed rates.

[4] The monthly service charges are the same for General Use and Space Heat - One Meter, while the monthly service charge for General Use and Space Heat - 2 Meters is higher.

[5] KCP&L's proposed rates are contained in KCP&L Application, Appendix 1.

[6] Average winter usage is 1035 kWh for General Use and Space Heat - One Meter based on KCP&L's Response to Data Request MGE-4.

This same pattern occurs at other kWh usage levels. Similarly, the discount on the space heat portion of usage on the Space Heat - 2 Meters schedule becomes larger with KCP&L's proposed rates.

Q. DO YOU HAVE ANY OBSERVATIONS REGARDING THE HISTORY OF KCP&L'S GENERAL USE AND SPACE HEAT WINTER ENERGY CHARGES?

A. Yes. Residential rates set in KCP&L rate cases since 1999 generally resulted from stipulations and across-the-board increases. I have two observations on the resulting historical pattern of rate changes. First, the winter declining block structure has become more pronounced, i.e., greater per kWh differences between rate blocks, over time for both General Use and General Use and Space Heat - One Meter. These results are shown on lines 1-5 of Schedule FJC-2. Column g shows that KCP&L's proposed rates continue this trend.

Second, the rate advantage of Space Heat - One Meter over General Use has generally increased over time, as shown on lines 6-11 of Schedule FJC-2.[7] Column g shows that KCP&L's proposed rates continue this growing Space Heat rate advantage.

[7] While the Space Heating - One Meter schedule rate advantage has generally increased continually since 1999, it declined somewhat with rates implemented in 2011. This 2011 result reflects the effect of an approved rate case stipulation between KCP&L and MGE in which the first energy block rate for Space Heat - One Meter was increased 6 percent prior to application of the increase to residential energy charges (Non-Unanimous Stipulation and Agreement as to MGE Rate Design Issue, Case No. ER-2010-0355, February 4, 2011).

3. RESIDENTIAL SPACE HEAT AND GENERAL USE SCHEDULES

Q. WHAT JUSTIFICATION HAS KCP&L PROVIDED FOR THE USE OF LOWER WINTER ENERGY PRICES FOR RESIDENTIAL SPACE HEAT COMPARED TO GENERAL USE AT CURRENT RATES?

A. In response to an MGE data request seeking this justification, KCP&L simply provided broad references to its class cost of service study and several general rate design general considerations and indicated that the Commission has approved the tariffs.[8] No Residential schedule-specific information, studies, analyses, or explanations were provided to support the current price differences.

[8] KCP&L's Response to Data Request MGE-8. Part (a) of Data Request MGE-8 requested all justification, including studies, supporting data, cost bases, and explanations to support the current price differences between General Use and General Use and Space Heat - One Meter. Part (b) of Data Request MGE-8 requested justification, including studies, supporting data, cost bases, and explanations to support the increased price differences under proposed rates. The complete KCP&L Response to Data Request MGE-8 follows:

> a) and b) The Commission has approved tariffs. Additionally, refer to the class cost of service study provide (sic) in response to data request MGE-1 and see response to DR MGE-7 as it may pertain to rate design.

The complete KCP&L Response to Data Request MGE-7 follows:

> Mr. Rush did not rely on any single, specific study to support the rate design proposal offered in this case. The class cost of service study provided by Mr. Normand was reviewed and evaluated in conjunction with a few critical considerations. They are:
>
> Provide Revenue Stability and Risk Mitigation
> Implement Cost-based Rates
> Minimize Customer Dissatisfaction
> Simplify the Rate Structures
> Consider Technology Issues

Q. WHAT JUSTIFICATION HAS KCP&L PROVIDED FOR INCREASING THE AVERAGE WINTER ENERGY PRICE DIFFERENCES BETWEEN SPACE HEAT AND GENERAL USE WITH ITS PROPOSED RATE CHANGE?

A. In response to an MGE data request seeking this justification, KCP&L provided the same response it offered regarding current price differences (see footnote 8). No Residential schedule-specific information, studies, analyses, or explanations were provided to support the increased price differences at proposed rates.

Q. DOES KCP&L'S COST OF SERVICE SUPPORT THE CURRENT LOWER PRICE FOR RESIDENTIAL SPACE HEATING SERVICES COMPARED TO THE GENERAL USE SERVICE AS KCP&L APPEARS TO SUGGEST IN ITS DATA REQUEST RESPONSE?

A. No.

Q. WHY IS THE COST OF SERVICE FOR A CUSTOMER CLASS AN IMPORTANT CONSIDERATION IN ASSIGNING REVENUE ON WHICH THE CLASS' RATES ARE SET?

A. Equity considerations require that each customer class pay the cost to serve the class. Achieving full equity among classes results in identical rates of return for each class based on the revenue produced from rates and the cost to serve each class. If the equity objective is not met, a portion of the cost to serve one or more classes is borne by other class(es). The term "customer class" in this context

should broadly be interpreted as tariff classifications. For example, Residential General Use is a different a "customer class" than General Use and Space Heat - One Meter for purposes of measuring the fairness of the rates customers pay.

Such inequity exists in KCP&L's current Residential rates. KCP&L's cost of service results show that winter revenue produced from current Residential rates and the resulting winter rates of return for General Use and Space Heat (both schedules) relative to General Use do not support the relatively lower priced Space Heat service in the winter. Currently, General Use customers are inequitably paying a portion of the cost to serve Space Heat customers in the winter. In addition, KCP&L's cost of service results show that for the Residential class as a whole, current rates and the resulting revenue produce a higher rate of return in the summer than in the winter.

Q. PROVIDE THE KCP&L COST OF SERVICE RESULTS THAT SUPPORT YOUR CONCLUSION REGARDING THESE RESIDENTIAL SERVICE INEQUITIES AT CURRENT RATES.

A. The following table shows the seasonal rate of return differences for the Residential class and the substantially lower rate of return for Space Heat (both schedules) than for General Use and for the entire Residential class in the winter:[9]

[9] Direct Testimony of Paul M. Normand, Case No. ER-2012-0174, Table 3, page 23. KCP&L's Response to Data Request MGE-2 (c) indicates that General Use includes the relatively new Other Use rate in the cost of service. Only five customers were on the General Use schedule in the test year according to KCP&L Application, Appendix 1.

	Annual	Summer	Winter
Residential - All	5.432%	6.509%	4.498%
General Use	5.958%	6.797%	5.174%
Time of Day	5.039%	6.438%	3.739%
Space Heat - One Meter	4.165%	5.859%	2.922%
Space Heat - 2 Meters	2.963%	4.161%	2.284%

As explained later in my testimony, KCP&L's proposed revenue spread exacerbates the inequality in winter rates of return between the General Use and Space Heat schedules.

Q. DID THE KCP&L COST OF SERVICE RESULTS IN ITS LAST RATE CASE SUPPORT THE LOWER PRICED RESIDENTIAL SPACE HEAT SERVICES COMPARED TO THE GENERAL USE SERVICE AT THAT TIME?

A. No. In Case No. ER-2010-0355, revenues from Space Heating (both schedules) produced substantially lower winter rates of return than the rates of return for both the General Use schedule and for the entire Residential class. These results are shown below:[10]

	Annual	Summer	Winter
Residential – All	6.248%	6.198%	6.299%
General Use	6.597%	6.034%	7.218%
Time of Day	5.974%	6.748%	5.132%
Space Heat - One Meter	5.026%	6.883%	3.583%
Space Heat - 2 Meters	5.238%	6.895%	4.288%

The continuing winter rate advantage of Space Heat over General Use service has been accompanied by a continuing discrepancy between Space Heat and General Use winter rates of return. In Case No. ER-2010-0355, the KCP&L winter rate

[10] Direct Testimony of Paul M. Normand, Case No. ER-2010-0355, Table 3, page 19.

of return for Space Heat - One Meter was 3.64 percentage points lower than the winter rate of return for General Use at rates in effect at that time. While closing somewhat, this gap remains at 2.25 percentage points in this case with current rates. In Case No. ER-2010-0355, the KCP&L winter rate of return for Space Heat - 2 Meters was 2.93 percentage points lower than the winter rate of return for General Use at rates in effect at that time. This gap remains at 2.89 percentage points in this case with current rates.

Simply stated, Space Heat (both schedules) customers are inequitably paying less than their fair share of the cost to serve them relative to General Use customers, and this discrepancy has persisted. This continuing inequity should be addressed in assigning revenue to tariff classifications and designing rates in this case.

Q. WHAT ARE THE WINTER PRICE CONSEQUENCES IF THE DISCREPANCY BETWEEN THE WINTER RATES OF RETURN FOR RESIDENTIAL SPACE HEAT COMPARED TO GENERAL USE ARE ELIMINATED?

A. At current rates, the winter energy charge revenue per kWh and resulting winter rate of return for General Use is higher than for Space Heat (both schedules). Equalizing the rates of return seasonally for the Residential class and among the Residential schedules in the winter based on the KCP&L cost of service results at current revenues requires higher winter energy charge revenue per kWh for Space Heat and lower revenue per kWh for General Use. The energy charge revenue

per kWh differences is sharply reduced as a result of the required revenue shift, from 1.68 cents per kWh to 0.77 cents per kWh for Space Heat - One Meter compared to General Use and from 1.86 cents per kWh to 0.64 cents per/kWh for Space Heat - 2 Meters compared to General Use. The required Residential revenue shift seasonally and among the winter schedules and the resulting winter energy price consequences are developed in Schedule FJC-3.

If both Space Heat (both schedules) and General Use customers were currently paying their fair share of the cost to serve them at current rates as indicated by the KCP&L cost of service results, the Space Heat price advantage would drop dramatically. The attractiveness of Space Heat to KCP&L's Residential customers today is due to the fact that it is underpriced.

Q. DO THE OTHER MISSOURI ELECTRIC UTILITIES HAVE SEPARATE ALL-ELECTRIC OR SPACE HEATING RESIDENTIAL RATES?

A. No. Schedule FJC-4 provides the current Residential rates for Ameren Missouri ("Ameren") and The Empire District Electric Company ("Empire District"). Neither of the other Missouri electric utilities offers a discounted Electric Space Heating service.

Q. HOW DO THE RESIDENTIAL SERVICE RATES FOR OTHER MISSOURI ELECTRIC UTILITIES COMPARE TO THOSE FOR KCP&L?

A. Both Ameren and Empire District have a fixed monthly charge and a single block summer energy charge. Ameren and Empire District have two-block, declining energy rates in the winter with block breaks at 750 kWh and 600 kWh, respectively. The winter rate differential between the first and second block is 2.51 cents per kWh for Ameren and 1.99 cents per kWh for Empire District.

By comparison, KCP&L's General Use schedule has a declining, three block winter energy rate structure as shown in Schedule FJC-1, with a current rate differential of 3.97 cent per kWh between the first two blocks (break at 600 kWh) and an additional 0.98 cent per kWh decline between the second and third block (break at 1000 kWh). Based on these pricing considerations, KCP&L has a stronger potential to add winter load through its current General Use blocked-rate pricing than does Ameren or Empire District without the need for separate, significantly lower-priced Space Heat schedules.

Q. DOES ELECTRICITY COMPARE FAVORABLY WITH NATURAL GAS FOR HEATING PURPOSES GIVEN KCP&L'S CURRENT WINTER RATES?

A. No. Based on the U.S. Energy Administration's Heating Fuel Cost Comparison calculator and MGE's current natural gas price to Residential customers, electric

prices would have to be no more than 1.52 cents per kWh in order for a customer to save money on monthly utility bills through an electric space heating furnace rather than a gas furnace.[11] This result and results for various natural gas furnace efficiencies and alternative electric heating options are shown in the top panel of Schedule FJC-5. The schedule also shows that KCP&L's current winter energy charges are well above the electric prices needed to produce customer savings resulting from the choice of electricity rather than natural gas for space heating purposes. The electric heating option disadvantage for customers grows under KCP&L's proposed rates.

Q. BASED ON YOUR ELECTRIC-GAS COMPARISON, WHY THEN WOULD CUSTOMERS CHOOSE ELECTRICITY OVER NATURAL GAS FOR HEATING PURPOSES?

A. Aside from possible one-time, equipment and installation cost differences, Space Heating - One Meter provides lower-price winter energy not only for heating but also for all other uses of electricity, so that the winter bills savings from these other uses of electricity may be sufficient to offset the price advantage that natural gas has for heating purposes. Customers may be naturally attracted to "discounted" rates too, regardless of whether that is really the wisest choice.

[11]The fuel cost comparison calculator is available through www.eia.gov/neic/experts/heatcalc.xls (accessed on July 9, 2012). This calculation is based on U.S. Department of Energy northern region standard furnace efficiencies of 78% for electricity and 90% furnace for natural gas and heat contents of 3,412 Btus/kWh for electricity and 102,300 Btus/Ccf for natural gas. Furnace standards are from U.S. Department of Energy, "Energy Conservation Program: Conservation Standards for Residential Furnaces and Residential Central Air Conditioners and Heat Pumps," 10 CFR Part 430, issued October 24, 2011. Natural gas and electricity heat content values are from U. S. Energy Administration, *Monthly Energy Review*, July 2012, pages 176 and 178. MGE's current gas prices are contained on Sheet No. 24.3, effective February 13, 2012.

Q. IS THIS A REASONABLE RATEMAKING APPROACH?

A. No. Fairness considerations suggest that two residential customers should not pay different prices in the winter for lighting their homes, operating their televisions and refrigerators, and using other electric appliances just because one customer happens to heat his or her home with electricity and the other customer does not. Furthermore, the discounted Space Heat (both schedules) services are underpriced based on the cost to provide them. These two fairness considerations are not met with the KCP&L's Residential service offerings today.

Q. DO YOU HAVE ANY OTHER OBSERVATIONS REGARDING THE AVAILABILITY OF RESIDENTIAL SPACE HEAT SERVICE?

A. Yes. Schedule FJC-6 shows that for a number of years, KCP&L's Residential General Use customer base has steadily declined at a time when its discounted Residential Space Heat customer base has continually grown. Even the two-meter Space Heating customer base has grown somewhat despite the schedule being "frozen" in 2007. Underpriced Space Heat services have contributed to this persistent imbalanced growth within the Residential class.

4. RESIDENTIAL RATE DESIGN RECOMMENDATIONS

4.1 CURRENT REVENUE SHIFT

Q. WHAT IS THE PURPOSE OF SHIFTING CURRENT RESIDENTIAL REVENUE SEASONALLY AND AMONG RATE SCHEDULES IN THE WINTER?

A. Current revenues are adjusted on a revenue-neutral basis based on the KCP&L cost of service results so that Residential customers seasonally and on different rate schedules in the winter contribute revenue through the rates they pay that reflect the cost to serve them. The recommended revenue shift and the resulting energy charge adjustments correct the current seasonal inequities in Residential revenue collection and correct the current relative under pricing of the Residential Space Heat services in the winter.

Q. DOES KCP&L'S RECOMMENDATION TO SPREAD THE PROPOSED INCREASE AMONG THE RESIDENTIAL SCHEDULES ACHIEVE THIS SAME RESULT?

A. No. The KCP&L across-the-board recommendation based on current revenues without first adjusting Residential rates does not address Residential cost of service differences by season and within the rate schedules in the winter based on KCP&L's cost of service results. In fact, an across-the-board recommendation accentuates the rate of return differentials and resulting inequities within the

Residential class, as shown in Schedule FJC-7 with an illustrative 10 percent winter revenue increase.

Q. EXPLAIN HOW YOU USE THE KCP&L COST OF SERVICE RESULTS TO ADJUST CURRENT RESIDENTIAL REVENUE.

A. I recommend that current Residential revenue be adjusted based on a revenue-neutral shift seasonally and among the rate schedules in the winter to equalize summer and winter rates of return and to equalize the winter rates of return among the rate schedules. The required seasonal revenue change and the winter revenue changes among the Residential services are developed in Schedule FJC-3, discussed earlier in my testimony. I explain my recommendations on how rates must be adjusted to reflect these required revenue changes in Section 4.3. First, I explain my recommendations pertaining to the prospective availability of Residential Space Heat (both schedules).

4.2 SPACE HEAT SERVICE AVAILABILITY

Q. WHAT IS YOUR RECOMMENDATION PERTAINING TO THE PROSPECTIVE AVAILABILITY OF THE RESIDENTIAL SPACE HEAT SERVICES?

A. I recommend elimination of these rate schedules based the ratemaking considerations discussed in my testimony. The resulting Residential rates before the approved base revenue change, explained in Section 4.3, incorporate the recommended current revenue shifts, explained in Section 4.1.

Q. OTHER THAN THE RATEMAKING CONSIDERATIONS YOU HAVE DISCUSSED, ARE THERE PUBLIC POLICY REASONS THAT SUPPORT ELIMINATION OF THE RESIDENTIAL SPACE HEAT SERVICES?

A. Yes. In the 1970s, rising natural gas demand and declining production along with supply availability concerns provided public policy support for favoring the use of electricity over natural gas, including offering special space heat rates to encourage the installation of electric space heating equipment. Energy market conditions today no longer provide this public policy support for preferential treatment of electricity for space heating purposes. In their place, today's energy-related public policy focuses on promoting end-user energy conservation, limiting environmental impacts related to energy production and delivery, and encouraging efficiency in energy consumption. These environmental concerns

result from impacts on air quality, water use and pollution, and soil contamination. Efficiency in energy consumption considers both appliance efficiency and the full fuel cycle efficiency of alternative energy sources, i.e., the amount of energy delivered to end users taking into account energy used in the full cycle from extraction to processing to generation to transmission to delivery.

KCP&L Residential Space Heat services are inconsistent with today's public policy objectives. Offering separate, discounted Residential Space Heat services further blunts customer incentives to conserve electricity used for both heat and non-heat purposes in the winter.[12] Furthermore, the often-presumed benefits of winter electric load additions resulting from the availability of lower-priced Residential Space Heat services ignore the environment impacts of the increased winter electricity use.

Finally, promotion of electricity through the Residential Space Heat services fails to consider that natural gas is more efficient than electricity for space heating purposes. Based on U.S. Department of Energy efficiency standards for residential furnaces and heat pumps, the consumption efficiency, i.e., combined appliance and fuel cycle efficiency, for a natural gas furnace is 74-82 percent

[12] The KCP&L General Use schedule has declining block winter energy charges that blunt customer conservation incentives and result in winter load additions that have environmental impacts. However, the availability of even lower-price Space Heat services worsens efforts to encourage energy conservation and to limit environmental impacts. In addition, it is not in KCP&L's interest to encourage customers to use less electricity in the winter because its net revenue would fall with declining usage.

while the consumption efficiency is 50 percent for an electric heat pump and 23 percent for an electric furnace.[13]

Q. DO YOU HAVE AN ALTERNATIVE RECOMMENDATION PERTAINING TO THE PROSPECTIVE AVAILABILITY OF THE RESIDENTIAL ELECTRIC SPACE HEAT SERVICES?

A. While I recommend that these services be eliminated, I understand that the Commission may prefer to take a more gradual approach and schedule the elimination of the services for a subsequent rate case. To achieve this objective, I alternatively recommend that the Commission: (1) adjust current rates to incorporate the recommended current revenue shifts among Residential schedules explained in Section 4.1; (2) indicate its intent to eliminate all Space Heat services, (3) freeze the Space Heat - One Meter schedule, as it did for Space Heat - 2 Meters schedule in 2007, and (4) require tariff language regarding availability to ensure the effectiveness of freezing the schedules and to simplify their subsequent elimination. Each of these parts of this alternative recommendation is

[13]These calculations are based on the following sources: (1) U.S. Department of Energy, "Energy Conservation Program: Conservation Standards for Residential Furnaces and Residential Central Air Conditioners and Heat Pumps," 10 CFR Part 430, issued October 24, 2011; (2) National Research Council, National Academy of Sciences, "Review of Site (Point-of-Use) and Full-Fuel-Cycle Measurement Approaches to DOE/EERE Building Appliance Energy-Efficiency Standards," May 15, 2009, page 6; and (3) U.S. Energy Information Administration, Fuel Cost Comparison Calculator available through www.eia.gov/neic/experts/heatcalc.xls (accessed on July 9, 2012). The calculations are based on appliance efficiencies of 81 percent and 90 percent for weatherized and non-weatherized natural gas furnaces in the region that includes Missouri, respectively, in (1) and on a single-package heat pump with an 8.0 Heating System Performance Factor from (1) with an adjustment for Missouri shown in (3). The fuel cycle efficiencies used the calculations, provided in (2), are 91 percent for natural gas and 30 percent for electricity based on coal-fired power plants. In 2011, KCP&L's electric generation consisted of 80 percent coal, 15 percent nuclear, 3 percent natural gas and oil, and 2 percent wind (Great Plains Energy Incorporated/Kansas City Power & Light Company's 2011 SEC Form 10-K, page 8). The consumption efficiency for each energy source is the product of the appliance efficiency and fuel cycle efficiency.

necessary if the services are to be simply eliminated in a subsequent rate case. Merely freezing the prospective availability of the schedules in this case is not sufficient.

Q. EXPLAIN YOUR TARIFF LANGUAGE RECOMMENDATION IN THE EVENT THE COMMISSION FREEZES THE RESIDENTIAL SPACE HEAT SCHEDULES.

A. Freezing a rate schedule is intended to be a first step toward eliminating it in a subsequent rate case. Given this purpose, I recommend that the Commission require that the availability of the schedules as specified in the tariff be limited to existing customers at existing premises. If a customer moves from premise A to premise B, the service would not be available to the customer at premise B nor would the service be available to a different customer at premise A. This language should apply to both the General Use and Space Heat - One Meter and General Use and Space Heat - 2 Meters schedules. My intent is not only to avoid the possible growth in customers served under the Residential Space Heat schedules but also to ensure declining customer counts on the frozen schedules over time thereby simplifying their future elimination. I note that the current tariff language in the General Use and Space Heat - 2 Meters schedule has not been effective in achieving this result over the last five years, as shown in Schedule FJC-6.

4.3 ADJUSTED RESIDENTIAL RATES AT CURRENT REVENUE

Q. EXPLAIN HOW ENERGY CHARGES AT CURRENT REVENUE ARE ADJUSTED TO REFLECT YOUR RECOMMENDED REVENUE SHIFT.

A. The required rates are developed in Schedule FJC-8.[14] Line 9 provides the recommended winter revenue shift per kWh for each Residential schedule. These amounts are used to adjust KCP&L's current winter energy charges.

If the Commission accepts my recommendation to eliminate Space Heat, a single General Use schedule is developed with the current Space Heat rate blocks and rate block rate differences (lines 14-15). My preferred recommendation is to include General Use and Space Heat - 2 Meters in the consolidated General Use schedule, but KCP&L has not provided billing determinants needed for the rate calculation.[15] As a result, the separate meter Space Heat schedule remains

[14]The rates shown in Schedule FJC-8 are based on the KCP&L cost of service results. However, Residential base revenue in the KCP&L Application differs somewhat from the Residential base revenue in the KCP&L cost of service study. If the KCP&L Application Residential base revenue is used in the KCP&L cost of service study, the following per kWh changes to the rates shown in Schedule FJC-8 are required:

	General Use	Space Heat-One Meter	Space Heat-2 Meters	Time of Day	Other Use
Winter Energy Charge					
Eliminate Space Heat					
All	0.00059			0.00472	0.00094
Non-Heat Load Meter			0.00059		
Heat Load Meter			0.00009		
Freeze Space Heat					
All	0.00069	0.00027		0.00472	0.00094
Non-Heat Load Meter			0.00059		
Heat Load Meter			0.00001		
Summer Energy Charge	(0.00085)	(0.00085)	(0.00085)	(0.00085)	(0.00085)

[15]KCP&L's Response to Data Request MGE-2-1. In KCP&L's Response to Data Request MGE-3-1, KCP&L confirmed that it is unwilling to provide these billings determinants as part of the discovery process and indicated that it could not develop reasonable estimates of these determinants.

separate and frozen in Schedule FJC-8. If KCP&L does not provide the necessary billing determinants during the course of this proceeding to enable development of General Use rates that include both Space Heat schedules, I recommend that the Commission direct KCP&L to include General Use and Space Heat - 2 Meters in the General Use schedule as part of its next rate case filing.

If the Commission freezes Space Heat availability, current winter energy charges are adjusted by the recommended revenue shift per kWh on each Residential schedule, with no change in rate differences among blocks in the blocked schedules (lines 17-22). With either my primary or alternative recommendation, Line 9 revenue per kWh changes are used to adjust KCP&L's Time of Day and Other Use winter energy charges (line 12).

The required summer energy charge change is shown on line 23. This per kWh amount is to be added to all current summer energy charges shown in Schedule FJC-1. My recommendation maintains the current rate structures with identical summer uniform energy charges for General Use, General Use and Space Heat - One Meter, and General Use and Space Heat - 2 Meters.

Q. WITH THE ELIMINATION OF SEPARATE SPACE HEAT SERVICES, YOU INDICATE THAT YOU PREFER TO INCLUDE SPACE HEAT - 2 METERS IN THE GENERAL USE SCHEDULE. WHAT BILLING DETERMINANT DATA MUST KCP&L PROVIDE TO DEVELOP WINTER ENERGY CHARGES ON THIS BASIS?

A. In order to develop rates on this basis, KCP&L must provide the separate meter winter usage in two rate blocks, i.e., first 1000 kWh and over 1000 kWh. For illustrative purposes, based on an assumption that separate meter winter usage is split evenly between the two blocks, the resulting consolidated General Use winter rates at current revenue applicable to all current General Use and Space Heat customers would be:

Service Charge	$9.00
First 1000 kWh	0.08720
Over 1000 kWh	0.06210

Based on this illustrative calculation, the inclusion of Space Heat - 2 Meters in the consolidated General Use schedule should slightly reduce the rates in each of the two blocks in the General Use schedule.

4.4 RESIDENTIAL RATES WITH APPROVED BASE REVENUE CHANGE

Q. HOW WOULD YOUR RECOMMENDED RESIDENTIAL RATES BE ADJUSTED TO COLLECT ANY BASE REVENUE CHANGE APPROVED BY THE COMMISSION?

A. I recommend that the approved Residential base revenue change assigned to the winter and summer seasons to maintain the equalized winter and summer Residential rates of return resulting from my revenue-neutral adjustments. I have no recommendation regarding Residential service charges. After determining the revenue change in each season due to approved service charge changes, I recommend that the remaining revenue in each season be collected with a uniform per kWh change in all energy charges in each season. These energy charge changes are to be added to my recommended energy charges at current revenue developed in Schedule FJC-8.

These calculations are shown in Schedule FJC-9 with an assumed Residential base revenue increase of about one-third of the KCP&L request and an assumed five percent increase in all Residential service charges. The resulting energy charge changes shown on line 12 are to be added to the recommended energy charges at current revenue in each Residential schedule (Schedules FJC-8).

Schedule FJC-9 can be used to determine the energy charge changes from any base revenue increase that the Commission ultimately approves by inserting the approved base revenue increase to be collected from energy charges in line 5,

column d and the approved service charge revenue change in line 10. The resulting line 12 amounts would then be added to my recommended energy charges at current revenue in Schedule FJC-8.

5. REGULATORY COMMISSION DECISIONS REGARDING KCP&L

Q. HAS KCP&L PROVIDED RECOMMENDATIONS TO REDUCE RESIDENTIAL WINTER ENERGY CHARGE DIFFERENCES BETWEEN GENERAL USE AND SPACE HEAT SCHEDULES ELSEWHERE?

A. Yes. In its 2009 Kansas rate case, KCP&L, through its rebuttal testimony, explained that "Based on its cost data offered in the Normand study, Residential General Use rates in the winter are too high and Residential Heating rates in the winter are too low."[16] Based on this result, KCP&L provided a recommendation to "move Residential winter rates closer to cost with revenue-neutral adjustments" with the result of reducing "the differential between General Use and Heating within the Residential class."[17] The Kansas Corporation Commission ("KCC")

[16] Rebuttal Testimony of Tim M. Rush, Docket No. 10-KCPE-415-RTS, page 23, lines 6-8. The referenced Normand study showed the following Residential rates of return at rates in effect at that time:

	Annual	Summer	Winter
Residential - All	7.736%	7.726%	7.744%
Regular (General Use)	8.558%	7.485%	9.611%
Time of Day	7.108%	6.791%	7.384%
Water Heating ("WH")	6.851%	7.567%	6.309%
Separately Metered - WH	5.650%	8.209%	4.256%
Space Heating ("SH")	5.823%	8.547%	4.057%
Separately Metered - SH	7.226%	8.882%	6.241%

Direct Testimony of Paul M. Normand, Docket No. 10-KCPE-415-RTS, Table 3, page 19.

[17] *Id.*, page 23, lines 13-14, 20. KCP&L indicated that it provided the recommendation in the event that the Kansas Corporation Commission decided to implement rate design changes in this docket.

adopted these KCP&L recommendations adjusted for the KCC-approved revenue requirement.[18]

Differences between Residential General Use and Electric Space Heat winter energy charges, i.e., cents per kWh, were dramatically reduced as a result of the KCC adoption of the KCP&L recommendation in Kansas as shown below:

	Residential Space Heat Rate Advantage Over General Use: Winter Rate Block Difference (Cents/kWh)[19]	
	Before Rate Charge	After Rate Change
Electric Space Heat		
First 1000 kWh	(2.83)	(0.73)
Over 1000 kWh	(4.10)	(1.57)
Electric Space Heat-Separate Meter Usage		
First 1000 kWh	(4.28)	(1.57)
Over 1000 kWh	(4.25)	(1.57)

As discussed earlier my testimony, KCP&L proposes to increase the current winter energy charge differences between the Space Heat and General Use schedules in this case in Missouri, contrary to the KCP&L recommendation and the KCC order in its 2009 Kansas rate case.

---

[18] Order: 1) Addressing Prudence; 2) Approving Application, in Part; & 3) Ruling on Pending Requests Docket No. 10-KCPE-415-RTS, November 22, 2010, page 125.

[19] *Id.*, page 125 and Exhibit V, page 2 provide the following winter energy charges before and after the approved rate change:

	Present Rates			New Rates		
	General Use	Space Heat	Space Heat-Separate Meter	General Use	Space Heat	Space Heat-Separate Meter
First 1000 kWh	0.08037	0.05211		0.07312	0.06581	
Over 1000 kWh	0.08003	0.03908		0.07312	0.05746	
Separate Meter			0.03758			0.05746

The Space Heat-Separate Meter schedule has been frozen to new customers since January 1, 2007.

In the Kansas case, KCP&L used its cost of service study results in developing its recommendation. In contrast, KCP&L does not recognize the KCP&L cost of service results in developing its proposed rates in this case. My recommendations in this case use the KCP&L cost of service results to reduce current Residential Space Heat-General Use winter energy charge differences so that customers on these schedules pay the cost to serve them.

Q. DO YOU HAVE ANY OTHER OBSERVATIONS REGARDING THE KCC'S ORDER IN KCP&L'S 2009 RATE CASE?

A. Yes. The KCC opened a rate design docket because the "current rate structure must be redesigned to move customer classes closer to the principal of cost causation" and ordered that various factors including the following be used:

- Further simplification of rate structure for Residential Classes by reducing the number of subclasses.
- Eliminate rate structures with artificial incentives to encourage a customer to switch end-use equipment.
- Incorporate the Commission's energy efficiency and energy conservation goals.[20]

[20] Order: 1) Addressing Prudence; 2) Approving Application, in Part; & 3) Ruling on Pending Requests Docket No. 10-KCPE-415-RTS, November 22, 2010, page 123, 124-25.

Q. HAS THE COMMISSION PREVIOUSLY ADDRESSED SEPARATE SPACE HEATING SERVICE FOR NON-RESIDENTIAL CUSTOMER CLASSES?

A. Yes. In Case No. ER-2007-0291, the Commission addressed separate all-electric space and separately-metered space heating services to KCP&L general service customers. In that case, the Commission froze these services to existing customers' locations and reduced the price advantage of these services over the general service schedules, with findings and decisions that included:

- Waiting until anywhere from 2009 to 2012 to address the rate disparities that the separately-metered space heating and all-electric tariff customers pay compared to the general service tariff customers is waiting too long.

- Trigen's and Staff's argument that increasing all class' rates the same percentage would effectively increase the size of the general service-space heating discounts, and exacerbate the current problem, is compelling.

- In a future rate case, the Commission might be willing to consider eliminating the discounts altogether. Allowing even more customers to use those discounts flies in the face of a possible move, supported by Staff, towards eliminating them entirely.[21]

Q. DO YOU HAVE ANY OBSERVATIONS REGARDING THESE MISSOURI AND KANSAS DECISIONS REGARDING KCP&L?

A. Yes. Through my testimony, I examine Residential Space Heat-General Use issues similar to those that that led the Commission to its 2007 decision regarding general service space heating services and that led the KCC to its 2010 decision regarding Residential space heating services. This examination supports my

[21] Report and Order, Case No. ER-2007-0291, issued December 6, 2007, pages 77, 78, and 82. The Commission also froze Residential General Use and Space Heat - 2 Meters in this case.

recommendations in this case regarding the pricing and availability of Residential Space Heat services.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of	)	
Kansas City Power & Light Company's	)	
Request for Authority to Implement	)	File No. ER-2012-0174
A General Rate Increase for Electric Service	)	

AFFIDAVIT

STATE OF TEXAS	)	
	)	ss
COUNTY OF DALLAS	)	

I, F. Jay Cummings, state that I am employed by Ruhter & Reynolds, Inc., Consulting Economists as a Senior Economist; that the Direct Testimony and schedules attached hereto have been prepared by me or under my direction and supervision on behalf of Southern Union Company, d/b/a Missouri Gas Energy; and, that the answers to the questions posed therein are true to the best of my knowledge, information and belief.

F. Jay Cummings

Subscribed and sworn to before me this 15th day of August, 2012.

Susan R Landis
Notary Public

My Commission Expires:

7/29/2015
(SEAL)

Kansas City Power & Light Company
Case No. ER-2012-0174
KCP&L Current and KCP&L Proposed Residential Rates

Line	Description	KCP&L Current Residential Rates (5/4/11)					KCP&L Proposed Residential Rates				
		General Use	General Use and Space Heat - One Meter	General Use and Space Heat - 2 Meters	Other Use	Time of Day	General Use	General Use	General Use	Other Use	Time of Day
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	Rate Sheet	5A	5A	5B	6	8	5A	5A	5B	6	8
2	Frozen			1/2/2007					1/2/2007		
3	Service Charge	9.00	9.00	11.05	9.00	14.04	10.35	10.35	12.71	10.35	16.15
4	Energy Charge										
5	Summer										
6	All kWh	0.11028	0.11028	0.11028	0.14323		0.12688	0.12688	0.12688	0.16477	
7	Peak - All kWh					0.16912					0.19456
8	Off-Peak - All kWh					0.09422					0.10839
9	Winter										
10	First 600 kWh	0.09914		0.09914			0.11405		0.11405		
11	Next 400 kWh	0.05945		0.05945			0.06839		0.06839		
12	Over 1000 kWh	0.04968		0.04968			0.05715		0.05715		
13	First 1000 kWh		0.07382					0.08492			
14	Over 1000 kWh		0.04872					0.05605			
15	Separate Meter - All kWh			0.04747					0.05462		
16	All kWh				0.11129	0.06964				0.12803	0.08011

Source: Current rates from Electronic Filing Information System, Missouri Public Service Commission. Proposed rates from KCP&L Application, Appendix 1.

Kansas City Power & Light Company
Case No. ER-2012-0174
Residential Winter Energy Charge Changes Since 1999

Line	Description	Effective Date of Rates: August 1, 1999	January 1, 2007	January 1, 2008	September 1, 2009	May 4, 2011	Proposed
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	**Winter Block Rate Difference (Cents/kWh):**						
2	General Use Schedule[1]						
3	Second Block Rate Less First Block Rate	(2.68)	(3.02)	(3.26)	(3.78)	(3.97)	(4.57)
4	Third Block Rate Less Second Block Rate	(0.66)	(0.74)	(0.80)	(0.93)	(0.98)	(1.12)
5	General Use and Space Heat - One Meter Schedule[2]	(1.42)	(1.60)	(1.71)	(1.99)	(2.51)	(2.89)
6	**Rate Advantage Space Heat - One Meter Schedule**						
7	**Compared to General Use Schedule (Cents/kWh) at:[3]**						
8	350 kWh	(1.98)	(2.23)	(2.42)	(2.81)	(2.53)	(2.91)
9	700 kWh	(1.60)	(1.80)	(1.95)	(2.27)	(1.97)	(2.26)
10	1000 kWh	(0.91)	(1.02)	(1.12)	(1.30)	(0.94)	(1.09)
11	1500 kWh	(0.63)	(0.70)	(0.77)	(0.90)	(0.66)	(0.76)

[1] The three General Use rate blocks are First 600 kWh, Next 400 kWh, Over 1000 kWh.

[2] The two General Use and Space Heat-One Meter rate blocks are First 1000 kWh and Over 1000 kWh.

[3] Usage levels selected to bracket the General Use winter average of 697 kWh and the General Use and Space Heat - One Meter winter average of 1035 kWh.

Kansas City Power & Light Company
Case No. ER-2012-0174

Cost of Service Required Residential Revenue Shifts and Resulting Winter Energy Revenue Per kWh

Line	Description	Winter	Summer	Total	Sources/Explanation
	(a)	(b)	(c)	(d)	(g)
1	**Required Winter-Summer Revenue Shifts to Equalize Rates of Return**				
2	Net Operating Income	18,778,357	23,549,977	42,328,334	Lines 2-4: KCP&L's Response to Data Request MGE-1.
3	Rate Base	417,476,411	361,827,988	779,304,399	
4	Rate of Return	4.498%	6.509%	5.432%	
5	Net Operating Income at Equalized Rate of Return	22,675,454	19,652,880	42,328,334	Line 4, column d x line 3 for each class.
6	Rate of Return	5.432%	5.432%	5.432%	Line 5/line 3.
7	Required Revenue Shift	6,325,326	(6,325,326)	-	(Line 5 - line 2) x 1/(1 - tax rate). The tax rate of 38.389% provided in KCP&L's Response to Data Request MGE-1.

Line	Description	General Use and Other Use	General Use and Space Heat - One Meter	General Use and Space Heat - 2 Meters	Time of Day	Total	
	(a)	(b)	(c)	(d)	(e)	(f)	
8	**Required Winter Revenue Shifts to Equalize Rates of Return**						
9	Net Operating Income	15,549,980	2,546,023	678,611	3,743	18,778,357	Lines 9-11: KCP&L's Responses to Data Request MGE-1.
10	Rate Base	300,520,736	87,139,641	29,715,905	100,128	417,476,411	
11	Rate of Return	5.174%	2.922%	2.284%	3.739%	4.498%	
12	Net Operating Income at Equalized Rate of Return	16,322,944	4,733,036	1,614,035	5,439	22,675,454	Line 4, column b x line 10 for each class.
13	Rate of Return	5.432%	5.432%	5.432%	5.432%	5.432%	Line 12/line 10.
14	Required Revenue Shift	1,254,588	3,549,712	1,518,275	2,752	6,325,326	(Line 12 - line 9) x 1/(1 - tax rate).
15	**Winter Energy Revenue per kWh**[1]						
16	Current	0.0823	0.0655	0.0637			
17	After Required Revenue Shift	0.0834	0.0757	0.0770			

[1] Test year winter kWh by schedule and rate block were provided in KCP&L's Response to Data Request MGE-4. Current winter energy charge revenue used in line 16 is calculated based on these kWhs and current rates in Schedule FJC-1. Line 17 is calculated based on these kWhs, current winter energy charge revenue, and the revenue shift in line 14.

Kansas City Power & Light Company
Case No. ER-2012-0174
Current Residential Rates: Ameren Missouri and The Empire District Electric Company

Line	Description	Ameren Missouri (7/31/2011) Residential Service	Ameren Missouri (7/31/2011) Optional Time of Day Rate	The Empire District Electric Company (6/15/11) General Use
	(a)	(b)	(c)	(g)
1	Rate Sheet	28	28	1
3	Service Charge	8.00	16.81	12.52
4	Energy Charge			
5	Summer			
6	All kWh	0.1059		0.1070
7	Peak - All kWh		0.1539	
8	Off-Peak - All kWh		0.0630	
9	Winter			
10	First 750 kWh	0.07530		
11	Over 750 kWh	0.05020		
12	First 600 kWh			0.1070
13	Over 600 kWh			0.0871

Source: Current rates from Electronic Filing Information System, Missouri Public Service Commission.

Kansas City Power & Light Company
Case No. ER-2012-0174

Electric Versus Natural Gas Space Heating Prices

Maximum Electric Price (Cents/kWh) Required for Customer Savings With Electric Space Heating Compared to Natural Gas Heating Service From Missouri Gas Energy

Line		Natural Gas		
		Low-Efficiency	Mid-Efficiency	High-Efficiency
		(a)	(b)	(c)
1		80%	90%	95%
2	Electricity			
3	Electric Furnace	1.72	1.52	1.44
4	Electric Heat Pump[1]			
5	HSPF < 8.5	3.61	3.21	3.04
6	HSPF > 8.5	3.93	3.49	3.01

Current Winter Energy Charges (Cents/kWh)

		General Use	General Use and Space Heat - One Meter	General Use and Space Heat - 2 Meters
		(a)	(b)	(c)
8	First 600 kWh	9.91		9.91
9	Next 400 kWh	5.95		5.95
10	Over 1000 kWh	4.97		4.97
11	First 1000 kWh		7.38	
12	Over 1000 kWh		4.87	
13	Separate Meter - All kWh			4.75

[1] Heating Season Performance Factors ("HSPF") and resulting efficiencies are for Kansas City in EIA's Heating Fuel Comparison Calculator.

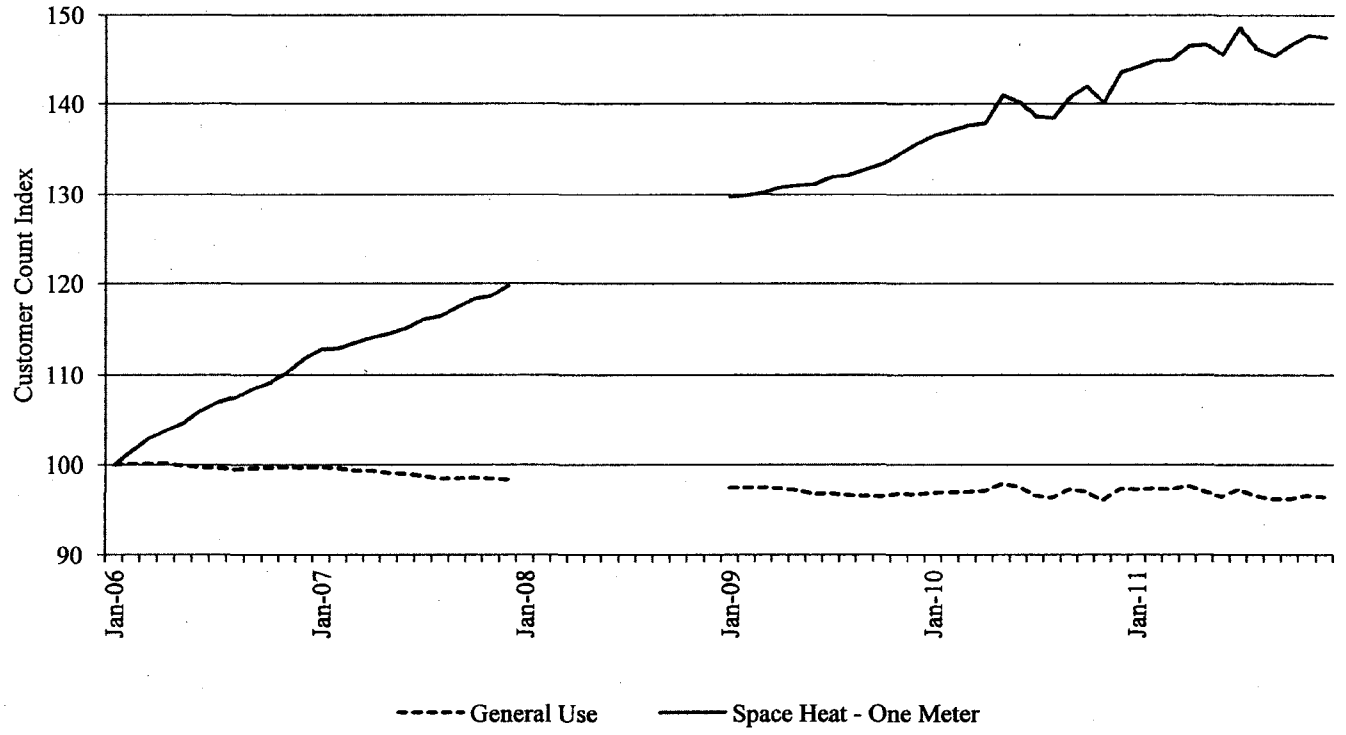
Kansas City Power & Light Company
Case No. ER-2012-0174
KCP&L Average Annual Number of Residential Customers

Average Number Based on Monthly Actual Customer Counts[1]

Line	Description	2006	2007	2009	2010	2011
	(a)	(b)	(c)	(d)	(e)	(f)
1	**Number of Customers**					
2	General Use	195,101	193,377	189,577	189,619	189,333
3	Space Heat - One Meter	28,684	31,322	35,695	37,724	39,547
4	Space Heat - 2 Meters	10,702	10,598	10,588	10,685	10,774
5	Time of Day	46	47	43	42	41
7	**Change in Number of Customers From Prior Period**					
8	General Use		(1,724)	(3,800)	42	(286)
9	Space Heat - One Meter		2,638	4,373	2,029	1,823
10	Space Heat - 2 Meters		(104)	(10)	97	89
11	Time of Day		1	(4)	(1)	(1)

[1] Customer counts by month provided in KCP&L's Response to MGE Data Request MGE-5. Data for 2008 were not provided.

Kansas City Power & Light Company
Case No. ER-2012-0174
Residential General Use and Space Heat - One Meter Monthly Customer Count Indexes
(January 2006 Customers = 100)



Source: KCP&L's Response to MGE Data Request MGE-5. Data for 2008 were not provided.

Kansas City Power & Light Company
Case No. ER-2012-0174
KCP&L Average Annual Number of Residential Customers

Average Annual Number From KCP&L Rate Case Applications[2]

Line	Description	2005 Test Year (9/30/2006)	2006 Test Year (9/30/2007)	2007 Test Year (9/30/2009)	2009 Test Year (12/31/2010)	Test Year Ending 9/30/2011
	(a)	(b)	(c)	(d)	(e)	(f)
1	**Number of Customers**					
2	General Use	199,240	196,858	192,737	189,938	188,355
3	Space Heat - One Meter	24,918	28,044	31,219	35,764	38,938
4	Space Heat - 2 Meters	10,998	10,836	10,563	10,608	10,712
5	Time of Day	50	47	46	43	41
7	**Change in Number of Customers From Prior Period**					
8	General Use		(2,382)	(4,121)	(2,799)	(1,583)
9	Space Heat - One Meter		3,126	3,175	4,545	3,174
10	Space Heat - 2 Meters		(162)	(273)	45	104
11	Time of Day		(3)	(1)	(3)	(2)

[2] KCP&L Application, Case Nos. ER-2006-0314, ER-2007-0291, ER-2009-0089, ER-2010-0355, and ER-2012-0174. The date in parentheses is the date through which known and measurable changes are reflected in the test year customer counts as shown in the Application.

Kansas City Power & Light Company
Case No. ER-2012-0174
Residential Winter Rates of Return With Illustrative 10 Percent Across-the-Board Revenue Increase

Line	Description	General Use and Other Use	General Use and Space Heat - One Meter	Rate of Return Difference	Sources/Explanation:
	(a)	(b)	(c)	(d)	(e)
1	Current Revenue	103,565,939	25,810,578		Calculated from KCP&L's Response to Data Request MGE-4.
2	Current Net Operating Income	15,549,980	2,546,023		Schedule FJC-3, line 9.
3	Rate Base	300,520,736	87,139,641		Schedule FJC-3, line 10.
4	Current Rate of Return	5.174%	2.922%	-2.253%	Columns a and b: Line 2/line 3. Column d: Column c - column b.
5	Increased Revenue	10,356,594	2,581,058		Line 1 x 1.10.
6	Net Operating Income with Increase	21,930,781	4,136,239		Line 2 + line 5 x (1- tax rate), where the tax rate is 38.389%.
7	Rate of Return With Revenue Increase	7.298%	4.747%	-2.551%	Columns a and b: Line 6/line 3. Column d: Column c - column b.

Line	Description	General Use and Other Use	General Use and Space Heat - 2 Meters	Rate of Return Difference	Sources/Explanation:
	(a)	(b)	(c)	(d)	(e)
8	Current Revenue	103,565,939	8,244,139		Calculated from KCP&L's Response to Data Request MGE-4.
9	Current Net Operating Income	15,549,980	678,611		Schedule FJC-3, line 9.
10	Rate Base	300,520,736	29,715,905		Schedule FJC-3, line 10.
11	Current Rate of Return	5.174%	2.284%	-2.891%	Columns a and b: Line 9/line 10. Column d: Column c - column b.
12	Increased Revenue	10,356,594	824,414		Line 8 x 1.10.
13	Net Operating Income with Increase	21,930,781	1,186,541		Line 9 + line 12 x (1- tax rate), where the tax rate is 38.389%.
14	Rate of Return With Revenue Increase	7.298%	3.993%	-3.305%	Columns a and b: Line 13/line 10. Column d: Column c - column b.

Kansas City Power & Light Company
Case No. ER-2012-0174
Recommended Residential Rates at Current Revenue

Line	Description	General Use	General Use and Space Heat - One Meter	General Use and Space Heat - 2 Meters	Time of Day	Other Use	All Classes	Source /Explanation
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	**Required Revenue Shift**							
2	Winter[1]	1,254,583	3,549,712	1,518,275	2,752	4	6,325,326	Schedule FJC-3, line 14.
3	Summer						(6,325,326)	Schedule FJC-3, line 7, column c.
4	**kWh**							
5	Winter	1,088,206,115	347,810,042	114,311,169	358,781	2,839	1,550,688,946	Lines 5-6: KCP&L's Response to Data Request MGE-4.
6	Summer	816,830,573	175,039,863	40,700,731	268,496	19,883	1,032,859,546	
7	Total	1,905,036,687	522,849,904	155,011,900	627,278	22,722	2,583,548,492	Line 5 + line 6.
8	**Revenue Shift/kWh**							
9	Winter	0.0012	0.0102	0.0133	0.0077	0.0016		Line 2/line 5.
10	**Recommended Rates at Current Revenue After Revenue Shift**							
11	Service Charge	9.00	9.00	11.05	14.04	9.00		Schedule FJC-1, line 3.
12	**Winter Energy Charges**							
	All kWh				0.07731	0.11285		Line 9 + Schedule FJC-1, line 16.
13	**Eliminate Space Heat**[2]							
14	First 1000 kWh	0.08732		Rates on lines				Lines 14-15: General Use and Space Heat
15	Over 1000 kWh	0.06222		17-22 apply				Heat (columns b and c) consolidated, based on Schedule FJC-1 current rates incorporating line 9.
16	**Retain Space Heat**							
17	First 600 kWh	0.10029		0.10029				Lines 17-22: Schedule FJC-1 current rates +
18	Next 400 kWh	0.06060		0.06060				line 9, with adjustment to Space Heat - 2 Meters
19	Over 1000 kWh	0.05083		0.05083				to maintain same blocked rates as General Use.
20	First 1000 kWh		0.08403					
21	Over 1000 kWh		0.05893					
22	Separate Meter - All kWh			0.06910				
23	**Summer Energy Charge Change**						(0.00612)	Apply to all Schedule FJC-1 summer energy charges.

[1] The General Use and Other Use revenue shift is split between the General Use and Other Use schedules based on relative winter energy charge revenue at current rates.

[2] Rates shown on lines 17-22 apply for General Use and Space Heat - 2 Meters because billing determinants to include Space Heat - 2 Meters in the consolidated General Use schedule were not provided in KCP&L's in Response to Data Request MGE-2-1.

Kansas City Power & Light Company
Case No. ER-2012-0174
Energy Charge Changes With Assumed Base Revenue Change

Line	Description	Winter	Summer	Annual	Sources/Explanation
	(a)	(b)	(c)	(d)	(e)
1	**Equalized Seasonal Return at Current Revenue**				
2	Required Net Operating Income	22,675,454	19,652,880	42,328,334	Schedule FJC-3, line 5.
3	Rate Base	417,476,411	361,827,988	779,304,399	Schedule FJC-3, line 3.
4	Current Rate of Return	5.432%	5.432%	5.432%	Line 2/line 3.
5	**Assumed Base Revenue Change**			13,011,164	Assumed base revenue change, or about one-third of request.
6	Resulting Net Operating Income			50,344,642	Line 1 + line 4 x (1 - tax rate), where the tax rate is 38.389%.
7	Resulting Rate of Return			6.460%	Line 6/line 2.
8	Revenue Change to Maintain Equalized Seasonal Returns	6,970,132	6,041,033		(Line 7, column d x line 3 - line 2) x 1/(1 - tax rate).
9	Resulting Rate of Return	6.460%	6.460%		(Line 8 x (1 - tax rate) + line 1)/line 3.
10	Service Charge Revenue Change	902,338	396,328		Assumed 5% increase in all service charges.
11	Required Energy Charge Revenue Change	6,067,793	5,644,705		Line 8 - line 10.
12	Energy Charge Change	0.00391	0.00547		Column b: Line 12, column b/Schedule FJC-8, line 5, column g. Column c: Line 12, column c/Schedule FJC-8, line 6, column g.