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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2012-0174

SURREBUTTAL TESTIMONY

OF

F. JAY CUMMINGS

ON BEHALF OF

MISSOURI GAS ENERGY

October 8, 2012

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Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is F. Jay Cummings.

Q. ARE YOU THE SAME F. JAY CUMMINGS WHO FILED DIRECT TESTIMONY IN THE PROCEEDING ON AUGUST 16, 2012 AND REBUTTAL TESTIMONY ON SEPTEMBER 5, 2012?

A. Yes.

1. TESTIMONY PURPOSE

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I address the parties' rebuttal testimony, filed on September 5, 2012, related to the issues I discussed in my direct and rebuttal testimony. The analysis and recommendations made in my direct testimony and further supported in my rebuttal testimony pertain to: (1) the need for cost-based, revenue-neutral Residential current rate adjustments; (2) the elimination of specially-priced Residential General Use and Space Heat ("Space Heat") schedules; and, (3)

recommendations for the design of energy charges for Residential services should my recommendations be adopted.[1]

Q. WHICH PARTIES ADDRESS THESE RESIDENTIAL RATE ISSUES IN THEIR REBUTTAL TESTIMONY?

A. Tim M. Rush on behalf of Kansas City Power & Light Company ("KCP&L") and Michael S. Scheperle on behalf of the Missouri Public Service Commission Staff ("Staff") address these issues in rebuttal testimony. I address the Staff and KCP&L rebuttal testimony in the remainder of this testimony.

2. KCP&L REBUTTAL TESTIMONY

2.1 RATE DESIGN RECOMMENDATIONS

Q. DO YOU AGREE WITH KCP&L WITNESS RUSH'S INTRODUCTORY EXPLANATION OF YOUR RECOMMENDATIONS REGARDING RESIDENTIAL SPACE HEAT SERVICES?

A. No. I disagree with several statements made in his introductory explanation. First, his argument that I recommend an adjustment solely to equalize the seasonal rates of return is incorrect.[2] In fact, based on KCP&L's own class cost of service

[1] My primary recommendation eliminates Residential Space Heat services in this case. My alternative recommendation would schedule these services for elimination in a subsequent rate case by freezing their availability and adding tariff language to simplify their future elimination. Direct Testimony of F. Jay Cummings (hereafter, "Cummings Direct"), Case No. ER-2012-0174, page 19, line 1 - page 22, line 21.

[2] Rebuttal Testimony of Tim M. Rush (hereafter, "Rush Rebuttal"), Case No. ER-2012-0174, page 6, lines 2-3.

("CCOS") study, my recommended revenue-neutral shift would also equalize the rates of return among the various Residential schedules in the winter to remove current inequities in the collection of winter revenue from customers served on various schedules.

Q. WHY IS YOUR RECOMMENDED CURRENT WINTER REVENUE ADJUSTMENT IMPORTANT?

A. This adjustment, which KCP&L witness Rush does not mention, corrects the continuing problem that Residential General Use customers pay not only the cost to serve them but also a portion of the cost to serve Space Heat customers who receive special rates in the winter.

Q. DO YOU HAVE OTHER DISAGREEMENTS WITH KCP&L WITNESS RUSH'S INTRODUCTORY EXPLANATION OF YOUR RECOMMENDATIONS?

A. Yes. KCP&L witness Rush incorrectly indicates that I propose "a series of scenarios to revise the Residential rate blocking."[3] Rather, than being a "series of scenarios," my recommended rates were developed using KCP&L's current rate structures. If my recommendation to eliminate Space Heat services is approved, I recommend the current Space Heat winter rate blocks and rate block differentials be used to design rates for the consolidated General Use schedule.[4] If my

[3] *Id.*, page 6, lines 5-6.

[4] Cummings Direct, page 23, lines 9-11.

alternative recommendation to freeze the availability of specially-priced Space Heat services is approved, I recommend that the current winter rate blocks and rate block differences in the General Use and Space Heat schedules be used to design rates for those schedules.[5]

In both instances, this recommended rate design is used both for the collection of revenue resulting from my recommended revenue shift at current revenue and the collection of revenue resulting from the approved revenue increase.[6] In addition, my recommendation retains the current summer rate structure in designing rates.[7]

Q. WHAT OTHER RESPONSES DO YOU HAVE TO KCP&L WITNESS RUSH'S INTRODUCTORY EXPLANATION OF YOUR RECOMMENDATIONS?

A. KCP&L witness Rush states that I provide no study that "would justify the proposed changes in rate design."[8] No study is needed because, as I explain above, my recommendations retain the current rate designs. As explained in my direct testimony, KCP&L proposes to change the current Residential rate designs by increasing the rate block differentials and relative winter price differences

[5] *Id.*, page 24, lines 7-10.

[6] *Id.*, page 26, lines 6-20 and Schedules FJC-8 and FJC-9.

[7] *Id.*, page 24, lines 14-18.

[8] Rush Rebuttal, page 6, lines 10-11.

between Residential General Use and Space Heat services without any study to support KCP&L's proposed rate design change.[9]

Finally, KCP&L witness Rush alleges that "MGE made modifications to the Company billings determinates [sic] to formulate their proposal."[10] This statement is incorrect. The rates shown in Schedule FJC-8 and Schedule FJC-9 included with my direct testimony are based on KCP&L's billing determinants provided in KCP&L's Response to Data Request MGE-4.[11]

I address further observations on KCP&L witness Rush's testimony pertaining to my recommendations in the remainder of this section of my testimony.

Q. DO YOU AGREE WITH KCP&L WITNESS RUSH'S CHARACTERIZATION OF KCP&L WITNESS NORMAND'S CCOS STUDY RESULTS AND YOUR USE OF THIS STUDY?

A. No. Although KCP&L witness Rush's explanation of KCP&L witness Normand's CCOS study results is accurate, it is incomplete. While he mentions that the CCOS study provides cost of service and rate of return information by class and

[9] Cummings Direct, page 8, line 3 - page 9, line 8.

[10] Rush Rebuttal, page 6, lines 11-12.

[11] Residential revenue calculated using these billing determinants and the rates shown in Schedule FJC-8 matches the Residential revenue shown in KCP&L's Response to Data Request MGE-4, after excluding $15,720 in revenue adjustments and manual bills. These revenue adjustments and manual bills are excluded because the associated kWhs cannot be assigned seasonally by rate block. The revenue calculations are shown in my direct testimony work papers that have been provided. The difference between the calculated Residential revenue based on the Schedule FJC-8 rates using KCP&L's billing determinants and the revenue shown in the KCP&L Application, Appendix 2 is only 0.0089 percent.

season, he does not mention that the CCOS provides this same information by rate schedule at current rates, as summarized on Table 3 in KCP&L witness Normand's direct testimony.[12] In my direct testimony, I explain that these CCOS results, as well as similar results in KCP&L's last rate case, show that - due to the special prices for these services - Residential Space Heat customers are and have been paying less than their fair share of the cost to serve them in the winter relative to General Use customers, and KCP&L's rate design recommendation in this case only exacerbates this situation.[13]

KCP&L witness Rush indicates that I address this inequity because of my "position that all rates should be the same."[14] He appears to suggest that my recommendation to eliminate Space Heat service, i.e., "all rates should be the same," drives my recommendation that deals with the inequity. This characterization of my analyses is incorrect.

[12] Rush Rebuttal, page 6, lines 16-21 and Direct Testimony of Paul M. Normand, Case No. ER-2012-0174, Table 3, page 23.

[13] Cummings Direct, page 10, line 9 - page 12, line 12 and page 17, line 16 - page 18, line 2.

[14] Rush Rebuttal, page 6, lines 22-23. Mr. Rush indicates that "all rates should be the same" means "a customer who has a gas furnace home should pay the same for electricity as a home with an electric heat pump" (Rush Rebuttal, page 6, line 23 - page 7, line 1). KCP&L witness Rush's statement does not address or answer the point of my direct testimony discussion of the fairness consideration resulting from two residential customers today, one who uses electric space heat and one who does not, paying different prices for lighting their homes, operating their refrigerators and televisions, and using other electric appliances (Cummings Direct, page 16, lines 1-8).

KCP&L witness Rush also contends that my recommendation does not take into account the differing load characteristics of an electric heat home compared to a home heated with natural gas (Rush Rebuttal, page 7, lines 1-3). Differing load characteristics for Space Heat customers and General Use customers who presumably do not have electric space heat equipment should be captured in the KCP&L cost of service study through the allocation factors applied to the various cost of service components for the different customer classes. These cost of service results are used to develop my recommended current revenue shift within the Residential class rate schedules. In other words, my recommendations, based on the KCP&L cost of service study, should reflect the cost consequences of the differing load characteristics to which KCP&L witness Rush refers.

Q. WHY IS KCP&L WITNESS RUSH'S CHARACTERIZATION OF YOUR ANALYSES INCORRECT?

A. I do not begin with a presumption that "all rates should be the same." Rather, I first correct the inequity within the Residential class through a revenue-neutral shift in current Residential revenue seasonally and among Residential rate schedules in the winter based on the KCP&L CCOS study.[15] This revenue shift results in energy charge adjustments to current Residential summer and winter rates on all rate schedules.[16] After making these adjustments, I assess other ratemaking and policy considerations, discussed in my previous testimony, that lead to my primary recommendation to eliminate special prices for Residential Space Heat services and my alternative recommendation to freeze the availability of these specially-priced services.[17] The end result of my analyses, not the starting point, is that current Residential General Use customers and Space Heat customers would pay the same rates if Space Heat services are eliminated in this case.

[15] Cummings Direct, Section 4.1 and Schedule FJC-3.

[16] *Id.*, page 23, line 3 - page 24, line 18 and Schedule FJC-8, lines 9 and 23.

[17] *Id.*, page 9, line 16 - page 16, line 17; page 19, line 3 - page 22, line 21; page 24, lines 7-12; and Schedule FJC-8.

Q. DO YOU AGREE WITH KCP&L WITNESS RUSH'S CONTENTION THAT YOUR RECOMMENDATION INCREASES ELECTRIC SPACE HEAT PRICES WITHOUT ANY COST JUSTIFICATION?[18]

A. No. There is cost justification for my recommendation that leads to higher rates for what are currently specially-priced services. As explained above and in more detail in my direct testimony, I recommend that: (1) the KCP&L cost of service results be used to adjust Residential Space Heat winter current rates to reflect the cost to serve this class of customers; and, (2) the approved revenue increase assigned to the Residential class be applied to the Residential rate schedules in such a way as to maintain their relationship to cost.[19]

2.2 RESIDENTIAL RATES OF OTHER ELECTRIC UTILITIES

Q. DO YOU HAVE ANY COMMENTS REGARDING KCP&L WITNESS RUSH'S OBSERVATION THAT RESIDENTIAL SPACE HEAT RATES ARE COMMON?

A. Yes. KCP&L witness Rush lists four utilities in Kansas, Iowa, Nebraska, and Oklahoma that have such rates.[20] He does not mention that a number of electric utilities nationally have discontinued or closed the availability of such rates, including utilities in Arkansas, California, Connecticut, Massachusetts, Nebraska,

[18] Rush Rebuttal, page 7, lines 11-12.

[19] Cummings Direct, especially page 17, line 5 - page 18, line 14; page 23, line 3 - page 24, line 18; page 26, line 3 - page 27, line 3; and Schedules FJC-3, FJC-8, and FJC-9.

[20] Rush Rebuttal, page 7, line 22 - page 8, line 1.

New Jersey, North Carolina, Ohio, Pennsylvania, and Wisconsin.[21] KCP&L witness Rush also does not mention the other two Missouri investor-owned electric utilities, neither of which has a separate, specially-priced Residential space heat service.

KCP&L witness Rush further indicates that other utilities do not have electric heating rates, but "their rate design supports electric heating or other winter season usage."[22] In fact, KCP&L's current Residential General Use rate and my recommended Residential rates with their declining winter block rate structures provide this support.

Furthermore, both Ameren Missouri ("Ameren") and The Empire District Electric Company ("Empire District") have Residential declining block winter rate structures that are less pronounced than the current KCP&L General Use winter rate. In other words, the winter price break for consuming more electricity for Ameren and Empire District Residential customers, including customers with electric space heat, is smaller than it currently is for KCP&L's General Use customers. Thus, the current KCP&L Residential General Use rate structure should more effectively encourage winter usage than the Residential rate

[21] Southwestern Electric Power Company, Sacramento Municipal Utility District, Connecticut Light and Power Company Nantucket Electric Company, Lincoln Electric System, Dominion North Carolina Power, Cleveland Electric Illuminating Company, Ohio Edison Company, Toledo Edison Company, PECO Energy Company (as of January 1, 2013), Public Service Electric and Gas Company, Toledo Edison Company, and Wisconsin Public Service Corporation.

[22] Rush Rebuttal, page 8, lines 1-3.

structures of these other Missouri electric utilities.[23] KCP&L's specially-priced Space Heat services are not needed for this purpose.

2.3 POLICY CONSIDERATIONS

Q. DO YOU HAVE ANY COMMENTS REGARDING KCP&L WITNESS RUSH'S DESCRIPTION OF THE U.S. DEPARTMENT OF ENERGY'S ("DOE'S") POLICY ON FULL FUEL CYCLE EFFICIENCY?[24]

A. KCP&L witness Rush's accurately excerpts DOE's policy statement, but his explanation of the policy statement is incomplete.[25] The statement explains that its "energy conservations standards should continue to be based, in large part, on the cost and savings that user's [sic] experience."[26] However, the policy statement does not dismiss full fuel cycle efficiency ("FFC") and environmental impacts as public policy considerations.[27] The policy statement clearly explains the importance of consumer and government decision-maker access to information on FFC and environmental impacts of energy alternatives and commits DOE to work with other federal agencies to make this information readily available.[28] This is

[23] Cummings Direct, page 13, line 14 - page 14, line 17.

[24] Rush Rebuttal, page 8, line 19 - page 10, line 5.

[25] The date of the Federal Register citation in *Id.*, page 9, footnote 1 should read August 18, 2011.

[26] 76 FR 51288 (August 18, 2011).

[27] 76 FR 51282 (August 18, 2011). KCP&L witness Rush acknowledges that the policy statement calls for FFC considerations in "national impact analyses and environmental assessments" (Rush Rebuttal, page 8, line 20), but he does not address their policy importance in evaluating discounted Residential Space Heat services.

[28] 76 FR 51285, 51287 - 89 (August 18, 2011).

precisely my point in raising FFC and environmental issues in my direct testimony. These policy issues should be among the considerations in assessing the reasonableness of promoting Residential Space Heat and the resulting increases in winter electricity usage through discounted rates.

In other words, DOE's conservation standards are intended to directly relate to customer cost differences from choosing alternative appliance efficiencies and energy sources. Customer costs are determined by the price that they pay for various energy sources. The prices customers pay for electricity compared to other energy sources do not include FFC and environmental effects, effects that result in societal costs for electricity that exceed the market cost, i.e., the price paid by end users. The fact that electricity prices are understated based on societal costs should not be ignored as a policy issue in considering alternative electric service availability and pricing. DOE recognizes this in pointing out the importance of information on these effects for government decision makers and consumers.

Also, in response to KCP&L witness Rush's discussion of DOE's policy statement and the statement's discussion of FFC and environmental impacts, Surrebuttal Schedule FJC-1, page 1 provides the detailed data underlying the FFC calculations that are included in my direct testimony.[29] The top panel on page 2 of the schedule incorporates FFC effects in Residential energy consumption data and

[29] Cummings Direct, page 20, line 15 - page 21, line 2 and footnote 13.

shows that about half of the total Residential energy consumption from all sources consists of electricity losses, i.e., BTUs lost in the FFC from extraction to delivery. The bottom panel on page 2 of the schedule provides quantification of greenhouse gas emissions associated with alternative energy sources, data that relates to environmental impacts referenced in my direct testimony.[30]

Q. DO YOU CONSIDER DOE'S CONSERVATION STANDARDS IN YOUR DIRECT TESTIMONY?

A. Yes. DOE's conservation standards (that do not include FFC and environmental impacts) are reflected in my calculations demonstrating that KCP&L electricity prices, including its Space Heat prices, are too high to produce customer savings from the use of electric heating equipment compared to natural gas furnaces.[31] KCP&L witness Rush did not dispute these results in his rebuttal testimony.

Q. DO YOU AGREE WITH KCP&L WITNESS RUSH'S CLAIM THAT YOU STATE THAT "ELECTRIC HEATING IS INCONSISTENT WITH PUBLIC POLICY"[32]?

A. No, I did not make this statement. I never questioned whether electricity should or should not be used for space heating purposes. Rather, as explained in detail in my direct testimony, ratemaking and policy considerations support my

[30] See, for example, *Id.*, page 19, line 20 - page 20, line 2.

[31] *Id.*, page 14, line 19 - page 15, line 9 and Schedule FJC-5.

[32] Rush Rebuttal, page 10, line 20.

recommendation to eliminate the specially-priced, non-cost-based Space Heat schedules. My testimony and recommendations do not preclude customers from choosing electricity for space heating. If my primary recommendation is adopted, Residential customers choosing electric space heat equipment would be served under the General Use schedule. With either my primary or alternative recommendation, the current underpricing of Space Heat services in the winter is corrected.

2.4 RECENT KCP&L KANSAS RATE CASE

Q. DO YOU HAVE ANY OBSERVATIONS REGARDING KCP&L WITNESS RUSH'S COMMENTS ON YOUR DIRECT TESTIMONY CONCERNING THE RECENT KCP&L RATE CASE IN KANSAS?[33]

A. Yes. KCP&L witness Rush attempts to distance himself from his own recommendation in the Kansas case by indicating that I do "not properly establish the context of the case."[34] He points out that "[m]ultiple parties took the extreme position of eliminating rates" in Kansas and that Residential Space Heat rates in Kansas had some deficiencies that do not exist in Missouri.[35] He does not explain what these alleged deficiencies were. The fact that only one party provides a recommendation to eliminate Residential Space Heat services in this case while

[33] *Id.*, page 10, lines 10-19.

[34] *Id.*, page 10, lines 12-13.

[35] *Id.*, page 10, lines 13-14 and lines 17-19.

many did in Kansas does not provide a basis for rejecting the analyses and recommendations of that party.[36] It simply may explain why KCP&L witness Rush chose to address the problem in Kansas, but not in Missouri.

KCP&L witness Rush ignores the fact the KCP&L cost of service results in this case, as in the recent Kansas case and in KCP&L's last Missouri rate case, demonstrate the need to significantly reduce the differential between General Use and Space Heat rates.[37] Furthermore, KCP&L witness Rush does not explain whether he believes that there are context differences between the two cases regarding the other ratemaking and policy considerations that I provided in my direct testimony which support the elimination of Residential Space Heat in this case.

[36] KCP&L witness Rush provides similar, extraneous arguments elsewhere in his rebuttal in noting that no builders, developers, or HVAC dealers had intervened in this case, and there is not public outcry to eliminate rates in this case. Rush Rebuttal, page 7, lines 15-18. The proper question is "are specially-priced Space Heat services appropriate?"

[37] KCP&L witness Normand explains that the approach used in the KCP&L CCOS in this case is the same as in the recent Kansas case and that the Kansas Corporation Commission endorsed the approach and explained that "It allows for a detailed examination of seasonal costs and corresponding seasonal rate allocations." Rebuttal Testimony of Paul M. Normand, Case No. ER-2012-0174, page 11, lines 5-18. KCP&L witness Rush supports KCP&L witness Normand's method in this case, indicating that KCP&L used the method in its last case and "proposed the method in conjunction with the Commission's direction to address seasonal cost of service" (Rush Rebuttal, page 4, lines 20-22).

2.5 RATE DESIGN CONSIDERATIONS

Q. DO YOU HAVE OBSERVATIONS CONCERNING KCP&L WITNESS RUSH'S EXPLANATION OF CONSIDERATIONS HE SUGGESTS FOR ASSESSING RATE DESIGN PROPOSALS?[38]

A. Yes. KCP&L witness Rush mentions five considerations. It appears to me that even utilizing his considerations will lead the Commission back to my recommendation.

Q. PLEASE DESCRIBE THE FIRST THREE CONSIDERATIONS IN RELATION TO YOUR RECOMMENDATIONS.

A. One consideration, "Implement Cost-Based Rates," is satisfied by my recommended revenue-neutral adjustment to current Residential rates to equalize the seasonal rates of return and the winter rates of return on the various Residential schedules based on the KCP&L cost of service.

KCP&L witness Rush explains that a second consideration, labeled "Simplify the Rate Structure," requires that "The Company should seek to combine or reduce rates where possible."[39] My primary recommendation satisfies this consideration by reducing the number of available rates.

[38] Rush Rebuttal, page 11, line 1 - page 12, line 14.

[39] *Id.*, page 12, lines 11-12.

A third consideration, "Consider Technology Issues," requires that the Company must be able to measure usage and produce bills under the new rates.[40] My recommendations that are based on KCP&L's current rate structure satisfy this consideration.

Q. WHAT IS KCP&L WITNESS RUSH'S FOURTH CONSIDERATION?

A. A fourth consideration is labeled "Provide Revenue Stability and Risk Mitigation." In assessing this issue, KCP&L witness Rush contends that, if specially-priced Space Heat services are eliminated, "the Company would lose a considerable amount of sales which would ultimately harm all customers."[41]

Q. DO YOU AGREE WITH KCP&L WITNESS RUSH'S CONTENTION AS TO THE IMPACT OF YOUR RECOMMENDATION?

A. No. KCP&L witness Rush does not provide any quantification or analyses to support his contention nor does he explain what he means by "harm." Perhaps he believes that as a result of a loss of "a considerable amount of sales," the Company will experience a sizable revenue loss that would cause it to file another rate case with resulting in higher rates.[42] However, the expected loss of "a considerable

[40] *Id.*, page 12, lines 13-14.

[41] *Id.*, page 11, lines 12-13.

[42] While his rebuttal testimony pertains to general service space heating, Donald E. Johnstone on behalf of Midwest Energy Users' Association also claims that this result would occur, although he provides no quantification or analyses to support his claim. Rebuttal Testimony of Donald A. Johnstone, Case No. ER-2012-0174, page 4, lines 5-8.

amount of sales" and resulting sizable revenue loss due to my recommendations is not supportable.

Q. PLEASE EXPLAIN.

A. The possibility of such a revenue loss is assessed by considering the Residential price elasticity of demand for electricity. The price elasticity of demand for a product or service is defined as:

$$\frac{\text{Percentage change in quantity}}{\text{Percentage change in price}}$$

An inelastic demand has an elasticity of less than one. With an inelastic demand, an increase in price results in increased revenue to the seller because the revenue loss due to the reduction in quantity consumed is more than offset by the additional revenue at the higher price on the remaining quantity consumed.[43] This is the case with the demand for electricity. Various studies have demonstrated that the Residential price elasticity of demand is very inelastic.[44]

[43] Algebraically, this result is explained as follows, where e is the price elasticity, P is price, Q is quantity consumed, Δ represents the change in a variable, and R is revenue. With an inelastic demand, $e = (\Delta Q/Q)/(\Delta P/P) < 1$, or $P(\Delta Q) < Q(\Delta P)$. Revenue is $R = P \times Q$, and the change in revenue is $\Delta R = P(\Delta Q) + Q(\Delta P)$. The revenue change is positive with a price increase because the second term (which is positive) is greater than the first term (which is negative) with an inelastic demand, i.e., $e < 1$.

[44] See, for example, Mark A. Bernstein and James Griffin, Regional Differences in the Price-Elasticity of Demand for Energy, RAND Infrastructure, Safety, and Environment, Technical Report, 2005 (available at http://www.rand.org/pubs/technical_reports/TR292.html, accessed on September 5, 2005) and U.S. Energy Administration ("EIA"), "Price Responsiveness in the AEO2003 NEMS Residential and Commercial Building Sector Model" (available at http://www.eia.gov/oiaf/analysispaper/elasticity/index, accessed on September 5, 2012). The Rand Report provides Residential electricity price elasticity estimates of -0.24 in the short-run and -0.32 in the long-run at the national level and -0.16 in the short-run and -0.24 in the long-run for the West North Central region that includes Missouri (pages 24 and 76). The EIA study provides Residential electricity price elasticity estimates of ranging from -0.29 to -0.34 in the short-run and -0.49 in the long-run.

The winter revenue-enhancing effect of my recommendations is illustrated by a calculation that includes the responsiveness of an average winter use Space Heat - One Meter customer to the recommended price change. Based on the range of Residential electricity price elasticities reported in the cited studies and the recommended higher winter energy prices, the average winter bill of this customer will increase from $8.30 to $11.62 in the short-run and from $5.37 to $10.21 in the long-run if Space Heat is eliminated.[45] While the average use customer reduces his/her usage, the revenue consequence due to the reduced usage is more than offset by the higher price on the remaining usage. In fact, KCP&L itself expects that it will achieve additional revenue in proposing to increase current Residential rates.[46]

Q. ISN'T IT POSSIBLE THAT SOME CURRENT SPACE HEAT CUSTOMERS MAY DISCONTINUE THEIR USE OF ELECTRIC SPACE HEAT EQUIPMENT CAUSING A FUTURE REVENUE LOSS?

A. Yes, this is a conceptual possibility. While some customers, facing higher Space Heat prices, may choose an alternative energy source when their electric space heat equipment wears out, this possibility should not be a significant factor for several reasons. First, to the extent this occurs, it would be realized only over a

[45] These calculations are based on the elimination of Space Heat services, average winter Space Heat - One Meter usage of 1035 kWh, current rates in Schedule FJC-1, recommended rates in Schedule FJC-8, and the range of elasticities reported in the cited studies. The corresponding bill increases with my alternative recommendation to freeze the availability of Space Heat services are from $6.82 to $8.97 in the short-run and from $4.75 to $8.15 in the long-run.

[46] KCP&L Application, Appendix 2 shows that KCP&L expects to increase Residential annual revenue by increasing the average Residential price from $0.10044 per kWh to $0.11555 per kWh.

long period of time. The life expectancy of electric heat pumps equipment is at least 15 years, and electric furnaces typically last longer.[47] Electric space heating has grown rapidly in the 2000s, suggesting that much of this electric equipment is relatively new and will not be replaced for some time.[48] Second, quantification of such an effect would be difficult, at best, and would be speculative. For example, such quantification would have to somehow take into account the incidence of premises currently equipped to use alternative energy sources for space heat; the cost to retrofit other premises and the likelihood that retrofits would occur; the future prices of both electricity and alternative energy sources; and the future prices and life spans of space heat equipment that use various energy sources.

Third, the long-run price elasticity estimates for Residential electricity reported in the cited studies suggest a small effect on usage due to price increases. It is not reasonable to invoke a highly speculative, long-term possibility that is likely to be small as a basis to ignore the fact that non-Space Heat customers are and have

[47] National Association of Home Builders/Bank of America Home Equity, "Study of Life Expectancy of Home Components," February 2007 and KCP&L's website heat pump questions and answers at http://www.kcplsave.com/residential/programs_and_services/heat_pumps/faqs.html#q15 (accessed on September 5, 2012).

[48] Between 2001 and 2009, the number of homes with space heating in the West North Central Census Division that includes Missouri grew by 0.7 million. In this period, the number of homes with electric space heating equipment grew by 1.0 million, while the number with natural gas equipment fell by 0.3 million. Between 2005 and 2009, the number of homes with space heat in the region grew by 0.2 million, while the number with electric space heat grew by 0.4 million. In 2009, Missouri had a disproportionate share of electric heated homes. Missouri had 28 percent of the region's total heated homes, but 44% of region's homes heated with electricity. Data are from U.S. Energy Information Administration, 2009 Residential Energy Consumption Survey, Table HC6.9; 2005 Residential Energy Consumption Survey, Table HC12.4; and 2001 Residential Energy Consumption Survey, Table HC3-10a, available on tabs at http://www.eia.gov/consumption/residential/data/ (accessed on September 5, 2012). The West North Central Census Division consists of Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

been inequitably paying a portion of the cost to serve Space Heat customers in the winter.

Q. WHAT IS KCP&L WITNESS RUSH'S FINAL RATE DESIGN ASSESSMENT CONSIDERATION?

A. In explaining the final consideration, labeled "Minimize Customer Dissatisfaction," in the context of my recommendations, KCP&L witness Rush lists two points. His first point, applicable to my alternative recommendation to freeze the availability of specially-priced Space Heat services, is that "the Company should allow some time period to elapse so that customers currently committed to that rate can still get the rate to justify their investment."[49] KCP&L witness Rush's second point listed in the "Minimize Customer Dissatisfaction" consideration is that if specially-priced Space Heat services are eliminated, "the rate impact of those customers should be considered."[50]

Q. DOES KCP&L WITNESS RUSH PROPOSE SPECIFIC TARIFF LANGUAGE TO ADDRESS SUCH CUSTOMER COMMITMENTS MENTIONED IN HIS FIRST POINT?

A. No. Absent specific tariff conditions, KCP&L would have an open-ended invitation to add new customers to a frozen rate if a customer simply indicated that he/she was "committed" to a using space heat equipment in a home the customer

[49] Rush Rebuttal, page 12, lines 3-6.

[50] Rush Rebuttal, page 12, lines 7-8. KCP&L witness Rush also mentions Space Heat increases on page 7, lines 5-8.

planned to build or remodel when that commitment may not exist or may not be realized until some point in the distant future. Freezing a rate is a first step towards its subsequent elimination when the number of customers on the rate has declined. If customers can simply choose the specially-priced Space Heat rate because of its lower price, the freeze would be ineffective.

Q. HAVE YOU CALCULATED THE SPACE HEATING BILL IMPACTS RESULTING FROM YOUR RECOMMENDATIONS IN RESPONSE TO KCP&L WITNESS RUSH'S SECOND POINT?

A. Yes. Surrebuttal Schedule FJC-2 provides the results of these calculations. The schedule shows the average winter and annual Space Heat and General Use customer bill if special prices for Space Heat services are eliminated and if the availability of specially-priced Space Heat services is frozen. Both of these alternatives reflect my recommended revenue shift to remove the current inequities within the Residential class in the collection of revenue seasonally and among the schedules in the winter.

Q. DO YOU HAVE ANY OBSERVATIONS ON THE SPACE HEAT BILL IMPACTS ASSOCIATED WITH YOUR RECOMMENDATIONS?

A. Yes, I have several observations. First, waiting to address the fact that Space Heat is underpriced until a subsequent rate case will simply lead to larger bill impacts in the future when this pricing problem is rectified.

Second, it is difficult to judge whether a particular impact is acceptable without a point of reference for comparison. However, it is possible that KCP&L's recent experience in Kansas may provide such a point of reference in this case. Surrebuttal Schedule FJC-2 includes the average use bill impacts resulting from the Kansas Corporation Commission's ("KCC's") Order in KCP&L's 2010 rate case.[51] Both the average winter and annual bill impacts in Kansas were substantially larger than those resulting from my recommendations in this case.

Third, while Space Heat customers will experience higher winter bills with my recommendation, their annual bill impacts are considerably smaller.[52]

Finally, there are many more General Use customers than Space Heat customers, and these General Use customers will have lower annual winter bills with my recommendations, especially if Space Heat services are eliminated.[53]

[51] Order: 1) Addressing Prudence; 2) Approving Application, in Part; & 3) Ruling on Pending Requests Docket No. 10-KCPE-415-RTS, November 22, 2010. The KCP&L-Kansas rates used in the calculations in Surrebuttal Schedule FJC-2 became effective on December 1, 2010. These rates increased slightly (from $0.00002 per kWh to $0.0004 per kWh) on February 1, 2012 as a result of the KCC's Order on rate case expenses in this docket.

[52] For an average use Residential Space Heat customer, the summer bill will fall by 5.2 percent with my cost-based adjustment to current rates (Schedule FJC-8) and by 0.3 percent with the assumed increase illustrated in Schedule FJC-9.

[53] KCP&L Application, Appendix 2 shows an average of 188,355 General Use customers and 49,650 Space Hear customers.

3. STAFF REBUTTAL TESTIMONY

Q. WHAT POSITION DID STAFF EXPRESS ON THESE ISSUES?

A. After listing the Residential Space Heat schedules, Staff states its position as follows:

> At this time, Staff does not support MGE's recommendation to eliminate the residential rate schedules mentioned above. Staff does not oppose all-electric rates but recommends that customers on such rate schedule(s) be moved toward KCPL's cost to serve them.[54]

Q. DO YOU AGREE WITH STAFF WITNESS SCHEPERLE'S POSITION?

A. No, I disagree with the position for several reasons. First, while Staff witness Scheperle recognizes that KCP&L's Residential Space Heat is underpriced, I explain in my rebuttal testimony that his recommendation does not go far enough in removing the inequities in collection of current Residential winter revenue from customers taking service on the various rate schedules.[55]

Second, Staff witness Scheperle provides no explanation for his position beyond that contained in the testimony referenced above. He provides no assessment of my explanation of the ratemaking and policy considerations that support my recommendation to eliminate Space Heat services.

[54] Rebuttal Testimony of Michael S. Scheperle, Case No. ER-2012-0174, page 6, lines 13-16.

[55] Rebuttal Testimony of F. Jay Cummings (hereafter, "Cummings Rebuttal"), Case No. ER-2012-0174, page 3, line 1 - page 4, line 8.

Third, Staff witness Scheperle does not express an opinion on my alternative recommendation to freeze Residential Space Heat services.[56]

4. CONCLUSIONS

Q. DO YOU HAVE CHANGES IN THE RECOMMENDATIONS THAT YOU MADE IN YOUR DIRECT TESTIMONY AS A RESULT OF THE PARTIES' REBUTTAL TESTIMONY PERTAINING TO RATE DESIGN?

A. No.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes.

[56] Cummings Direct, especially page 9, line 16 - page 16, line 17 and page 19, line 3 - page 22, line 21. Also, see Cummings Rebuttal in this case.

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 A General Rate Increase for Electric Service	))))	File No. ER-2012-0174

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 Surrebuttal 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 4th day of October, 2012.

Susan R Landis
Notary Public

My Commission Expires:

7/29/2015
(SEAL)

SUSAN R LANDIS
My Commission Expires
July 29, 2015

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

Energy Efficiency and Environmental Impacts

Energy Efficiency of Energy Delivered to the Home[1]

	Extraction	Processing	Transportation[2]	Conversion	Distribution	Cumulative Efficiency
Natural Gas	97.00%	96.90%	99.00%	-	98.80%	91.90%
Oil	96.30%	93.80%	98.80%	-	99.30%	88.60%
Propane	95.90%	95.30%	98.60%	--	99.20%	89.30%
Electricity:						
Coal-Based	98.00%	98.60%	99.00%	32.70%	93.80%	29.30%
Oil-Based	96.30%	93.80%	98.80%	31.70%	93.80%	26.50%
Natural Gas-Based	97.00%	96.90%	99.00%	42.10%	93.80%	36.70%
Nuclear-Based	99.00%	96.20%	99.90%	32.70%	93.80%	29.20%
Other[3]-Based	--	--	--	56.00%	93.80%	49.70%
Electricity Weighted Average[4]	-	-	-	35.80%	-	31.90%

Source: *Source Energy and Emission Factors for Building Energy Consumption,* Prepared by the Gas Technology Institute for the Codes & Standards Research Consortium, August 2009.

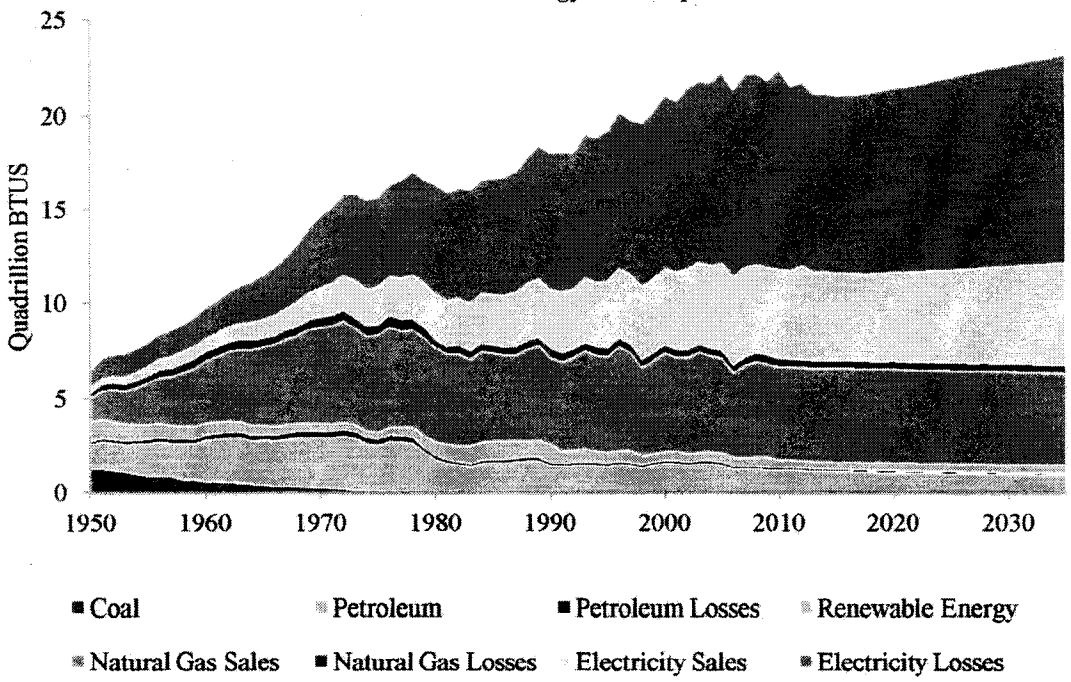
--" indicates not applicable or no efficiency loss.
[1] Efficiency of energy delivered to the home refers to the energy used or lost, from the point of extraction to the residence, not including the end-use device.
[2] Transportation of natural gas from processing plant to local distribution system; transportation of fossil fuel to electricity generating plants.
[3] Includes renewable energy
[4] Current national weighted average mix of all power generation sources.

Source for table: American Gas Association, "A Comparison of Energy Use, Operating Costs, and Carbon Dioxide Emissions of Home Appliances," October 20, 2009, pages 6.

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

Energy Efficiency and Environmental Impacts

Residential Energy Consumption



Full-Fuel-Cycle Carbon Dioxide Equivalent Emissions For New Homes[1]
(Metric Tons of CO_2e[2] per Average Household Energy Use)

Natural Gas	6.4
Electricity[3]	10.1
Oil	9.0
Propane	7.6

[1] Space heating, water heating, cooking, and clothes drying only
[2] Includes impact of unburned methane gas
[3] Based on actual generating mix in 2007

Source for figure: American Gas Association, "Squeezing Every BTU: Natural Gas Direct Used Opportunities and Challenges," January 2012, Figure 4, page 18. Source for table: American Gas Association, "A Comparison of Energy Use, Operating Costs, and Carbon Dioxide Emissions of Home Appliances," October 20, 2009, page 11.

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

Residential Average Bill Impacts:[1]
Comparison of KCP&L-Kansas To KCP&L-Missouri

Line	Description		General Use	Space Heat (Single Meter)
	(a)		(b)	(c)
1	Percentage Change Due to KCP&L-Kansas 2010 Rate Case			
2		Winter	-7.0%	28.2%
3		Annual	-0.7%	18.4%
4	Percentage Change Due to KCP&L-Missouri Recommended Current Rate Change with Revenue Shift[2]			
5	Eliminate Space Heat			
6		Winter	-5.9%	16.5%
7		Annual	-5.6%	6.1%
8	Freeze Space Heat			
9		Winter	1.1%	12.5%
10		Annual	-1.9%	4.0%

[1] Bill calculations based on average usage for each rate schedule in each season. These usage levels are calculated from Schedule PMN-3, pages 26 and 28, Docket No. 10-KCPE-415-RTS in Kansas, and from KCP&L's Response to Data Request MGE-4 in this case in Missouri. The annual bill consists of eight winter billing months and four summer billing months.

[2] The bill increases on lines 6-10 will be larger if the Commission approves a Residential base revenue increase in this case. For example, with the assumed revenue increase illustrated in Schedule FJC-9, the bill impacts would be as follows:

		General Use	Space Heat
Eliminate Space Heat			
	Winter	-1.6%	21.9%
	Annual	-1.0%	11.2%
Freeze Space Heat			
	Winter	5.4%	17.8%
	Annual	2.7%	9.1%