

Exhibit No.:  
Issues: Continued Funding of Income-  
Eligible Weatherization  
Witness: Sharlet E. Kroll  
Sponsoring Party: Missouri Department of Economic  
Development – Division of Energy  
Type of Exhibit: Direct Testimony  
Case Nos.: ER-2016-0285

**MISSOURI PUBLIC SERVICE COMMISSION**

**KANSAS CITY POWER & LIGHT COMPANY**

**CASE NO. ER-2016-0285**

**DIRECT TESTIMONY**

**OF**

**SHARLET E. KROLL**

**ON**

**BEHALF OF**

**MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT**

**DVISION OF ENERGY**

Jefferson City, Missouri

November 30, 2016

**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    )            Case No. ER-2016-0285

**AFFIDAVIT OF SHARLET E. KROLL**

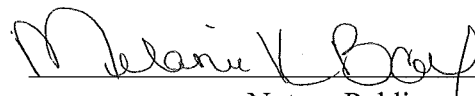
**STATE OF MISSOURI**                                        )  
  )  
**COUNTY OF COLE**                                        )            **ss**

Sharlet E. Kroll, of lawful age, being duly sworn on her oath, deposes and states:

1. My name is Sharlet E. Kroll. I work in the City of Jefferson, Missouri, and I am employed by the Missouri Department of Economic Development, Division of Energy as a Planner II.
2. Attached hereto and made a part hereof for all purposes is my Direct Testimony (Income-Eligible Weatherization) on behalf of the Missouri Department of Economic Development – Division of Energy.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge.

  
\_\_\_\_\_  
Sharlet E. Kroll

Subscribed and sworn to before me this 30<sup>th</sup> day of November, 2016.

  
\_\_\_\_\_  
Notary Public

My commission expires:

MELANIE K. BAX  
Notary Public - Notary Seal  
State of Missouri  
Commissioned for Osage County  
My Commission Expires: December 13, 2019  
Commission Number: 15638889

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1 **I. INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is Sharlet E. Kroll. My business address is 301 West High Street, Suite 720, PO  
4 Box 1766, Jefferson City, Missouri 65102.

5 **Q. By whom and in what capacity are you employed?**

6 A. I am employed by the Missouri Department of Economic Development (“DED”) –  
7 Division of Energy (“DE”) as a Planner II Energy Policy Analyst.

8 **Q. On whose behalf are you testifying?**

9 A. I am testifying on behalf of DE, an intervenor in these proceedings.

10 **Q. What are the responsibilities of the Division of Energy?**

11 A. DE is a division within DED which serves as Missouri’s state energy office. DE is  
12 responsible for the administration of federal programs and grants such as the federal Low  
13 Income Weatherization Assistance Program (“LIWAP”). DE is also responsible for  
14 administering the federal State Energy Program (“SEP”). The SEP, established by the  
15 United States Congress in 1978, is managed nationally by the United States Department  
16 of Energy (“USDOE”) and consists of several statewide energy efficiency programs  
17 funded by the USDOE. DE powers and duties are outlined in Section 640.150, RSMo.

18 **Q. Have you previously testified before any state regulatory commission?**

19 A. Yes. I have testified before the Missouri Public Service Commission (“MPSC” or  
20 “Commission”). Please see Schedule SEK-1.

21 **Q. Please describe your educational and professional background.**

22 A. I was awarded a dual Bachelor of Arts degree in Sociology and Political Science in 1993  
23 from the University of Missouri – Columbia (“UMC”). I have over 23 years of

1 experience in state government and began my career with the State of Missouri in the  
2 Department of Social Services (“DSS”), initially with the Division of Family Services  
3 (“DFS”) and later with the Division of Aging (“DA”) where I conducted hotline  
4 investigations, provided protective services, assessed medical and physical functionality  
5 for authorization of services for daily living activities, and made routine home visits to  
6 assess authorized Medicaid funded services. As part of my training with DA, I  
7 completed 26 hours of Investigative Technique and Report Writing offered by the  
8 University of Missouri Law Enforcement Training Institute and School of Law. During  
9 my service with DA, I was assigned to a pilot program co-delivered by DA, DFS, and the  
10 two area hospitals in Jefferson City, Missouri. As part of the pilot program, I worked as a  
11 liaison between DA and the hospitals arranging home services for qualifying at-risk  
12 individuals and was trained to receive and process Medicaid applications: Old Age  
13 Assistance and Permanently and Totally Disabled. In 2002 I accepted an internal  
14 promotion, and my area of expertise was the development and implementation of  
15 statewide public health programs – primarily public health emergency response and  
16 volunteerism. I spent nine of those 13 years developing and implementing public health  
17 emergency plans as the “State MRC/Volunteer Program” Coordinator. I completed all  
18 National Incident Management System curriculum required for public health. I  
19 participated in and evaluated several disaster preparedness exercises. The last two years  
20 of my career with DHSS were in the Office of Primary Care and Rural Health where I  
21 coordinated the statewide Oral Health Preventive Services Program, which works with  
22 schools and communities to address access to care barriers for low-income children. I  
23 joined the DED/DE team in 2015. My responsibilities include representing DE at

1 investor-owned utility (“IOU”) advisory group meetings, conducting DE’s internal  
2 budget tracking of energy efficiency (“EE”) measures in Missouri, evaluating and  
3 developing policy recommendations on the non-energy benefits and low-income issues  
4 related to initiatives under the Clean Power Plan, and work on a project to detail the EE  
5 case history of each utility. I completed Building Operator Certification (“BOC”). BOC  
6 is a national workforce training and credentialing program that offers job skills in EE  
7 building and operation maintenance practices. I have accompanied DE weatherization  
8 technical staff on monitoring visits to pre- and post-weatherized homes. I have a  
9 certificate of knowledge in Building Science Principles, which is a home performance  
10 course. I am currently enrolled in the Master of Public Affairs program at the Harry S  
11 Truman School of Public Affairs.

12 **Q. Please describe your work assisting Missouri utilities with energy efficiency**  
13 **initiatives.**

14 A. I serve as DE’s designated representative to all electric and natural gas IOU  
15 collaboratives,<sup>1</sup> including: Liberty Utilities EE Advisory Group, Missouri Gas Energy -  
16 Laclede Gas Company EE Collaborative, Ameren Missouri<sup>2</sup> Demand-Side Management  
17 Stakeholder Group (“DSMAG”), Ameren Missouri Natural Gas EE Advisory Group,  
18 Kansas City Power and Light Company DSMAG, KCP&L Greater Missouri Operations  
19 Company DSMAG, Summit Natural Gas EE Advisory Group, Empire District Company  
20 DSMAG and Empire District Gas Company DSMAG. I am also DE’s representative for  
21 the Missouri American Water Company’s EE Collaborative. Most collaboratives meet

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<sup>1</sup>Missouri Public Service Commission Case No. AO-2011-0035. *In the Matter of the Chairman’s Request for A Status Report Regarding Energy Efficiency Advisory Groups and Collaboratives*. Status Report. August 7, 2015.

<sup>2</sup> Union Electric Company d/b/a Ameren Missouri

1           quarterly via conference call, web cast, or in-person. Three collaboratives meet  
2           biannually. Each collaborative addresses company specific issues, which may include  
3           EE measures and programs, weatherization efforts, the potential for co-delivery of  
4           programs, and program evaluation.

5   **Q.    What information did you review in preparation of this testimony?**

6   A.    In preparation of this testimony, I reviewed direct testimonies of Scott H. Heidtbrink,  
7           Ronald A. Klote, Darrin R. Ives, Albert R. Bass Jr., and Charles A. Caisley, filed on  
8           behalf of Kansas City Power & Light Company (“KCP&L” or “Company”) in this case;  
9           past tariffs and case documents regarding KCP&L’s EE and weatherization programs  
10          including weatherization reports made to the DSMAG; and conversations and emails  
11          with KCP&L’s manager, Elena Hill, regarding their weatherization program.

12   **II.   PURPOSE AND SUMMARY OF TESTIMONY**

13   **Q.    What is the purpose of your testimony in these proceedings?**

14   A.    The purpose of my testimony is to discuss KCP&L’s income-eligible weatherization  
15          (“weatherization”) program and to discuss DE’s role in relation to KCP&L’s  
16          weatherization program.

17   **Q.    Does DE administer KCP&L’s weatherization program?**

18   A.    No. While DE does administer in-state delivery of LIWAP and some utility-sponsored  
19          weatherization programs, DE does not administer KCP&L’s program.

20   **III.   RECOMMENDATIONS**

21   **Q.    What recommendations do you have regarding KCP&L’s weatherization program?**

22   A.    DE recommends KCP&L continue their weatherization program which is funded at a  
23          level of \$573,888. This funding level was established prior to Case No. ER-2010-0355

1 and was reaffirmed in Case No. ER-2012-0174. As ordered in Case No. ER-2014-0370,  
2 weatherization program funding was to transition back into base rates at the conclusion of  
3 MEEIA Cycle I, which ended December 31, 2015.<sup>3</sup> However, currently the program is  
4 funded as an offset to the accumulated balance reflected in a deferral account. DE  
5 recommends continued use of this mechanism, but requests clarification that in the event  
6 that the balance is depleted, KCP&L can begin recording expenses to the deferral account  
7 for future recovery. Recently, the Commission approved a tracking mechanism in  
8 KCP&L Greater Missouri Operation's Case No. ER-2016-0156.<sup>4</sup>

9 **Q. What is the basis for DE's recommendation?**

10 A. The Company's weatherization program transitioned from base rates into MEEIA I on  
11 July 6, 2014. However, a surplus accrued because there was a period of time when the  
12 Company continued to collect funds through base rates after this transition.<sup>5</sup> The liability  
13 balance for this surplus is \$1,282,303.<sup>6</sup> As mentioned above, weatherization  
14 expenditures are currently being offset against the surplus. This surplus equates to almost  
15 a three-year offset based on the Company's level of expenditures since January 1, 2015.  
16 While it is likely the Company will file for another rate case before the surplus is  
17 exhausted, a tracking mechanism will ensure the weatherization program remains fully  
18 funded between rate cases.

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<sup>3</sup> Missouri Public Service Commission Case No. ER-2014-0370. *In the Matter of the Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service*. Report and Order. September 15, 2015, pp.101-102.

<sup>4</sup> Missouri Public Service Commission Case No. ER-2016-0156, *In the Matter of the KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service*. Non-unanimous Stipulation and Agreement, pp 5.

<sup>5</sup> Missouri Public Service Commission Case No. ER-2014-0370. *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service*. Staff Report Revenue Requirement Cost of Service, pp. 138-9.

<sup>6</sup> Company response to DED-DE Data Response 408. Surplus as of October 31, 2016.



1 **IV. FEDERAL LOW INCOME WEATHERIZATION ASSISTANCE PROGRAM**

2 **Q. Please describe the federal LIWAP administered by DE.**

3 A. Congress established the federal LIWAP in response to the energy crisis of the early  
4 1970s. The LIWAP provides cost-effective, energy-efficient home improvements to  
5 Missouri's low income households, especially households in which the elderly, children,  
6 those with physical disadvantages, and others hit hardest by high utility costs reside. The  
7 program is intended to be a more effective, long-lasting solution to address energy  
8 insecurity. Its goal is to lower utility bills and improve comfort while ensuring health and  
9 safety. Weatherization is the nation's largest residential energy efficiency program.  
10 From 1977 through June 2016, 188,286 homes in Missouri were weatherized with funds  
11 administered by DE. DE maintains an expert staff with certified technical personnel to  
12 ensure administration of LIWAP funds in compliance with USDOE program guidelines.  
13 Administration includes several components: monitoring contactors ("subgrantees"),  
14 fiscal management of multiple funding sources with differing expiration cycles, training  
15 and technical support provided to subgrantees, home audit of weatherized home to ensure  
16 quality control and adherence with program guidelines, submittal of required reports and  
17 inquiries to USDOE, and responses to federal and state auditors inquiries. The LIWAP  
18 utilizes a "whole house retrofit" approach to building improvement. All participating  
19 homes must undergo an energy audit to identify energy efficiency and health and safety  
20 opportunities, such as malfunctioning or substandard equipment. Home efficiency and  
21 health and safety measures which have been determined to be cost effective or necessary  
22 for client health and safety are installed by trained weatherization professionals.  
23 Effective July 1, 2015, every weatherized home must pass a thorough, quality-control

1 inspection by the subgrantee before the dwelling can be reported as completed. The final  
2 inspection must certify that work was completed in a professional manner and in  
3 accordance with the Technical Standards. A second home audit is performed to verify  
4 that all repairs and installations were completed properly.

5 **Q. What are the current sources of weatherization funding administered by DE?**

6 A. DE administers funds from four funding streams: USDOE, Low-Income Home Energy  
7 Assistance Program (“LIHEAP”), Utilicare, and four of the state’s IOUs. DE annually  
8 submits an application to receive USDOE grant funds, which has traditionally been DE’s  
9 primary source of LIWAP funding. LIHEAP funds have been transferred to weatherize  
10 homes, providing a long-term – versus temporary – solution to addressing the energy  
11 burden for low-income clients. At times, DE receives Utilicare funding, which comes  
12 from the state’s general revenue and is subject to the state budgetary process. Finally,  
13 DE administers weatherization funds on behalf of four Missouri investor-owned electric  
14 and natural gas utilities (Ameren Missouri – electric and natural gas, Laclede Gas  
15 Company, and Liberty Utilities). DE administers all funds in accordance with USDOE  
16 LIWAP guidelines. DE contracts with 17 local community action agencies (“CAAs”)  
17 and one non-profit organization as subgrantees. Together, these agencies serve every  
18 region in the state. DE provides on-site monitoring and technical oversight of the  
19 subgrantees to ensure appropriate utilization of funds, with a goal of fully spending  
20 funding allocations each contract cycle. DE did accumulate a surplus (“carryover”) of  
21 utility funds associated with past priority spending of American Recovery and  
22 Reinvestment Act (“ARRA”) funding. However, in recent years, DE administered

1 LIWAP has performed weatherization at its full utility funding allocations, and DE is also  
2 reducing the amount of carryover.

3 **Q. Please identify regulated IOU based weatherization fund sources that are not**  
4 **administered by DE.**

5 A. KCP&L self-administers its weatherization program, as do KCP&L Greater Missouri  
6 Operations, Empire District Electric Company, Empire District Gas Company, Missouri  
7 Gas Energy, and Summit Natural Gas.

8 **Q. What are some of the benefits of low-income weatherization?**

9 A. Low-income weatherization programs can reduce customer energy use and provide  
10 economic benefits for utilities, ratepayers, and local communities. Low-income  
11 households are more likely to have difficulty connecting to utility service due to  
12 outstanding account balances, have energy disruptions due to shut-offs, and experience  
13 negative health and employment outcomes due to challenges related to acquiring and  
14 maintaining basic household energy services. Low-income households are less likely to  
15 have the financial resources to make meaningful energy efficiency improvements that  
16 will reduce their energy burden. Without weatherization, homeowners may resort to  
17 using broken or malfunctioning equipment that can result in fires or carbon monoxide  
18 poisoning. Homeowners may go without heating or cooling or forgo needed medical  
19 appointments, medications, and/or food. This is particularly concerning for households  
20 with occupants who are premature babies, elderly, take medications which can affect core  
21 body temperature, or suffer chronic diseases such as asthma, chronic obstructive  
22 pulmonary disease, diabetes, or congestive heart failure. Premature babies or babies born  
23 with weakened immune systems are at a higher risk for developing respiratory syncytial

1 virus (“RSV”) and asthma. When low-income household parents cannot establish or re-  
2 establish utility services under their names, they may employ other measures to gain  
3 service such as make-shift connections from neighboring properties, utilization of gas-  
4 powered generators or charcoal grills, or creating utility accounts under the name of a  
5 minor child. The short-term fixes can have lasting negative health, safety and economic  
6 impacts on individuals and within communities. The weatherization program is intended  
7 to achieve a long-term energy solution in contrast to LIHEAP bill assistance, which is a  
8 temporary stop-gap measure that does not cure the problem of high energy use.  
9 Weatherization improves health and safety by enabling the homeowner to afford to heat  
10 their home to a comfortable level, and the risk of fire is reduced by eliminating the use of  
11 space heaters, cooking ovens, or hot plates to heat homes. Weatherization programs also  
12 have a positive impact on local economies through locally made purchases of energy  
13 efficiency related materials, equipment, and labor. The housing stock is improved when  
14 a home is weatherized, which in turn improves property values for both the homeowner  
15 and the community.

16 **Q. Are there utility benefits from low-income energy efficiency services?**

17 A. Yes. Weatherized homes have improved energy efficiency which helps low-income  
18 households to better control energy usage and reduce energy bills. When customers can  
19 afford their energy bills, there are fewer shut-offs and reconnections, fewer notices and  
20 customer calls, reduced collection costs, and lower bad debt.<sup>7</sup> This, in turn, lowers the  
21 utility’s costs associated with unpaid balances, and consequently results in a positive  
22 impact on future rates for all customers.

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<sup>7</sup> M.Schweitzer. *Oak Ridge national Laboratory. Nonenergy Benefits From The Weatherization Assistance Program: A Summary of Findings From the Recent Literature*, April 2002.

**V. KCP&L’S RESIDENTIAL WEATHERIZATION PROGRAM**

**Q. Are you satisfied with the performance of the Company’s weatherization program?**

A. Yes. The program has performed well since transitioning out of MEEIA, and the Company continues to make process improvements to the program. The current budget is adequate to support the program. As of October 31, 2016, KCP&L had expended \$444,639 of its budget (Table 1). This equates to 77 percent of the budget being expended through 75 percent of the year with 122 homes weatherized, which is the second highest number of homes completed since PY2011. Additionally, the Company’s cost per home has declined. Overall, the Company is weatherizing more homes at less per average cost of home.

Table 1<sup>8</sup>

Year	Budget	Expenditure	Percentage	Number Homes	Avg Homes Per Month	Cost per Home
2011	\$ 150,475.00	\$ 150,475.00	100.00%	25	2.08	\$ 6,019.00
2012	\$ 325,000.00	\$ 369,916.30	113.82%	77	6.42	\$ 4,804.11
2013	\$ 587,546.26	\$ 262,547.00	44.69%	67	5.58	\$ 3,918.61
2014*	\$ 573,888.00	\$ 258,987.21	45.13%	28	2.33	\$ 9,249.54
2015	\$ 549,817.00	\$ 481,840.00	87.64%	127	10.58	\$ 3,794.02
2016**	\$ 573,888.00	\$ 444,639.00	77.48%	122	12.2	\$ 3,644.58

\* MEEIA I began July 6, 2014

\*\* Data as of November 21, 2016 reflects Jan – October 31, 2016

**Q. Which local agencies administer KCP&L’s weatherization program.**

A. KCP&L has contracts with four community action agencies for PY 2016: West Central Community Action Agency (WCMCAA”), United Services Community Action Agency (“USCAA”), Missouri Valley Community Action Agency (“MVCAA”), and Central Missouri Community Action (“CMCA”).

<sup>8</sup> Company response to DED-DE Data Request 405 and Company follow-up 11/21/2016 email to author.

1 **Q. What is the estimated number of Missouri households currently on waiting lists**  
2 **which are served by community action agencies providing weatherization services**  
3 **within KCP&L's service territory?**

4 A. Because DE has contractual relationships with 18 subgrantees and four of DE's  
5 subgrantees are also the CAAs that KCP&L utilizes to administer its weatherization  
6 program, DE receives reports from the CAAs which include the number of homes on the  
7 subgrantee's waiting list, city of home, and fuel provider. As of August 2016,<sup>9</sup> 83  
8 KCP&L customers were on CAA waiting lists in KCP&L's territory (Table 2). This  
9 represents 4 percent of the statewide waiting list total (2091).

Table 3	
Contracting Agency/Entity	2016 Waiting List
West Central Missouri Community Action Agency	1
United Services Community Action Agency	65
Missouri Valley Community Action Agency	17
Central Missouri	0
<b>TOTALS</b>	<b>83</b>

10 **Q. Can the Company's program be improved?**

11 A. Yes. The Company is reviewing and making improvements to the program. The  
12 Company reached out to DE numerous times over the last several months for technical  
13 assistance. They have been in conversations with their contracted CAAs, and they are  
14 reviewing updates to their weatherization contracts.

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<sup>9</sup> Data represents close of business day August 10, 2016.

1 **VI. INCOME RELATED ENERGY CONSIDERATIONS**

2 **Q. What is energy burden and energy insecurity?**

3 A. Energy burden is the portion of annual income a household pays for home energy.  
4 Energy burden disproportionately impacts low-income households. According to  
5 research in “The Home Energy Affordability Gap,” Missouri households with income  
6 between 50-100 percent of the federal poverty level (“FPL”) have a home energy burden  
7 of 16 percent of their annual income. The home energy burden increases to 29 percent  
8 for those households below 50 percent.<sup>10</sup> Energy insecurity describes a family’s ability to  
9 meet basic household energy needs. It is “...the interplay between structural conditions  
10 of housing and the costs of household energy.”<sup>11</sup> Energy insecurity occurs when one or  
11 all of three things are experienced:<sup>12</sup> 1) limited or uncertain access to energy, 2) receipt  
12 of utility termination notice, and 3) actual shut-off of utility service.

13 **Q. What factors, other than income, contribute to higher energy burden?**

14 A. A 2016 report sponsored by the American Council for an Energy-Efficient Economy  
15 (“ACEEE”) analyzed data from the U.S. Census Bureau’s American Housing Survey to  
16 examine energy burden for the largest 48 U.S. cities. The report concluded that low  
17 income households paid more per square foot for energy due to energy inefficient homes.  
18 Low-income households had median annual utility costs of \$1.41 per square foot while

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<sup>10</sup> Fisher, Sheehan & Colton. (April 2016). “The Home Energy Affordability Gap 2014: Missouri,” Public Finance and General Economics. Retrieved November 28, 2016 from [http://www.homeenergyaffordabilitygap.com/03a\\_affordabilityData.html](http://www.homeenergyaffordabilitygap.com/03a_affordabilityData.html)

<sup>11</sup> Hernandez, D., Aratani, Y., & Jiang, Y. (2014). Energy Insecurity Among Families with Children, New York: *National Center for Children in Poverty*, Columbia University Mailman School of Public Health. Retrieved October 4, 2016 from [http://www.nccp.org/publications/pdf/text\\_1086.pdf](http://www.nccp.org/publications/pdf/text_1086.pdf)

<sup>12</sup> E. March. (January 2011). *Children’s HealthWatch*. Behind Closed Doors, The hidden health impacts of being behind on rent.

1 non-low-income had \$1.17. This resulted in a median energy burden of 7.2 percent  
2 versus 2.3 percent.<sup>13</sup>

3 **Q. Is it true that low-income customers as a group consume more energy than other**  
4 **customers?**

5 A. No. While it is true that LIHEAP recipients, receiving targeted subsidies to offset energy  
6 costs, exhibit energy use resembling that of non-low income households, as a group low-  
7 income households actually use less energy than non-low income households. Utilities  
8 generally cannot determine household income from customer account information and  
9 can only determine low-income status by identifying accounts receiving bill assistance  
10 payments. The majority of low-income households do not receive bill assistance as a  
11 direct subsidy offsetting energy costs. Therefore LIHEAP recipients are not  
12 representative of low-income households in general. Other data sources must be  
13 examined to evaluate average low-income household energy use relative to households at  
14 other income levels. The LIHEAP Home Energy Notebook (“Notebook”) provides  
15 insight regarding the direct relationship between income and consumption (i.e.: more  
16 income, more consumption; less income, less consumption). The Notebook includes  
17 national and regional data on four categories of users: all households, non-low income  
18 households, low-income households, and LIHEAP recipient households. Below is an  
19 abbreviated copy of Table A-2 from the last published Notebook, which compares  
20 average consumption per household by end user and fuel source. Midwest Households  
21 across all categories consumed more electricity when compared to all categories of US  
22 households.

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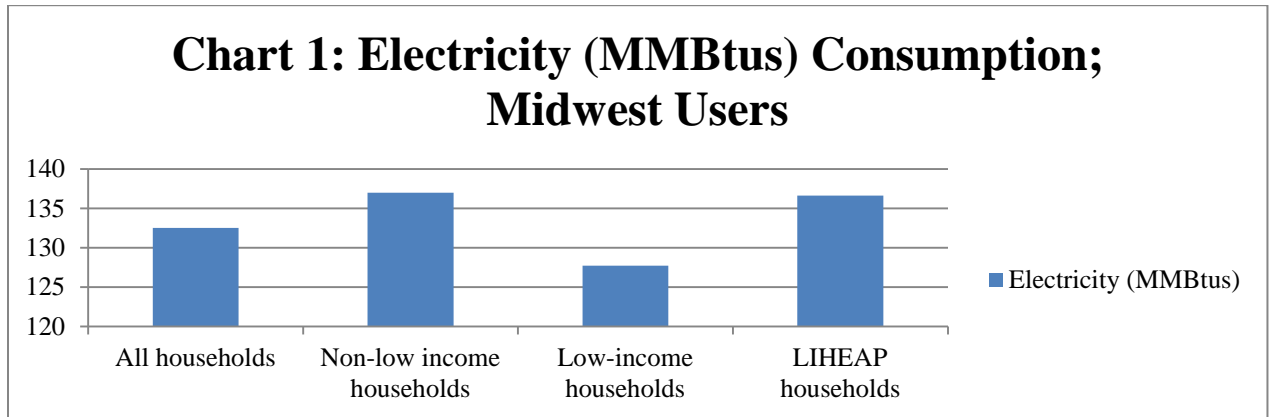
<sup>13</sup> Drehobl, A. & Ross, L. (April 2016). *Lifting the High energy Burden in America’s Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities*. Retrieved September 9, 2016 from <http://aceee.org/research-report/u1602>



Notebook Table A-2:<sup>14</sup> *Residential energy: Average consumption in MMBtus per household, by all fuels and specified fuels, by all, non-low income, low income and LIHEAP recipient households, by Census region, FY 2011*

Census Region	Natural Gas (MMBtus)	Electricity (MMBtus)	Fuel Oil (MMBtus)	Kerosene (MMBtus)	LPG (MMBtus)	Other (MMBtus)
US – All households	99.1	115.4	62.7	151.7	55.7	112.5
US – Non-low income households	105.3	120.1	67.6	160.9	62.1	120.0
US – Low income households	87.5	105.5	54.4	137.7	54.5	98.4
US – LIHEAP recipient households	107.3	117.9	50.5	155.6	78.3	112.0
Midwest – All households	120.2	132.5	61.3	131.6	92.2	131.1
Midwest – Non-low income households	126.0	137.0	67.5	139.2	NC	132.6
Midwest – Low income households	110.4	124.7	53.7	122.0	92.2	125.7
Midwest – LIHEAP recipient households	124.0	136.6	50.5	153.5	90.0	107.7

<sup>14</sup> U.S. Department of Health and Human Services Administration for Children and Families Office of Community Services Division of Energy Assistance. LIHEAP Home Energy Notebook For Fiscal Year 2011, June, 2014. Table A-2: LIHEAP defines low-income as those which are at or below 150 percent of the poverty guidelines and do not receive LIHEAP assistance. FY2011 is the most current publication.



1 Low-income households, in the Midwest, consumed less electricity than all Midwestern  
2 households combined – 124.7 MMBtus versus 132.5 MMBtus (Chart 1), while **non**-low  
3 income households consumed more electricity than all other users – 137.0 MMBtus. The  
4 electricity consumption of LIHEAP recipient households in the Midwest resembled that  
5 of non-low income household consumption. If LIHEAP recipient homes could reduce  
6 energy consumption through energy efficiency measures and/or a rate structure that  
7 encouraged energy conservation, then their energy burden could be reduced and LIHEAP  
8 dollars would be more impactful.

9 **Q. What are other ways to reduce energy burden in addition to weatherization?**

10 A. Energy burden can be reduced through energy efficiency improvements incremental to  
11 weatherization and through rate structures that encourages conservation. In its Report  
12 and Order for Case No. 18,626, the Commission said, “Rate design should encourage the  
13 efficient use of energy and recognize and reward customers who choose to conserve.”<sup>15</sup>  
14 The Commission ordered a rate design investigation and in the order called the declining  
15 block rate structure a promotional rate structure that encouraged and rewarded

<sup>15</sup> Missouri Public Service Commission Case No. 18,626. (1976). *In the Matter of the Complaint of St. Joseph Light & Power Company as to Unreasonableness of Electric, Gas, Steam Heating and High Pressure Steam Rates Now on File and in Effect, and Application to Establish New Rates and Charges for Such Services*. Report and Order, pp 22-23.

1 consumption and was "...an anachronism which fails to rationally meet the changing  
2 circumstances which have substantially increased the cost of electric service...".<sup>16</sup> Roger  
3 Colton, economist and low-income advocate, stated in his testimony before the  
4 Minnesota Public Utilities Commission that low- and average- use customers save under  
5 an inclining block rate design.

6 "When those customers cannot afford to pay their energy bills,  
7 price signals are not effective. The viability of sending a price  
8 signal assumes that the customer has the ability to *receive and act*  
9 *upon* the signal..."<sup>17</sup>

10 DE witness Martin Hyman will offer detailed testimony on rate design.

11 **VII. CONCLUSIONS**

12 **Q. Please summarize your testimony.**

13 **A.** DE supports the KCP&L administered low-income weatherization program and  
14 recommends continuing the current budget of \$573,888 along with a tracking mechanism  
15 to ensure weatherization remain fully funded should the Company's weatherization  
16 surplus be exhausted prior to the next rate case.

17 **Q. Does this conclude your testimony?**

18 **A.** Yes, thank you.

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<sup>16</sup> Missouri Public Service Commission Case No. EO-77-56. *In the Matter of the Investigation of the Rate Design and Transit Department Subsidy of St. Joseph Light & Power Company*. Order dated September 14, 1976.

<sup>17</sup> Colton, R. (2014). *FSC's Law & Economics Insights*, Issue 14-5. Retrieved November 14, 2016 from [http://www.fsconline.com/downloads/FSC%20Newsletter/news2014/n2014\\_0910.pdf](http://www.fsconline.com/downloads/FSC%20Newsletter/news2014/n2014_0910.pdf)