

Exhibit No.:
Issues: Low-Income Weatherization
Income Related Considerations
Witness: Sharlet E. Kroll
Sponsoring Party: Missouri Department of Economic
Development – Division of Energy
Type of Exhibit: Direct Testimony
Case Nos.: ER-2018-0145; ER-2018-0146

MISSOURI PUBLIC SERVICE COMMISSION

KANSAS CITY POWER & LIGHT COMPANY

AND

KCP&L GREATER MISSOURI OPERATIONS

CASE NOS. ER-2018-0145; ER-2018-0146

DIRECT TESTIMONY

OF

SHARLET E. KROLL

ON

BEHALF OF

MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT

DIVISION OF ENERGY

Jefferson City, Missouri

June 19, 2018

Mo. Div. of Energy Exhibit No. 458
Date 6/3/18
File No. ER-2018-0145
ER-2018-0146

Exhibit # 458

**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-2018-0145
a General Rate Increase For Electric Service)

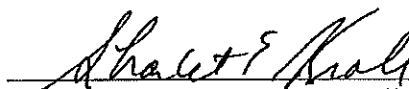
In The Matter of KCP&L Greater Missouri)
Operations Company's Request for Authority) File No. ER-2018-0146
To Implement a General Rate Increase For)
Electric Service)

AFFIDAVIT OF SHARLET E. KROLL

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

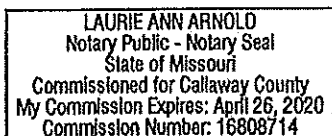
Sharlet E. Kroll, of lawful age, being duly sworn on her oath, deposes and states:


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 an Energy Specialist IV.
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 June 19, 2018.





Notary Public

My commission expires: 4/26/20

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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 an Energy Specialist IV.

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

9 A. I am testifying on behalf of DE, an intervener 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 of
16 Energy (“USDOE”) and consists of several statewide energy efficiency programs funded
17 by the USDOE. DE’s 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 am a Capital Fellow in the

1 Master of Public Affairs Program at the Harry S Truman School of Public Affairs.

2 I joined the DED-DE team in 2015 as a Planner II, Energy Policy Analyst. As an Energy
3 Policy Analyst, I represented DE at investor-owned utility (“IOU”) advisory group
4 meetings, conducted DE’s internal budget tracking of energy efficiency (“EE”) measures
5 in Missouri, evaluated and developed policy recommendations on the non-energy benefits
6 and low-income issues related to initiatives under the Clean Power Plan, and worked on a
7 project to detail the EE case history of each utility. In March of 2017, I was promoted as
8 the Administrative Manager for DE’s LIWAP unit where I supervise the LIWAP
9 procedural operations and staff. I have over 25 years of state government program
10 experience in areas related to low-income, public health, emergency response, and EE. I
11 started my career as a Social Service Worker with the State of Missouri in the Department
12 of Social Services (“DSS”), initially with the Division of Family Services and later with
13 the Division of Aging – which is now the Division of Senior and Disability Services within
14 the Department of Health and Senior Services. During my service with the Division of
15 Aging, I was cross-trained to receive and process Medicaid applications related to: Old
16 Age Assistance and the Permanently and Totally Disabled. In 2002 I became Missouri’s
17 first “State Medical Reserve Corps/Volunteer Program Coordinator” and worked with local
18 public health agencies to develop and implement a statewide public health volunteer
19 program for disaster response.

20 **Q. Please describe your work assisting Missouri utilities with energy efficiency**
21 **initiatives.**

22 **A.** I am the Weatherization Assistance Program Administrative Manager for DE. Prior to this
23 position, I served as DE’s designated representative to all electric and natural gas IOU

1 collaboratives. These included: Liberty Utilities (Midstates Natural Gas) Corporation
2 d/b/a Liberty Utilities (“Liberty”) EE Advisory Group, Missouri Gas Energy - Laclede Gas
3 Company EE Collaborative, Ameren Missouri¹ Demand-Side Management Stakeholder
4 Group (“DSMAG”), Ameren Missouri Natural Gas EE Advisory Group, Kansas City
5 Power and Light Company DSMAG, KCP&L Greater Missouri Operations Company
6 DSMAG, Summit Natural Gas EE Advisory Group, Empire District Electric Company
7 DSMAG, and Empire District Gas Company DSMAG. Most collaboratives meet quarterly
8 via conference call, web cast, or in-person. Three collaboratives meet biannually. Each
9 collaborative addresses company-specific issues, which may include EE measures and
10 programs, weatherization efforts, the potential for co-delivery of programs, and program
11 evaluation.

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

13 **A.** In preparation of this testimony, I reviewed direct testimonies of Ronald A. Klote, Darrin
14 R. Ives, Marisol E. Miller, Albert R. Bass Jr., and Burton L. Crawford, filed on behalf of
15 Kansas City Power & Light Company (“KCP&L”) and KCP&L Greater Missouri
16 Operations (“GMO”) in this case; past tariffs and case documents regarding KCP&L’s
17 weatherization programs.

¹ Union Electric Company d/b/a Ameren Missouri

1 **II. PURPOSE AND TESTIMONY RECOMMENDATIONS**

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

3 A. The purpose of my testimony is to provide information on the history and performance of
4 the KCP&L's and GMO's income-eligible weatherization programs ("IEW") and discuss
5 energy burden and other household income related considerations.

6 **Q. What are your recommendations?**

7 A. DE requests that the Commission: (1) continue the IEW programs at a funding level of
8 \$573,888 for KCP&L and \$500,000 for GMO with any unspent annual funds rolling
9 forward into future program years, (2) convene a joint advisory group of interested
10 stakeholders which would meet biannually to consider weatherization policy and program
11 improvements for both companies and be a resource to address barriers to fully utilize IEW
12 funds, and (3) order the new advisory group to consider the policy of voluntary customer
13 contributions to IEW through a check off box on customer bills and the on-line payment
14 system.

15 **III. CUSTOMER AND COMPANY BENEFITS FROM WEATHERIZATION**

16 **Q. What are some customer benefits from weatherization?**

17 A. There are numerous quantifiable and non-quantifiable benefits to weatherizing customer
18 homes. Weatherization can reduce customer energy use and provide economic benefits for
19 utilities, ratepayers, and local communities. Low-income households are more likely to
20 have difficulty connecting to or continuing utility service due to outstanding account
21 balances, have energy disruptions due to shut-offs, and experience negative health and
22 employment outcomes due to challenges related to acquiring and maintaining basic
23 household energy services. Low-income households are less likely to have the financial

1 resources to make meaningful energy efficiency improvements that will reduce their
2 energy burden. Without weatherization, homeowners may resort to using broken or
3 malfunctioning equipment or utilize substitutions that can result in fires or carbon
4 monoxide poisoning. Examples of the later include attempting to warm homes with ovens,
5 cook-stove gas burners turned-up, utilizing kerosene heaters in areas insufficiently
6 ventilated, utilizing unsafe fireplaces or wood burning stoves. Homeowners may go
7 without heating or cooling or forgo needed medical appointments, medications, and/or
8 food. This is particularly concerning for households with occupants who are premature
9 babies, elderly, those who take medications which can affect core body temperature, or
10 those who suffer chronic diseases such as asthma, chronic obstructive pulmonary disease,
11 diabetes, or congestive heart failure. Premature babies or babies born with weakened
12 immune systems are at a higher risk for developing respiratory syncytial virus (“RSV”)
13 and asthma. When low-income household parents cannot establish or re-establish utility
14 services under their names, they may employ other measures to gain service such as make-
15 shift connections from neighboring properties, utilization of gas-powered generators or
16 charcoal grills, or creating utility accounts under the name of a minor child. These short-
17 term measures can have lasting negative health, safety and economic impacts on
18 individuals and within families and communities. The weatherization program is intended
19 to achieve a long-term energy solution in contrast to Low Income Home Energy Assistance
20 Program (“LIHEAP”) bill assistance, which is a temporary stop-gap measure that does not
21 resolve or address the source of high energy use. Weatherization improves health and
22 safety by enabling the homeowner to afford to heat their home to a comfortable level, and
23 the risk of fire is reduced by eliminating the use of space heaters, cooking ovens, or hot

1 plates to heat homes. Weatherization programs also have a positive impact on local
2 economies through locally made purchases of energy efficiency related materials,
3 equipment, and labor. The housing stock is improved when a home is weatherized, which
4 in turn improves property values for both the homeowner and the community.

5 **Q. Are there utility benefits from low-income weatherization services?**

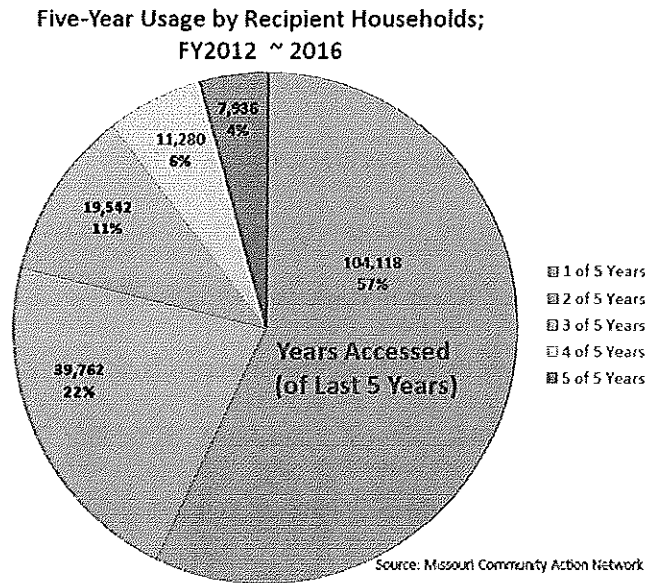
6 A. Yes. Weatherized homes have improved energy efficiency which helps low-income
7 households to reduce energy usage and better manage energy bills. When customers can
8 afford their energy bills, there are fewer shut-offs and reconnections, fewer disconnection
9 notices and customer calls, reduced collection costs, and lower bad debt.² This, in turn,
10 lowers the utility's costs associated with unpaid balances, and consequently results in a
11 positive impact on future rates for all customers.

12 **Q. Where might a low-income customer go to find bill payment assistance?**

13 A. Customers who have difficulty affording their utility bill can apply for LIHEAP assistance.
14 LIHEAP funds are available on a first come, first serve basis. The Missouri Community
15 Action Network ("MOCAN") in partnership with the DSS conducted a five year study of
16 182,638 unique LIHEAP households for FY2012 – FY2016. The study found that 57
17 percent of households that received LIHEAP assistance utilized LIHEAP for one year
18 while only 4.35 percent (7,936 households), utilized LIHEAP every year of the study. Out
19 of the 4.35 percent, there were 73 percent of households that are considered vulnerable
20 populations per the LIWAP definitions – disabled, elderly or children under age five. Over
21 half of these vulnerable households (59 percent of the 73 percent) had at least one

² M.Schweitzer. *Oak Ridge national Laboratory. Nonenergy Benefits From The Weatherization Assistance Program: A Summary of Findings From the Recent Literature, April 2002.*

1 individual with a disability. This data suggests the majority of households who received
2 LIHEAP all five years were likely on a fixed income and not in the workforce.



3
4 Some utilities offer bill payment assistance programs for qualifying customers. The
5 Company includes information on its website to direct customers to financial resources and
6 the Company's Economic Relief Pilot Program ("ERPP"). When customers have
7 exhausted utility, private donations, and government assistance programs, they must find
8 other sources of payment or forgo payment and forgo an essential service.

9 **Q. Where might customers seek other payment resources?**

10 **A.** When customers lack adequate funds they may turn to a variety of resources such as: bank
11 overdrafts, a loan from friends and family, a late or skipped payment on another bill,
12 pawnshops, auto title pawn, credit cards, and payday loans. Based on a Pew Charitable
13 Trust report, "Who Borrows, Where They Borrow, and Why", 69 percent of first time

1 payday loan users sought out the loan to pay for recurring expenses such as utilities, food,
2 rent/mortgage payments.³

3 **IV. KCP&L'S AND GMO'S RESIDENTIAL INCOME-ELIGIBLE**
4 **WEATHERIZATION PROGRAMS**

5 **Q. Why do you support a continued funding level of \$573,888 for KCP&L's IEW**
6 **program?**

7 A. This funding level was established over eight years ago and KCP&L has demonstrated in
8 the recent past that it can expend at this level. KCP&L's service area is sufficient to support
9 this funding level as it serves 254,755 residential customers⁴ in communities across 13
10 counties. This equates to \$2.25 annually per customer (\$573,888/254,755 customers).

11 **Q. Are you satisfied with the performance of KCP&L's IEW program?**

12 A. While DE is satisfied with its performance in 2016 and 2017, I am concerned with the
13 anticipated performance for 2018. In 2016 and 2017, the IEW program performed well as
14 KCP&L made process improvements. However, DE is concerned that the recent
15 performance will be sidetracked as KCP&L contracted in 2018 for much less than its
16 Commission approved funding level of \$573,888.

17 **Q. Which local agencies administer KCP&L's IEW?**

18 A. KCP&L contracts with four Community Action Agencies ("CAAs") to deliver
19 weatherization services in the KCP&L service area: West Central Missouri Community
20 Action Agency ("WCMCAA"), Community Action Agency of Greater Kansas City

³ Collins, J.M., & Gjertson, L. (2013). Emergency savings for low-income consumers. *Focus*. Vol 20 (1), pp 12-17. Accessed from <https://www.irp.wisc.edu/publications/focus/pdfs/foc301c.pdf>

⁴ Company's Minimum Filing Requirements, EFIS No. 5.

1 (“CAAGKC”), Missouri Valley Community Action Agency (“MVCAA”), and Central
2 Missouri Community Action (“CMCA”).

3 **Q. What obstacles do you anticipate to KCP&L’s ability to fully expend annual IEW**
4 **funds?**

5 A. KCP&L executed over \$100K less in weatherization contracts for 2018 than its stipulated
6 funding level. The CAAs are bound by contract to keep weatherization expenditures within
7 specified budget terms. Further, the KCP&L IEW tariff does not provide the program’s
8 funding level. Thus, CAAs cannot confer to assess if KCP&L has contracted at its full
9 funding level. Typically, contracts are executed for a 12-month program year. KCP&L’s
10 program year is January – December. Contractually, KCP&L can recapture unspent funds
11 from CAAs, who are behind on production, and reallocate these funds to higher performing
12 CAAs through an amended contract process in order to fully expend program funds within
13 the program year. This is an ideal program management practice. Unless a contract is
14 amended, a CAA will not expend more than the contracted budget. KCP&L executed⁵
15 \$573,888 in contracts with its CAAs in 2016, \$573,888 in 2017 and only \$459,110 for
16 2018. Thus, KCP&L’s IEW program will not fully expend \$573,888 for program year
17 2018.

18 **Q. Why do you support a funding level of \$500,000 for GMO’s IEW program?**

19 A. GMO serves 282,861 residential customers⁶ in communities across 31 counties. The GMO
20 territory represents 22 additional counties and 28,106 more residential customers than
21 KCP&L. Yet, GMO expends less on its IEW program than its sister company which results

⁵ Company response to DED-DE Data Request No. 400.

⁶ Company’s Minimum Filing Requirements, EFIS No. 5

1 in less homes weatherized. GMO's weatherization funding level is set at \$400,000 with
2 another \$100,000 allowed to be tracked in a deferral account. If GMO fully expended its
3 funding level of \$400,000, that would equate to a \$1.41 per customer contribution annually
4 (\$400K/282,861 residential customers). If GMO expended \$400,000 plus tracked another
5 \$100,000 that would equate to a \$1.77 per customer contribution (\$500K/282,861
6 residential customers). In contrast, KCP&L customers contribute \$2.25 annually to the
7 KCP&L IEW program (\$573,888 funding level/254,755 KCP&L customers). However,
8 in 2017, GMO contracted over \$200K⁷ less for weatherization than its sister company –
9 even though the last rate case increased the funding level to better align GMO with
10 KCP&L. This resulted in only 64 GMO homes weatherized compared to KCP&L's 133.

11 **Q. Are you satisfied with the performance of GMO's IEW program?**

12 **A.** No. Per the Stipulation and Agreement in Case No. ER-2016-0156, IEW was to be funded
13 in base rates at a level of \$400,000 with up to an additional \$100,000 per year allowed to
14 be recorded in a deferral account for future recovery.⁸ GMO did not achieve this
15 benchmark primarily due to its contracting practices.

16 **Q. Which local agencies administer GMO's IEW?**

17 **A.** GMO contracts with five CAAs who deliver weatherization services within the GMO's
18 service areas: WCMCAA, CAAGKC, MVCAA, Community Services, Inc. ("CSI") –
19 which also covers the St. Joseph communities, and Community Action Partnership of
20 North Central Missouri ("CAPNCM").

⁷ Company's Response to DED-DE Data Request No. 400

⁸ Missouri Public Service Commission Case No. ER-2016-0156. *In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement A General Rate Increase for Electric Service*. Non-Unanimous Stipulation and Agreement, Section 9, page 5.

1 **Q. What obstacles do you anticipate to GMO's ability to expend over \$400,000 annually**
2 **for IEW as agreed to in ER-2016-0156?**

3 A. GMO consistently awarded less than \$400,000 in weatherization contracts for program
4 years 2016, 2017, and 2018. Thus, its CAAs were unable to exceed their contracted budget
5 amounts. Typically, contracts are executed for a 12-month program year. GMO's program
6 year is January – December. The CAAs are bound by contract to keep weatherization
7 expenditures within specified budget terms. Contractually, GMO can recapture unspent
8 funds from CAAs, who are behind on production, and reallocate these funds to higher
9 performing CAAs through an amended contract process in order to fully expend program
10 funds within the program year. This is an ideal program management practice. Unless a
11 contract is amended, a CAA will not expend more than the contracted budget. GMO
12 executed⁹ \$237,500 in contracts with its CAAs in 2016 (while the program was still under
13 MEEIA and not in base rates), \$348,000 in 2017 and \$356,000 for 2018. GMO did not
14 expend its contracted amounts in 2016 or 2017 even though the Stipulation and Agreement
15 to ER-2016-0156 allowed GMO to track any IEW expenditures exceeding annual rate
16 collections for the program.

17 **Q. What other missed opportunities could KCP&L and GMO consider to incorporate**
18 **as a complement into their IEW programs?**

19 A. The companies could consider adding contract language to incorporate missed
20 opportunities. Since 2016, the KCP&L and GMO IEW programs have shifted policy to
21 more closely align with the federal LIWAP, which is an evidence-based and cost-effective

⁹ Company response to DED-DE Data Request No. 400.

1 national model. There are several benefits in this approach, such as: a whole-home
2 methodology, installation of cost-effective measures identified through modeling software,
3 and the program model is already in use by the CAAs. There are some missed opportunities
4 to this approach such as (1) installing additional cost-effective measures in homes
5 weatherized after September 1, 1994; and (2) when weatherizing rental properties allow
6 cost-effective measures such as: refrigerators, water heaters, heating, and air conditioners.

7 **Q. Why would re-weatherization work in a previously weatherized home be considered?**

8 A. Homes weatherized in Missouri between 1994 and 2009 had less energy efficiency
9 measures installed compared to homes weatherized after the start of the American
10 Recovery and Reinvestment Act of 2009 (“ARRA”). These homes represent additional
11 energy savings customers and KCP&L and GMO could capture. Energy efficiency
12 technology has advanced substantially since 1994; the LIWAP has changed, and energy
13 efficiency measures installed in 1994 have exceeded their evaluated life-span. The
14 modeling software used by LIWAP to assess cost-effectiveness considers the life-span of
15 each measure, which range from three to twenty years. It has been 24 years since 1994 and
16 any installed measure has exceeded its evaluated life-span.

17 **Q. What is the opportunity for installing additional energy efficiency measures in rental
18 properties?**

19 A. A whole home approach considers all possible cost-effective energy efficiency measures
20 which can be captured as savings for the utility and the customer. Heating, air conditioners,
21 refrigerators and water heaters can be viewed as enhancing the property for the landlord.
22 Exclusion of these measures leaves potential for additional savings under a whole home
23 approach. Many low-income households reside in rental properties and lack the ability to

1 achieve home-ownership. While low-income families can be transient, their ability to
2 move is challenged by their: (1) ability to find affordable housing, (2) credit issues which
3 impact their ability to establish rental agreements and utility service, and (3) transportation
4 means to move their household. Thus, low-income customers are less likely than any other
5 income group to be able to reduce their energy burden by moving into more energy efficient
6 housing stock. They are also unlikely to afford or be able to make heating, refrigerator, or
7 water heater improvements to property they do not own. Thus, low-income renters do not
8 achieve the full energy burden reduction possible.

9 **V. FEDERAL LOW-INCOME WEATHERIZATION ASSISTANCE PROGRAM**

10 **Q. Please describe the USDOE's LIWAP.**

11 **A.** Congress established the federal LIWAP in response to the energy crisis of the early 1970s.
12 LIWAP is the nation's largest residential energy efficiency program, and it provides cost-
13 effective, energy-efficient home improvements to Missouri's low-income households,
14 especially households in which the elderly, children, those with physical disadvantages,
15 and others hit hardest by high utility costs reside. The program is intended to be a more
16 effective, long-lasting solution to address energy insecurity. Its goal is to lower utility bills
17 and improve comfort while ensuring health and safety. The LIWAP utilizes a "whole
18 house retrofit" approach to building improvement. All participating homes must undergo
19 an energy audit to identify energy efficiency and health and safety opportunities, such as
20 malfunctioning or substandard equipment. Home efficiency and health and safety
21 measures which have been determined to be cost effective or necessary for client health
22 and safety are installed by trained weatherization professionals. Effective July 1, 2015,
23 every weatherized home must pass a thorough, quality-control inspection ("QCI") by the

1 subgrantee before the dwelling can be reported as completed. The final inspection must
2 certify that all repairs and installations were completed in a professional manner and in
3 accordance with the Technical Standards.

4 **Q. Please describe DE's administration of LIWAP.**

5 **A.** DE maintains an expert team with certified technical personnel trained to ensure
6 administration of LIWAP funds in compliance with USDOE program guidelines. DE has
7 eight full time staff and several part time staff, whose total time is equivalent to an
8 additional one and a half full time staff positions. Several DE staff are credentialed through
9 certifications to ensure administration of LIWAP in compliance with USDOE program
10 guidelines. USDOE requires some DE staff to be quality certified inspector ("QCI")
11 certified, of which three of DE's technical staff are certified accordingly. Additionally,
12 some DE staff are Certified Building Analysts and Certified Healthy Home Specialists.
13 DE has fiscal management of multiple funding sources with differing expiration cycles.
14 From 1977 through May 31, 2018, 191,168 homes in Missouri were weatherized with
15 funds administered by DE. DE administers funds from three funding streams: USDOE,
16 LIHEAP, and six of the state's IOUs – (Ameren Missouri Electric, Ameren Missouri
17 Natural Gas, Spire East, Liberty Utilities, Empire District Electric Company, and Empire
18 District Gas Company. Although, by agreement in PSC Case Nos. GR-2017-0215 and
19 GR-2018-0013, DE will soon be transitioning the administration of Spire East and Liberty
20 Utilities' weatherization programs back to the respective utility). DE annually submits an
21 application to receive USDOE grant funds, which has traditionally been DE's primary
22 source of LIWAP funding. Beginning in 2013, some LIHEAP funds transferred to DE to
23 weatherize homes, providing a long-term – versus temporary – solution to addressing the

1 energy burden for low-income clients. DE does not receive any state funds for
2 weatherization. DE administers all funds in accordance with USDOE LIWAP guidelines.
3 DE contracts with 17 local CAAs and one non-profit organization as subgrantees to provide
4 weatherization services to every region in the state.

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

7 A. KCP&L self-administers its weatherization program, as do KCP&L Greater Missouri
8 Operations, Spire – West, and Summit Natural Gas. As mentioned earlier in testimony,
9 DE will soon begin the process to transition administration of Spire East and Liberty
10 Utilities weatherization programs back to the respective utility. Additionally, per Case No.
11 ER-2016-0179, Ameren along with stakeholders compiled a report to the Commission
12 regarding future administration of Ameren Electric’s weatherization program.

13 **VI INCOME RELATED ENERGY CONSIDERATIONS**

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

15 A. Energy burden is the portion of annual income a household pays for home energy. Energy
16 burden disproportionately impacts low-income households. According to research in “The
17 Home Energy Affordability Gap,”¹⁰ Missouri households with income between 50-100
18 percent of the federal poverty level (“FPL”) have a home energy burden of 15 percent of
19 their annual income. The home energy burden increases to 28 percent for those households

¹⁰ Fisher, Sheehan & Colton. (April 2018). “The Home Energy Affordability Gap 2016: Missouri,” Public Finance and General Economics. Retrieved June 18, 2018 from http://www.homeenergyaffordabilitygap.com/03a_affordabilityData.html

1 below 50 percent of FPL.¹¹ This is a one percent increase from the 2017 Home energy
2 Affordability Gap Report. Energy insecurity describes a family's ability to meet basic
3 household energy needs. It is "...the interplay between structural conditions of housing
4 and the costs of household energy."¹² Energy insecurity occurs when one or all of three
5 things are experienced:¹³ 1) limited or uncertain access to energy, 2) receipt of utility
6 termination notice, and 3) actual shut-off of utility service.

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

8 A. A 2016 report sponsored by the American Council for an Energy-Efficient Economy
9 ("ACEEE") analyzed data from the U.S. Census Bureau's American Housing Survey to
10 examine energy burden for the largest 48 U.S. cities. The report concluded that low-
11 income households paid more per square foot for energy due to energy inefficient homes.
12 Low-income households had median annual utility costs of \$1.41 per square foot while
13 non-low-income had \$1.17. This resulted in a median energy burden of 7.2 percent versus
14 2.3 percent.¹⁴

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

17 A. No. As a group low-income households actually use less energy than non-low income
18 households. However, it is true that LIHEAP recipients, who receive targeted subsidies to
19 offset energy costs, exhibit energy use resembling that of non-low income households.

¹¹ Fisher, Sheehan & Colton. (April 2018). "The Home Energy Affordability Gap 2016: Missouri," Public Finance and General Economics. Retrieved June 18, 2018 from http://www.homeenergyaffordabilitygap.com/03a_affordabilityData.html

¹² 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

¹³ E. March. (January 2011). *Children's HealthWatch*. Behind Closed Doors, The hidden health impacts of being behind on rent.

¹⁴ 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>

1 Utilities generally cannot determine household income from customer account information
2 and can only determine low-income status by identifying accounts receiving bill assistance
3 payments. The majority of low-income households do not receive bill assistance as a direct
4 subsidy offsetting energy costs. Therefore, LIHEAP recipients are not representative of
5 low-income households in general. Other data sources must be examined to evaluate
6 average low-income household energy use relative to households at other income levels.
7 The LIHEAP Home Energy Notebook (“Notebook”) provides insight regarding the direct
8 relationship between income and consumption (i.e.: more income, more consumption; less
9 income, less consumption). The Notebook includes national and regional data on four
10 categories of users: all households, non-low income households, low-income households,
11 and LIHEAP recipient households. Below is an abbreviated copy of Table A-2 from the
12 last published Notebook FY2014,¹⁵ which compares average consumption per household
13 by end user and fuel source. Midwest Households across all categories consumed more
14 natural gas when compared to all categories of US households.

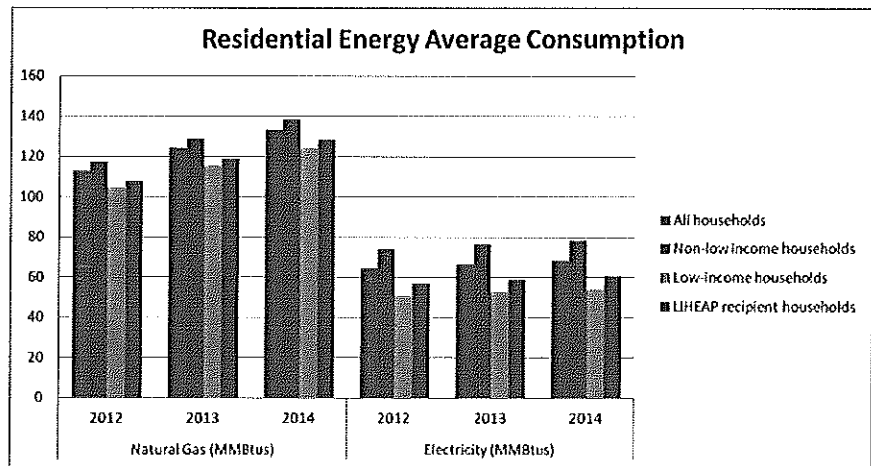
¹⁵ U.S. Department of Health and Human Services Administration for Children and Families Office of Community Services Division of Energy Assistance. LIHEAP Home Energy Notebook For Fiscal Year 2014, June, 2016. Table A-2, pp. 95. LIHEAP defines low-income as those which are at or below 150 percent of the poverty guidelines and do not receive LIHEAP assistance. FY2014 is the most current publication.

LIHEAP Home Energy Notebook Table A-2: 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 2014. Page 104.

Census Region	All Fuels (MMBtus)	Natural Gas (MMBtus)	Electricity (MMBtus)	Fuel Oil (MMBtus)	Kerosene (MMBtus)	LPG (MMBtus)
US - All households	92.4	113.2	60.8	123.3	67.8	114.7
US - Non-low income households	98.7	117.4	66.2	131.4	73.7	121.9
US - Low-income households	80.7	104.2	52.2	108.5	65.4	99.8
US - LIHEAP recipient households	94.8	115.3	56.3	116.8	85.7 *	102.4
Midwest - All households	119.4	133.5	68.3	116.3	NC	113.6
Midwest - Non-low income households	125.8	138.2	78	118.1	NC	137.1
Midwest - Low-income households	107.7	124.4	54.2	114.9	NC	125.7
Midwest - LIHEAP recipient households	113	128.5	60.5	101.9 *	NC	109.1

* view number with caution due to small number of sample cases.
 NC = no cases in the 2009 RECS household sample.

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Low-income households, in the Midwest, consumed less electricity than all Midwestern households combined – 54.2 MMBtus versus 68.3 MMBtus (Chart 1) for FY2014, while non-low income households consumed more electricity than all other users – 78 MMBtus. The electricity consumption of LIHEAP recipient households in the Midwest was higher than low-income household consumption but lower than non-low income household consumption. If LIHEAP recipient homes could reduce energy consumption through energy efficiency measures then their energy burden could be reduced and LIHEAP dollars would be more impactful.

1 **Q. Does DE recommend allowing customer's an additional option to voluntarily**
2 **contribute to weatherization, as they currently have the choice to voluntarily**
3 **contribute to bill assistance?**

4 **A. Yes. This would allow customers to voluntarily contribute additional funds to long-term**
5 **solutions for reducing energy burdens through weatherization, in addition to the current**
6 **option to contribute to the immediate need for billing assistance.**

7 **VII. CONCLUSIONS**

8 **Q. Please summarize your testimony.**

9 **A. DE supports KCP&L's and GMO's administered IEW program and recommends**
10 **continuing the KCP&L program at the funding level of \$573,888, and GMO's program at**
11 **a funding level of \$500,000. Any unspent funds should be allowed to roll-forward into**
12 **future program years. DE respectfully requests the Commission order the companies to**
13 **convene a joint advisory group of interested stakeholders which would meet biannually to**
14 **consider weatherization policy and program improvements for both companies and be a**
15 **resource to address barriers to fully utilize IEW funds, and order the new advisory group**
16 **to consider the policy of voluntary customer contributions to IEW through a check off box**
17 **on customer bills and the on-line payment system.**

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

19 **A. Yes.**