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Low-Income Characteristics
Witness: Sharlet E. Kroll
Sponsoring Party: Missouri Department of Economic
Development – Division of Energy
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Case Nos.: ER-2016-0023

MISSOURI PUBLIC SERVICE COMMISSION

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2016-0023

REBUTTAL TESTIMONY

OF

SHARLET E. KROLL

ON

BEHALF OF

MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT

DVISION OF ENERGY

Jefferson City, Missouri

May 2, 2016

(Low-Income Weatherization)

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of The Empire District Electric Company's)
Request for Authority to Implement a General Rate)
Increase for Electric Service Provided in)
Missouri Service Areas)

ER-2016-0023

AFFIDAVIT OF SHARLET E. KROLL

STATE OF MISSOURI)
)
COUNTY OF COLE) ss

Sharlet E. Kroll, of lawful age, being duly sworn on his 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 (Revenue Requirement) 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 2nd day of May, 2016.

My commission expires:

MELISSA ANN ADAMS
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: March 09, 2019
Commission Number: 15633820



Notary Public




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

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

20 A. No.

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 22 years of

1 experience in state government and began my career with the State of Missouri in 1993
2 as a Social Service Worker I assigned to the Osage County Division of Family Services
3 (“DFS”) within the Department of Social Services (“DSS”) where I investigated child
4 abuse allegations, conducted home visits, and was responsible for the county foster care
5 program. I transferred to the Division of Aging (“DA”) as a Social Service Worker II in
6 1994 where I conducted hotline investigations, provided protective services, and worked
7 with low-income adults who required assistance with daily living activities. The majority
8 of my responsibilities included home visits to assess medical and physical functionality,
9 monthly protective service home visits, and routine home visits to assess authorized
10 Medicaid funded services. As part of my training with DA, I completed 26 hours of
11 Investigative Technique and Report Writing offered by the University of Missouri Law
12 Enforcement Training Institute School of Law. During my service with DA, I was
13 assigned to the pilot Community Outreach Initiative (“COI”) program (1997 – 2000)
14 between DA, DFS, and the two area hospitals in Jefferson City, Missouri. As part of the
15 COI pilot program, I worked as a liaison between DA and the hospitals arranging home
16 services for qualifying at-risk individuals and was trained to receive and process
17 Medicaid applications: Old Age Assistance and Permanently and Totally Disabled. I also
18 served on an advisory team to draft Department policy for the COI pilot program. The
19 COI pilot program ended in 2000 and the DA was moved, through an Executive Order in
20 2001 by Governor Wilson, to the Department of Health (“DHSS”), and DA is now
21 known as the Division of Community and Home Based Services. In 2002 I accepted an
22 internal promotion as a Health Program Representative. My area of expertise was the
23 development and implementation of statewide public health programs – primarily public

1 health emergency response and volunteerism. I spent nine of those 13 years developing
2 and implementing public health emergency plans as the “State MRC/Volunteer Program”
3 Coordinator. I completed all National Incident Management System curriculum required
4 for public health. I have been a participant and an evaluator for several disaster
5 preparedness exercises. The last two years of my career with DHSS were in the Office of
6 Primary Care and Rural Health where I coordinated the statewide Oral Health Preventive
7 Services Program, which works with schools and communities to address access to care
8 barriers for low-income children. I joined the DED/DE team in 2015. My
9 responsibilities include representing DE at investor-owned utility (“IOU”) advisory group
10 meetings, conducting DE’s internal budget tracking of energy efficiency (“EE”) measures
11 in Missouri, evaluating and developing policy recommendations on the non-energy
12 benefits and low-income issues related to initiatives under the Clean Power Plan, and
13 work on a project to detail the EE case history of each utility. I am currently working to
14 complete Building Operator Certification (“BOC”). BOC is a national workforce training
15 and credentialing program that offers job skills in EE building and operation maintenance
16 practices. I have accompanied DE weatherization technical staff on monitoring visits to
17 pre- and post-weatherized homes.

18 **Q. Please describe your work assisting Missouri utilities with energy efficiency**
19 **initiatives.**

20 A. I serve as DE’s designated representative to all electric and natural gas IOU
21 collaboratives,¹ including: Liberty Utilities Energy Efficiency Advisory Group, Missouri

¹Missouri 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.

1 Gas Energy - Laclede Gas Company Energy Efficiency Collaborative, Ameren² Missouri
2 Demand-Side Management Stakeholder Group, Ameren Missouri Natural Gas Energy
3 Efficiency Advisory Group, Kansas City Power and Light Company Demand-Side
4 Management Advisory Group, KCP&L Greater Missouri Operations Company Demand-
5 Side Management Advisory Group, Summit Natural Gas Energy Efficiency Advisory
6 Group, Empire District Company Demand-Side Management Advisory Group
7 (“DSMAG”), and Empire District Gas Company Demand-Side Management Advisory
8 Group. Most collaboratives meet quarterly via conference call or web cast or in-person.
9 Three collaboratives meet biannually. Each collaborative addresses different issues,
10 which may include EE measures and programs, weatherization efforts, the potential for
11 co-delivery of programs, and program evaluation.

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

13 A. In preparation of this testimony, I reviewed the direct testimonies of Mr. Brad P. Beecher,
14 Mr. W. Scott Keith, Mr. Bryan S. Owens, Mr. Nathaniel W. Hackney, and Ms. Joan E.
15 Land filed on behalf of Empire District Electric Company (“Empire” or “Company”) in
16 this case; relevant portions of the Accounting Schedules and Cost of Service Report filed
17 by the Staff of the Missouri Public Service Commission (“Staff”); and past tariffs and
18 case documents regarding Empire’s EE and weatherization programs including
19 weatherization reports made to the DSMAG from 2006 to present. I also spoke to the
20 three social service agencies with whom the Company contracts for its weatherization
21 program.

² Union Electric Company d/b/a AmerenUE

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

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

3 A. The purpose of my testimony is to provide evidence on the energy burden faced by
4 customers in the Company's service area,³ to respond to Empire's proposal to increase
5 funding for the Company's weatherization program, and to respond to the portion of
6 Staff's Cost of Service Report that address Staff's recommendation for an evaluation of
7 Empire's weatherization program. I will also clarify DE's role in relation to Empire's
8 weatherization program.

9 **Q. Does DE administer Empire's weatherization program?**

10 A. No. While DE does administer in-state delivery of LIWAP and some utility-sponsored
11 programs, DE does not administer Empire's weatherization program.

12 **III. RECOMMENDATIONS**

13 **Q. What recommendations do you have regarding Empire's weatherization program?**

14 A. In this case, Empire has requested an increase in annual weatherization funds from
15 \$225,000 to \$250,000. As my testimony demonstrates, there is a significant unmet need
16 for weatherization services in the Company's service territory. For this reason, DE
17 supports additional funding for weatherization, subject to conditions discussed later in my
18 testimony. DE has concerns regarding program delivery and oversight which should be
19 addressed in this proceeding. For example, Empire has regularly underspent program
20 funds. DE also has concerns about frequent data errors appearing in DSMAG reports,

³ Missouri Public Service Commission Tariff No. JE-2003-0707, The Empire District Company, Description of Territory, Sheets Nos. 1 – 26a, and Missouri Public Service Commission Case No. ER-2015-0023. *In the Matter of The Empire District Electric Company's Request for Authority to Implement a General Rate Increase for Electric Service*. Minimum Filing Requirements. Empire provides electric service to 110 communities throughout 16 counties in Southwest Missouri. Empire serves all of Christian, Hickory, Jasper, Lawrence, Polk, Stone, and Taney counties. They serve parts of Barry, Barton, Cedar, Dade, Dallas, Greene, McDonald, Newton, and St. Clair counties.

1 and issues with the contract administration of subcontractors. Finally, as a result of ER-
2 2012-0351, Empire collects weatherization funding through base rates. DE is concerned
3 whether unspent program funds, which are rolled forward into succeeding program year
4 budgets,⁴ are being credited at a reasonable rate of interest. Empire witness Nate
5 Hackney states that:

6 ... Neither Empire’s service tariff for this program, nor the Revised Agreement in
7 ER-2014-0351 (which set the current budget), prescribes a methodology for, or
8 addresses in any way, “how accrued interest is handled”.⁵

9 The Company should implement measures to improve accountability, ensure that
10 program funding is more fully utilized, and allow for interest to accrue on unspent funds,
11 as appropriate.

12 **Q. Does DE support Staff’s recommendation for an evaluation of Empire’s**
13 **weatherization program?**

14 A. DE would support Staff’s recommendation for a program evaluation, if the scope of the
15 review is targeted to Empire and the Community Action Agencies’ (“CAAs”)
16 administration of the Company’s weatherization program. Empire contracts with three
17 CAAs that use the provided funds to supplement the CAAs funding under the federally
18 funded and DE administered LIWAP. The LIWAP already undergoes regular evaluation
19 and therefore should not be included in the Empire review. The CAAs administer
20 Empire’s weatherization program consistent with the parameters of LIWAP. A program
21 management evaluation, that reviews and identifies administrative barriers – such as

⁴ Missouri Public Service Commission Case No. ER-2014-0351, *In the Matter of The Empire District Electric Company for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company’s Missouri Service Area*. Report and Order. June 24, 2015, page 10.

⁵ Company Response to Division of Energy Data Request 406.2, Part 4a.

1 breakdowns in communication or insufficient staffing to support administration of the
2 program, is needed in order to assist the Company and the DSMAG in adopting
3 improvement measures.

4 **Q. Please explain your recommendation that an evaluation of the Company's**
5 **weatherization program should not include an evaluation of the federally funded,**
6 **DE administered LIWAP.**

7 A. LIWAP already undergoes regular evaluations. In 2012, USDOE performed a two-day
8 on-site monitoring of LIWAP. USDOE's technical monitoring staff reviewed DE's
9 adherence to federal program guidelines including cost-effectiveness, improved comfort,
10 and benefits to health and safety. Through November 2012 to April 2013, USDOE's
11 Financial Management and Administration staff conducted a desk monitoring of the DE
12 administered LIWAP. This in-depth monitoring focused on the financial administration
13 of funds and management of contracts by DE. Additionally, the Missouri State Auditor's
14 Office conducted an audit of LIWAP in 2014, and Ameren Missouri conducted an
15 evaluation of LIWAP that included the time period of November 1, 2011 through
16 October 31, 2013. A national evaluation of LIWAP was released in September 2015
17 which reviewed the time periods of 2008 and 2010. Therefore, including LIWAP in an
18 Empire evaluation would be duplicative and result in unnecessary costs. DE does not see
19 the need for the scope of an Empire weatherization evaluation to include the LIWAP.
20 The aspects of Empire's program that should be reviewed during an evaluation relate to
21 Empire's distribution of funds to, and communication with the CAAs.

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

2 **Q. Please describe the federal low-income weatherization assistance program**
3 **administered by DE.**

4 A. Congress established the federal LIWAP in response to the energy crisis of the early
5 1970s. The LIWAP provides cost-effective, energy-efficient home improvements to
6 Missouri's low income households, especially households in which the elderly, children,
7 those with physical disadvantages, and others hit hardest by high utility costs reside. The
8 program is intended to be a more effective, long-lasting solution to address energy
9 insecurity. Its goal is to lower utility bills and improve comfort while ensuring health and
10 safety. Weatherization is the nation's largest residential energy efficiency program.
11 From 1977 through December 2015, 187,400 homes in Missouri were weatherized with
12 funds administered by DE. DE maintains an expert staff with certified technical
13 personnel to ensure administration of LIWAP funds in compliance with USDOE program
14 guidelines. Administration includes several components: monitoring contactors
15 ("subgrantees"), fiscal management of multiple funding sources with differing expiration
16 cycles, training and technical support provided to subgrantees, home audits of
17 weatherized home to ensure quality control and adherence with program guidelines,
18 submittal of required reports and inquires to USDOE, and responses to federal and state
19 auditors inquiries. The LIWAP utilizes a "whole house retrofit" approach to building
20 improvement. All participating homes must undergo an energy audit to identify energy
21 efficiency and health and safety opportunities, such as malfunctioning or substandard
22 equipment. Home efficiency and health and safety measures which have been
23 determined to be cost effective or necessary for client health and safety are installed by

1 trained weatherization professionals. Effective July 1, 2015, every weatherized home
2 must pass a thorough, quality-control inspection by the subgrantee before the dwelling
3 can be reported as completed. The final inspection must certify that work was completed
4 in a professional manner and in accordance with the Technical Standards. A second
5 home audit is performed to verify that all repairs and installations were completed
6 properly.

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

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

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

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

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

8 **Q. What is the energy burden for a low-income customer?**

9 A. According to research in “The Home Energy Affordability Gap,” Missouri households
10 with income at 50- 100% FPL have a home energy burden of 17% of their annual
11 income. The home energy burden increases to 31% for those households below 50%.⁶
12 The income for a family of three⁷ at 100% of the poverty guidelines is \$20,090.⁸ The
13 average monthly bill was \$142.01⁹ for an Empire residential customer. Using this data
14 one can calculate an annual bill of \$1,704.12 (\$142.01 X 12 months) which is 8.5% of the
15 annual income at 100% of the federal poverty level (“FPL”) guidelines
16 (\$1,704.12/\$20,090). Empire has requested a 9.66%¹⁰ rate increase. The proposed
17 increase would create a \$155.58 monthly average bill.¹¹ This would raise the energy
18 burden from 8.5% to 9.3% (\$155.58*12 months = \$1,866.96/\$20,090). A household
19 energy burden of 6% or greater is widely accepted by housing analysts as the measure for

⁶ Fisher, Sheehan & Colton, “The Home Energy Affordability Gap 2014: Missouri,” Public Finance and General Economics (April 2015).

⁷ Average household size for counties in Empire’s service territory is 2.46, U.S. Census Bureau, *American Community Survey*. 2014 Estimates
⁸ 2015 poverty guidelines

⁹ Missouri Public Service Commission Case No. ER-2016-0023, *In the Matter of The Empire District Electric Company’s Request for Authority to Implement a General Rate Increase for Electric Service*, Direct Testimony of Martin R. Hyman on Behalf of the Missouri Division of Energy, April 8, 2016, page 22, line 1, Table 4a..

¹⁰ Company’s Minimum Filing Requirements for ER-2016-0023.

¹¹ Hyman. Direct. Page 22, line 2, Table 4b.

1 unaffordable.¹² The weatherization program helps low-income customers reduce their
2 energy burden by providing cost-effective, energy-efficient home improvements to
3 Missouri’s low-income households, and it educates home occupants during the
4 weatherization process to help them make behavior changes to complement installed
5 weatherization measures, thus maximizing long-term potential energy savings.

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

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

¹² Fisher, Sheehan & Colton. *Public Finance and General Economics*. The Home Energy Affordability Gap 2014: Missouri, April, 2015.
www.homeenergyaffordabilitygap.com.

1 When low-income household parents cannot establish or re-establish utility services
2 under their names, they may employ other measures to gain service such as make-shift
3 connections from neighboring properties, utilization of gas-powered generators or
4 charcoal grills, or creating utility accounts under the name of a minor child. The short-
5 term fixes can have lasting negative health, safety and economic impacts on individuals
6 and within communities.

7 The weatherization program is intended to achieve a long-term energy solution in
8 contrast to LIHEAP bill assistance, which is a temporary stop-gap measure that does not
9 cure the problem of high energy use. Weatherization improves health and safety by
10 enabling the homeowner to afford to heat their home to a comfortable level, and the risk
11 of fire is reduced by eliminating the use of space heaters, cooking ovens, or hot plates to
12 heat homes. Weatherization programs also have a positive impact on local economies
13 through locally made purchases of energy efficiency related materials, equipment, and
14 labor. The housing stock is improved when a home is weatherized, which in turn
15 improves property values for both the homeowner 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 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.¹³ 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.

¹³ M.Schweitzer. *Oak Ridge national Laboratory*. Nonenergy Benefits From The Weatherization Assistance Program: A Summary of Findings From the Recent Literature, April 2002.

1 **V. EMPIRE’S RESIDENTIAL WEATHERIZATION PROGRAM**

2 **Q. Describe Empire’s residential weatherization program.**

3 A. Empire has administered a low-income weatherization program throughout its service
4 area since Missouri Public Service Commission Case No. ER-2004-0570 (Schedule SEK-
5 1). The current weatherization program is offered according to terms negotiated in
6 Missouri Public Service Commission Case No. ER-2014-0351. Empire contracts with
7 three CAAs – the Economic Security Corporation (“ESC”), the Ozark Area Community
8 Action Corporation (“OACAC”), and the West Central Missouri Community Action
9 Agency (“WCMCAA”)¹⁴ – to administer the weatherization program, which follows
10 USDOE LIWAP guidelines to determine consumer eligibility. For over ten years,
11 Empire has partnered with these agencies¹⁵ to deliver weatherization. Empire submits an
12 annual report to the DSMAG (formerly the CPC – Customer Programs Collaborative) of
13 which DE is a member.

14 **Q. Please discuss low-income customer energy use and the need for a weatherization**
15 **program.**

16 A. The Company states that LIHEAP recipients utilize more energy during the winter
17 months than other residential households.¹⁶ As previously stated, LIHEAP is a short-
18 term solution that does not improve energy usage for the customer. While low-income
19 families can make choices about their energy consumption through temperature settings

¹⁴ Missouri Public Service Commission Tariff No. YE-2016-0008, The Empire District Electric Company, Promotional Practices Schedule PRO, July 26, 2015, Sheet No. 8c.

¹⁵ Missouri Public Service Commission Case No. ER-2004-0570, *In the Matter of the tariff filing of The Empire District Electric Company to Implement a General Rate Increase for Retail Electric Service Provided to Customers in its Missouri Service Area*, Stipulation and Agreement As to Certain Issues. December 22, 2004. Page 2.

¹⁶ Missouri Public Service Commission Case No. ER-2016-0023, *In the Matter of The Empire District Electric Company’s Request for Authority to Implement a General Rate increase for Electric Service*, Direct Testimony of W. Scott Keith on Behalf The Empire District Electric Company, Direct, page 9, lines 11- 13.

1 and the use of efficient lights, they are less likely than other consumers to have the
2 financial means to make meaningful and long-term energy efficiency improvements to
3 their building envelope (e.g.: insulation, energy efficient windows/doors, water heaters,
4 heating, ventilation and air-conditioning systems).

5 Numerous studies have presented evidence that low-income families are more likely to
6 experience housing insecurity, energy insecurity, and food insecurity. For example,
7 Sociologist Matthew Desmond published *Unaffordable America* in 2015, which
8 examined poverty, housing, and eviction data from 1991 to 2013. The research, based on
9 American Housing Survey data, found that in 2013 most renter households in America
10 spent over 30% of their income on housing costs including utility costs with 1 in 8
11 families reporting that they could not pay all of their rent.¹⁷ As Mr. Desmond notes, “A
12 low-income family renting in a disadvantaged neighborhood pays less rent than an
13 affluent one living in a swanky downtown loft – but their utility costs are about the
14 same.”¹⁸ *Unaffordable America* also examined data from the Milwaukee Area Renters
15 Study and concluded that poor working families who experienced an eviction were 20%
16 more likely to lose their employment as a result of the eviction. Another study, published
17 in 2008 regarding household energy security, found that children in households with
18 moderate to severe energy security were also more likely to experience food insecurity,
19 increased hospitalizations since birth, and caregiver-reported fair or poor health than
20 children in energy secure households.¹⁹ “The Home Energy Affordability Gap” report

¹⁷ M. Desmond. *Institute for Research on Poverty Fast Focus*. Unaffordable America: Poverty, Housing, and Eviction, March, 2015. No. 22-2015.

¹⁸ *Ibid.*

¹⁹ J.Cook. *Pediatrics*. A Brief Indicator of Household Energy Security: Associations with Food Security, Child Health, and Child Development in US Infants and Toddlers, October 2008. Volume 122.

1 for 2014 analyzed Missouri home energy burden data and concluded that Missouri
2 households at or below 125% of the poverty level experience energy burdens of 11-
3 31%.²⁰ When faced with a high energy burden, customers may have to make decisions
4 regarding whether to heat the home or forgo other necessities such as food, needed
5 medical visits, and medications. Often times, those heavily burdened are unable to pay
6 their utility bills and must seek assistance. In addition to only meeting temporary need,
7 LIHEAP assistance is not guaranteed. Not all who are eligible will receive assistance
8 because there are more families in need than there are funds available to meet that need.
9 Program participation is also an issue. In Missouri, only 29% of eligible households
10 receive LIHEAP assistance.²¹

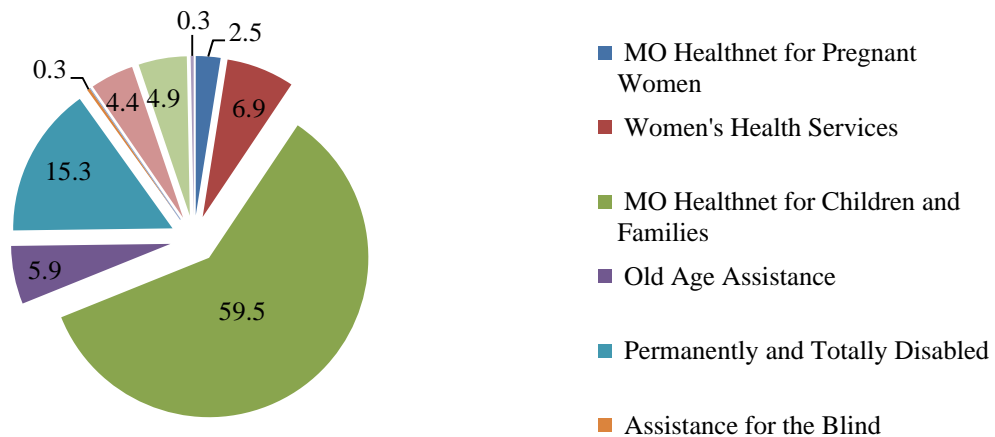
11 In 2014, 15.5% of individuals were below the poverty level in Missouri (Table 1).
12 This percentage is similar to the statewide percent of individuals receiving some type of
13 benefit through MO HealthNet (“Medicaid”). The county level percentages differ from
14 the state in both categories, and a widening gap of significance emerges, as seen in Table
15 1. Several counties exceed the state rates by over five percentage points. Simply put, a
16 person has greater probability of experiencing poverty in these counties versus other
17 counties in the state.

²⁰ Fisher, Sheehan & Colton. *Public Finance and General Economics*. The Home Energy Affordability Gap 2014: Missouri, April, 2015.

²¹ Heather Jones, email to author, February 19, 2016.

Table 1: Percent of MO HealthNet Eligibles Versus Percent of Population Under the Federal Poverty Level 2014			
Barry County	Barton County	Cedar County	Christian County
²² Medicaid 20.41%	Medicaid 19.45%	Medicaid 22.55%	Medicaid 13.46%
²³ Poverty 19.10%	Poverty 18.70%	Poverty 23.30%	Poverty 10.60%
Dade County	Dallas County	Greene County	Hickory County
Medicaid 18.46%	Medicaid 19.78%	Medicaid 15.86%	Medicaid 18.32%
Poverty 20.60%	Poverty 22.80%	Poverty 18.70%	Poverty 21.60%
Jasper County	Lawrence County	McDonald County	Newton County
Medicaid 19.96%	Medicaid 19.87%	Medicaid 20.61%	Medicaid 17.08%
Poverty 18.40%	Poverty 18.60%	Poverty 21.80%	Poverty 15.00%
Polk County	St. Clair County	Stone County	Taney County
Medicaid 20.29%	Medicaid 18.86%	Medicaid 14.34%	Medicaid 17.62%
Poverty 23.60%	Poverty 21.80%	Poverty 17.10%	Poverty 18.80%
State	16 County Total		
Medicaid 15.83%	Medicaid 18.50%		
Poverty 15.50%	Poverty 19.41%		

Chart 1: Percent Of Medicaid Eligibles By Program Category For All Counties November 2014



²² Missouri Information for Community Assessment. MO HealthNet Eligibility. November 2014. www.health.mo.gov/data/mica/MICA/.

²³ U.S. Census Bureau. American Community Survey Estimates. 2014

1 In November 2014, 59.5% of all those eligible in these 16 counties were enrolled in the
2 MO Healthnet for Children and Families program, compared to 21.2% of eligibles
3 enrolled in both the Old Age Assistance and Permanently and Totally Disabled programs.
4 This is important as the weatherization program prioritizes applications for families with
5 children, the elderly and those with a disability which, in November 2014, were 80.7% of
6 the total of those eligible for Medicaid (Chart 1). This works out to roughly 50,104
7 potentially eligible homes for the weatherization program (152,732 (Medicaid
8 individuals) * 80.7%=123,255/2.46 (ACS 2014 estimated persons per household)).
9 Participation in the federal free and reduced lunch (“F&RL”) program is also an indicator
10 of poverty. Empire provides utility service to 49 public school districts across 16
11 counties.²⁴ All 49 school districts participate in the F&RL program, which is a United
12 States Department of Agriculture Food and Nutrition Service (“USDA FNS”) program
13 administered by the Missouri Department of Elementary and Secondary Education
14 (“DESE”).²⁵ Eligibility for free lunch is 130% or less of the federal poverty guidelines
15 and reduced lunch eligibility is 130%-185% of the federal poverty guidelines. F&RL is
16 nationally recognized in the fields of health and education as a measure of socioeconomic
17 status, and it is used to locate concentrated pockets of low-income for social program
18 intervention.²⁶ A threshold of 50% or greater student population receiving F&RL is used
19 to identify “concentrated pockets” of low income. Therefore, the larger the percentage of

²⁴ Company response to Division of Energy Data Request 400. January 6, 2016.

²⁵ The Missouri Department of Elementary and Secondary Education (DESE) report Missouri public school district F&RL data by individual school buildings within the school district. The number of students receiving free lunch and the number of students receiving reduced lunch are presented together as one data element versus two separate data sets. DESE does their FRL lunch percentage count on the last Wednesday in January using the number of student membership reported in CORE and the number of students educated in the building receiving either free or reduced lunch. Therefore, the 2015 F&RL data would be reflective for November 2014.

²⁶ Validating Adolescent Socioeconomic Status: Comparing School Free or Reduced Price Lunch with Community Measures. Spatial Demography 2014 2(1): 55-5.

1 a student population receiving F&RL in a given school building, the higher the
2 proportion of corresponding families in the community that are low-income. There are
3 1282 public school buildings in Missouri that reported a F&RL count of 50% or greater,
4 and 144 (11%) of those 1282 school buildings receive their utility service from Empire.²⁷
5 Those 144 school building represent 46 school districts. Stated another way, 74.2% of
6 the school buildings served by Empire have 50% or greater of the student population
7 receiving F&RL services. Additionally, there are school districts which house school
8 buildings that DESE has designated as Community Eligible Provision (CEP) Buildings.
9 CEPs have the option to offer F&RL to all attending students without requiring eligibility
10 applications as these buildings are considered high poverty local education agencies
11 (LEA). There are six CEPs located in three school districts served by Empire: the Fair
12 Play R-II School District (Polk County), the Humansville R-IV School District (Polk
13 County), and the Kirbyville R-VI School District (Taney County). In Empire's six
14 CEPS, the membership count is 835, or roughly 287 households in Polk County and 47
15 households in Taney County (based on ACS 5-year estimates of average household size).
16 As shown in Table 2, the majority of homes in the communities of Fair Play,
17 Humansville, and Kirbyville are owner occupied and have electricity as their primary
18 heating fuel. Less than 20% of the homes are mobile homes. Multi-family units
19 comprise less than 4% of the total housing stock in Polk County and less than 24% in
20 Taney County. These communities are in the OACAC service area.

²⁷ Company Response to Division of Energy Data Request 400. January 6, 2016.

Census Tract	9601 (Polk)	4803.02 (Taney)	Missouri
Owner occupied	69.6%	65.7%	67.9%
Primary heating fuel - Electric	60.7%	66.6%	33.8%
Mobile homes	15.0%	18.1%	6.5%
Multi-family units	3.1%	23.7%	19.8%

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 Empire’s service territory?**

4 A. DE has contractual relationships with subgrantees. Three of DE’s subgrantees are also
5 the social service agencies that Empire utilizes to administer its weatherization program.
6 The subgrantees are required to submit reporting elements to DE, such as the number of
7 homes on the subgrantee’s waiting list. As of February 2015, the waiting lists included
8 112 homes for ESC, 268 homes for OACAC, and 186 homes for WCMCAA.

9 **Q. Will increasing the fixed components of the various rate charges enable customers,**
10 **particularly low-income customers, to make more efficient decisions regarding their**
11 **energy usage?**

12 A. No. Mr. Keith argues in his direct testimony that increasing the residential fixed charge
13 will move rates toward a cost of service that will, in effect, “...lessen the impact on
14 Empire’s lower income customers, who on the average use more than the average
15 customer during the winter months.”²⁹

²⁸ US Census Bureau. American Community Survey 5-year Estimates: Table DP04 Selected Housing Characteristics 2010-2014. Fair Play and Humansville are included in tract 960. Kirbyville is included in tract 4803.02

²⁹ Keith, Direct, page 9 line 12.

1 It is important to note that Mr. Keith's analysis of low-income customer usage is based
2 on only those residential customers (4,162)³⁰ who receive LIHEAP assistance³¹ and not
3 all low-income customers. Thus, Mr. Keith's conclusion is based on 3.3% of the
4 Company's 126,469 residential customer accounts. As mentioned earlier, only about
5 29% of eligible households in Missouri receive LIHEAP. Further, the Company does not
6 define any level of "low-income"³² and states that it does not know customer household
7 income for purposed of determining LIWAP³³ or LIHEAP³⁴ eligibility of its customers.
8 Mr. Keith's statement regarding "lower- income" customers is misleading as not all low-
9 income Empire customers are also LIHEAP recipients. Thus, we cannot assume that all
10 low-income families utilize, "...more than the average customer..." as Mr. Keith argues.
11 It would be more accurate to say that "customers who receive LIHEAP" use on average
12 more than the average customer, which DE would not dispute.

13 **Q. Are you surprised by the fact that LIHEAP customers use more than the average**
14 **customer?**

15 A. No. LIHEAP subsidizes household income in order to reduce the energy burden. It is a
16 measure aimed at payment of the utility bill. Energy conservation is achieved through
17 behavior changes and installation of efficiency measures. LIWAP educates home
18 occupants during the weatherization process to help occupants make behavior changes to
19 compliment installed weatherization measures and thus maximize the long-term potential
20 energy savings.

³⁰ Company response to Division of Energy Data Request 401. January 6, 2016.

³¹ Company response to Division of Energy Data Request 404. January 4, 2016.

³² Ibid

³³ Company response to Division of Energy Data Request No. 403, December 30, 2015.

³⁴ Company response to Division of Energy Data Requests Nos. 402, January 6, 2016.

1 **Q. What is the energy usage of low-income households?**

2 A. The LIHEAP Home Energy Notebook contains energy data by four categories: all, non-
3 low-income, low-income, and LIHEAP recipient; data for national residential use from
4 the LIHEAP Home Energy Notebook is shown in Table 3 below.

	1979	1981	1983	1985	1987	1990	1993	1997	2001	2005	2011
Total	166	153	135	144	143	134	145	143	134	147	152
Other	75	79	74	75	78	76	83	86	80	89	89
Cooling	5	7	5	7	9	9	9	10	12	19	21
Heating	87	67	56	62	56	49	53	47	42	39	43

5 It is true that the total energy use for low-income households has increased since 2001
6 (Table 3). However, the energy use for heating decreased in 2001 and has remained
7 lower than pre-1997 years. Between 2001 and 2011, there is an increase in energy use
8 for cooling and for other energy use. Two trends have emerged since 1997 in low-
9 income households: 1) a steady increase in the percentage of households using central
10 air-conditioning,³⁶ and 2) an increase in the percentage of households using electricity as
11 a heating fuel.³⁷

12 **Q. Please discuss barriers LIHEAP customers face in reducing their energy use.**

13 A. While low-income families can make choices about their energy consumption (e.g.:
14 temperature settings, more efficient lights), they do not readily have the ability or the
15 financial means to make meaningful and long-term energy efficiency impacts to their

³⁵ 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. Figure 3.3: LIHEAP defines low-income as those which are at or below 150 percent of the poverty guidelines and do not receive LIHEAP assistance.

³⁶ Ibid. Figure 4.

³⁷ Ibid. Figure 5.

1 building envelope (e.g.: insulation, energy efficient windows/doors, energy star water
2 heaters, and energy star heating and ventilation or air-conditioning upgrades). Looking at
3 the housing tenure of families with income below the poverty level for the past 12 months
4 of 2014, the majority of households in 9 out of the 16 counties are renters, and the
5 percentage of renters versus owners is 60% or higher for 6 of those 9 counties.³⁸ Looking
6 at primary heating fuel for both renters and owners across all income levels, one finds
7 that the majority of renters in each county use electricity as their primary heating fuel
8 source.³⁹ In comparison, the majority of home owners in 10 out of 16 counties reported
9 using electricity as their primary heating fuel. Families, that rent, rely on their landlords
10 to make energy efficiency improvements. Renters are eligible for participation in the
11 weatherization program, but, as stated earlier, landlords must contribute a percentage of
12 the estimated costs.

13 **VI. CONCLUSIONS**

14 **Q. Please summarize your testimony.**

15 **A.** A weatherization program helps communities grow and prosper while promoting energy
16 efficiency, which is good for the customer, the community, the utility, and ultimately
17 ratepayers. DE supports low-income weatherization and believes there is a demonstrated
18 need for the weatherization program in Empire's service area. DE supports a review that
19 is limited in scope to Empire's administration of weatherization funds and related
20 contracts. Per the Company's tariff, any unused weatherization funds can be rolled
21 forward into the next fiscal year. However, the intent of doing so was not to accumulate
22 a large balance. DE will support an increase in weatherization funding contingent on

³⁸ *US Census Bureau*. American Community Survey 5-year Estimates: Table B17019.

³⁹ *US Census Bureau*. American Community Survey 5-year Estimates: Table B25117.

1 improved administration and implementation of a mechanism to credit interest, on unused
2 weatherization funds, back to the weatherization program in order to send the proper
3 signal to the Company to encourage full utilization of funds.

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

5 A. Yes, thank you.