

FILED
December 29, 2017
Data Center
Missouri Public
Service Commission

Exhibit No.: 503
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.: GR-2017-0215; GR-2017-0216

MISSOURI PUBLIC SERVICE COMMISSION

SPIRE MISSOURI INC.

CASE NO. GR-2017-0215

AND

CASE NO. GR-2017-0216

DIRECT TESTIMONY

OF

SHARLET E. KROLL

ON

BEHALF OF

MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT

DIVISION OF ENERGY

Jefferson City, Missouri
September 8, 2017

(Revenue Requirement)

DE Exhibit No. 503
Date 2-15-17 Reporter A.F.
File No. GR-2017-0215
GR-2017-0216

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

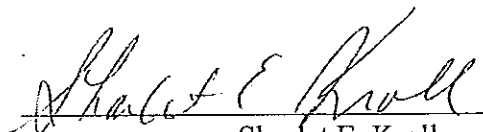
In the Matter of Laclede Gas Company's)	<u>File No. GR-2017-0215</u>
Request to Increase Its Revenues for Gas Service)	Tariff No. YG-2017-0195
In the Matter of Laclede Gas Company d/b/a Missouri Gas)	<u>File No. GR-2017-0216</u>
Energy's Request to Increase Its Revenues for Gas Service)	Tariff No. YG-2017-0196

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 (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 8th day of September, 2017.

LAURIE ANN ARNOLD
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: April 26, 2020
Commission Number: 16608714



Notary Public

My commission expires: 4/26/20

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 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 federal Low
13 Income Weatherization Assistance Program (“LIWAP”) funding in Missouri. DE is also
14 responsible for administering the federal State Energy Program (“SEP”) in Missouri. The
15 SEP, established by the United States Congress in 1978, is managed nationally by the
16 United States Department of Energy (“USDOE”). DE’s powers and duties are outlined in
17 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.

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

2 A. I was awarded a dual Bachelor of Arts degree in Sociology and Political Science in 1993
3 from the University of Missouri – Columbia (“UMC”). I am a Capital Fellow in the
4 Master of Public Affairs Program at the Harry S Truman School of Public Affairs.

5 I joined the DED-DE team in 2015 as a Planner II, Energy Policy Analyst. As an Energy
6 Policy Analyst, I represented DE at investor-owned utility (“IOU”) advisory group
7 meetings, conducted DE’s internal budget tracking of energy efficiency (“EE”) measures
8 in Missouri, evaluated and developed policy recommendations on the non-energy benefits
9 and low-income issues related to initiatives under the Clean Power Plan, and worked on a
10 project to detail the EE case history of each utility. In March of 2017, I was promoted as
11 the Administrative Manager for DE’s LIWAP unit where I supervise the LIWAP
12 procedural operations and staff. I have over 24 years of state government program
13 experience in areas related to low-income, public health, emergency response, and EE. I
14 started my career as a Social Service Worker with the State of Missouri in the Department
15 of Social Services, initially with the Division of Family Services and later with the Division
16 of Aging – which is now the Division of Senior and Disability Services within the
17 Department of Health and Senior Services. During my service with Division of Aging, I
18 was cross-trained to receive and process Medicaid applications related to: Old Age
19 Assistance and the Permanently and Totally Disabled. In 2002 I became Missouri’s first
20 “State Medical Reserve Corps/Volunteer Program Coordinator” and worked with local
21 public health agencies to develop and implement a statewide public health volunteer
22 program for disaster response. I also hold a certificate of knowledge in Building Science
23 Principles, which is a home performance course. In addition, I completed Building

1 Operator Certification (“BOC”). The BOC is a national workforce training and
2 credentialing program that offers job skills in EE building and operation maintenance
3 practices. Finally, I completed the National Incident Management System curriculum
4 required for public health, the Federal Emergency Management Agency’s (“FEMA”)
5 Planners Course, and other emergency management courses sponsored through the State
6 Emergency Management Agency (“SEMA”). I participated in and evaluated several state-
7 level disaster preparedness exercises.

8 **Q. Please describe your work assisting Missouri utilities with energy efficiency**
9 **initiatives and weatherization.**

10 A. Until recently, I served as DE’s designated representative to all electric and natural gas
11 IOU collaboratives, including: Liberty Utilities EE Advisory Group, Missouri Gas Energy
12 - Laclede Gas Company EE Collaborative, Ameren Missouri¹ Demand-Side Management
13 Stakeholder Group (“DSMAG”), Ameren Missouri Natural Gas EE Advisory Group,
14 Kansas City Power and Light Company DSMAG, KCP&L Greater Missouri Operations
15 Company DSMAG, Summit Natural Gas EE Advisory Group, Empire District Electric
16 Company DSMAG, and Empire District Gas Company DSMAG. Most collaboratives
17 meet quarterly via conference call, web cast, or in-person. Three collaboratives meet
18 biannually. Each collaborative addresses company-specific issues, which may include EE
19 measures and programs, weatherization efforts, the potential for co-delivery of programs,
20 and program evaluation.

¹ Union Electric Company d/b/a Ameren Missouri

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

2 A. In preparation of this testimony, I reviewed the relevant portions of direct testimonies of
3 Michael Noack, Scott A. Weitzel, C. Eric Lobser, and past tariffs and case documents
4 regarding Laclede Gas Company (“LAC”) and Laclede Gas Company d/b/a Missouri Gas
5 Energy (“MGE”) EE and weatherization programs including DE weatherization reports.

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

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

8 A. The purpose of my testimony is to present DE’s recommendations regarding administration
9 and funding of the Company’s weatherization programs in Eastern (LAC) and Western
10 (MGE) Missouri. I will also provide information on the history and performance of both
11 weatherization programs, and discuss energy burden and other household income related
12 considerations.

13 **Q. What are your recommendations regarding the LAC and MGE weatherization
14 programs?**

15 A. DE requests that the Commission (1) continue the current level of funding for the LAC
16 weatherization program, (2) continue the current level of funding for the MGE
17 weatherization program, (3) consider allowing the company to compensate DE and
18 Environmental Improvement and Energy Resources Authority (“EIERA”) for their
19 respective roles in administering the LAC weatherization program or in the alternative
20 direct that the Company and interested parties consider alternatives for DE’s ongoing
21 administration of the utility-funded weatherization program, and (4) approve adding a

1 check off box to customer bills and the on-line payment systems to allow additional
2 voluntarily contributions to weatherization efforts – a long-term energy solution.

3 **Q. What do you recommend regarding the LAC and MGE weatherization program**
4 **funding levels?**

5 A. DE recommends continuing the LAC weatherization program at the annual level of
6 \$950,000 which was approved in Case No. GR-2010-0171 (Schedule SEK-2). DE
7 recommends continuing MGE weatherization program at its current level of \$750,000
8 which was approved in Case No. GR-2014-007 (Schedule SEK-3). DE recommends that
9 compensation paid for administration be in addition to recommended levels.

10 **III. FEDERAL LOW INCOME WEATHERIZATION ASSISTANCE PROGRAM**

11 **Q. Please describe the federal LIWAP.**

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

1 every weatherized home must pass a thorough, quality-control inspection (“QCI”) by the
2 subgrantee before the dwelling can be reported as completed. The final inspection must
3 certify that all repairs and installations were completed in a professional manner and in
4 accordance with the Technical Standards.

5 **Q. What are some of the benefits of weatherization?**

6 A. Weatherization can reduce customer energy use and provide economic benefits for utilities,
7 ratepayers, and local communities. Low-income households are more likely to have
8 difficulty connecting to utility service due to outstanding account balances, have energy
9 disruptions due to shut-offs, and experience negative health and employment outcomes due
10 to challenges related to acquiring and maintaining basic household energy services. Low-
11 income households are less likely to have the financial resources to make meaningful
12 energy efficiency improvements that will reduce their energy burden. Without
13 weatherization, homeowners may resort to using broken or malfunctioning equipment that
14 can result in fires or carbon monoxide poisoning. Homeowners may go without heating or
15 cooling or forgo needed medical appointments, medications, and/or food. This is
16 particularly concerning for households with occupants who are premature babies, elderly,
17 take medications which can affect core body temperature, or suffer chronic diseases such
18 as asthma, chronic obstructive pulmonary disease, diabetes, or congestive heart failure.
19 Premature babies or babies born with weakened immune systems are at a higher risk for
20 developing respiratory syncytial virus (“RSV”) and asthma. When low-income household
21 parents cannot establish or re-establish utility services under their names, they may employ
22 other measures to gain service such as make-shift connections from neighboring properties,
23 utilization of gas-powered generators or charcoal grills, or creating utility accounts under

1 the name of a minor child. The short-term fixes can have lasting negative health, safety
2 and economic impacts on individuals and within communities. The weatherization
3 program is intended to achieve a long-term energy solution in contrast to Low Income
4 Home Energy Assistance Program (“LIHEAP”) bill assistance, which is a temporary stop-
5 gap measure that does not cure the problem of high energy use. Weatherization improves
6 health and safety by enabling the homeowner to afford to heat their home to a comfortable
7 level, and the risk of fire is reduced by eliminating the use of space heaters, cooking ovens,
8 or hot plates to heat homes. Weatherization programs also have a positive impact on local
9 economies through locally made purchases of energy efficiency related materials,
10 equipment, and labor. The housing stock is improved when a home is weatherized, which
11 in turn improves property values for both the homeowner and the community.

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

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

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 **IV. DE'S ADMINISTRATION OF WEATHERIZATION ASSISTANCE PROGRAMS**

2 **Q. Please describe DE's administration of the federal LIWAP.**

3 A. DE maintains an expert team with certified technical personnel trained to ensure
4 administration of LIWAP funds in compliance with USDOE program guidelines. DE has
5 eight full time staff and several part time staff, whose total time is equivalent to an
6 additional one and a half full time staff positions. Several DE staff are credentialed through
7 certifications to ensure administration of LIWAP in compliance with USDOE program
8 guidelines. USDOE requires some DE staff to be QCI certified, which three of DE's
9 technical staff have. Additionally, some DE staff are Certified Building Analysts and
10 Certified Healthy Home Specialists. Administration includes several components
11 encompassing fiscal, procedural and technical oversight. DE has fiscal management of
12 multiple funding sources with differing expiration cycles. Procedural administration
13 includes: monitoring contactors ("subgrantees"), technical assistance, review and approval
14 of monthly subgrantee requests for payment ("reimbursements") and supporting client files
15 and documentation, annual on-site procedural monitoring of subgrantee contracts, and
16 submittal of required reports and inquiries to USDOE. Technical administration includes:
17 home inspections of a minimum of five percent of weatherized homes during on-site
18 technical monitoring to ensure quality control and adherence with program guidelines,
19 training support, and technical assistance. These activities can be aggregated to daily,
20 monthly, and annual occurrences as shown in Schedule SEK – 4. Annually, DE issues
21 subgrantee weatherization contracts, assigns a risk assessment to each subgrantee, hosts a
22 technical training in Jefferson City, conducts at least one on-site fiscal and procedural
23 monitoring of each subgrantee and two on-site technical monitorings of each subgrantee.

1 USDOE requires an on-site technical monitoring of a percentage of completed homes per
2 subgrantee. DE adds homes to this requirement in order to monitor weatherization work
3 on homes from each funding source. DE contracts with 17 local community action
4 agencies (“CAAs”) and one non-profit organization as subgrantees to provide
5 weatherization services to every region in the state. DE negotiates one contract per funding
6 source with each subgrantee. During FY 2017, DE had 85 executed contracts in place with
7 subgrantees and 31 (36 percent) were for utility weatherization programs. Monthly, DE
8 authorizes subgrantee payment of funds. Each subgrantee request for reimbursement is
9 reviewed once per funding source and entered into separate tracking systems for payment.
10 For example, if a home is weatherized using USDOE funds, Company funds, and LIHEAP
11 funds, then DE staff would review three separate reimbursements for authorization of
12 payment from each fund and enter each of the three requests into separate ledgers. DE
13 daily compiles reports, invoice and expenditure tracking, answers numerous inquiries for
14 technical assistance, and maintenance of the Missouri Weatherization Assistance Program
15 (“MoWAP” or “Database”) Database. MoWAP is a real-time, web-based application used
16 by DE and their subgrantees for tracking and reporting of DE administered weatherization
17 funds. DE monitors MoWAP daily for subgrantee activity (budget adjustments and
18 reimbursements) and reports.

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

20 **A.** From 1977 through July 31, 2017, 189,976 homes in Missouri were weatherized with funds
21 administered by DE. DE administers funds from four funding streams: USDOE, LIHEAP,
22 Utilicare, and four of the state’s IOUs – (Ameren Missouri Electric, Ameren Missouri
23 Natural Gas, LAC, and Liberty Utilities). DE annually submits an application to receive

1 USDOE grant funds, which has traditionally been DE's primary source of LIWAP funding.
2 Beginning in 2013, LIHEAP funds have been transferred to DE to weatherize homes,
3 providing a long-term – versus temporary – solution to addressing the energy burden for
4 low-income clients. At times, DE receives Utilicare funding, which comes from the state's
5 general revenue and is subject to the state budgetary process.³ DE administers all funds in
6 accordance with USDOE LIWAP guidelines. DE did accumulate a surplus ("carryover")
7 of IOU funds associated with past priority spending of American Recovery and
8 Reinvestment Act ("ARRA") funding. However, in recent years, DE has reduced the
9 amount of carryover.

10 **Q. How are DE's costs of administering utility weatherization programs provided?**

11 **A.** While the subgrantees have received and continue to receive administrative compensation
12 from utility weatherization programs, DE's administrative services have been provided at
13 no cost to the Company. DE has funded the vast majority of its administrative contribution
14 to utility weatherization programs through the USDOE grant it receives to administer the
15 LIWAP program. At the state level, DE receives no general revenue funds to administer
16 weatherization programs nor does DE receive funds to administer the weatherization
17 portion of Utilicare.⁴ However, DE does intermittently receive some funds to administer
18 the transfer of federal LIHEAP⁵ funds for weatherization. The amount approved for 2016
19 was less than three percent of the LIHEAP funds authorized for weatherization.

³ No allocation was granted for FY2018 (July 1, 2017 – June 30, 2018).

⁴ Missouri Revised Statutes, *Utilicare Stabilization Fund Created – Used For Utilicare Program*. Chapter 660, Section 660.136.1, August 28, 2016. <http://www.moga.mo.gov/mostatutes/stathtml/66000001361.html>

⁵ While DE received 2.9 percent from LIHEAP for personnel costs and expense and equipment costs for the current year, no administrative funding for DE was authorized the first two years of LIHEAP funding for LIWAP.

1 **Q. Which IOUs weatherization programs are not administered by DE?**

2 A. MGE, Kansas City Power & Light ("KCP&L"), KCP&L Greater Missouri Operations,
3 Summit Natural Gas, The Empire District Electric and Gas Companies ("Empire") manage
4 their own weatherization programs. However, DE and Empire are currently in negotiations
5 to transfer administration of their electric and natural gas weatherization programs to DE
6 by November 1, 2017 as per the stipulation and agreement in Case No. EM-2016-0213.
7 DE will receive an annual administration fee of up to five percent for a period of five years,⁶
8 which is to be funded by shareholders.

9 **Q. Do organizations and companies typically charge for program administration?**

10 A. Yes. For example, DE allows its subgrantees a five percent allowance for administration.
11 However, if the grant is less than \$350,000, then DE allows the subgrantee, per USDOE
12 guidelines, to request an additional five percent. The majority of subgrantees requested
13 and received the additional five percent for the current program year. Utility managed
14 weatherization programs provide administration compensation to their social service
15 agencies. MGE allows its social service agencies an annual administrative compensation
16 rate of 13 percent.⁷ Even the Missouri State Employee Charitable Campaign receives a fee
17 for all incurred Campaign costs. This fee varies from year to year but on average has been
18 less than 10 percent. Table 1 shows the range of administration fees that participating

⁶ Missouri Public Service Commission Case No. EM-2016-0213. *In the Matter of The Empire District Electric Company, Liberty Utilities (Central) Co, And Liberty Sub Corp. Concerning an Agreement and Plan of Merger and Certain Related Transactions.* Stipulation and Agreement, pp 8.

⁷ Iacleda Gas Company, All Missouri Gas Energy Service Areas. (February 9, 2014). Tariff Sheet No. 96. Promotional Practices, "Weatherization Program." JG-2014-0293.

1 charities receive.⁸ Less than seven percent of participating charities waive an
2 administrative fee with the majority receiving 11 – 20 percent.

Admin Fee (%)	Number	Percent
0	63	6.30%
1 to 5	127	12.70%
6 to 10	170	17.00%
11 to 15	226	22.60%
16 to 20	226	22.60%
21 to 25	89	8.90%
26 to 30	42	4.20%
31 to 35	28	2.80%
over 35	29	2.90%

3 **V. THE COMPANY’S WEATHERIZATION PROGRAMS**

4 **Q. How is the LAC weatherization program administered?**

5 A. DE has administered the LAC weatherization program since February 2008 as a result of
6 Case No. GR-2007-0208. DE oversees contractor (“subgrantee”) delivery of program
7 services within LAC’s service area. There are six subgrantees contracted by DE to provide
8 approval and installation of weatherization measures to Missouri’s most vulnerable
9 households: East Missouri Action Agency (“EMAA”), Urban League of Metropolitan St.
10 Louis (“ULMSL”), Jefferson Franklin Community Action Corporation (“JFCAC”),
11 Community Action Agency of St. Louis County (“CAASTLC”), North East Community
12 Action Corporation (“NECAC”), and South Central Missouri Community Action Agency
13 (“SCMAA”). From February 2008 to July 31, 2017, there were 2916 LAC customers
14 weatherized utilizing company funds administered by DE.

⁸ Missouri State Employees Charitable Campaign. (2016). 2016 Quick Charity Reference Guide. Retrieved December 1, 2016, from https://msecc.mo.gov/documents/2016_Quick_Charity_Reference_Guide.pdf.

1 **Q. Under what condition is DE willing to continue administration of the company's**
2 **weatherization program?**

3 A. DE is willing to continue administering the LAC weatherization program, consistent with
4 the LIWAP, provided that its administrative costs can be recovered. DE is willing to
5 provide administration services at the lesser of costs or up to five percent of the program
6 budget. This level of administrative funding is consistent with LIWAP guidelines found
7 in the United States Code of Federal Regulations (C.F.R.) 10 C.F.R. § 440.18(e):

8 Not more than 10 percent of any grant made to a State may be used by the grantee
9 and subgrantees for administrative purposes in carrying out duties under this part,
10 except that not more than 5 percent may be used by the State for such purposes,
11 and not less than 5 percent must be made available to subgrantees by States.⁹
12

13 However, DE acknowledges that parties have expressed concerns in the past about
14 providing such compensation.

15 **Q. What is the basis for DE's recommendation for administration compensation?**

16 A. DE is concerned about its on-going ability to administer the Company's program due to
17 the increasing costs which the USDOE LIWAP grant incurs as a result of managing the
18 LAC and other utility programs. Increasingly, DE has faced financial challenges in
19 supporting adequate staff and covering related expenses to administer both LIWAP and
20 utility weatherization programs. DE is also concerned about possible public perceptions
21 of bias arising from DE's agreement to manage some utility weatherization programs while
22 declining to manage other requests for the same treatment. In addition to the cost of staff
23 time and related expenses associated with administration of the Company's program, DE

⁹ United States Government Publishing Office. (2011). *Weatherization Assistance for Low-Income Persons; Allowable Expenditures*. Accessed August 30, 2017 from <https://www.gpo.gov/fdsys/granule/CFR-2011-title10-vol3/CFR-2011-title10-vol3-sec440-18>

1 is aware that the EI ERA, which handles the receipt and disbursement of IOU program
2 funds, is requesting a flat fee to recover their transaction costs for the services they provide
3 in the administration of the Company's funds. Currently, only their accounting and
4 auditing fees are paid out of the Company's \$950,000 weatherization funds. DE believes
5 we can provide value in administering weatherization programs due to economies of scale.
6 However, if DE is to be responsible for ongoing administration, then DE is interested in
7 crafting a consistent and sustainable approach to program administration that addresses
8 these issues.

9 **Q. What is EI ERA?**

10 A. Since 2003, DE administered IOU weatherization funds have been held by EI ERA. EI ERA
11 was established in 1972 by the Missouri General Assembly and is housed within the
12 Missouri Department of Natural Resources. It is a quasi-governmental environmental
13 finance agency which has a five member board appointed by the Governor for a three-year
14 term and confirmed by the Senate. EI ERA does not receive state general revenue funds.

15 **Q. What incremental costs does DE incur to administer LAC's weatherization program?**

16 A. The six subgrantees providing weatherization services for the company's eligible
17 customers represent six instances of incremental costs for DE as shown in Schedule SEK
18 - 4. DE annually contracts with subgrantees to provide weatherization services. From
19 November 1 - October 31, 2016, DE had six additional contracts with subgrantees for
20 LAC's weatherization program as shown in Table 2 below.

TABLE 2: Contracts

Fund	Agency					
	EMAA	ULMSL	JFCAC	CAASTLC	NECAC	SCMCAA
DOE	Y	Y	Y	Y	Y	Y
LIHEAP	Y	Y	Y	Y	Y	Y
Utilicare *	Y	Y	Y	Y	Y	Y
Ameren Electric	Y	Y	Y	Y	Y	
Ameren Gas	Y				Y	Y
Liberty Utilities	Y				Y	Y
Laclede Gas	Y	Y	Y	Y	Y	Y
TOTALS	7	5	5	5	7	6

1 Monthly, DE reviews subgrantee requests (“reimbursements”) for payment. Subgrantees
 2 submit one reimbursement per funding source. For example, a subgrantee who weatherizes
 3 a home leveraging blended DOE, LAC, LIHEAP, and Ameren-Missouri Electric funds
 4 would submit four separate reimbursement requests. Thus, there is a potential of 72 (six
 5 subgrantees x 12 months) additional reimbursements DE must review as a result of
 6 administering LAC’s funds. As indicated in Table 3 below, the number of reimbursements
 7 historically has ranged from 30 to 47, but DE is on track to process 60 or more by October
 8 31, 2017.

TABLE 3: Number Reimbursements Submitted to DE for Processing (LAC)

Agency	PY 2011 (G12-10-0171)	PY 2012 (G12-10-0171-2)	PY 2013 (G12-10-0171-3)	PY 2014 (G12-10-0171-4)	PY 2015 (G12-10-0171-5)	PY 2016* (G12-10-0171-6)
EMAA	2	3	4	5	4	7
ULMSL	3	5	4	10	8	8
JFCAC	7	7	7	8	8	4
CAASTLC**	8	16	11	12	16	15
NECAC	4	4	7	8	9	8
SCMCAA	6	3	2	2	2	2
TOTALS***	30	38	35	45	47	44

* November 1, 2016 - July 31, 2017
 ** CAASTLC is submitting two reimbursement requests per month for PY 2016
 *** Estimate 19 more reimbursement requests between August - October 2017.

9 Each reimbursement is touched by at least three DE staff starting with the initial review of
 10 client files, then approval of reimbursement, and finally completion of forms for
 11 authorization of payment. Because DE administers the LAC funds consistent with LIWAP,
 12 DE includes LAC funds in both the on-site technical and procedural monitoring with
 13 subgrantees. DE must annually complete a minimum of one on-site procedural monitoring

1 and two technical monitoring of each subgrantee per USDOE LIWAP guidelines. DE
 2 includes additional client files to be reviewed during the procedural monitoring and
 3 additional homes to be inspected during the technical monitoring process in order to
 4 include homes weatherized with utility funds. In FY 2017, DE included 48 client files
 5 (Table 4) weatherized with Company funds, in its procedural monitoring reports to
 6 subgrantees.

TABLE 4: Number Client Files Reviewed During Annual Procedural Monitoring Visit (LAC)

Agency	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
EMAA	2	1	1	1	1	4
ULMSL	5	4	1	4	7	18
JFCAC	2	2	5	1	1	3
CAASTLC	7	39	26	22	24	18
NECAC	1	1	3	3	2	3
SCMCAA	1	3	1	1	1	2
TOTALS	18	50	37	32	36	48

Monitoring schedule goes by the State Fiscal Year ("FY") of July 1 - June 30.

7 Technical monitoring of subgrantees includes site visits to a minimum of five percent of
 8 completed homes. DE also includes homes "in-progress" and homes ready to start
 9 weatherization. Technical monitoring is broken into two cycles. Thus, every subgrantee
 10 receives two technical monitoring visits per fiscal year. As shown in Table 5 below, DE
 11 included 20 LAC funded homes in technical monitoring reports.

TABLE 5: Number of Client Homes Visited During Technical Monitoring Visits (LAC)

Agency	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017*
EMAA	1	0	2	0	0
ULMSL	11	0	7	3	2
JFCAC	1	2	2	1	1
CAASTLC	18	12	13	12	2
NECAC	1	1	1	4	2
SCMCAA	1	1	2	0	2
TOTALS	33	16	27	20	9

* Technical monitors using the state fiscal year. FY 2017 has only one cycle of technical monitoring completed as cycle two started in August 2017.

1 **Q. Please discuss LAC’s weatherization program.**

2 A. DE administers LAC’s program according to the USDOE’s LIWAP guidelines. LAC
 3 provides service to 606,401¹⁰ residential customers in 11 (9.6 percent) of the 114 counties
 4 in Missouri. The Company’s weatherization program is performing well as shown in Table
 5 6 below.

Table 6: LAC Weatherization Production

Program Year *	Budget	Expenditure	Variance	Percent	Homes	Avg Cost Per Home
2007**	\$939,165	\$819,818	\$119,347	87%	349	\$2,349
2008	\$1,031,343	\$1,023,661	\$7,682	99%	443	\$2,311
2009	\$995,686	\$713,515	\$282,171	72%	216	\$3,303
2010	\$1,089,741	\$555,260	\$534,481	51%	156	\$3,559
2011	\$1,617,213	\$972,780	\$644,433	60%	219	\$4,442
2012	\$1,629,606	\$1,516,457	\$113,149	93%	409	\$3,708
2013	\$1,063,149	\$983,772	\$79,377	93%	256	\$3,843
2014	\$1,029,689	\$1,003,491	\$26,198	97%	325	\$3,088
2015	\$975,980	\$947,436	\$28,544	97%	285	\$3,324
2016 ***	\$978,221	\$705,496	\$272,725	72%	258	\$2,734
Total	\$11,349,793	\$9,241,686	\$2,108,107	81%	2916	\$3,169

* Program year runs November 1 - October 31. Year based on November.

** Partial year as program administration began February 2008.

*** Partial year from November 1, 2016 - July 31, 2017.

6 The first program year (PY 2007) was nine months, but 87 percent of LAC funds were
 7 expended. Missouri received American Recovery and Reinvestment Act (“ARRA”)
 8 funding from April 1, 2009 to June 30, 2013. Because ARRA’s LIWAP funds were
 9 required to be expended by a deadline, they had to be utilized ahead of IOU funds. This
 10 resulted in a surplus (“carryover”) of utility funds in PY 2009 through PY 2011. However,
 11 in PY 2014 and PY 2015, DE reduced the amount of carryover and is expended 97 percent
 12 of weatherization funds. Presently, subgrantees have expended 72 percent of LAC’s funds
 13 in nine months (or 75 percent of the contract time).

¹⁰ Company’s Minimum Filing Requirement

1 **Q. Please discuss MGE’s weatherization program.**

2 A. MGE provides service to 449,833¹¹ residential customers in 31(27.2 percent) of the 114
 3 counties in Missouri, which is 156,568 fewer residential customers than LAC. The
 4 company administers the MGE weatherization program. As shown in Table 7¹² below,
 5 MGE’s weatherization program is performing well. The program accrued carryover
 6 funds when switching social service providers from Kansas City to United Services
 7 Community Action Agency¹³ in 2014. However, MGE has increased production of
 8 homes and reduced the amount of carryover during the last two program years.

Table 7: MGE Weatherization Program

Year*	Budget	Expenditure	Difference	No. Homes	Cost Per Home	Carryover	Change	Variance
2012	\$1,461,632	\$1,495,098	-\$33,466	353	\$4,235	\$676,704		
2013	\$643,650	\$607,391	\$36,259	143	\$4,247	\$730,270	\$53,566	7.92%
2014	\$750,000	\$335,425	\$414,575	181	\$1,853	\$1,282,312	\$552,042	75.59%
2015	\$750,000	\$1,054,966	-\$304,966	301	\$3,505	\$977,347	-\$304,965	-23.78%
2016	\$750,000	\$994,640	-\$244,640	331	\$3,005	\$731,707	-\$245,640	-25.13%
Total	\$4,355,282	\$4,487,520	-\$132,238	1,309	\$3,428.20			

* Based on calendar year.

9 MGE’s social service agencies have weatherized 1,309 customer households between
 10 January 1, 2012 and December 31, 2016 while reducing the average cost per home down
 11 to \$3,428. This performs very well when compared to the LAC program.¹⁴ During the
 12 same time period, DE weatherized 1520 customer households with LAC funds at an
 13 average cost per home of \$3,612.98.

¹¹ Company’s Minimum Filing Requirement

¹² Company’s response to DED-DE Data Request 401.

¹³ Now d/b/a Community Action Agency of Greater Kansas City (“CAAGKC”)

¹⁴ In order to compare the two programs, LAC’s program year from November 1 – October 31 was converted to a calendar year to match MGE’s program cycle of January 1 – December 31st.

1 **Q. How many Company customers are on waiting lists for weatherization services?**

2 A. Subgrantees use waiting lists as a way to fairly manage the order in which applicants
 3 receive weatherization measures so that preferential treatment is removed from the process.
 4 There are 1658 households statewide on subgrantee waiting lists for weatherization
 5 services and 148 (8.93 percent) are LAC customers while 127 (7.66 percent) are MGE
 6 customers as shown in Table 8 below. It should be noted that waiting lists only consider
 7 households that are in application status. Households that are in the process of being
 8 weatherized are not considered as part of the waiting list count. In addition, the waiting
 9 lists do not account for all potentially eligible households.

Table 8: Subgrantee Waiting List; September 1, 2017

Agency	Company	Waiting List (Total)	Waiting List (LAC)	Percent	Waiting List (MGE)	Percent
CAAGKC	MGE	31	0	0.00%	27	87.10%
CAASTL	LAC	89	78	87.64%	0	0.00%
CAPNCM	No	43	0	0.00%	0	0.00%
CAPNEM	No	50	0	0.00%	0	0.00%
CMCA	No	39	0	0.00%	0	0.00%
CSI	MGE	44	0	0.00%	18	40.91%
DAEOC	No	60	0	0.00%	0	0.00%
EMAA	LAC	129	14	10.85%	0	0.00%
ESC	MGE	67	0	0.00%	40	59.70%
JFCAC	LAC	32	0	0.00%	0	0.00%
MOCA	No	38	0	0.00%	0	0.00%
MVCAA	MGE	87	0	0.00%	19	21.84%
NECAC	LAC	443	24	5.42%	0	0.00%
OACAC	MGE	108	0	0.00%	8	7.41%
OAI	No	176	0	0.00%	0	0.00%
SCMCAA	LAC	57	0	0.00%	0	0.00%
ULMSL	LAC	38	32	84.21%	0	0.00%
WCMCA	No	127	0	0.00%	15	11.81%
TOTAL		1,658	148	8.93%	127	7.66%

Six agencies subgrant for LAC weatherization funds

Four agencies provide MGE weatherization services

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. Energy
4 burden disproportionately impacts low-income households. According to research in “The
5 Home Energy Affordability Gap,” Missouri households with income between 50-100
6 percent of the federal poverty level (“FPL”) have a home energy burden of 15 percent of
7 their annual income. The home energy burden increases to 27 percent for those households
8 below 50 percent of FPL.¹⁵ Energy insecurity describes a family’s ability to meet basic
9 household energy needs. It is “...the interplay between structural conditions of housing
10 and the costs of household energy.”¹⁶ Energy insecurity occurs when one or all of three
11 things are experienced:¹⁷ 1) limited or uncertain access to energy, 2) receipt of utility
12 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 income
17 households paid more per square foot for energy due to energy inefficient homes. Low-
18 income households had median annual utility costs of \$1.41 per square foot while non-low-

¹⁵ Fisher, Sheehan & Colton. (April 2017). “The Home Energy Affordability Gap 2016: Missouri,” Public Finance and General Economics. Retrieved August 17, 2017 from http://www.homeenergyaffordabilitygap.com/03a_affordabilityData.html

¹⁶ 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

¹⁷ E. March. (January 2011). *Children’s HealthWatch*. Behind Closed Doors, The hidden health impacts of being behind on rent.

1 income had \$1.17. This resulted in a median energy burden of 7.2 percent versus 2.3
2 percent.¹⁸

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 can
9 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 direct
11 subsidy offsetting energy costs. Therefore LIHEAP recipients are not representative of
12 low-income households in general. Other data sources must be examined to evaluate
13 average low-income household energy use relative to households at other income levels.
14 The LIHEAP Home Energy Notebook (“Notebook”) provides insight regarding the direct
15 relationship between income and consumption (i.e.: more income, more consumption; less
16 income, less consumption). The Notebook includes national and regional data on four
17 categories of users: all households, non-low income households, low-income households,
18 and LIHEAP recipient households. Below is an abbreviated copy of Table A-2 from the
19 last published Notebook FY2014,¹⁹ which compares average consumption per household

¹⁸ 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://ncece.org/research-report/u1602>

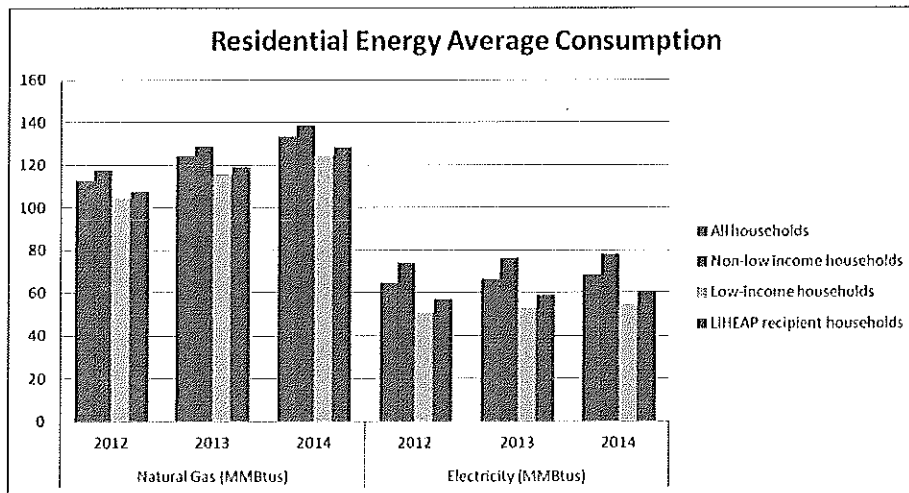
¹⁹ U.S. Department of Health and Human Services Administration for Children and Families Office of Community Services Division of Energy Assistance. LIHEAP Home Energy Notebook For Fiscal Year 2014, June, 2016. Table A-2, pp. 95. LIHEAP defines low-income as those which are at or below 150 percent of the poverty guidelines and do not receive LIHEAP assistance. FY2014 is the most current publication.

1 by end user and fuel source. Midwest Households across all categories consumed more
 2 natural gas when compared to all categories of US households.

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.



4 Low-income households, in the Midwest, consumed less natural gas than all Midwestern
 5 households combined – 124.4 MMBtus versus 133.5 MMBtus (Chart 1) for FY2014, while
 6 **non**-low income households consumed more natural gas than all other users – 138.2
 7 MMBtus. The natural gas consumption of LIHEAP recipient households in the Midwest
 8 was higher than low-income household consumption but lower than non-low income

1 household consumption. If LIHEAP recipient homes could reduce energy consumption
2 through energy efficiency measures then their energy burden could be reduced and
3 LIHEAP dollars would be more impactful.

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

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

10 **VII. CONCLUSIONS**

11 **Q. Please summarize your testimony.**

12 A. LAC's and MGE's weatherization programs should continue and be funded at their present
13 level of \$950,000 and \$750,000 respectively. In addition to these funding levels, the
14 Commission should allow the company to compensate DE to receive an administration fee
15 of up to five percent to cover costs associated with administering LAC's weatherization
16 program or initiate a discussion among stakeholders about options for ongoing
17 administration of the utility funded programs. Compensation for EIERA administrative
18 functions should also be addressed. Lastly, a check-off box should be added to the
19 companies' customer bills and on-line billing system to allow customers the option of
20 providing additional voluntarily contributions to weatherization.

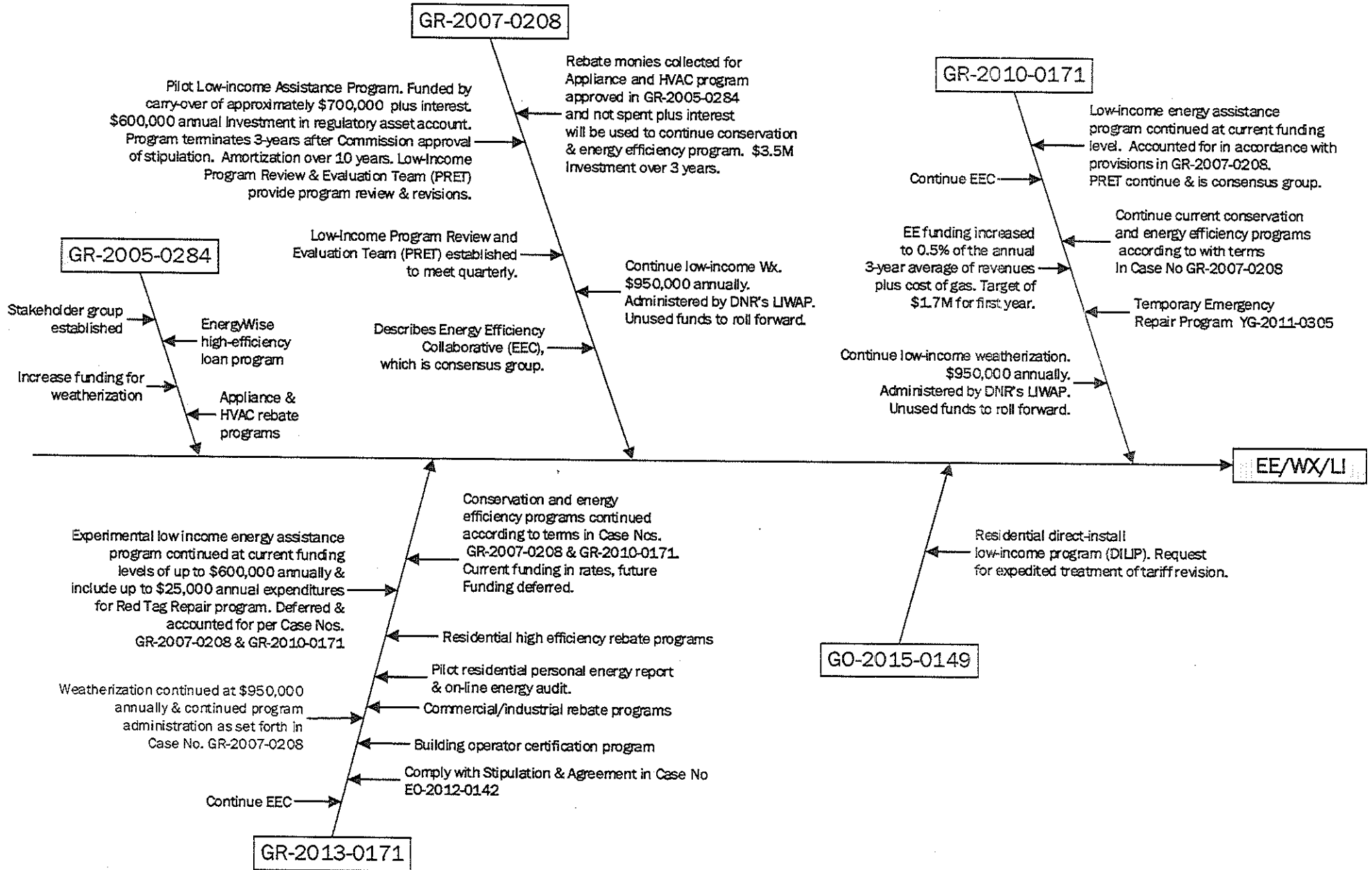
21 **Q. Does this conclude your testimony?**

22 A. Yes, thank you.

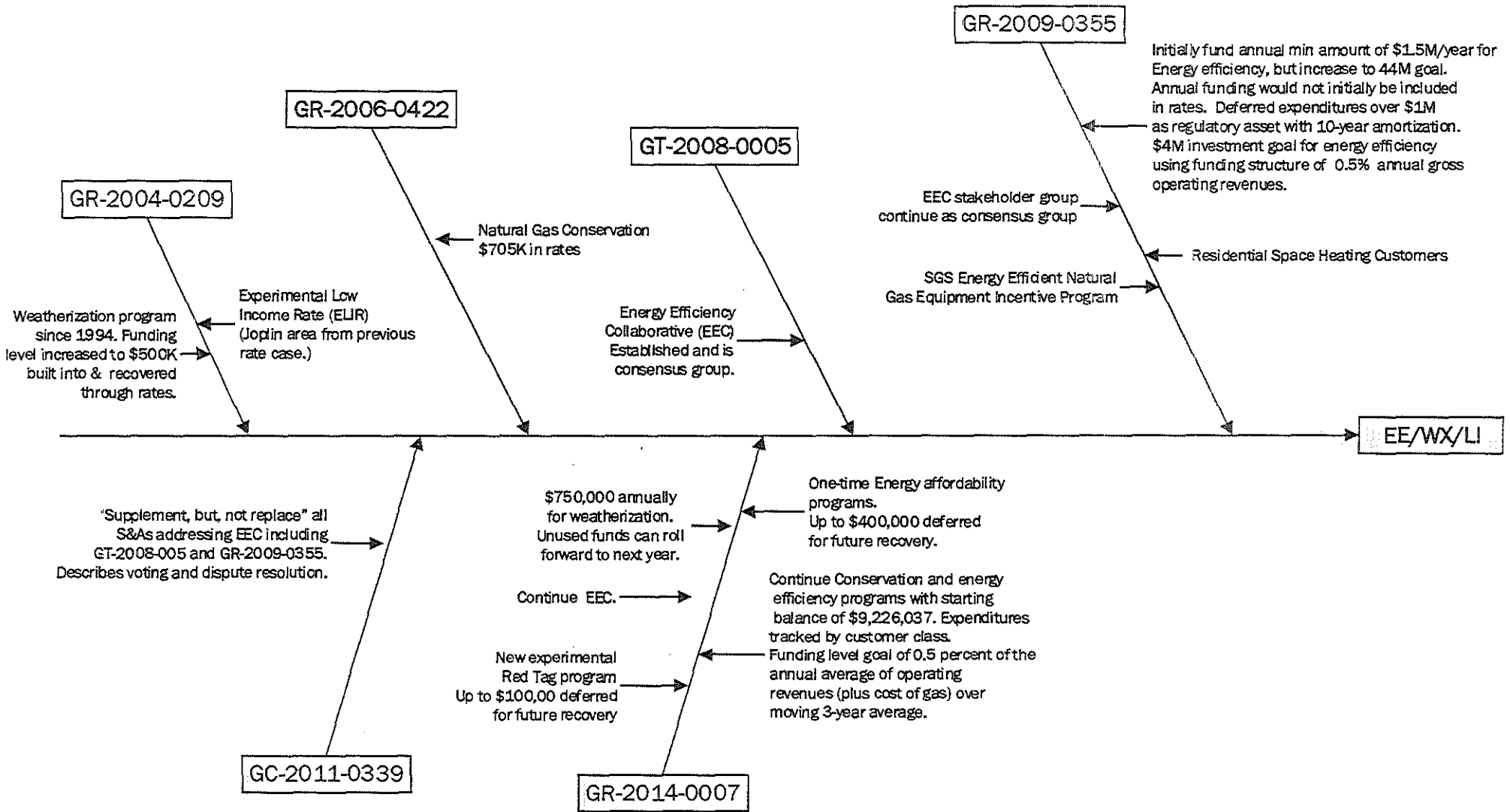
Schedule SEK - 1

Case No.	IOU	Testimony Type	Issues
ER-2016-0023	Empire District Electric Company	Rebuttal	Low-income Weatherization and Low-income charact
ER-2016-0023	Empire District Electric Company	Surrebuttal	Low-income Weatherization
ER-2016-0156	KCP&L Greater Missouri Operations	Rebuttal	Income-Eligible Weatherization Income-Eligible Weatherization and Income Related E
ER-2016-0285	Kansas City Power & Light	Direct	Considerations Income-Eligible Weatherization and Income Related E
ER-2016-0179	Union Electric Company d/b/a/ Ameren Missouri	Direct	Considerations
ER-2016-0285	Kansas City Power & Light	Rebuttal	Continued Funding of Income-Eligible Weatherization

Spire Missouri Inc. (Laclede Gas Company)



Spire Missouri Inc. (Missouri Gas Energy)



Schedule SEK - 4: DE Activities and Incremental Transactions for Administration of LAC Funds

Task	Minimum*	Frequency				Total	Staff Involvement		Comment
	Number	Historically	Annually	Monthly	Quarterly	B*(C:F)	Number	Detail	
1. Cooperation and Programming Agreement	1	X					1	2 Wx manager and DE legal counsel. Other DE staff assist as needed.	Requires several staff touches and several days to generate and execute. This is completed at transfer of administration from the utility to DE. It is amended thereafter as needed.
2. Subgrantee Allocation Calculation & Distribution	6		X				6	2 Fiscal and Procedural staff	DE calculates and enters allocation amount into MoWAP. Distribute Allocations to Subgrantees so that they can prepare budgets.
3. DE Review of Subgrantee Budgets and Documentation	6		X				6	4 Procedural supervisor, Wx manager, fiscal staff, support staff	Subgrantees submit proposed budgets and required documents for DE review prior to DE preparation of contracts. This requires several days and several staff touches.
4. Subgrantee Contracts	6		X				6	6 Wx manager, procedural manager, fiscal staff, fiscal manager, support staff, and Director	DE prepares subgrantee contracts for the Company's weatherization funds. Each funding source has its own contract with the subgrantee. This step requires several days and several staff touches to complete process and execute contracts. DE had 85 contracts with subgrantees during FY 2017
5. Subgrantee Submits Reimbursements	6			X			47	4 Procedural staff, procedural supervisor, fiscal staff, fiscal manager	The process time per reimbursement varies depending on the number of client files attached to the reimbursement. It takes about 30 minutes to review one client file. All clients files on every reimbursement are reviewed. DE reviewed 1596 client files in FY 2017. Additionally, subgrantees can request reimbursement multiple times per month. DE processed 47 Laclede Gas Company Reimbursements from November 1 2015 - October 31, 2016 (Average 4/month). DE is on track to process upwards of 60 reimbursements for PY 2016 (ending October 31, 2017).
6. EIERA Invoices	6			X			47	2 Fiscal staff and manager	One invoice per utility per subgrantee. As an internal control - when the final payment is made from the fund, then this invoice is sent from the fiscal manager to the wx manager and finally to the DE director for review and signature.
7. EIERA Invoices entered Into MoWAP	6			X			47	1 Fiscal Staff	A bank statement is received from EIERA when the reimbursements are processed. The actual pay date is entered into MoWAP and the payments database is updated.
8. Record Filing	6			X			47	1 Fiscal Staff	DE maintains files for each subgrantee which also contains a copy of each request and invoice (12 subgrantee records X 12 months).
9. Procedural Monitoring - of Subgrantee (on-site)	6		X				6	8 Three teams of minimum two staff	On-site monitoring review that includes (1) expenditures, (2) production, (3) average cost per home, (4) client files (5) equipment, (6) waiting lists, and (7) contractors/bids. 48 client files (LAC customers) reviewed during PY 2016.
10. Technical Monitoring of Subgrantee (on-site)	6		X				20	3 Wx technical staff	DE staff travel out to a percentage (for each funding source) of weatherized homes to view: (1) homes not started (2) homes in progress and (2) homes completed. DE only tracks the number of homes completed that DE monitored. DE monitored 20 (six percent) of homes completed July 2015 - June 2016 with Laclede Gas Company funds. DE monitored 27 (seven percent) of homes completed July 2014 - June 2015 with Laclede Gas Company funds. Monitored in this context means Quality Control Inspection (QCI). Step 3 involves travel between multiple homes and 1-2 hours spent in each home.
11. Reports	2			X	X		12	4 Procedural staff, fiscal, procedural supervisor, support staff	There are two separate reports. DE staff prepares a monthly (1) Expenditures and Production Report, (2) DE also prepares a quarterly report. These reports contain data for all six of the Company's subgrantees.
12. Financial Audits	6		X				6	2 Procedural supervisor and fiscal staff	Review financial audit schedule for each subgrantee. (One schedule is completed for each funding source with the subgrantee. Therefore, the Subgrantee has multiple schedules.
13. Weatherization Conference	1		X				1	9 All eight Wx staff and support staff	Annual meeting to provide continuing weatherization training to all subgrantees and not just Company subgrantees.

*based on six subgrantees