

Exhibit No.:

Issues:

Commitment to Provide Low or No
Cost Weatherization Assistance to
AmerenUE Low-Income Customers and
Energy Efficiency Services to
Residential and Commercial Customers.

Witness:

Sponsoring Party:

Anita C. Randolph
Missouri Department of Natural
Resources' Outreach and Assistance
Center, Missouri Energy Center

Type of Exhibit:

Case No.:

Testimony
EC-2002-1

AMEREN UE EARNINGS COMPLAINT CASE

REBUTTAL TESTIMONY

OF

ANITA C. RANDOLPH

MISSOURI DEPARTMENT OF NATURAL RESOURCES

ENERGY CENTER

March 20, 2002

FILED
MAY 20 2002
Missouri Public
Service Commission

Exhibit No. 119
Date 7/10/02 Case No. EC-2002-1
Reporter KRM

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

TESTIMONY OF

ANITA C. RANDOLPH

DIRECTOR

MISSOURI DEPARTMENT OF NATURAL RESOURCES

ENERGY CENTER

CASE NO. EC-2002-1

1 Q. Please state your name and address.

2 A. My name is Anita C. Randolph. My business address is Missouri Department of Natural
3 Resources, Energy Center, 1659 East Elm Street, P.O. Box 176, Jefferson City, Missouri
4 65102-0176.

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

6 A. I am employed by the Missouri Department of Natural Resources as the director of the
7 Missouri Energy Center, a division of state government with its executive office located in
8 Jefferson City, Missouri.

9 Q. On whose behalf are you testifying?

10 A. I am testifying on behalf of the Missouri Department of Natural Resources, an intervenor in
11 these proceedings.

12 Q. Please describe your educational background and business experience.

13 A. I attended the University of Missouri and received a Bachelor of Journalism degree in 1974.
14 In addition, I attended the University of Oklahoma and received a Master's in Public Health
15 degree in 1988 with a specialty in environmental management. I have worked as a research
16 analyst in the Missouri House of Representatives' House Research office. In this capacity, I
17 developed legislative approaches for environmental, energy and natural resource issues for
18 the Energy and Environment, State Parks, and Mining legislative committees. Prior to
19 becoming the director of the Missouri Energy Center, I was employed by the Missouri
20 Department of Transportation in its Office of Transportation Planning and Policy
21 Development. In this position I worked directly with Missouri's Congressional Delegation,
22 the Missouri Governor's Office and the Missouri General Assembly on legislative and
23 appropriation issues affecting Missouri's transportation system. On July 13, 1998, I was

1 appointed director of the Energy Center, formerly the Division of Energy, by Mr. Stephen
2 Mahfood, director of the Missouri Department of Natural Resources.

3 Q. What is the purpose of your direct testimony in these proceedings?

4 A. The purpose of my testimony is to focus on the proposed electric rate decrease, low-income
5 residential customers served by Ameren UE and the need for low-income weatherization
6 assistance, and opportunities to promote utility-based energy efficiency services for
7 residential and commercial customers.

8 The Energy Center is seeking commitment by AmerenUE to provide additional funding for
9 weatherization assistance for their low-income residential customers and utility-based energy
10 efficiency services and programs for residential and commercial customers.

11 Pursuant to the terms and conditions of a stipulation and agreement filed and approved in
12 Case No. GR-97-393, AmerenUE implemented an experimental weatherization program for
13 a two-year period ending on March 31, 2000 that was funded at the level of \$150,000 per
14 year. Following the company's last gas rate case (Case No. GR-2000-512), by Order
15 Approving Unanimous Stipulation and Agreement dated October 17, 2000, the company
16 implemented a new weatherization program, funded by the company at an annual rate of
17 \$125,000. The details of the program were determined through a collaborative process
18 among representatives of the company, Staff, the Public Counsel and the MoDNR.

19 Q. Do you have information regarding the success of the experimental weatherization program?

20 A. The experimental weatherization program was modeled after the statewide Low-Income
21 Weatherization Program administered by the Missouri Department of Natural Resources
22 Energy Center. Weatherization services were provided through community action agencies,
23 which the Energy Center contracts with to provide weatherization services in the

1 administration of the federal weatherization program. The East Missouri Action Agency,
2 Inc. (EMAA) located in Park Hills, Missouri participated in the AmerenUE experimental
3 weatherization project. The EMAA weatherized 72 homes. Based on the U.S. Department of
4 Energy's National Energy Audit (NEAT) procedure, the 72 homes weatherized had an
5 average savings-to-investment ratio of \$3.37 saved for each dollar invested.

6 Q. What is the relationship between home heating bills in Missouri and low-income residential
7 utility customers?

8 A. Winter home heating bills in Missouri impose significant burdens on low-income
9 households. According to the U.S. Department of Housing and Urban Development (HUD),
10 a household that faces a shelter burden exceeding 30 percent of income is over-extended.
11 Shelter burdens include rent or mortgage payments and all utility payments other than
12 telephone. A household that is paying 20 to 25 percent of its income simply toward home
13 heating—again, not taking into account non-electricity use—will not be able to stay below
14 this 30 percent limit.

15 Q. What is the significance of home heating burdens?

16 A. The significance of the home heating burdens imposed on low-income households is even
17 more apparent when one considers the full range of incomes at which low-income residents
18 of Missouri live. Most households that qualify for the Low-Income Home Energy Assistance
19 Program (LIHEAP) in Missouri by living at or below 150 percent of poverty live below the
20 ceiling rather than at the ceiling. A household with an annual income of \$0 to \$2,000 will
21 have winter heating burdens of nearly 85 percent; households living with annual incomes of
22 \$2,000 to \$4,000 will have winter heating burdens of nearly 30 percent; and households

1 living with annual incomes of \$4,000 to \$6,000 will have winter heating burdens of more
2 than 16 percent.

3 The number of households with these extremely low levels of annual incomes (and thus high
4 heating burdens) is significant. Of the roughly 125,000 Missouri LIHEAP participants, more
5 than 71,000, or 60 percent, live with incomes of less than \$6,000. (Source: "Structuring a
6 Public Purpose 'Distribution Fee' for Missouri", Fisher, Sheehan & Colton, Public Finance
7 and General Economics consultants, July 1997)

8 Q. Do a large number of low-income homes in Missouri still need to be weatherized?

9 A. Yes. A significant number of low-income households in Missouri are in need of energy-
10 efficiency improvements. It is difficult to quantify the precise number of low-income units
11 in Missouri that are in need of energy-efficiency improvements. According to the state
12 Weatherization Assistance Program (WAP) which is administered by the Energy Center,
13 from 1978 (beginning of the program in Missouri) through June 30, 2001, a total of 138,429
14 homes were weatherized in Missouri. The Energy Center estimates an additional 450,300
15 eligible homes remain. (In FY 2001, the eligibility was increased from 125 to 150% of the
16 poverty level in response to last year's heating crisis, resulting in approximately 100,000
17 additional homes meeting the eligibility criteria.) At the current rate of approximately 2,000
18 units weatherized statewide each year under funding levels prior to FY 2003, it would take
19 more than 150 years to complete all of the eligible homes. At the higher federal funding
20 level for the fiscal year 2003, approximately 3,000 homes should be weatherized annually. If
21 this increased level of funding is continued, it would still take 104 years to complete all of
22 the eligible homes in Missouri. Clearly, on-going and additional sources of low-income
23 energy-efficiency services are needed.

1 Q. Please describe any other changes made to the Weatherization Assistance Program that focus
2 on electricity.

3 A. The U.S. Department of Energy has added electric base-load (or electric plug-load) measures
4 to the federal program regulations effective January 1, 2001. This is an evolution in the
5 federal and state guidelines, allowing the program to move toward whole-house
6 weatherization. Typically, addressing just the heating and/or cooling cost of a dwelling unit
7 accounts for only about half of the unit's energy expenditures. The addition of cost-effective
8 electric base load measures gives local weatherization agencies greater flexibility to help
9 low-income households reduce their energy costs, and to partner with sources of leveraged
10 funds, including electric utilities.

11 These measures include replacement lighting, replacement electric water heaters and other
12 electric appliances such as refrigerators. The Missouri Weatherization Assistance Program
13 along with a Technical Advisory Group is researching recommendations for implementation
14 of practical energy saving base-load measures for Missouri.

15 Q. What is the estimated number of Missourians currently on weatherization waiting lists?

16 A. Statewide, more than 3,200 families are currently on weatherization waiting lists.

17 Q. How many new clients are added to that list annually?

18 A. On average, more than 2,300 households are added to that waiting list annually.

19 Q. At the current rate, how long would it take the state's weatherization program at the local
20 level to meet the needs of eligible clients in the AmerenUE service territory?

21 A. There are 242,458 households (150 percent of poverty as of 1990 census data, all fuel types
22 including natural gas heated homes) eligible for weatherization assistance in the AmerenUE

1 service territory. At current resource levels, it would take approximately 74 years to serve the
2 AmerenUE low-income residential clients.

3 Q. What are some of the general benefits of low-income residential weatherization?

4 A. As noted earlier in my testimony, home heating is a high cost for individuals with low
5 income. Overall, low-income households spend approximately 14 percent of their income on
6 energy needs. This percentage compares with only 3.5 percent of non-low-income
7 households. The decision and ability to pay one's utility bill often compete with other
8 necessities. Many low-income individuals live in older homes equipped with older, less-
9 efficient heating systems and generally lack energy-efficiency items such as insulation.
10 Weatherization reduces space heating fuel consumption by an average (including all heating
11 fuels) of 18.2 percent. Specifically for homes using electricity for heat, weatherization
12 reduces space heating fuel consumption by 35.9 percent. For natural gas homes, annual
13 space heating fuel consumption is reduced by 33.5 percent. (Source: "Progress Report of the
14 National Weatherization Assistance Program," Oak Ridge National Laboratory, September
15 1997.) Weatherization is a cost-effective means to help low-income individuals or families
16 pay their energy bills year after year for the life of the energy-efficiency product.
17 Weatherization reduces the amount of state and federal assistance needed to pay higher
18 utility bills, keeps money in the local economy, results in a positive impact on the
19 household's promptness in paying utility bills, reduces arrearages and helps to reduce
20 environmental pollution through energy efficiency.

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

22 A. Yes. In addition to looking at energy-efficiency from the household perspective, it is
23 beneficial to examine the benefits of a low-income energy-efficiency program from the

1 perspective of energy service providers. Extensive research has found that low-income
2 energy-efficiency programs result in substantial non-energy savings to utilities. These non-
3 energy savings include reductions in working capital expense, uncollectible accounts, credit
4 and collection expenses, and others. The Pennsylvania Low-Income Usage Reduction
5 Program (LIURP) for all Pennsylvania utilities is an example of benefits derived for low-
6 income households to whom energy efficiency was delivered. A payment of less than 100
7 percent means the specified low-income household did not completely pay the current
8 month's utility bill. In contrast, a payment exceeding 100 percent means the low-income
9 household not only paid the current bill, but paid off its arrears as well. For every
10 Pennsylvania utility but one, the delivery of energy efficiency substantially improved the
11 payment patterns of the treated low-income households. Indeed, the delivery of energy
12 efficiency generally caused a substantial increase in the payment coverage of the household
13 energy bill. In most cases, the low-income household moved from falling further and further
14 behind by failing to pay the current bill to paying the entire current bill and beginning to
15 retire the arrears. (Source: "Structuring a Public Purpose 'Distribution Fee' for Missouri",
16 Fisher, Sheehan & Colton, Public Finance and General Economics consultants, July 1997.)

17 Q. Please describe recent heating expense increases and the impact on low-income residential
18 customers.

19 A. During the summer of 2000, natural gas prices began rising across the country. As we
20 entered the 2000-2001 winter heating period, natural gas prices had increased from
21 approximately \$2.00 per Mcf (1,000 cubic feet) to over \$10. On July 31, 2001, Public
22 Service Commission Chair Kelvin Simmons relayed his concerns regarding the plight of
23 residential customers in a letter sent to members of the Missouri Congressional delegation.

1 In that letter, Chairman Simmons noted "Even though energy prices aren't in the headlines
2 right now, I want to alert you to the potential for crisis in your district. Some of your
3 constituents face disconnection of utility service because they're living on the edge and can't
4 make ends meet. They're still paying for last year's winter's heating bills, incurring costs for
5 air conditioning and trying to budget for other life necessities." Although the chill of the
6 coldest November and December in Missouri history are behind us, the effects are still being
7 felt by Missourians struggling to pay high heating bills from last winter. "I am not
8 comfortable with the idea that families who lose gas or electric service will suffer during
9 extreme weather conditions," Chairman Simmons stated in his letter to the Missouri
10 Congressional delegation. "This past winter's high natural gas bills have had a tremendous
11 impact on the already strapped budgets of a large number of low-income and senior citizen
12 families in Missouri. We simply must find a way to help those in need." Many of the
13 investor-owned energy utilities report higher numbers of residential customers (79,000
14 natural gas heated households) unable to fully pay for their energy bills. Although Chairman
15 Simmons' concerns were focusing on natural gas heated households, this situation also
16 occurs in electric heated households. Weatherization can help customers to use energy more
17 efficiently and reduce their winter heating bills.

18 Q. What funding level would be required to adequately support AmerenUE's low-income
19 weatherization assistance program?

20 A. Evidence presented in Case No. GR-2000-512 established that the company provides service
21 to approximately 123,000 natural gas customers in 90 Missouri counties. A total annual
22 revenue outlay of \$125,000 or approximately \$1 per customer, was dedicated to low-income
23 weatherization assistance. The company currently provides service to approximately 1.2

1 million electric customers. At a rate of \$1 per electric customer, we request an annual
2 funding level of \$1.2 million for low-income weatherization. This program should be
3 designed to be consistent with federal guidelines for the Weatherization Assistance Program,
4 and should be developed through a collaborative effort between AmerenUE, PSC Staff,
5 Office of Public Counsel and the DNR.

6 Q. Please describe the need for residential energy efficiency.

7 Investments in residential energy efficiency help deliver efficient end-uses to consumers.
8 Energy efficiency recognizes the truism that Missouri households do not seek to consume
9 energy. Instead, what they seek is to have light, hot water, refrigeration and heating and
10 cooling. If these end uses can be delivered using less energy, the needs of Missouri
11 consumers will have been satisfied.

12 U.S. Department of Housing and Urban Development (HUD) 1990 data showed that roughly
13 one of every six Missouri units of housing that are affordable to households living above 80
14 percent of median income were constructed before 1940. Moreover, of the total of roughly
15 550,000 units affordable at that income level, nearly 90,000 have some type of "physical
16 problem" under HUD's definitions. Finally, nearly 55,000 households living above 80
17 percent of median income pay more than 30 percent of their income for shelter costs, and
18 roughly 5,000 pay more than 50 percent. Focusing attention only on heating bills generally
19 results in inadequate attention being devoted to the impacts of the electric policy on
20 residential consumers. Electric non-heating consumption represents roughly 45 percent of
21 total home energy use and nearly 70 percent of total home energy bills. What happens to the
22 price of electricity and its relationship to a household's total energy burden is thus important
23 to residential consumers. (Source: "Structuring a Public Purpose 'Distribution Fee' for

1 Missouri”, Fisher, Sheehan & Colton, Public Finance and General Economics consultants,
2 July 1997.)

3 In its August 29, 2001, final report, the Missouri Public Service Commission’s Natural Gas
4 Commodity Price Task Force recognized the need for energy efficiency programs by its
5 recommendation that “the Commission should pursue incentive measures for encouraging
6 energy efficiency.” The report included this explanation of the need for efficiency programs:
7 “Effective energy efficiency programs can address the barriers that inhibit customers from
8 making investments in energy efficiency improvements – lack of money or competing
9 demand for available funds, the perception that up-front costs are more important than long-
10 term savings and lack of technical expertise.”

11 Q. Briefly describe the benefits of residential and commercial utility-based energy-efficiency
12 services.

13 A. The Missouri Energy Policy Task Force recommended in its October 16, 2001 final report,
14 that “Missouri pursue incentives funded through various sources to encourage the increased
15 development of energy efficiency and renewable energy to provide for a more secure energy
16 future.” The Task Force report cited the following benefits to customers, utilities, the
17 economy and the environment: “Missourians would benefit greatly from investments in
18 energy efficiency and renewable resource programs. Efficiency programs provide assistance
19 to customers by helping to reduce their energy usage and utility bills, which is particularly
20 important when energy prices are high and volatile. System reliability and resilience are
21 improved by reducing vulnerability to disruptions in energy supplies through efficiency and a
22 diversified fuel mix. Long-term costs can be lowered by reducing expenditures by gas and
23 electric utilities to upgrade their infrastructure to meet increasing demand. Investments in

1 energy efficiency and the resulting lower energy costs coupled with the development of
2 domestic renewable energy will improve the ability of businesses to compete, keep energy
3 dollars closer to Missouri, increase customers' discretionary income, preserve natural
4 resources and reduce pollution."

5 Well-designed energy-efficiency programs have been shown to produce substantial economic
6 benefits for local and state economies. *The Missouri Statewide Energy Study (1992)*
7 prepared by Missouri's Environmental Improvement and Energy Resources Authority
8 concluded that energy efficiency would "sustain more employment opportunities than either
9 the continued current level of energy use or the development of new energy supplies."

10 In addition to these benefits, state investment in energy-efficiency tends to protect
11 households against "insurable events." In August 1996, Lawrence Berkeley Laboratory
12 released findings showing that energy-efficiency investments in housing often lead to the
13 correction of conditions that place buildings at risk. Such conditions include fire, carbon
14 monoxide poisoning, and the like.

15 Energy-efficiency investments can also promote the affordability of homeownership in
16 Missouri. A study by Fisher, Sheehan and Colton, Public Finance and General Economics,
17 released in November 1996, documented how energy-efficiency investments affect the
18 affordability of first-time home ownership. The study found that, in the Census Division of
19 which Missouri is a part, a \$3,000 energy- efficiency investment made at the time of home
20 purchase, financed at 9 percent interest, would yield an effective reduction in the price of the
21 home of 6 percent and an effective interest-rate discount of 0.48 percent. In other words, in
22 order to generate the same dollar savings as the energy efficiency investment, the interest rate
23 charge on the home mortgage would need to be reduced by 0.48 percent.

1 The U.S. Department of Energy addressed the economic benefits of commercial efficiency
2 programs in a 1995 report "U.S. Electric Utility Demand-Side Management (DSM): Trends
3 and Analysis". In a detailed analysis of verified savings achieved, 20 utility commercial
4 lighting programs were reviewed. All 20 programs were found to be cost-effective when
5 compared to program-specific avoided costs (Source: The Cost and Performance of Utility
6 Commercial Lighting Programs, Lawrence Berkeley Laboratories, May 1994). A more
7 comprehensive review of evaluations for 40 large commercial programs that accounted for
8 one-third of 1992 utility DSM spending was completed by Lawrence Berkeley Laboratories
9 for the U.S. Department of Energy. The majority of the programs reviewed, which
10 accounted for 88 percent of utility and consumer spending on programs included in the study,
11 were cost-effective. For all the programs analyzed, the savings weighted average ratio of
12 total resource benefits to total resource costs was 3.2 to 1 (Source: The Cost and Performance
13 of the Largest Commercial Sector DSM Programs, Lawrence Berkeley National Laboratory,
14 December 1995). Eight of the programs reviewed in the study had total resource costs at or
15 below 2 cents per kilowatt hour. Lawrence Berkeley Laboratories found that, overall,
16 utilities demonstrated a capability to undertake highly cost-effective energy-efficiency
17 programs.

18 Q. Briefly describe utility-based energy-efficiency services available today.

19 A. Several utilities throughout the nation continue to offer energy efficiency services and
20 programs to their customers. These energy efficiency measures include residential and
21 commercial energy audits, consumer education, and rebates or low-interest loans for the
22 purchase of new products such as efficient water heaters, lights, showerheads, air

1 conditioners, and heat pumps. Energy savings of approximately 40% can be realized through
2 energy efficiency improvements. (Source: U.S. Department of Energy.)

3 Missouri energy utilities including Springfield's City Utilities, City of Independence Power
4 & Light Department, Columbia Water and Light and Kansas City Power & Light offer
5 energy efficiency services to their customers as described above. Similar programs are
6 offered by other utilities throughout the nation including, Wisconsin Public Service
7 Corporation, Portland General Electric and Northern State Power, to name just a few.

8 Q. What is the cost comparison of energy efficiency to new electric generation?

9 A. Energy efficiency is appropriately viewed as an energy resource like coal, oil or natural gas.

10 In contrast to supply options for new generation such as drilling for more natural gas or
11 mining coal, energy efficiency helps contain energy prices by curbing demand instead of
12 increasing supply. This means that energy efficiency provides additional economic value by
13 preserving natural resources and reducing emissions. (Source: "Utility Deregulation a Bust
14 for Energy Efficiency Programs", Environmental Working Group, October 1998.) The
15 primary efficiency programs having the most potential for energy savings include efficient
16 residential heating, ventilating and air conditioning equipment (HVAC), tune-ups and repair;
17 proper installation, maintenance and use of commercial HVAC and other building systems;
18 and commercial and industrial sector lighting retrofits. In addition, energy efficient design
19 and construction of new buildings have significant potential for energy savings in Missouri.
20 To achieve these savings, training for building contractors, developers and architects is
21 essential and could be included in a utility-based efficiency program.

22 It is difficult to accurately compare investments in energy efficiency measures, often referred
23 to as demand-side management (DSM), to investments in building new generation plants or

1 supply-side resources. Economic comparisons of efficiency and supply-side investments
2 require that consideration of the life-cycle cost of the options are addressed on an integrated
3 basis, such as the interaction of the change in usage patterns with the generation function of
4 the utility must be considered over the expected life of the options. (Source: "Electric Utility
5 Demand Side Management 1998," U.S. Department of Energy, Energy Information
6 Administration.)

7 While cost calculations will vary by region and individual utility, the U.S. Department of
8 Energy (USDOE) has used the cost of energy in cents per kilowatt hour (kWh) saved as an
9 index for making approximate comparisons between the cost of energy efficiency programs
10 and new generation plants.

11 USDOE data collected from surveys of 63 percent of reporting utilities in 1994 indicated that
12 the cost of energy efficiency programs was competitive with or below the cost of new
13 generating capacity. The average costs of achieving conserved energy were reported at under
14 3 cents per kWh while the cost for new generation facilities ranged from 2 to 15 cents per
15 kWh on a significant number of days per year. During capacity shortages, prices could
16 increase to 50 cents per kWh or higher, reflecting the cost of building new generation to
17 serve peak loads or the price signals that might be required to match demand to available
18 supply if power must be purchased on the spot market.

19 In a more recent report issued by the Rocky Mountain Institute this year (2001), it was found
20 that the average cost of implementing energy efficiency has been 2 cents per kWh with the
21 best-designed programs costing less. In contrast, each kWh generated by an existing power
22 plant cost 5 cents or more.

1 In April 2001, the Missouri Public Service Commission reported that the current long-term
2 wholesale market price for electricity in the Midwest was 4 cents per kWh, or \$40 per
3 megawatt, not including transmission costs. Using these cost estimates, energy efficiency
4 investments ranging from 2 to 3 cents per kWh are more cost-effective than building new
5 generation at 4 to 5 cents per kWh without factoring in the additional environmental and
6 system benefits due to less stress on the transmission and distribution systems.

7 Q. What are some of the statistics related to energy efficiency investments and potential in
8 Missouri?

9 Missouri utilities' total demand side management (DSM) savings averaged just 0.06 percent
10 of total electricity sales in 1998, compared to the national average of 1.74 percent of sales.
11 The Alliance to Save Energy, a nationally recognized coalition of prominent business,
12 government, environmental, and consumer leaders who promote the efficient and clean use
13 of energy worldwide to benefit consumers, the environment, economy and national security,
14 issued a report in 1998 addressing energy-efficiency improvements to homes. It was found
15 that residential energy-efficiency improvements could reduce energy consumption in
16 Missouri by an estimated 567 billion Btu's, or the equivalent of approximately 100,000
17 barrels of crude oil each year. The Alliance reported that, of the 34 states studied that had not
18 adopted the 1993 Model Energy Code, Missouri ranked 5th highest in terms of potential total
19 energy savings and 5th highest in potential energy savings per home.

20 In a report to the Missouri Legislature pursuant to House Concurrent Resolution 16 titled
21 "Economic Opportunities Through Energy Efficiency and the Energy Policy Act of 1992",
22 Missouri specific opportunities and benefits of commercial energy efficiency programs were
23 addressed. The report found that if Missouri had met its mandatory obligation set forth in the

1 Energy Policy Act of 1992 (to adopt a state-wide commercial building efficiency standard by
2 1995), the result would have been a reduction in the cumulative consumption of energy by
3 new commercial buildings built between 1995 and 2000 by 4 trillion BTUs, the equivalent of
4 nearly 700,000 barrels of oil per year. The cumulative operating cost savings for Missouri
5 commercial building owners would have been nearly \$68 million by the year 2000. The
6 report goes on to say that this potential is "dwarfed by the energy consumption of the pre-
7 1995 standing commercial building stock." It is this existing commercial building stock
8 which would benefit from energy efficiency programs.

9 Q. What are some of the statistics related to energy efficiency investments and potential
10 nationally?

11 A. In its March 1990 report "Efficient Electricity Use: Estimates of Maximum Energy Savings,"
12 the Electric Power Research Institute, funded by utility companies, estimates that 22 to 44
13 percent of total U.S. electricity consumption could be saved by using the most efficient
14 technology available in 1990. Nationwide, spending on state energy efficiency programs fell
15 from \$1.65 billion in 1993 to nearly half -- \$912.5 million in 1998 -- at a cost of nearly
16 15,000 megawatts in power savings. The Environmental Working Group reported in 1998
17 that through the mid-1990's, programs gradually shrunk as utilities sought to cut cost in
18 preparation for restructuring. As programs shrunk, so did savings, contributing to high
19 demand growth and current reliability problems. As a result, Americans forfeited \$1 billion
20 in savings on electric bills as of 1997. These savings would have continued every year for
21 the subsequent 10 years, a total of at least \$10 billion in consumer savings lost due to cuts in
22 energy efficiency programs by utilities, inspired largely by utility deregulation.

1 Utility commitment to energy efficiency programs varies largely by company and region.

2 For example, the City of Eugene, Oregon, whose utility serves some 73,000 customers,

3 invested more in energy efficiency than the combined outlay of Southern Company, Entergy,

4 Commonwealth Edison, and American Electric Power, which serves more than 12 million

5 customers.

6 Energy efficiency measures are proven to cut energy usage and pollution. For example,

7 compact fluorescent bulbs use one-quarter the electricity for incandescent bulbs. Replacing

8 just one incandescent light bulb will save a consumer \$50 and reduce carbon monoxide

9 emissions by 1,000 pounds over the life of the bulb.

10 Q. What funding level would be required to adequately support a residential and commercial

11 energy efficiency program through AmerenUE?

12 A. The company currently provides service to approximately 1.2 million electric customers. At

13 a rate of \$1 per electric customer, we request an annual funding level of \$1.2 million for

14 residential and commercial energy efficiency services or programs. These programs should

15 be designed through a collaborative effort between AmerenUE, PSC Staff, Office of Public

16 Counsel and the DNR.

17 Q. Does this conclude your testimony?

18 A. Yes. Thank you.

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STATE OF MISSOURI
PUBLIC SERVICE COMMISSION

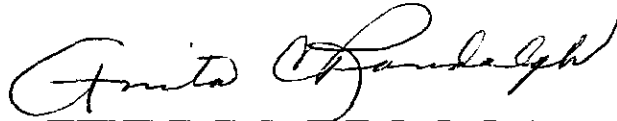
Staff of the Missouri Public Service Commission,)
Complainant,)
V.)
Union Electric Company, D/B/A AmerenUE,)
Respondent)

Case No. EC-2002-1

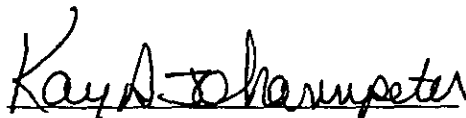
AFFIDAVIT OF ANITA C. RANDOLPH

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

Anita C. Randolph, being duly sworn on her oath, hereby states that she has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form; that the answers in the foregoing Rebuttal Testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters were true and correct to the best of her knowledge, information and belief.



Anita C. Randolph



Kay A. Johannpeter
Notary Public

KAY A. JOHANNPETER
My commission expires: NOTARY PUBLIC, STATE OF MISSOURI
MONITEAU COUNTY
My Commission Expires 8-4-2003

Subscribed and sworn before me this 21st day of March 2002.

