

Exhibit No.:
Issues: Commitment to Provide Low or No
Cost Weatherization Assistance to
AmerenUE Low-Income Customers.
Witness: Anita C. Randolph
Sponsoring Party: Missouri Department of Natural
Resources' Energy Center
Type of Exhibit: Testimony
Case No.: GR-2000-512

AMEREN UE NATURAL GAS RATE CASE

DIRECT TESTIMONY

OF

ANITA C. RANDOLPH

MISSOURI DEPARTMENT OF NATURAL RESOURCES

ENERGY CENTER

FILED²
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Missouri Public
Service Commission

**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. GR-2000-512

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2 Q. Please state your name and address.

3 A. My name is Anita C. Randolph. My business address is Missouri Department of Natural
4 Resources, Energy Center, 1659 East Elm Street, P.O. Box 176, Jefferson City, Missouri
5 65102-0176.

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

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

10 Q. On whose behalf are you testifying?

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

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

14 A. I attended the University of Missouri and received a Bachelor of Journalism degree in 1974.
15 In addition, I attended the University of Oklahoma and received a Master's in Public Health
16 degree in 1988 with a specialty in environmental management. I have worked as a research
17 analyst in the Missouri House of Representatives' House Research office. In this capacity, I
18 developed legislative approaches for environmental, energy and natural resource issues for
19 the Energy and Environment, State Parks, and Mining legislative committees. Prior to

1 becoming the director of the Missouri Energy Center, I was employed by the Missouri
2 Department of Transportation in its Office of Transportation Planning and Policy
3 Development. In this position I worked directly with Missouri's Congressional Delegation,
4 the Missouri Governor's Office and the Missouri General Assembly on legislative and
5 appropriation issues affecting Missouri's transportation system. On July 13, 1998, I was
6 appointed director of the Energy Center, formerly the Division of Energy, by Mr. Stephen
7 Mahfood, director of the Missouri Department of Natural Resources.

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

9 A. The purpose of my testimony is to focus on the proposed natural gas rate increase and the
10 effects on low-income residential customers served by Ameren UE and the need for low-
11 income weatherization assistance.

12 Q. Please provide an overview of the statutory authority of the Missouri Department of Natural
13 Resources.

14 A. The Department of Natural Resources (DNR) is vested with the powers and duties regarding
15 energy activities pursuant to §640.150 RSMo (1994). These powers and duties include:

- 16 (1) Assessing the impact of national energy policies on this state's supply and use of
17 energy on this state's public health, safety and welfare;
- 18 (2) Consulting and cooperating with all state and federal governmental agencies,
19 departments, boards, commissions and all other interested agencies and
20 institutions, governmental and non-governmental, public and private, on matters
21 of energy research and development, management, conservation and distribution;
- 22 (3) The monitoring and analyzing of all federal, state, local and voluntarily disclosed
23 private-sector energy research projects and voluntarily disclosed private-sector

1 energy-related data and information concerning supply and consumption (of
2 energy), in order to plan for the future energy needs of this state. All information
3 gathered shall be maintained, revised and updated as an aid to any interested
4 person, foundation or other organization, public or private;

- 5 (4) Analyzing the potential for increased utilization of coal, nuclear, solar, resource
6 recovery and reuse, energy-efficient technologies and other energy alternatives,
7 and making recommendations for the expanded use of alternate energy sources
8 and technologies;

- 9 (5) The development and promotion of state energy conservation programs,
10 including:

- 11 (a) Public education and information in energy-related areas;
12 (b) Developing energy-efficiency standards for agricultural and industrial
13 energy use and for new and existing buildings, to be promoted through
14 technical assistance efforts by cooperative arrangements with interested
15 public, business and civic groups, and by cooperating with political
16 subdivisions of this state;
17 (c) Preparing plans for reducing energy use in the event of an energy or other
18 resource supply emergency.

19 The DNR has assigned the implementation of §640.150 RSMo 1994 to the Energy Center.

20 Q. What is the purpose of your testimony?

21 A. The Energy Center is seeking commitment by AmerenUE to continue providing funding
22 for weatherization assistance for its low-income residential customers. Pursuant to the terms
23 and conditions of a stipulation and agreement filed and approved in Case No. GR-97-393,

1 AmerenUE implemented an experimental weatherization program for a two-year period
2 ending on March 31, 2000. The Energy Center requests that the Commission order this
3 program be continued and an amount equal to the current funding level of \$150,000 annually
4 be included in AmerenUE's revenue requirement. The weatherization program should be
5 designed through a collaborative process with Commission Staff, the Office of Public
6 Counsel, the Department of Natural Resources Energy Center and community weatherization
7 providers in the Company's service territory.

8 Q. Do you have information regarding the success of the company's experimental
9 weatherization program?

10 A. The experimental weatherization program was modeled after the statewide Low-Income
11 Weatherization Program administered by the Missouri Department of Natural Resources Energy
12 Center. Weatherization services were provided through community action agencies, with which
13 the Energy Center contracts to provide weatherization services in the administration of the
14 federal weatherization program. The East Missouri Action Agency, Inc. (EMAA) located in
15 Park Hills, Missouri participated in the AmerenUE experimental weatherization project. The
16 EMAA weatherized 72 homes. Based on the U.S. Department of Energy's National Energy
17 Audit (NEAT) procedure, the 72 homes weatherized had an average savings-to-investment ratio
18 of \$3.37 saved for each dollar invested.

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

21 A. Winter home heating bills in Missouri impose significant burdens on low-income
22 households. According to the U.S. Department of Housing and Urban Development (HUD), a
23 household that faces a shelter burden exceeding 30 percent of income is over-extended. Shelter

1 burdens include rent or mortgage payments and all utility payments other than telephone. A
2 household that is paying 20 to 25 percent of its income simply toward home heating—again, not
3 taking into account non-electricity use—will not be able to stay below this 30 percent limit.

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

5 A. The significance of the home heating burdens imposed on low-income households is even
6 more apparent when one considers the full range of incomes at which low-income residents
7 of Missouri live. Most households that qualify for the Low-Income Home Energy Assistance
8 Program (LIHEAP) in Missouri by living at or below 150 percent of poverty live below the
9 ceiling rather than at the ceiling. A household with an annual income of \$0 to \$2,000 will
10 have winter heating burdens of nearly 85 percent; households living with annual incomes of
11 \$2,000 to \$4,000 will have winter heating burdens of nearly 30 percent; and households
12 living with annual incomes of \$4,000 to \$6,000 will have winter heating burdens of more
13 than 16 percent.

14 The number of households with these extremely low levels of annual incomes (and thus high
15 heating burdens) is significant. Of the roughly 125,000 Missouri LIHEAP participants, more
16 than 71,000, or 60 percent, live with incomes of less than \$6,000.

17 Q. What is the need for low-income energy-efficiency assistance?

18 A. A significant number of low-income households in Missouri are in need of energy-
19 efficiency improvements. It is difficult to quantify the precise number of low-income units
20 in Missouri that are in need of energy-efficiency improvements. Some rough estimates can
21 be made. In 1995, there were an estimated 450,000 low-income households in Missouri.
22 According to the state Weatherization Assistance Program (WAP) which is administered by
23 the Energy Center, Missouri has weatherized roughly 31,000 homes from 1989 through

1 1997. However, because of decreased funding levels, the number of units per year has
2 dropped in recent years. By Fiscal Year 1996, the number of low-income units weatherized
3 each year in Missouri had dropped to only 40 percent of its 1989 level.

4 Roughly 355,000 low-income housing units remain to be weatherized in Missouri. The
5 Weatherization Assistance Program serves approximately 2,000 units statewide each year. If
6 this rate continues, if no weatherized house ever needs to be re-weatherized, and if no
7 expansion in Missouri's low-income population occurs, these un-weatherized homes will all
8 be treated with energy-efficiency improvements by the year 2109, roughly 109 years.

9 Clearly, on-going and additional sources of low-income energy-efficiency services are
10 needed.

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

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

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

14 A. More than 2,300 households added to that waiting list annually.

15 Q. What is the number of weatherization eligible households in Missouri not on a waiting list?

16 A. State weatherization officials currently estimate the number of eligible weatherization
17 households at more than 219,000; more than 150,000 are inhabited by elderly people and more
18 than 55,000 are inhabited by disabled persons.

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 139,435 households (1990 census data, all fuel types including natural gas heated
22 homes) eligible for weatherization assistance in the AmerenUE service territory. At current

1 resource levels, it would take approximately 74 years to serve the AmerenUE low-income
2 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. 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 competes 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 A home that has been weatherized can reduce average annual fuel savings per dwelling
11 by up to 13.5 percent, with electricity at 12.2 percent and natural gas at 23.4 percent,
12 making weatherization a cost-effective means to help low-income individuals or families
13 with their energy bills year after year for the life of the energy-efficiency product.
14 Weatherization reduces the amount of state and federal assistance needed to pay higher
15 utility bills, keeps money in the local economy, results in a positive impact on the
16 household's promptness in paying utility bills, reduces arrearages and helps to reduce
17 environmental pollution through energy efficiency.

1 Q. What are the utility benefits from low-income energy efficiency?

2 A. In addition to looking at energy-efficiency from the household perspective, it is beneficial to
3 examine the benefits of a low-income energy-efficiency program from the perspective of
4 energy service providers. Extensive research has found that low-income energy-efficiency
5 programs result in substantial non-energy savings to utilities. These non-energy savings
6 include reductions in working capital expense, uncollectible accounts, credit and collection
7 expenses, and others. The Pennsylvania Low-Income Usage Reduction Program (LIURP)
8 for all Pennsylvania utilities is an example of benefits derived for low-income households to
9 whom energy efficiency was delivered. A payment of less than 100 percent means the
10 specified low-income household did not completely pay the current month's utility bill. In
11 contrast, a payment exceeding 100 percent means the low-income household not only paid
12 the current bill, but paid off its arrears as well.

13 For every Pennsylvania utility but one, the delivery of energy efficiency substantially
14 improved the payment patterns of the treated low-income households. Indeed, the delivery
15 of energy efficiency generally caused a substantial increase in the payment coverage of the
16 household energy bill. In most cases, the low-income household moved from falling further
17 and further behind by failing to pay the current bill to paying the entire current bill and
18 beginning to retire the arrears.

1 Q. How would you describe the need for residential energy efficiency?

2 A. Investments in residential energy efficiency help deliver efficient end-uses to consumers.

3 Energy efficiency recognizes the truism that Missouri households do not seek to consume
4 energy. Instead, what they seek is to have light, hot water refrigeration and heating and
5 cooling. If these end uses can be delivered using less energy, the needs of Missouri
6 consumers will have been satisfied.

7 HUD data shows that roughly one of every six Missouri units of housing that are affordable
8 to households living above 80 percent of median income were constructed before 1940.

9 Moreover, of the total of roughly 550,000 units affordable at that income level, nearly 90,000
10 have some type of "physical problem" under HUD's definitions. Finally, nearly 55,000
11 households living above 80 percent of median income pay more than 30 percent of their
12 income for shelter costs, and roughly 5,000 pay more than 50 percent. Electric non-heating
13 consumption represents roughly 45 percent of residential energy usage and nearly 70 percent
14 of residential bills. What happens to the electricity bills is thus important to residential
15 consumers.

16 Q. Who would benefit?

17 A. Funding residential energy-efficiency investments in the state of Missouri will generate
18 substantial benefits for all sectors of the state. In addition to generating environmental
19 benefits such as cleaner air and water, energy efficiency will promote economic
20 development, increase housing affordability, and reduce the risk of insurable events.

21 Well-designed energy-efficiency programs have been shown to produce substantial
22 economic benefits for local and state economies. *The Missouri Statewide Energy Study*
23 prepared by Missouri's Environmental Improvement and Energy Resources Authority

1 concluded that energy efficiency would "sustain more employment opportunities than either
2 the continued current level of energy use or the development of new energy supplies."

3 Q. In addition to economic benefits, are there other benefits?

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

9 Energy-efficiency investments can promote the affordability of homeownership in Missouri.

10 A study of how energy-efficiency investments affect the affordability of first-time home
11 ownership found that, in the Census Division of which Missouri is a part, a \$3,000 energy-
12 efficiency investment made at the time of home purchase, financed at 9 percent interest,
13 would yield an effective reduction in the price of the home of 6 percent and an effective
14 interest-rate discount of 0.48 percent.

15 Finally, the Alliance to Save Energy, a nationally recognized coalition of prominent
16 business, government, environmental, and consumer leaders who promote the efficient and
17 clean use of energy worldwide to benefit consumers, the environment, economy and national
18 security, issued a report addressing energy-efficiency improvements to homes. It was found
19 that residential energy-efficiency improvements could reduce energy consumption by an
20 estimated 567 billion Btu's. The Alliance reported that, of those states that did not have an
21 established energy standard in the U.S., Missouri ranked 5th in terms of potential total energy
22 savings and 5th in energy savings per home.

23 Q. Does this conclude your testimony?

1 A. Yes. Thank you.

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