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Low Income Weatherization
Witness: Laura Wolfe
Sponsoring Party: Missouri Department of
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Case No.: ER-2011-0028

DIRECT TESTIMONY
OF
LAURA WOLFE
MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENERGY

FEBRUARY 8, 2011

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

UNION ELECTRIC COMPANY, d/b/a AMEREN MISSOURI

RATE CASE

CASE NO. ER-2011-0028

MDNR Exhibit No. 800
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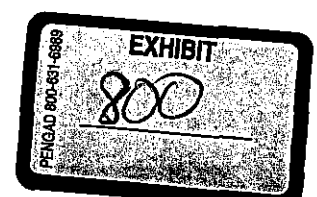


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1 I. INTRODUCTION

2 **Q. Please state your name and business address.**

3 A. My name is Laura Wolfe. My business address is Missouri Department of Natural
4 Resources, Division of Energy (MDNR-DE), 1101 Riverside Drive, P.O. Box 176,
5 Jefferson City, Missouri 65102-0176.

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

7 A. I am employed as an Energy Specialist in the Energy Policy and Resources Program in
8 the Missouri Department of Natural Resources, Division of Energy. The Missouri
9 Department of Natural Resources is an agency of state government with its executive
10 office located in Jefferson City, Missouri, and is vested with the powers and duties set
11 forth in Section 640.150, RSMo. The Division of Energy is the designated state energy
12 office in Missouri responsible for the administration of the federal Low Income
13 Weatherization Assistance Program (LIWAP) and the federal State Energy Program
14 (SEP) established by the United States Congress in 1978, which is managed nationally
15 by the United States Department of Energy (USDOE). The SEP consists of several
16 statewide energy efficiency programs administered by the MDNR-DE and funded by
17 the USDOE.

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

19 A. I am testifying on behalf of the Missouri Department of Natural Resources ("MDNR"),
20 an intervenor in these proceedings.

21 **Q. Please describe your educational background and professional experience.**

22 A. I received a Bachelor of Science in Business Administration in 1985 from Central
23 Methodist College (n.k.a., Central Methodist University) in Fayette, Missouri, and a

1 Master in Public Administration in 1990 from the University of Missouri-Columbia. In
2 addition to governmental accounting, purchasing, facilities management, and
3 regulatory compliance auditing experience, I have worked in a variety of positions
4 regarding utility regulation including as a Utility Regulatory Auditor III for the
5 Commission from 1996 to 1999, a Costing Administrator and later Docket Manager for
6 Sprint (n.k.a., CenturyLink) from 1999 to 2002, and as a Utility Regulatory Specialist
7 in the Federal Gas Group at the Commission from 2002 to 2007. I have been an
8 Energy Specialist with MDNR since 2007.

9 **Q. Have you previously testified before the Commission on behalf of the Missouri**
10 **Department of Natural Resources?**

11 A. Yes, I have. I testified on behalf of MDNR in the following cases before the
12 Commission:

- 13 • Empire District Gas Company rate case, GR-2009-0434;
 - 14 • Empire District Electric Company rate case, ER-2010-0130;
 - 15 • Union Electric Company, d/b/a AmerenUE rate case, ER-2010-
16 0036;
 - 17 • Laclede Gas Company rate case, GR-2010-0171;
 - 18 • Kansas City Power and Light rate case, ER-2009-0089; and
 - 19 • KCP&L-Greater Missouri Operations rate case, ER-2009-0090.
- 20

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

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

23 A. The purpose of my testimony is to address the current state of the demand side
24 management (“DSM”) programs offered by Union Electric Company, now doing
25 business as Ameren Missouri (“AmerenMO”). I will also address concerns regarding

1 cost recovery of DSM program costs, and cost recovery of the costs of the restoration
2 of the Taum Sauk Reservoir.

3
4

III. DEMAND SIDE MANAGEMENT PORTFOLIO

5 **Q. What programs currently make up AmerenMO's DSM portfolio?**

6 **A. AmerenMO's DSM portfolio currently includes the following programs:**

7 **Weatherization Program** - designed to assist qualified low income residential
8 customers in reducing their use of energy through weatherization and
9 conservation.¹

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Business Energy Efficiency Programs - this is a portfolio of programs designed
to proactively impact Commercial & Industrial (C&I) customer energy use in
such a way as to reduce consumption of electric energy and/or reduce peak
energy and demand levels. The programs have been identified through the
AmerenMO's Integrated Resource Planning ("IRP") case.² The program
includes:

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Standard Incentive Program - provides pre-set incentives for energy efficient
products that are readily available in the marketplace and will target
measures for which energy savings can be reliably deemed, or calculated
using simple threshold criteria.³

23
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Custom Incentive Program - provides financial assistance to customers to
support implementation of energy efficiency improvement opportunities
which are available at the time of new equipment purchases, facility
modernization, and industrial process improvement.⁴

27
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New Construction Incentive Program - is designed to capture energy and
demand reductions from new construction projects by interacting with
building owners and designers during the design and/or construction
process.⁵

32
33
34

Retro-Commissioning Program - designed to capture energy and demand
reductions from existing facilities by optimizing building system energy use

¹ Union Electric Company P.S.C. MO Schedule No. 5, sheet 218.
² Missouri PSC Case No. EO-2007-0409, *In the Matter of Union Electric Company d/b/a AmerenUE's 2008 Utility Resource Filing pursuant to 4 CSR 240 - Chapter 22.*
³ Union Electric Company, P.S.C. MO Schedule No. 5, sheets 228-233.
⁴ *Ibid.*, sheets 234-235.
⁵ Union Electric Company, P.S.C. MO Schedule No. 5, sheets 235.1-235.6.

1 and overall efficiency by providing energy assessment services and
2 assistance in implementing identified solutions to customers to insure that
3 their systems are operating at optimal energy efficiency.⁶
4

5 **Residential Energy Efficiency Programs** - this is a portfolio of programs
6 designed to proactively impact residential customer energy use in such a way as
7 to reduce consumption of electric energy and/or reduce peak demand levels.
8 The goal of these programs is to acquire the demand side resources identified
9 through the AmerenMO's Integrated Resource Planning effort in an appropriate
10 and cost-effective manner.⁷ The program includes:
11

12 **Lighting and Appliance Program** - designed to reduce energy use in
13 residential lighting and appliance products by encouraging selection of
14 ENERGY STAR® qualified products through Market Transformation
15 efforts.⁸
16

17 **Social Marketing Distribution Program** - designed to reduce energy use in
18 residential lighting by leveraging the distribution and education capabilities
19 of organizations to distribute CFL lamps and educational material to their
20 residential constituents.⁹
21

22 **Multi-Family Income Qualified Program** - partners with multi-family
23 building owners and managers to remove energy inefficient lighting and
24 appliances and install program-specified energy efficiency measures
25 (EEMs) in income qualified building units.¹⁰
26

27 **HVAC CheckMe!® Program** - designed to encourage residential customers to
28 have existing cooling systems evaluated and if feasible, brought back to
29 factory specifications (re-commissioned), or replace less efficient, working
30 central cooling systems with high efficiency central cooling systems.¹¹
31

32 **Refrigerator Bounty and Recycling Program** - designed to prevent the
33 continued use of inefficient, working refrigerators and freezers by taking the
34 units out of homes and recycling them in an environmentally safe manner.¹²
35

36 **Q. Do you have any recommendations regarding AmerenMO's Weatherization**
37 **Program?**

⁶ *Ibid.*, sheets 235.7-235.9.

⁷ Missouri PSC Case No. EO-2007-0409, *In the Matter of Union Electric Company d/b/a AmerenUE's 2008 Utility Resource Filing pursuant to 4 CSR 240 - Chapter 22.*

⁸ Union Electric Company, P.S.C. MO Schedule No. 5, sheets 239 - 241.

⁹ *Ibid.*, sheet 241.1.

¹⁰ *Ibid.*, sheets 250-252.

¹¹ *Ibid.*, sheets 253-256.

¹² Union Electric Company, P.S.C. MO Schedule No. 5, sheets 257-258.

1 A. Yes, I do. I recommend that AmerenMO continue to fund the Weatherization Program
2 at the current level of funding of \$1,200,000 per year. The State of Missouri received
3 additional funding in 2009 for the Federal Low Income Weatherization Assistance
4 Program via the American Recovery and Reinvestment Act ("ARRA"). Missouri was
5 awarded \$128 million dollars for low income weatherization to be used by the end of
6 March 2012. This additional funding is allowing the weatherization efforts for low
7 income citizens to provide much needed improvements to many more residences.
8 Even with this additional ARRA funding, the local agencies that provide low income
9 weatherization services continued to use the AmerenMO funds. Schedule LAW-
10 Direct-1 reflects the agencies' use of AmerenMO funds for the period of November
11 2009 through October 2010. The annual contribution, plus previous years' carryover
12 of unused funds, resulted in grants to the local agencies of \$1,636,702. The agencies
13 used \$1,115,398 of the grants, which is 68% of the total funds available and 93% of
14 AmerenMO's annual funding of \$1,200,000.

15 ARRA funding is giving a significant boost to weatherization efforts across
16 Missouri, but it is only a short-term funding source no longer be available after March
17 31, 2012. The low income weatherization funds provided through utility programs like
18 AmerenMO's will be essential once the ARRA funding ends.

19 **Q. You stated that, per AmerenMO's tariff, the Business Energy Efficiency**
20 **Programs consist of programs that were identified through AmerenMO's**
21 **Integrated Resource Planning (IRP) case. Also, according to AmerenMO's tariff,**
22 **the goal of the Residential Energy Efficiency Programs is to acquire the demand**
23 **side resources identified through the AmerenMO's IRP. What amount of energy**

1 savings was related to these programs in AmerenMO's most recently completed
2 IRP case?

3 A. In its most recently completed IRP case, Case No. EO-2007-0409, AmerenMO
4 calculated the MWh savings and the MW savings for each of the programs they
5 planned to implement as a result of the integrated resource planning study. Using
6 information from AmerenMO IRP, I created the accompanying Schedule LAW-Direct-
7 2 to present the anticipated MWh savings and MW savings, as well as the total
8 resource cost test results and the utility cost test results, for each program and for the
9 total DSM portfolio.¹³

10 Q. How successful has AmerenMO been in implementing the DSM programs
11 identified in their IRP study from Case No. EO-2007-0409?

12 A. Initially, in my opinion, AmerenMO struggled to get programs implemented and
13 promoted as quickly as planned in the IRP, particularly residential programs. A
14 primary cause of delay in implementing residential programs was the initial contractor
15 for program design, implementation and administration that did not deliver services as
16 expected. AmerenMO has since corrected this issue.

17 As detailed on page 1 of Schedule LAW-Direct-3, AmerenMO expended just over
18 60% of the 2008 budget proposed in the IRP for residential programs in 2008, but only
19 achieved a little over 8% savings of MWh and less than 3% savings in MW. MDNR
20 recognizes that all DSM programs take time and expense to design, implement and
21 promote, and that in addition, AmerenMO had early difficulties with its residential

¹³ Missouri PSC Case No. EO-2007-0409, *In the Matter of Union Electric Company db/a AmerenUE's 2008 Utility Resource Filing pursuant to 4 CSR 240 - Chapter 22, 4 CSR 240-22.070 Appendix B - DSM Implementation Plan, Table 8: AmerenUE Portfolio Summary, page 31.*

1 program contractor. AmerenMO's efforts begin to be a bit more fruitful in 2009 when
2 the MWh and MW savings rose to 67% and 31%, respectively. However, the efforts
3 for 2010 were a decline from 2009: 54% savings in MWh and 27% savings in MW
4 while spending 38% of the cumulative budget for the three year period.

5 AmerenMO achieved some success with its business energy efficiency programs.
6 In 2008, the first budget year after the IRP plan, AmerenMO expended 28% of the
7 proposed budget and achieved only a little more than 20% savings in MWh and 10%
8 savings in MW. Again, just as with residential programs, the design, implementation,
9 and promotion of DSM programs takes time and expense to ramp up to become fully
10 operational. AmerenMO improved on its first year by increasing the MWh and MW
11 savings to 57% and 20%, respectively, in 2009. However, as with the residential
12 programs, the business energy programs experienced a decline in 2010 with only 49%
13 savings in MWh, and 22% savings in MW while spending only 34% of the cumulative
14 budget for the three year period.

15 AmerenMO has made progress in implementing both its residential and business
16 efficiency programs; however, the expenditure levels are falling well below the
17 appropriate budgets for these programs developed in the IRP process. The IRP study
18 indicated that these budget levels are appropriate to achieve the cost effective savings
19 from DSM. However, Ameren has not met their IRP savings and expenditure goals.

20 **Q. Schedule LAW-Direct-3, page 1, indicates that AmerenMO implemented a**
21 **program that was not in the IRP plan, the Appliance Recycling Program. Was it**
22 **appropriate for AmerenMO to deviate from the DSM programs identified in the**
23 **IRP plan?**

1 A. Yes. The IRP is designed to plan for resource acquisition, both supply side and
2 demand side, to meet the forecast needs for energy and the provision of that energy by
3 the utility. On the demand side, MDNR, as well as state policy as detailed in the
4 Missouri Energy Efficiency Investment Act ("MEEIA"),¹⁴ encourages electric utilities
5 to identify and implement all cost effective DSM programs. The IRP is based on what
6 is known at the time of the study. It is not uncommon, however, in the course of
7 designing, implementing and administering DSM programs that a utility learns of other
8 DSM opportunities that may not have been considered before. That is the case with the
9 Appliance Recycling Program, entitled the Refrigerator Recycling Program in
10 AmerenMO's tariff. AmerenMO conducted a market potential study in 2010¹⁵. As a
11 result of that study, AmerenMO determined that there was a potential to remove old
12 and inefficient refrigerators from the grid and reduce energy consumption.
13 AmerenMO's response was to design, implement, and promote this program although
14 it was not part of its IRP plan. And, most important of all, AmerenMO is achieving
15 cost effective energy reductions with the Appliance Recycling program.

16 **Q. Has AmerenMO shown a willingness to act on other lessons learned while**
17 **implementing DSM programs?**

18 A. Yes. AmerenMO has also shown a willingness to seek out alternative program designs
19 and target customers in order to achieve success. Two examples are the Multi-Family
20 Income Qualified Program and the Social Marketing Distribution Program.

¹⁴ Section 393.1124, RSMo.

¹⁵ AmerenUE. (2010) AmerenUE Demand Side Management (DSM) Market Potential Study. 4 volumes. Global Report Number 1287-1. January, 2010.

1 In its IRP plan, AmerenMO identified a cost effective DSM program to implement
2 called the Multifamily Residential program. The initial concept of the program was to
3 have a "comprehensive program incorporating low-cost/no-cost measures and major
4 system upgrades where cost effective" to multifamily residential facilities.¹⁶
5 AmerenMO designed and implemented a program to target multifamily residences and
6 sought to contract with providers to do the installation of various measures, but
7 received extraordinarily high cost estimates for program services. AmerenMO worked
8 through a variety of alterations seeking ways to implement a successful program to
9 address the energy efficiency needs of residents of multifamily housing. After several
10 revisions, AmerenMO refocused the program on low income multifamily public
11 housing and has now partnered with the City of St. Louis to install energy efficiency
12 measures in low income housing in the city. AmerenMO continues to promote the
13 program and expects to expand to it other low-income housing authorities. Rather than
14 stop the program when it initially encountered obstacles, AmerenMO sought
15 alternatives to establish a successful program.

16 The Social Marketing Distribution Program developed from a request from a non-
17 profit group interested in distributing compact fluorescent light bulbs ("CFL") at a
18 community event. AmerenMO realized that there was potential to reach often hard-to-
19 reach low income customers through non-profit organizations. As a result, AmerenMO
20 designed the Social Marketing Distribution Program to get CFLs and energy efficiency
21 educational materials into the hands of its residential customers.

¹⁶ Missouri PSC Case No. EO-2007-0409, *In the Matter of Union Electric Company d/b/a AmerenUE's 2008 Utility Resource Filing pursuant to 4 CSR 240 – Chapter 22, 4 CSR 240-22.070 Appendix B - DSM Implementation Plan, Table 7: Initial Program Concepts, page 29.*

1 Q. Are there any other indications of AmerenMO's willingness to pursue energy
2 efficiency that you want to mention?

3 A. Yes, there is. In June 2009, the Department of Energy approved Missouri's application
4 under the U.S. Department of Energy's State Energy Program for \$57,393,000 in
5 American Recovery and Reinvestment Act funding for energy efficiency and
6 renewable energy programs. One of the programs designed and implemented by
7 MDNR is the *Energize Missouri Industries – Best Price Efficiency Program*. The
8 program provided grants to companies that competitively bid for energy efficiency
9 incentives through a "reverse auction." The goal of the auction was to provide
10 industries and commercial entities with the opportunity to realize measurable energy
11 savings that will result in reduced energy costs and increased market competitiveness.
12 When all the winners of the *Best Price Efficiency Program* reverse auction fully
13 implement their projects, Missouri could save up to 75 million kWh (kilowatt-hours) of
14 energy. The online reverse auction allowed pre-qualified providers to bid on \$3
15 million in incentives on a \$/kWh saved basis for expected energy efficiency projects.
16 AmerenMO's bid of \$0.0325/kWh for a projected total savings of 15.4 million kWh
17 resulted in an award of \$500,000 from the *Energize Missouri Industries – Best Price*
18 *Efficiency Program*. On January 24, 2011, AmerenMO filed a tariff revision to
19 implement this project in conjunction with its Business Energy Efficiency Programs.¹⁷
20 The revised tariff sheets bear an effective date of February 20, 2011.

21
22 **IV. DSM PROGRAM COST RECOVERY**

¹⁷ Missouri Public Service Commission, Tariff Filing No. JE-2011-0375.

1 **Q. What is your concern for the recovery of DSM program costs?**

2 A. Timely cost recovery is necessary for utilities to allow them to pursue DSM programs
3 that result in significant investments and energy savings. Timely cost recovery also
4 encourages the utilities to respond to the state's policy to implement all cost effective
5 DSM as detailed in MEEIA. Generally in Missouri, electric utilities record the costs of
6 providing DSM programs into a regulatory asset account and then seek recovery in its
7 next rate case. Expenditures found to be prudent are amortized and recovered over
8 several years: currently six (6) years for AmerenMO.¹⁸

9 The Commission is promulgating rules that will provide electric utilities a process
10 for seeking approval of a DSM portfolio and an accompanying demand-side programs
11 investment mechanism ("DSIM"). The DSIM will be the company's plan to recover
12 program costs, lost revenues, and possibly performance incentives. The rules,
13 however, may not be in effect for several months. MDNR recommends that the
14 Commission allow the costs of DSM programs incurred by AmerenMO be recovered
15 through expensing rather than amortization in the interim until the MEEIA rules are in
16 effect and fully implemented.

17

18 **V. TAUM SAUK RESERVOIR RESTORATION COST RECOVERY**

19 **Q. What is your concern for the recovery of costs associated with the restoration of**
20 **the Taum Sauk Reservoir?**

¹⁸ Missouri Public Service Commission Case No. ER-2010-0036, *In the Matter of Union Electric Company d/b/a AmerenUE's Tariffs to Increase its Annual Revenues for Electric Service*, Order Approving First Stipulation and Agreement, Effective March 24, 2010.

1 A. My concern with these costs is related to a Consent Judgment reached between the
2 State of Missouri and Ameren in Case No. 07RE-CC00005 before the Circuit Court of
3 Reynolds County. In the Consent Judgment, AmerenMO (at that time, AmerenUE)
4 agreed to the following provision:

5 2. Rebuild. Subject to authorization by FERC, AmerenUE shall replace the
6 failed Upper Reservoir Dike with a new Upper Reservoir Dam, according to
7 all requirements of construction and licensing of all Federal and State
8 regulatory agencies with jurisdiction over the rebuild. In order to facilitate
9 the rebuilding of the Upper Reservoir Dam, the State agrees to timely
10 process and issue all necessary or required permits in a manner consistent
11 with prevailing law and to fully cooperate with AmerenUE during the
12 rebuild process.

13
14
15 3. Ratepayer Protection. AmerenUE acknowledges that it will not attempt
16 to recover from ratepayers in any rate increase any in-kind or monetary
17 payments to the State Parties required by this Consent Judgment or
18 construction costs incurred in the reconstruction of the Upper Reservoir
19 Dam (expressly excluding, however, "allowed costs," which shall mean
20 only enhancements, costs incurred due to circumstances or conditions that
21 are currently not reasonably foreseeable and costs that would have been
22 incurred absent the Occurrence as allowed by law), and further
23 acknowledges the audit powers of the Missouri Public Service Commission
24 to ensure that no such recovery is pursued. In the event that Ameren intends
25 to seek recovery for allowed costs, it shall notify the State Parties in writing
26 at least seven (7) business days in advance of its initial applications for the
27 recovery of these costs. If AmerenUE fails to provide the required notice, it
28 shall forfeit whatever legal right it has to seek such recovery.¹⁹
29

30 MDNR is aware that the restoration project is now completed, and the issue of cost
31 recovery will be addressed in this rate case.

32 Q. What were the circumstances that led to the need for restoration of the Taum
33 Sauk Reservoir?

¹⁹ *State of Missouri ex rel. Jeremiah W. (Jay) Nixon v. Union Electric d/b/a AmerenUE*, Case No. 07RE-CC00005, Reynolds County Circuit Court, January 9, 2008.

1 A. AmerenMO's Taum Sauk Upper Storage Facility experienced a massive dam failure
2 during the very early hours of December 14, 2005. More than a billion gallons of
3 water rushed down Proffit Mountain and overwhelmed the east fork of the Black River
4 and the lower ground of Johnson's Shut-Ins State Park, a park owned and managed by
5 MDNR. This event resulted in extensive damage to state resources and property and
6 led to the Consent Judgment referenced above. The Consent Judgment requires
7 Ameren UE to pay damages valued at \$179,705,000 and to comply with the ratepayer
8 protection provisions described above.

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

10 A. Yes. Thank you.

Agency	Grant Amount	2009		2010										Total Expenses	Balance
		November Expenses	December Expenses	January Expenses	February Expenses	March Expenses	April Expenses	May Expenses	June Expenses	July Expenses	August Expenses	September Expenses	October Expenses		
Community Services Inc.	\$ 14,324	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,811	\$ -	\$ -	\$ 2,496	\$ -	\$ -	\$ 5,787	\$ 11,894	\$ 2,430
Delta Area Economic Opportunity Corporation	83,736	383	-	-	3,711	10,406	12,229	10,675	6,097	31,824	8,411	-	-	83,736	-
East Missouri Action Agency	124,229	7,830	-	7,819	10,816	10,814	4,979	3,438	1,010	2,415	4,506	2,628	21,889	78,144	46,085
Green Hills Community Action Agency	20,363	-	-	-	5,221	-	-	-	-	-	-	-	-	5,221	15,142
Central Missouri Community Action	43,042	-	-	-	-	-	-	-	7,747	16,401	-	18,894	-	43,042	-
Urban League	363,876	5,293	-	21,551	4,878	11,349	19,830	25,165	29,881	39,142	24,538	113,785	68,484	363,876	-
Jefferson-Franklin Community Action Corporation	146,938	-	-	8,431	1,917	3,485	2,381	2,768	446	10,012	11,735	11,472	26,862	79,510	67,428
Kansas City Neighborhood & Community Services Dept.	55,401	-	51	-	-	-	-	-	-	-	-	-	-	51	55,350
Community Action Agency of St. Louis County	534,658	22,229	16,638	8,047	37,431	21,937	39,288	17,261	22,643	20,832	18,500	20,126	18,021	282,954	271,704
Missouri Ozarks Community Action	61,184	-	-	-	11,513	3,435	1,824	-	6,844	12,128	-	12,529	5,485	53,758	7,426
North East Community Action Corporation	154,897	-	-	-	-	-	13,422	755	8,400	12,957	21,057	39,267	37,364	133,212	21,685
Northeast Missouri Community Action Agency	34,054	-	-	-	-	-	-	-	-	-	-	-	-	-	34,054
Total *	\$ 1,636,702	\$ 36,735	\$ 16,689	\$ 45,848	\$ 78,487	\$ 61,426	\$ 97,565	\$ 60,063	\$ 83,048	\$ 148,207	\$ 88,747	\$ 218,701	\$ 183,882	\$ 1,118,398	\$ 521,304

* Carryover from previous year \$436,702
 Current year \$ 1,200,000
 Total Grants \$1,636,702

Missouri PSC Case No. ER-2011-0028
 Anticipated MWh Savings, MW Savings, TRC Results, and Utility Cost Test Results

Source:

Missouri PSC Case No. EO-2007-0409: *In the Matter of Union Electric Company
 d/b/a AmerenUE's 2008 Utility Resource Filing pursuant 4 CSR 240 - Chapter 23
 4 CSR 240-22.070 Appendix B - DSM Implementation Plan, Table 8: AmerenUE Portfolio Summary, page 31*

Residential Program	Total Annual MWh			Total Annual MW			Annual Program Costs (x \$100,000)			Cost-Effectiveness	
	2008	2009	2010*	2008	2009	2010*	2008	2009	2010*	TRC	UCT
ENERGY STAR Homes Program	-	-	154	-	-	0.1	\$ -	\$ 0.1	\$ 0.2	1.00	1.18
Home Energy Performance	3,480	8,195	14,463	0.5	1.2	2.0	\$ 0.8	\$ 1.1	\$ 1.4	2.39	3.19
Residential DR-CPP w/ Smart Thermostat	-	-	159	-	-	1.8	\$ -	\$ -	\$ 0.5	1.37	1.30
Residential DR-Direct Load Control	496	1,013	1,554	5.5	11.3	17.3	\$ 1.1	\$ 1.3	\$ 1.5	1.93	1.78
Residential HVAC Diagnostics & Tune-Up	-	5,904	13,692	-	1.2	2.8	\$ -	\$ 2.1	\$ 2.8	1.55	1.92
Residential Lighting and Appliances	28,749	65,928	112,670	2.4	5.6	9.6	\$ 3.1	\$ 4.1	\$ 5.3	2.29	3.99
Residential Low Income	4,581	9,162	13,742	0.3	0.5	0.8	\$ 3.0	\$ 3.0	\$ 3.1	0.88	1.00
Residential Multifamily	10,012	24,136	34,026	1.8	4.3	6.2	\$ 0.7	\$ 1.0	\$ 1.4	2.63	3.26
Residential New HVAC	-	1,464	3,394	-	0.3	0.7	\$ -	\$ 0.5	\$ 0.7	1.71	2.13
Total Residential Program	47,317	115,802	193,854	10.5	24.4	41.3	\$ 8.7	\$ 13.2	\$ 16.9		

Commercial/Industrial Program	Total Annual MWh			Total Annual MW			Annual Program Costs (x \$100,000)			Cost-Effectiveness	
	2008	2009	2010*	2008	2009	2010*	2008	2009	2010*	TRC	UCT
C&I Custom	27,099	54,198	81,297	3.5	7.0	10.6	\$ 4.2	\$ 4.3	\$ 4.4	2.23	2.94
C&I Prescriptive	32,470	68,985	109,738	4.8	10.5	16.6	\$ 4.9	\$ 6.5	\$ 8.3	1.89	2.44
C&I Retro-commissioning	11,573	24,007	37,357	1.4	2.8	4.4	\$ 0.6	\$ 0.6	\$ 0.7	3.17	6.78
Commercial Demand Credit	760	760	760	38.0	37.0	38.0	\$ 0.4	\$ 0.4	\$ 0.4	1.56	1.08
Commercial DR-CPP w/Smart Thermostat	-	-	178	-	-	2.0	\$ -	\$ -	\$ 0.5	1.60	1.51
Commercial New Construction	817	1,634	2,451	0.3	0.5	0.8	\$ 0.7	\$ 0.7	\$ 0.7	1.14	1.35
Industrial Interruptible	3,800	3,800	3,800	47.5	47.5	47.5	\$ 2.0	\$ 2.0	\$ 2.1	1.59	0.36
Total Commercial/Industrial Program	76,519	153,384	235,581	95.5	105.3	119.9	\$ 12.8	\$ 14.5	\$ 17.1		

Other Programs and Costs	Total Annual MWh			Total Annual MW			Annual Program Costs (x \$100,000)			Cost-Effectiveness	
	2008	2009	2010*	2008	2009	2010*	2008	2009	2010*	TRC	UCT
Education Program	-	-	-	-	-	-	\$ 0.5	\$ 0.7	\$ 0.9		
Evaluation, Measurement, and Verification Information Program	-	-	-	-	-	-	\$ 1.1	\$ 1.4	\$ 1.7		
Portfolio Administration	-	-	-	-	-	-	\$ 0.5	\$ 0.7	\$ 0.9		
Total Other Programs and Costs	-	-	-	-	-	-	\$ 3.2	\$ 4.2	\$ 5.2		

Total Portfolio	Total Annual MWh			Total Annual MW			Annual Program Costs (x \$100,000)			Cost-Effectiveness	
	2008	2009	2010*	2008	2009	2010*	2008	2009	2010*	TRC	UCT
Total Portfolio	123,836	269,186	429,435	106.0	130.7	161.2	\$ 24.7	\$ 31.9	\$ 39.2	1.71	2.04

* Amounts shown for 2010 are for the eleven months ended 11/30/2010.

Missouri PSC Case No. ER-2011-0028

Comparison of Actual to Anticipated MWh Savings, MW Savings, and Program Costs

Source: Missouri PSC Case No. EO-2007-0409: in the Matter of Union Electric Company

d/b/a AmerenUE's 2008 Utility Resource Filing pursuant 4 CSR 240 - Chapter 23

4 CSR 240-22.070 Appendix B - DSM Implementation Plan, Table 8: AmerenUE Portfolio Summary, page 31 and Response to Data Request DNR-004

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Residential Program	Total Annual MWh											
	2008			2009			2010			Cumulative		
	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance
ENERGY STAR Homes Program	-	-	-	-	-	-	154	-	(154)	154	-	(154)
Home Energy Performance	3,480	-	(3,480)	8,195	-	(8,195)	14,463	-	(14,463)	26,138	-	(26,138)
Residential DR-CPP w/ Smart Thermostat	-	-	-	-	-	-	159	-	(159)	159	-	(159)
Residential DR-Direct Load Control	495	-	(495)	1,013	-	(1,013)	1,554	-	(1,554)	3,062	-	(3,062)
Residential HVAC Diagnostics & Tune-Up	-	-	-	7,368	1,036	(6,332)	17,086	4,956	(12,130)	24,454	5,992	(18,462)
Residential Lighting and Appliances	28,749	3,838	(24,911)	65,928	69,946	4,018	112,670	86,978	(25,692)	207,347	160,762	(46,585)
Residential Low Income	4,581	-	(4,581)	9,162	5,201	(3,961)	13,742	7,963	(5,779)	27,485	13,164	(14,321)
Residential Multifamily	10,012	-	(10,012)	24,136	29	(24,107)	34,026	29	(33,997)	68,174	58	(68,116)
Residential New HVAC (Combined with HVAC Diag. & Tune-up)	-	-	-	-	-	-	-	-	-	-	-	-
Appliance Recycling (Not in IRP plan. TRC: 1.71; UCT: 2.13)	-	-	-	-	908	908	-	5,249	5,249	-	6,157	6,157
Total Residential Program	47,317	3,838	(43,479)	115,802	77,120	(38,682)	193,854	105,175	(88,679)	358,973	186,133	(170,840)
Percentage Actual to IRP Plan		8.11%			66.60%			54.25%			52.14%	

Residential Program	Total Annual MW											
	2008			2009			2010			Cumulative		
	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance
ENERGY STAR Homes Program	-	-	-	-	-	-	0.1	-	(0.1)	0.1	-	(0.1)
Home Energy Performance	0.5	-	(0.5)	1.2	-	(1.2)	2.0	-	(2.0)	3.7	-	(3.7)
Residential DR-CPP w/ Smart Thermostat	-	-	-	-	-	-	1.8	-	(1.8)	1.8	-	(1.8)
Residential DR-Direct Load Control	5.5	-	(5.5)	11.3	-	(11.3)	17.3	-	(17.3)	34.1	-	(34.1)
Residential HVAC Diagnostics & Tune-Up	-	-	-	1.2	0.3	(0.9)	2.8	1.4	(1.4)	4.0	1.7	(2.3)
Residential Lighting and Appliances	2.4	0.3	(2.1)	5.6	6.5	0.9	9.6	8.0	(1.6)	17.6	14.8	(2.8)
Residential Low Income	0.3	-	(0.3)	0.5	0.6	0.1	0.8	0.9	0.1	1.6	1.5	(0.1)
Residential Multifamily	1.8	-	(1.8)	4.3	-	(4.3)	6.2	-	(6.2)	12.3	-	(12.3)
Residential New HVAC (Combined with HVAC Diag. & Tune-up)	-	-	-	0.3	-	(0.3)	0.7	-	(0.7)	1.0	-	(1.0)
Appliance Recycling (Not in IRP plan. TRC: 1.71; UCT: 2.13)	-	-	-	-	0.1	0.1	-	0.8	0.8	-	0.9	0.9
Total Residential Program	10.5	0.3	(10.2)	24.4	7.5	(17.0)	41.3	11.1	(31.0)	76.2	18.9	(57.3)
Percentage Actual to IRP Plan		2.86%			30.74%			26.82%			24.77%	

Residential Program	Cumulative Annual Program Costs (x \$100,000)											
	2008			2009			2010			Cumulative		
	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance
ENERGY STAR Homes Program	\$ -	\$ -	\$ -	\$ 0.129	\$ -	\$ (0.129)	\$ 0.304	\$ -	\$ (0.304)	0.433	-	(0.433)
Home Energy Performance	\$ 0.800	\$ 0.370	\$ (0.430)	\$ 1.820	\$ 0.370	\$ (1.450)	\$ 3.262	\$ 0.371	\$ (2.891)	5.882	1.111	(4.771)
Residential DR-CPP w/ Smart Thermostat	\$ -	\$ 0.300	\$ 0.300	\$ -	\$ 0.300	\$ 0.300	\$ 0.506	\$ 0.300	\$ (0.206)	0.506	0.900	0.394
Residential DR-Direct Load Control	\$ 1.100	\$ -	\$ (1.100)	\$ 2.458	\$ -	\$ (2.458)	\$ 3.955	\$ -	\$ (3.955)	7.513	-	(7.513)
Residential HVAC Diagnostics & Tune-Up	\$ 0.520	\$ 0.622	\$ 0.102	\$ 3.275	\$ 0.900	\$ (2.375)	\$ 7.273	\$ 1.754	\$ (5.519)	11.068	3.276	(7.792)
Residential Lighting and Appliances	\$ 3.100	\$ 2.424	\$ (0.676)	\$ 7.151	\$ 7.044	\$ (0.107)	\$ 12.403	\$ 8.637	\$ (3.766)	22.654	18.105	(4.549)
Residential Low Income	\$ 3.000	\$ 1.169	\$ (1.831)	\$ 5.982	\$ 3.810	\$ (2.172)	\$ 9.085	\$ 5.020	\$ (4.065)	18.067	9.999	(8.068)
Residential Multifamily	\$ 0.700	\$ 0.860	\$ 0.160	\$ 1.685	\$ 1.240	\$ (0.445)	\$ 3.047	\$ 1.240	\$ (1.807)	5.432	3.340	(2.092)
Residential New HVAC (Combined with HVAC Diag. & Tune-up)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-	-	-
Appliance Recycling (Not in IRP plan. TRC: 1.71; UCT: 2.13)	\$ -	\$ -	\$ -	\$ -	\$ 0.058	\$ 0.058	\$ -	\$ 0.440	\$ 0.440	-	0.498	0.498
Total Residential Program	\$ 9.220	\$ 5.745	\$ (3.475)	\$ 22.500	\$ 13.722	\$ (8.836)	\$ 39.835	\$ 17.762	\$ (22.073)	71.555	37.229	(34.326)
Percentage Actual to IRP Plan		62.31%			60.99%			44.59%			52.03%	

Comparison of Actual to Anticipated MWh Savings, MW Savings, and Program Costs

Source: Missouri PSC Case No. EO-2007-0409: In the Matter of Union Electric Company

d/b/a AmerenUE's 2008 Utility Resource Filing pursuant 4 CSR 240 - Chapter 23

4 CSR 240-22.070 Appendix B - DSM Implementation Plan, Table 8: AmerenUE Portfolio Summary, page 31 and Response to Data Request DNR-004

Commercial/Industrial Program	Total Annual MWh											
	2008			2009			2010			Cumulative		
	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance
C&I Custom	27,099	5,018	(22,081)	54,198	57,365	3,167	81,297	74,942	(6,355)	162,594	137,325	(25,269)
C&I Prescriptive	32,470	10,466	(22,004)	68,985	23,359	(45,626)	109,738	30,212	(79,526)	211,193	64,037	(147,156)
C&I Retro-commissioning	11,573	-	(11,573)	24,007	1,558	(22,449)	37,357	3,581	(33,776)	72,937	5,139	(67,798)
Commercial Demand Credit	760	156	(604)	760	156	(604)	760	156	(604)	2,280	468	(1,812)
Commercial DR-CPP w/Smart Thermostat	-	-	-	-	-	-	178	-	(178)	178	-	(178)
Commercial New Construction	817	0	(817)	1,634	4,809	3,175	2,451	7,179	4,728	4,902	11,988	7,086
Industrial Interruptible	3,800	-	(3,800)	3,800	0	(3,800)	3,800	-	(3,800)	11,400	-	(11,400)
Total C/I Program	76,519	15,640	(60,879)	153,384	87,247	(66,137)	235,581	116,070	(119,511)	465,484	218,957	(246,527)
Percentage Actual to IRP Plan		20.44%			56.88%			49.27%			47.04%	

Commercial/Industrial Program	Total Annual MW											
	2008			2009			2010			Cumulative		
	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance
C&I Custom	3.5	1.0	(2.5)	7.0	8.8	1.8	10.6	11.3	0.7	21.1	21.1	-
C&I Prescriptive	4.8	1.9	(2.9)	10.5	4.0	(6.5)	16.6	5.2	(11.4)	31.9	11.1	(20.8)
C&I Retro-commissioning	1.4	-	(1.4)	2.8	0.2	(2.6)	4.4	0.5	(3.9)	8.6	0.7	(7.9)
Commercial Demand Credit	38.0	7.5	(30.5)	37.0	7.5	(29.5)	38.0	7.5	(30.5)	113.0	22.5	(90.5)
Commercial DR-CPP w/Smart Thermostat	-	-	-	-	-	-	2.0	-	(2.0)	2.0	-	(2.0)
Commercial New Construction	0.3	-	(0.3)	0.5	0.7	0.2	0.8	1.4	0.6	1.6	2.1	0.5
Industrial Interruptible	47.5	-	(47.5)	47.5	-	(47.5)	47.5	-	(47.5)	142.5	-	(142.5)
Total C/I Program	95.5	10.4	(85.1)	105.3	21.2	(84.1)	119.9	25.9	(94.0)	320.7	57.5	(263.2)
Percentage Actual to IRP Plan		10.89%			20.13%			21.60%			17.93%	

Commercial/Industrial Program	Annual Program Costs (x \$100,000)											
	2008			2009			2010			Cumulative		
	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance	IRP Plan	Actual	Variance
C&I Custom	\$ 4.200	\$ 1.882	\$ (2,318)	\$ 8.510	\$ 7.929	\$ (0,581)	\$ 12.925	\$ 9.569	\$ (3,356)	\$ 25.635	\$ 19,380	\$ (6,255)
C&I Prescriptive	\$ 4.900	\$ 1.524	\$ (3,376)	\$ 11.327	\$ 3.005	\$ (8,322)	\$ 19.647	\$ 3.685	\$ (15,962)	\$ 35.874	\$ 8,214	\$ (27,660)
C&I Retro-commissioning	\$ 0.600	\$ 0.074	\$ (0,526)	\$ 1.182	\$ 0.314	\$ (0,868)	\$ 1.863	\$ 0.632	\$ (1,231)	\$ 3.645	\$ 1,020	\$ (2,625)
Commercial Demand Credit	\$ 0.400	\$ 0.040	\$ (0,360)	\$ 0.830	\$ 0.040	\$ (0,790)	\$ 1.261	\$ 0.040	\$ (1,221)	\$ 2.491	\$ 0.120	\$ (2,371)
Commercial DR-CPP w/Smart Thermostat	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.488	\$ -	\$ (0,488)	\$ 0.488	\$ -	\$ (0,488)
Commercial New Construction	\$ 0.700	\$ 0.095	\$ (0,605)	\$ 1.348	\$ 0.830	\$ (0,518)	\$ 2.047	\$ 1.274	\$ (0,773)	\$ 4.095	\$ 2,199	\$ (1,896)
Industrial Interruptible	\$ 2.000	\$ -	\$ (2,000)	\$ 4.047	\$ -	\$ (4,047)	\$ 6.147	\$ -	\$ (6,147)	\$ 12.194	\$ -	\$ (12,194)
Total C/I Program	\$ 12.800	\$ 3.615	\$ (9,185)	\$ 27.244	\$ 12.118	\$ (15,126)	\$ 44.378	\$ 15.200	\$ (29,178)	\$ 84.422	\$ 30,933	\$ (53,489)
Percentage Actual to IRP Plan		28.24%			44.48%			34.25%			36.64%	