

Exhibit No.:
Issues: Energy Efficiency Services
Witness: John Buchanan
Sponsoring Party: Missouri Department of Natural
Resources - Missouri Division of
Energy
Type of Exhibit: Rebuttal Testimony
Case No.: GT-2011-0410

MISSOURI PUBLIC SERVICE COMMISSION

UNION ELECTRIC COMPANY

d/b/a AMEREN MISSOURI

CASE NO. GT-2011-0410

REBUTTAL TESTIMONY

OF

JOHN BUCHANAN

ON

BEHALF OF

MISSOURI DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENERGY

Jefferson City, Missouri
September 8, 2011

TABLE OF CONTENTS

I.	INTRODUCTION.....	2
II.	PURPOSE AND SUMMARY OF TESTIMONY.....	4
III.	PROPOSED REMOVAL OF ENERGY EFFICIENCY MEASURES BY AMEREN MISSOURI.....	4
IV.	SUMMARY OF TESTIMONY.....	25

1 **I. INTRODUCTION**

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

3 A. John Buchanan, Missouri Department of Natural Resources, Division of Energy, 1101
4 Riverside Drive, Jefferson City, Missouri.

5 **Q. What is the Division of Energy?**

6 A. The Division of Energy (DE) is a division within the Missouri Department of Natural
7 Resources (MDNR) and is the designated state energy office in Missouri responsible for the
8 administration of several federal programs and grants, including the federal Low Income
9 Weatherization Assistance Program (LIWAP) and the federal State Energy Program (SEP)
10 established by the United States Congress in 1978, which is managed nationally by the
11 United States Department of Energy (USDOE). The SEP consists of several statewide energy
12 efficiency programs administered by the DNR and funded by the USDOE. In 2009, the
13 MDNR assumed oversight responsibility with regard to federal energy grants issued by the
14 USDOE as a result of the passage of the American Recovery and Reinvestment Act of 2009.
15 The MDNR is vested with the powers and duties set forth in Section 640.150, RSMo.

16 **Q. What is your position with the Missouri Division of Energy?**

17 A. I am a Senior Planner in the DE's Energy Policy and Resources Program at the MDNR.

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

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

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

22 A. I joined the Missouri Department of Natural Resources, Division of Energy in July of 1980
23 as director of the Missouri Residential Conservation Service Program, a federally mandated

1 nationwide energy efficiency program for residential customers served by investor-owned
2 electric and natural gas companies. In 1986, I was promoted to serve as the Senior Energy
3 Planner within the Director's Office at the Division of Energy. In this capacity, I was
4 involved in a variety of programs and projects addressing energy, environmental, and natural
5 resource issues. In October 1995, I was appointed as a Senior Energy Planner within the
6 Policy and Planning Unit at the Division of Energy where my responsibilities include
7 preparation of testimony filed in general rate or other cases by the DNR before the Missouri
8 Public Service Commission (Commission), energy efficiency program design and
9 development, energy emergency planning, energy supply and price monitoring and energy-
10 related policy development. In 2008, I was confirmed by the Missouri Senate as one of nine
11 commissioners to the Missouri Propane Gas Commission that regulates propane gas safety
12 within Missouri. Prior to my employment with the Department of Natural Resources, I
13 served as Special Assistant to the Mayor, City of Columbia, Missouri for two years. I have a
14 Bachelor of Arts degree in Political Science from Columbia College. I am a former Fellow
15 of Missouri University, where I received a Master of Science in Public Administration.

16 **Q. Are you currently working with Missouri gas utilities to implement energy efficiency**
17 **initiatives?**

18 A. Yes. Since 1980 I have worked directly with investor-owned regulated gas utilities on
19 several natural gas energy efficiency initiatives including the federal Residential
20 Conservation Service Program established by a US Congressional mandate. This was the
21 first nationwide utility-sponsored non-low income residential energy efficiency program
22 under the guidance of the USDOE. Currently, I serve as the designated DE representative on
23 three (3) energy efficiency collaboratives:

1 1) Ameren Missouri (natural gas) established by GR-2003-0517 and continued as a result
2 of the company's last two rate cases, GR-2007-0003 and GR-2010-0363;

3 2) Atmos Energy Corporation (Atmos) established by GR-2006-0387 and continued as a
4 result of the company's last rate case, GR-2010-0192; and,

5 3) Missouri Gas Energy (MGE) established by GR-2006-0422 and GT-2008-0005 and
6 continued as a result of the company's last rate case, GR-2009-0355.

7 I also prepared testimony and participated in settlement discussions that led to the establishment
8 of the efficiency collaborative for Laclede Gas Company in GR-2007-0208.

9 10 **II. PURPOSE AND SUMMARY OF TESTIMONY**

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

12 A. The purpose of my testimony is to address Ameren Missouri's proposed removal of natural
13 gas related energy efficiency measures for residential and commercial customers that were
14 implemented in accordance with Ameren Missouri's last rate case, GR-2010-0363. I will
15 specifically offer testimony that addresses:

16 (1) Direct Testimony by Gregory W. Lovett, filed on behalf of Ameren Missouri; and,

17 (2) Direct Testimony by Kyle Shoff, filed on behalf of Ameren Missouri.

18 19 **III. PROPOSED REMOVAL OF ENERGY EFFICIENCY MEASURES – AMEREN**

20 **MISSOURI**

21 **Q. Briefly summarize Mr. Lovett's basis for the removal of energy efficiency measures**
22 **filed by Ameren Missouri and approved by the Commission in Case No. GR-2010-0363.**

1 A. According to Mr. Lovett, “Ameren Missouri’s decision to analyze the cost effectiveness of
2 its current natural gas energy efficiency program was driven by the terms of the Unanimous
3 Stipulation and Agreement in Case No. GR-2010-0363 (Stipulation).” Specifically, Mr.
4 Lovett notes that “paragraph 6B of the Stipulation requires the Company to limit its energy
5 efficiency funding to ‘expenditures prudently-incurred on cost effective programs.’” (Direct
6 Testimony, Greg Lovett, Ameren Missouri, August 10, 2011, page 2, lines 16-20)

7 **Q. Ameren agreed to file compliance tariff sheets effective March 1, 2011 and that “Such**
8 **tariffs shall provide for uninterrupted availability of these energy efficiency programs**
9 **through December 31, 2012.” Ameren agreed to “perform a post-implementation**
10 **evaluation of the effectiveness of its non low income weatherization energy efficiency**
11 **programs.” Is Ameren’s proposal to remove energy efficiency measures consistent with**
12 **these agreements?**

13 A. No. (Unanimous Stipulation and Agreement, Ameren Missouri, GR-2010-0363, January 29,
14 2011, page 3, paragraph B, paragraph C; page 4, paragraph F and paragraph G)

15 **Q. Did the Commission address “cost-effectiveness” of implementing energy efficiency**
16 **programs by Ameren Missouri prior to the Unanimous Stipulation and Agreement**
17 **(Stipulation) in Case No. GR-2010-0363 and approved by the Commission?**

18 A. Yes. In the Stipulation and Agreement in Ameren’s previous general rate case, Case No.
19 GR-2007-0003, paragraph 18 provides, “The Collaborative will consider cost effectiveness
20 and the optimal design of implementing energy efficiency programs.” (Stipulation and
21 Agreement, GR-2007-0003, AmerenUE, March 27, 2007, pages 8-9, paragraph 18.)

22 **Q. What other factors did Mr. Lovett cite as the basis for the removal of energy efficiency**
23 **measures approved by the Commission?**

1 A. Mr. Lovett also notes that “paragraph 6D of the Stipulation explicitly makes Ameren
2 Missouri ‘responsible for all final decisions’ regarding its natural gas energy efficiency
3 programs and created the Energy Efficiency Advisory Group (EEAG), which is advisory in
4 nature. Prior to the Stipulation, decisions had been made by mutual agreement of a
5 Collaborative.” (Direct Testimony, Greg Lovett, Ameren Missouri, August 10, 2011, page 2,
6 lines 21-25)

7 **Q. Did Mr. Lovett explain the method used by Ameren Missouri to justify its proposal to**
8 **remove energy efficiency measures presented in the Stipulation?**

9 A. Yes. According to Mr. Lovett, “Utilizing updated information, new Total Resource Cost
10 (“TRC”) analyses were completed by Ameren Missouri witness Kyle Shoff. As a result of
11 this work, several (energy efficiency) measures were identified as non-cost effective.”
12 (Direct Testimony, Greg Lovett, Ameren Missouri, August 10, 2011, page 3, lines 10-12)

13 **Q. Did Mr. Lovett note in his Direct Testimony, that none of the other members of the**
14 **EEAG supported removing any of the energy efficiency measures proposed by Ameren**
15 **Missouri?**

16 A. No. According to Mr. Lovett, “Because the EEAG is only advisory, the Company is not
17 required to have unanimous agreement before it seeks Commission permission to modify its
18 energy efficiency tariffs. In this situation, even though the EEAG did not agree that the
19 measures in question were not cost effective, the Company was faced with the obligation to
20 amend its tariffs to remove what it believed (and continues to believe) are non-cost effective
21 measures.”

1 **Q. Did Ameren Missouri issue an email dated May 20, 2011 that included the statement**
2 **“Please let us know by the 25th (May 2011) if you will support these changes so we can**
3 **include this information on our cover letter with the tariff filing.”?**

4 A. Yes. (Response to Data Request, MDNR 026, Greg Lovett, Ameren Missouri, August 29,
5 2011)

6 **Q. Did Ameren Missouri include in its June 8, 2011 cover sheet to the Commission that the**
7 **non-Ameren EEAG members did not support the proposed elimination of any energy**
8 **efficiency measure?**

9 A. No. (Cover Sheet, Wendy Tatro, Ameren Missouri, June 8, 2011)

10 **Q. Mr. Lovett characterizes the change of the collaborative from consensus to “only**
11 **advisory” on page 4 of his Direct Testimony. Does MDNR agree with his**
12 **characterization and could this perspective have an impact on how the collaborative**
13 **interacts with Ameren and how Ameren makes decisions regarding energy efficiency**
14 **programs?**

15 A. Ameren has stated that they welcome input from the members of the collaborative, however,
16 given the June 8, 2011 filing and the opposition and non-support expressed by members of
17 the EEAG to the changes proposed by Ameren, MDNR is concerned about the likely
18 treatment that Ameren will give to the advice the EEAG may give. MDNR is concerned that
19 the EEAG’s input will have no meaningful impact on future decisions made by Ameren
20 regarding energy efficiency programs.

21 **Q. Did Mr. Lovett refer to and interpret paragraph 6B of the Stipulation as to require**
22 **Ameren Missouri to limit its energy efficiency funding to expenditures prudently-**
23 **incurred on cost effective programs.**

1 A. Yes. (Direct Testimony, Greg Lovett, Ameren Missouri, August 10, 2011, page 2, lines 18-
2 20)

3 **Q. Do you agree with Mr. Lovett's interpretation of paragraph 6B of the Stipulation?**

4 A. Absolutely not.

5 **Q. Why do you disagree with Mr. Lovett's interpretation of paragraph 6B of the**
6 **Stipulation?**

7 A. Nowhere within the Stipulation does language appear that specifically states or implies that
8 Ameren Missouri is to "limit" its energy efficiency funding expenditures. In fact, in the
9 Order Approving Stipulation and Agreement by the Commission effective January 29, 2011,
10 the Commission noted, "The agreement authorizes Ameren to file tariff sheets **increasing**
11 (emphasis added) its retail base rate by \$9 million, which includes \$700,000 of annual
12 funding for natural gas energy efficiency programs; **increasing** (emphasis added) over the
13 next three years to approximately \$850,000." (Order Approving Stipulation and Agreement,
14 GR-2010-0363, page 1, paragraph 2) I also strongly disagree with Mr. Lovett's
15 interpretation since he has failed to address paragraph 6C that addresses the issue of
16 "effectiveness" of energy efficiency programs implemented by Ameren Missouri in
17 accordance with the Stipulation.

18 **Q. Since Ameren is proposing to remove energy efficiency measures, will this action result**
19 **in Ameren meeting the terms of paragraph 6B of the Stipulation?**

20 A. Elimination of energy efficiency measures appears to be diametrically opposed to the
21 commitment Ameren Missouri made to ramp up its target level of annual funding for energy
22 efficiency. By proposing to remove energy efficiency measures and in the absence of details
23 from Ameren on the energy efficiency initiatives for the balance of program year 2011 and

1 for 2012, MDNR is uncertain how Ameren intends to meet the terms of paragraph 6B where
2 “Ameren Missouri agrees to a target level of annual funding to be achieved within the next
3 three years ramping up by year three to an amount equal to 0.5% of gross operating revenues
4 for gas service, including gas cost, or approximately \$850,000,” (Unanimous Stipulation and
5 Agreement, Ameren Missouri, GR-2010-0363, January 29, 2011, page 3, paragraph 6B)

6 **Q. How does paragraph 6C of the Stipulation address the issue of effectiveness of energy**
7 **efficiency programs implemented by Ameren Missouri.**

8 A. Paragraph 6C states, “The Company shall perform a post-implementation evaluation of the
9 effectiveness of its non low income weatherization energy efficiency programs. **Post-**
10 **implementation evaluations of all programs or measures** (emphasis added) shall include
11 usage data for program participants through the end of the month of April, 2012, and be
12 completed by December 31, 2012. Post-implementation evaluations will generally be
13 performed by an outside firm and include both a process evaluation and an impact
14 evaluation.” (Unanimous Stipulation and Agreement, GR-2010-0363, January 29, 2011, page
15 3, paragraph 6C)

16 **Q. Would such a post-implementation evaluation determine the cost-effectiveness of the**
17 **energy efficiency programs and measures filed by Ameren Missouri in accordance with**
18 **the Stipulation and approved by the Commission?**

19 A. Yes. In fact, Direct Testimony filed by Kyle Shoff on behalf of Ameren Missouri addresses
20 this cost-effectiveness issue where he states, “Best practices for estimating the cost-
21 effectiveness of energy efficiency measures, on either an *ex ante* (before implementation) or
22 *ex post* (after implementation) basis, are summarized most succinctly and completely in the

1 National Action Plan for Energy Efficiency (“NAPEE”) Guides.” (Direct Testimony, Kyle
2 Shoff, Ameren Missouri, August 10, 2011, page 5, lines 1-4)

3 **Q. Since Ameren Missouri references NAPEE regarding the cost-effectiveness of energy**
4 **efficiency measures, were recommendations regarding energy efficiency measures**
5 **presented by the National Action Plan for Energy Efficiency used by Ameren Missouri**
6 **in designing and implementing energy efficiency initiatives?**

7 A. No. The 2010 program year energy efficiency initiatives were proposed by Ameren Missouri
8 and initiated through the consensus process by the Residential and Commercial Energy
9 Efficiency Collaborative (RCEEC). Further, Ameren Missouri did not base its proposal to
10 continue or expand its energy efficiency initiatives on the National Action Plan, a strategic
11 business plan or formal program evaluation performed by Ameren Missouri or a third party.
12 (Response to Data Request, MDNR 002 and MDNR 013, Greg Lovett, AmerenUE, GR-
13 2010-0363, October 4, 2010)

14 **Q. Were the energy efficiency measures proposed by Ameren Missouri in its compliance**
15 **tariffs filed as Appendix C. to the Stipulation and approved by the Commission based**
16 **on an *ex ante* (before implementation) benefit/cost analysis?**

17 A. No, they were not based on any *ex ante* benefit/cost analysis since the benefit/cost analysis
18 was to be performed *ex post* (after implementation) as reflected by paragraph 6C of the
19 Stipulation.

20 **Q. Regarding the term “prudently-incurred” as used by Mr. Lovett, when or how is an**
21 **expense by an investor-owned gas company determined to be prudent in nature?**

22 A. The prudence of an expense is typically examined in a rate case which occurs after an
23 expense is incurred during a test year (or, for expenses which are accounted for in a

1 regulatory asset account like DSM expenses, in the first rate case occurring thereafter);
2 expenses are examined by parties including but not limited to the Office of Public Counsel
3 (OPC) and the Staff of the Commission (Staff). The Commission determines whether an
4 expense was prudently incurred only when presented the issue as a contested issue based
5 upon a review of prior expenses by a party to a rate case, and typically based on an audit of
6 the account in which the expenses have been categorized, generally in gas cases, this would
7 be challenges by the OPC and Staff. Accordingly, paragraph 6H of the Stipulation states, “In
8 the next general rate proceeding, any Energy Efficiency expense may be reviewed and or
9 challenged on the basis of prudence. (Unanimous Stipulation and Agreement, GR-2010-
10 0363, January 29, 2011, page 5, paragraph 6H)

11 **Q. Since the authorization of energy efficiency programs by the Commission in Ameren**
12 **Missouri’s Case No. GR-2003-0157; and, their continuation in Case No. GR-2007-0003**
13 **and GR-2010-0363, has the Commission identified or taken action against Ameren**
14 **Missouri regarding any identified energy efficiency program expense noted as being**
15 **imprudently incurred?**

16 A. No. In GR-2003-0517, the Commission authorized \$55,000 per year in energy efficiency
17 expenditures. In GR-2007-0003, the Commission authorized an increase in energy efficiency
18 funding to \$100,000 per year. And in GR-2010-0363, the Commission authorized \$700,000
19 per year to support energy efficiency, to be ramped up to approximately \$850,000 within 3
20 years. (Response to Data Request, MDNR 025, Greg Lovett, Ameren Missouri, August 29,
21 2011)

22 **Q. Is the current energy efficiency annual funding level of \$700,000 per year funded by**
23 **shareholders or through rates?**

1 A. The \$700,000 in energy efficiency funding approved by the Commission in Ameren
2 Missouri's last rate case, GR-2010-0363, is supported through rates paid by Ameren
3 Missouri customers. (Order Approving Stipulation and Agreement, GR-2010-0363, January
4 29, 2011)

5 **Q. What was the effective date of the Stipulation?**

6 A. January 29, 2011. (Order Approving Stipulation and Agreement, GR-2010-0363, January 29,
7 2011)

8 **Q. Did Ameren Missouri agree to the terms of the Stipulation as filed with and approved**
9 **by the Commission?**

10 A. Yes. (Response to Data Request, MDNR 006, Ameren Missouri, Greg Lovett, August 24,
11 2011)

12 **Q. Did the Stipulation have tariff sheets attached as "Appendix C" referenced within**
13 **paragraph 6G of the Stipulation and titled 'Missouri Energy Efficient Natural Gas**
14 **Equipment and Building Shell Measure Rebate Program' (hereafter "Compliance**
15 **Tariffs")?**

16 A. Yes. (Response to Data Request, MDNR 004, Ameren Missouri, Greg Lovett, August 23,
17 2011)

18 **Q. When did Ameren Missouri file tariff revisions proposing to remove energy efficiency**
19 **measures from the energy efficiency compliance tariffs related to the Stipulation**
20 **approved by the Commission?**

21 A. June 8, 2011, or approximately 3 months from the effective date of the compliance tariffs.
22 (Wendy Tatro, Associate General Counsel, Ameren Missouri, June 8, 2011)

1 **Q. As used by Mr. Lovett, does the definition of the term “cost-effective” appear in the**
2 **Stipulation?**

3 A. No. (Response to Data Request, MDNR 001, Ameren Missouri, Greg Lovett, August 24,
4 2011)

5 **Q. As used by Mr. Lovett, does the definition or the term “Total Resource Cost or “TRC”**
6 **appear within the Stipulation?**

7 A. No. (Response to Data Request, MDNR 002, Ameren Missouri, Greg Lovett, August 24,
8 2011)

9 **Q. Does the Stipulation specifically state or require the use of “Total Resource Cost or**
10 **“TRC”” to evaluate the effectiveness of an energy efficiency measure?**

11 A. No. (Unanimous Stipulation and Agreement, GR-2010-0363, January 29, 2011 and Response
12 to Data Request, MDNR 002, Greg Lovett, Ameren Missouri, August 24, 2011)

13 **Q. As used by Mr. Lovett, does the definition or the term “Benefit/Cost or B/C” appear**
14 **within the Stipulation?**

15 A. No. (Response to Data Request, MDNR 003, Ameren Missouri, Greg Lovett, August 24,
16 2011)

17 **Q. Does the Stipulation specifically state or require the use of a “Benefit/Cost or B/C” test**
18 **or score to determine the effectiveness of an energy efficiency measure?**

19 A. No. (Response to Data Request, MDNR 003, Greg Lovett, Ameren Missouri, August 24,
20 2011)

21 **Q. Did the energy efficiency tariff sheets attached to the Stipulation approved by the**
22 **Commission include a definition for the term “Application”?**

1 A. Yes. “Application” reads in part: “(Program) is designed to encourage more effective
2 utilization of natural gas by encouraging energy efficiency improvements through the
3 replacement of less efficient natural gas equipment with high efficiency ENERGY STAR®
4 qualified natural gas equipment and other high efficiency equipment and building shell
5 measures.” (Response to Data Request, MDNR 005, Ameren Missouri, Greg Lovett, August
6 24, 2011)

7 **Q. Did the Compliance Tariffs attached to the Stipulation and approved by the**
8 **Commission include a definition for the term “Annual Fuel Utilization Efficiency or**
9 **AFUE”?**

10 A. Yes. “AFUE – Annual Fuel Utilization Efficiency: Energy efficiency rating measure
11 determined, under specific testing conditions, by dividing the energy output by the energy
12 input. It is a measure of the heat actually delivered by a furnace to the structure compared to
13 the heat potential in amount of fuel supplied to the furnace. For example, a furnace that has a
14 92% AFUE rating converts 92% of the fuel supplied as heat to the structure – the other 8% is
15 lost as exhaust. This information is available on every furnace sold in the United States.”
16 (Response to Data Request, MDNR 008, Greg Lovett, Ameren Missouri, August 29, 2011)

17 **Q. Did the Compliance Tariffs attached to the Stipulation and approved by the**
18 **Commission include a definition for the term “ENERGY STAR®”?**

19 A. Yes. “ENERGY STAR® - A voluntary labeling program designed to identify and promote
20 energy efficient products to reduce energy expenses and greenhouse gas emissions.

21 ENERGY STAR® is a joint program of the U.S. Environmental Protection Agency and the
22 U.S. Department of Energy. (Response to Data Request, MDNR 009, Greg Lovett, Ameren
23 Missouri, August 29, 2011)

1 **Q. Do the Compliance Tariffs attached to the Stipulation and approved by the**
2 **Commission include a description as to the “Availability” of the energy efficiency**
3 **programs offered by Ameren Missouri?**

4 A. Yes. “Availability – The Program is voluntary and a Participant may only receive one rebate
5 per listed measure per calendar year...Residential rebates apply only to Residential
6 customers purchasing ENERGY STAR[®] Qualified or programmable thermostats, ENERGY
7 STAR[®] Qualified residential natural gas utilization equipment, and other high energy
8 efficient natural gas equipment and building shell measures as listed in Residential Measures.
9 General Service rebates apply only to General Service customers purchasing ENERGY
10 STAR[®] Qualified or programmable thermostats, ENERGY STAR[®] Qualified natural gas
11 utilization equipment, high efficiency rated natural gas utilization equipment and other high
12 efficiency equipment and building shell measures as listed in General Service Measures.”

13 (Response to Data Request, MDNR 010, Greg Lovett, Ameren Missouri, August 29, 2011)

14 **Q. Is Ameren Missouri an ENERGY STAR[®] Partner?**

15 A. Yes. Ameren Missouri or “Ameren” is an ENERGY STAR[®] Utility/States and Regional
16 Energy Efficiency Group for Products Partner, I.D. No. 1017002 since 2003. (Response to
17 Data Request, MDNR 011, Greg Lovett, Ameren Missouri, August 29, 2011)

18 **Q. Did Ameren Missouri sign and execute an ENERGY STAR[®] Partnership Agreement**
19 **(EPA Form Number 5900-33)?**

20 A. Yes. Greg Lovett, as the Partnership Agreement Signatory for Ameren, signed the form on
21 September 2, 2003. (Response to Data Request, MDNR 012, Greg Lovett, Ameren Missouri,
22 August 29, 2011)

1 **Q. Did Ameren Missouri agree to the terms of the Partnership Agreement from EPA Form**
2 **Number 5900-33?**

3 A. Yes. (Response to Data Request, MDNR 013, Greg Lovett, Ameren Missouri, August 29,
4 2011)

5 **Q. Does the Partnership Agreement include the following statement, “ENERGY STAR[®]**
6 **Partner agrees that it is important to build and maintain the meaning of the ENERGY**
7 **STAR[®] label as a trustworthy symbol that makes it easy to make a difference for the**
8 **environment while saving money?”**

9 A. Yes. (Partnership Agreement between ENERGY STAR[®] and Ameren, an ENERGY STAR[®]
10 Partner, Signed by Greg Lovett, September 2, 2003)

11 **Q. Are the Compliance Tariffs attached as Appendix C. to the Stipulation titled “Missouri**
12 **Energy Efficient Natural Gas Equipment and Building Shell Measure Rebate Program”**
13 **subject to the Promotional Practice rule, 4 CSR 240-14?**

14 A. Yes, unless they fit an exception in 4 CSR 240-14.010. (Response to Data Request, MDNR
15 007, Wendy Tatro, Ameren Missouri, August 24, 2011)

16 **Q. Were the energy efficiency tariff sheets attached as Appendix C. to the Stipulation**
17 **approved by the Commission and subject to the Promotional Practice rule, 4 CSR 240-**
18 **14 identified as an exception in 4 CSR 240-14.010?**

19 A. There is no evidence to support an exception as reflected by 4 CSR 240-14.010. (Response to
20 Data Request, MDNR 007, Wendy Tatro, Ameren Missouri, August 24, 2011)

21 **Q. Briefly summarize Mr. Shoff’s Direct Testimony addressing the removal of energy**
22 **efficiency measures filed by Ameren Missouri in accordance with the Stipulation and**
23 **approved by the Commission.**

1 A. Mr. Shoff provides background information that describes his role in reviewing Ameren
2 Missouri's natural gas energy efficiency tariffs, provides a definition of Total Resource Cost
3 Test, how Ameren used the TRC to evaluate energy efficiency measures, presents a table that
4 reflects energy efficiency measures that had a TRC score of less than 1 and various technical
5 details as to the Total Resource Cost analyses.

6 **Q. Do you agree with Mr. Lovett's explanation for removing energy efficiency measures**
7 **approved by the Commission?**

8 A. No, I do not agree with Mr. Lovett's explanation or rationale for removing any of the energy
9 efficiency measures approved by the Public Service Commission in Case No. GR-2010-
10 0363.

11 **Q. Please elaborate why you disagree with Mr. Lovett's explanation for removing energy**
12 **efficiency measures approved by the Commission.**

13 A. According to Mr. Shoff's Direct Testimony, "Ameren Missouri currently has a portfolio
14 which includes a business program with 28 measures and a residential program with 19
15 measures." (Direct Testimony, Kyle Shoff, Ameren Missouri, August 2011, page 2, lines 9-
16 10) Of the 19 residential measures, Ameren Missouri is proposing to eliminate 13 or 68
17 percent of the energy efficiency measures; and, of the 28 general service measures, Ameren
18 Missouri is proposing to eliminate 7 or 25 percent of the energy efficiency measures. I also
19 disagree with the removal of any of the energy efficiency measures since the MDNR as well
20 as Ameren Missouri, OPC and Staff agreed to the terms of the Stipulation, specifically
21 paragraph 6C regarding post-implementation evaluation.

1 **Q. Of the 13 residential energy efficiency measures and the 7 general service energy**
2 **efficiency measures proposed for elimination by Ameren Missouri, are any ENERGY**
3 **STAR[®] labeled?**

4 A. Yes. Of the 13 residential energy efficiency measures, 4 are ENERGY STAR[®] labeled,
5 including ENERGY STAR[®] door, tankless water heater with an Energy Factor of 0.82,
6 window replacement; and, tank storage water heaters with a 0.67 Energy Factor that now
7 serves as the new ENERGY STAR[®] standard for tanked storage water heaters as of
8 September 2010. Of the 7 general service energy efficiency measures, 4 are ENERGY
9 STAR[®] labeled, including window replacement, ENERGY STAR[®] door, Griddles – gas;
10 and, food service ovens. (Response to Data Request, MDNR 016, Kyle Shoff, Ameren
11 Missouri, August 24, 2011)

12 **Q. In general, what other residential energy measures were proposed for elimination by**
13 **Ameren Missouri under Ameren's classification as non-cost effective?**

14 A. Wall insulation (R-11 to R-13), new ceiling insulation (R-38 to R-50), new wall insulation
15 (R-19), wall insulation, old ceiling insulation (R-11 to R-30), old wall insulation (R-0 to R-
16 11), ceiling insulation; and, average ceiling insulation (R-19 to R-30). (Response to Data
17 Request, MDNR 016, Kyle Shoff, Ameren Missouri, August 24, 2011)

18 **Q. So, in effect, Ameren Missouri is saying that residential insulation is not cost effective?**

19 A. Yes, that is precisely what Ameren Missouri is saying.

20 **Q. And Ameren Missouri also is saying that certain ENERGY STAR[®] labeled energy**
21 **efficiency measures are not cost effective?**

22 A. Yes, despite the fact that the removal of ENERGY STAR[®] measures seems to run contrary
23 to the terms of an ENERGY STAR[®] Partner.

Q. Did Ameren Missouri offer replacement or alternative energy efficiency measures in Ameren Missouri's June 8, 2011 filing with the Commission or with the EEAG?

A. No. There are no replacement or alternative energy efficiency measures presented in Ameren Missouri's June 8, 2011 filing to remove energy efficiency measures or in Direct Testimony by Greg Lovett or Direct Testimony by Kyle Shoff. Since Ameren Missouri's June 8, 2011 filing with the Commission, Ameren has not offered or proposed to file new tariff sheets with the commission that include replacement or alternative energy efficiency measures or to discuss replacement or alternative energy efficiency measures with the EEAG.

Q. How much revenue has Ameren Missouri collected to fund energy efficiency?

A. Ameren stated that it has collected \$437,000 which represents the annual non low income energy efficiency revenue authorized in rates. (Response to Data Request, MPSC 0004, Gary S. Weiss, Ameren Missouri, August 2, 2011)

Q. What is the total energy efficiency expenditures, reservations for rebates and rebates paid to date by energy efficiency measure?

A. The following table was generated based on data provided by Ameren Missouri to the Staff of the Commission which did not include a specific time period regarding energy efficiency expenditures.:

Table I.

Residential	Expenditures	Reservations	Rebates Paid
Programmable Thermostats	\$1,462	0	59
Furnace 92% to 95.9%	\$9,450	179	63
Furnace 96% or higher	\$4,600	0	23
Boiler	\$0	1	0
Tank Storage Water Heater – Tier 1	\$50	23	1
Tank Storage Water Heater – Tier 2	\$125	0	1
Tank or Tankless Water Heater - .82 or higher	\$2,000	13	10
Ceiling and Wall Insulation	\$37,359	333	152
Windows and Doors	\$250	0	1

General Service			
Furnace – 92% to 95.9% less than 150,000 MMBtu	\$150	3	1
Tank Storage Water Heater – Tier 1	\$0	1	0
Tankless Water Heater	\$0	1	0

(Response to Data Request, MPSC 0003, Greg Lovett, Ameren Missouri, August 3, 2011)

Q. Since Ameren Missouri is collecting funds to support energy efficiency measures through rates, if energy efficiency measures are removed without replacement energy efficiency measures, is it likely that Ameren Missouri will not meet the terms of paragraph 6B?

A. Yes. Based on expenditures shown above and by removing energy efficiency measures before December 2012, it appears unlikely that Ameren Missouri will expend the amount specified or ramp up energy efficiency funding as reflected in 6B of the Stipulation.

Q. Are there other potentially negative impacts from removing energy efficiency measures at this time?

A. Yes. As Ameren Missouri proposes to remove energy efficiency measures, residential and general service customers that are aware of or may be currently participating in an energy efficiency program may become confused or dissatisfied with the program they have an interest in or may be participating. As reflected in Table I on page 17 of my Rebuttal Testimony, several Ameren Missouri customers are on reservation lists for those measures that Ameren Missouri is proposing to remove. This “start/stop” approach to energy efficiency program management will not result in a positive outcome and could possibly deter future participation by Ameren Missouri residential and general service customers.

Q. Did Ameren Missouri conduct post-implementation evaluations of its energy efficiency programs established by Case No. GR-2003-0157 or expanded by Case No. GR-2007-0003, to support Ameren Missouri’s proposed expansion for the 2011 program period?

1 A. No. Ameren Missouri has not evaluated any of its natural gas energy efficiency programs
2 since inception. (Response to Data Request, DNR 002, Greg Lovett, AmerenUE, GR-2010-
3 0363, October 4, 2010)

4 **Q. There seems to be a great deal of emphasis by Ameren Missouri regarding the use of**
5 **Total Resource Cost or “TRC” as the primary methodology used to determine the *ex***
6 ***ante* (before implementation) cost-effectiveness or benefit/cost score for energy**
7 **efficiency measures. Do you agree with Ameren Missouri?**

8 A. MDNR agrees that TRC is the primary method to determine the cost effectiveness or
9 benefit/cost score for energy efficiency at the program level. The National Action Plan for
10 Energy Efficiency (NAPEE) guide that Kyle Shoff refers in his Direct Testimony (Direct
11 Testimony, Kyle Shoff, Ameren Missouri, page 6, lines 11-17) addresses Total Resource
12 Cost as well as other benefit/cost analysis and how they should be used.

13 **Q. Could you please share some of the cost-effectiveness guidance presented by NAPEE?**

14 A. According to NAPEE, “Evaluating cost-effectiveness at the measure level means that each
15 individual component of a utility program must be cost-effective. Evaluation at the utility
16 program level means that collectively the measures under a program must be cost effective,
17 but some measures can be uneconomical if there are other measures that more than make up
18 for them.”¹

19 **Q. Did the NAPEE guide address cost-effectiveness tests at the measure level?**

20 A. According to NAPEE, “Applying cost-effectiveness tests at the measure level is the most
21 restrictive. With this approach, the analyst or policy-maker is explicitly or implicitly

¹ National Action Plan for Energy Efficiency (2008). *Understanding Cost-Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers*. Energy and Environmental Economics, Inc. and Regulatory Assistance Project. www.epa.gov/eeactionplan, page 3-9

1 emphasizing the cost-effectiveness rather than the total energy savings of the efficiency
2 portfolio. In contrast, applying cost-effectiveness tests at the portfolio level allows utilities
3 greater flexibility to experiment with different strategies and technologies and results in
4 greater overall energy savings, though at the expense of less (but still) cost-effective portfolio
5 overall.²

6 **Q. How did Ameren use the TRC to evaluate its energy efficiency measures?**

7 A. According to Kyle Schoff, “Ameren Missouri calculated the TRC for each measure within
8 the program year 2011 natural gas portfolio.” (Direct Testimony, Kyle Schoff, Ameren
9 Missouri, August 10, 2011, page 3, lines 12-13)

10 **Q. Did any of the energy efficiency measures have a TRC below one?**

11 A. According to Kyle Schoff, “Yes. The tables below summarize the measures that have TRC
12 values less than one. The company believes these measures should be removed from the
13 natural gas programs.” (Direct Testimony, Kyle Schoff, Ameren Missouri, August 10, 2011,
14 page 3, lines 21-23)

15 **Q. So, Ameren is proposing to remove all energy efficiency measures that had a TRC score**
16 **below 1?**

17 A. Yes. (Direct Testimony, Kyle Schoff, Ameren Missouri, August 10, 2011, page 3, lines 21-
18 23)

19 **Q. Is this approach consistent with NAPEE’s cost-effectiveness guidelines referenced by**
20 **Ameren?**

² National Action Plan for Energy Efficiency (2008). *Understanding Cost-Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers*. Energy and Environmental Economics, Inc. and Regulatory Assistance Project. www.epa.gov/eeactionplan, page 3-10

1 A. According to NAPEE, “Strictly applying cost-effectiveness at the measure or even the
2 program level can often result in the need for specific exceptions. At the measure level,
3 variations in climate, building vintage, building type and end use may affect the cost-
4 effectiveness of a measure.” Further, “some programs, such as those for emerging
5 technologies or Home Performance with ENERGY STAR, ramp up slowly over time and
6 typically do not achieve cost-effectiveness within the first three years, but do provide energy
7 efficiency benefits. Also, the program and portfolio approaches make it easier to include
8 supporting programs such as information campaigns that raise overall awareness and
9 complement other programs, but may not be cost-effective on a stand-alone basis.”³

10 **Q. Is there any guidance in the Stipulation applicable to whether the cost effectiveness**
11 **term applies to measures, programs or portfolios?**

12 A. Yes, “cost-effective programs”. (Unanimous Stipulation, Ameren Missouri, GR-2010-0363,
13 January 29, 2011, page 3, paragraph 6B, page 4, paragraph 6C, page 5, paragraph 6F)

14 **Q. Did Ameren Missouri at any time present TRC scores to the EEAG for energy**
15 **efficiency measures on both a natural gas and electric basis?**

16 A. No. (Response to Data Request, MDNR 023, Kyle Shoff, Ameren Missouri, August 29,
17 2011)

18 **Q. Are the TRC scores for energy efficiency measure reflected in Kyle Shoff’s Direct**
19 **Testimony natural gas only TRC values?**

³ National Action Plan for Energy Efficiency (2008). *Understanding Cost-Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers*. Energy and Environmental Economics, Inc. and Regulatory Assistance Project. www.epa.gov/eeactionplan, page 3-10

1 A. Yes. The TRC scores presented by Ameren Missouri have consistently reflected natural gas
2 only TRC values. (As referenced by Direct Testimony, Greg Lovett, Ameren Missouri,
3 August 10, 2011, page 3, lines 12-22)

4 **Q. Did Ameren Missouri at any time prior to or following the Stipulation provide cost**
5 **benefit scores using methodologies other than Total Resource Cost as outlined by the**
6 **NAPEE guide?**

7 A. No. (As referenced by Direct Testimony, Greg Lovett, Ameren Missouri, August 10, 2011,
8 page 3, lines 12-22; and, Direct Testimony, Kyle Schoff, Ameren Missouri, August 10, 2011,
9 page 6, lines 11-17)

10 **Q. Is Ameren Missouri's proposal to remove energy efficiency measures consistent with**
11 **the provisions of paragraph 6G of the Stipulation?**

12 A. No. Paragraph 6G of the Stipulation states, "The Parties agree that Ameren Missouri may
13 file with the Commission proposed revised tariff sheets concerning the Energy Efficiency
14 programs, if Ameren Missouri believes circumstances warrant changes." (Unanimous
15 Stipulation and Agreement, GR-2010-0363, January 29, 2011, page 6, Paragraph 6G)

16 **Q. Why is Ameren Missouri's proposal to remove energy efficiency measures not**
17 **consistent with paragraph 6G of the Stipulation?**

18 A. To meet the terms reflected in paragraph 6B, Ameren Missouri agreed to ramp up funding to
19 support energy efficiency within 3 years. Of the \$700,000 annual amount provided by
20 ratepayers to support energy efficiency, \$263,000 is committed to the Low-Income
21 Weatherization Assistance Program for Ameren Missouri's low income natural gas space
22 heating customers. To meet the terms of paragraph 6B, Ameren Missouri would need to
23 address expanded or amended non-low-income energy efficiency measures to ramp up

1 funding by \$150,000 within 3 years or approximately \$50,000 per year. Paragraph 6G
2 provides the authorization to file revised energy efficiency tariff sheets to meet this ramp-up
3 goal.

4 **SUMMARY OF TESTIMONY**

5
6 **Q. Please summarize your testimony.**

7 A. The Commission approved the Unanimous Stipulation and Agreement in Ameren Missouri's
8 last natural gas general rate case, Case No. GR-2010-0363 that provides funding derived in
9 rates to support energy efficiency programs with initial funding at \$700,000 with a target
10 level of funding ramping up to 0.5% of gross annual operating revenues, including gas costs
11 or approximately \$850,000 in three years. After only three months from the date the
12 Commission-approved compliance tariffs took effect, Ameren Missouri is proposing to
13 remove energy efficiency measures Ameren Missouri has identified as non-cost effective.
14 This determination is based on the use of a measure level cost-effectiveness test that
15 produced natural gas only benefit/cost scores. Removing energy efficiency measures at this
16 time would violate provisions of the Stipulation and would result in a significantly weaker
17 energy efficiency portfolio offered by Ameren Missouri.

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

19 A. Yes. Thank you.