

Exhibit No.:
Issue: Demand-Side Programs; Demand-Side Programs Investment Mechanisms
Witness: Martin Hyman
Sponsoring Party: Missouri Department of Economic Development – Division of Energy
Type of Exhibit: Surrebuttal Testimony
Case No.: EO-2015-0055

MISSOURI PUBLIC SERVICE COMMISSION

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. EO-2015-0055

SURREBUTTAL TESTIMONY

OF

MARTIN HYMAN

ON

BEHALF OF

MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT

DVISION OF ENERGY

Jefferson City, Missouri

April 27, 2015

(Surrebuttal)

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


In the Matter of Union Electric Company)
d/b/a Ameren Missouri's 2nd Filing to Implement)
Regulatory Changes in Furtherance of Energy)
Efficiency as Allowed by MEEIA) EO-2015-0055

AFFIDAVIT OF MARTIN HYMAN

STATE OF MISSOURI)
)
COUNTY OF COLE) ss

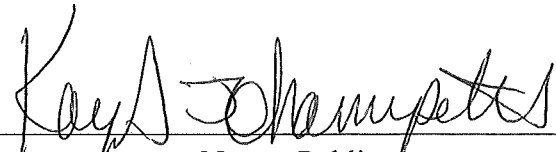
Martin Hyman, of lawful age, being duly sworn on his oath, deposes and states:

1. My name is Martin Hyman. I work in the City of Jefferson, Missouri, and I am employed by the Missouri Department of Economic Development as a Planner II, Division of Energy.
2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of the Missouri Department of Economic Development – Division of Energy.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge.



Martin Hyman

Subscribed and sworn to before me this 27th day of April, 2015.



Notary Public

My commission expires:

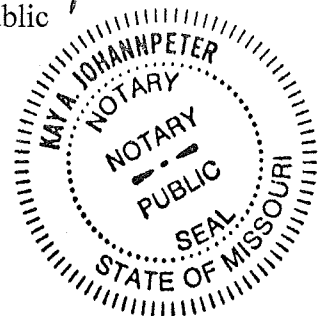
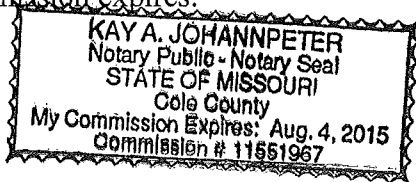


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1 **I. INTRODUCTION**

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

3 A. My name is Martin Hyman. My business address is 301 West High Street, Suite 720, PO
4 Box 1766, Jefferson City, Missouri 65102.

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

6 A. I am employed by the Missouri Department of Economic Development – Division of
7 Energy (“DE”) as a Planner II.

8 **Q. Please describe your educational background and employment experience.**

9 A. In 2011, I graduated from the School of Public and Environmental Affairs at Indiana
10 University in Bloomington with a Master of Public Affairs and a Master of Science in
11 Environmental Science. There, I worked as a graduate assistant, primarily investigating
12 issues surrounding energy-related funding under the American Recovery and
13 Reinvestment Act of 2009. I also worked as a teaching assistant in graduate school and
14 interned at the White House Council on Environmental Quality in the summer of 2011. I
15 began employment with DE in September, 2014. Prior to that, I worked as a contractor
16 for the U.S. Environmental Protection Agency to coordinate intra-agency modeling
17 discussions.

18 **Q. Have you previously filed testimony before the Missouri Public Service Commission**
19 **(“PSC” or “Commission”) on behalf of DE or any other party?**

20 A. No.

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

2 **Q. Are you adopting the previously filed Rebuttal Testimony of Dr. Alex Schroeder,**
3 **Planner III – Senior Energy Policy Analyst with DE¹ in the present case (EO-2015-**
4 **0055)?**

5 A. Yes. Dr. Schroeder accepted a position with the Federal Energy Regulatory Commission
6 in Washington, D.C.

7 **Q. What is the purpose of your Surrebuttal Testimony in this proceeding?**

8 A. The purpose of my testimony is to 1) express DE’s agreement with certain positions of
9 other parties in this case, and 2) indicate DE’s concerns with positions expressed by John
10 A. Rogers and other witnesses on behalf of the Staff of the Public Service Commission
11 (“Staff” and “the Commission,” respectively),² in addition to concerns with the witness
12 for the Office of the Public Counsel (“OPC”), Dr. Geoff Marke.³
13 DE does not agree with Staff that the filing of Union Electric Company d/b/a Ameren
14 Missouri (“Ameren” or “the Company”) regarding its proposed second demand-side
15 management portfolio under the Missouri Energy Efficiency Act (“MEEIA” and
16 “MEEIA Cycle II programs”) should be completely rejected; Staff’s recommendation for

¹ Missouri Public Service Commission Case No. EO-2015-0055, *In the Matter of Union Electric Company d/b/a Ameren Missouri’s 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as allowed by MEEIA*, Rebuttal Testimony of Alex Schroeder on Behalf of the Missouri Department of Economic Development, Division of Energy, March 20th, 2015.

² Missouri Public Service Commission Case No. EO-2015-0055, *In the Matter of Union Electric Company d/b/a Ameren Missouri’s 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as allowed by MEEIA*, Corrected Clean Rebuttal Testimony of John A. Rogers, April 17th, 2015.

³ Missouri Public Service Commission Case No. EO-2015-0055, *In the Matter of Union Electric Company d/b/a Ameren Missouri’s 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as allowed by MEEIA*, Rebuttal Testimony of Geoff Marke Submitted on Behalf of the Office of the Public Counsel, March 20th, 2015.

1 an outright rejection of the Company's proposal is partly predicated on a narrow
2 interpretation of what is, "... beneficial to all customers in the customer class in which
3 the [demand-side management] programs are proposed, regardless of whether the
4 programs are utilized by all customers."⁴ Moreover, Staff does not consider higher
5 potential savings based on the goals at 4 CSR 240-20.094(2)(A) and (B), nor does Staff
6 fully consider savings based on NEBs.

7 DE is also concerned that OPC does not correctly characterize the Company's inaccurate
8 assessment of potential gains from lighting efficiency, potentially allowing the Company
9 to justify much of its reduced energy efficiency potential assessment; OPC may have also
10 inaccurately represented the progress made by Ameren to date with its MEEIA programs.
11 Finally, DE notes that Staff and OPC do not adequately consider the adverse
12 consequences of the Commission's decision should it reject the Company's proposal. As
13 a result, DE urges the Commission to accept Ameren's proposal with the requirement that
14 the Company make certain modifications to its MEEIA Cycle II portfolio, as allowed
15 under 4 CSR 240-20.093(3).⁵

16 All references are cited in the footnotes below.

⁴ §373.1075.4 RSMo and the implementing regulations at 4 CSR 240-20.093(2)(C).

⁵ "... **The commission shall approve, approve with modification acceptable to the electric utility, or reject such applications for approval of demand-side program plans within one hundred twenty (120) days of the filing of an application under this section only after providing the opportunity for a hearing**" (emphasis added).

1 **III. AGREEMENT WITH CERTAIN POSITIONS OF OTHER PARTIES**

2 **Q. In general, what are DE's concerns with respect to Ameren's MEEIA Cycle II filing,**
3 **as described by Dr. Schroeder in his Rebuttal Testimony?**

4 A. DE's primary concerns with the Company's filing include: the Company's reduction in its
5 proposed demand and energy savings targets;⁶ the incorrect application of cost-
6 effectiveness testing by the Company to its entire MEEIA portfolio (and low-income
7 programs in particular);⁷ the Company's proposed reduction in its lighting program;⁸ the
8 incorrect characterizations by the Company of Combined Heat and Power;⁹ the increased
9 need for joint delivery of natural gas and electric programs;¹⁰ and the need for a
10 strengthened multi-family program.¹¹

11 **Q. Did other parties express similar positions on any of these issues?**

12 A. Yes.

13 **Q. Can you provide some examples?**

14 A. DE's concern with the low estimate of "Realistic Achievable Potential" ("RAP") by the
15 Company is shared by Staff. Mr. Rogers notes that the energy savings in the RAP used to
16 derive the MEEIA Cycle II programs proposed by the Company, both on absolute and
17 kilowatt-hour per dollar bases, are not even half of the actually achieved levels during the
18 Company's pre-MEEIA and MEEIA Cycle I program periods.¹² As Mr. Rogers also
19 indicates, the incremental and cumulative annual energy savings from this RAP are

⁶ Schroeder, pages 1-2, lines 18-22 and 1-7.

⁷ *Ibid*, pages 2-3, lines 8-20 and 1-10.

⁸ *Ibid*, pages 3-6, lines 11-23, 1-19, 1-19, and 1-22.

⁹ *Ibid*, pages 7-9, lines 1-18, 1-22, and 1-12.

¹⁰ *Ibid*, pages 9-10, lines 13-17 and 1-10.

¹¹ *Ibid*, pages 10-11, lines 11-23 and 1-14.

¹² Rogers, page 15, lines 7-13.

1 nearly half the levels of those stated in the Integrated Resource Plans of Kansas City
2 Power & Light Company and KCP&L – Greater Missouri Operation Company.¹³

3 DE also agrees with the recommendation in Dana Gray’s Rebuttal Testimony on behalf
4 of Tower Grove Neighborhoods Community Development Corporation regarding the
5 need for the Company to expand its multifamily energy efficiency programs to
6 unsubsidized low-income housing,¹⁴ as well as with the discussion of Non-Energy
7 Benefits (“NEBs”).¹⁵ DE similarly agrees with Annika Brink’s Rebuttal Testimony on
8 behalf of the National Housing Trust with respect to the need to expand the multifamily
9 program to unsubsidized housing.¹⁶

10 This is not necessarily an exhaustive list of those positions stated in other parties’
11 Rebuttal Testimony with which DE would agree.

12 **Q. What modifications does DE believe the Company should make to its MEEIA Cycle**
13 **II proposal for it to be accepted by the Commission?**

14 A. The flaws noted above are examples of instances in which the Company could modify its
15 proposal, thereby strengthening its MEEIA Cycle II portfolio. DE strongly urges the
16 Commission to order Ameren to make such modifications as part of the acceptance of the
17 Company’s proposal, rather than rejecting the Company’s plan outright.

¹³ *Ibid*, Pages 15-16, lines 14-15 and 1-3.

¹⁴ Missouri Public Service Commission Case No. EO-2015-0055, *In the Matter of Union Electric Company d/b/a Ameren Missouri’s 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as allowed by MEEIA*, Rebuttal Testimony of Dana Gray on Behalf of Tower Grove Neighborhoods Community Development Corporation, March 20th, 2015, pages 6-7, lines 9-22 and 1-4.

¹⁵ *Ibid*, page 6, lines 6-7.

¹⁶ Missouri Public Service Commission Case No. EO-2015-0055, *In the Matter of Union Electric Company d/b/a Ameren Missouri’s 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as allowed by MEEIA*, Rebuttal Testimony of Annika Brink on Behalf of National Housing Trust, March 20th, 2015, page 8, lines 7-23.

1 In particular, DE recommends that the Commission order the Company to make, at the
2 least, the following modifications to its proposal as a condition of its acceptance:

- 3 • Revise the market potential estimate of its lighting program to account for
4 the actual market penetration of energy-efficient lighting technologies;
- 5 • Expand the pool of eligible participants in its multifamily program to
6 include unsubsidized housing based on a commonly-accepted measure of
7 need (e.g., an income equivalent to 200 percent of the Federal Poverty
8 Level);
- 9 • Include more co-delivered programs with natural gas utilities;
- 10 • Include Combined Heat and Power as an eligible demand-side program, as
11 per §393.1075.2(3) RSMo;¹⁷ and,
- 12 • Consult with stakeholders to reassess the RAP claimed by the Company.

13 **IV. CONCERNS WITH POSITIONS OF STAFF AND PUBLIC COUNSEL**

14 **1. BENEFITS TO NON-PARTICIPANT CUSTOMERS**

15 **Q. What are DE's concerns with Staff's recommendation regarding Ameren's**
16 **proposed MEEIA Cycle II portfolio?**

17 A. DE does not agree that the Company's proposal should be completely rejected by the
18 Commission without the opportunity to consider alternative options, contrary to the
19 position described by Staff.¹⁸ Rather than proposing that the Commission approve the

¹⁷ “‘Demand-side program,’ any program conducted by the utility to **modify the net consumption of electricity on the retail customer's side of the electric meter**, including but **not limited to** energy efficiency measures, load management, demand response, and interruptible or curtailable load ...” (emphasis added).

¹⁸ Staff's position is stated in Rogers's Rebuttal Testimony.

1 Company's proposal with modifications,¹⁹ Staff relies on an overly narrow interpretation
2 of a portion of the MEEIA statute at §393.1075.4 RSMo and the implementing
3 regulations of this portion of the statute at 4 CSR 240-20.093(2)(C); Staff also fails to
4 explicitly quantify potential benefits other than rate impacts to the Company's customers.
5 Instead, Staff opposes the Company's proposal outright, proposes no modifications, and
6 indicates that Ameren is, "... the only party to this case that can 'redo' the detailed
7 analysis that is necessary in order for the Plan to comply with the MEEIA
8 requirements."²⁰

9 **Q. Is Staff's interpretation of portions of §373.1075.4 RSMo (and the implementing**
10 **regulations at 4 CSR 240-20.093(2)(C)) accurate with regards to the statutory**
11 **language mandating that, "Recovery for such programs [i.e., demand-side**
12 **management programs] shall not be permitted unless the programs are approved by**
13 **the commission, result in energy or demand savings and are beneficial to all customers**
14 **in the customer class in which the programs are proposed, regardless of whether the**
15 **programs are utilized by all customers" (emphasis added)?**

16 A. No. While Mr. Rogers correctly emphasizes the latter part of the sentence,²¹ his
17 interpretation of this portion of the statute (and implementing regulations) unreasonably
18 construes the phrase "beneficial to all customers in the customer class" as referring to a
19 reduction in rates over time:

¹⁹ As per 4 CSR 240-20.093(3), quoted on page 4 of Mr. Rogers's Rebuttal Testimony.

²⁰ Rogers, page 4, lines 6-8.

²¹ See, for example, Rogers, page 2, lines 15-19; page 4, lines 8-10; and pages 9-10, lines 17-29 and 1-16.

1 **Upon the advice of Staff Counsel**, Staff interprets § 393.1075.4. and 4 CSR 240-
2 20.094(2)(C) to mean that the Commission can only approve DSM programs and
3 a DSIM which are expected to provide **some benefits for each customer in each**
4 **customer class including each customer who does not participate directly in**
5 any of the programs. **For the customer who never participates directly in any**
6 **of the DSM programs, benefits will only occur if the impact of the Plan**
7 **causes rates - at some point in time - to be lower than the rates that would**
8 **have occurred if there were no DSM programs and no DSIM.** (Emphasis
9 added.)²²

10 **Q. Does Mr. Rogers provide any support for Staff’s interpretation of §393.1075.4**
11 **RSMo or 4CSR 240-20.094(2)(C) other than “Upon the advice of Staff Counsel?”**

12 No.

13 **Q. Is his position substantiated anywhere in the MEEIA statute?**

14 A. No. The statute never defines how MEEIA programs shall be, “... beneficial to all
15 customers in the customer class in which the programs are proposed, regardless of
16 whether the programs are utilized by all customers.” The word “beneficial” is left open to
17 interpretation, allowing for the Commission to determine the appropriate definition of
18 what is “beneficial.”

19 **2. OTHER BENEFITS POTENTIALLY OVERLOOKED**

20 **Q. Does Mr. Rogers cite all of the relevant language from the MEEIA in his discussion?**

21 A. No. Immediately following the portion of §393.1075.4 RSMo which he cites is a very
22 important caveat involving the use of cost-effectiveness tests. The use of different cost-

²² *Ibid*, page 19, lines 10-16.

1 effectiveness tests in evaluating MEEIA programs and portfolios is crucial to determining
2 which benefits are counted.

3 Specifically, the portion of text Mr. Rogers does not cite reads:

4 Recovery for such programs shall not be permitted unless the programs are
5 approved by the commission, result in energy or demand savings and are
6 beneficial to all customers in the customer class in which the programs are
7 proposed, regardless of whether the programs are utilized by all customers. **The**
8 **commission shall consider the total resource cost test [TRC] a preferred cost-**
9 **effectiveness test.** (Emphasis added.)

10 **Q. Does Mr. Rogers rely on the TRC as “... a preferred cost-effectiveness test” in**
11 **evaluating net benefits?**

12 A. No. Mr. Rogers compares the TRC to a “rate impact analysis” of the Company’s MEEIA
13 Cycle II proposal in order to make the case that the Company's proposal will not lower
14 customer rates in a “beneficial” manner:

15 While all four (4) of the components of benefits and the utility’s program costs
16 are the same for the TRC and rate impact analysis, the TRC includes participants’
17 program costs, which are not included in the rate impact analysis. The rate impact
18 analysis includes costs for utility’s throughput disincentive, performance
19 incentive and lower billing units, which are not included in the TRC. These costs
20 drive the rates higher. The Plan’s total annual costs related to utility’s throughput
21 disincentive, performance incentive and lower billing units exceed the annual

1 participants' program costs. Consequently, the Plan's annual rate impact is never
2 beneficial while – at the same time – the TRC is beneficial.²³

3 As evidenced by Mr. Rogers's testimony, the two cost-effectiveness tests include
4 different components; the rate impact analysis in particular includes cost components
5 which weight it towards a narrow focus on rate impacts. Using the rate impact analysis as
6 a "preferred" test to the exclusion of other cost-effectiveness tests may lead to
7 conclusions such as those of Mr. Rogers.

8 **Q. Does Dr. Marke similarly rely on tests other than the TRC in his Rebuttal**
9 **Testimony for OPC?**

10 A. No. However, he makes other possibly inaccurate assertions regarding the use of the TRC
11 with respect to MEEIA in Table 13 of his testimony.²⁴ Although the table is titled, "Cost-
12 effective tests and their prominence in MEEIA rules and statute," his discussion prior to
13 the presentation of the table states that, "[Ameren's] methodology runs counter to the
14 intention of the MEEIA statute which references only one cost effective test—the TRC.
15 Table 13 includes a breakdown of how the different cost-effective tests appear in the
16 MEEIA statute as well as the applicable MEEIA rules in 4 CSR 240-3.163, 4 CSR
17 240.3.164, 4 CSR 240.20.093, and 4 CSR 240-20.094."²⁵

18 Dr. Marke's table is incomplete because it fails to reflect the clear statutory language at
19 §393.1075.4 RSMo, i.e., "The commission shall consider the total resource cost test a
20 **preferred** cost-effectiveness test" (emphasis added). In other words, Dr. Marke's
21 assertion that the TRC is "prominent" in the MEEIA rules or statute – or that the TRC

²³ *Ibid*, pages 25-26, lines 9-14 and 1-2.

²⁴ Marke, page 24, line 3.

²⁵ *Ibid*, pages 23-24, lines 14-15 and 1-2.

1 appears in certain parts of the rules or statute – has no bearing on the fact that the TRC is
2 “preferred” (non-exclusively) by statute.

3 **Q. Do you disagree with the substance of Mr. Rogers’s analysis or his concerns**
4 **regarding rate impacts?**

5 A. DE does not take issue at present with his specific analysis or subsequently expressed
6 concerns regarding rate impacts in general. However, as noted above, DE is concerned
7 with Staff’s narrow interpretation of §373.1075.4 RSMo and 4 CSR 240-20.093(2)(C)
8 and the apparent preference by Staff of a cost-effectiveness test other than the TRC which
9 too narrowly focuses on direct impacts to rates. DE would also note that Staff may not
10 have fully considered the possibility of how rates might be reduced under a Company
11 portfolio evaluated in relation to the overall regulatory goals cited by Mr. Rogers at 4
12 CSR 240-20.094(2)(A) and (B):

13 (A) **The commission shall use the greater of** the annual realistic achievable
14 energy savings and demand savings as determined through the utility’s market
15 potential study **or the following incremental annual demand-side savings goals**
16 **as a guideline to review progress toward an expectation that the electric**
17 **utility’s demand-side programs can achieve a goal of all cost-effective**
18 **demand-side savings:**

19 (B) **The commission shall also use the greater of** the cumulative realistic
20 achievable energy savings and demand savings as determined through the utility’s
21 market potential study **or the following cumulative demand-side savings goals**
22 **as a guideline to review progress toward an expectation that the electric**

1 utility's demand-side programs can achieve a goal of all cost-effective
2 demand-side savings: (Emphasis added.)²⁶

3 **Q. Has Staff fully considered all potential avoided utility costs?**

4 A. No. In Staff witness Sarah L. Kliethermes's discussion of "Staff's estimated marginal
5 avoided cost calculation" with respect to the Net Throughput Disincentive ("NTD"),²⁷
6 she states that her calculations did not account for a) "... the market value of energy as a
7 weighted average at the points from which Ameren Missouri withdraws energy to serve
8 its load," escalation costs for this energy or for transmission costs, or hourly load shape
9 estimates related to energy savings; Ms. Kliethermes indicates that only the last of these
10 adjustments has the potential (and only in some instances) to lower avoided utility costs if
11 NTDs are used in the calculation of a DSIM.²⁸

12 **Q. What kinds of benefits might be considered other than reduced rates?**

13 A. Staff does not consider benefits beyond the traditional TRC's avoided costs (i.e., NEBs).
14 Although Mr. Rogers notes that a very narrow range of "probable environmental
15 compliance costs" are "implicitly" incorporated in the Company's modeling efforts,²⁹
16 more of these types of avoided costs could be included or properly accounted for; as an
17 example, air pollution emissions are reduced when the use of existing power plants is
18 curtailed due to increased energy efficiency. In addition, there are many other NEBs

²⁶ Cited by Rogers with different emphases on page 8, lines 3-15.

²⁷ Missouri Public Service Commission Case No. EO-2015-0055, *In the Matter of Union Electric Company d/b/a Ameren Missouri's 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as allowed by MEEIA*, Rebuttal Testimony of Sarah L. Kliethermes, March 20th, 2015, page 11, lines 8-10.

²⁸ *Ibid*, pages 12-13, lines 1-22 and 1-2.

²⁹ Rogers, page 23, lines 8-12.

1 which accrue to customers and the Company as a result of energy efficiency programs,
2 such as improved health and safety from residential energy efficiency improvements.

3 **Q. Can you briefly describe NEBs?**

4 A. NEBs are benefits other than the direct monetary savings traditionally associated with
5 energy efficiency programs (e.g., avoided participant utility bill costs). Examples of
6 NEBs include reduced pollution from power plants which are either not used or needed,
7 along with subsequently improved public health and well-being (and the associated
8 reductions in healthcare costs).

9 **Q. Can certain NEBs be quantified?**

10 A. Yes. As noted by many parties at the first MEEIA rulemaking workshop under EW-2015-
11 0105, "... prior work demonstrates a non-zero value for many NEBs."³⁰

12 **Q. Is the fact that NEBs are not explicitly mentioned in the MEEIA statute or rules
13 relevant to this discussion?**

14 A. No. As stated above, the requirement that a MEEIA portfolio be, "beneficial to all
15 customers in the customer class" is broad enough to encompass more benefits than those
16 narrowly contemplated by Staff. Any quantifiable NEBs which accrue to a customer class
17 in part or whole would likely fit under this language.

³⁰ Missouri Public Service Commission Case No. EW-2015-0105, *In the Matter of a Working Case to Review The Commission's Missouri Energy Efficiency Investment Act (MEEIA) Rules 4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093, and 4 CSR 240-20.094*, Missouri Division of Energy's Comments in Response to the First MEEIA Rulemaking Workshop, March 12th, 2015, page 1.

1 **Q. Does the consideration of NEBs contradict your assertion that the TRC was not**
2 **used as “... a preferred cost-effectiveness test” by the Staff?**

3 A. No. First, certain NEBs could feasibly be incorporated into the TRC as a component of
4 avoided utility or participant costs; for example, it is possible that not all probable
5 environmental compliance costs have yet been counted. Second, while the TRC is a
6 “preferred” test, it is not the exclusive test which may be used. The Societal Cost Test, or
7 Societal Cost/Benefit Test (“SCT”) incorporates NEBs and could be used as a
8 supplement to the TRC to assess benefits, “... to all customers in the customer class in
9 which the programs are proposed, regardless of whether the programs are utilized by all
10 customers.”

11 **3. OPC’S DISCUSSION OF ENERGY EFFICIENCY STANDARDS IN LIGHTING**
12 **AND COMPANY PROGRESS UNDER MEEIA**

13 **Q. What is DE’s concern with Dr. Marke’s testimony regarding lighting efficiency and**
14 **the overall energy efficiency gains made by Ameren customers under MEEIA?**

15 A. Dr. Marke incorrectly characterizes the flaws in Ameren’s assumptions regarding
16 potential energy efficiency gains from lighting. In addition, he makes questionable claims
17 about energy efficiency gains made by Ameren’s customers under MEEIA.

18 **Q. How does OPC address the Company’s proposal with respect to purported**
19 **decreases in potential efficiency gains from lighting?**

20 A. Similarly to the Rebuttal Testimony of Dr. Schroeder, Dr. Marke discusses the potential
21 impacts of Federal efficiency standards on the Company’s potential study.³¹ However,

³¹ Marke, pages 18-22.

1 Dr. Marke's overview incorrectly states that federal efficiency standards, "... remove the
2 most inefficient products from the market"³²

3 **Q. Why is Dr. Marke's assertion regarding efficiency standards incorrect?**

4 A. As noted in Dr. Schroeder's testimony:

5 The EISA standard governs the import and manufacture of inefficient bulbs, but
6 does not ban the sale or use of remaining bulbs that do not meet said standard.
7 [Citation omitted] Therefore, it says nothing about the kinds of bulbs that
8 Ameren's customers are actually using, particularly in the aftermath immediately
9 following the point at which it goes into effect.³³

10 Consequently, it is not correct to assume that the EISA lighting standard "removes the
11 most inefficient products from the market;" such products may still remain on store
12 shelves or in the closets of consumers for some time. This is why, as Dr. Schroeder notes,
13 it is still reasonable to consider providing rebates for compact fluorescent lightbulbs even
14 if they are not the "most efficient" lightbulbs, since such rebates, "... can still play an
15 important role in accelerating the diffusion of CFLs in Ameren's service territory"³⁴ and
16 replacing less efficient lightbulbs such as incandescents.

17 **Q. What is a more appropriate methodology for measuring potential savings from
18 lighting efficiency?**

19 A. The discussion in Dr. Schroeder's testimony on page 5, lines 4-14, references a National
20 Renewable Energy Laboratory report which recommends that:

³² *Ibid*, page 18, lines 7-8.

³³ Schroeder, page 4, lines 4-8.

³⁴ *Ibid*, page 6, lines 10-11.

1 ... in cases where actual pre-program measure wattage is not available, the
2 Residential Lighting Evaluation Protocol recommends that evaluators continue to
3 adopt the EISA standards as the new baseline. However, program administrators
4 who have adequate resources **should conduct ongoing monitoring and research**
5 **to determine whether the delta watts assumptions reflect actual market**
6 **conditions** during the phase-in of the EISA requirements and use a lagged
7 approach to phasing in the requirements. (Emphasis added.)³⁵

8 In short, the EISA standards are not to be used as a baseline assumption if better data
9 which “reflect actual market conditions” may be obtained.

10 **Q. How should “actual market conditions” be measured across Missouri utilities?**

11 A. DE supports a statewide potential study in order to measure not only market conditions
12 for lighting efficiency, but the overall market potential for energy efficiency programs
13 and measures across the state’s utilities.

14 **Q. How does OPC characterize the progress of Ameren’s energy efficiency programs**
15 **under MEEIA?**

16 A. Dr. Marke includes data (Table 11 of his testimony) on “Ameren Missouri kWh customer
17 class kWh five-year consumption totals,”³⁶ along with calculations of increases in energy
18 consumption by class between 2012 and 2014. Based on this data, he states, “Table 11
19 suggests that after two-years and approximately \$76 million dollars in program costs to

³⁵ National Renewable Energy Laboratory, “Chapter 6: Residential Lighting Evaluation Protocol. The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures,” Subcontract Report by Scott Dimetrosky, Katie Parkinson, and Noah Lieb, February 2014, pages 6-14 – 6-15. Retrieved from http://www.nrel.gov/extranet/ump/pdfs/20140514_ump_res_lighting_draft.pdf.

³⁶ Marke, page 21, lines 1-2.

1 encourage energy efficiency all rate classes, but especially the residential rate class, are
2 consuming more electricity than they did before Ameren Missouri ever supported a
3 MEEIA program.”³⁷

4 **Q. Why is DE concerned with the presentation of the data in this table and the**
5 **resulting conclusions drawn by OPC?**

6 A. As presented, it is unclear whether Dr. Marke’s data is “weather-normalized,” i.e.,
7 whether or not the data has been adjusted to account for seasonal and inter-annual
8 variations in temperature and other such factors. Thus, there could be differences in
9 energy consumption between years which are partly due to changes in the weather.

10 Dr. Marke also does not consider changes in consumption by measure. While he hints at
11 this issue in his discussion of appliance standards (e.g., Table 10 of his testimony),³⁸ he
12 does not factor in this discussion in his presentation of Table 11 when he asserts, “A
13 close examination of Ameren Missouri’s kWh sales over the past five years further
14 supports the conclusion that the potential for energy efficiency savings has not
15 diminished based on two years of efficient lighting activity.”³⁹

16 Most critically, Dr. Marke’s calculations of changes in consumption are based on the
17 total energy consumption of each class from 2012 to 2014, rather than the average energy
18 consumption per customer for each class in each year. By aggregating the consumption of
19 all consumers in a single class over three years, Dr. Marke’s calculation ignores the
20 growth in the average customer count which, for example, is evident for the Residential
21 Service class between 2011 and 2014. Absent such a normalization, it is less clear how

³⁷ *Ibid*, page 22, lines 1-4.

³⁸ *Ibid*, page 19, lines 1-2.

³⁹ *Ibid*, page 20, lines 10-12.

1 much of the increase in energy consumption is a result of the increased customer count
2 between years.

3 **4. LACK OF PROPOSED ALTERNATIVES AND POTENTIAL CONSEQUENCES**

4 **Q. Does Staff propose an alternative to the Company's MEEIA Cycle II portfolio or**
5 **plan?**

6 A. No. According to Mr. Rogers, "Ameren Missouri is the only party to this case that can
7 'redo' the detailed analysis that is necessary in order for the Plan to comply with the
8 MEEIA requirements;"⁴⁰ consequently, Staff's recommendation is that the Commission
9 either entirely reject the Company's proposal or let parties review the Company's
10 requested variances.⁴¹

11 **Q. Does Staff recommend the continuation of Ameren's DSIM in order to allow the**
12 **prudently-incurred cost recovery of MEEIA expenses?**

13 A. No. Staff recommends that the Commission, "Reject all tariff sheets filed with the
14 application,"⁴² although they do provide alternative recommendations in the event the
15 commission approves a modified MEEIA portfolio and DSIM⁴³ (in addition to the
16 provision for addressing variances noted above).

17 **Q. Does OPC recommend the continuation of Ameren's DSIM in order to allow the**
18 **prudently-incurred cost recovery of MEEIA expenses?**

19 A. No. According to Dr. Marke:

⁴⁰ Rogers, page 4, lines 6-8.

⁴¹ *Ibid*, page 4, lines 14-18.

⁴² *Ibid*, page 10, line 26.

⁴³ *Ibid*, page 33, lines 1-6.

1 Public Counsel recommends that the Commission reject Ameren Missouri's
2 MEEIA Cycle II proposal **as it is currently filed. Ameren Missouri's**
3 **application includes excessive variances from applicable MEEIA rules that**
4 **distort the intention behind the Demand-Side Investment Mechanism**
5 **(DSIM)** and virtually assure Ameren Missouri of an over-collection of lost
6 revenues and utility incentives. (Emphasis added.)⁴⁴

7 **Q. Does DE support the unconditional rejection of Ameren's proposal, including its**
8 **DSIM filing?**

9 A. No. While DE agrees that the burden of analyzing and proposing a new or revised
10 portfolio lies with the Company, DE does not agree that this requires the outright
11 rejection of the Company's proposed MEEIA Cycle II portfolio and accompanying
12 DSIM.

13 **Q. Why?**

14 A. As described above, DE has numerous concerns with the Company's filing which are
15 shared by other stakeholders in this case. However, to discard the Company's MEEIA
16 Cycle II portfolio and accompanying DSIM entirely because of such concerns – or any of
17 the considerations raised by Staff and OPC – would lead to adverse consequences for
18 ratepayers, program partners, and the Company. As a result, DE provided the
19 recommended modifications which the Commission is urged to make a condition of the
20 acceptance of the Company's proposal; such a condition reasonably places the burden of
21 analyzing and revising the proposed portfolio on the Company.

⁴⁴ Marke, page 3, lines 11-15.

1 **Q. What would be the nature of the adverse consequences mentioned above?**

2 A. Discontinuation of an energy efficiency portfolio would, at the very least, create major
3 uncertainty for customers, program partners, and the Company while drastically reducing
4 the potential markets for energy efficiency in Missouri in the short term.⁴⁵ This was
5 highlighted during the discussions regarding program continuity for the Company's
6 Commercial and Industrial programs, during which the Company raised concerns about
7 customer uncertainty over whether or not these programs would continue.

8 Rejection of the Company's proposed MEEIA portfolio would also lead to the need for
9 increased future capacity additions, as acknowledged by Mr. Rogers.⁴⁶ Notably, the
10 Company's 2014 Integrated Resource Plan indicates that energy efficiency is one of the
11 least-cost options when compared to supply side resources,⁴⁷ meaning that efficiency is a
12 better investment for both the Company and ratepayers than a number of physical
13 capacity additions. However, Staff does not propose a mechanism for avoiding such
14 additions – and costs to ratepayers – in the absence of a MEEIA or non-MEEIA energy
15 efficiency portfolio.

⁴⁵ The relevance of continuous participation in programs is evident in a 2014 report from the American Council for an Energy-Efficient Economy, which notes in its discussion of cumulative and annual data, "Cumulative participation is the most relevant in terms of highlighting the success of a program because it takes several years to build participation in a program." Dan York, Max Neubauer, Seth Nowak, and Maggie Molina, "Expanding the Energy Efficiency Pie: Serving More Customers, Saving More Energy Through High Program Participation," American Council for an Energy-Efficient Economy, Report U1501, January, 2015, page 6. Retrieved from <http://aceee.org/sites/default/files/publications/researchreports/u1501.pdf>.

⁴⁶ Rogers, page 14.

⁴⁷ Missouri Public Service Commission Case No. EO-2015-0084, *In re: Ameren Missouri's 2014 Utility Resource Filing Pursuant to 4 CSR 240 – Chapter 22*, 2014 Integrated Resource Plan, October 1st, 2014, Chapter 1 – Executive Summary, page 7.

1 Finally, rejection of the proposed DSIM absent the allowance for a proposed alternative –
2 or the explicit allowance of the continuation of the current DSIM – may prohibit the cost
3 recovery of prudently incurred MEEIA-related expenses should the current DSIM also be
4 allowed to lapse. This would increase the business risk associated with the Company’s
5 voluntary participation in MEEIA.

6 **Q. Does Staff acknowledge this business risk?**

7 A. Not entirely. In his Rebuttal Testimony, Staff witness David Murray indicates that,
8 “...Staff **generally considers the DSIM to lower business risk** due to the fact that **the**
9 **DSIM does not require any upfront investment and costs are recovered** through a
10 rider ...” (emphasis added).⁴⁸

11 **Q. Why do you qualify your answer?**

12 A. Mr. Murray implicitly acknowledges that the lack of a DSIM would increase business
13 risks for the company when he states that, “...Staff generally considers the DSIM to
14 lower business risk....” However, Mr. Murray’s characterization of the manner in which
15 the DSIM serves this function is incomplete, since while MEEIA cost recovery is based
16 on a number of predicted costs, a MEEIA portfolio and accompanying DSIM requires
17 some upfront investments (e.g., potential studies). In addition, while Ameren’s MEEIA
18 cost recovery is provided for through a DSIM, these initially unrecovered costs and

⁴⁸ Missouri Public Service Commission Case No. EO-2015-0055, *In the Matter of Union Electric Company d/b/a Ameren Missouri’s 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as allowed by MEEIA*, Rebuttal Testimony of David Murray, March 20th, 2015, page 7, lines 1-3.

1 incentives are only guaranteed to the extent they are prudently incurred and ultimately
2 collected, as per the section of 4 CSR 240-20.093(2)(C) cited by Mr. Rogers:⁴⁹

3 **(C) The commission shall approve the establishment, continuation, or**
4 **modification of a DSIM and associated tariff sheets if it finds the electric**
5 **utility's approved demand-side programs are expected to result in energy and**
6 **demand savings and are beneficial to all customers in the customer class in which**
7 **the programs are proposed, regardless of whether the programs are utilized by all**
8 **customers and will assist the commission's efforts to implement state policy**
9 **contained in section 393.1075, RSMo, to—**

10 **1. Provide the electric utility with timely recovery of all reasonable and**
11 **prudent costs of delivering cost-effective demand-side programs ... (Emphasis**
12 **added.)**

13 Thus, a DSIM reduces business risks for the Company; absent a DSIM or other similar
14 mechanism, business risks would increase for a company which incurred MEEIA-related
15 costs.

16 **Q. Do the rules for changing a utility's DSIM explicitly account for business risks with**
17 **respect to utility program costs?**

18 **A. Yes, as stated in 4 CSR 240-20.093(2)(D):**

19 **In addition to any other changes in business risk** experienced by the electric
20 **utility, the commission shall consider changes in the utility's business risk**
21 **resulting from establishment, continuation, or modification of the DSIM in**

⁴⁹ Rogers, pages 9-10, lines 21-29 and 1-3.

1 setting the electric utility’s allowed return on equity in general rate proceedings.

2 (Emphasis added.)

3 Additionally, 4 CSR 240-20.093(2)(F) reads:

4 The commission shall **approve any cost recovery component of a DSIM**
5 **simultaneously with** the programs approved in accordance with 4 CSR 240-
6 20.094 **Demand-Side Programs.** (Emphasis added.)

7 In other words, the Commission must account for increases and decreases in risk to the
8 Company from changes to the DSIM when setting the Company’s return on equity, and
9 MEEIA program costs must be accounted for in the DSIM along with the acceptance of
10 MEEIA programs under 4 CSR 240-20.094. The failure to recover the costs of continuing
11 or accepted MEEIA programs would not only constitute a potential problem under this
12 latter requirement, but would force the Commission to consider changes to the
13 Company’s return on equity in light of changes to the Company’s risk.

14 **Q. If the Company and intervenors cannot reach an agreement, what steps should**
15 **occur?**

16 A. DE supports programs which result in “... all cost-effective demand-side savings.”⁵⁰
17 Therefore, while we would prefer to see the submission of MEEIA program revised as
18 per Dr. Schroeder’s Rebuttal Testimony and our recommendations in Section III, in the
19 absence of such an outcome we would support a non-MEEIA portfolio similar to the
20 current portfolio, with costs recovered in a deferred account. DE also notes that the
21 Commission may order the filing of an interim DSIM under 4 CSR 240-20.093(4), which
22 would allow for MEEIA and/or energy efficiency program continuity:

⁵⁰ §393.1075.4 RSMo.

1 If the adjustments to the DSIM cost recovery revenue requirement and DSIM
2 rates are not in accordance with the provisions of this rule, section 393.1075,
3 RSMo, or the DSIM established, modified, or continued in the most recent filing
4 for demand-side program approval, the commission ... **may instead order the**
5 **filing of interim tariff sheets that implement its decision and approval.**

6 (Emphasis added.)

7 DE's primary objective in this case is to maintain the existence of all cost-effective
8 demand-side programs – and, as similarly indicated by Mr. Rogers, all low-income
9 energy efficiency programs deemed to be in the “public interest”⁵¹ – within the State of
10 Missouri. Given the fact that, “...Staff recognizes and appreciates the initiative and the
11 extra effort by the Company for its second MEEIA filing and for its continued Energy
12 Efficiency Regulatory Stakeholder Advisory Team process ...,”⁵² DE also wishes to
13 respect the efforts already invested in the current process by all parties while encouraging
14 further participation.

15 **Q. Does DE agree with Dr. Marke's opinion that, “Based on the results in figure 3**
16 **[responses on customer satisfaction with and trust of Ameren's energy efficiency**
17 **programs], it bears discussion whether or not Ameren Missouri is the appropriate**
18 **agent to even be delivering energy efficiency products and marketing?”⁵³**

19 **A.** While Dr. Marke may believe that a non-utility party is better suited for program delivery
20 and marketing, this is not currently required based on the language throughout the
21 MEEIA statute which contemplates utility-provided programs (e.g., §393.1075.2(3))

⁵¹ Rogers, pages 8-9, lines 27-36 and 1-6.

⁵² *Ibid*, page 6, lines 11-12.

⁵³ Marke, page 14, lines 10-11.

1 RSMo: “‘Demand-side program’, **any program conducted by the utility** to modify the
2 net consumption of electricity on the retail customer’s side of the electric meter ...”
3 (emphasis added)). However, this issue may be revisited at an appropriate time in the
4 future.

5 **V. CONCLUSIONS**

6 **Q. Please summarize your conclusions and the position of DE.**

7 A. While DE is concerned with Ameren’s MEEIA Cycle II proposal for many of the reasons
8 indicated by Staff and others, DE does not agree that the Company’s proposal should be
9 completely rejected without the chance for the Company to revise its submission or
10 recover its prudently incurred costs. Staff’s recommendation for an outright rejection of
11 the Company’s proposal is partly predicated on a narrow interpretation of what is, “...
12 beneficial to all customers in the customer class in which the [demand-side management]
13 programs are proposed, regardless of whether the programs are utilized by all customers.”
14 Staff does not consider higher potential savings based on the goals at 4 CSR 240-
15 20.094(2)(A) and (B), nor does Staff fully consider savings based on NEBs.

16 In addition, DE is concerned that OPC does not correctly characterize one of the flaws in
17 the Company’s assessment of potential gains in lighting efficiency, potentially allowing
18 the Company to justify much of its reduced assessment of market potential. OPC also
19 makes suspect assertions regarding the Company’s progress with its MEEIA programs.

20 Finally, DE notes that Staff and OPC do not adequately consider the ramifications of
21 discontinuing the Company’s current MEEIA portfolio and accompanying DSIM.

22 DE strongly urges the Commission to accept the Company’s proposal on the condition
23 that the Company makes the modifications recommended in Section III.

1 **Q. Does this conclude your direct testimony in this case?**

2 A. Yes.