EXHIBIT

Exhibit No.:
Issue(s): Potential Study and Savings Targets/ Overearnings and the Demand-Side Investment Mechanism/ Program Design
Witness/Type of Exhibit: Marke/Surrebuttal
Sponsoring Party: Public Counsel
Case No.: EO-2015-0055

SURREBUTTAL TESTIMONY

OF

GEOFF MARKE

Submitted on Behalf of
the Office of the Public Counsel

**UNION ELECTRIC COMPANY D/B/A
AMEREN MISSOURI'S**

Case No. EO-2015-0055

** **

Denotes Highly Confidential Information that has been redacted

April 27, 2015

OPC Exhibit No. 801-NP
Date 7-21-15 Reporter TM
File No. EO-2015-0055

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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	)))))	File No. EO-2015-0055

AFFIDAVIT OF GEOFF MARKE

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Geoff Marke, of lawful age and being first duly sworn, deposes and states:

1. My name is Geoff Marke. I am a Regulatory Economist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached affidavit are true and correct to the best of my knowledge and belief.

Geoff Marke

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

JERENE A. BUCKMAN
My Commission Expires
August 23, 2017
Cole County
Commission #13754037

Jerene A. Buckman
Notary Public

My commission expires August 23, 2017.

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SUREBUTTAL TESTIMONY

OF

GEOFF MARKE

UNION ELECTRIC COMPANY

d/b/a Ameren Missouri

CASE NO. EO-2015-0055

I. INTRODUCTION

Q. Please state your name, title and business address.

A. Dr. Geoffrey Marke, Economist, Office of the Public Counsel (OPC or Public Counsel), P.O. Box 2230, Jefferson City, Missouri 65102.

Q. Are you the same Geoff Marke that filed rebuttal testimony in EO-2015-0055?

A. I am.

Q. Would you please summarize OPC's positions in which you have filed?

A. As explained in my rebuttal and surrebuttal (below) testimonies, OPC recommends that the Commission reject Ameren Missouri's, Missouri Energy Efficiency Investment Act (MEEIA) Cycle II application as it is currently filed.

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of this testimony is to respond to comments filed in rebuttal regarding Ameren Missouri's MEEIA application including:

- The Potential Study and Saving Targets comments by the Sierra Club witness Tim Woolf, National Resource Defense Counsels (NRDC) witness Phil Mosenthal, National Housing Trust (NHT) witness Annika Brink, Missouri Division of Energy

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(DE) witness Alex Schroeder and the Missouri Public Service Commission Staff (Staff) witness John Rogers.

- Overearnings and the Demand-Side Investment Mechanism (DSIM) comments by Staff witness John Rogers, Sarah Kliethermes, and Mark Oligschlaeger as well as NRDC witness Phil Mosenthal and Ashok Gupta.
- Program Design comments by NHTA witness Annika Brink, Tower Grove Neighborhood Community Development Corporation (Tower Grove) witness Dana Gray, the Sierra Club witness Tim Woolf, NRDC witness Phil Mosenthal, DE witness Alex Schroeder.

II. THE POTENTIAL STUDY AND SAVING TARGETS

Q. Did any party file rebuttal testimony supporting Ameren Missouri's market potential study and/or the saving targets that are a result of that analysis?

A. No, there was no testimony from any party supporting Ameren Missouri's conclusions drawn from the market potential study or the low saving targets that are a result of that analysis.

Although parties may disagree on individual components of Ameren Missouri's application, the application's foundation rests on the results of its market potential study and the saving targets. The saving targets proved to be too low in Cycle I and are projected to be roughly half those targets for Cycle II. Table 1 presents an abridged breakdown between the two filed applications as well as the estimated savings and expenditures realized in program years 2013 and 2014.

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**Table 1.

** Table 1 reveals that Ameren Missouri:

- Achieved 87% of their savings targets within the first two years of Cycle I.
- Achieved savings at 22% under planned budget spending in Cycle I.
- Is proposing a 46.23% lower saving target in Cycle II compared to Cycle I.
- Is proposing a 7.5% decrease in budget spending in Cycle II compared to Cycle I.
- Is proposing a 187% increase in cost per saved MWh compared to Cycle I.

Cycle II's application produces fewer savings at higher costs relative to the planned and estimated realized amounts.

Q. Are there additional costs to ratepayers that need to be considered?

A. Yes, program costs represent only one component of the DSIM. The other two components, the throughput disincentive and the utility performance incentive, need to be factored in to appreciate the full incongruity between the two applications.

[1] The planned MWh energy efficiency savings amount assumed a % of opt-out customers and would be adjusted upward/downward to reflect actual "opt-out" numbers.
[2] Estimated Realized Amounts: PY2013 results reflect the "black box" agreement from the second non-unanimous stipulation and agreement in EO-2012-0142. PY2014 is based on initial, but not agreed upon, estimates from Ameren Missouri's evaluators.

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Q. Can those costs be determined yet?

No, Cycle I's program will not conclude until the end of 2015. The net shared benefit amount cannot be known until after the final evaluation, measurement and verification (EM&V) by Ameren Missouri's third-party contractors and the Commission's independent auditor is complete. A breakdown of the costs associated with the throughput disincentive and the performance incentive under different assumptions will be addressed in the Demand-Side Management Mechanism (DSIM) section of this testimony.

Q. Did any party file testimony objecting to the potential study assumptions?

A. Yes, NRDC witness Phil Mosenthal and Sierra Club witness Tim Woolf examine what other states have accomplished, and explore deficiencies in the cost-effectiveness calculations performed by Ameren Missouri.

NHT witness Annika Brink provides primary data suggesting that Ameren Missouri's low-income multi-family potential is under-stated in its potential study. DE witness Alex Schroeder echoes this concern and explains that both efficient lighting and combined heat and power potential are understated.

Finally, Staff witness John Rogers explains his belief that the saving targets are understated by comparison to Kansas City Power & Light and KCP&L Greater Missouri Operations saving targets estimates, as well by comparison to Ameren Missouri's Cycle I estimates and program activity to date.

Q. Please summarize the concerns raised by NRDC and the Sierra Club.

A. Mosenthal and Woolf's argument against the lower saving targets can be summarized as follows:

- Reduction in potential savings from codes and standards are overstated.
- EM&V saving results only eliminated a few measures.

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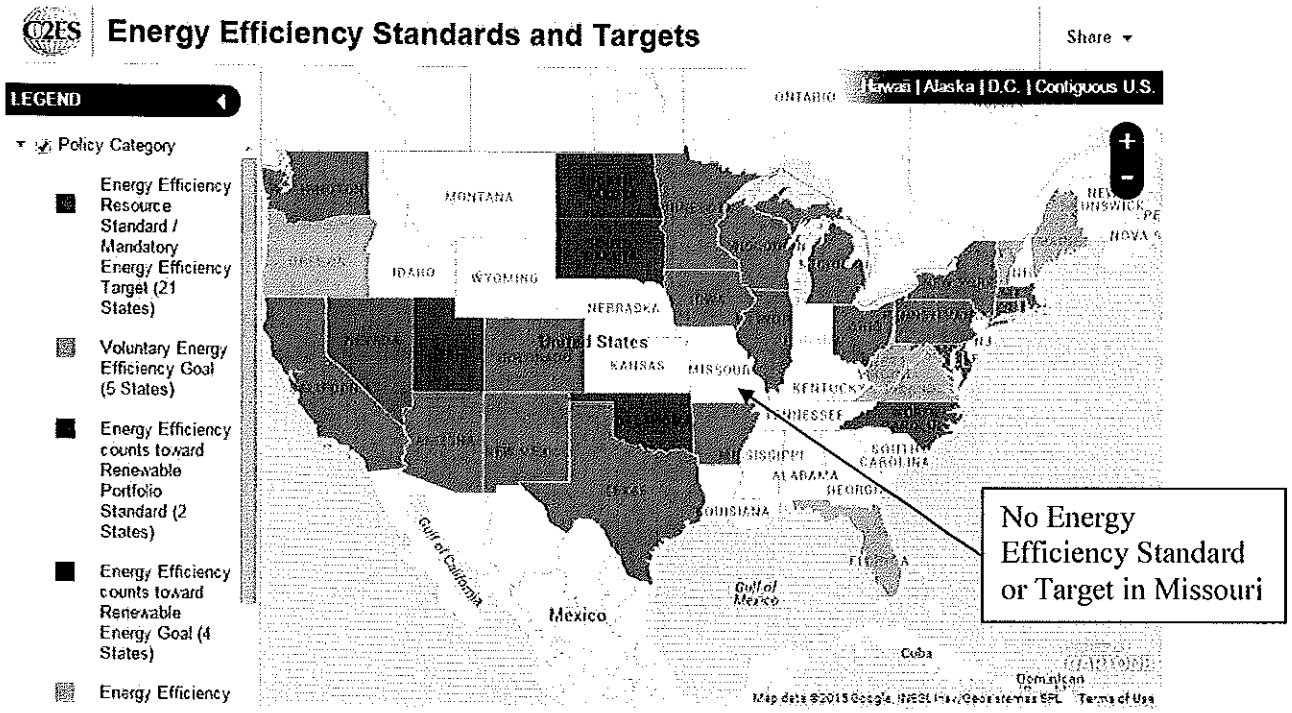
- Too much emphasis on the TRC for cost-effectiveness screening (Woolf) or the TRC was improperly calculated (Mosenthal).
- Targets are lower than what other states are achieving.

Q. Please respond to Woolf and Mosenthal's assertion on pages 20-23 and 53 respectively of their rebuttal testimony that codes and standards are overstated.

A. Woolf and Mosenthal are correct in pointing out that mandated codes and standards are not a valid justification for Ameren Missouri's lower projected savings potential. A look at U.S. energy policy on state-by-state basis in Figures 1 through 4 from the Center for Climate and Energy Solutions illustrates this.

Figure 1: Energy Efficiency Standards and Targets:[3]



[3] Center for Climate and Energy Solutions: Energy Efficiency Standards and Targets 2015 http://www.c2es.org/us-states-regions/policy-maps/energy-efficiency-standards

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Figure 2: Residential Building Energy Codes[4]

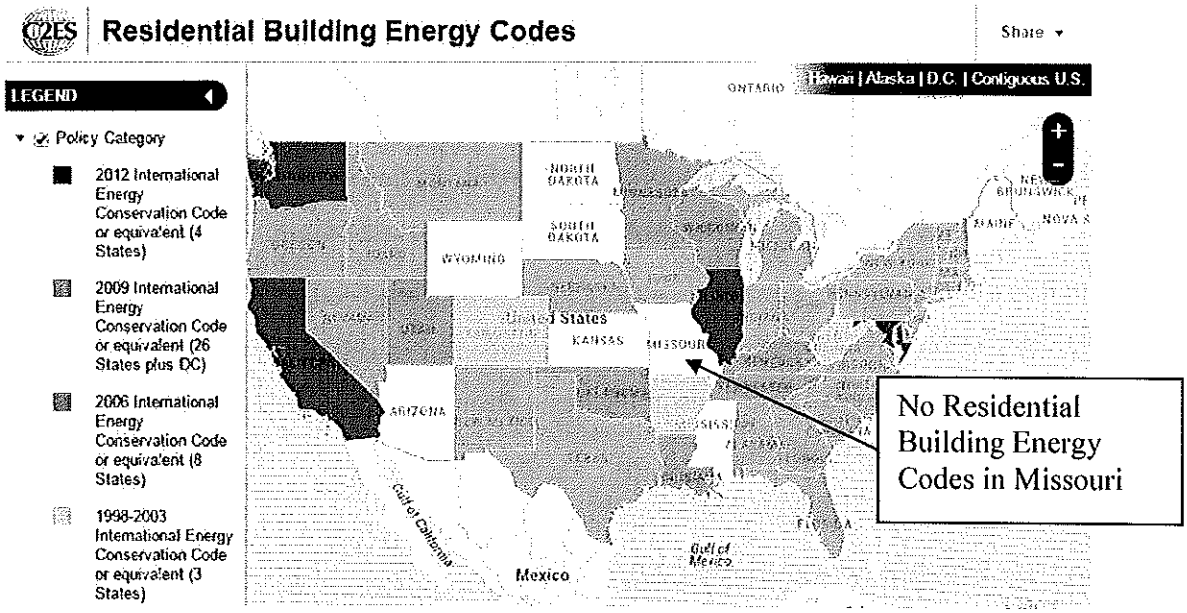
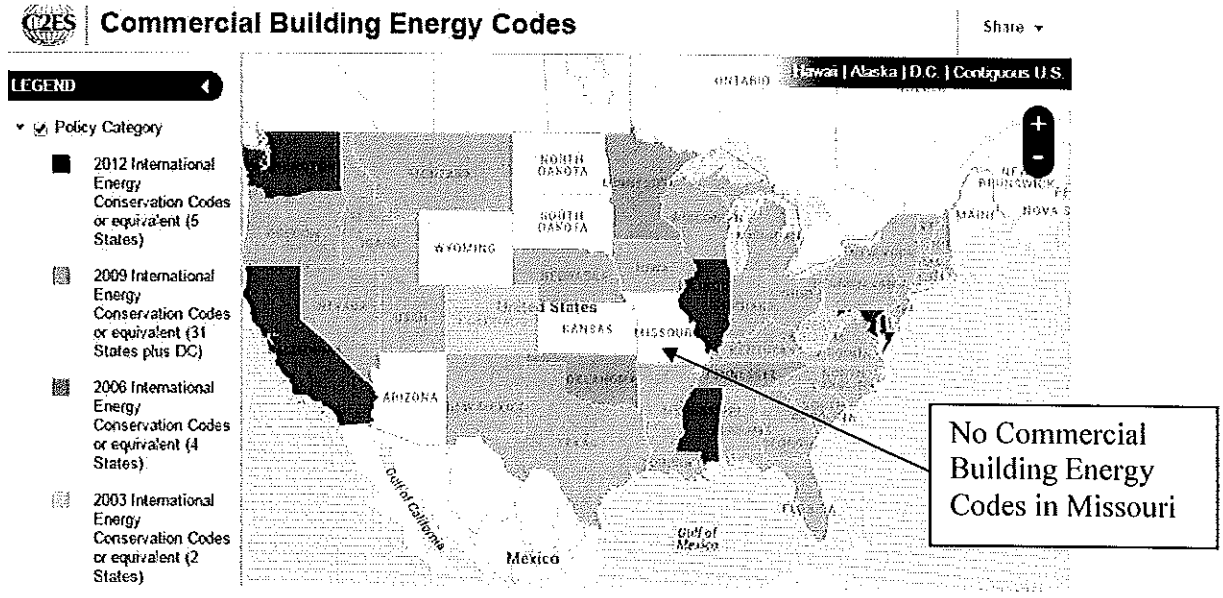


Figure 3: Commercial Building Energy Codes:[5]



[4] Center for Climate and Energy Solutions: Residential Building Energy Codes 2015 http://www.c2es.org/us-states-regions/policy-maps/residential-building-energy-codes

[5] Center for Climate and Energy Solutions: Commercial Building Energy Codes 2015 http://www.c2es.org/us-states-regions/policy-maps/commercial-building-energy-codes

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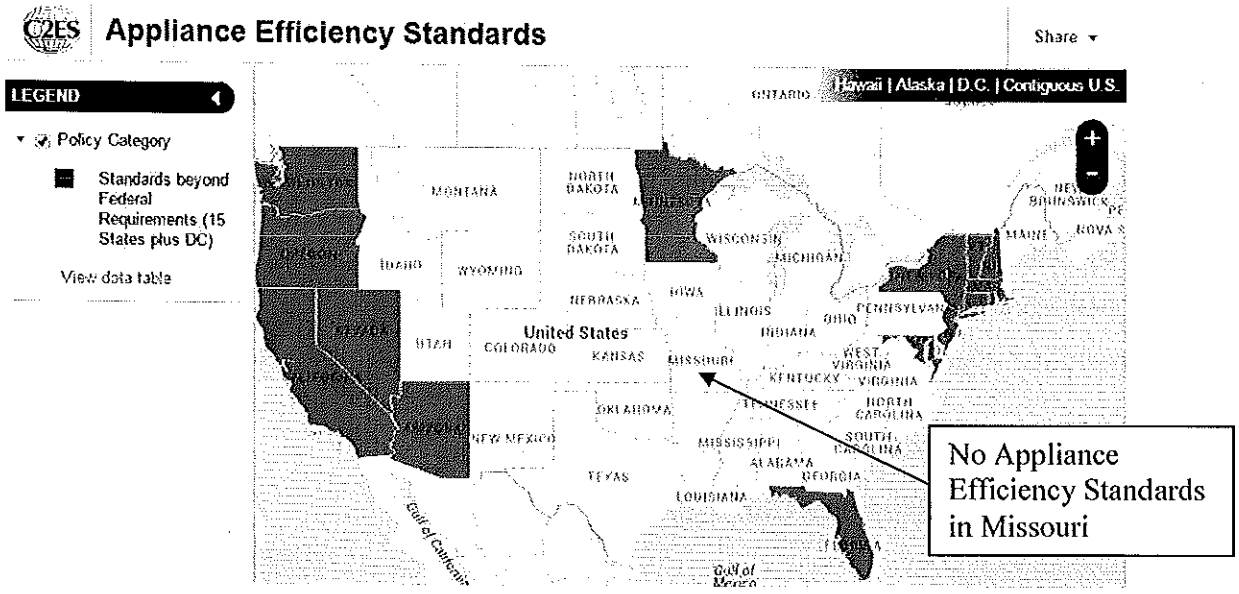
Figure 4: Appliance Efficiency Standards[6]



Figures 1 through 4 reveal that Missouri has no:

- Mandated Energy Efficiency Standards and Targets
- Residential Building Energy Codes
- Commercial Building Energy Codes
- Appliance Efficiency Standards

Only two other states—Kansas and Wyoming—share these characteristics. The fact that there are no state-specific building codes, or an appliance standard, in place in Missouri suggests that ratepayer-funded energy efficiency programs in Missouri are not constrained in achieving savings attributable to those programs compared to other states. In short, there should be more potential.

[6] Center for Climate and Energy Solutions: Appliance Efficiency Standards 2015 http://www.c2es.org/us-states-regions/policy-maps/appliance-energy-efficiency

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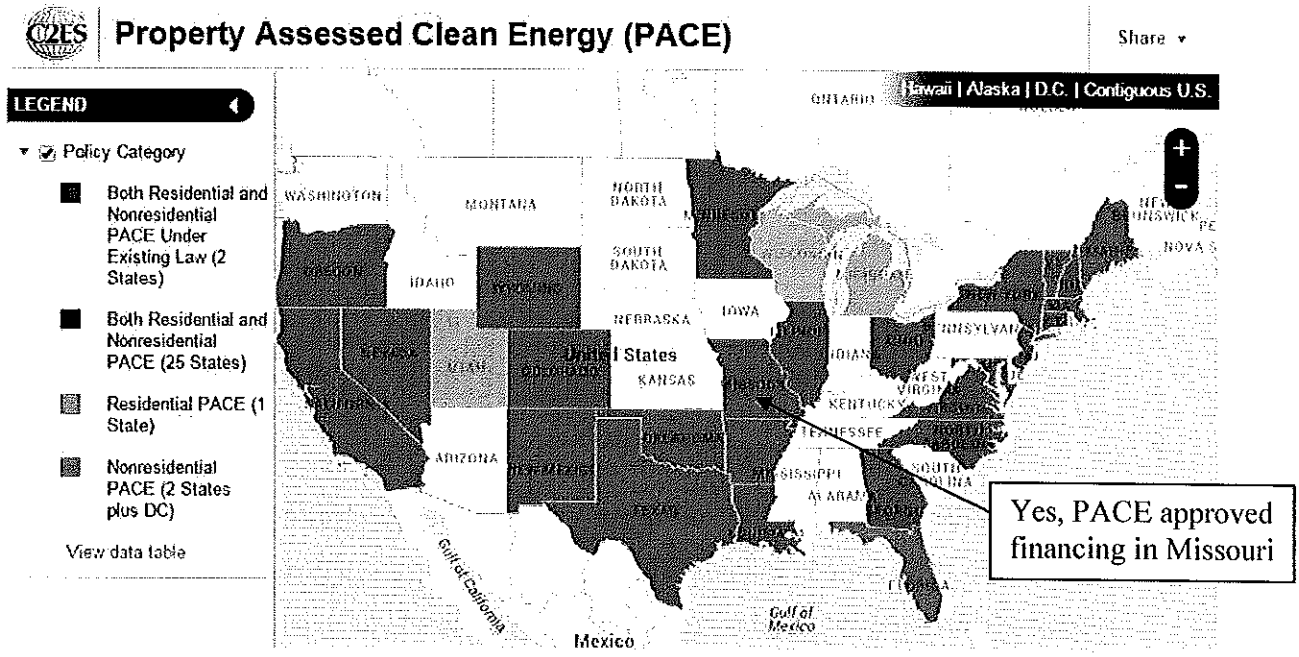
Q. Are there any policy mechanisms in place in Missouri that could enhance MEEIA savings?

A. Yes, there are several Property Assessed Clean Energy (PACE) programs in place by local governments to help finance renewable energy and energy efficiency projects on residential, commercial and industrial properties. PACE programs are designed to overcome the up-front cost barriers that discourage energy efficiency investment. Through use of a debt instrument property owners can begin saving on energy costs while they are paying for their energy retrofits. Figure 5 shows a breakdown of PACE-approved programs in states across the U.S.

Figure 5: Property Assessed Clean Energy (PACE)



Q. Are there PACE-approved programs in Ameren Missouri's service territory?

A. Yes, "Set the PACE St. Louis" is perhaps the most appropriate example for Ameren Missouri.[7]

[7] Set the PACE St. Louis. http://www.setthepacestlouis.com/index.shtml

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Q. Did Ameren Missouri consider the option of PACE funding in their potential study?

A. Not to my knowledge.

Q. Has Ameren Missouri promoted or otherwise partnered with PACE funding to date?

A. Not to my knowledge.

Q. Please respond to Woolf and Mosenthal's general conclusion on pages 16 and 18 respectively in their rebuttal testimony that the EM&V downward adjustments are overstated.

A. OPC is in general agreement with both Woolf and Mosenthal that the EM&V downward adjustments are not the primary driver for the significant reduction in estimated saving targets from Cycle I.

Q. Please respond to Woolf and Mosenthal's general conclusion on pages 46 and 19 respectively in their rebuttal testimony that Ameren Missouri placed too much emphasis on the TRC for cost-effectiveness screening.

A. OPC's concern with the TRC differs from other parties to this case. The TRC is the preferred cost-effectiveness test according to Missouri statute and Commission rules. The rationale behind utilizing the TRC is that it seeks to evaluate the costs and benefits to both participants and program administrators of energy efficiency programs.

The ratepayer concern is not in Ameren Missouri's use of the TRC on the front end of Cycle II, but rather its abandonment of the TRC when it comes time to determine how the Company should be compensated on the back end. When the net shared benefits are calculated for purposes of determining the throughput disincentive and the utility performance incentive, Ameren Missouri instead elects to utilize a UCT test—doing so mismatches how evaluations are performed and serves to inflate artificially savings and

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revenues. This is asymmetrical, was discussed in my rebuttal testimony, and will be expanded on in the next section of my testimony.

Q. Please respond to the Woolf and Mosenthal's assertion on page 16 and 19 respectively of their rebuttal testimony that utilities in other states are achieving larger savings and that the avoided cost estimates are understated.

A. OPC is in general agreement that many parts of the country are projecting greater savings potentials than what Ameren Missouri is for Cycle II. However, this exercise can be taken too far, as none of the aforementioned states (e.g., Massachusetts, Rhode Island) referenced by Woolf and Mosenthal are an appropriate comparison from which to judge Ameren Missouri's efforts or savings potential due to their unique regulatory environment and operating conditions. OPC will expand on elements of this issue later in this testimony in the lighting section.

Both Woolf and Mosenthal are correct in their assertions that avoided cost assumptions utilized in Ameren Missouri's potential study are understated. Further, Staff witness Sarah Kliethermes addresses part of this issue discussing Ameren Missouri's failure to fully consider the avoided cost of transmission, supportive services, and net off system sales margins.

Q. Please continue.

A. It is important to note, however, that Ameren Missouri's estimates of lower avoided costs represent a snapshot in time. In this case, that snapshot is 2013, with those assumptions largely being locked in for this case until the conclusion of 2018. If avoided costs are greater in the future than what was assumed in 2013, then Ameren Missouri would be understating the potential of cost-effective energy savings. Of course, the inverse is also possible, as the drop in natural gas prices due to fracking technology illustrated.

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This suggests a perpetual timing issue with respect to every potential study and the MEEIA structure, one which prevents accurate estimates and considerations for energy efficiency actions by the utility.

Q. What does OPC propose?

A. Considering the plethora of outstanding issues raised by stakeholders and their merit, Ameren Missouri's application should be rejected. Importantly, the EPA is expected to present more concrete guidelines this summer regarding the Clean Power Plan which may add a new layer of complexity to this application, and will certainly better inform the answer to the avoided costs question. The parties' time would be utilized better by designing proper targets, more appropriate recovery mechanisms, and customer-specific targets for the utility performance incentive rather than locking stakeholders into a clearly deficient application for the next three-year cycle due to the utility's haste.

Q. Please summarize the concerns raised by DE and the NHT.

A. Both DE and NHT make a general argument that Ameren Missouri's energy savings potential is too low, specifically regarding the low-income and low-income multi-family population. DE makes two additional arguments: 1) for a change in the lighting baseline assumptions to reflect household lighting saturation patterns, and 2) that combined heating and power (CHP) estimates in the Ameren Missouri market potential study are understated.

Q. Please respond.

A. Both the treatment of low-income programs and the issue of the appropriate lighting baseline will be discussed later in the program design section of this testimony. At this time, OPC cannot speak to whether or not Ameren Missouri's potential study estimates of CHP reflect appropriate assumptions.

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Q. Please summarize the concerns raised by Staff.

A. Mr. Rogers refers to Staff's filed report in EO-2015-0084, Ameren Missouri's triennial IRP filing, where Staff found no deficiencies but identified two concerns: 1) that Ameren Missouri's RAP portfolio estimates for MEEIA Cycle II are less than half the actual achieved levels of previous efforts by the Company, and 2) the estimates for Cycle II are one-half the savings estimates for both Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company's RAP estimates in their IRP filing. Mr. Rogers then states a much larger concern by pointing out that according to Ameren Missouri's filing, its RAP plan is not expected to be beneficial to all customers in the customer class in which the DSM programs are proposed throughout the life of these measures. This assertion would run counter to Missouri statute and, therefore, the Commission cannot approve the plan.

Q. Please respond.

A. OPC agrees with Staff.

Q. Why is this application not expected to be beneficial to all customers in the customer class in which the DSM programs are proposed throughout the life of these measures?

A. There is no single answer to this question. In part, OPC suggests that correcting Ameren Missouri's inflation of the net shared benefits amount by omitting out-of-pocket costs and utility-performance-incentive costs is a logical piece of the application that could be addressed and result in movement towards rectifying this problem.

Ameren Missouri compounds this deficiency by requesting a larger percentage of the throughput disincentive and a more generous utility performance incentive. Finally, as discussed above, and in my rebuttal testimony, the already low targets from Cycle I have been halved for Cycle II.

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III. OVEREARNINGS AND THE DEMAND-SIDE INVESTMENT MECHANSIM

Q. Do you agree with Staff witness John Rogers and NRDC witness Phil Mosenthal that Ameren Missouri has over-collected from ratepayers in Cycle I and that a similar mechanism would produce comparable or worse results?

A. Yes, both Mr. Rogers and Mr. Mosenthal argue that the current DSIM is flawed and that the proposed DSIM in Cycle II exacerbates the overearnings problem. Mr. Rogers estimates the overearnings of the throughput disincentive to be $4,573,635. Mr. Mosenthal does not provide a specific monetary estimate but instead speaks of over-recovery in general terms based on EM&V results.

Q. Does OPC agree with Mr. Roger's monetary estimate of Ameren's overearnings in Cycle I?

A. In part.

Q. Please explain.

A. Staff's estimate understates the overearnings by omitting two essential cost inputs for determining the net shared benefits: 1) the out-of-pocket costs that a ratepayer would spend on a measure, and 2) the utility performance incentive. The omission of these two inputs significantly increases Ameren Missouri's throughput disincentive recovery and utility performance incentive amount in Cycle I. This omission is continued by Ameren Missouri in its Cycle II's application.

Q. Why should the out-of-pocket costs be included?

A. Because the total resource cost test (TRC) is preferred by statute and reiterated in the Commission rules. If out-of-pocket costs are excluded from the calculation, then the cost-

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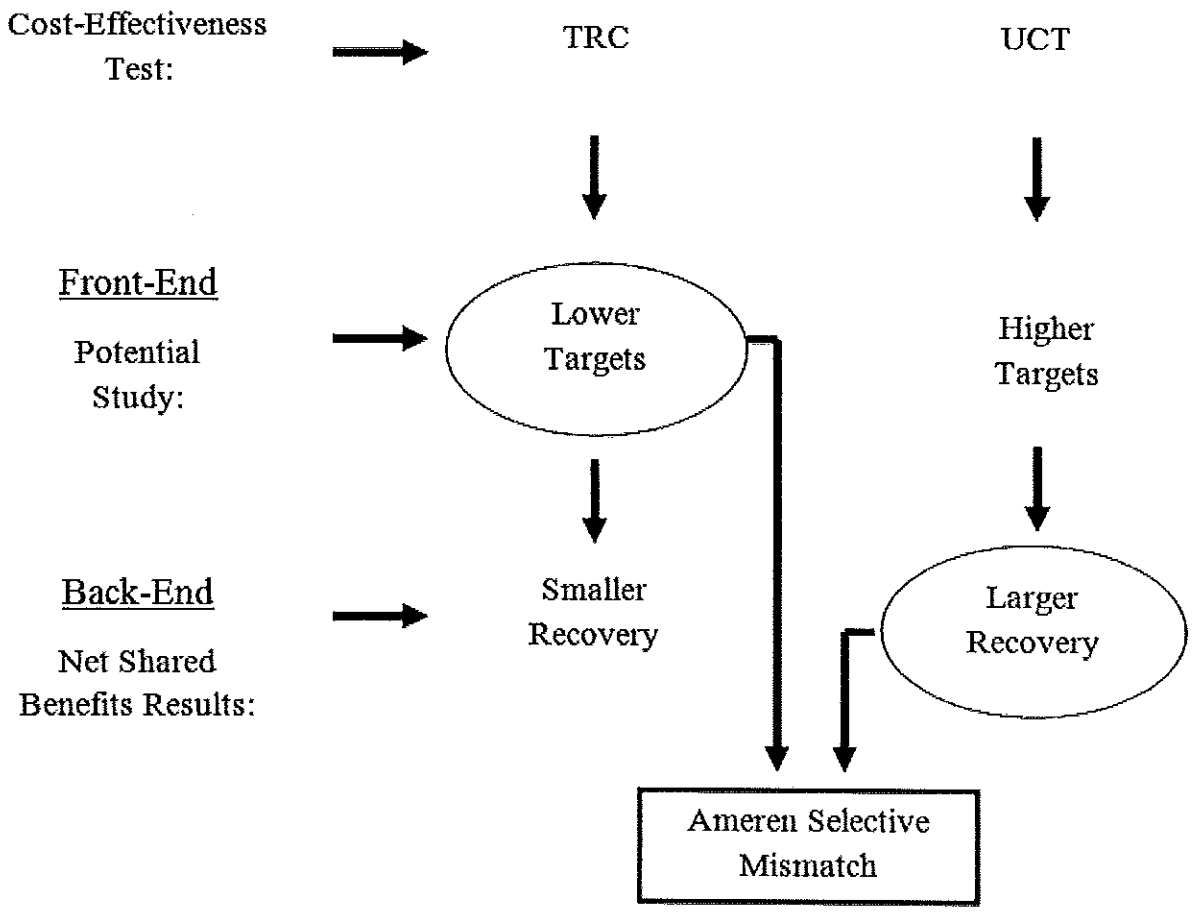
effectiveness test is no longer a TRC calculation but a UCT calculation. The result is an overstated net shared benefit amount.

As expressed in my rebuttal, if the TRC is utilized on the front-end to set Ameren Missouri's targets and available measures, then it should also be utilized on the back-end to determine the net shared benefits. The mechanism used must match in order to maintain continuity and ensure that neither ratepayers nor the utility are being disadvantaged monetarily. Figure 6 illustrates this mismatch.

Figure 6: Illustrative example of selective mismatches in cost-effectiveness test



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To date, symmetry in the use of cost-effectiveness tests has not occurred, and is one of the great flaws in Cycle I. In the first two EM&V reviews in Cycle I, the UCT has been utilized and supported by the Company and Staff to determine net shared benefits even though the TRC is preferred by statute and reiterated in the Commission rules. Now, Ameren Missouri proposes that the UCT be utilized to determine the net shared benefits in Cycle II while simultaneously arguing that the TRC should be used to determine the potential saving targets, applicable programs and incentivized measures.

This selective mismatch in cost-effectiveness tests enhances the over-earnings that Staff and NRDC identified for Cycle I and exacerbates the monetary impact of the Cycle II application. Utilizing a TRC on the front-end in the potential study eliminates both measures and programs that would otherwise be cost-ineffective. if using the UCT. Utilizing the UCT on the back-end with EM&V raises the revenues Ameren Missouri collects because out-of-pocket costs are no longer factored into the net shared benefit amount result.

The result is a MEEIA portfolio that sets targets low and then inflates the results of how high the target was overcome, resulting in a windfall for the utility.

Why should the utility performance incentive be included as a cost?

A. Because net shared benefits are "shared," not "selectively shared." Under the proposed application, this cost is omitted as an input in the calculation of the net shared benefits and runs counter to Commission rules.

Q. Please continue.

A. Commission Rule 4 CSR 240-3.153(1)(A) states:

> Annual net shared benefits means the utility's avoided costs measured and documented through evaluation, measurement, and verification (EM&V) reports for approved demand-side programs less the sum of the programs' costs including design, administration, delivery, **end-use measures**,

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> **incentives**, EM&V, utility market potential studies, and technical resource manual on an annual basis; (emphasis added).

I have highlighted two key terms from this definition—"end-use measures" and "incentives." An "end-use measure" is the product itself—the efficient HVAC, the pipe wrap, the CFL light bulb that is rebated. An "incentive," which is different in the rule from an "end-use measure," means the utility performance incentive. The incentive is a multi-million dollar cost to ratepayers and functions as a return on investment in much the same way as a return for a traditional supply-side resource functions. "End-use measures" and "incentives" receive separate treatment in the rules, are not interchangeable, and must be treated distinctly.

Failing to do this ignores a material cost that ratepayers inevitably will pay on their electric bills in the form of the surcharge for MEEIA following the conclusion of a cycle. Selectively omitting this cost also runs counter to Chapter 22 rules governing integrated resource planning process. 4 CSR 240-22.060(4)(C) includes a specific provision which requires utilities to calculate their demand-side management estimates with and without a utility financial incentive included in their 20-year planning horizon. The rule states:

> **The analysis of economic impact of alternative resource plans, calculated with and without utility financial incentives for demand-side resources**, shall provide comparative estimates for each year of the planning horizon (emphasis added).

According to these rules, Ameren Missouri is required to forecast its IRP plans with estimates that include and exclude a utility performance incentive. This represents another example within the Commission's rules that treats the performance incentive as a calculated input for demand-side resources. Omitting the utility performance incentive also runs counter to best practice literature in determining the appropriate net shared benefits attributable to a utility's efforts.

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Q. What best practice literature supports this assertion?

A. Both the EPA and the American Council for Energy Efficiency Economy (ACEEE) state that a utility performance incentive is a necessary component in determining the net shared benefits to account properly for investment in energy efficiency. Table 2 is a reprinted excerpt from the EPA's 2007 report *Aligning Utility Incentives with Investment in Energy Efficiency*.

Table 2: Reprint of Pros and Cons of Utility Performance Incentive Mechanisms

Table 6-7. Pros and Cons of Utility Performance Incentive Mechanisms

Pros
• Provide positive incentives for utility investment in energy efficiency programs.
• Policy-makers can influence the types of program investments and the manner in which they are implemented through the design of specific performance features.
Cons
• Typically requires post-implementation evaluation, which entails the same issues as cited with respect to fixed-cost recovery mechanisms.
• Mechanisms without performance targets can reward utilities simply for spending, as opposed to realizing savings.
• Mechanisms without penalty provisions send mixed signals regarding the importance of performance.
• Incentives will raise the total program costs borne by customers and reduce the net benefit that they otherwise would capture.

The EPA acknowledges that a utility's performance incentive reduces the net shared benefits that can be claimed. The final bullet point under "Cons" specifically states:

> Incentives will raise the total program costs borne by customers and reduce the net benefit that they otherwise would capture.

ACEEE also has stated that the utility's performance incentive should be included as a cost component for delivering energy efficiency resources, as the incentive is equivalent to a rate

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of return that a utility would earn for a supply-side investment. In a 2014 national review of energy efficiency programs, ACEEE states:

> The second general category is performance incentives, which are either utility shareholder incentives or performance management fees for non-utility program administrators. Both are typically established as a way to encourage greater levels of efficiency, and typically they are earned only if certain thresholds of energy savings are met or exceeded. **While utilities earn the incentives for good performance and may not perceive them as a direct cost of efficiency programs, ratepayers foot the bill for performance incentives, so they need to be accounted for in calculating the overall cost of delivering energy efficiency resources.** Not all jurisdictions, however, adopt performance incentives: currently 28 states have them in place for at least one major utility (Downs et al. 2013). We have chosen to include performance incentives as a cost component of delivering energy efficiency resources because they are equivalent to a rate of return that utilities would earn on a supply-side investment (emphasis added).

The argument for why Ameren Missouri's net shared benefits calculation should ignore the Commission's MEEIA rules, the Commission's IRP rules, and best practice literature is not well supported. It also ignores how each of the cost components, or the "three legs" of MEEIA, are collected from ratepayers on their electric bill—through the Energy Efficiency Investment Charge (EEIC) as shown in Figure 7.

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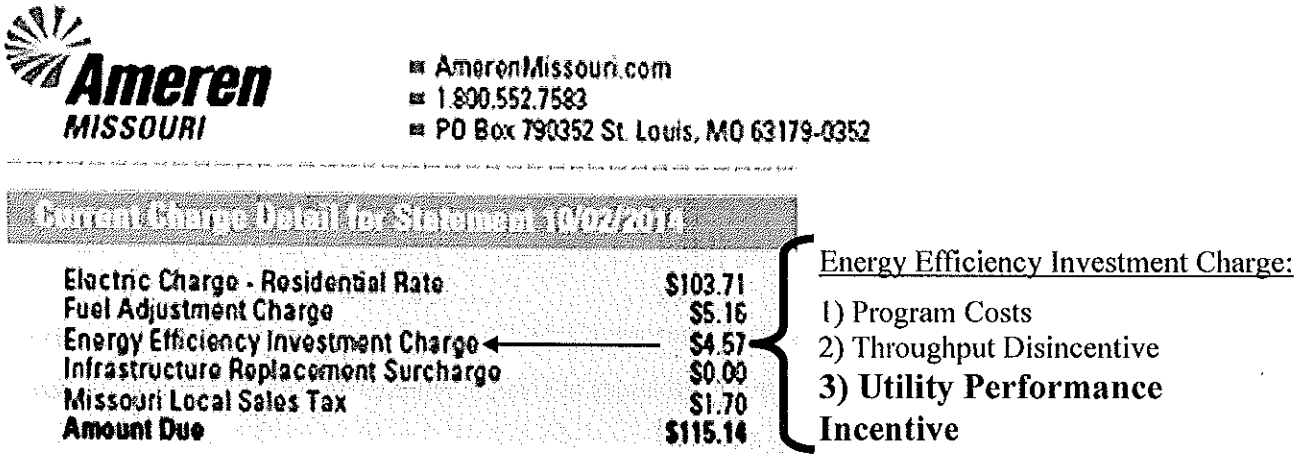
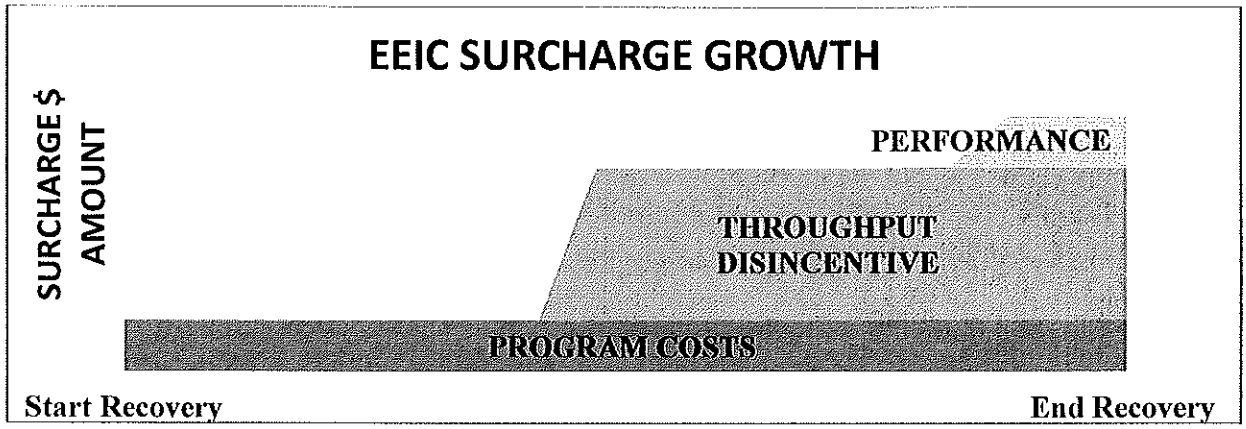
Figure 7: Where the utility performance incentive cost will be recovered on a ratepayer's bill



Q. Please explain.

A. The EEIC is a separate surcharge collected on a customer's bill. The components of the EEIC surcharge are the three legs that support a MEEIA application: program costs, throughput disincentive and the utility performance incentive. Each of these components are interdependent, but are also recovered at different intervals. The Ameren Missouri ratepayers experienced a small surcharge at the beginning of Cycle I that represented only program costs, but over time that surcharge increases as the other cost components are collected. This results in an increased EEIC surcharge as seen in Figure 8.

Figure 8: Illustrative EEIC Surcharge Increase



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All three cost components are recovered from ratepayers and paid to Ameren Missouri through the EEIC surcharge. Yet Ameren Missouri would have the Commission ignore this and not factor in the performance incentive amount as a cost component for determining the net shared benefits. Only the utility benefits from this omission.

Q. Why is it appropriate to discuss the overearnings of Cycle I in Ameren Missouri's Cycle II application?

A. This discussion is important because Cycle II's deficiencies cannot fully be understood without identifying the unresolved issues in Cycle I. Ameren Missouri's Cycle I overearnings illuminate those issues.

Q. Do you agree with Mr. Rogers' statement that the Commission should not order Ameren to refund the overearnings amount?

A. No, although I agree with Mr. Rogers' later assertion that the 2012 Stipulation and the Rider EEIC will only use deemed annual net shared benefits, I disagree that the calculation of those deemed annual net shared benefits were done correctly. As stated above, the net shared benefit calculation omits out-of-pocket costs and the utility performance incentive cost, thus overstating the net shared benefits. Any incorrect calculation of the net shared benefit amount could be addressed in a MEEIA prudency review.

Q. Please illustrate the net shared benefit savings gap between the two approaches utilized in Cycle I.

A. The large difference between a full EM&V net-to-gross approach and a deemed gross approach can be seen by comparing the PY2014 EM&V draft estimates against Ameren Missouri's Demand-Side Program Annual Report for 2014 filed in EO-2015-0210:

Deemed Estimates for PY2014	$184,907,690
Initial EM&V Estimates for PY2014	$114,521,310
Difference	$70,386,380

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Q. Does the proposed methodological approach in Cycle II alleviate OPC's concerns?

A. No, Ameren Missouri's proposed methodological approach in Cycle II will have a free rider problem. The utility will be rewarded for any energy efficiency adoption during this period regardless of whether or not a rebate for a measure was necessary for a purchase.

This approach is compounded by the fact that Ameren Missouri is:

- Proposing significantly smaller energy saving targets
- A greater percentage share of the throughput disincentive
- A greater percentage share of the utility performance incentive
- Continued omission of the out-of-pocket costs from ratepayers as a cost
- Continued omission of the utility performance incentive as a cost

There is compelling evidence that Ameren Missouri's energy saving estimates and net shared benefits have been incorrectly calculated to date in Cycle I. Ignoring these facts and requesting a greater monetary recovery and a smaller savings return in Cycle II only exacerbates this issue.

Q. The purpose of MEEIA is to reduce energy consumption. What level of energy reductions were seen in 2013 and 2014 in Ameren Missouri's service territory?

A. **

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Q. Were there additional issues raised over Ameren Missouri's DSIM mechanism?

A. Yes, Staff provided additional objections to Ameren Missouri's application from Sarah Kliethermes on the throughput disincentive design and from Mark Oligschlaeger on the throughput disincentive calculation.

Q. Does OPC concur with Ms. Kliethermes' concerns and Mr. Oligschlaeger's suggestions?

A. Yes. In general, Ms. Kliethermes makes a compelling argument for why Ameren Missouri's application appears to be tilted so heavily in the utility's favor in determining the appropriate throughput disincentive amount.

OPC also is in general support of Mr. Oligschlaeger's testimony regarding proposed true-up mechanisms and applying appropriate inputs from current and future cases. This would help ensure that customers reimburse Ameren Missouri only for the actual impact on the Company's earnings of its energy efficiency program offerings if the Commission approves this application.

IV. PROGRAM DESIGN

Street Lighting and Small Business Direct

Q. NRDC witness Mosenthal suggests additional savings can be obtained by including municipal street lighting and a small business direct install program in the MEEIA portfolio. Do you agree?

A. Tentatively, yes. OPC supports the street lighting and small business direct install programs if the overall savings targets are increased and the MEEIA costs are allocated to the lighting and small general service class.

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Energy Star Residential New Construction

Q. NRDC witness Mosenthal suggests that the residential new construction should not have been eliminated from Cycle II's application because of the lost opportunity market. Do you agree?

A. No, the program was eliminated because home builders were determined to be largely free riders, that is to say, they would have built energy efficient homes regardless of whether or not Ameren Missouri ratepayers incentivized them. Mr. Mosenthal lists some strategies for promoting the program but does not offer any suggestions on how to deal with the free ridership problem.

Lighting Fixtures and EISA Standards

Q. Please summarize how Ameren Missouri proposes to deal with lighting in its Cycle II application.

A. Ameren Missouri has adjusted its energy savings targets downward for lighting as a result of federal efficiency standards and due to its lighting efforts in Cycle I. As a result, Ameren Missouri is not including any standard A base CFLs (with the exception of high wattage bulbs) in Cycle II.

Q. Did any parties raise concerns over this proposal?

A. Yes, Sierra Club witness Woolf, NRDC witness Mosenthal, and DE witness Schroeder object. Although none of the witnesses propose a specific net-to-gross ratio for residential lighting CFLs or offer a suggestion on what a more appropriate baseline should be, all three witnesses suggest that lighting savings are understated. All three witnesses reference the same Northeast Energy Efficiency Partnerships (NEEP) study which states:

> <u>The A-line market has not been transformed</u> and many inefficient options still exist for customers. This may have unexpected implications for

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> programs that have assumed halogen alone to be the baseline, as this evidence supports a blended baseline for 2014. (emphasis added)[8]

But this information on efficient lighting saturation in the northeastern United States contradicts what Ameren Missouri and their EM&V residential evaluator Cadmus have reported to date in Cycle I.

Q. Please explain.

A. In PY2013, Ameren Missouri and Cadmus attempted to claim market transformation of the service territory in less than one year due to CFL lighting sales. The Commission's Independent Auditor provided two estimates of Ameren Missouri's PY2013 savings based on a more modest market transformation assumption and no market transformation assumption. Public Counsel, in turn, took issue with the market transformation claim and filed a response to Staff and Ameren Missouri's Change Request articulating those concerns.

In early February, all three parties entered into a second non-unanimous stipulation and agreement that agreed to a portfolio-wide MWh savings estimate and a net shared benefits estimate for PY2013. The Signatories made no further agreements with respect to any of the issues in dispute (e.g., market effects, net shared benefits, performance incentive), but did agree on a process change in an attempt to avoid future disputes for the remaining Cycle I years.

Q. What events have transpired since that agreement?

A. Shortly after the agreement, Ameren Missouri's EM&V evaluators submitted PY2014 draft results to stakeholders. **

[8] Northeast Residential Lighting Strategy: 2014-2015 Update. p. 4.
http://www.neep.org/sites/default/files/resources/2014-2015%20RLS%20Update.pdf

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Several weeks later, the Commission's independent auditor, Johnson Consulting, submitted their draft report to stakeholders in response to the evaluator's drafts. One of the key findings from the Johnson Consulting draft includes the following:

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** (emphasis added).

Q. Does OPC believe that Ameren Missouri has more efficient lighting saturation than California or Massachusetts?

A. Not based on the data available.

Q. Please explain.

A. According to the Edison Electric Institute report filed in Ameren Missouri's Cycle II application, California's 2013 electric energy efficiency budget was approximately $1.5 billion and Massachusetts was approximately $475 million. Figure 9 shows the top ten states in the country in terms of electric energy efficiency expenditures and figure 10 shows ACEEE's state energy efficiency scorecard for 2014.

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Figure 9: 2013 Edison Electric Top 10 states[9]

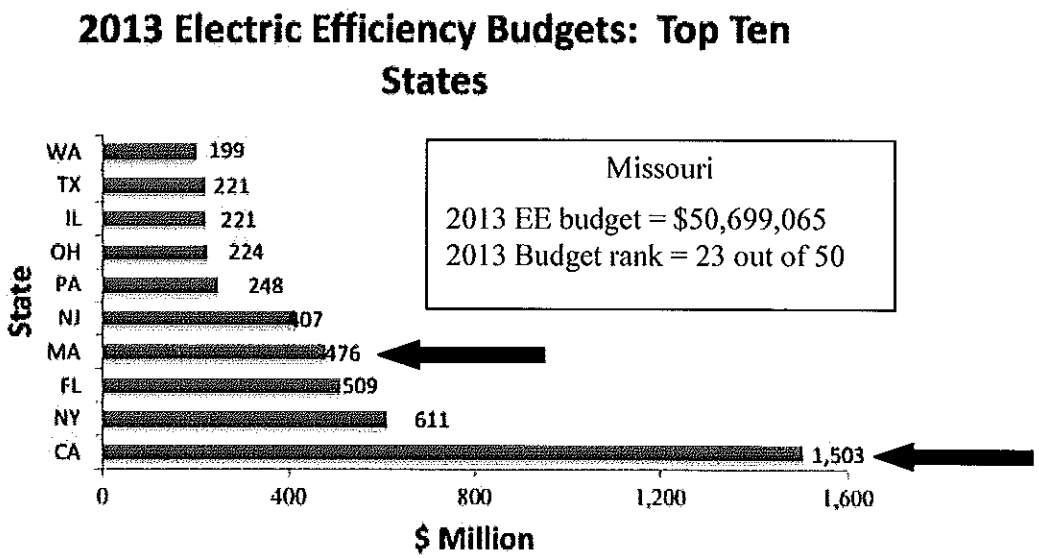
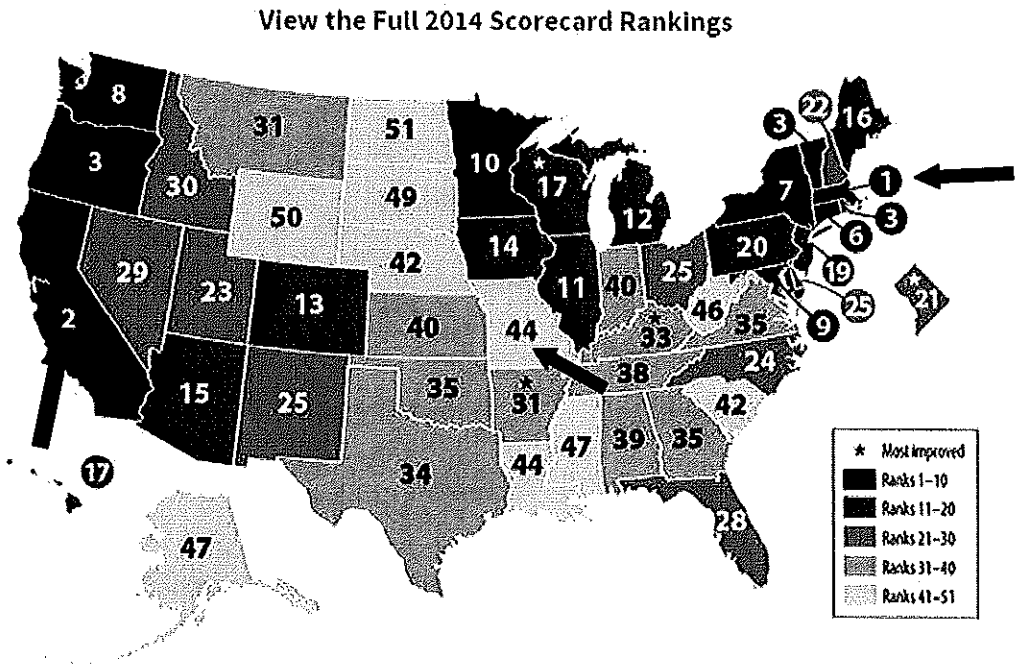


Figure 10: ACEEE 2014 State Energy Efficiency Scorecard[10]



[9]Edison Electric Institute Issue Brief, Summary of Electric Utility Customer-Funded Energy Efficiency Savings Expenditures, and Budgets. March 2014.
http://www.edisonfoundation.net/iei/Documents/InstElectricInnovation_USEESummary_2014.pdf
[10] ACEEE, The State Energy Efficiency Scorecard. http://aceee.org/state-policy/scorecard

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Note that Massachusetts and California are ranked #1 and #2 respectively. Missouri on the other hand, is ranked #44 and placed in the fifth tier or least improved grouping.[11] Both California and Massachusetts have had aggressive efficient lighting programs in place for decades. Ameren Missouri has had MEEIA in place for two years.

Even taking into account that the above examples reflect state-wide efforts and estimates compared to only Ameren Missouri's service territory, it seems inconceivable that Ameren Missouri represents the most heavily saturated lighting service area in the country after only two years of program activity.

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Q. Does OPC have any suggestions regarding the efficient lighting baseline?

A. OPC filed written testimony in EO-2012-0142 concerning the adoption of CFL lighting in PY2013. To summarize our position as it pertains to this application, OPC agrees with Ameren Missouri that CFL lighting should not be included in its MEEIA Cycle II portfolio. Lighting efforts should be directed towards LED lighting.

Energy Analysis Program

Q. NRDC witness Mosenthal suggests that Ameren Missouri's Energy Analysis Program should not have been eliminated from Cycle II's application because it did not properly account for gas savings. Do you agree?

A. No, gas savings should not be included in the MEEIA savings estimates. Furthermore, Mr. Mosenthal fails to provide evidence that the inclusion of gas savings alone would make this program cost-effective. That being said, OPC believes the Home Energy Analysis program should not be discontinued.

[11] Missouri lost one place in the rankings moving from #43 in 2013 to #44 in 2014. http://database.aceee.org/state/missouri

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Q. Please explain.

A. A residential home energy audit provides the best opportunity for Ameren Missouri to make a compelling personalized case for their programs. Having a trained professional, that a consumer actively sought out, provide comprehensive feedback and suggestions on how to reduce energy bills is an ideal sales opportunity. If Ameren Missouri, or any other electric utility, is going to achieve energy efficiency savings much beyond lighting greater emphasis should be placed on promoting the entire portfolio of efficiency options.

Q. According to Ameren Missouri's application, this program is not cost-effective. How would OPC propose to deal with this issue?

A. Joint delivery of the program with Laclede Gas, Liberty Gas and Columbia Water and Light will reduce administrative cost and improve cost-effectiveness. Indeed, joint delivery would allow Ameren Missouri to extend the program offering to their entire service territory. At the moment, the Home Energy Analysis program is only available to customers who have both electric and gas services from Ameren Missouri.

Q. Did any stakeholders comment on the benefits of joint delivery in rebuttal?

A. Yes, DE witness Schroeder's rebuttal testimony spoke to the benefits of co-delivering energy efficiency programs. Shared administrative and implementation costs between utilities represents a win-win opportunity to create cost-effective opportunities for ratepayers.

Q. Have any utilities shared these sentiments?

A. Yes. In Ameren Missouri's Cycle I application, EO-2012-0142, Laclede Gas witness James Travis specifically speaks to joint delivery:

> Q. With that in mind, what kind of programs best lend themselves to joint delivery?

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A. One example of such a program is the Residential Home Energy Performance Program ("HEP"). As described by Ameren, this program focuses on a "whole house approach," and begins with a contractor performing an energy audit and recommending measures based on the audit findings. However, as Ameren notes, a full-scale home energy audit can be expensive. Therefore, it is seldom cost-effective for either Laclede or Ameren to pay for an energy audit for their own individual fuel source. However, that obstacle may be hurdled if the companies share the cost of an audit that may identify measures that reduce both gas and electric usage. For example, an energy audit that results in an expenditure for insulation or air sealing can lower cooling costs in the summer and heating costs in the winter.[12]

Q. Are there barriers that have prevented more joint-delivered programs?

A. Yes, timing and coordination have proven to be barriers to the joint delivery of gas and electric utilities. The electric utilities have a financial incentive tied to cost-effective energy savings through a MEEIA application, gas utilities do not have the same incentive structure and their program budgets are tied to when they come in for a rate case.

Q. Are there examples of jointly delivered programs between gas and electric utilities?

A. Yes, Ameren Missouri and Laclede Gas currently share costs associated with the CommunitySavers program. KCPL&L Greater Missouri Operations co-delivered their Home Performance with Energy Start Program with Missouri Gas Energy (MGE). Empire Electric delivered a similar program with MGE as well.

Q. Does OPC have any suggestions?

A. Yes, OPC, Staff and DE all have collectively spoken with each of the investor-owned gas utilities in Missouri about how to coordinate activity with their electric counterparts. This

[12] EO-2012-0142, Rebuttal Testimony of James Travis p. 4, 11-19 & p. 5, 1-2.

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dialogue has lead to the formation of a statewide collaborative meeting of all investor-owned gas utility advisory members to be held on May 14th at the Truman Building. One of the topics on that agenda is the joint delivery of a uniformed home energy audit programs between utilities across the state.

OPC suggests that Ameren Missouri examine joint delivery of this program with applicable gas utilities in its service territory.

Low-Income Programs

Q. DE witness Schroeder suggests that low-income and education programs be subject to a public interest standard. Do you agree?

A. This is a non-issue, because both low-income and education programs do not need to meet the TRC cost-effectiveness threshold. Dr. Schroeder argues that, though this may be true, the lower score for the low-income and education program is placed within the larger portfolio and subsequently lowers the cost-effectiveness of the MEEIA application. While Ameren Missouri's Cycle II application would be "more" cost-effective if it did not include a low-income or education component, experience to date has shown that the parties can account for this small effect on the portfolio-wide score when assessing the results of cost-effectiveness testing.

Q. Does OPC have any other suggestions?

A. Yes, one of the central concerns of stakeholders has been increasing rates of nonparticipation. As a result, tenants often pay a MEEIA charge, but cannot experience a benefit on their bill—a particularly regressive result.

The split-incentive barrier inherent in most rental properties discourages multifamily property managers/owners from improving the energy efficiency of their tenant units because they do not usually pay their tenant's energy bills and, therefore, have no incentive to install more expensive energy-efficient measures.

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Reaching this demographic (low-income multifamily residents and owners) traditionally has been considered a time-intensive undertaking for energy efficiency managers. Even though most concur that low-income residents would benefit greatly in financial savings from reduced energy bills, the large range in housing mix type (subsidized, unsubsidized, HUD), red tape, and other interdependent variables can make this group fairly unattractive when it comes to targeting kWh reductions.

To remedy this situation, Public Counsel suggests that a much smaller utility performance incentive be made available for overall kWh reduction, but that additional specific utility performance incentives be designed for reaching specific program targets. In short, if participation rates are important—and OPC believes they are—then there needs to be an incentive to entice marketing and administrative efforts to produce higher participation rates in priority populations.

OPC stops short of making specific target recommendations in this case as there are many outstanding issues present in this application that need to be reconciled before numerical targets for an enhanced utility performance incentive can be designed.

Q. NHT witness Brink recommends that a non-energy benefit (NEB) "adder" be applied, at a minimum, to low-income programs for cost-effectiveness screening. Do you agree?

A. No, Ms. Brink's recommendation raises a host questions and has implications far beyond the filed application. Public Counsel suggests that the MEEIA rulemaking workshops would provide a more appropriate venue for continued dialogue over this issue.

Q. Please summarize NHT witness Brink's and Tower Grove witness Gray's recommendations as they pertain to the low-income multi-family program.

A. NHT witness Brink and Tower Grove witness Gray makes four general recommendations with specific examples including:

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1. Low-income multifamily units would be its own targeted program (aside from single-family units)
    i. Streamline delivery to affordable multifamily buildings
2. Program design
    i. Create a one-stop shop, intensive services approach to guiding participants through the process.
    ii. Address residential and commercial meters via a whole-building approach (single point of contact), not the bifurcated model proposed in the Cycle II application.
    iii. Bonus incentives for participants
    iv. Easy access to aggregate whole-building monthly energy usage data
3. Eligibility and program size
    i. Eligibility expanded to include: unsubsidized low-income multifamily buildings and include State Low-Income Housing Tax Credit recipients to the extent allowed by statute.
4. Coordination with key non-utility stakeholders
    i. Partner with Laclede Gas, the Missouri Housing Development Commission, providers of energy efficiency financing (Community Development Financial Institutions and PACE districts) and local partners that can fund "walk away" issues (e.g., leaky roof, mold, etc.).

Q. Does OPC support the first set of recommendations?

A. Yes, greater emphasis needs to be placed on low-income multifamily residents. Ameren Missouri should be commended for their activity in Cycle I which centered on direct installation of energy efficiency measures (e.g., efficient lighting, pipe wrap, programmable thermostat). However, the proper response for Cycle II should be more aggressive savings and strategies for obtaining increased participants, not the diminished proposal put forward.

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Q. Does OPC support the second set of recommendations?

A. No, not as Ameren Missouri's Cycle II application is designed. NHT witness Brink cites the one-stop-shop model as a best practice seen in successful low-income multifamily energy efficiency adoption. The one-stop-shop model takes a whole-building approach, streamlines participation by providing access to commercial, residential, gas, and electric offerings via a single point of contact, and provides intensive resources for applicants to navigate the eligibility, selection of measure, installation, financing and evaluation process. This endeavor is often dedicated to a committed third-party implementer (Elevate Energy in Illinois and the Vermont Energy Investment Corporation in Washington D.C.) with funding streams above and beyond ratepayer-funded revenue. In short, the one-stop-shop model is time and labor intensive, thus making it cost-ineffective and/or unattractive from the utility's perspective when energy savings could easily be gained in less restrictive venues. Instead, tying a utility performance incentive to achieving a certain level of savings in the low-income multifamily sector may provide the utility a more efficient cost-effective encouragement to improve performance on this issue.

Finally, some of Ms. Brink's testimony touches on building-level usage data and its disclosure. OPC is concerned about potential privacy and security issues that may be present with such disclosure in individually metered properties. OPC believes these challenges may be resolved successfully by well-designed disclosure policies and protocols, but again, more dialogue needs to take place to ensure that disclosure of any data would, at a minimum, be on an aggregated monthly basis and that appropriate consumer security measures are in place to minimize any potential liability.

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Q. Does OPC support the third set of recommendations?

A. In part. The inclusion of unsubsidized low-income multifamily housing units would appear to be an appropriate cohort to the extent that it has not already been done. Additional dialogue would need to accompany this recommendation to develop qualifications testing.

Q. Does OPC support the fourth set of recommendations?

A. Yes, OPC has been a vocal advocate for joint delivery of energy efficiency programs. Maximizing economies of scale and minimizing administrative costs should be sought out whenever possible.

Q. Do you have any additional comments?

A. Yes, the multifamily sector and the low-income multifamily sector in particular have represented a formidable challenge to energy efficiency measure adoption. This phenomenon is not unique to Ameren Missouri's service territory, as the split-incentive barrier, referenced earlier, continues to represent a serious obstacle across the country.

In 2014, OPC was an active participant in all five multifamily group meetings that culminated in the White Paper entitled "Scaling Up Energy Efficiency in Missouri and Illinois Multifamily Affordable Housing" and which was included in Ms. Brink's testimony as Exhibit A. During those meetings there was considerable discussion over Ameren Missouri's Cycle II application and the upcoming MEEIA rulemaking workshop. The general consensus among participants was that there were significant structural issues that inhibited more dynamic program design from moving forward. It also became increasingly clear that the five meetings and the white paper alone were not going to rectify the many outstanding issues.

With that in mind, OPC suggests that stakeholders and the Commission consider ordering the parties to jointly develop a low-income multifamily property pilot program to deploy in

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Cycle II that would serve as a case study for the Commission and the basis for a business proposal to property owners in future applications.

Q. Does this conclude your testimony?

A. Yes.

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