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Issues:	Demand-Side Programs Investment Mechanism
Witness:	John A. Rogers
Sponsoring Party:	MO PSC Staff
Type of Exhibit:	Surrebuttal Testimony
File No.:	EO-2015-0055
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MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

SURREBUTTAL TESTIMONY

OF

JOHN A. ROGERS

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

FILE NO. EO-2015-0055

Jefferson City, Missouri
April 2015

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	)))))	Case No. EO-2015-0055

AFFIDAVIT OF JOHN A. ROGERS

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

John A. Rogers, of lawful age, on his oath states: that he has participated in the preparation of the following Surrebuttal Testimony in question and answer form, consisting of 19 pages of Surrebuttal Testimony to be presented in the above case, that the answers in the following Surrebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

John A Rogers
John A. Rogers

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

SUSAN L. SUNDERMEYER
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: October 28, 2018
Commission Number: 14942086

Susan L Sundermeyer
Notary Public

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FILE NO. EO-2015-0055

Q. Please state your name and business address.

A. My name is John A. Rogers, and my business address is Missouri Public Service Commission, P. O. Box 360, Jefferson City, Missouri 65102.

Q. What is your present position at the Missouri Public Service Commission ("Commission")?

A. I am a Utility Regulatory Manager in the Energy Unit of the Regulatory Review Division.

Q. Are you the same John A. Rogers that filed rebuttal testimony in this case on March 20, 2015?

A. Yes, I am.

Q. Would you please summarize the purpose of your surrebuttal testimony?

A. I discuss certain aspects of the rebuttal testimony filed by other parties on March 20, 2015, concerning Union Electric Company's d/b/a Ameren Missouri Company's ("Ameren Missouri" or "Company") proposed plan for its 2016 – 2018 demand-side management ("DSM") programs including a technical resource manual ("TRM") and its demand-side programs investment mechanism ("DSIM") (collectively, the "Plan"). My surrebuttal testimony will discuss how the Plan:

1. Fails to comply with all of the statutory requirements of the Missouri Energy Efficiency Investment Act[1] ("MEEIA");
2. Should be rejected as currently proposed; and
3. Can most efficiently and effectively be modified through a collaborative technical working process and not through a contested hearing.

Q. As a result of its review of other parties' rebuttal testimony filed on March 20, 2015, has Staff altered its position in its rebuttal testimony[2] that the Commission reject the Plan because the Plan does not comply with MEEIA?

A. No. Staff has not altered its position and continues to recommend that the Commission reject the Plan primarily because the Plan: 1) does not demonstrate progress towards achieving a goal of all cost effective demand-side savings, 2) is not expected to be beneficial to all customers in the customer class in which the programs are proposed, regardless of whether the programs are utilized by all customers, (3) will likely result in over-recovery of the throughput disincentive, and (4) does not propose an earnings opportunity (performance incentive mechanism) which is associated with cost-effective measurable and verifiable efficiency savings. As a guide for Staff's review and its continued recommendation that the Commission should reject the Plan, Staff has prepared Schedule JAR-S1, which lists many – but not all − of the issues presented in the rebuttal testimony of Staff and of other parties. The schedule identifies the rebuttal testimony pages for witnesses who provided rebuttal testimony on each issue.

[1] 393.1075, RSMo, Supp. 2013.
[2] Rogers rebuttal testimony at page 2, line 12 through page 3, line 17.

Plan does not demonstrate progress toward achieving a goal of all cost-effective demand-side savings.

Q. Do any other parties provide testimony regarding the Plan's failure to demonstrate progress toward achieving MEEIA's goal of all cost-effective demand-side savings[3]?

A. Yes. Office of Public Council ("OPC") witness Geoff Marke testifies, "Ameren Missouri's MEEIA Cycle II proposal is predicated on artificially downward adjusted savings targets that understate the overall potential for energy efficiency adoption."[4] Dr. Marke later testifies, "Ameren Missouri's MEEIA Cycle II application savings targets are roughly half of what its targets were when approved in its first application."[5]

Missouri Division of Energy ("DE") witness Alex Schroeder testifies, "DE echoes Staff's concerns about Ameren's potential underestimate of RAP."[6] (Footnote deleted)

National Resources Defense Council ("NRDC") witness Philip Mosenthal testifies, "Despite EnerNOC's potential study being unreasonably low, Ameren's savings targets in its proposed MEEIA plan are lower still. As such, the proposal clearly violates the MEEIA rule's intent to pursue all cost-effective efficiency."[7]

Sierra Club witness Tim Woolf testifies, "Figure 3.2 presents the energy savings for the total portfolio, as a percent of total retail sales. In 2013 and 2014, Ameren achieved

[3] Section 393.1074 4. The commission shall permit electric corporations to implement commission-approved demand-side programs proposed pursuant to this section with a goal of achieving all cost-effective demand-side savings.
[4] Marke rebuttal testimony page 3, lines 15 – 17.
[5] Marke rebuttal testimony page 8, lines 15 – 16.
[6] Schroeder rebuttal testimony page 2, line 1.
[7] Mosenthal rebuttal testimony page 9, lines 4 – 6.

efficiency savings equal to roughly 1.0% of sales, but for 2016-2018, the Company plans to save roughly half of that amount."[8]

Q. Does Staff agree with the comments related to all cost-effective demand-side savings of each witness listed above?

A. Yes it does. Although the witnesses present information from different perspectives or using different analyses, many parties, including Staff, have identified concerns with Ameren Missouri's Plan.

Q. Do you present in rebuttal testimony an analysis of Ameren Missouri's MEEIA programs' 2012 – 2018 actual and planned performance similar to that of Mr. Woolf's Figure 3.2?

A. Yes, Chart 3 in Schedule JAR-1 of my rebuttal testimony presents the actual and planned incremental annual energy savings for 2012 – 2018, while Mr. Woolf's Figure 3.2 presents the same actual and planned incremental energy savings but as a percentage of retail sales. Both Chart 3 and Figure 3.2 graphically illustrate the dramatic drop in the Plan's energy savings targets for 2016 – 2018 relative to planned energy savings and actual energy savings achievement for 2013 and 2014.

Q. Do any parties provide rebuttal testimony demonstrating the Plan's progress toward achieving a goal of all cost-effective demand-side savings?

A. No.

[8] Woolf rebuttal testimony page 11, lines 1 – 3.

Plan is not expected to be beneficial to all customers.

Q. Do other parties share Staff's concern that the Plan is not expected to be beneficial to all customers in the customer class in which the programs are proposed, regardless of whether the programs are utilized by all customers?

A. No. To my knowledge no other party – including Ameren Missouri - has focused on the MEEIA statutory requirement that "[r]ecovery for such programs shall not be permitted unless the programs are approved by the commission, result in energy or demand savings and *are beneficial to all customers in the customer class in which the programs are proposed, regardless of whether the programs are utilized by all customers*."[9] (Emphasis added)

To my knowledge, no other party – not even Ameren Missouri – has performed and presented an analysis of the long-run rate impact of Ameren Missouri's RAP DSM strategy similar to that contained in my rebuttal testimony.[10]

Q. Do any other parties discuss ways to improve the rate impact of the Plan?

A. Yes. OPC's Dr. Marke testifies, "In managing rate and bill impacts of energy efficiency programs, it is important to design programs in a way that reduce program costs and maximize customer participation. Increasing levels of customer participation is essential, because as more customers participate in energy efficiency programs, more customers will experience the benefits of net bill reductions. In fact, when seeking to mitigate rate impact concerns, regulators often consider increasing program budgets – rather than decreasing them – as a way of increasing participation and increasing the portion of customers that experience net benefits from energy efficiency programs. If the majority of customers eventually become

[9] Section 393.1075 4.
[10] Rogers rebuttal page 26, line 3 through page 30, line 17.

program participants, the concerns about rate impacts should be significantly mitigated as more customers experience net reductions in their bills"[11]

Mr. Mosenthal testifies, "Ameren has primarily focused on simply continuing its current programs at lower levels of savings than are currently being achieved. … Ameren has not investigated new programs or best practices in program design that would allow them to go deeper and achieve more participation than would be possible with the current program designs."[12]

Q. Do other parties provide discussion and make specific recommendations on how the Plan might be modified to increase customer participation and overall net benefits to customers?

A. Yes. Dr. Marke, Dr. Schroeder, Mr. Mosenthal, Mr. Woolf, National Housing Trust witness Annika Brink, and Tower Grove Neighborhood Community Development Corporation witness Dana Gray provide extensive testimony and specific recommendations on how the Plan might be modified to increase customer participation and overall net benefits to the customers of Ameren Missouri. Schedule JAR-S1 illustrates the scope and breadth of the recommendations in the collective parties' rebuttal testimony to potentially modify the Plan so that the Plan can comply with MEEIA.

Q. You note that MEEIA requires programs that "*are beneficial to all customers in the customer class in which the programs are proposed, regardless of whether the programs are utilized by all customers.*" Do you occasionally receive phone calls from Ameren Missouri's customers who do not participate in Ameren Missouri's energy efficiency programs?

[11] Marke Rebuttal testimony page 28, lines 4 – 14.
[12] Mosenthal rebuttal page 4, lines 19 – 23.

A. Yes.

Q. Please describe the customers' inquiry and your response to such phone calls.

A. Most often, customers will inquire as to what the Energy Efficiency Investment Charge on their bill is for, and I have responded that the Commission has approved the MEEIA programs and the charge as the result of a formal case. Customers will often then inquire as to why they have to pay for efficiency programs which they have not used and have no plans to ever use. I have always been comfortable replying that the Commission has approved the energy efficiency programs and the Energy Efficiency Investment Charge for all customers (who have not opted-out of program participation) because even though rates may be higher in the near term, at some time in the future rates will be much lower and there will be net benefits for all customers, even those who do not participate directly in the programs, due to a reduced need for supply-side resources in the future.

Q. Would you be able to respond in a similar way should the proposed Plan be approved by the Commission, and if not, why not?

A. I would not. As a result of the analysis in my rebuttal testimony, I conclude that the RAP DSM strategy contained in Ameren Missouri's 2014 IRP and proposed in the MEEIA Cycle 2 application is expected to result in zero overall long-term benefits for all customers of Ameren Missouri – a result that is contrary to MEEIA and the MEEIA rules.[13]

The utility cost test ("UCT") as a preferred cost effectiveness test

Q. Do you agree with Mr. Woolf's **Section 7. MEEIA AND COST-EFFECTIVENESS** rebuttal testimony which asserts that "Ameren relies too heavily on the

[13] Rogers rebuttal testimony page 30, lines 15 – 17.

results of the TRC test to justify the cost-effectiveness of its portfolio of programs, without considering the results of the UCT"[14] and that "programs that do not meet the TRC test but pass the UCT generally are programs with costs that are "above the level determined to be cost-effective [that] are funded by the customers participating in the program." Mo. Rev. Stat. § 393.1075.4."[15]?

A. Yes. And Mr. Woolf correctly identifies that Section 393.1075 4. states: "Nothing herein shall preclude the approval of demand-side programs that do not meet the [TRC] test if the costs of the program above the level determined to be cost-effective are funded by the customers participating in the program …"[16] as support for his position.

Q. Do the Commission's MEEIA rules address the role of the UCT in the determination of cost-effectiveness?

A. Yes. 4 CSR 240-20.094(3) states:

> (A) For demand-side programs and program plans that have a total resource cost test ratio greater than one (1), the commission shall approve demand-side programs or program plans, and annual demand and energy savings targets for each demand-side program it approves, provided it finds that the utility has met the filing and submission requirements of 4 CSR 240-3.164(2) and the demand-side programs and program plans—
>
> 1. Are consistent with a goal of achieving all cost-effective demand-side savings;
>
> 2. Have reliable evaluation, measurement, and verification plans; and
>
> 3. Are included in the electric utility's preferred plan or have been analyzed through the integration process required by 4 CSR 240-22.060 to determine the impact of the demand-side programs and program plans on the net present value of revenue requirements of the electric utility.
>
> (B) The commission shall approve demand-side programs having a total resource cost test ratio less than one (1) for demand-side programs targeted to low-income customers or general education campaigns, if the commission determines that the utility has met the filing and submission requirements of 4

[14] Woolf rebuttal testimony page 46, lines 19 – 21.
[15] Woolf rebuttal testimony page 47, lines 23 – 26.
[16] Woolf rebuttal testimony page 47, lines 13 -16.

> CSR 240-3.164(2), the program or program plan is in the public interest, and meets the requirements stated in paragraphs (3)(A)2. and 3.
>
> 1. If a program is targeted to low-income customers, the electric utility must also state how the electric utility will assess the expected and actual effect of the program on the utility's bad debt expenses, customer arrearages, and disconnections.
>
> (C) *The commission shall approve demand-side programs which have a total resource cost test ratio less than one (1), if the commission finds the utility has met the filing and submission requirements of 4 CSR 240-3.164(2) and the costs of such programs above the level determined to be cost-effective are funded by the customers participating in the programs* or through tax or other governmental credits or incentives specifically designed for that purpose and meet the requirements as stated in paragraphs (3)(A)2. and 3.
>
> (Emphasis added)

Q. What is your understanding of 4 CSR 240-20.094(3)(C)?

A. I understand 4 CSR 240-20.094(3)(C) to mean that should a program not pass the TRC (…*less than one*…) but pass the UCT (*program costs above cost-effective level are funded by participating customers*)[17], the Commission shall still approve the program. Further, I understand the language in 4 CSR 240-20.094(3)(C) to mean the Commission has chosen to use both the TRC and the UCT as preferred cost-effectiveness tests in its MEEIA rules.

Low-income programs and the Plan's cost-effectiveness.

Q. Does Staff agree with Dr. Schroeder's rebuttal testimony, which asserts that "the MEEIA rules do not require the entire portfolio to meet a cost-effectiveness test, as low-income and educational programs are to be evaluated based on a "public interest" standard,"[18] and, similarly, Ms. Brink's rebuttal testimony " … Ameren does plug the low-income program back into its portfolio-level cost-effectiveness calculations in order to ensure that the

[17] 4 CSR 240-3.64(1)(Y) Utility cost test means the test that compares the avoided utility costs to the sum of all utility incentive payments, plus utility costs to administer, deliver, and evaluate each demand-side program to quantify the net savings obtained by substituting the demand-side program for supply-side resources.
[18] Schroeder rebuttal testimony page 2, lines 10 – 12.

portfolio as a whole passes the TRC with a value of at least 1.0. This, in effect does subject low-income programs to a cost-effectiveness test, just with slightly less stringency. While I am not an attorney, I believe the impact of this practice is to unfairly limit the size of Ameren's low-income programs in a manner that is not supported by the MEEIA statute."[19]

A. No. Staff does not agree with the assertions of Dr. Schroeder and Ms. Brink. While it is clear in the MEEIA statute and the MEEIA rules that low-income and educational *programs* do not have to be cost-effective if found to be in the public interest, there is nothing in the MEEIA statute or MEEIA rules to indicate that these programs can be excluded from the *portfolio* level cost-effectiveness tests. To the contrary, 4 CSR 240-3.164(2) requires:

> 4 CSR 240-3.164(2) When an electric utility files for approval of demand-side programs *or demand-side program plans* as described in 4 CSR 240-20.094(3), the electric utility shall file or provide a reference to which commission case contains the following information...
> (B) Demonstration of cost-effectiveness for *each* demand-side program ***and for*** *the total of all demand-side programs of the utility*. At a minimum, the electric utility shall include:
> 1. The total resource cost test and a detailed description of the utility's avoided cost calculations and all assumptions used in the calculation. To the extent that *the portfolio of programs fails to meet the* ***TRC*** *test*, the utility shall examine whether the failure persists if it considers a reasonable range of uncertainty in the assumptions used to calculate avoided costs;
> 2. The utility shall also include calculations for the utility cost test, the participant test, the non-participant test, and the societal cost test; and…
>
> (Emphasis added)

These excerpts from 4 CSR-3.164(2)(B) indicate the cost-effectiveness of the entire Plan needs to be considered, even if the individual low-income programs are not required to meet the cost-effectiveness test. Likewise, the UCT can be applied to individual programs, but the TRC is the preferred test for the Plan.

[19] Brink rebuttal testimony page 12, lines 12 – 17.

Further, 4 CSR 240-20.094(1)(K) defines demand-side program plan to mean a particular combination of demand-side programs to be delivered according to a specified implementation schedule and budget.

Q. Does Staff have any recommendations to modify the treatment of low-income programs in the Plan?

A. Yes. While low-income programs must be included in the estimation of the Plan's overall cost-effectiveness as measured by the TRC, Staff recommends that any modified Plan include:

1. A utility incentive component of a DSIM for all programs which are <u>not</u> low-income programs; and
2. A requirement to spend at least a specified amount over the Plan period on low-income programs.

By making these adjustments, Ameren Missouri will be incented to spend the modified Plan's entire budget for low-income programs and to not limit the size of the low-income programs.

<u>Enhanced achievable potential demand-side portfolios which are analyzed through Chapter 22 integrated resource analysis are needed to determine all cost-effectiveness demand-side savings for Ameren Missouri.</u>

Q. Please comment on Mr. Woolf's rebuttal testimony at page 33, lines 13 – 19:

> Further, IRPs should not define energy efficiency so narrowly, with only two possible future efficiency portfolios. One of the key purposes of any IRP is to assess a variety of different levels of energy efficiency programs, in order to determine which level is most cost-effective and meets the selection criteria of the IRP. By limiting the IRP analysis to the narrowly-defined MAP and RAP scenarios from the Potential Study, the Company has not fully identified or investigated the amount of cost-effective energy efficiency savings that are available on its system.

A. While Mr. Woolf's discussion is related to the electric utility resource planning process in 4 CSR 240-22, MEEIA rule 4 CSR 240-3.164(2) requires that when an electric utility files for approval of demand-side programs or demand-side program plans as described in 4 CSR 240-20.094(3), the electric utility shall file … (B) Demonstration of cost-effectiveness of each demand-side program and for the total of all demand-side programs of the utility. At a minimum, the electric utility shall include: … 3. "*The impacts on annual revenue requirements and net present value of annual revenue requirements as a result of the integration analysis in accordance with 4 CSR 240-22.060 over the twenty (20)-year planning horizon.*"[20]

Staff agrees with Mr. Woolf that a variety of different levels of energy efficiency should be tested through Chapter 22 integrated resource analysis in order to best determine the level of the most cost-effective demand-side resources. In fact, Staff has been promoting this very concept for several years as evidenced by Schedule JAR-S2, a version of which has been presented by Staff to the IRP stakeholder group of each Missouri's investor-owned electric utilities.

Staff's response to proposed modifications to Ameren Missouri's DSIM.

Q. Please comment on Dr. Marke's rebuttal testimony at page 9, lines 6 – 11 in which Dr. Marke states: "OPC believes that the 149% difference [between what is collected under the MEEIA Cycle I deemed net savings for determining the throughput disincentive (or lost revenues) and what was planned for in Ameren MEEIA Cycle 1] is, in part, a result of not factoring in the out of pocket expenses from Ratepayers as required by the total resource cost test (TRC), as well as the omission of a performance incentive amount that will be a realized

[20] 4 CSR 240-3.164(2)(B)3.

cost borne by ratepayers at the conclusion of Cycle I. Ameren Missouri is proposing similar omissions for Cycle II."

A. As Staff understands Dr. Marke's assertion, Ameren Missouri's deemed net benefits for its throughput disincentive should include the participant's cost to install a more efficient measure as well as a performance incentive amount. In Staff's opinion, Dr. Marke's assertion completely ignores the terms in paragraphs 5. b. i. and 6. b. of the *Unanimous Stipulation and Agreement Resolving Ameren Missouri's MEEIA Filing* ("2012 Stipulation") in Case No. EO-2012-0142.[21] The 2012 Stipulation's paragraph 5. b. i. requires that " … NSB are the present value of the lifetime avoided costs (i.e., avoided energy, capacity, transmission and distribution, and probable environmental compliance costs) for the approved MEEIA Programs using the deemed values in the TRM less the present value of all utility costs of administering the MEEIA Programs. The revenue requirement addition provided for in this paragraph 5. b. i. shall be trued-up as provided for in paragraph 6. b. below." Paragraph 6. b. requires that " … For purposes of determining the Ameren Missouri's TD-NSB Share, the only changes that will be made to the inputs into the DSMore model that was utilized for the MEEIA Report when the DSMore model is re-run (at any point in time) to calculate actual NSB are (i) the actual number of energy efficiency measures (by type) installed in each month up to that point, (ii) the actual program costs in each month incurred up to that point, and (iii) for Commercial and Industrial Custom measures for which the TRM does not provide a deemed value, savings determined according to the protocol provided for at pages 85 to 98 of the TRM."

[21] On August 1, 2012, the Commission approved the *Unanimous Stipulation and Agreement Resolving Ameren Missouri's MEEIA Filing* which had been filed on July 5, 2012 on behalf of nine parties including the Office of Public Counsel.

Further, 4 CSR 240-20.093(1)(C) defines annual net shared benefits to mean "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, incentives, EM&V, utility market potential studies, and technical resource manual on an annual basis."

Q. Please summarize Staff's view of Dr. Marke's rebuttal testimony at page 9, lines 6 – 11 with respect to the 2012 Stipulation and relevant Commission rules.

A. The terms of the 2012 Stipulation and the rule definition of annual net shared benefits make it clear that participants' costs to install high efficiency measures and/or a utility incentive award amount are not costs when calculating annual net shared benefits.

Q. Please comment on Dr. Marke's rebuttal testimony at page 23, lines 8 – 15 in which Dr. Marke states: "In its MEEIA Cycle II application Ameren Missouri would have the Commission set energy and demand savings targets based in part, on the TRC calculation (which would lower the target) and then collect greater lost revenues by calculating net shared benefits using the UCT (which would raise the throughput amount). This "sharing" of benefits between the utility and customer fails to account for the additional costs borne by the customer and thus overstates the total benefits. This methodology runs counter to the intention of the MEEIA statute which references only one cost effective test – the TRC."

A. First, as I state in my previous answer, annual net shared benefits are defined in the MEEIA rules and do not include participant costs to install high efficiency measures and/or a utility incentive award amount. Second, the MEEIA statute does not mandate that the TRC is **the** preferred cost-effectiveness test. The TRC is by statute **a** preferred cost-effectiveness test, as evidenced by Section 393.1075.4., in part, with emphasis: <u>The</u>

commission shall consider the total resource cost test **a** preferred cost-effectiveness test. The Commission acknowledged this statutory requirement (to consider the TRC ***a*** preferred cost effectiveness test) when it promulgated its MEEIA rules, and in particular 4 CSR 240-20.093(1)(DD), 4 CSR 240-20.094(3)(A) and (C), and 4 CSR 240-3.164(2)(B).

Q. In rebuttal testimony, Staff asserts that the Plan's proposal to not use full evaluation, measurement and verification ("EM&V") to determine Ameren Missouri's net performance incentive ("NPI") component of the Rider EEIC does not comply with the statutory requirements of Section 393.1075.3(3), which require the Commission provide timely earnings opportunities associated with *cost-effective measurable and verifiable efficiency savings.*[22] Do other parties agree with Staff's analysis?

A. Yes. Dr. Marke testifies, "The threat to ratepayers is additionally heighted within the context of Ameren Missouri's MEEIA Cycle II application because of the request to utilize deemed TRM savings as the basis for both the throughput disincentive and the performance incentive. This proposal minimizes the role of EM&V and essentially eliminates the role set aside for the Commission's independent auditor. Under such a scenario Ameren Missouri would have considerably smaller energy and demand saving targets and be compensated fully for all energy efficiency efforts it could record, regardless of whether or not the utility was responsible for the adoption (i.e., free ridership)."[23]

Q. Do other parties agree with Staff's assertion that for 2013, Ameren Missouri received pre-taxed earning through its NTD component of its Rider EEIC[24]?

[22] Rogers rebuttal testimony page 3, lines 8 – 13.
[23] Marke rebuttal testimony page 17, lines 14 - 21.
[24] Rogers rebuttal testimony page 30, line 18 through page 33, line 8.

A. Yes. Mr. Mosenthal testifies, "The most concerning aspect of the proposed DSIM structure is that it does not true-up the throughput incentive net shared benefit award based on evaluated data. The purpose of the throughput incentive is to compensate the utility for lost marginal revenue due to the efficiency activities. Without any true-up based on EM&V, then Ameren may over collect. As a result, ratepayers would pay Ameren more in the throughput incentive than it actually lost in revenue. We have seen this occur in 2013 and 2014, where EM&V results indicated downward adjustments to initial savings estimates."[25]

Q. How do you respond to Mr. Mosenthal's rebuttal testimony cited in your last answer?

A. Staff agrees with Mr. Mosenthal's assertion that Ameren Missouri has been over-compensated for its throughput disincentive for 2013 and for 2014. Staff understands the "throughput incentive net shared benefit award" to which Mr. Mosenthal refers to be the existing NTD component in the Rider EEIC which calculates Ameren Missouri's annual energy savings, annual demand savings and annual net shared benefits amounts based upon deemed values and not based upon the results of final EM&V; however, this arrangement is consistent with the terms of the Commission-approved 2012 Stipulation.[26] In my rebuttal testimony, I presented the following Rebuttal Table 2[27] to illustrate this point for 2013.

[25] Mosenthal rebuttal testimony page 44, lines 12 – 18.
[26] See paragraphs 5. b. i. and 6. b. of the 2012 Stipulation for terms governing the NTD for Ameren Missouri's MEEIA Cycle 1.
[27] Rebuttal Table 2 is corrected to use the acronym EM&V and not EV&V.

Rebuttal Table 2
Staff Analysis of Ameren Missouri 2013 Throughput Disincentive

		2013 (1)
Deemed Annual Energy Savings in MWh		337,368
EM&V Annual Energy Savings in MWh		347,360
Deemed *less* EM&V MWh Savings		-9,992
Deemed less EM&V % Change in MWh Savings		-3.0%
Deemed Annual Net Shared Benefits	$	141,010,520
EM&V Annual Net Shared Benefits	$	123,646,681
Deemed *less* EM&V Annual Net Shared Benefits	$	17,363,839
Deemed *less* EM&V % Change in Annual Net Shared Benefits		12.3%
26.34% of Deemed Annual Net Shared Benefits	$	37,142,171
26.34% of EM&V Annual Net Shared Benefits	$	32,568,536
26.34 % of Deemed *less* EM&V Annual Net Shared Benefits	$	4,573,635

(1) 2013 EM&V values from paragraph 11 of the Second Non-Unanimous Stipulation and Agreement Settling the Program Year 2013 Change Requests in Case No. EO-2012-0142.

Although EM&V for program year 2014 is not final, based upon my understanding of the draft EM&V reports for 2014 and the avoided cost issue for 2014 EM&V identified in Schedule JAR-S3 and Schedule JAR-S4, Staff estimates that Ameren Missouri may be over-compensated by nearly $25 million for its 2014 NTD compared to what the NTD would be if the 2014 NTD was based upon ***the utility's portion of annual net shared benefits achieved and documented through EM&V reports***.[28]

[28] 4 CSR 240-20.093(2)(H)

Table 1
Staff Analysis of Ameren Missouri 2014 Throughput Disincentive

		2014
Deemed Annual Energy Savings in MWh (1)		361,915
EM&V Annual Energy Savings in MWh (2)		344,726
Deemed less EM&V MWh Savings		17,189
Deemed less EM&V % Change in MWh Savings		4.7%
Deemed Annual Net Shared Benefits (1)	$	184,907,690
EM&V Annual Net Shared Benefits (3)	$	90,541,414
Deemed less EM&V Annual Net Shared Benefits	$	94,366,276
Deemed less EM&V % Change in Annual Net Shared Benefits		51.0%
26.34% of Deemed Annual Net Shared Benefits	$	48,704,686
26.34% of EM&V Annual Net Shared Benefits	$	23,848,608
26.34 % of Deemed less EM&V Annual Net Shared Benefits (4)	$	24,856,077

(1) 2014Q4 Surveillance Monitoring Report.
(2) February 14, 2015 Draft EM&V reports of Cadmus and ADM.
(3) John Rogers April 13, 2015 calculation which assumes the final EM&V ex post gross UCT benefits will be reduced by 40% when the avoided costs used in the DSMore model are updated to reflect the methodology used in Ameren Missouri's most recently adopted perferred resource plan filed on October 1, 2014 in File No. EO-2015-0084.
(4) Over-recovery of throughput disincentive through deemed savings vs. retrospective EM&V using the avoided cost methodology used in the most recently adopted preferred resource plan. 4 CSR 240-20.093(2)(H): Any utility incentive component of a DSIM shall be based on the performance of demand-side programs approved by the commission in accordance with 4 CSR 240-20.094 Demand-Side Programs and shall include a methodology for determining the utility's portion of annual net shared benefits achieved and documented through EM&V reports for approved demand-side programs. Each utility incentive component of a DSIM shall define the relationship between the ***utility's portion of annual net shared benefits achieved and documented through EM&V reports***, annual energy savings achieved and documented through EM&V reports as a percentage of annual energy savings targets, and annual demand savings achieved and documented through EM&V reports as a percentage of annual demand savings targets.

Discussion of process and calendar for the remainder of this case.

Q. What is your general assessment of the issues in this case as a result of the rebuttal testimony filed on March 20, 2015 and what is your recommendation on how to best move forward?

A. Staff and other parties have provided rebuttal testimony recommending that the Plan must be rejected and then modified before the Plan can comply with MEEIA and can be approved by the Commission. Schedule JAR-S1 illustrates the broad scope, depth, and complexity of the issues identified in rebuttal testimony. At the same time, any modifications to the Plan which the Commission approves must be acceptable to Ameren Missouri.[29] Because of the large number of very complex issues, many of which are interrelated, it is highly unlikely that a formal hearing process can achieve the desired outcome of a modified Plan which complies with the MEEIA statute and is acceptable to Ameren Missouri.

In Staff's opinion, the Plan must be rejected; therefore, Staff suggests that the best path forward is for Ameren Missouri and the parties to request suspension of the current procedural schedule in order to concentrate their energies more productively on using a collaborative technical working process to explore ways to deliver to the Commission a modified Plan that satisfies the requirements of MEEIA and the MEEIA rules.

Q. Does this conclude your testimony?

A. Yes.

[29] 4 CSR 240-20.094(3) … 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. … (E) The commission shall simultaneously approve, approve with modification acceptable to the utility, or reject the utility's DSIM proposed pursuant to 4 CSR 240-20.093. (Emphasis added).

Witnesses and Page References for Issues in Rebuttal Testimony Filed on March 20, 2015 in Case No. EO-2015-0055

Issues	Rogers	Kliethermes	Oligschlaeger	Murray	Marke	Schroeder	Gupta	Mosenthal	Woolf	Brink	Gray
	Staff	Staff	Staff	Staff	OPC	DE	NRDC	NRDC	Sierra	NHT	Tower Gr.
Plan does not demonstrate progress towards achieving all cost-effective demand-side savings	15-18				5-9, 18-20	2		9-10, 19, 26-29	9-12, 46-		
Plan is not expected to be beneficial to all customers	18-30				28-29						
Low participation rates					28			4, 16-17	24-28, 44, 52		
Potential study					10-20				8, 30-40		
Potential study screening should give weight to UCT									9, 22-23, 46-53		
New baseline forecast					18-20	4-6		20-22	16-17		
EM&V results								18-19	15-16		
Lower avoided costs								19	16		
Understating probable costs of complying with 111(d)									36-40		
Take rates or adoption rates (1, 3, 5 yr payback)					10-12			15-17	26-27		
Adjustment for survey bias					10-12				26		
Attitudinal responses					10-14				26		
CFL still cost effective?						5-6		23-26			
Joint gas-and-electric programs					3	9-10				11	
Small business direct install								31-32	40-45		
More aggressive upstream programs								16-17, 37-38	24, 52		
More active account management strategy								39-41	25		
Enhancements to business new construction								41-42			
Residential behavioral program								42-43	25		
No adjustment should be made for public sector buildings								10-12			
CHP						7-9		35			
St. Louis 25 by 20 initiative								35-36			
LED streetlights								36-37	18, 52		
Low-income and hard-to-reach customers											
Portfolio TRC should exclude programs "in public interest"						2-3			47	12	
Include unsubsidized affordable housing										8-11	6-7
Monthly anonymized usage data										7-8	7
Expanded list of measures to improve NEBs										11-14	5-6
Start to finish one stop shop/audit/financing										5-7, 11	4-5
Lost margin revenue recovery component of DSIM											
Lost margin revenue estimate is 2-3 times Staff's estimate		4-5									
Marginal rates vs average rates		7-11									
Marginal costs		11-13									
Marginal revenues		13									
Use lost revenue component of a DSIM - 4 CSR 240-20.094		4, 6-7, 13									
True-up NTD for actual rate case frequency			8-10								
Correct NTD for "fixed costs" approved in ER-2014-0258		8	10-13								
Annualize impact of DSM in permanent rates			13-16								
Current NTD may result in shareholder earnings	30-33	5	16-17		3			5, 44			
Use TRC costs and perf. Inc. award in calc. annual NSB					4, 9, 23-24						
Inappropriate to screen measures and programs with TRC and then value NTD and NPI with UCT					23-24						
Revenue decoupling							4-7	44-45			
Earnings opportunity not based on EM&V per 393.1075.3.(3)	33-34				28-29			43-44			
Performance incentive award					4, 17, 28-29			43-45			
Flexibility to change energy and demand savings targets								5, 46	54-55		
DSIM impact on business risk and authorized ROE				3-7				46			
Customer notice 4 CSR 240-3.163(2)(A)		3-4									
Process and schedule to "redo" the Plan	4, 18								6-9, 18-19		
Methodology to determine all cost effective savings									33, 53		
Ameren Missouri is only party who can perform "redo"	4, 18										
Variances from Commission Rules					30						
Flexibility to change energy and demand savings targets								5, 46	54-55		

Regulatory Process to Achieve a Goal of All Cost-Effective Demand-Side Savings

November 2012

John Rogers
Utility Regulatory Manager
Missouri Public Service Commission

John.rogers@psc.mo.gov

1

Missouri's Energy Efficiency Investment Act of 2009 (MEEIA)

Senate Bill 376 became law on August 28, 2009 as § 393.1075

3. It shall be the policy of the state to value demand-side investments equal to traditional investments in supply and delivery infrastructure and allow recovery of all reasonable and prudent costs of delivering cost-effective demand-side programs. In support of this policy, the commission shall:

(1) Provide timely cost recovery for utilities;

(2) Ensure that utility financial incentives are aligned with helping customers use energy more efficiently and in a manner that sustains or enhances utility customers' incentives to use energy more efficiently; and

(3) Provide timely earnings opportunities associated with cost-effective measurable and verifiable efficiency savings.

4. The commission shall permit electric corporations to implement commission-approved demand-side programs proposed pursuant to this section with a goal of achieving all cost-effective demand-side savings.

2

Summary of MEEIA State Energy Policy

- Value demand-side and supply-side resources on equal basis
- Programs' cost recovery
- Ensure utility financial incentives are aligned with helping customers save energy
- Provide for timely earnings opportunities
- Goal of achieving all cost-effective demand-side savings
- Programs must be cost effective
- Large customers – who qualify – may opt-out
- Evaluation, measurement and verification of energy and demand savings
- Annual reports to Commission
- Separate line item on customers' bills for MEEIA charges
- State tax credits, incentives and disclosures

3

Commission's MEEIA Rules

- 4 CSR 240-3.163 Demand-Side Programs Investment Mechanisms Filing and Submission Requirements
- 4 CSR 240-3.164 Demand-Side Programs Filing and Submission Requirements
- 4 CSR 240-20.093 Demand-Side Programs Investment Mechanisms
- 4 CSR 240-20.094 Demand-Side Programs

4

Commission's Chapter 22 Rules

- 4 CSR 240-22.010 Policy Objectives
- 4 CSR 240-22.020 Definitions
- 4 CSR 240-22.030 Load Analysis and Load Forecasting
- 4 CSR 240-22.040 Supply-Side Resource Analysis
- 4 CSR 240-22.045 Transmission and Distribution Analysis
- 4 CSR 240-22.050 Demand-Side Resource Analysis
- 4 CSR 240-22.060 Integrated Resource Plan and Risk Analysis
- 4 CSR 240-22.070 Resource Acquisition Strategy Selection
- 4 CSR 240-22.080 Filing Schedule, Filing Requirements, and Stakeholder Process

5

Chapter 22 Policy Objectives

(2) The fundamental objective of the resource planning process at electric utilities shall be to provide the public with energy services that are safe, reliable, and efficient, at just and reasonable rates, in compliance with all legal mandates, and in a manner that serves the public interest and is consistent with state energy and environmental policies. ...

(A) Consider and analyze demand-side resources, renewable energy, and supply-side resources on an equivalent basis, subject to compliance with all legal mandates that may affect the selection of utility electric energy resources in the resource planning process;

(B) Use minimization of the present worth of long-run utility costs as the primary selection criterion in choosing the preferred resource plan,

6

Major Drivers for Resource Planning

- Uncertain load forecast – both energy and demand;
- Uncertain federal environmental regulation – what regulations, when legislated, what cost to comply;
- Uncertain natural gas prices, prices of other fuels and market prices of energy and demand;
- Uncertain costs of supply-side resources;
- Uncertain costs and benefits of and response of customers to demand-side resources; and
- Uncertain future legal mandates and future Missouri energy and environmental policy.

7

Regulatory Process To Achieve All Cost-Effective Demand-Side Savings

- Most current DSM market potential study;
- Commission-ordered special contemporary issues;
- Chapter 22 Electric Utility Resource Planning analyses and filings – both triennial compliance filings and annual update filings;
- Application for approval of demand-side programs and DSIM under MEEIA Rules;
- Commission approval of MEEIA demand-side programs and DSIM;
- MEEIA EM&V and MEEIA annual reports; and
- Utility and statewide collaborative processes

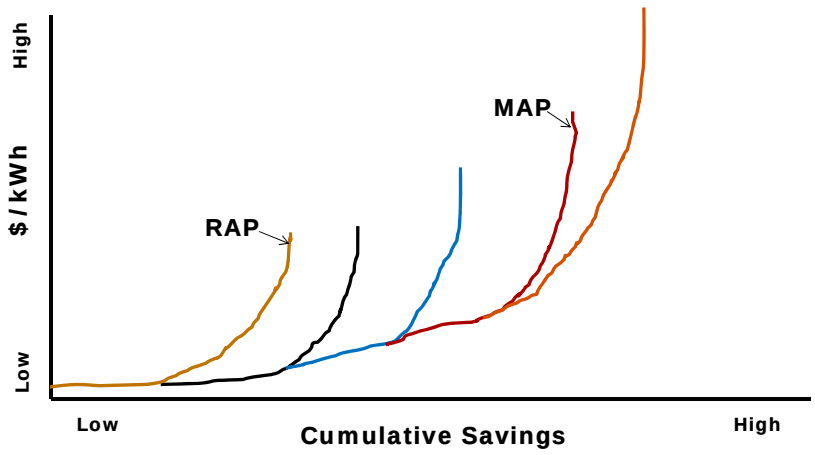
8

DSM Market Potential Studies

- Provide:
  - Quantitative analysis of costs and benefits of demand-side measures and programs;
  - Supply curves for demand-side measures and programs; and
  - Portfolios of demand-side programs (and corresponding costs and benefits) which the studies define as MAP and RAP.
- Do not provide:
  - Determination of all cost-effective demand-side savings.

9

DSM Supply Curves



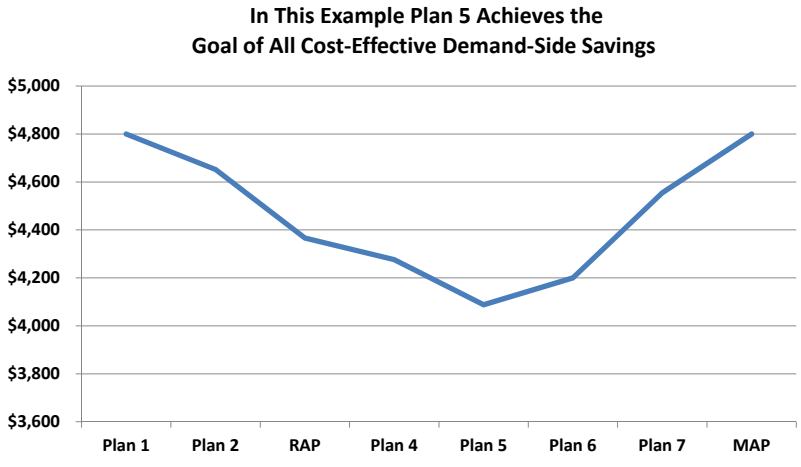
10

All Cost-Effective Demand-Side Savings

- Is determined through:
  - Integrated resource analysis of a diverse set of alternative resource plans which include diverse combinations of supply-side resources and demand-side resources; and
  - Risk analysis and strategy selection of diverse set of candidate resource plans;
- Because:
  - All cost-effective demand-side savings results from the identification of the point at which PVRR begins to increase with increased levels of demand-side resources.

11

Risk Adjusted PVRR and All Cost-Effective Demand-Side Savings



12

Chapter 22 – Resource Analysis, Risk Analysis and Strategy Selection - Is Necessary Because It:

- Is *more robust* than the DSM market potential study in its:
  - Analyses of demand-side resources and supply-side resources on an equivalent basis;
  - Analyses of uncertain factors; and
  - Calculation of risk adjusted PVRR; and
- Is able to consider retirements of supply-side resources while the DSM market potential study can not;
- Is the policy of the state to value demand-side investments equal to traditional investments in supply and delivery infrastructure.

13

Rogers, John

From: Rogers, John
Sent: Monday, April 13, 2015 9:16 AM
To: 'Doug Bruchs'; 'andrew@renewmo.org'; 'alex.schroeder@ded.mo.gov'; 'donaldcedllc@sbcglobal.net'; 'geoff.marke@ded.mo.gov'; 'hrobertson@greatriverslaw.org'; 'joe.gassner@ded.mo.gov'; 'john.hickey@sierraclub.org'; 'john.buchanan@ded.mo.gov'; 'kjohnson@johnsonconsults.com'; 'martha.buschjost@ded.mo.gov'; 'mbrubaker@consultbai.com'; Dietrich, Natelle; 'opcservice@ded.mo.gov'; 'rstanfield@nrdc.org'; 'Greg Lovett (glovett@ameren.com)'; 'Laureen M Welikson (LWELIKSON@ameren.com)'; 'rvoytas@ameren.com'; 'Dolly, Cara J'; 'dlaurent@ameren.com'; Mueth, Marcella; Berlin, Bob; Payne, Whitney
Cc: 'M. Sami Khawaja'; 'Rick Morgan'; 'Salil.Gogte'; 'Hodgson, Wyley'; 'Dave Korn'; 'John Walczyk'; 'Laura James'; 'Jamie Drakos'; 'Benjamin Mabee'; 'Zachary Horvath'; 'Sara Wist'; 'Jane Colby'
Subject: RE: MPSC Staff Comments on Draft EM&V Reports

All:

Staff provides the following comments concerning the avoided cost of energy, avoided cost of capacity and avoided T&D cost for the PY2014 EM&V reports:

1. The DSM program benefits in the Evaluators' February 14, 2015 draft PY2014 EM&V reports appear to be calculated using the avoided costs in Ameren Missouri's prior adopted preferred resource plan and not the avoided costs in Ameren Missouri's most recently-adopted preferred resource plan as a result of its October 1, 2014 Chapter 22 triennial compliance filing in Case No. EO-2015-0084.
2. 4 CSR 240-20.093(1)(F) Avoided cost or avoided utility cost means the cost savings obtained by substituting demand-side programs for existing and new supply-side resources. Avoided cost include avoided utility cost resulting from demand-side programs energy savings and demand savings associated with generation, transmission and distribution facilities including avoided probable environmental compliance costs. ***The utility shall use the same methodology used in its most recently-adopted preferred resource plan to calculate its avoided costs.*** [Emphasis added]
3. Staff requests that Ameren Missouri provide the Evaluators and the Staff –at its earliest convenience - the compliant avoided costs input files beginning with 2014 avoided costs for use in the DSMore model for the Evaluators' final PY2014 EM&V reports.
4. Staff requests that the Evaluators recalculate all program and portfolio level benefits and net benefits using the compliant avoided costs and provide to all parties updated draft PY2014 EM&V reports by May 4th for discussion during the scheduled 4-hour conference call on May 6th.

In summary, the compliant avoided cost input files for use in the DSMore model for the Evaluators' final PY2014 EM&V reports are the avoided costs in Ameren Missouri's most recently-adopted preferred resource plan as a result of Ameren Missouri's October 1, 2014 Chapter 22 triennial compliance filing in Case No. EO-2015-0084.

Thanks,

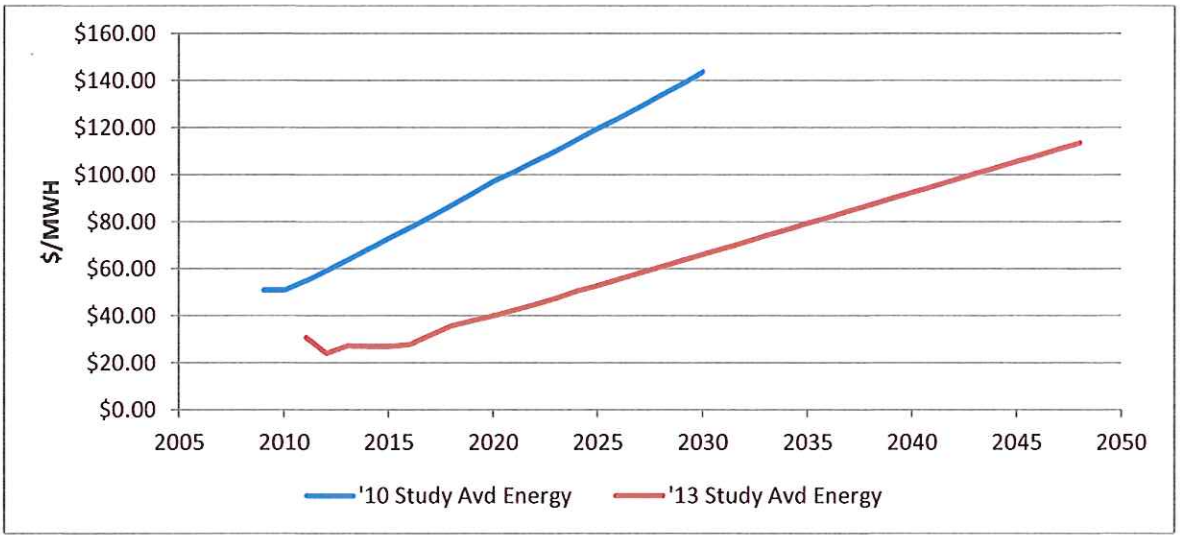
John Rogers

One measure that was a central part of the Company's portfolio plan was impacted so severely that it is no longer cost effective. That measure is programmable thermostats. 2013 EM&V found that, while programmable thermostats can generate meaningful savings, the majority of customers that have them installed override the settings and operate their thermostat in a manual mode. Of course, that means for such customers it saves nothing since the previous thermostat operated similarly. This is one of the more extreme examples, but there were many measures with similar declines in savings that resulted from EM&V.

Lower Avoided Costs

The market values of energy and capacity utilized to estimate Ameren Missouri's avoided costs were reported previously in this section of the report. What is not evident from Table 2.7 is how those avoided costs compare to those utilized for the MEEIA 2013-15 programs. In short, they are markedly lower. In fact, they are close to half of the former avoided cost curves. The 2013-15 and 2016-18 avoided energy cost curves are shown in Figure 2.3 below.

Figure 2.3: Avoided Energy Cost Comparison – 2013-15 vs. 2016-18



The decline is impossible to miss. There are two primary causes of the energy market price decline. First, lower load growth has been observed over the last few years due to the combination of a less robust than expected recovery from the severe recession of 2007-2009 and increasing customer energy efficiency induced both by utility programs as well as codes and standards. Secondly, and even more significantly, a marked decrease in the market price of natural gas, which is frequently the fuel that fires marginal generators that establish wholesale electricity market clearing prices, has significantly depressed peak power prices. The natural gas prices used in the 2010

study were based on 2009-2010 data, which was prior to the boom in production of gas from shale formations that has caused precipitous declines in observed market prices and expectations of future gas prices. The confluence of these two factors caused the marked decrease in the avoided costs illustrated above.

The impact of lower avoided costs on energy efficiency is that the benefits of energy efficient measures have become smaller. Lower avoided costs can cause marginally cost-effective measures to become no longer cost effective, reducing potential; or can cause cost-effective measures to simply be less cost effective. Either result reduces the total benefits realized by customers. As is relevant to the discussion of the comparison of 2013-15 planned savings to the 2016-18 planned savings, the important piece is the measures which are no longer cost effective. For MEEIA 2013-15, 47 residential, 104 commercial, and 43 industrial measures, representing a total of 194 measures, passed the economic screen for cost effectiveness. With the lower avoided costs described above, MEEIA 2016-18 programs include 43 residential, 100 commercial, and 39 industrial measures, for a total of 182 measures that were screened as cost effective. That is a net loss of 12 measures, representing 6% of the number that were previously cost effective.

An additional note, the 182 measures that are cost effective for MEEIA 2016-18 are less cost effective than they were in MEEIA 2013-2015. This is the majority of the reason that the cost effectiveness tests for MEEIA 2016-18 are roughly half of MEEIA 2013-15. The 2016-18 TRC of 1.53 compares to the 2013-15 TRC metric of 2.07. This will have significant ramifications on the levels of shared net benefits calculated for purposes of the DSIM in Chapter 3 of this report.

In summary, the savings Ameren Missouri is targeting for the 2016-18 program years is significantly less than its MEEIA 2013-15 plan at a similar budget. That should not in any way be viewed as a reduction in Ameren Missouri's commitment and effort toward delivering all cost-effective energy efficiency to its customers. It is in fact an outcome of circumstances outside of the Company's control. With approval of the MEEIA 2016-2018 plan, Ameren Missouri will continue to vigorously pursue cost-effective opportunities to generate savings for its customers as they are possible within the environment in which it is delivering programs.

Ameren Missouri Expert/Witness: Richard A. Voytas