Exhibit No.:	
Issues:	Demand-Side Programs EM&V Reports
Witness:	John A. Rogers
Sponsoring Party:	MO PSC Staff
Type of Exhibit:	Direct Testimony
File No.:	EO-2012-0142
Date Testimony Prepared:	October 22, 2014

MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

DIRECT TESTIMONY

OF

JOHN A. ROGERS

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

FILE NO. EO-2012-0142

Jefferson City, Missouri
October 2014

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Filing to Implement Regulatory Changes Furtherance of Energy Efficiency as Allowed by MEEIA	)))))	Case No. EO-2012-0142

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 Direct Testimony in question and answer form, consisting of 20 pages of Direct Testimony to be presented in the above case, that the answers in the following Direct 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 22nd day of October, 2014.

LAURA BLOCH
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: June 21, 2015
Commission Number: 11203914

Notary Public

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FILE NO. EO-2012-0142

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. Please state your educational background and experience.

A. These are contained in Schedule JAR-1.

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

A. The purpose of my testimony is to provide a record of competent and substantial evidence to support Commission approval of the terms of the joint settlement position (hereinafter the "joint position") contained in the *Non-unanimous Stipulation and Agreement Settling the Program Year 2013 Change Requests* ("Stipulation") filed on September 19, 2014, by Staff of the Missouri Public Service Commission ("Staff") and Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company") to resolve the competing change requests[1] filed by Ameren Missouri and Staff related to the evaluation, measurement and verification ("EM&V") of Ameren Missouri's eleven (11) demand-side management ("DSM") programs for program year 2013[2] ("PY2013").

My testimony will provide background information and discussion concerning:

1. The annual EM&V process for Ameren Missouri's DSM programs following PY2013, program year 2014 ("PY2014") and program year 2015 ("PY2015");
2. The role of EM&V in the determination of Ameren Missouri's 3-year performance incentive award amount following completion of annual EM&V for PY2013, PY2014 and PY2015;
3. PY2013 EM&V final reports of: a) Ameren Missouri's EM&V Evaluators (Cadmus Group, Inc. ("Cadmus") for residential DSM programs and ADM Associates, Inc. ("ADM") for commercial and industrial ("C&I") DSM programs), and b) Commission's Auditor (Johnson Consulting Group, LLC, for all DSM programs); and
4. The competing change requests filed by Ameren Missouri and Staff.

Next, my testimony will provide record evidence to support Commission approval of the joint position as described in the terms of the Stipulation by specifically presenting how those terms:

1. Provide for a black box settlement of the annual energy savings and net benefits for PY2013 which is: a) based upon competent and substantial evidence, b) within the range of reasonableness defined by the final reports of Cadmus, ADM and the

[1] On July 3, 2014, Ameren Missouri filed its *Application for Approval of Change Request*, and on the same date Staff filed *Staff's Change Request for Adjustment to Ameren Missouri's Report of 2013 Annual Energy Savings and Net Benefit from MEEIA Programs*.
[2] January 2, 2013 through December 31, 2013.

Auditor and the change requests of Ameren Missouri and Staff, and c) a just and reasonable compromise between the competing change requests of Ameren Missouri and Staff and between the respective EM&V final reports of the Evaluators and the Auditor;

2. Can result in agreement - by April 1, 2015 - on the components of net-to-gross ("NTG") ratios[3] for EM&V of Ameren Missouri's DSM programs, with agreement on how the components of NTG ratios should be calculated for PY2014 and PY2015 in order to avoid the repeated need for change requests and hearings following the filing of EM&V final reports for PY2014 and PY2015;
3. Can result in agreement reached by the stakeholders on proposed revisions to EM&V aspects of the MEEIA rules[4] such that any proposed revisions to the MEEIA rules are provided to the Commission no later than July 1, 2015; and
4. Is desired as soon as possible so that Ameren Missouri, Staff and other parties can efficiently and effectively achieve the objectives of items 2 and 3 above, thus avoiding the need for repeated costly and time consuming change requests hearings in future years starting with PY2014.

EM&V process for PY2013, PY2014 and PY2015

Q. What are the requirements and process for performing EM&V for PY2013?

A. Commission Rules 4 CSR 240-3.163(7), 4 CSR 240-20.093(7) and 4 CSR 240-22.070(8) include requirements for the performance and auditing of MEEIA[5]

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[3] Net-to-gross ratios are important in determining the actual energy savings attributable to a particular program, as distinct from energy efficiency occurring naturally (in the absence of a program). The net-to-gross ratio equals the net program load impact divided by the gross program load impact. This factor is applied to gross program savings to determine the program's net impact.
[4] 4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093 and 4 CSR 240-20.094.
[5] Missouri Energy Efficiency Act of 2009, Section 393.1075, RSMo, Supp 2012.

demand-side programs' EM&V. Further, paragraph 11 of the *Unanimous Stipulation and Agreement Resolving Ameren Missouri's MEEIA Filing*[6] ("2012 Stipulation") includes additional activities and schedules for drafting, reviewing, discussing, finalizing and requesting changes to the EM&V final reports. Copies of Commission Rules 4 CSR 240-3.163(7), 4 CSR 240-20.093(7) and 4 CSR 240-22.070(8) and paragraphs 11 EM&V and 14 Stakeholder Meetings of the 2012 Stipulation are included in Schedule JAR-2. Schedule JAR-3 is a summary of the original EM&V schedule for the PY2013 EM&V process[7] described in paragraph 11 of the 2012 Stipulation.

Q. Who are Ameren Missouri's independent EM&V contractors who performed full EM&V for PY2013?

A. In compliance with 4 CSR 240-20.093(7), Ameren Missouri hired two "independent contractors to perform and report EM&V of each commission-approved demand-side program in accordance with 4 CSR 240-20.094 Demand-Side Programs": 1) Cadmus to perform EM&V for its residential programs, and 2) ADM to perform EM&V for its commercial and industrial ("C&I") programs.

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[6] Filed in this case on July 5, 2012 and approved by the Commission on August 1, 2012.

[7] On March 18 - 19, 2013, Ameren Missouri held a stakeholder meeting at Ameren Corporation's headquarters to review all of Ameren Missouri's draft EM&V plans. The meeting was attended by over 40 persons each day including Ameren Missouri stakeholders, Evaluators and the Auditor team. On April 15, 2013, Ameren Missouri held a meeting at its St. Charles Operations Center to discuss the written comments received from stakeholders and the Auditor concerning all draft EM&V plans.

In compliance with the schedule contained in Schedule JAR-3, Cadmus and ADM draft EM&V reports were circulated to stakeholders and the Auditor on February 14, 2014. Stakeholder and Auditor comments concerning the Cadmus and ADM draft EM&V reports were reviewed during stakeholder meetings on March 11 – 12, 2014. On April 15, 2014, a stakeholder conference call was held to review comments on the Cadmus and ADM draft EM&V reports and the draft Auditor Report.

On May 15, 2014, in compliance with the schedule in Schedule JAR-3, Ameren Missouri filed eight (8) EM&V Reports produced by Cadmus for its MEEIA residential programs and one (1) EM&V Report produced by ADM for its MEEIA commercial and industrial ("C&I") programs. On May 28, 2014, revisions were filed to all eight (8) of the Cadmus final EM&V Reports. On May 30, 2014, revisions were filed to the ADM final EM&V Report. On June 12, 2014, revisions were filed to all eight (8) of the Cadmus final EM&V Reports and to the ADM final EM&V Report. All revisions were made following Staff's requests to: 1) allocate all indirect program plan costs to individual programs prior to calculation of program-level cost effectiveness tests and net benefits, and 2) use program level costs and benefits from the utility cost test when calculating each program's net benefits.

Q. Who is the Commission's independent EM&V auditor ("Auditor") for PY2013?

A. In accordance with 4 CSR 240-20.093(7), the Commission hired the Auditor, Johnson Consulting Group, LLC, as its "…independent contractor to audit and report on the work of each utility's independent EM&V contractor."

Q. In your opinion are Cadmus, ADM and Auditor experienced and qualified EM&V contractors?

A. Yes. I have worked with Cadmus and ADM through Ameren Missouri's DSM stakeholder process since mid-2009. I was involved in the process to hire the Auditor and I have worked with the Auditor since January 2013 and I am familiar with the capabilities of the Auditor and the Auditor team.[8]

Determination of the performance incentive award amount

Q. Please describe the Commission-approved demand-side programs investment mechanism ("DSIM") for Ameren Missouri's PY2013 – PY2015 DSM programs.

A. The DSIM is described in the Company's Rider EEIC which is included as Schedule JAR-4. Rider EEIC provides for recovery of three separate components of the DSIM: program costs, throughput disincentive and performance incentive award.

Q. Which of the three separate components of the DSIM are impacted by EM&V?

A. Only the performance incentive award is impacted by EM&V.

Q. How is the performance incentive award amount determined?

A. Original Sheet No. 90.1 of Rider EEIC (see Schedule JAR-4) specifies that the performance incentive award amount will be a two-year annuity (using 6.95% as a discount

[8] The roles and responsibilities for the members of the Auditor's team is contained in Table E-1 of the Auditor's EM&V final report filed on August 27, 2014, in File No. EO-2012-0142.

rate and not discounting the first period) of a percentage of the total net benefits[9] from EM&V for PY2013, PY2014 and PY2015. The percentage of energy savings target is equal to the sum of the annual energy savings from the EM&V final reports for PY2013, PY2014 and PY2015 divided by the Commission-approved 3-year energy savings target of 793,100 MWh[10] expressed as a percentage. The 3-year performance incentive award amount is determined by interpolating values on Table 1 and multiplying the interpolated percentage of EM&V net benefits by the sum of the net benefits from the EM&V final reports for PY2013,

Table 1[11]

Percent of 3-Year MWh Target	Percent of 3-Year EM&V Net Benefits
<70	0.00%
70	4.60%
80	4.78%
90	4.92%
100	5.03%
110	5.49%
120	5.87%
130	6.19%
>130	6.19%

<u>EM&V final reports of Evaluators and Auditor</u>

Q. When were and where are the PY2013 EM&V final reports of Cadmus and ADM filed?

[9] 4 CSR 240-20.093(1)(C): 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, incentives, EM&V, utility market potential studies, and technical resource manual on an annual basis. 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 costs include avoided utility costs 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

[10] The cumulative 793,100 MWh net (net-to-gross ratios are equal to 1.0) energy savings is based upon the 1,434,353 MWh annual energy sales for the opt-out customers specified in Table 2.11 of the MEEIA Report.

[11] Table 1 is from Ameren Missouri's Rider EERC and is also on Schedule JAR-4-2

A. The Cadmus and ADM PY2013 EM&V final reports were filed in the Commission's electronic information filing system ("EFIS") on June 12, 2014 in File No. EO-2012-0142.

Q. When was and where is the final report of the Auditor filed?

A. The Auditor's final report was filed in EFIS on August 27, 2014 in File No. EO-2012-0142.

Q. Were the "final" reports of Cadmus, ADM and the Auditor filed more than once to make corrections to the reports?

A. Yes.

Q. Please explain why the final reports were corrected.

A. The Cadmus and ADM reports were filed on May 15, 2014, May 30, 2014 and June 12, 2014. The second and third filings were made to allocate indirect portfolio costs to each DSM program prior to calculating each program's cost effectiveness ratios[12] and to correctly calculate net benefits using costs from the utility cost test at the DSM program level. The Auditor reports were filed on July 2, 2014, August 25, 2014 and August 27, 2014. The second and third filings were made to correct values taken in error from the Cadmus and ADM reports and to include – for the first time - the Auditor's recommendation for net benefits at the DSM program level and for the DSM portfolio.

Q. Does the fact that the EM&V final reports of Cadmus, ADM and the Auditor were corrected multiple times cause you concern for the capabilities of these EM&V experts?

A. No. This is the first time EM&V reports have been prepared to comply with the 2012 Stipulation and with the Commission's rules regarding EM&V. There is naturally a

[12] The cost-effectiveness ratios are the utility cost test (UTC), total resource cost (TRC) test, ratepayer impact measure (RIM) test, and participant cost test (PTC) which are defined further on Table 6 of the Cadmus' Ameren Missouri Residential Portfolio Evaluation Summary Program Year 2013.

learning curve involved with any new process, and what has occurred thus far regarding EM&V for PY2013 is not unusual or unexpected.

Change requests filed by Ameren Missouri and Staff

Q. When were the change requests of Ameren Missouri and Staff filed?

A. The change requests of Ameren Missouri and Staff were filed in EFIS on July 3, 2014 in File No EO-2012-0142.

Q. Please describe the change request of Ameren Missouri.

A. Ameren Missouri witness Rick Voytas filed direct testimony on July 3, 2014, recommending that the Commission approve the EM&V final reports of Cadmus and ADM but with reduced adjustments for free riders for each of the DSM programs. In his testimony, Mr. Voytas argued that the adjustments for free riders should be reduced to correct for a bias in the survey process to gather data to estimate free riders.

Q. Please describe the change request of Staff.

A. Staff filed its change request in the form of a verified memorandum to the case file in File No. EO-2012-0142 on July 3, 2014, recommending that the Commission accept the Auditor's final report but with the net-to-gross ratio for the LightSavers[13] program excluding any impact due to market effects,[14] and recommending the Commission order an adjustment to any performance incentive award to exclude any recovery by Ameren Missouri for market effects, not only for PY2013, but also for PY2014 and PY2015. While Staff acknowledges that there are market effects impacts from Ameren Missouri's DSM program, Staff was concerned that the methodologies of both Cadmus and Auditor to quantify their

[13] LightSavers program is also referred to as the Lighting program.
[14] On page 4 of its EM&V LightSavers final report, Cadmus defines market effects as structural market or behavior changes caused by program activity that result in additional purchases of non-discounted bulbs.

respective market effects adjustments for the Lighting program may not be reliable,[15] because the methodologies have not yet been recognized as industry best practices.

Q. Did any party other than Ameren Missouri and Staff file a change request?

A. No.

PY2013 annual energy savings and net benefits as a result of EM&V final reports and change requests

Q. How do the PY2013 EM&V final reports of Cadmus, ADM and the Auditor and the change requests of Ameren Missouri and Staff effect the PY2013 annual energy savings and net benefits?

A. The different adjustments to the net-to-gross ratio for the various DSM programs are contained in the Cadmus, ADM and Auditor final reports and in the change requests of Ameren Missouri and Staff and are summarized in Table 2. The adjustments to the net-to-gross ratio (NTG) are free riders, participant spillover, nonparticipant spillover and market effects. NTG = 1.00 – free riders adjustment + participant spillover adjustment + nonparticipant spillover adjustment + market effects adjustment. Following is illustrative of the definitions for the various adjustments for the LightSavers program:[16]

> For the LightSavers upstream markdown and coupon distribution channels, the Cadmus team estimated an overall savings-weighted NTG of 125%, based on the following:
>
> - Free ridership: the percentage of products that would have been purchased without the retailer discounts or coupons.
> - Nonparticipant Lighting Spillover or "like" Spillover: the additional non-discounted light bulbs purchased as a result of the program.

[15] Section 393.1075.3. states: It shall be the policy of the state to value demand-side investment 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*. [Emphasis added]

[16] From page 3 of the Cadmus EM&V final report for the LightSavers program.

- Nonparticipant Non-lighting Spillover or "unlike Spillover": the non-lighting energy efficiency actions induced by the program.
- Market Effects: structural market or behavior changes caused by program activity that result in additional purchases of non-discounted bulbs.

Table 2
Adjustments to Net Energy Savings Recommended by Evaluators' and Auditor's Final Reports and by Change Requests of Ameren Missouri and Staff

	Free Rider		Participant Spillover		Nonparticipant Spillover		Market Effects		
Program	**Evaluator**	**Ameren**	**Evaluator**	**Auditor**	**Evaluator**	**Auditor**	**Evaluator**	**Auditor**	**Staff**
Appliance	38.6%	22.0%	0.3%	0.3%	12.6%	3.0%	0.0%	0.0%	0.0%
Community	4.2%	2.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%
Construction	72.1%	72.0%	0.4%	0.4%	0.0%	3.0%	0.0%	0.0%	0.0%
Cool	25.2%	14.0%	1.4%	1.4%	19.2%	3.0%	0.0%	0.0%	0.0%
Lighting	21.0%	20.0%	25.0%	7.5%	0.8%	3.0%	18.0%	5.4%	0.0%
Performance	16.5%	7.0%	5.1%	5.1%	1.7%	3.0%	0.0%	0.0%	0.0%
Rebate	14.7%	8.0%	5.8%	5.8%	1.7%	3.0%	0.0%	0.0%	0.0%
Custom	7.0%	6.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Standard	5.0%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Construction	6.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retro-Comm.	33.0%	27.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Adjustments which were contested as a result of the competing change requests

Q. Has Staff quantified the PY2013 annual energy savings and the net benefits for each DSM program and for the DSM portfolio recommended by the Cadmus, ADM, Auditor, Ameren Missouri and Staff?

A. Yes. Table 3 contains the results of Staff's quantification of PY2013 annual energy savings and net benefits for 24 possible scenarios resulting from the 24 different combinations of two different sets of adjustments for free riders (Evaluators and Ameren Missouri), two different adjustments for Lighting program participant spillover (Cadmus and Auditor), two different sets of adjustments for nonparticipant spillover for each residential DSM program (Cadmus and Auditor), and three different adjustments for Lighting program market effects (Cadmus, Auditor and Staff).

Table 3

Scenarios Sorted by EM&V Net Benefits

Scenario	Free Rider	PSO	NPSO	Market Effects	EM&V NTG *a*	EM&V MWh *b*	EM&V Net Benefits *c*
7	Voytas	Evaluator	Evaluator	Evaluator	116.1%	397,499	$ 141,187,752
10	Voytas	Evaluator	Auditor	Evaluator	116.9%	398,063	$ 138,486,221
1	Evaluator	Evaluator	Evaluator	Evaluator	114.5%	390,039	$ 136,425,329
4	Evaluator	Evaluator	Auditor	Evaluator	115.4%	390,602	$ 133,723,798
8	Voytas	Evaluator	Evaluator	Auditor	106.9%	368,906	$ 132,626,554
9	Voytas	Evaluator	Auditor	Auditor	107.4%	369,469	$ 129,925,023
19	Voytas	Auditor	Evaluator	Evaluator	103.4%	357,786	$ 129,297,199
11	Voytas	Evaluator	Evaluator	None	103.1%	356,652	$ 128,957,469
2	Evaluator	Evaluator	Evaluator	Auditor	104.9%	361,446	$ 127,864,130
22	Voytas	Auditor	Auditor	Evaluator	103.9%	358,349	$ 126,595,668
12	Voytas	Evaluator	Auditor	None	103.5%	357,215	$ 126,255,938
3	Evaluator	Evaluator	Auditor	Auditor	105.8%	362,009	$ 125,162,600
13	Evaluator	Auditor	Evaluator	Evaluator	101.4%	350,326	$ 124,534,776
5	Evaluator	Evaluator	Evaluator	None	101.1%	349,191	$ 124,195,045
16	Evaluator	Auditor	Auditor	Evaluator	102.2%	350,889	$ 121,833,245
6	Evaluator	Evaluator	Auditor	None	101.8%	349,755	$ 121,493,515
20	Voytas	Auditor	Evaluator	Auditor	95.0%	329,193	$ 120,736,001
21	Voytas	Auditor	Auditor	Auditor	95.1%	329,756	$ 118,034,470
23	Voytas	Auditor	Evaluator	None	91.7%	316,938	$ 117,066,916
14	Evaluator	Auditor	Evaluator	Auditor	92.8%	321,733	$ 115,973,577
24	Voytas	Auditor	Auditor	None	91.6%	317,502	$ 114,365,385
15	Evaluator	Auditor	Auditor	Auditor	93.3%	322,296	$ 113,272,046
17	Evaluator	Auditor	Evaluator	None	89.4%	309,478	$ 112,304,492
18	Evaluator	Auditor	Auditor	None	89.7%	310,041	$ 109,602,961

Q. Which of the 24 scenarios represents the recommendation of the Evaluators (Cadmus and ADM), the Auditor, Ameren Missouri and Staff?

A. Scenario 7 was initially recommended by Ameren Missouri in its Change Request; Scenario 1 is recommended by the Evaluators; Scenario 15 is recommended by the Auditor; and Scenario 18 was initially recommended by Staff in its Change Request.

<u>Joint Position</u>

Q. Please state the joint position of Staff and Ameren Missouri.

A. The joint position is the same as paragraphs 8 and 9 of the Stipulation, specifically:

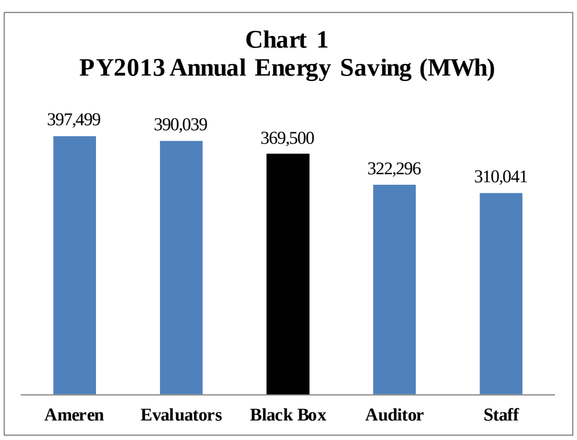
> 8. For purpose of determining the Ameren Missouri 2013 – 2015 performance incentive award amount in 2016, the PY2013 EM&V annual

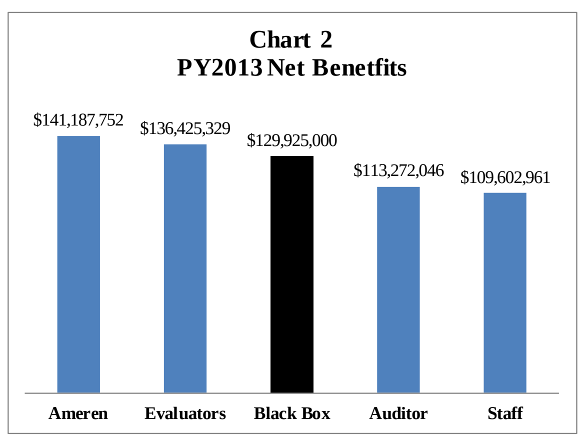
> energy savings is 369,500 MWh and the PY2013 net benefits amount is $129,925,000.
>
> 9. The parties will work together to address revisions to the MEEIA rules such that any proposed revisions to the MEEIA rules are provided to the Missouri Public Service Commission no later than July 1, 2015. Further, the parties agree that the components of net-to-gross ("NTG") ratios for purposes of calculating EM&V results, including for the performance incentive component of Ameren Missouri's MEEIA programs, are free ridership, participant spillover, nonparticipant spillover and market effects, and also agree that the formula for determining NTG ratios is as follows: NTG =1.0 – Free Ridership + Participant Spillover + Nonparticipant Spillover + Market Effects. The agreement in the preceding sentence does not bind any party to how any component of NTG ratios should be calculated, but the parties agree to make a best effort to determine how such components should be calculated through EM&V for the EM&V to be conducted for PY2014 and PY2015, and also agree to make a best effort to address the calculation of the NTG ratio components as part of the process of developing proposed revised MEEIA rules. In addition, the parties will make a best effort to agree by April 1, 2015 on how the EM&V contractors and the Commission's Auditor should participate in any future Change Request dockets.

<u>Black box settlement of annual energy savings and net benefits for PY2013</u>

Q. How do the Black Box PY2013 annual energy savings of 369,500 MWh and net benefits of $129,925,000 compare to the PY2013 annual energy savings and net benefits recommended by the Evaluators, Auditor, Ameren Missouri and Staff?

A. Chart 1 contains the comparison for PY2013 annual energy savings and Chart 2 is the comparison for PY2013 net benefits.





Q. What conclusions can be drawn from Chart 1 and Chart 2?

A. The Black Box settlement of 369,500 MWh for PY2013 annual energy savings and $129,925,000 for PY2013 net benefits falls squarely within the range of reasonable outcomes as determined by the Evaluators and the Auditor and as initially proposed by Ameren Missouri and Staff in their respective change requests. The PY2013 settled amounts for annual energy savings and net benefits are just and reasonable because they represent a fair and reasonable compromise of the filed change requests of Ameren Missouri and Staff which are amply supported by the range of values determined in the EM&V final reports of the Evaluators and the Auditor.

Best efforts to agree by April 1, 2015 on how the components of the net-to-gross ratio should be calculated through EM&V for PY2014 and for PY2015

Q. A key feature of the joint position found in paragraph 9 of the Stipulation requires Ameren Missouri and Staff to use their best efforts to agree by April 1, 2015, on how the components of the net-to-gross ratio should be calculated through EM&V for PY2014 and for PY2015. Please explain the importance and significance of this requirement.

A. Ameren Missouri and Staff recognize that the issues in this case are numerous (as reflected in Table 2) and very difficult to comprehend as reflected in the modeling of spillover and market effects by Cadmus and the Auditor, respectively. Reaching agreement on a reasonable compromise for the PY2013 annual energy savings and net benefits does not provide a solution to these same issues for EM&V in PY2014 and PY2015. Staff is sensitive to the fact that using a hearing process to resolve competing change requests is an inefficient use of party and Commission resources. Resolving future change requests is time consuming and expensive and will also bring into the hearing process the Evaluators and the Auditor. It is not customary in the EM&V industry to bring evaluators and the auditors into an adversarial role by requiring them to defend their work product in a hearing room. While a just and reasonable outcome may be possible through a time consuming and expensive hearing process, it is Staff's opinion that it will be more productive to engage Cadmus, ADM, Auditor, Ameren Missouri, Staff and other interested stakeholders in less formal, but more constructive meetings to discuss and agree, if possible, on how the components of the net-to-gross ratios should be calculated through EM&V for PY2014 and for PY2015. The process will also inform the MEEIA rulemaking review which must be completed by July 1, 2015.

Q. Has the Auditor's EM&V methodology and assessment of the adjustments for spillover and market effects for the Lighting program been discussed with Cadmus and other stakeholders as an alternative EM&V methodology to that of Cadmus contained in Appendix I and Appendix J of the Cadmus final report filed on June 12, 2014?

A. No.

Q. Why not?

A. The Auditor's EM&V methodology for and assessment of participant spillover and market effects for the Lighting program was first filed in EFIS as Appendix A to the Auditor's EM&V report on July 2, 2013. The last Ameren Missouri EM&V stakeholder meeting was held on April 15, 2014 when the Auditor's ***draft*** report was discussed and commented on by Cadmus, Ameren Missouri and interested stakeholders.

Q. Why was the Auditor's Appendix A methodology not available for discussion and comment during the April 15, 2014 EM&V stakeholder meeting?

A. The Auditor developed its Appendix A methodology following the EM&V stakeholders' discussion on April 15, 2014, and did so to specifically address some of the concerns expressed by Staff regarding the Cadmus methodology to estimate market effects and spillover in Appendix J of the Cadmus PY2013 EM&V final report.

Q. Why is it important that Cadmus and stakeholders have the opportunity to discuss and consider the relative merits of the Auditor's Appendix A methodology to estimate market effects and participant spillover?

A. There are two reasons. First, as Table 2 and Table 3 above illustrate, the adjustments for spillover and market effects for the Lighting program are very different and have a significant impact on both PY2013 annual energy savings[17] and PY2013 net benefits.[18] Second, the Auditor's Appendix A methodology – which represents what is understood by Staff to be a new methodology and is, therefore, a methodology which is not recognized as an EM&V industry best practice – does seem to address many of the concerns expressed by Staff regarding the Cadmus methodology to estimate market effects and spillover in Appendix J of the Cadmus EM&V final report.

Q. Does Staff have concerns that the change requests hearing process may not be able to develop a record necessary for the Commission to rule on all of the components to net-to-gross for each program, but especially for the Lighting program?

A. Yes.

Q. Why?

A. It is very difficult to understand the methodologies and the relative merits of each methodology contained in the Cadmus LightSavers Appendix J and in the Auditor's Appendix A, because, unfortunately, both methodologies are to some extent proprietary and not transparent to anyone other than the author of each methodology.

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[17] The impact of the Auditor's recommendations for the participant spillover and market effects adjustments for the PY2013 LightSavers program is a reduction of 78,306 MWh of annual energy savings. This amount is derived by subtracting the EM&V MWh in column b of Table 3 for Scenario 14 (321,733 MWh) from the EM&V MWh in column b of Table 3 for Scenario 1 (390,039 MWh).

[18] The impact of the Auditor's recommendations for the participant spillover and market effects adjustments for the PY2013 LightSavers program is a reduction of $20,451,752 of net benefits. This amount is derived by subtracting the EM&V Net Benefits in column c of Table 3 for Scenario 14 ($115,973,577) from the EM&V Net Benefits in column c of Table 3 for Scenario 1 ($136,425,329).

Q. So, what is Staff's recommendation for this less than satisfactory situation?

A. The joint position terms contained in paragraphs 8 and 9 of the Stipulation are specifically designed to remedy this situation. First, in paragraph 8, Ameren Missouri and the Staff reached an agreement as to a just and reasonable compromise concerning PY2013 annual energy savings and PY2013 net benefits as demonstrated in Tables 2 and 3 above. Second, paragraph 9 establishes a stakeholder process that includes Cadmus, ADM, Auditor, Ameren Missouri, Staff and other interested stakeholders and requires the stakeholders to apply their best efforts to determine how the components to net-to-gross ratios for each DSM program should be calculated through EM&V for the EM&V that will be conducted for PY2014 and PY2015 – making the process more transparent. Paragraph 9 also requires that the parties will make a best effort to agree by April 1, 2015 on how the Evaluators and the Commission's Auditor should participate in any future change request dockets. Currently there is no Commission rule or Commission order that addresses or defines the role of the Evaluators and Auditor in the contested case hearing process in the event of any future change requests.

Best efforts to provide Commission with proposed revised MEEIA rules by July 1, 2015

Q. In the joint position, as described in paragraph 9 of the Stipulation, Ameren Missouri and Staff agree to use their best efforts to provide the Commission with proposed revised MEEIA rules by July 1, 2015. Please explain the significance and importance of this term.

A. Even if the best efforts of all stakeholders are successful in determining how the components to net-to-gross ratios for each DSM program should be calculated through EM&V for the EM&V to be conducted for PY2014 and PY2015, such an agreement would address only Ameren Missouri PY2014 and PY2015. Such a success, if possible, would do little or nothing to address longer term concerns related to EM&V as it may impact other companies or future DSIMs, especially the performance incentive components of future DSIMs. The joint position terms (paragraph 9) requires that the parties work together to address revisions to the MEEIA rules such that any proposed revisions to the MEEIA rules are provided to the Missouri Public Service Commission no later than July 1, 2015. It also requires the parties to make their best effort to address the calculation of the NTG ratio components as part of the process of developing proposed revised MEEIA rules. This "collaborative" process represents the best way forward for the parties, and other interested stakeholders, to address the longer term concerns related to EM&V as it may impact all utilities, future DSIMs and in particular the performance incentive award components of future DSIMs.

<u>Discussion of why time is of the essence for the Commission to order the terms contained in the joint position</u>

Q. Is it beneficial to Ameren Missouri's customers that the joint position be approved as soon as possible?

A. Yes.

Q. Why?

A. Staff and Ameren Missouri have entered into a Stipulation. On October 6, 2014, Missouri Department of Economic Development Division of Energy filed its *Response to Change Requests* which contains its support for Staff's and Ameren's stipulated position, as a just and reasonable compromise of their Change Requests. Only the Office of the Public Council ("OPC") is opposed to the Stipulation.

The expense of holding a hearing on the change requests will be ultimately borne by Ameren Missouri's customers. Such an expense is not necessary because the joint position (paragraph 8 of the Stipulation) includes agreement to a just and reasonable compromise concerning PY2013 annual energy savings and PY2013 net benefits. Further, paragraph 9 of the Stipulation can result in very meaningful improvements to the EM&V process in the short term (agreement by April 1, 2015, on how to perform calculation of net-to-gross adjustments for PY2014 and PY2015) and in the long term (proposed revised MEEIA rules to the Commission by July 1, 2015). Instead of spending the next 2 - 3 months in a contested hearing process which may result in the Commission "splitting the baby,"[19] Staff recommends the Commission direct the parties to begin working immediately on a constructive stakeholder process - to include Cadmus, ADM, Auditor, Ameren Missouri, Staff and other interested stakeholders – utilizing the best efforts of all involved to achieve the objectives of paragraph 9 of the Stipulation.

OPC's continued opposition to the joint position will make it impossible to achieve agreement by April 1, 2015 - through the best efforts of all involved - on how to perform calculation of net-to-gross adjustments for PY2014, because a Commission order concerning the change requests is not expected until late February or early March 2015. Should the Commission in this proceeding ultimately approve the joint position or otherwise decide on an outcome within the range of reasonableness (i.e. "splitting the baby" in some other way), the parties will likely be faced with the same change requests issues for PY2014. The 2012 Stipulation requires the first draft of the Evaluators' EM&V reports to be submitted on February 14, 2015. and the EM&V final reports are due on June 12, 2015.

[19] The Black Box PY2013 annual energy savings and PY2013 net benefits in Chart 1 and Chart 2, respectively, has essentially "split the baby" already.

Further, the litigation of change requests for PY2013 will delay the start of a process that Ameren Missouri, the Staff, and Division of Energy consider necessary to be able to provide proposed revised MEEIA rules to the Commission. Instead of working together collaboratively as proposed in the joint position, the parties will be engaged over the next 2 – 3 months litigating this proceeding instead of working cooperatively to make enhancements to the MEEIA rules.

<u>Conclusion</u>

Q. Please summarize the terms of the joint position that you recommend that the Commission order in this proceeding.

A. Based on the range of reasonable EM&V outcomes and the facts discussed above, I recommend that the Commission order the following:

> For purpose of determining the Ameren Missouri 2013 – 2015 performance incentive award amount in 2016, the PY2013 EM&V annual energy savings is 369,500 MWh and the PY2013 net benefits amount is $129,925,000.
>
> The parties will work together to address revisions to the MEEIA rules such that any proposed revisions to the MEEIA rules are provided to the Missouri Public Service Commission no later than July 1, 2015. Further, the parties agree that the components of net-to-gross ("NTG") ratios for purposes of calculating EM&V results, including for the performance incentive component of Ameren Missouri's MEEIA programs, are free ridership, participant spillover, nonparticipant spillover and market effects, and also agree that the formula for determining NTG ratios is as follows: NTG =1.0 – Free Ridership + Participant Spillover + Nonparticipant Spillover + Market Effects. The agreement in the preceding sentence does not bind any party to how any component of NTG ratios should be calculated, but the parties agree to make a best effort to determine how such components should be calculated through EM&V for the EM&V to be conducted for PY2014 and PY2015, and also agree to make a best effort to address the calculation of the NTG ratio components as part of the process of developing proposed revised MEEIA rules. In addition, the parties will make a best effort to agree by April 1, 2015 on how the EM&V contractors and the Commission's Auditor should participate in any future Change Request dockets.

Q. Does this conclude your testimony?

A. Yes, it does.

<u>Educational Background and Work Experience of John A. Rogers</u>

I have a Master of Business Administration degree from the University of San Diego and a Bachelor of Science degree in Engineering Science from the University of Notre Dame. My work experience includes 34 years in energy utility engineering, system operations, strategic planning, regulatory affairs, general management and management consulting. From 1974 to 1985, I was employed by San Diego Gas & Electric with responsibilities in gas engineering, gas system planning and gas operations. From 1985 to 2000, I was employed by Citizens Utilities primarily in leadership roles for gas operations in Arizona, Colorado and Louisiana. From 2000 to 2003, I was an executive consultant for Convergent Group (a division of Schlumberger) providing management consulting services to energy utilities. From 2004 to 2008, I was employed by Arkansas Western Gas and was responsible for strategic planning and resource planning. I have provided expert testimony before the California Public Utilities Commission, Arizona Corporation Commission, Arkansas Public Service Commission and Missouri Public Service Commission in general rate cases, applications for special projects, gas resource plan filings, electric resource plan filings, demand-side management programs and demand-side programs investment mechanism cases. I have been employed by the Missouri Public Service Commission since December 2008 and am responsible for Commission Staff's input to the regulatory process concerning electric utility resource planning, demand-side management programs, demand-side programs investment mechanisms, and fuel adjustment clauses.

John A. Rogers
Testimony, Reports and Rulemakings

BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION

File Number	Company	Issues
ER-2010-0036	Ameren Missouri	Fuel Adjustment Clause Demand-Side Programs (DSM) DSM Cost Recovery
EX-2010-0368 EW-2010-0254	Missouri Public Service Commission	Missouri Energy Efficiency Investment Act Rulemaking
EX-2010-0254 EW-2009-0412	Missouri Public Service Commission	Electric Utility Resource Planning Rulemaking
EO-2009-0237	KCP&L Greater Missouri Operations Company	Electric Utility Resource Planning Compliance Filing
ER-2009-0090	KCP&L Greater Missouri Operations Company	Fuel Adjustment Clause
ER-2010-0355	Kansas City Power and Light	DSM Cost Recovery Fuel Switching
ER-2010-0356	KCP&L Greater Missouri Operations Company	Fuel Adjustment Clause DSM Cost Recovery Fuel Switching
AO-2011-0035	All Electric Utilities	DSM Status Report
EO-2011-0066	Empire District Electric Company	Electric Utility Resource Planning Compliance Filing
ER-2011-0028	Ameren Missouri	DSM Cost Recovery
EO-2011-0271	Ameren Missouri	Electric Utility Resource Planning Compliance Filing
EO-2012-0009	KCP&L Greater Missouri Operations Company	Demand-side Programs Investment Mechanism
EO-2012-0142	Ameren Missouri	Demand-side Programs Investment Mechanism

John A. Rogers
Testimony, Reports and Rulemakings

BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION (cont.)

File Number	Company	Issues
ER-2012-0166	Ameren Missouri	DSM Cost Recovery Demand-side Programs Investment Mechanism
ER-2012-0174	Kansas City Power & Light	DSM Cost Recovery
ER-2012-0175	KCP&L Greater Missouri Operations Company	DSM Cost Recovery Demand-side Programs Investment Mechanism
ER-2012-0345	Empire District Electric Co.	DSM Cost Recovery
EO-2012-0323	Kansas City Power & Light	Electric Utility Resource Planning Compliance Filing
EO-2012-0324	KCP&L Greater Missouri Operations Company	Electric Utility Resource Planning Compliance Filing
EO-2013-0537	Kansas City Power & Light	Electric Utility Resource Planning Annual Update
EO-2013-0538	KCP&L Greater Missouri Operations Company	Electric Utility Resource Planning Annual Update
EO-2013-0547	Empire District Electric Co.	Electric Utility Resource Planning Compliance Filing
EX-2014-0205	Dogwood Energy, LLC	Rulemaking Petition
EO-2014-0095	Kansas City Power & Light	Demand-side Programs Investment Mechanism

John A. Rogers
Testimony, Reports and Rulemakings

BEFORE THE ARKANSAS PUBLIC SERVICE COMMISSION

Docket Number	Company	Issues
07-079-TF	Arkansas Western Gas	Arkansas Weatherization Program
07-078-TF	Arkansas Western Gas	Initial Energy Efficiency Programs
07-041-P	Arkansas Western Gas	Special Contract
06-028-R	Arkansas Western Gas	Resource Planning Guidelines for Electric Utilities
05-111-P	Arkansas Western Gas	Gas Conservation Home Weatherization Program

4 CSR 240-3.163(7) EM&V reports shall document, include analysis, and present any applicable recommendations for at least the following, and all models and spreadsheets shall be provided as executable versions in native format with all formulas intact:

(A) Process evaluation and recommendations, if any; and

(B) Impact evaluation—

1. The lifetime and annual gross and net demand savings and energy savings achieved under each program, and the techniques used to estimate annual demand savings and energy savings; and

2. A demonstration of the cost-effectiveness of the program, to include at a minimum the TRC of each program.

A. If a program is determined not to be cost-effective, the electric utility shall identify the causes why and present appropriate program modifications, if any, to make the program cost-effective. If there are no modifications to make the program cost-effective, the utility shall describe how it intends to end the program and how it intends to achieve the energy and demand savings initially estimated for the discontinued program.

B. The fact that a program proves not to be cost-effective is not by itself sufficient grounds for disallowing cost recovery.

4 CSR 240-20.093(7) Evaluation, Measurement, and Verification (EM&V) of the Process and Impact of Demand-Side Programs. Each electric utility shall hire an independent contractor to perform and report EM&V of each commission-approved demand-side program in accordance with 4 CSR 240-20.094 Demand-Side Programs. The commission shall hire an independent contractor to audit and report on the work of each utility's independent EM&V contractor.

(A) Each utility's EM&V budget shall not exceed five percent (5%) of the utility's total budget for all approved demand-side program costs.

(B) The cost of the commission's EM&V contractor shall—

1. Not be a part of the utility's budget for demand-side programs; and

2. Be included in the Missouri Public Service Commission Assessment for each utility.

(C) EM&V draft reports from the utility's contractor for each approved demand-side program shall be delivered simultaneously to the utility and to parties of the case in which the demand-side program was approved.

(D) EM&V final reports from the utility's contractor of each approved demand-side program shall—

1. Be completed by the EM&V contractor on a schedule approved by the commission at the time of demand-side program approval in accordance with 4 CSR 240-20.094(3); and

2. Be filed with the commission and delivered simultaneously to the utility and the parties of the case in which the demand-side program was approved.

(E) Electric utility's EM&V contractors shall use, if available, a commission-approved statewide technical resource manual when performing EM&V work.

4 CSR 240-22.070(8) Evaluation of Demand-Side Programs and Demand–Side Rates. The utility shall describe and document its evaluation plans for all demand-side programs and demand-side rates that are included in the preferred resource plan selected pursuant to 4 CSR 240-22.070(1). Evaluation plans required by this section are for planning purposes and are separate and distinct from the evaluation, measurement, and verification reports required by 4 CSR 240-3.163(7) and 4 CSR 240-20.093(7); nonetheless, the evaluation plan should, in addition to the requirements of this section, include the proposed evaluation schedule and the proposed approach to achieving the evaluation goals pursuant to 4 CSR 240-3.163(7) and 4 CSR 240-20.093(7). The evaluation plans for each program and rate shall be developed before the program or rate is implemented and shall be filed when the utility files for approval of demand-side programs or demand-side program plans with the tariff application for the program or rate as described in 4 CSR 240-20.094(3). The purpose of these evaluations shall be to develop the information necessary to evaluate the cost-effectiveness and improve the design of existing and future demand-side programs and demand-side rates, to improve the forecasts of customer energy consumption and responsiveness to demand-side programs and demand-side rates, and to gather data on the implementation costs and load impacts of demand-side programs and demand-side rates for use in future cost-effectiveness screening and integrated resource analysis.

(A) Process Evaluation. Each demand-side program and demand-side rate that is part of the utility's preferred resource plan shall be subjected to an ongoing evaluation process which addresses at least the following questions about program design.

1. What are the primary market imperfections that are common to the target market segment?

2. Is the target market segment appropriately defined, or should it be further subdivided or merged with other market segments?

3. Does the mix of end-use measures included in the program appropriately reflect the diversity of end-use energy service needs and existing end-use technologies within the target market segment?

4. Are the communication channels and delivery mechanisms appropriate for the target market segment?

5. What can be done to more effectively overcome the identified market imperfections and to increase the rate of customer acceptance and implementation of each end-use measure included in the program?

(B) Impact Evaluation. The utility shall develop methods of estimating the actual load impacts of each demand-side program and demand-side rate included in the utility's preferred resource plan to a reasonable degree of accuracy.

1. Impact evaluation methods. At a minimum, comparisons of one (1) or both of the following types shall be used to measure program and rate impacts in a manner that is based on sound statistical principles:

A. Comparisons of pre-adoption and post-adoption loads of program or demand-side rate participants, corrected for the effects of weather and other intertemporal differences; and

B. Comparisons between program and demand-side rate participants' loads and those of an appropriate control group over the same time period.

2. The utility shall develop load-impact measurement protocols that are designed to make the most cost-effective use of the following types of measurements, either individually or in combination:

A. Monthly billing data, hourly load data, load research data, end-use load metered data, building and equipment simulation models, and survey responses; or

B. Audit and survey data on appliance and equipment type, size and efficiency levels, household or business characteristics, or energy-related building characteristics.

(C) The utility shall develop protocols to collect data regarding demand-side program and demand-side rate market potential, participation rates, utility costs, participant costs, and total costs.

Paragraphs 11 and 14 of the Stipulation and Agreement in File No. EO-2012-0142 - Ameren Missouri MEEIA:

11. <u>EM&V</u>.

a. Approximately five percent of the three-year MEEIA Programs' costs budget will be spent for EM&V. Ameren Missouri will consider input from the stakeholder group, as described in paragraph 14, in its determination of how best to allocate and utilize the EM&V budget.

b. The following process will be used for EM&V reports:

i. 45 days after the end of each program year, the EM&V contractor will circulate a draft EM&V report to all stakeholders participating in the stakeholder group and the Commission's Independent EM&V Auditor ("Auditor"). This provision does not affect the requirement in the MEEIA rules for the EM&V contractors to provide copies of draft EM&V reports to stakeholders participating in the stakeholder group at the same time that draft reports are provided to Ameren Missouri.

ii. 60 days after circulation of the draft EM&V report, the Auditor and each stakeholder group participant will provide any comments and recommendations for report changes to the EM&V contractor and to all other stakeholder group participants and the Auditor. The Signatories recognize there is a benefit to providing comments as early as possible, as providing comments and recommendations earlier to the EM&V contractor will allow for more time for the incorporation of comments and changes into the Final Report.

iii. Prior to issuing the Final EM&V Report, the EM&V contractor will host at least one meeting with the Auditor and the stakeholder group participants to discuss the comments and recommendations for report changes. The EM&V contractor will determine what comments and/or changes are incorporated into the Final EM&V Report. 30 days after the deadline for comments and recommendations for report changes, the Final EM&V report will be provided to all stakeholder group participants by the EM&V contractor.

iv. Any stakeholder group participant who wants a change to the impact evaluation portion of a Final EM&V Report will have 21 days from the issuance of the Final EM&V Report to file a request with the Commission to make such a change ("Change Request"). Any stakeholder group participant filing a Change Request will set forth all reasons and provide support for the requested change in its initial Change Request filing. Responses to a Change Request may be filed by any stakeholder group participant and are due 21 days after the Change Request is filed. The response should set forth all reasons and provide support for opposing or agreeing with the Change Request. Within two business days after the deadline for filing a Change Request(if a Change Request is filed), the Signatories agree that the stakeholder group participants will hold a conference call/meeting to agree upon a proposed procedural schedule that results in any evidentiary hearing that is necessary to resolve the Change Request to be completed within 60 days of the filing of the Change Request, and which will recommend to the Commission that the Commission issue its Report and Order resolving the Change Request within 30 days after the conclusion of such a hearing. The Signatories anticipate a hearing with live testimony may be required to resolve a Change Request, but if a hearing is not required, they agree to cooperate in good faith to obtain Commission resolution of a Change Request as soon as possible. The Signatories will be parties to a Change Request resolution proceeding without the necessity of applying to intervene. The procedural schedule for such a Change Request proceeding will provide that data request objections must be lodged within 7 days and responses will be due within 10 days (notifications that additional time is required to respond will also be due within 7 days).

v. All Signatories will be bound by the impact evaluation portion of the Final EM&V Report, as it may be modified by the Commission's resolution of issues related to the impact evaluation portion of the Final EM&V Report.

14. Stakeholder Meetings. Ameren Missouri will continue meeting at least quarterly with its stakeholder group which shall consult with and advise Ameren Missouri on at least the topics the stakeholder group currently addresses, with Ameren Missouri providing at least information of the nature it currently provides. The stakeholder group will consist of the Signatories who choose to participate and their invitees. The stakeholder group will: (a) receive program updates from Ameren Missouri and EM&V updates and report presentations from Ameren Missouri's evaluators; (b) consult with and advise Ameren Missouri on the possible expansion of energy efficiency and demand response programs, and the design of such programs (possibly including co-delivery of programs with gas/water utilities); and (c) consult with and advise Ameren Missouri on issues related to EM&V (including Ameren Missouri's proposed EM&V Requests for Proposals, the scope of work for future EM&V projects, and issues relating to net-to-gross ratios that may be used in future MEEIA plans), and the TRM. Ameren Missouri will circulate a draft agenda for each stakeholder group meeting approximately one week prior to the scheduled meeting date. Any stakeholder group member can suggest items for the agenda for a stakeholder group meeting. A suggested agenda item will be included on the agenda for a stakeholder group meeting so long as a majority of the Signatories voting on inclusion of the suggested item believe it is appropriate to do so. This stakeholder group fulfills the requirements of 4 CSR 240-20.094(8)(A) regarding a utility specific collaborative. The Signatories agree to support efforts to develop a statewide TRM as set forth in 4 CSR 240- 20.094 (8)(B). If a statewide TRM is approved by the Commission prior to the end of Ameren Missouri's initial three-year MEEIA programs, the Signatories agree that Ameren Missouri's TRM will continue to be used for the Plan.

Stipulation and Agreement in File No. EO-2012-0142 - Ameren Missouri MEEIA

Stipulation Paragraph	Process Steps	Program Year Days	Cumulative Days	PY 2013 Date	
11.b.i.	Draft EM&V Report Circulated to Stakeholders	45	45	2/14/14	
11.b.ii.	Comments and Recommendations on Draft EM&V Report (1)	60	105	4/15/14	
11.b.iii.	Meeting to Discuss Comments Prior to Final Draft EM&V Report	0	105	4/15/14	
11.b.iii.	Final EM&V Report Issued (2)	30	135	6/12/14	Thurs.
11.b.iv.	File a Change Request	21	156	7/3/14	Thurs.
11.b.iv.	Conference Call on Procedural Schedule (working days)	2	158	7/8/14	Tues.
11.b.iv.	File Responses to Change Request	19	177	7/24/14	Thurs.
11.b.iv.	Evidentiary Hearing Completed Not Later Than	39	216	9/1/14	Mon.
11.b.iv.	Commission Report and Order Not Later Than	30	246	10/1/14	Wed.

(1) There was an additional meeting on March 11 and 12, 2014 to review initial comments.
(2) Staff's *Notice Regarding Change Request* filed on May 30, 2014 provided for additional time for final EM&V reports to be issued. Since the final EM&V reports were issued on June 12, 2014, there were 58 days (and not 30 days) between the April 15, 2014 meeting to discuss comments prior to final draft EM&V reports and the final EM&V reports being issued.

RIDER EEIC
ENERGY EFFICIENCY INVESTMENT CHARGE
For MEEIA CYCLE 1 Plan

APPLICABILITY

This Rider EEIC – Energy Efficiency Investment Charge(Rider EEIC) is applicable to all kilowatt-hours (kWh) of energy supplied to customers served by Ameren Missouri (Company) under Service Classification Nos. 1(M), 2(M), 3(M), 4(M), 11(M), and 12(M), excluding kWh of energy supplied to "opt-out" customers.

Charges passed through this Rider EEIC reflect the charges approved to be collected from the implementation of the MEEIA Cycle 1 Plan. Those charges include: 1) projected Program Costs, projected Ameren Missouri's TD-NSB Share and Performance Incentive Award (if any) for each Effective Period, 2) Reconciliations, with interest, to true-up for differences between the revenues billed under this Rider EEIC and total actual monthly amounts for: i) Program Costs incurred, ii) Ameren Missouri's TD-NSB Share incurred, and iii)amortization of any Performance Incentive Award ordered by the Missouri Public Service Commission (Commission) and 3)any Ordered Adjustments. Charges under this Rider EEIC shall continue after the anticipated December 31, 2015 end of MEEIA Cycle 1 Plan until such time as the charges described in items 1), 2) and 3) in the immediately preceding sentence have been billed. Charges arising from the MEEIA Cycle 1 Plan that are the subject of this Rider EEIC shall be reflected in one "Energy Efficiency Invest Chg" on customers' bills in combination with any charges arising from a rider that is applicable to post-MEEIA Cycle 1 Plan demand-side management programs approved under the Missouri Energy Efficiency Investment Act.

DEFINITIONS

As used in this Rider EEIC, the following definitions shall apply:

"Ameren Missouri's TD-NSB Share" means 26.34% of the TD-NSB multiplied by the Time-Value Adjustment Factor.

"Effective Period" (EP) means the twelve (12) billing months beginning with the February billing month and ending with the January billing month. Where an additional EEIC filing is made during a calendar year, the Effective Period for such a filing shall begin with the June or October billing month and end with the subsequent January billing month.

"Evaluation Measurement & Verification - Net Shared Benefits" (EM&V-NSB) means the 2013 present value of the lifetime avoided costs (i.e., avoided energy, capacity, transmission and distribution, and probable environmental compliance costs) for the MEEIA Cycle 1 Plan using the EM&V results described in paragraph 11 of the Stipulation less the 2013 present value of Program Costs. Paragraphs 5.b.ii and 6. c. of the Stipulation provide further description of the EM&V-NSB.

"MEEIA Cycle 1 Plan" has the same meaning as the defined term "Plan" provided for in paragraph 4 of the Stipulation, as it may be hereafter amended by Commission-approved amendments to the Stipulation.

"MWH Target" has the meaning provided for in paragraph 5.b.ii and Appendix B of the Stipulation.

"Program Costs" means program expenditures, including such items as program design, administration, delivery, end-use measures and incentive payments, evaluation, measurement and verification, market potential studies and work on the Technical Resource Manual (TRM).

RIDER EEIC
ENERGY EFFICIENCY INVESTMENT CHARGE (Cont'd.)
For MEEIA CYCLE 1 Plan

DEFINITIONS (Cont'd.)

"Performance Incentive Award" means the sum of a two-year annuity (using 6.95% as a discount rate and not discounting the first period) of a percentage of EM&V-NSB as described below and further described in paragraph 5.b.ii and Appendix B of the Stipulation:

Percent of MWH Target	Percent of EM&V-NSB*
<70	0.00%
70	4.60%
80	4.78%
90	4.92%
100	5.03%
110	5.49%
120	5.87%
130	6.19%
>130	6.19%

*Includes income taxes (i.e. results in revenue requirement without adding income taxes). The percentages are interpolated linearly between the performance levels.

"Stipulation" means the Stipulation and Agreement approved by the Commission in its order effective August 11, 2012, as amended by order effective December 29, 2012, in File No. EO-2012-0142, as it may be amended further by subsequent Commission orders.

"Throughput Disincentive - Net Shared Benefits" (TD-NSB)means the 2013 present value of the lifetime avoided costs (i.e., avoided energy, capacity, transmission and distribution, and probable environmental compliance costs) for the MEEIA Cycle 1 Plan using the deemed values in the TRM, less the 2013 present value of Program Costs as further described in paragraphs 5.b.i and 6. b. of the Stipulation.

"Time-Value Adjustment Factor" means the factor used each month to convert Ameren Missouri's TD-NSB Share from a present value into a nominal revenue requirement. The factor is [1.0695 ^ (Calendar Year – 2013)].

RIDER EEIC
ENERGY EFFICIENCY INVESTMENT CHARGE (Cont'd.)
For MEEIA CYCLE 1 Plan

ENERGY EFFICIENCY INVESTMENT RATE (EEIR) DETERMINATION

The EEIR during each applicable EP is a dollar per kWh rate for each Service Classification calculated as follows:

EEIR = [NPC + NTD + NPI + NOA]/PE

Where:

NPC = Net Program Costs for the applicable EP as defined below,

NPC = PPC + PCR

PPC = Projected Program Costs is an amount equal to Program Costs projected by the Company to be incurred during the applicable EP.

PCR = Program Costs Reconciliation is equal to the cumulative difference, if any, between the PPC revenues billed resulting from the application of the EEIR and the actual Program Costs incurred through the end of the previous EP (which will reflect projections through the end of the previous EP due to timing of adjustments). Such amounts shall include monthly interest charged at the Company's monthly short-term borrowing rate.

NTD = Net Throughput Disincentive for the applicable EP as defined below,

NTD = PTD + TDR

PTD = Projected Throughput Disincentive is 90% of Ameren Missouri's TD-NSB Share projected by the Company to be incurred during the applicable EP.

TDR = Throughput Disincentive Reconciliation is equal to the cumulative difference, if any, between the PTD revenues billed resulting from the application of the EEIR and 100% of Ameren Missouri's TD-NSB Share through the end of the previous EP as adjusted for the inputs described in paragraph 6.b. of the Stipulation, (which will reflect projections through the end of the previous EP due to timing of adjustments). Prior to the beginning of the February 2014 billing month, such amounts shall include monthly interest charged at the Company's monthly Allowance for Funds Used During Construction (AFUDC) rate. Beginning with the start of the February 2014 billing month, any cumulative difference and all subsequent amounts shall include monthly interest charged at the Company's monthly short-term borrowing rate.

RIDER EEIC
ENERGY EFFICIENCY INVESTMENT CHARGE (Cont'd.)
For MEEIA CYCLE 1 Plan

EEIR DETERMINATION (Cont'd.)

NPI = Net Performance Incentive for the applicable EP as defined below,

NPI = PI + PIR

PI = Performance Incentive is equal to the Performance Incentive Award monthly amortization multiplied by the number of billing months in the applicable EP.

The monthly amortization shall be determined by dividing the Performance Incentive Award by the number of available billing months between the first billing month of the first EEIR filing after the determination of the Performance Incentive Award and 24 calendar months following the end of the annual period in which the Performance Incentive Award is determined.

The number of applicable billing months in the EP shall be the number of applicable billing months less the number of months including Performance Incentive Award amortization from previous EPs.

PIR = Performance Incentive Reconciliation is equal to the cumulative difference, if any, between the PI revenues billed resulting from the application of the EEIR and the monthly amortization of the Performance Incentive Award through the end of the previous EP (which will reflect projections through the end of the previous EP due to timing of adjustments). Such amounts shall include monthly interest charged at the Company's monthly short-term borrowing rate.

NOA = Net Ordered Adjustment for the applicable EP as defined below,

NOA = OA + OAR

OA = Ordered Adjustment is the amount of any adjustment to the EEIC ordered by the Commission as a result of prudence reviews and/or corrections under this Rider EEIC. Such amounts shall include monthly interest at the Company's monthly short-term borrowing rate.

OAR = Ordered Adjustment Reconciliation is equal to the cumulative difference, if any, between the OA revenues billed resulting from the application of the EEIR and the actual OA ordered by the Commission through the end of the previous EP (which will reflect projections through the end of the previous EP due to timing of adjustments). Such amounts shall include monthly interest charged at the Company's monthly short-term borrowing rate.

RIDER EEIC
ENERGY EFFICIENCY INVESTMENT CHARGE (Cont'd.)
For MEEIA CYCLE 1 Plan

EEIR DETERMINATION (Cont'd.)

PE = Projected Energy, in kWh, forecasted to be delivered to the customers to which the Rider EEIC applies during the applicable EP.

The EEIR components and Total EEIR applicable to the individual Service Classifications shall be rounded to the nearest $0.000001.

Allocations of charges for each Service Classification for the MEEIA Cycle 1 Plan will be made in accordance with the Stipulation.

This Rider EEIC shall not be applicable to customers that have satisfied the opt-out provisions contained in Section 393.1075.7, RSMo.

FILING

The Company shall make an EEIC filing each calendar year to be effective for the subsequent calendar year's February billing month. The Company is allowed or may be ordered by the Commission to make one other EEIC filing in each calendar year with such subsequent filing to be effective beginning with either the June or October billing month. Rider EEIC filings shall be made at least sixty (60) days prior to their effective dates.

PRUDENCE REVIEWS

A prudence review shall be conducted no less frequently than at twenty-four (24) month intervals in accordance with 4 CSR 240-20.093(10). Any costs which are determined by the Commission to have been imprudently incurred or incurred in violation of the terms of this Rider EEIC shall be addressed through an adjustment in the next EEIR determination and reflected in factor OA above.

RIDER EEIC
ENERGY EFFICIENCY INVESTMENT CHARGE (Cont'd.)
For MEEIA CYCLE 1 Plan
(Applicable To Determination of EEIR for the Billing Months of February 2014 through January 2015)

EEIR Components and Total EEIR

Service Class	**NPC/PE ($/kWh)**	**NTD/PE ($/kWh)**	**NPI/PE ($/kWh)**	**NOA/PE ($/kWh)**	**Total EEIR ($/kWh)**
1(M)-Residential Service	$0.001447	$0.002025	$0.000000	$0.000000	**$0.003472**
2(M)-Small General Service	$0.000920	$0.001035	$0.000000	$0.000000	**$0.001955**
3(M)-Large General Service	$0.000933	$0.001439	$0.000000	$0.000000	**$0.002372**
4(M)-Small Primary Service	$0.000936	$0.001087	$0.000000	$0.000000	**$0.002023**
11(M)-Large Primary Service	$0.000809	$0.000886	$0.000000	$0.000000	**$0.001695**
12(M)-Large Transmission Service	$0.000000	$0.000000	$0.000000	$0.000000	**$0.000000**