

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

MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

CORRECTED CLEAN 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**

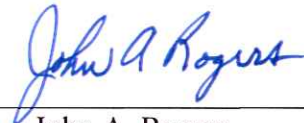
In the Matter of Union Electric Company)
d/b/a Ameren Missouri's Filing to)
Implement Regulatory Changes)
Furtherance of Energy Efficiency as)
Allowed by MEEIA)

Case No. EO-2012-0142

AFFIDAVIT OF JOHN A. ROGERS

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

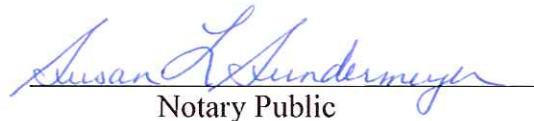
John A. Rogers, of lawful age, on his oath states: that he has participated in the preparation of the following Corrected Clean Direct Testimony in question and answer form, consisting of 20 pages of Corrected Clean Direct Testimony to be presented in the above case, that the answers in the following Corrected Clean 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

Subscribed and sworn to before me this 23rd day of January, 2015.

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

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FILE NO. EO-2012-0142

13 Q. Please state your name and business address.

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

16 Q. What is your present position at the Missouri Public Service Commission
17 (“Commission”)?

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

20 Q. Please state your educational background and experience.

21 A. These are contained in Schedule JAR-1.

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

23 A. The purpose of my testimony is to provide a record of competent and
24 substantial evidence to support Commission approval of the terms of the joint settlement
25 position (hereinafter the “joint position”) contained in the *Non-unanimous Stipulation and*
26 *Agreement Settling the Program Year 2013 Change Requests* (“Stipulation”) filed on
27 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

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1 competing change requests¹ filed by Ameren Missouri and Staff related to the evaluation,
2 measurement and verification (“EM&V”) of Ameren Missouri’s eleven (11) demand-side
3 management (“DSM”) programs for program year 2013² (“PY2013”).

4 My testimony will provide background information and discussion concerning:

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

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

- 19 1. Provide for a black box settlement of the annual energy savings and net benefits
20 for PY2013 which is: a) based upon competent and substantial evidence, b) within
21 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.

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

5 2. Can result in agreement - by April 1, 2015 - on the components of net-to-gross
6 (“NTG”) ratios³ for EM&V of Ameren Missouri’s DSM programs, with
7 agreement on how the components of NTG ratios should be calculated for
8 PY2014 and PY2015 in order to avoid the repeated need for change requests and
9 hearings following the filing of EM&V final reports for PY2014 and PY2015;

10 3. Can result in agreement reached by the stakeholders on proposed revisions to
11 EM&V aspects of the MEEIA rules⁴ such that any proposed revisions to the
12 MEEIA rules are provided to the Commission no later than July 1, 2015; and

13 4. Is desired as soon as possible so that Ameren Missouri, Staff and other parties can
14 efficiently and effectively achieve the objectives of items 2 and 3 above, thus
15 avoiding the need for repeated costly and time consuming change requests
16 hearings in future years starting with PY2014.

17 **EM&V process for PY2013, PY2014 and PY2015**

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

19 A. Commission Rules 4 CSR 240-3.163(7), 4 CSR 240-20.093(7) and
20 4 CSR 240-22.070(8) include requirements for the performance and auditing of MEEIA⁵

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.

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1 demand-side programs’ EM&V. Further, paragraph 11 of the *Unanimous Stipulation and*
2 *Agreement Resolving Ameren Missouri’s MEEIA Filing*⁶ (“2012 Stipulation”) includes
3 additional activities and schedules for drafting, reviewing, discussing, finalizing and
4 requesting changes to the EM&V final reports. Copies of Commission Rules
5 4 CSR 240-3.163(7), 4 CSR 240-20.093(7) and 4 CSR 240-22.070(8) and paragraphs 11
6 EM&V and 14 Stakeholder Meetings of the 2012 Stipulation are included in Schedule JAR-2.
7 Schedule JAR-3 is a summary of the original EM&V schedule for the PY2013 EM&V
8 process⁷ described in paragraph 11 of the 2012 Stipulation.

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

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

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.

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

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

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

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

12 **Determination of the performance incentive award amount**

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

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

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

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

20 Q. How is the performance incentive award amount determined?

21 A. Original Sheet No. 90.1 of Rider EEIC (see Schedule JAR-4) specifies that the
22 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.

1 rate and not discounting the first period) of a percentage of the total net benefits⁹ from EM&V
2 for PY2013, PY2014 and PY2015. The percentage of energy savings target is equal to the
3 sum of the annual energy savings from the EM&V final reports for PY2013, PY2014 and
4 PY2015 divided by the Commission-approved 3-year energy savings target of 793,100
5 MWh¹⁰ expressed as a percentage. The 3-year performance incentive award amount is
6 determined by interpolating values on Table 1 and multiplying the interpolated percentage of
7 EM&V net benefits by the sum of the net benefits from the EM&V final reports for PY2013,
8 **PY2014 and PY2015.**

9 **Table 1¹¹**

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%

10
11 **EM&V final reports of Evaluators and Auditor**

12 Q. When were and where are the PY2013 EM&V final reports of Cadmus and
13 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

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

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

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

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

9 A. Yes.

10 Q. Please explain why the final reports were corrected.

11 A. The Cadmus and ADM reports were filed on May 15, 2014, May 30, 2014 and
12 June 12, 2014. The second and third filings were made to allocate indirect portfolio costs to
13 each DSM program prior to calculating each program’s cost effectiveness ratios¹² and to
14 correctly calculate net benefits using costs from the utility cost test at the DSM program level.
15 The Auditor reports were filed on July 2, 2014, August 25, 2014 and August 27, 2014. The
16 second and third filings were made to correct values taken in error from the Cadmus and
17 ADM reports and to include – for the first time - the Auditor’s recommendation for net
18 benefits at the DSM program level and for the DSM portfolio.

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

21 A. No. This is the first time EM&V reports have been prepared to comply with
22 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.

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

3 **Change requests filed by Ameren Missouri and Staff**

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

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

7 Q. Please describe the change request of Ameren Missouri.

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

13 Q. Please describe the change request of Staff.

14 A. Staff filed its change request in the form of a verified memorandum to the case
15 file in File No. EO-2012-0142 on July 3, 2014, recommending that the Commission accept
16 the Auditor's final report but with the net-to-gross ratio for the LightSavers¹³ program
17 excluding any impact due to market effects,¹⁴ and recommending the Commission order an
18 adjustment to any performance incentive award to exclude any recovery by Ameren Missouri
19 for market effects, not only for PY2013, but also for PY2014 and PY2015. While Staff
20 acknowledges that there are market effects impacts from Ameren Missouri's DSM program,
21 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.

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

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

4 A. No.

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

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

10 A. The different adjustments to the net-to-gross ratio for the various DSM
11 programs are contained in the Cadmus, ADM and Auditor final reports and in the change
12 requests of Ameren Missouri and Staff and are summarized in Table 2. The adjustments to
13 the net-to-gross ratio (NTG) are free riders, participant spillover, nonparticipant spillover and
14 market effects. $NTG = 1.00 - \text{free riders adjustment} + \text{participant spillover adjustment} +$
15 $\text{nonparticipant spillover adjustment} + \text{market effects adjustment}$. Following is illustrative of
16 the definitions for the various adjustments for the LightSavers program:¹⁶

17 For the LightSavers upstream markdown and coupon distribution channels, the
18 Cadmus team estimated an overall savings-weighted NTG of 125%, based on
19 the following:

- 20
- 21 • Free ridership: the percentage of products that would have been
 - 22 purchased without the retailer discounts or coupons.
 - 23 • Nonparticipant Lighting Spillover or “like” Spillover: the additional
 - 24 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

Program	Free Rider		Participant Spillover		Nonparticipant Spillover		Market Effects		
	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).

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Table 3

Scenarios Sorted by EM&V Net Benefits							
Scenario	Free Rider	PSO	NPSO	Market Effects	EM&V NTG <i>a</i>	EM&V MWh <i>b</i>	EM&V Net Benefits <i>c</i>
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

1
2 Q. Which of the 24 scenarios represents the recommendation of the Evaluators
3 (Cadmus and ADM), the Auditor, Ameren Missouri and Staff?

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

7 **Joint Position**

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

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

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

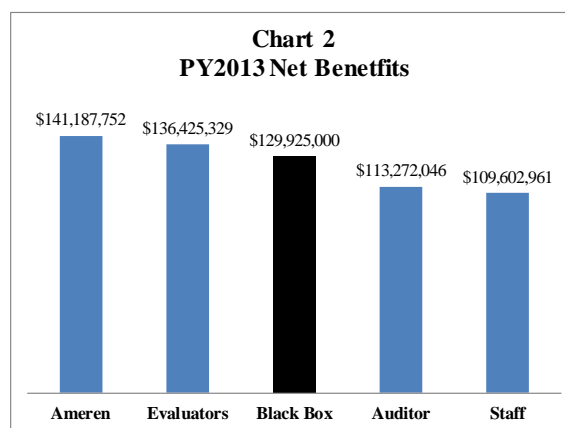
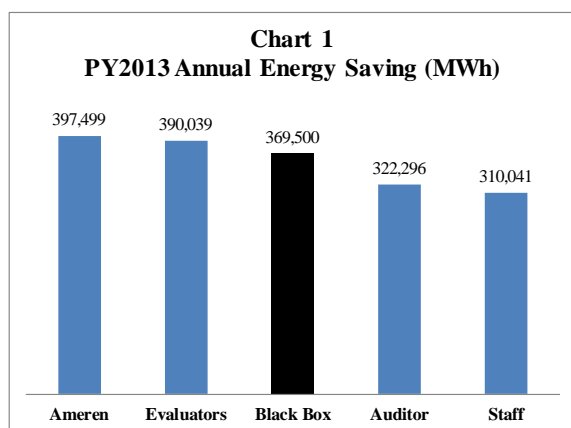
1 energy savings is 369,500 MWh and the PY2013 net benefits amount is
2 \$129,925,000.

3 9. The parties will work together to address revisions to the MEEIA
4 rules such that any proposed revisions to the MEEIA rules are provided to the
5 Missouri Public Service Commission no later than July 1, 2015. Further, the
6 parties agree that the components of net-to-gross (“NTG”) ratios for purposes
7 of calculating EM&V results, including for the performance incentive
8 component of Ameren Missouri’s MEEIA programs, are free ridership,
9 participant spillover, nonparticipant spillover and market effects, and also
10 agree that the formula for determining NTG ratios is as follows: $NTG = 1.0 -$
11 $Free\ Ridership + Participant\ Spillover + Nonparticipant\ Spillover + Market$
12 $Effects$. The agreement in the preceding sentence does not bind any party to
13 how any component of NTG ratios should be calculated, but the parties agree
14 to make a best effort to determine how such components should be calculated
15 through EM&V for the EM&V to be conducted for PY2014 and PY2015, and
16 also agree to make a best effort to address the calculation of the NTG ratio
17 components as part of the process of developing proposed revised MEEIA
18 rules. In addition, the parties will make a best effort to agree by April 1, 2015
19 on how the EM&V contractors and the Commission’s Auditor should
20 participate in any future Change Request dockets.

21 **Black box settlement of annual energy savings and net benefits for PY2013**

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

25 A. Chart 1 contains the comparison for PY2013 annual energy savings and Chart
26 2 is the comparison for PY2013 net benefits.



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

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

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

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

15 A. Ameren Missouri and Staff recognize that the issues in this case are numerous
16 (as reflected in Table 2) and very difficult to comprehend as reflected in the modeling of
17 spillover and market effects by Cadmus and the Auditor, respectively. Reaching agreement
18 on a reasonable compromise for the PY2013 annual energy savings and net benefits does not
19 provide a solution to these same issues for EM&V in PY2014 and PY2015. Staff is sensitive
20 to the fact that using a hearing process to resolve competing change requests is an inefficient
21 use of party and Commission resources. Resolving future change requests is time consuming
22 and expensive and will also bring into the hearing process the Evaluators and the Auditor. It
23 is not customary in the EM&V industry to bring evaluators and the auditors into an
24 adversarial role by requiring them to defend their work product in a hearing room. While a

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1 just and reasonable outcome may be possible through a time consuming and expensive
2 hearing process, it is Staff's opinion that it will be more productive to engage Cadmus, ADM,
3 Auditor, Ameren Missouri, Staff and other interested stakeholders in less formal, but more
4 constructive meetings to discuss and agree, if possible, on how the components of the net-to-
5 gross ratios should be calculated through EM&V for PY2014 and for PY2015. The process
6 will also inform the MEEIA rulemaking review which must be completed by July 1, 2015.

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

11 A. No.

12 Q. Why not?

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

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

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

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

4 A. There are two reasons. First, as Table 2 and Table 3 above illustrate, the
5 adjustments for **participant** spillover and market effects for the Lighting program are very
6 different and have a significant impact on both PY2013 annual energy savings¹⁷ and PY2013
7 net benefits.¹⁸ Second, the Auditor's Appendix A methodology – which represents what is
8 understood by Staff to be a new methodology and is, therefore, a methodology which is not
9 recognized as an EM&V industry best practice – does seem to address many of the concerns
10 expressed by Staff regarding the Cadmus methodology to estimate market effects and
11 spillover in Appendix J of the Cadmus EM&V final report.

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

15 A. Yes.

16 Q. Why?

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

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).

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

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

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

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

21 A. Even if the best efforts of all stakeholders are successful in determining how
22 the components to net-to-gross ratios for each DSM program should be calculated through
23 EM&V for the EM&V to be conducted for PY2014 and PY2015, such an agreement would

1 address only Ameren Missouri PY2014 and PY2015. Such a success, if possible, would do
2 little or nothing to address longer term concerns related to EM&V as it may impact other
3 companies or future DSIMs, especially the performance incentive components of future
4 DSIMs. The joint position terms (paragraph 9) requires that the parties work together to
5 address revisions to the MEEIA rules such that any proposed revisions to the MEEIA rules
6 are provided to the Missouri Public Service Commission no later than July 1, 2015. It also
7 requires the parties to make their best effort to address the calculation of the NTG ratio
8 components as part of the process of developing proposed revised MEEIA rules. This
9 “collaborative” process represents the best way forward for the parties, and other interested
10 stakeholders, to address the longer term concerns related to EM&V as it may impact all
11 utilities, future DSIMs and in particular the performance incentive award components of
12 future DSIMs.

13 **Discussion of why time is of the essence for the Commission to order the terms contained**
14 **in the joint position**

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

17 A. Yes.

18 Q. Why?

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

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

14 OPC’s continued opposition to the joint position will make it impossible to achieve
15 agreement by April 1, 2015 - through the best efforts of all involved - on how to perform
16 calculation of net-to-gross adjustments for PY2014, because a Commission order concerning
17 the change requests is not expected until late February or early March 2015. Should the
18 Commission in this proceeding ultimately approve the joint position or otherwise decide on an
19 outcome within the range of reasonableness (i.e. “splitting the baby” in some other way), the
20 parties will likely be faced with the same change requests issues for PY2014. The 2012
21 Stipulation requires the first draft of the Evaluators’ EM&V reports to be submitted on
22 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.

1 Further, the litigation of change requests for PY2013 will delay the start of a process
2 that Ameren Missouri, the Staff, and Division of Energy consider necessary to be able to
3 provide proposed revised MEEIA rules to the Commission. Instead of working together
4 collaboratively as proposed in the joint position, the parties will be engaged over the next 2 –
5 3 months litigating this proceeding instead of working cooperatively to make enhancements to
6 the MEEIA rules.

7 **Conclusion**

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

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

12 For purpose of determining the Ameren Missouri 2013 – 2015
13 performance incentive award amount in 2016, the PY2013 EM&V annual
14 energy savings is 369,500 MWh and the PY2013 net benefits amount is
15 \$129,925,000.

16 The parties will work together to address revisions to the MEEIA rules
17 such that any proposed revisions to the MEEIA rules are provided to the
18 Missouri Public Service Commission no later than July 1, 2015. Further, the
19 parties agree that the components of net-to-gross (“NTG”) ratios for purposes
20 of calculating EM&V results, including for the performance incentive
21 component of Ameren Missouri’s MEEIA programs, are free ridership,
22 participant spillover, nonparticipant spillover and market effects, and also
23 agree that the formula for determining NTG ratios is as follows: $NTG = 1.0 -$
24 $Free\ Ridership + Participant\ Spillover + Nonparticipant\ Spillover + Market$
25 $Effects$. The agreement in the preceding sentence does not bind any party to
26 how any component of NTG ratios should be calculated, but the parties agree
27 to make a best effort to determine how such components should be calculated
28 through EM&V for the EM&V to be conducted for PY2014 and PY2015, and
29 also agree to make a best effort to address the calculation of the NTG ratio
30 components as part of the process of developing proposed revised MEEIA
31 rules. In addition, the parties will make a best effort to agree by April 1, 2015
32 on how the EM&V contractors and the Commission’s Auditor should
33 participate in any future Change Request dockets.
34

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1 | Q. Does this conclude your testimony?

2 | A. Yes, it does.