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, PY2014 and PY2015.

Correct the record.)

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%

EM&V final reports of Evaluators and Auditor

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

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 participant 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.

Correct

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.

[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).

effectiveness test in Missouri (but not the only cost-effectiveness test in Missouri) and the definition of annual net shared benefits.

Ultimately, as I explain later in this testimony, the 2012 Stipulation provides that any performance incentive award amount is not included in the calculation of EM&V annual net shared benefits.

Q. Please respond to Dr. Marke's direct testimony on page 62, lines 17 through 18: "The Total Resource Cost test is the preferred test in Missouri for the evaluation of the net shared benefits produced by energy efficiency programs."

A. While Dr. Marke wants the reader to believe that the TRC is **the** preferred cost-effectiveness test, the TRC is by statute a preferred cost-effectiveness test, as evidenced by Dr. Marke's own citation of Section 393.1075.4., in part, with emphasis: **<u>The commission shall consider the total resource cost test a preferred cost-effectiveness test</u>**. The Commission acknowledged this statutory requirement (to consider the TRC *a* preferred cost effectiveness test) when it promulgated the following administrative rules:

- 4 CSR 240-20.093(1)(DD) Total resource cost test, or TRC, means the test of the cost-effectiveness of demand-side programs that compares the avoided utility costs to the sum of all incremental costs of end-use measures that are implemented due to the program (including both utility and participant contributions), plus utility costs to administer, deliver, and evaluate each demand-side program;

- 4 CSR 240-20.09~~3~~4(3)(A) For demand-side programs and program plans that have a total resource cost test ratio greater than one (1), the commission shall approve demand-side programs or program plans, and annual demand and energy savings targets for each demand-side program it approves, provided it finds that the utility has met the filing and submission requirements of 4 CSR 240-3.164(2) and the demand-side programs and program plans— Correct
  1. Are consistent with a goal of achieving all cost-effective demand-side savings;
  2. Have reliable evaluation, measurement, and verification plans; and
  3. Are included in the electric utility's preferred plan or have been analyzed through the integration process required by 4 CSR 240-22.060 to determine the

design, administration, delivery, end-use measures, incentives, EM&V, utility market potential studies, and technical resource manual on an annual basis."

Q. What incentives are included in the 4 CSR 240-3.163(1)(A) and 4 CSR 240-20.093(1)(C) definitions of annual net shared benefits?

A. The incentives in the definition of annual net shared benefits are one component of program costs, or the customer incentives (direct or indirect payments or rebates to customers to encourage the installation of energy saving measures). As indicated in the rule, the components of program costs are program design, administration, delivery, end-use measures, incentives, EM&V, market potential studies and technical resource manual.

The performance incentive award is <u>not</u> a program cost; it is a financial incentive awarded to the utility. While 4 CSR 240-20.093(~~1~~ 2)(C)2. requires that the Commission provide financial incentives to electric utilities, such financial incentives are not considered a cost when calculating annual net shared benefits for the utility incentive component of a DSIM as described in 4 CSR 240-20.093(~~1~~ 2)(H). Correct correct

> 4 CSR 240-20.093(~~1~~ 2)(C) The commission shall approve the establishment, continuation, or modification of a DSIM and associated tariff sheets if it finds the electric utility's approved demand-side programs are expected to result in energy and demand savings and are beneficial to all customers in the customer class in which the programs are proposed, regardless of whether the programs are utilized by all customers and will assist the commission's efforts to implement state policy contained in section 393.1075, RSMo, to— Correct
>
> 1. Provide the electric utility with timely recovery of all reasonable and prudent costs of delivering cost-effective demand-side programs;
> 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/or verifiable energy and demand savings.
>
> 4 CSR 240-20.093(~~1~~ 2)(H) Any utility incentive component of a DSIM shall be based on the performance of demand-side programs approved by the commission in accordance with 4 CSR 240-20.094 Demand-Side Programs Correct

> and shall include a methodology for determining the utility's portion of annual net shared benefits achieved and documented through EM&V reports for approved demand-side programs. Each utility incentive component of a DSIM shall define the relationship between the utility's portion of annual net shared benefits achieved and documented through EM&V reports, annual energy savings achieved and documented through EM&V reports as a percentage of annual energy savings targets, and annual demand savings achieved and documented through EM&V reports as a percentage of annual demand savings targets.
>
> 1. Annual energy and demand savings targets approved by the commission for use in the utility incentive component of a DSIM are not necessarily the same as the incremental annual energy and demand savings goals and cumulative annual energy and demand savings goals specified in 4 CSR 240-20.094(2).
>
> 2. The commission shall order any utility incentive component of a DSIM simultaneously with the programs approved in accordance with 4 CSR 240-20.094 Demand-Side Programs.
>
> 3. Any utility incentive component of a DSIM shall be implemented on a retrospective basis and all energy and demand savings used to determine a DSIM utility incentive revenue requirement must be measured and verified through EM&V.

Q. Do any of the MEEIA rules require the utility to include financial incentives for its demand-side programs when analyzing alternative resource plans during the utility's electric utility resource planning?

Correct A. Yes. 4 CSR 240-20.09~~3~~4(3)(A)~~2~~3. requires that demand-side program plans are included in the electric utility's preferred plan or have been analyzed through the integration process required by 4 CSR 240-22.060 to determine the impact of the demand-side programs and program plans on the net present value of revenue requirements of the electric utility. Further, 4 CSR 240-22.060(4)(C) requires that the utility provide:

> (C) The analysis of economic impact of alternative resource plans, calculated with and without utility financial incentives for demand-side resources, shall provide comparative estimates for each year of the planning horizon—
>
> 1. For the following performance measures for each year:
>
> A. Estimated annual revenue requirement;
>
> B. Estimated annual average rates and percentage increase in the average rate from the prior year; and
>
> C. Estimated company financial ratios and credit metrics.

Q. Do the requirements of 4 CSR 240-20.09~~1~~4(3)(A)~~2~~3. and Correct 4 CSR 240-22.060(4)(C) result in a requirement that financial incentives be included in the calculation of annual net shared benefits as a result of EM&V for program year 2013?

A. No. Staff can find no such requirement in the MEEIA statute or the Commission's MEEIA rules on this question. Ultimately, for Ameren Missouri and the stakeholders, paragraph 5.b.ii and Example Nos. 1 and 2 in Appendix B of the 2012 Stipulation clearly show that the utility performance incentive award amount is not to be included in the calculation of annual net shared benefits.[13] While the annual net shared benefits for each of the three (3) program years is determined at the conclusion of each program year, the performance incentive award amount is determined following the conclusion of the third and final program year using the previously determined annual net shared benefits for each of the three program years.[14] Appendix B is provided as Schedule JAR-1.

Q. Is Dr. Marke's assertion that the utility performance incentive award should be included as a cost when calculating annual net shared benefits supported by any literature on this subject?

A. Not any literature relevant to Ameren Missouri's program year 2013 ("PY2013") programs. Staff has been able to locate only one instance - in California - for which financial incentives are included as a cost when calculating net benefits and that instance is described on pages 6-9 of *Aligning Utility Incentives with Investment in Energy*

[13] Also see the definition of Performance Incentive Award on Original Sheet No. 90.1 of Rider EEIC, which is Schedule JAR-4-2 of the direct testimony of John Rogers.

[14] Paragraph 11.b. of the 2012 Stipulation specifies the process for EM&V reports and begins with paragraph 11.b.i. "45 days after the end of each program year ... ", then describes the process for finalizing each program years EM&V in paragraphs 11.b.ii through paragraphs 11.b.iv, and concludes with paragraph 11.b.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."

Ameren's market effect assertion" concerning Wal-Mart's influence on the retail market,[18] California and Previous Utility-Sponsored Energy Efficiency Programs,[19] The Energy Independence and Security Act of 2007 (EISA),[20] Ameren Illinois' upstream lighting rebate program,[21] and Home Depot and Kansas City.[22] Dr. Marke then includes in his direct testimony "additional examples" concerning his proposed rebound effect adjustment[23] to the residential LightSavers program. While all of Dr. Marke's "additional examples" that allegedly "contradict Ameren's market effect assertion" are interesting, <u>none</u> of the "additional examples" listed by Dr. Marke are relevant to *cost-effective measurable and/or verifiable energy and demand savings* which are the result of EM&V performed *for the PY2013 demand-side programs of Ameren Missouri.* All of Dr. Marke's "additional examples" relate to experiences of other utilities in other states during periods of time other than 2013 and are not supported by EM&V performed in compliance with the Commission's rules 4 CSR 240-20.093(3)(C), 4 CSR 240-20.093(3)(H) and 4 CSR 240-3.164(1)(L).

Q. Does Dr. Marke claim or demonstrate that the EM&V performed and reported by Cadmus, ADM, Auditor and, to a limited degree, Ameren Missouri was not performed and

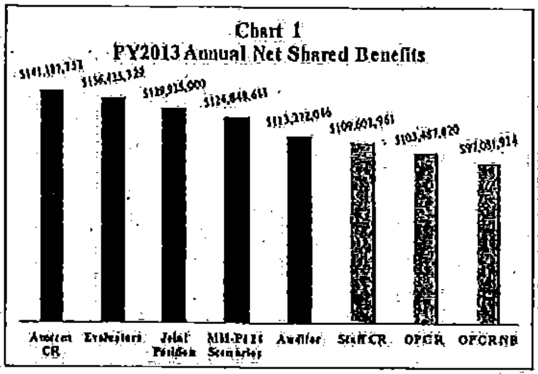
Correct reported in compliance with the Commission's rules 4 CSR 240-20.093(~~3~~ 2)(C) 3

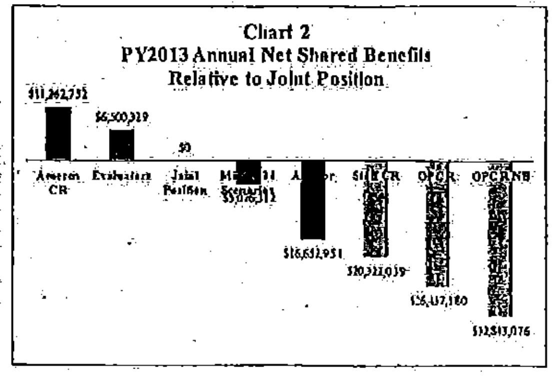
Correct 4 CSR 240-20.093(~~3~~ 2)(H) and 4 CSR 240-3.164(1)(L)?

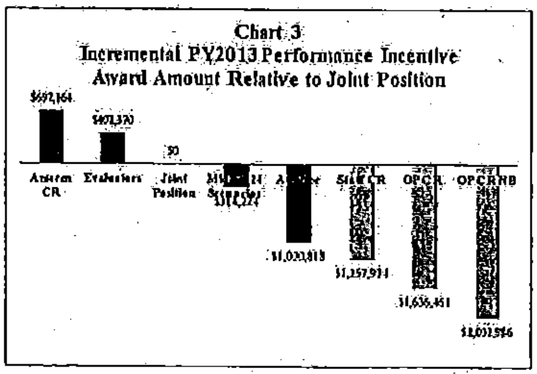
A. No.

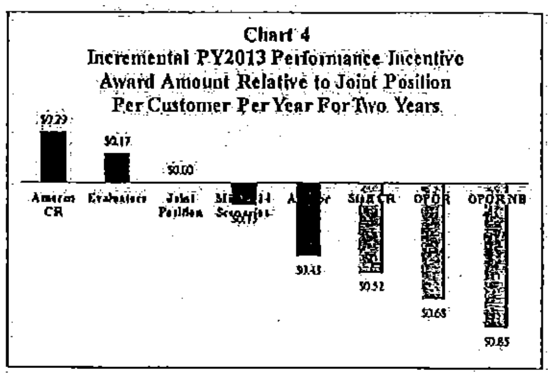
Q. Can the Commission rule in favor of Dr. Marke's recommendations for items 20, 21 and 22 in the list of 22 issues concerning the PY2013 EM&V for the Ameren Missouri

[18] Appendix to Marke direct testimony at page 46, line 12 through page 50, line 10.
[19] Appendix to Marke direct testimony at page 50, line 12 through page 52, line 3.
[20] Appendix to Marke direct testimony at page 52, line 5 through page 54, line 20.
[21] Appendix to Marke direct testimony at page 55, line 1 through page 56, line 10.
[22] Appendix to Marke direct testimony at page 56, line 12 through page 58, line 1.
[23] Marke direct testimony at page 5, line 1 through page 17, line 2.









Q. Why are the bars in Rogers Charts 1 through 4 for Ameren CR, Evaluators, Mid-Pt 24 Scenarios and Auditor one color (blue) and the bars for Staff CR, OPC R and OPC R NB a different color (green)?

A. The amounts represented by the blue bars for Ameren CR, Evaluators, Mid-Pt 24 Scenarios and Auditor are relevant to the Commission's determination of whether the joint position is just and reasonable because the amounts for the blue bars are based upon actual EM&V performed and reported by Ameren Missouri, Cadmus, ADM and the Auditor as required by Commission rules 4 CSR 240-20.093(~~3~~2)(C)~~,~~3 4 CSR 240-20.093(~~3~~2)(H), and 4 CSR 2403.164(1)(L) for Ameren Missouri's PY2013 demand-side programs and are compliant with the terms of the 2012 Stipulation.[14] Correct

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

Q. Is the joint position the product of EM&V which was performed and reported consistent with the MEEIA statute and the MEEIA rules?

A. Yes. It is troubling that Dr. Marke has twisted and changed the plain meaning of the MEEIA statue and MEEIA rules to accommodate his objective of lowering the PY2013 annual energy savings and PY2013 annual net shared benefits of Ameren Missouri's demand-side programs. Dr. Marke's alteration of the MEEIA statute and rules are plainly evident in his October 6, 2014 response to the change requests of Ameren Missouri and Staff, his October 22, 2014 direct testimony and his November 17, 2014 rebuttal testimony.

Q. Please summarize how Dr. Marke has attempted to change the MEEIA statute and the MEEIA rules.

A. By insisting that the TRC is <u>the</u> preferred cost-effectiveness test for Missouri - instead of <u>a</u> cost-effectiveness test for Missouri - Dr. Marke has changed the application of the statute and has changed the Commission rule 4 CSR 240-20.093(1)(C) definition of annual net shared benefits to: 1) include any utility financial incentive as a program cost,[30] and 2) include costs from the TRC test instead of costs from the UCT.[31] Dr. Marke's extensive research of and reporting on the market effects adjustments and the rebound effects adjustments for other utilities in other states during periods of time other than 2013 are <u>not</u> based upon actual EM&V performed and reported in compliance with Commission rules 4 CSR 240-20.093(~~1~~2)(C)3, 4 CSR 240-20.093(~~1~~2)(H), and 4 CSR 2403.164(1)(L) for Ameren Missouri's PY2013 demand-side programs. Specifically, OPC has <u>not</u> performed any studies and activities required by the Commission rules *to evaluate and to estimate and/or verify the*

Correct

[30] Appendix to Marke direct testimony page 62 line 17 through page 63 line 23.
[31] Marke rebuttal testimony page 4 line 18 through page 5 line 6.