Exhibit No.:

Issues: Solar Rebates Witness: Daniel I. Beck

Sponsoring Party: MO PSC Staff

Type of Exhibit: Surrebuttal Testimony

Case No.: ET-2014-0085

Date Testimony Prepared: November 1, 2013

MISSOURI PUBLIC SERVICE COMMISSION REGULATORY REVIEW DIVISION

SURREBUTTAL TESTIMONY

OF

DANIEL I. BECK

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. ET-2014-0085

Jefferson City, Missouri November 2013

** Denotes Highly Confidential Information **



BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Ameren Missouri's Application for Authorization to Suspend Payment of Solar Rebates) Case No. ET-2014-0085		
AFFIDAVIT OF DANIEL I. BECK			
STATE OF MISSOURI)) ss COUNTY OF COLE)			
Daniel I. Beck, of lawful age, on his oath states: that he has participated in the preparation of the following Surrebuttal Testimony in question and answer form, consisting of pages of Surrebuttal Testimony to be presented in the above case, that the answers in the following Surrebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.			
	Daniel I. Beck		
Subscribed and sworn to before me this day of November, 2013.			
SUSAN L. SUNDERMEYER Notary Public - Notary Seal State of Missouri Commissioned for Callaway County My Commission Expires: October 03, 2014 Commission Number: 10942086	Notary Public		

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SURREBUTTAL TESTIMONY

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DANIEL I. BECK

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. ET-2014-0085

- Q. Please state your name and business address.
- A. Daniel I. Beck and my business address is Missouri Public Service Commission, P.O. Box 360, Jefferson City, Missouri, 65102.
 - Q. By whom are you employed and in what capacity?
- A. I am employed by the Missouri Public Service Commission ("Commission") as the Manager of Engineering Analysis, which is in the Tariff, Safety, Economic and Engineering Analysis Department in the Regulatory Review Division. My credentials are attached as Schedule 1 to this testimony.
 - Q. What is the purpose of your surrebuttal testimony?
- A. The purpose of this testimony is to respond to The Missouri Solar Energy Industries Association ("MOSEIA") witnesses Dane Glueck and Ezra D. Hausman, Ph.D. on various issues raised in their rebuttal testimonies regarding the suspension of solar rebates by Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company").
 - Q. Please summarize your testimony.
- A. As provided in the rebuttal testimonies of Staff witnesses Claire M. Eubanks and Mark L. Oligschlaeger, the Staff ("Staff") of the Missouri Public Service Commission ("Commission") recommends that the Commission deny Ameren Missouri's request to suspend solar rebate payments in 2013 when solar rebate payments reach \$18,811,454

because Ameren Missouri has not reached the 1% retail rate impact ("RRI") limit as calculated by Staff's methodology. Although MOSEIA supports Staff's recommendation that Ameren Missouri's request be denied, MOSEIA witnesses Glueck and Hausman have raised issues of the notice provided for rebate suspension and costs included in the Renewable Energy Standard ("RES") retail rate impact calculation ("RRI"). My surrebuttal testimony addresses these issues.

- Q. In his Rebuttal Testimony, on page 4, MOSEIA witness Dane Glueck states that "many solar customers would be harmed by the suspension of solar rebates upon only sixty days' notice". Is 60 days' notice consistent with Missouri Statutes?
- A. Yes. House Bill 142 ("HB 142") was signed by Governor Jay Nixon on July 3, 2013, and became effective on August 28, 2013. This bill included changes to RSMo 393.1030.3 that include the following: "The commission shall rule on the suspension filing within sixty days of the date it is filed." My understanding of the statute is that the Commission does not have the discretion to extend the time for its decision past sixty days and that HB 142 included a customer protection for rebate payments to continue until the Commission reached its decision on the RRI.
- Q. Has any other party to this case, besides Ameren Missouri, argued that Ameren Missouri has reached its retail rate impact limit?
- A. No, Ameren Missouri stands alone in its assertion to the Commission. The Office of the Public Counsel, MOSEIA and Staff have all presented in testimony that Ameren Missouri has not reached the RRI limit.
- Q. If the Commission were to accept Ameren Missouri's RRI calculation and decide to allow Ameren Missouri to suspend solar rebate payments, is Ameren Missouri

proposing to start making the payments again starting January 1, 2014, and does that have any impact on the harm that may occur for "many solar customers"?

- A. Yes, Ameren Missouri's proposed tariff Sheet No. 88, 2nd Revised, includes the following language "Solar rebate payments will resume January 1, 2014." Given this fact, the worst case scenario is that the payments of solar rebates may be delayed by as much as 22 days. But it is unlikely that Ameren Missouri will suspend payments on December 10, 2013, because payments will not be suspended until the \$18,811,454 limit is reached. Ameren Missouri's request does not propose to permanently end solar rebates and not restart the payments at the beginning of 2014.
 - Q. Is any party proposing to end solar rebates permanently?
- A. No. Based on the Direct and Rebuttal Testimony filed in this case, no party is proposing to permanently end solar rebates for Ameren Missouri.
 - Q. Should MOSEIA witness Glueck be surprised by the 60 day requirement?
- A. No. On page 4 of his testimony, witness Glueck states "During the 2012-13 legislative session, MOSEIA and others in the solar industry worked with the electric utilities located in Missouri, including Ameren, to draft for consideration by the Missouri Legislature, the recently enacted House Bill 142." It is not logical to claim that sixty days' notice is unreasonable when his statement indicates that MOSEIA was part of the drafting process for HB 142, which includes the 60 day requirement.
- Q. On page 4 of MOSEIA witness Glueck's testimony he states, "MOSEIA and others in the solar industry were completely surprised when Kansas City Power & Light/GMO (and now Ameren) filed requests with the Commission seeking to suspend the payment." On page 5 he then quotes the Staff Report on Company's RES Compliance Plan

filed in Commission File No. EO-2012-0348 that includes emphasis being added to the phrase "performing the detailed netting calculation literally serves no purpose". How do you respond to this?

A. It is important to note that no one anticipated the drastic rise in solar rebate applications that has occurred. The decrease in the cost of solar equipment coupled with the rebate and other incentives available has made this type of investment more attractive to customers. Despite the sudden rise in applications, if one reviews the annual renewable energy filings from these three utilities and the corresponding Staff Reports that were filed in Case Nos. EO-2012-0348, EO-2012-0349 and EO-2012-0351, I believe that one will conclude that reaching the one percent retail rate limit was discussed in the Company Reports and the Staff Reports. The following statement is a direct quote from Staff's Report for KCPL that was filed on May 31, 2012:

"Dependent on the expenditures associated with S-REC purchases and solar rebates for calendar year 2013 and 2014, the one percent (1%) rate impact limit could be reached. However, the three (3) year average rate impact should not exceed one percent. The Company will monitor the amount of solar rebates closely. The Company provided the basis for its determination and summarized the projected rate impact as 0.78% for calendar year 2012 and 0.92% based on a three year average (2012-2014)."

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The following statement is a direct quote from Staff's Report for GMO that was filed on May 31, 2012:

"Dependent on the expenditures associated with S-REC purchases and solar rebates for calendar year 2013 and 2014, the one percent (1%) rate impact limit could be reached. The Company will monitor the amount of solar rebates closely. The Company provided the basis for its determination and summarized the projected rate impact as 0.99% for calendar year 2012 and 1.18% based on a three year average (2012-2014)."

Although Witness Glueck did not specifically reference the Staff's Report for Ameren Missouri, the following statement is a direct quote from Staff's Report for Ameren Missouri that was filed on May 31, 2012:

"Based on the projected Plan costs for calendar years 2012, 2013, and 2014 compared to one percent (1%) of the current revenue requirement for the Company, the rate impact limit should not be exceeded."

While Staff's Report did not express concern that Ameren Missouri would exceed the one percent (1%) rate impact limit, the quotes above clearly express a concern that both KCPL and GMO would exceed the one percent (1%) rate impact limit. Staff would also note that May 31, 2012 is over a year before any Company filed to suspend the solar rebates.

- Q. On pages 6-7 of his rebuttal testimony MOSEIA witness Glueck describes a front-loading proposal. Does that proposal comply with the statutes, rules and tariffs that are currently in place?
- A. No. This proposal would not provide consumers the protection offered by the retail rate impact limit and, therefore, does not comply with the statutes, rules and tariffs that are in effect.
- Q. MOSEIA witness Hausman, on page 6, lines 1-3, of his rebuttal testimony states the following, "It is premature, overly conservative, and inappropriate to include the unknown future cost of additional RES-related expenditures in calculating the RRI during the years before such resources are constructed or procured." What is Staff's response to this statement?
- A. In Staff's view, the balance of available funds under the 1% between solar rebates and resource additions in a utility's IRP is a policy decision to be made by the Commission. Under Rule 4 CSR 240-20.100(5)(B) a utility should use its IRP when

determining its RES-compliant portfolio and RES Compliance Plan. His claim that the RRI (Retail Rate Impact) should not include costs until a resource is constructed or procured demonstrates a lack of understanding that the Retail Rate Impact section of the Renewable Energy Standard Rules, 4 CSR 240-20.100(5), defines a planning process.

- Q. Does MOSEIA witness Hausman further discuss this concept in his Rebuttal Testimony?
- A. Yes. Starting at page 16, line 9 and continuing to page 17, line 27, MOSEIA witness Hausman discusses how he believes future wind projects should be treated. Based on my reading of this discussion, it appears that he is arguing that future costs should be ignored. This is in direct contrast to the retail rate impact rules that have been adopted by the Commission. It also does not reflect the reality that all of the solar rebates that have been paid out prior to August 28, 2013 did not provide the Company with either energy or S-RECs. Instead of this resulting in direct benefits to the Company and Ameren Missouri's ratepayers, the primary result for expenditure before August 28, 2013 will be that ratepayers will have to pay for prudently incurred solar rebates in future rates and that the Company will be obligated to procure all of the net power generated from these facilities under the net metering statutes, rules and tariffs. Under the net metering requirements, the customer-generator will then be compensated for this generation at the full retail rate as defined by the tariff serving that customer, up to the level of their usage for any given month. This obligation to purchase the energy is not a benefit, it is an additional cost.
 - Q. Has the Commission placed a priority on Electric Resource Planning?
- A. Yes. The Commission's Electric Resource Planning Chapter, 4 CSR 240-22, first went into effect on May 6, 1993. I was one of the Staff member's that had input in the

original drafting of this Chapter. In the twenty years that have passed since that Chapter went into effect, I believe the Commission has repeatedly reaffirmed the value of Electric Resource Planning (often referred to as IRP). This Chapter was amended effective June 30, 2011, but those changes did not change the importance of the process.

- Q. Did MOSEIA witness Hausman discuss the Maryland Heights Renewable Energy Center (Maryland Heights) in his Rebuttal Testimony?
- A. Yes, witness Hausman argues it is not proper to include nearly ** ______** of Maryland Heights' costs in Ameren Missouri's RRI calculation because they are not prudently incurred costs. Using the costs for calendar year 2013, Hausman calculated a cost of ** _____ ** per REC for the 2013 output for Maryland Heights [Huasman Rebuttal, page 14, line 16]. He further states that Ameren Missouri sells blocks of RECs to its customers through its Pure Power Program at \$10.00 per 1,000 kilowatt hour block. From this analysis, Hausman concludes that RECs produced by Maryland Heights are imprudently incurred costs to comply with the RES and the costs included in the RRI for Maryland Heights should be discounted to a level of producing a \$10.00 REC.
- Q. Do you support his recommendation to limit the costs for the Maryland Heights Renewable Energy Center?
- A. No. Looking at a single year of costs and benefits for a long-term project should not be used to determine the cost-effectiveness of a project. Instead, it highlights the need for looking at future costs and benefits that is part of the Commission's rules on Integrated Resource Planning and the one percent (1%) rate impact limit of the RES planning process. In the case of Maryland Heights, the Commission determined that this facility should be included in rates in Ameren Missouri's most recent rate case.



- Q. Could you provide another example that shows that one year of cost and benefits is not a reasonable method to determine the cost-effectiveness of a project?
- A. Yes. Ameren Missouri witness Matt Michels Schedule MM-1, which witness Hausman relied on to develop the REC costs for Maryland Heights, also contains costs for the GOB Solar Panels. The GOB Solar Panels reference in the schedule is the Solar System that is installed on Ameren Missouri's headquarters, as the building is commonly referred to as the General Office Building or GOB. Schedule MM-1 includes costs for the GOB Solar Panels rate base (**______**), GOB Solar Panels Other (** _____ **), GOB Solar Panels Other Taxes – Property (** ____ **) and GOB Solar Energy Benefits of (** _____ **). These cost total ** _____ **. Similar to witness Hausman's analysis, Ameren Missouri's Renewable Energy Standard Compliance Plan 2013-2015, filed in Case No. EO-2013-0503, was the basis for the RECs associated with the GOB Solar Panels, which was 130 RECs for 2012 (The system produced 104 RECs in 2012 and this actual value was adjusted to reflect the 25% in-state factor.) This results in a cost per REC of ** _____ ** for the GOB Solar System. This single year cost per REC for the GOB Solar System, like the cost of a 2013 REC for the Maryland Heights, does not provide a reasonable basis for determining whether a project is prudent.
- Q. Could a similar calculation be done to determine the cost of a SREC from the \$2 per watt solar rebates that Ameren Missouri has paid out in 2013?
- A. Yes. Prior to August 28, 2013, no SRECs were associated with the solar rebates but after that date, due to HB 142, the cost of a SREC can be estimated. In response to data request MPSC 0007, the total cost of solar rebates after August 28, 2013 for calendar



year 2013 (\$5.9 million) can be divided by the estimated 10-year total of SRECs (46,930), and the result is a cost of \$127.18 per SREC.

- Q. In Case Nos. ET-2014-0059 and ET-2014-0071, Ameren Missouri witness Matt Michels testified that "S-RECs have recently been available for less than \$5 each." Is Staff recommending that the \$5 price per S-REC be used to limit the amount of a solar rebate that is being paid?
- A. No. Staff does not recommend using either a \$10 per REC or \$5 per S-REC maximum price.
- Q. Will the cost of RECs and S-RECs be reviewed in future prudence reviews, either as part of a general rate case or as part of a RESRAM filing as defined by 4 CSR 240-20.100?
- A. Yes, Staff performs a cursory review as part of its review of a company's RES compliance plan, but Staff will conduct a complete prudence review of costs as part of a general rate case or RESRAM filing
 - Q. Does this conclude your surrebuttal testimony?
 - A. Yes, it does.

Daniel I. Beck, P.E.

Manager of Engineering Analysis Section

Tariff, Safety, Economic and Engineering Analysis Department

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Missouri Public Service Commission

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I graduated with a Bachelor of Science Degree in Industrial Engineering from the University

of Missouri at Columbia. Upon graduation, I was employed by the Navy Plant Representative Office

in St. Louis, Missouri as an Industrial Engineer. I began my employment at the Commission in

November, 1987, in the Research and Planning Department of the Utility Division (later renamed the

Economic Analysis Department of the Policy and Planning Division) where my duties consisted of

weather normalization, load forecasting, integrated resource planning, cost-of-service and rate

design. In December, 1997, I was transferred to the Tariffs/Rate Design Section of the

Commission's Gas Department where my duties include weather normalization, annualization, tariff

review, cost-of-service and rate design. Since June 2001, I have been in the Engineering Analysis

Section of the Energy Department, which was created by combining the Gas and Electric

Departments. I became the Supervisor of the Engineering Analysis Section, Energy Department,

Utility Operations Division in November 2005 and my current title is Manager of Engineering

Analysis.

I am a Registered Professional Engineer in the State of Missouri. My registration number is

E-26953.

Schedule 1-1

List of Cases in which prepared testimony was presented by: DANIEL I. BECK

Company Name	Case No.
Union Electric Company	EO-87-175
The Empire District Electric Company	EO-91-74
Missouri Public Service	ER-93-37
St. Joseph Power & Light Company	ER-93-41
The Empire District Electric Company	ER-94-174
Union Electric Company	EM-96-149
Laclede Gas Company	GR-96-193
Missouri Gas Energy	GR-96-285
Kansas City Power & Light Company	ET-97-113
Associated Natural Gas Company	GR-97-272
Union Electric Company	GR-97-393
Missouri Gas Energy	GR-98-140
Missouri Gas Energy	GT-98-237
Ozark Natural Gas Company, Inc.	GA-98-227
Laclede Gas Company	GR-98-374
St. Joseph Power & Light Company	GR-99-246
Laclede Gas Company	GR-99-315
Utilicorp United Inc. & St. Joseph Light & Power Co	. EM-2000-292
Union Electric Company d/b/a AmerenUE	GR-2000-512
Missouri Gas Energy	GR-2001-292
Laclede Gas Company	GR-2001-629
Union Electric Company d/b/a AmerenUE	GT-2002-70
Laclede Gas Company	GR-2001-629
Laclede Gas Company	GR-2002-356
Union Electric Company d/b/a AmerenUE	GR-2003-0517
Missouri Gas Energy	GR-2004-0209
Atmos Energy Corporation	GR-2006-0387
Missouri Gas Energy	GR-2006-0422
Union Electric Company d/b/a AmerenUE	GR-2007-0003
The Empire District Electric Company EO-200'	7-0029/EE-2007-0030
Laclede Gas Company	GR-2007-0208
The Empire District Electric Company	EO-2008-0043
Missouri Gas Utility, Inc.	GR-2008-0060

The Empire District Electric Company	ER-2008-0093
Trigen Kansas City Energy Corporation	HR-2008-0300
Union Electric Company d/b/a AmerenUE	ER-2008-0318
Kansas City Power & Light Company	ER-2009-0089
KCP&L Greater Missouri Operations Company	ER-2009-0090
Missouri Gas Energy	GR-2009-0355
The Empire District Gas Company	GR-2009-0434
Union Electric Company d/b/a AmerenUE	ER-2010-0036
Laclede Gas Company	GR-2010-0171
Atmos Energy Corporation	GR-2010-0192
Kansas City Power & Light Company	ER-2010-0355
KCP&L Greater Missouri Operations Company	ER-2010-0356
Union Electric Company d/b/a Ameren Missouri	GR-2010-0363
Kansas City Power & Light Company	ER-2012-0174
KCP&L Greater Missouri Operations Company	ER-2012-0175
Chaney vs. Union Electric Company	EO-2011-0391
Veach vs. The Empire District Electric Company	EC-2012-0406
The Empire District Electric Company	ER-2012-0345
KCP&L Greater Missouri Operations Company	ET-2014-0059
Kansas City Power & Light Company	ET-2014-0071