Exhibit No.:	
Issues:	Rate Design Class Cost of Service
Witness:	Michael S. Scheperle
Sponsoring Party:	MO PSC Staff
Type of Exhibit:	Rebuttal Testimony
Case No.:	ER-2012-0166
Date Testimony Prepared:	August 14, 2012

MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

REBUTTAL TESTIMONY

OF

MICHAEL S. SCHEPERLE

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. ER-2012-0166

Jefferson City, Missouri
August 2012

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Electric Service	)))	Case No. ER-2012-0166

AFFIDAVIT OF MICHAEL S. SCHEPERLE

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

Michael S. Scheperle, of lawful age, on his oath states: that he has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 10 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following Rebuttal 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.

Michael S. Scheperle
Michael S. Scheperle

Subscribed and sworn to before me this 14th day of August, 2012.

SUSAN L. SUNDERMEYER
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: October 03, 2014
Commission Number: 10942086

Susan L. Sundermeyer
Notary Public

TABLE OF CONTENTS

REBUTTAL TESTIMONY

OF

MICHAEL S. SCHEPERLE

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. ER-2012-0166

Production-Capacity Allocator 2

MIEC Rate Design 6

REBUTTAL TESTIMONY

OF

MICHAEL S. SCHEPERLE

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. ER-2012-0166

Q. Please state your name and business address.

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

Q. Are you the same Michael S. Scheperle who filed, on July 19, 2012, direct testimony in question and answer format and as part of the Missouri Public Service Commission Staff's ("Staff's") Rate Design and Class Cost-of-Service Report?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of this testimony is to provide results of the production allocators used in the class cost-of-service ("CCOS") study by Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri"), Missouri Industrial Energy Consumers ("MIEC"), and by the Office of Public Counsel ("OPC") in its alternative method[1]; and the rate design proposed by MIEC. I explain why in developing Average and Excess production allocators for fixed and variable components the CCOS independent studies' of Ameren Missouri, MIEC, and OPC, did not account for what Staff considers "normal weather," and did not consider the Missouri Energy Efficiency Investment Act ("MEEIA") savings. I further discuss the impact of the rate design recommendation of MIEC. MIEC's rate design proposal segregates MIEEA costs

[1] OPC recommended an A&4CP production allocator and an alternative A&E 4NCP production allocator

by class from the other costs to serve the class. Staff recommends that the Commission not adopt MIEC's method, because it results in large variations in the amount of increase for each class of customers, which would result in rate shock for some classes of customers.

Production-Capacity Allocator

Q. What are the different production-capacity allocators used by the parties?

A. There are numerous production-capacity cost allocation methods used by the parties in this case. The methods used are: a Base, Intermediate and Peak Method ("BIP") used by Staff; an Average and Excess Method ("A&E 4NCP") used by Ameren Missouri and MIEC; and an Average and Coincident Peak Method ("A&4CP") and an independent alternative method ("A&E 4NCP") recommended by OPC.

Q. Does Staff agree with the A&E 4NCP used by Ameren Missouri, MIEC, and OPC?

A. Not entirely. Even though the results of Ameren Missouri, MIEC, and OPC's A&E 4NCP method and Staff's BIP method are within a similar range, Staff believes that these parties used a production allocator that did not include "normal weather" as defined by the United States National Oceanic and Atmospheric Administration ("NOAA")[2] in developing its production allocator and did not consider savings from the Missouri Energy Efficiency Investment Act ("MEEIA") in calculating their production allocator. Listed below in Table 1 are production allocators by various parties who presented CCOS studies.

[2] According to NOAA, a climate normal is defined, by convention, as the arithmetic mean of a climatological element computed over three consecutive decades. To conform to the NOAA's three consecutive decade convention for determining normal temperatures, Staff used observed maximum and minimum daily temperatures for the 30-year period of January 1, 1981, through December 31, 2010, on which NOAA bases its calculation of normal.

Table 1

	Classes of Customers					
Production Allocation Factors	**Res**	**SGS**	**LGS/SPS**	**LPS**	**LTS**	**Lighting**
Staff - Base, Intermediate & Peak (BIP)	47.37%	10.70%	27.71%	7.40%	6.11%	0.70%
Ameren Missouri - Average and Excess (A&E 4NCP)	46.89%	10.65%	28.47%	7.23%	6.04%	0.72%
MIEC - Average and Excess (A&E 4NCP)	46.89%	10.65%	28.47%	7.23%	6.04%	0.72%
OPC - Average & 4 Coincident Peak (A&4CP)	41.65%	10.00%	30.49%	8.75%	8.83%	0.30%
OPC Alternative - Average and Excess (A&E 4NCP)	46.88%	10.65%	28.47%	7.23%	6.05%	0.73%

Q. How does the Production-Capacity allocator of Ameren Missouri, MIEC and OPC's A&E studies compare, methodologically, to Staff's BIP study?

A. Staff's production allocators differ from Ameren Missouri, MIEC and OPC's alternative method in four areas:

1. Allocation method;
2. Time period used;
3. Normal weather impact; and
4. Energy Efficiency impact.

Q. Would you explain the differences in the allocation methods used?

A. First, the "Average" piece in Ameren Missouri, MIEC, and OPC's A&E method are very similar to Staff's "Base" piece in the BIP method, as both methodologies use the annual kWh at generation. The difference in approach between the A&E methodology and Staff's BIP methodology is in how the next component(s) of the allocator are determined. Both Staff's BIP method and the A&E method use Non-Coincident Peak ("NCP")

information, but Staff's BIP method separates the remaining capacity piece into two components, an "intermediate" component and "peak" component, while the A&E studies only use one component, the "excess" piece, in its calculations. Staff calculates the Intermediate component ("I" component of BIP method) using 12 NCP information from all 12 months of the update period, and the Peak component ("P" component of BIP method) using 3 NCP information from the months of June, July and August (months of three highest system peaks).[3] The Intermediate component is calculated on the proportion of demand established less the Base component already allocated. The Peak component is calculated on the proportion of demand established less the Base and Intermediate components already allocated. This process eliminates any double counting that could occur because the BIP method reduces the peaks by the previous components.

However, even though Staff disagrees with certain portions of the A&E production allocator, the production allocators used by Ameren Missouri, MIEC, and Staff are all within a similar range for each class.

Q. Why did Staff use a different time period?

A. In this case, there are eleven months between the end of the test year (September 2011) and the true-up (August 2012). In an attempt to capture a more likely forward-looking indictor of non-weather related electricity usage per customer, Staff used the most recent temperature and load data available, and therefore, based its analysis on an updated twelve-month period of February 1, 2011 through January 31, 2012. This reduces the lag between the end of the analysis period and the true-up date to just seven months.

Q. What time periods did the other parties use?

[3] Ameren Missouri is a summer peaking utility with system peak occurring in a summer month (July), with other summer months (June, August) close (percentage-wise) to the system peak.

A. The Ameren Missouri, MIEC, and OPC analyses reflected the test year of October 1, 2010, through September 30, 2011.

Q. What did the parties use for normal weather?

A. All of the other parties used the same data that Ameren Missouri used in its study so the other parties used the same weather as Ameren Missouri. Ameren Missouri used the same weather history to calculate normal weather for this case as it did in its previous four electric cases. This was the weather history where Staff and Ameren Missouri agreed to adjust temperature data from NOAA in the 30-year period of January 1, 1971 through December 31, 2000, for the St. Louis Lambert Airport weather station based on a merger case and complaint case agreement in Case Nos. EM-96-149 and EC-2002-1.

Q. What weather history did Staff use?

A. Staff used the U.S. National Oceanic and Atmospheric Administration's ("NOAA's") normal weather based on the 30-year period of 1981 through 2010.

Q. Why did Staff change what it used?

A. The adjustments previously agreed to by Staff and Ameren Missouri were necessary because NOAA's previous normals did not take into account a 1996 instrumentation change. However, NOAA's new normals 1981- 2010 published in July 2011 accounted for not only the 1996 instrumentation change, but also instrumentation changes in 1989 and 2002.

Q. Why is it important to use the correct weather data?

A. This is the first Ameren Missouri rate case in which Staff has used NOAA's normal weather based on the 30-year period of 1981 – 2010 as these " climate normals" were

published in July 2011 by the National Climatic Data Center ("NCDC") of the U.S. NOAA as the authoritative definition of normal weather.

Normalized and annualized kWh usage are used in developing the average piece of the A&E production allocator used by Ameren Missouri, MIEC, and OPC, and also the base piece of the Base, Intermediate and Peak production allocator used by Staff. The use of different normals results in different weather adjustments to the weather sensitive classes which in turn affect the A&E production allocators used by Ameren Missouri, MIEC, and OPC.

Q. Was the Energy Efficiency Adjustment included in the kWh usage used to develop allocation factors?

A. It appears that Ameren Missouri, MIEC, and OPC did not include the Energy Efficiency Adjustment, which is calculated from the energy savings and reduced demand of Ameren Missouri's Demand-Side Management ("DSM") programs savings in developing its A&E allocator. This would not result in a significant variation, but should be considered, just as weather adjustments, 365-days adjustments, and other annualizations were considered. Staff used the energy savings and reduced demand in developing its BIP production allocator.

MIEC Rate Design

Q. Does Staff agree with MIEC's rate design recommendation?

A. No, Staff does not. In this case, MIEC's recommendation is that the increase be segregated into a MEEIA revenue requirement and non-MEEIA revenue requirement. Staff would agree that the separate line item on a customer's bill under MEEIA should reflect the proper amount of each class' portion as agreed to by the parties under the *Unanimous Stipulation and Agreement* in Case No. EO-2012-0142, and approved by the Commission

with an effective date of August 11, 2012. A separate rate component should be designed for each rate class that collects the appropriate MEEIA cost from the appropriate customer classes, less opt-out customers, as contained in the *Unanimous Stipulation and Agreement*. The difference between MIEC's method and Staff's recommendation is that MIEC wants to take one component of the increase (MEEIA costs) and allocate that portion to specific classes without specifically considering other significant parts of the increase. This results in a significant increase to some classes while reducing the increase to other classes.

There are other large costs in the requested increase by Ameren Missouri that MIEC did not segregate or individualize by rate classes that would significantly alter the amount of increase granted by the Commission to individual customer classes. In Ameren Missouri's rate increase application and press release, Ameren Missouri identified four key components. These included (1) investments made primarily to improve the reliability of Ameren Missouri's aging infrastructure and comprise about $85 million; (2) higher net fuel costs of approximately $103 million; (3) higher costs for Ameren Missouri's energy efficiency costs of approximately $81 million; and (4) additional cost increases, including renewable energy requirements, material costs and employee benefits.

In this case, MIEC's rate design proposal is segregating one cost – the MEEIA costs (identified in 3 above) by class, without considering individual class cost responsibility for other large increase costs like fuel costs (identified in 2 above). This methodology significantly alters the amount of increase to individual customer classes. MIEC's rate design proposal wants to allocate the cost of compliance with the MEEIA rules to each class based on its level of responsibility. However, Staff disagrees with this proposal because it doesn't account for any of the other reasons for the rate increase, i.e., MIEC is not requesting to

allocate to each class its respective portion of (1) fuel costs, (2) investments to improve reliability and (3) other additional costs.

Q. Would you provide an example?

A. Yes. Staff developed Schedule MSS-R1 as an example. Schedule MSS-R1 is a comparison of segregating MEEIA costs and non-MEEIA costs as proposed by MIEC ("MIEC MEEIA Segregated") and a Staff duplication of MIEC's method segregating the MEEIA costs and the fuel costs ("MEEIA and Fuel Segregated"). This schedule shows that segregating certain components of the increase has a significant impact on certain classes.

Table 2, a summary of Schedule MSS-R1, shows the large variations in the total allocation of the rate increase between classes of MIEC MEEIA Segregated and MEEIA and Fuel Segregated.

Table 2
MIEC Rate Design Method
For 10% increase
($ in thousand)

	MIEC's MEEIA Segregated		MEEIA and Fuel Segregated		$	%
Rate Class	Rev Req ($)	% Increase	Rev Req ($)	% Increase	Difference	Difference
Residential	$153,142	13.09%	$143,612	12.27%	($9,530)	-0.81%
SGS	$18,005	6.25%	$16,581	5.76%	($1,424)	-0.49%
LGS/SPS	$62,678	8.36%	$66,159	8.82%	$3,481	0.46%
LPS	$15,362	8.09%	$18,320	9.65%	$2,958	1.56%
LTS	$6,055	4.09%	$11,336	7.66%	$5,281	3.57%
Lighting	$2,774	8.07%	$2,008	5.84%	($766)	-2.23%
Total	$258,016	10.00%	$258,016	10.00%	$0	0.00%

Q. Would you explain Table 2?

A. Table 2 compares MIEC's proposed plan versus what the numbers would be like if each customer class were responsible for its portion of MEEIA and its own fuel costs. The largest variation in dollars is the additional revenue requirement for the residential class of over $9.5 million dollars or 0.81% while the LTS class receives a $5.3 million reduction or 3.57% reduction using MIEC's recommendation.

Q. What are Staff's recommendations for rate design?

A. Based on Staff's CCOS study results, Staff recommends adjustments be made first on a revenue-neutral basis to all classes of customers based on all costs – not just the non-MEEIA costs. The revenue-neutral adjustments recommended by Staff are that Ameren Missouri's residential class receives a positive 1% adjustment, the lighting class receives a positive 3% adjustment, and the remaining classes of customers (SGS, LGS/SPS, LPS and LTS) receive a negative adjustment of approximately 1%. After the recommended revenue-neutral adjustments are made, any overall change in revenues ordered by the Commission should be applied on an equal-percentage basis across-the board to the adjusted class revenues.

Staff's recommendation does not include segregating certain components of the increase as recommended by MIEC such as MEEIA and non-MEEIA costs or fuel and non-fuel costs. Staff correctly applies these components in its CCOS study and makes revenue-neutral adjustments based on its CCOS study. Staff's recommendation brings each customer class closer to its cost-of-service. The rate design, and true-up in subsequent rate cases as agreed to in Case No. EO-2012-0142, will make sure that each class recovers the MEEIA costs that it incurs as required by MEEIA.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

(ILLUSTRATIVE PURPOSES ONLY)

AMEREN MISSOURI
Case No. ER-2012-0166

MIEC RATE DESIGN METHOD
For 10% Increase
($ in Thousand)

MIEC's MEEIA SEGREGATED (1)

Rate Class	Current Revenue	Revenue Adjustmen: 2% Increase Residential & Lighting	Revenue Adjustmen: 1.75% Decr. All Other Classes	Adjusted Current Revenues	MEEIA Revenue Requirement	Non-MEEIA Remainder of 10% increase Applied to All Classes	Rev Req ($)	% Increase
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Residential	$1,170,105	$23,402		$1,193,507	$58,750	$70,990	$153,142	13.09%
Small Gen. Service	$288,054		($5,044)	$283,010	$6,216	$16,833	$18,005	6.25%
Large G.S. / Sm Primary	$749,850		($13,131)	$736,719	$31,989	$43,820	$62,678	8.36%
Large Primary	$189,820		($3,324)	$186,496	$7,593	$11,093	$15,362	8.09%
Large Transmission	$147,949		($2,591)	$145,358	$0	$8,646	$6,055	4.09%
Lighting	$34,380	$688		$35,068	$0	$2,086	$2,774	8.07%
Total	$2,580,158	$24,090	($24,090)	$2,580,158	$104,548	$153,468	$258,016	10.00%

(1) PROPOSAL BY MIEC - SCHEDULE MEB-COS-7 (Page 3 of 5)

MEEIA AND FUEL SEGREGATED AS CALCULATED BY STAFF (2)

Rate Class	Current Revenue	Revenue Adjustmen: 2% Increase Residential & Lighting	Revenue Adjustmen: 1.75% Decr. All Other Classes	Adjusted Current Revenues	MEEIA Revenue Requirement	Fuel Revenue Requirement	Non-MEEIA & Fuel Remainder of 10% increase Applied to All Classes	Rev Req ($)	% Increase
	(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)
Residential	$1,170,105	$23,402		$1,193,507	$58,750	$38,115	$23,345	$143,612	12.27%
Small Gen. Service	$288,054		($5,044)	$283,010	$6,216	$9,873	$5,536	$16,581	5.76%
Large G.S. / Sm Primary	$749,850		($13,131)	$736,719	$31,989	$32,891	$14,410	$66,159	8.82%
Large Primary	$189,820		($3,324)	$186,496	$7,593	$10,403	$3,648	$18,320	9.65%
Large Transmission	$147,949		($2,591)	$145,358	$0	$11,084	$2,843	$11,336	7.66%
Lighting	$34,380	$688		$35,068	$0	$634	$686	$2,008	5.84%
Total	$2,580,158	$24,090	($24,090)	$2,580,158	$104,548	$103,000	$50,468	$258,016	10.00%

(2) COMPARATIVE PURPOSES - USING MIEC'S PROPOSAL With FUEL ALSO SEGREGATED