Exhibit No.:

Issues: Lighting Class Cost of Service Study

Witness: Philip B. Difani, Jr.

Sponsoring Party: Union Electric Company
Type of Exhibit: Direct Testimony

Case No.: ER-2011-0028

Date Testimony Prepared: September 3, 2010

### MISSOURI PUBLIC SERVICE COMMISSION

**CASE NO. ER-2011-0028** 

**DIRECT TESTIMONY** 

**OF** 

PHILIP B. DIFANI, JR.

 $\mathbf{ON}$ 

**BEHALF OF** 

UNION ELECTRIC COMPANY d/b/a AmerenUE

# TABLE OF CONTENTS

I.	INTRODUCTION	. 1
II.	PURPOSE OF TESTIMONY	. 2
	STIPULATION AND AGREEMENT FROM CASE NO. ER-2010-0036	. 2
IV.	LIGHTING CLASS COST OF SERVICE REFINEMENT ANALYSIS	4
V.	DEVELOPMENT OF INDIVIDUAL RATES	. 7
VI.	OTHER LIGHTING CHANGES	. 7
VII	SUMMARY OF TESTIMONY	10

1	DIRECT TESTIMONY					
2	OF					
3	PHILIP B. DIFANI, JR.					
4	CASE NO. ER-2011-0028					
5	I. <u>INTRODUCTION</u>					
6	Q. Please state your name and business address.					
7	A. My name is Philip B. Difani, Jr. and my business address is One Ameren					
8	Plaza, 1901 Chouteau Avenue, St. Louis, Missouri.					
9	Q. By whom and in what capacity are you employed?					
10	A. I am a Rate Engineer for Union Electric Company d/b/a AmerenUE					
11	("AmerenUE" or "Company").					
12	Q. Please describe your educational background and employment					
13	experience.					
14	A. My educational background consists of a Bachelor of Science Degree in					
15	Mechanical Engineering from Washington University in May 1983 and a Master of					
16	Business Administration from Southern Illinois University in March 1993. I began my					
17	engineering career at Union Electric Company in the Nuclear Function as a Mechanical					
18	Engineer in May 1983. I was responsible for various modifications to the Callaway Plant					
19	including preparing specifications, drawings and other design-related matters. I					
20	transferred to the Rate Engineering Department in February 1991.					
21	Q. Please describe your duties and responsibilities as Rate Engineer -					
22	Rates and Tariffs.					

- 1 A. My duties and responsibilities include assignments related to the gas and
- 2 electric rates of the Ameren Companies, including participation in regulatory
- 3 proceedings, rate analyses, conducting various studies and other rate or regulatory
- 4 projects as assigned.

6

# II. PURPOSE OF TESTIMONY

- Q. What is the purpose of your direct testimony in this proceeding?
- A. My direct testimony discusses: a) the development and results of an
- 8 analysis which refines Company witness William M. Warwick's Lighting class' cost of
- 9 service results to equitably further apportion costs among each of the following active
- 10 Lighting classifications: 1) Street and Outdoor Area Lighting Company Owned (5M),
- 2) Street and Outdoor Area Lighting Customer Owned (6M), and 3) Municipal Street
- 12 Lighting Incandescent (7M); b) the development of the revenue increase being
- proposed for each Lighting classification, 5(M), 6(M), and 7(M); c) the development of
- 14 the individual rates for each Lighting classification and the street lighting offerings
- 15 therein; and d) other miscellaneous Lighting tariff revisions. It should be noted that
- 16 currently the Company's Schedule 5, Schedule of Rates for Electricity, also contains
- 17 Private Ornamental Street Lighting Service Classification 8(M); however, the Company
- is proposing to discontinue this service classification as no customers are being served on
- 19 this rate.

#### 20 III. STIPULATION AND AGREEMENT FROM CASE NO. ER-2010-0036

- Q. Did the First Non-unanimous Stipulation and Agreement in the
- 22 Company's most recently adjudicated electric rate case (Case No. ER-2010-0036)
- contain any language relative to a cost of service study for municipal lighting?

1	A. Yes. Page 7 contains the following language addressing a municipal						
2	lighting study:						
3 4 5	"13. With regard to municipal lighting, AmerenUE agrees:  a. to immediately commence a cost of service study for all rates						
6 7 8 9 10 11 12 13 14 15 16	under service classifications 5M and 6M, and upon completion of that study to share the results, all work papers and underlying data with financial and accounting consultants for the Municipal Group, Public Counsel, the Staff and other interested signatories. Prior to commencing such study, AmerenUE will meet with the Municipal's Group's financial and accounting consultants and those at the Public Counsel's office and with the Staff, and those representing other interested signatories in a collaborative fashion in an attempt to agree on the parameters and general guidelines of the study."						
17	Q. Did the Company meet with the parties, as described above?						
18	A. Yes. The Company met with the above-listed parties on two occasion						
19	after the June 21, 2010 effective date of new rates from Case. No. ER-2010-0036.						
20	During the initial meeting, which occurred prior to the commencement of the study						
21	AmerenUE provided the participants with a proposed framework for the study and took						
22	comments on that process. After that meeting, AmerenUE engaged in several telephone						
23	conversations with representatives of the Municipal Group to answer questions about the						
24	Company's proposed methodology. After receiving a letter from the Municipal Group						
25	containing multiple additional questions about street lighting issues and the study						
26	AmerenUE held a second meeting to clarify those issues.						
27	Q. Has AmerenUE provided the required documentation to the						
28	Municipal Group, the Office of Public Counsel and the Staff?						
29	A. Concurrent with the filing of this case, AmerenUE is providing all wor						
30	papers and underlying data.						

2

8

11

17

21

#### IV. LIGHTING CLASS COST OF SERVICE REFINEMENT ANALYSIS

#### Q. What was the starting point of your analysis?

- 3 A. As I mentioned earlier, the starting point for my analysis was the
- 4 Company's class cost of service study developed for this proceeding by Mr. Warwick.
- 5 Specifically, I used the Lighting Class annual revenue requirement necessary to recover
- 6 the operating and maintenance expenses, taxes, depreciation expense, and a fair return on
- 7 the Company's investment in property and plant attributable to the Lighting Class.

#### Q. What was the next step in your analysis?

9 A. Next, the class cost of service study results for Lighting was 10 functionalized as Production, Transmission, Distribution or General Plant. However, this functionalization was not necessary for Account 373 since costs from this account were 12 directly assigned to the Lighting Class. The summation of the net investment for the 13 Lighting Class was then converted to an annual revenue requirement through the 14 application of an internally calculated fixed charge rate ("FCR") factor based on the 15 Company's class cost of service study. The application of this FCR to the Company's 16 Lighting investment reflects allowances for the Company's cost of money, income taxes, depreciation expense, and property and payroll taxes. In addition, my analysis included 18 the expenses which were allocated to the Lighting class as a result of the class cost of 19 service study. While there is significant investment and expense allocated directly to 20 Lighting (e.g. accounts 373, 585 and 596), many of the remaining costs are common investment and expense items of which Lighting receives an allocated portion. As such I 22 differentiated "Lighting-only" investment and expense from the common investment and 23 expense allocated to Lighting.

1	Q.	How were the Lighting-only investment and expense allocated to the						
2	Company's	Lighting offerings?						
3	A.	The Lighting-only investment is identified in Federal Energy Regulatory						
4	Commission	("FERC") Account 373 (directly assigned). As discussed above, the net						
5	investment was converted into a revenue requirement by the use of a FCR. Lighting-only							
6	expense is captured by FERC Accounts 585 and 596. Both investment and expense was							
7	spread to applicable offerings as described below.							
8	Q.	How was the common investment and expense allocated by the class						
9	cost of servi	ce study assigned to the Company's Lighting offerings?						
10	A.	This investment was also multiplied by the FCR to approximate the						
11	needed revenue requirement for such investment as described above. Common							
12	investment a	and expenses were then allocated on a kilowatt-hour basis to all Lighting						
13	offerings.							
14	Q.	How was the proposed revenue requirement allocated to all the						
15	Lighting rat	tes?						
16	A.	The proposed revenue requirement was then classified into three						
17	categories:							
18		Energy Related - This category includes all common investment and						
19	expense item	ns, both metered and unmetered. This revenue requirement was spread to all						
20	Lighting off	erings using kilowatt-hours ("kWh"), except for the meter investment and						
21	meter readin	g expense which was allocated on a per meter basis.						
22		Lighting-only Investment - Lighting-only investment was entirely						
23	allocated to	our 5(M) and 7(M) Lighting Rates. The vast majority of these costs are due						

- 1 to the Company's investments in lighting poles, fixtures, brackets, cable, wire,
- 2 installation labor and applicable construction overheads. The Company determined the
- 3 current cost of each of its 5(M) rate offerings and used a ratio of the current cost of such
- 4 investments to the net original cost rate base of this same investment to determine the net
- 5 investment on a per fixture basis. A fixed charge rate was then used to determine the
- 6 revenue requirement.
- 7 Lighting-only Operation and Maintenance ("O&M") Expense Directly
- 8 assigned O&M expense is reflective of the Company's cost of upkeep for the Lighting
- 9 offerings. This category includes the O&M expense for light bulb and photocell
- 10 replacement on all offerings except for metered and the 6(M) Energy Only, for which the
- 11 Company does not perform this service. It also includes the repair of poles, brackets,
- 12 fixtures, cable and wire for 5(M) and 7(M) non-metered offerings. While the Company
- offers an "Energy and Maintenance" 6(M) rate classification, the Company's primary
- responsibility is to maintain only the bulb and photocell. The 6(M) customer is required
- 15 to maintain its investment, which can include the pole, bracket, and cable or wire to the
- 16 fixture, that they own. The Company does not maintain any of the metered facilities in
- 6(M) or 7(M) except for the meter itself.
- 18 Q. How does the Company differentiate its O&M expenses between bulb
- and photocell repairs and the O&M expenses of its facilities serving 5(M)
- 20 customers?
- 21 A. The Company reviewed its known documentation for all Lighting work
- 22 for the past three years, and was able to identify in summary from the expenses
- associated with O&M for the bulb and photocell (~27%) and that for repair of other

- 1 Lighting facilities (~73%). The former is allocated to all offerings (except the metered
- and the 6(M) Energy Only customers); the latter only to 5(M) and 7(M) customers.

# 3 V. <u>DEVELOPMENT OF INDIVIDUAL RATES</u>

- 4 Q. How did you develop the Lighting rates based on the above
- 5 information?
- 6 A. This was accomplished in several steps:
- 7 1. Based on the across-the-board increase recommended by Company
- 8 witness Wilbon L. Cooper, the Lighting Class, in total, was allocated the system average
- 9 increase of 10.8%.
- 10 2. While my analysis indicated the 6(M) rate should recieve an increase of
- 11 216% over their current rate, such an increase was reduced to 20% because of other
- 12 factors to be considered, such as, revenue stability, rate stability, effectiveness in yielding
- 13 total revenue requirements, public acceptance, and value of service, as discussed in
- 14 Mr. Cooper's testimony. Because the 7(M) rate is extremely limited, it received the
- system average increase of 10.8%. The remainder of the increase is allocated to the 5(M)
- rate class, which results in a 9.7% increase.
- 17 3. New rates were calculated based on current class revenue plus the
- 18 calculated increase to each class. Such increases were spread intra-class on an across-
- 19 the-board basis.

### 20 VI. <u>OTHER LIGHTING CHANGES</u>

- Q. Are there other changes to the Lighting tariffs being proposed in this
- 22 **case?**

- 1 A. Yes, we are proposing to discontinue collecting the monthly charges on
- 2 distribution facilities installed specifically for lighting equipment, which are delineated in
- 3 Paragraph E.2 on Sheet No. 40, and we are proposing to discontinue the "Circuit Charge
- 4 per Month" on Sheet No. 50 of the Company's current Schedule 5 Schedule of Rates
- 5 for Electricity.

# Q. Please explain the history of these charges.

- A. Prior to September, 1988, when new installations of Company-owned
- 8 lights under the 5(M) rate required the installation of distribution facilities (i.e., separate
- 9 poles, spans, UG circuits, etc.), those facilities were billed on a monthly basis. In
- 10 September, 1988, the mechanism to charge for these excess facilities changed to a one-
- time, upfront charge. Customers had the option to pay the one-time charge for their
- existing excess facilities or continue to pay the monthly charge for those facilities already
- in place in September, 1988. Most customers chose to continue the monthly charge.
- 14 Since September, 1988, any excess facilities required for new lighting installations have
- been paid for upfront by the customers requesting those installations.
- Q. Why are you proposing to eliminate the monthly charges on pre-

# 17 September 27, 1988 pole and cable charges at this time?

- 18 A. There are several reasons to consider eliminating the monthly charges for
- 19 these lighting facilities at this time. First, elimination of the monthly charges will
- 20 simplify the Company's record-keeping and billing for Lighting service. Record-keeping
- 21 for these pre-September 1988, lighting facilities can be extremely challenging due to
- 22 reconfiguration of streets and neighborhoods. Additionally, over the past several years
- 23 the Company has received numerous complaints from customers affected by these

- 1 charges alleging that these facilities have been "paid for." Clearly, this argument is not
- 2 consistent with the idea that these customers are paying monthly for service enabled by
- 3 these facilities and are not paying for the facilities themselves. However, considering the
- 4 simplification of the administration of the billing of these facilities along with the
- 5 aforementioned complaints, the Company has concluded that it is reasonable to eliminate
- 6 these charges at this time.

# 7 Q. Will the Company continue to maintain and replace these distribution

# lighting facilities following the elimination of the monthly charge?

- 9 A. Yes, the Company will continue to maintain those items in place. If the
- 10 replacement consists of a non-stock item, such as an ornamental concrete pole or a steel
- 11 breakaway pole, AmerenUE will replace it with a like substitute. Any customer-
- requested changes to or relocations of these facilities would be performed under the
- 13 current tariff provisions.

## 14 Q. How would this change be implemented in the Company's tariffs?

- 15 A. The charges, which are shown in paragraph 2 under Section E of the
- 16 Company's 5(M) tariff, would be removed from the tariff as would similar circuit charges
- in the 7(M) tariff. Paragraph 1 would remain unchanged, as that is the current provision
- 18 for providing excess distribution lighting facilities. This same change would be
- 19 applicable to all 5(M) and 7(M) customers, whether Residential, Non-Residential, or
- 20 Governmental.

# 1 VII. SUMMARY OF TESTIMONY

## 2 Q. Please summarize your testimony and conclusions.

- 3 A. Based on the results of Mr. Warwick's class cost of service study, I 4 developed rates for all Lighting Classes and offerings within Lighting Classes 5(M), 5 6(M), and 7(M). Revenue requirements were determined based on plant investment and 6 expense, direct O&M expense, and direct investment in lighting facilities allocated on the 7 basis of kilowatt-hours. These revenue requirements were then added together to calculate a total revenue requirement, based on the cost of service study, for each of the 8 9 Lighting offerings by the Company. The result of this analysis indicated an increase of 10 216% of the 6(M) rate and a more modest 15% increase in the 5(M) rate. The Company 11 has proposed to limit the increase to the Lighting Classes as a whole to the overall base 12 rate increase of 10.8%. Because the Company is proposing to limit the increase, it has 13 further proposed to limit the 6(M) rate class to 20% and spread the remaining increase 14 among its other Lighting Classes. Such increases were then spread across-the-board on 15 an intra-class basis. Furthermore, the Company has proposed to eliminate the pre-16 September, 1988 pole rental, span and circuit charges from the 5(M) and 7(M) tariffs. 17 The Company will continue to own and maintain these facilities.
- 18 Q. Does this conclude your direct testimony?
- 19 A. Yes, it does.

# BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of Union Electr d/b/a AmerenUE for Authoric Tariffs Increasing Rates for E Service Provided to Custome Company's Missouri Service	ty to File Electric rs in the	) ) ) )	Case No. ER-2011-0028					
AFFIDAVIT OF PHILIP B. DIFANI, JR.								
STATE OF MISSOURI CITY OF ST. LOUIS	) ) ss )							
Philip B. Difani, Jr., being first duly sworn on his oath, states:								
1. My name is Ph	nilip B. Difani	, Jr. I work i	n the City of St. Louis, Missouri,					
and I am employed by Union Electric Company d/b/a AmerenUE as Rate Engineer.								
2. Attached heret	o and made a	part hereof fo	or all purposes is my Direct					
Testimony on behalf of Union	n Electric Com	ipany d/b/a A	AmerenUE consisting of 10					
pages, all of which have been	prepared in w	ritten form f	or introduction into evidence in					
the above-referenced docket.								
3. I hereby swear	and affirm the	at my answer	rs contained in the attached					
testimony to the questions the	erein propound	led are true a	nd correct.					
		Philip Hail	B. Difami, Jr.					
Subscribed and sworn to before me this <u>3</u> day of September, 2010.								
			da Tesdall					
My commission expires:	Missouri - St	ill - Notary Publed, State of Louis County #07158967						