Missouri Public Service Commission

Exhibit No.: 075

Issues: Class Cost of Service Study
Witness: William M. Warwick
Sponsoring Party: Union Electric Company
Type of Exhibit: Direct Testimony

Case No.: ER-2007-0002

Date Testimony Prepared: July 3, 2006

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2007-0002

DIRECT TESTIMONY

OF

WILLIAM M. WARWICK

ON

BEHALF OF

UNION ELECTRIC COMPANY d/b/a AmerenUE

> St. Louis, Missouri July 2006

> > Ameren UE Exhibit No.
> >
> > Case No(s). DR-7007-0002
> >
> > Date 2007 Rptr DE

TABLE OF CONTENTS

I.	INTRODUCTION	1
H.	PURPOSE AND SUMMARY OF TESTIMONY	2
III.	CLASS COST OF SERVICE STUDY	2
IV.	UNBUNDLING FUNCTIONAL COST COMPONENTS	.12

1		DIRECT TESTIMONY
2		OF
3		WILLIAM M. WARWICK
4		CASE NO. ER-2007-0002
5		I. <u>INTRODUCTION</u>
6	Q.	Please state your name and business address.
7	Α.	William M. Warwick, Ameren Services Company ("Ameren Services"), One
8	Ameren Plaz	a, 1901 Chouteau Avenue, St. Louis, Missouri.
9	Q.	What is Ameren Services Company?
10	Α.	Ameren Services Company provides various corporate, administrative and
11	technical sup	port services for Ameren Corporation ("Ameren") and its affiliates, including
12	Union Electr	ic Company d/b/a AmerenUE (referred to herein as "Company" or
13	"AmerenUE'	').
14	Q.	What is your position with Ameren Services?
15	A.	I am Managing Supervisor of Rate Engineering.
16	Q.	Please describe your educational background and employment
17	experience.	
18	Λ.	I received a Bachelor of Science degree in Engineering Management from the
19	University o	f Missouri-Rolla in December 1978.
20		I was employed at ACF Industries' Amcar Division-St. Louis Plant from
21	December, 1	978 to December, 1981, as an engineer in the Industrial Engineering
22	Department,	responsible for project planning. I began working at Union Electric Company
23	in the Rate E	Engineering Department in December, 1981.

1		My duties and responsibilities include assignments related to the Company's								
2	gas and electric rates, including participation in regulatory proceedings, rate analysis, the									
3	development and interpretation of the Company's gas and electric tariffs, including rules and									
4	regulations, and other rate or regulatory projects as assigned.									
5		II. PURPOSE AND SUMMARY OF TESTIMONY								
6	Q.	What is the purpose of your direct testimony in this proceeding?								
7	A.	I am responsible for:								
8		(1) Developing a fully allocated embedded customer class cost of service								
9		study for the Company's Missouri jurisdictional electric operations fo								
0 1		the test year period of the twelve months ending June 30, 2006; and								
11		(2) Disaggregating, or unbundling, the various functional cost componen								
12		included in the Company's allocated class cost of service study.								
13		An Executive Summary of my testimony is included in Attachment A of								
14	Company w	ness Wilbon L. Cooper's direct testimony.								
15		III. <u>CLASS COST OF SERVICE STUDY</u>								
16	Q.	Please explain the information contained in Schedule WMW-E1 attached								
17	to your test	iony.								
18	Α.	Schedule WMW-E1 contains the results of my customer class cost of service								
19	study for the	Company's Missouri jurisdictional operations for the test year ending June 30,								
20	2006. This	udy is based upon the Company's present rate levels and uses weather								
21	normalized :	les during the test year. A Missouri jurisdictional cost of service study								
22	prepared by	Company witness Gary S. Weiss and discussed in his direct testimony provided								

1	the total rate l	pase and expense items that formed the starting point for this class cost of
2	service study.	
3	Q.	What is generally meant by the term "cost of service study"?
4	A.	A cost of service study determines a utility's aggregate annual revenue
5	requirement r	necessary to recover its operating and maintenance expenses and taxes,
6	depreciation of	of its plant, and a fair return on the utility's net investment in property and plant.
7	Q.	What information is provided by a class cost of service study?
8	A.	A class cost of service study allocates the various costs identified in the cost
9	of service stu	dy to each of the Company's rate classes, to determine as accurately as possible
0	the cost of se	rving each of the Company's rate classes.
1	Q.	What rate classes were included in the Company's class cost of service
2	study?	
3	A.	The Company's existing residential, small general service, large general
4	service, small	primary service, large primary service, large transmission service and street
5	and outdoor a	area lighting service classes were allocated their respective portions of the
6	Company's o	perating costs in the class cost of service study.
7	Q.	What categories of cost did you examine in developing the customer class
8	cost of service	ee study summary included in Schedule WMW-E1 of your testimony?
9	A.	I conducted a detailed analysis of all elements of investment and expense
20	associated wi	th the Company's Missouri electric operation for the purpose of allocating such
21	costs to the n	on-lighting customer classes served by the Company. As a part of this analysis,
22	total expense	s and investment in property and plant were classified into their
23	customer-rela	ited energy-related and demand-related components

1	Q. Were the rate base investment and expenses associated with the
2	Company's lighting customers considered in the class cost of service study you
3	performed?
4	A. Yes, they were. However, in considering such lighting costs in my study, I
5	employed a cost of service approach similar to that historically utilized by the Commission
6	Staff. This approach consists of allocating the total of all Company investment and expense
7	to the non-lighting customer classes only, as if there were no lighting customers. This
8	allocation of such costs to the non-lighting classes is offset by also allocating, or crediting,
9	existing lighting revenues to the non-lighting customer classes. This allocation of lighting
10	costs and revenues was done based on each class' respective total net original cost rate base
11	This process presumes that the Company's current lighting revenues, which are about 1% of
12	the Company's total revenues, currently provide a fair and reasonable recovery of the
13	Company's total costs of providing lighting service. Said another way, it is presumed that
14	allocated lighting revenues are equivalent to allocated lighting costs.
15	Q. Please describe the development of the factors used to allocate costs to
16	each customer class, other than the lighting customers.
17	A. The allocation factors for each customer class were determined by calculating
18	the proportionate share of total customer or property units of each class and the total energy
19	or demand related units of each class, including applicable losses. These calculations were
20	developed at the various voltage levels on the Company's generation, transmission and

distribution system that are associated with the facilities whose costs are being allocated.

l	Q.	After the allocation factors for each class were derived, what was the next
2	step in the st	udy?
3	A.	The next step was to apply these allocation factors to the various functional
4	components of	of rate base and operating and maintenance expenses, as developed in total for
5	the Company	's Missouri jurisdictional operations.
6	Q.	Please describe how those costs and expenses were allocated to the
7	customer cla	sses.
S	A.	The original cost and depreciation reserves of the major functional
9	components	of the Company's Missouri electric rate base were allocated to customer classes
10	as described	below. The resulting dollar amounts (in thousands) allocated to each class are
11	provided in S	chedule WMW-E1.
12		(1) <u>Production Plant.</u> Production plant was allocated to each customer
13	class on the b	pasis of the Four Non-Coincident Peak (4 NCP) Average and Excess Demand
14	allocation fac	ctors for each customer class at the Company's generating stations. Non-
15	coincident pe	eak demand is the customer class' maximum load at any time of the study period
16	regardless of	the time of occurrence or magnitude of the Company's system peak. The four
17	non-coincide	nt peak demands are the average of the customer class' four maximum monthly
18	loads. The d	irect testimony sponsored by Mr. Cooper in this docket establishes why the
19	4 NCP Avera	age and Excess methodology is appropriate for the allocation of the Missouri
20	jurisdictiona	Production Plant to the various customer classes.
21		(2) <u>Transmission Plant.</u> Transmission line and substation investment was
22	allocated to o	each customer class on the basis of the twelve coincident peak (12 CP) demands

of each class at their point of input to the Company's transmission system. Coincident peak

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- demand is the customer class' peak load at the time of occurrence of the Company's system
- 2 peak. The twelve coincident peak demands are the customer class' twelve monthly loads at
- 3 the time of the Company's twelve monthly system peaks. Such 12 CP allocation is
- 4 consistent with the development of the Ameren system transmission revenue requirement,
- 5 under the Midwest Independent Transmission System Operator, Inc. (MISO).

secondary distribution voltage is below 600 volts.

6 (3) <u>Distribution Plant.</u> The Company's Distribution Plant was allocated to
7 each customer class based upon the results of a detailed analysis of the functions performed
8 by the facilities in Distribution Plant Accounts 360-369. This analysis determined the
9 breakdown of each account based on its customer related and primary and secondary voltage
10 demand-related functions. Primary distribution voltage is 600 volts and above, while

The portion of the Distribution Plant accounts assigned to the customer component was derived using the generally accepted and widely used zero intercept methodology described in the National Association of Regulatory Utility Commissioners (NARUC) Electric Utility Cost Allocation Manual. This approach to cost assignment is predicated on the fact that there is a zero or no load component in even the smallest available unit of utility distribution equipment. The zero intercept method identifies the portion of plant related to a hypothetical no-load or zero-intercept condition, i.e., the cost of simply making service available to a customer. The remaining, or demand-related, portion of the Company's Distribution Plant accounts was split between the primary and secondary voltage levels on the basis of a review of the functional utilization of various equipment and hardware in such accounts. For all distribution accounts, with the exception of Account 369, Services, the demand-related investment in each account was allocated to each customer

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jurisdictional cost of service study.

class on the basis of the non-coincident peak demand of each class at the appropriate primary 1 2 and secondary voltage levels. The demand-related investment in Account 369, Services, was allocated to 3 each customer class on the basis of the sum of the maximum demand of all customers in the 4 5 class at the secondary level. The maximum individual customer demand was used to reflect 6 the fact that the maximum demand of individual customers dictates the sizing of their service 7 facilities. 8 Distribution Account 370, Meters, was allocated to each of the customer 9 classes by allocation factors which weigh the results of multiplying the current cost of the 10 typical metering arrangement for each customer class by the number of meters used in 11 serving that class. All metering cost is classified as customer related. 12 Account 371-1, Installation on Customer's Premises Substation equipment, 13 was allocated to the Primary class on the basis of such customers' historic use of these 14 facilities. 15 Account 373, Street Lighting & Signal Systems, was allocated to the customer classes based on their net original cost rate base, as explained earlier. 16 17 (4) General Plant. The balance in this account was allocated to each customer class on the basis of the proportion of labor expense allocated to each class. This 18 19 "labor ratio" method of allocation is the same as that employed by Mr. Weiss in arriving at

the Missouri portion of General Plant and Administrative and General expenses in his

l	(5) <u>Accumulated Reserves for Depreciation.</u> As such reserves are
2	functionalized by type of plant, these reserves were allocated on the same basis as the
3	allocation of the various plant accounts, as described above.
4	(6) <u>Materials & Supplies.</u> This component consists of fuel inventories,
5	power pool materials related to power plants and transmission facilities, and local materials
6	related mainly to distribution facilities. Fuel inventories and power pool materials are
7	directly related to generation and were therefore allocated on the basis of the energy
8	allocation factor. The local distribution materials were allocated on the basis of the
9	composite allocation of Distribution Plant, as previously described.
10	(7) <u>Cash Working Capital.</u> This item is related primarily to operating
11	expenses and was therefore allocated to each customer class in proportion to the total
12	operating expenses allocated to each class.
13	(8) <u>Customer Advances for Construction and Deposits.</u> This component
14	of rate base was assigned to each customer class on the basis of an analysis of the sources of
15	such deposits in Missouri.
16	(9) <u>Total Accumulated Deferred Income Taxes.</u> This component is related
17	primarily to investment in property and was therefore allocated to each customer class on the
18	basis of allocated gross plant.
19	Q. How did you allocate the Missouri jurisdictional test year operating and
20	maintenance expenses to the customer classes?
21	A. With very few exceptions, the operating and maintenance expenses were
22	allocated to the customer classes on the same basis as the related investment in plant was
23	allocated. This type of allocation employs the familiar and widely used "expenses follow

- plant" principle of cost allocation. For example, the allocator for Transmission Lines was
- 2 utilized to allocate Transmission Line expenses. The only exceptions to this procedure are as
- 3 follows:
- 4 (1) <u>Production Expenses.</u> This item consists of two categories: (1) fixed,
 5 which includes standard operating crews, nuclear support staff and net interchange capacity
- 6 charges; and (2) variable, which includes fuel, fuel handling, production plant maintenance
- 7 expenses and net interchange power energy costs. The fixed portion of production expenses
- 8 was allocated on the same basis as Production Plant, while the variable portion was allocated
- 9 using a variable allocator based on the megawatt-hours required at the generator to provide
- service to each respective customer class.
- 11 System Revenues. This item consists of revenues derived from system
- capacity sales, transmission service charges and miscellaneous rentals. Reserve capacity and
- transmission service charges primarily contribute to the reduction of fixed charges on
- 14 transmission facilities, while a significant portion of miscellaneous rental revenue is
- associated with General Plant. Thus, these revenues were allocated to the customer classes
- based on the application of the previously mentioned Transmission Plant allocators to the
- 17 reserve capacity and transmission service revenues, and "labor ratio" allocators to the
- 18 remaining miscellaneous rental revenue.
- 19 <u>Customer Accounts Expenses.</u> An analysis of Account 903, Customer
- 20 Records & Collection Expenses, indicated that approximately 18 percent of such expenses
- 21 are devoted to credit and collection activities. Therefore, this portion of Account 903 and all
- 22 of Account 904, Uncollectible Accounts, were allocated to each customer class on the basis
- 23 of the annual level of collection activities applicable to each customer class. The remaining

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1 82 percent of Account 903, and other direct Customer Accounts Expenses were allocated to 2 each customer class utilizing a weighted billing and customer accounts administration 3 allocation factor. Account 902, Meter Reading Expenses, was allocated to each class by 4 weighting the results of applying the monthly contract meter reading cost per meter to the 5 respective number of meters in each customer class. Account 901, Supervision, was allocated to each class on the basis of the composite allocation of all other Customer 6 7 Accounts Expenses. 8 (4) Customer Service & Sales Expenses. These expenses were allocated 9 to each customer class using the composite allocation of Customer Accounts Expenses. 10 Interest on Customer Surety Deposits. These expenses were allocated (5) 11 to each customer class on the basis of the previously allocated Customer Advances and 12 Deposits, since advances and deposit accounts are typically representative of where surety 13 deposits are booked. 14 (6) Administrative & General (A&G) Expenses. The Electric Power Research 15 Institute (EPRI) subscription included in the test year A&G expenses is based upon a formula 16 incorporating the Company's kilowatt-hour sales and revenues. Therefore, this expense was 17 allocated to each customer class on the basis of the application of this formula to the sales 18 and revenues of each customer class during the study period. 19 All remaining A&G expenses were allocated to the customer classes on the 20 basis of the class composite distribution of previously allocated labor expense. As indicated

earlier, this allocation of A&G expenses reflects the same methodology as that utilized by

Mr. Weiss in the Company's jurisdictional cost of service study.

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l	Q.	How did you allocate the test year depreciation expenses?								
2	A.	Since depreciation expenses are functionalized and are directly related to the								
3	Company's o	riginal cost investment in plant, depreciation expense within each function was								
4	allocated to each customer class on the basis of the previously allocated original cost									
5	production, t	ransmission, distribution and general plant.								
6	Q.	How did you allocate the test year real estate and property taxes?								
7	A.	Real estate and property tax expenses are directly related to the Company's								
8	original cost	investment in plant, so these expenses were allocated to customer classes on the								
9	basis of the s	sum of the previously allocated production, transmission, distribution and general								
10	plant investr	nent.								
11	Q.	How did you allocate the test year income taxes?								
12	A.	Income tax expense is directly related to the Company's net operating income								
13	as a proporti	on of its net rate base investment, i.e. rate of return on its net original cost rate								
14	base. As a re	esult, income taxes were allocated to each class on the basis of the net original								

Q. Did you make any adjustments to Company witness James R. Pozzo's weather normalized base rate revenues?

cost rate base allocated to each customer class.

A. Yes, despite Mr. Pozzo's effort to replicate Mr. Weiss' weather normalized base rate revenues, there was a \$21,883 difference. The difference was allocated to the classes based on the allocation of net original cost rate base. Such treatment is consistent with the allocation of lighting revenues mentioned earlier in my testimony. This adjustment can be found on my Schedule WMW-E1, line 5 titled Rate Revenue Variance.

1	Q.	Please identify Schedule WMW-E2.
2	A.	Schedule WMW-E2 was derived from my class cost of service summary
3	Schedule WM	4W-E1. To develop Schedule WMW-E2, I modified the base revenues of each
4	class in Scheo	dule WMW-E1 to reflect the class revenues necessary for the Company to
5	realize equali	zed rates of return from each customer class at the Company's current level of
6	total Missour	i revenues.
7	Q.	Please describe the methodology used to equalize rates of return for each
8	customer cla	ss, as reflected in your Schedule WMW-E2.
9	A.	The total net original cost rate base of each customer class was multiplied by
10	the Missouri	jurisdictional test year return of 8.869% to obtain the required total net
11	operating inc	ome for each class. This net operating income was then added to the operating
12	expenses for	each class to obtain the total operating revenue for each class required for equal
13	class rates of	return. The resulting cost of service of each customer class is set forth on line 6
14	of Schedule	WMW-E2. However, the revenue requirement of each customer class is as
15	indicated in I	Mr. Cooper's Schedule WLC-E2
16	17	V. UNBUNDLING FUNCTIONAL COST COMPONENTS
17	Q.	What is your second area of responsibility in this case?
18	A.	My second area of responsibility is to desegregate or unbundle the Company's
19	class revenue	e requirements in its allocated class cost of service study. These costs were
20	divided into	the following Functionalized Cost Categories.
21		1) Customer Related Costs
22		2) Distribution - Demand Related Costs
7 3		3) Transmission - Demand Related Costs

1		4) Production - Energy Related Costs
2		5) Production - Demand Related Costs
3	Q.	Why is a breakdown of such costs necessary?
4	A.	This breakdown was required by Mr. Cooper for use in the development of
5	proposed rate	es in this case, which are discussed in Mr. Cooper's direct testimony.
6	Q.	Please describe the general method utilized in your analyses for the
7	unbundling	of the Company's revenue requirement.
8	Α.	This unbundling process entailed a detailed analysis of the various
9	components	of the equalized customer class rates of return study presented in Schedule
10	WMW-E2 of	my testimony. As the Company's various components of cost presented in
11	Schedule WM	MW-E1 were allocated to customer classes on either a customer, energy or
12	demand relat	ed basis, the unbundling process consisted of extracting these components of
13	cost and assig	gning them to the functional cost categories indicated earlier.
14	Q.	In this accounting of the Company's total costs, how did you reconcile
15	total costs w	ith the Company's various sources of revenue?
16	Α.	As the objective was to unbundle the costs associated with the Company's
17	base rate reve	enues, the Company's miscellaneous revenue sources associated with Other,
18	Lighting and	System revenues were deducted from the unbundled functional cost categories
19	in a manner i	reflective of where the costs associated with such services appear in the
20	Company's a	ccounts. Some examples of Other Company revenues are late payment charges,
21	returned chec	ck charges, meter rentals, substation rentals and disconnect/reconnect charges.
22	System rever	nues generally consist of transmission service charges and facility and land rental
23	receipts.	

A.

Yes, it does.

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1 Q. Following this process of netting the Company's miscellaneous revenues 2 against their supporting costs, were the remaining unbundled costs the amounts which 3 are, in the aggregate, recovered in the Company's base rate revenues? 4 Yes, the steps I have described equated the Company's base rate revenues with A. the costs associated with such revenues. The results of this analysis are contained in 5 6 Schedule WMW-E3 of my testimony. As I indicated earlier, this information was used by Mr. Cooper in the development of the revised rates being proposed by the Company in this 7 8 case. 9 Q. Does this conclude your direct testimony?

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of Union Electric d/b/a AmerenUE for Authorit Tariffs Increasing Rates for E Service Provided to Custome Company's Missouri Service	y to File lectric rs in the))))	Case No	. ER-2007-0002						
AFFIDAVIT OF WILLIAM M. WARWICK										
STATE OF MISSOURI CITY OF ST. LOUIS)) ss)									
William M. Warwick, being first duly sworn on his oath, states:										
1. My name is W	1. My name is William M. Warwick. I work in the City of St. Louis, Missouri,									
and I am employed by Amere	en Services Co	ompany as M	anaging S	upervisor of Rate						
Engineering.										
2. Attached here	to and made a	part hereof f	or all purp	poses is my Direct						
Testimony on behalf of Unio	n Electric Cor	mpany d/b/a	AmerenUl	E consisting of 14 pages						
and Schedules WMW-E1 thr	ough WMW-l	E3, all of whi	ch have b	een prepared in written						
form for introduction into evi	idence in the a	ibove-referen	iced docke	et.						
3. I hereby swea	r and affirm th	nat my answe	rs contain	ed in the attached testimony						
to the questions therein propo	ounded are tru	e and correct								
Subscribed and sworn to before me this 3rd day of July, 2006. My commission expires: CAROLYN J. WOODSTOCK										
Notary Public - Notary Seal STATE OF MISSOURI Franklin County My Commission Expires: May 19, 2008										

AmerenuE MISSOURI ELECTRIC OPERATIONS ELECTRIC COST OF SERVICE ALLOCATION STUDY 12 MONTHS ENDED JUNE 2006

TITLE: SUMMARY							SMALL		LARGE		SMALL		LARGE		LARGE
		!	MIS\$OURI	RE	SIDENTIAL	G	EN SERV		GEN SERV	E	RIMARY	E	RIMARY		TRANS
	BASE REVENUE	s	1,970,790	s	850,213	s	226,710		418,267		182,440		156 050		487.000
2	OTHER REVENUE	s	62,831	S	32,743	ş S	6,417		10,700		4,656		155,952		137,209
3	LIGHTING REVENUE	•	27,111	S		\$	3,093		5,129		2,117	-	4.991		3,324
4	SYSTEM REVENUE		305 352	Š	141,552	Š	34,164	-	60,213	-	-	-	2,024		1,231
5	RATE REVENUE VARIANCE	ě	(22)	S		-	34,104				26,163	-	25,343		17,917
6	TOTAL OPERATING REVENUE	<u>;</u>			(11)			_	(4)	_	(2)		(2)	_	(1)
-	TOTAL OPERATING REVENUE	\$	2,366,061	\$	1,038,013	3	270,381	5	494,305	\$	215,374	5	188,307	\$	159,680
7	TOTAL DROP TAR DUST 11/2 14 0 51/5					_				_					
8	TOTAL PROD, T&D, CUST, AND A&G EXP	\$	1,466,770	\$	631,615		151,370	•	290,712		138,649	-	140,403		114,022
9	TOTAL DEPR AND AMMORT EXPENSES	\$	386,941	\$		\$	44,7 9 6		72,330	•	28,930	-	27,432		15,B34
10	REAL ESTATE AND PROPERTY TAXES	\$	99,528	\$		\$	11,520		18,610	-	7,447		7,065		4,092
11	INCOME TAXES	\$	233,191	\$	116,251	\$		\$	44,120		18,212	•	17,410		10,592
12	PAYROLL TAXES	\$	19,601	\$	9,331	\$	2,093		3,657	\$	1,732	\$	1,700	\$	1,087
13	FEDERAL EXCISE TAX	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
14	REVENUE TAXES	<u>\$</u>		\$	<u> </u>	\$		\$	<u>-</u>	<u>\$</u>		<u>\$</u>		\$	
15															
16	TOTAL OPERATING EXPENSES	\$	2,206,031	\$	1,005,611	\$	236,384	\$	429,429	\$	194,970	\$	194,009	\$	145,627
17															
18	NET OPERATING INCOME	\$	160,030	\$	32,402	\$	33,997	\$	64,876	\$	20,404	\$	(5,702)	\$	14,053
19															
20	GROSS PLANT IN SERVICE	\$	11.224,426	\$	5,727,483	\$	1,298,968	\$	2,098,760	\$	840,189	\$	797,165	\$	461,861
21	RESERVES FOR DEPRECIATION	5	4,500,562	\$	2,336,943	\$	524,193	\$	834,584	\$	324,668	5	306,876	\$	173,298
22															
23	NET PLANT IN SERVICE	\$	6,723,865	S	3,390,540	\$	774,776	5	1,264,176	\$	515,521	s	490,289	s	288,563
24							•						,		,
25	MATERIALS & SUPPLIES - FUEL	\$	227,226	\$	83,227	\$	22,416	\$	49,074	\$	24,304	s	25,033	S	23,172
26	MATERIALS & SUPPLIES -LOCAL	\$	21,434	\$	13,180	\$	2.694	s	3,557	S	1,060		914		29
27	CASH WORKING CAPITAL	\$	(13,595)	s	(5,854)	\$	(1,403)	s	(2,695)	\$	(1,285)	-	(1,301)	-	(1,057)
28	CUSTOMER ADVANCES & DEPOSITS	\$	(14,677)		(6,243)		(4,406)		(2,673)		(845)		(511)		(
29	ACCUMULATED DEFERRED INCOME TAXES	s	(1,095,577)		(559,136)		(126,813)				(81,970)		(77,764)		(45,040)
30		·		_				Ť		_			(,
31	TOTAL NET ORIGINAL COST RATE BASE	\$	5,848,677	s	2,915,713	S	667,264	\$	1,106,586	s	456,786	s	436,660	5	265,668
32		•		•	_,,	•	,20	•	.,.50,000	•	.55,700	*	.55,000	-	200,000
33	RATE OF RETURN		2.736%		1.111%		5.095%		5.863%		4.457%		-1.306%		5.290%

AmerenUE MISSOURI ELECTRIC OPERATIONS EQUALIZED CLASS RATES OF RETURN ANALYSIS 12 MONTHS ENDED JUNE 2006

	TITLE: SUMMARY EQUAL ROR (\$000's)						SMALL		LARGE	SMALL		LARGE			LARGE
		M	IISSOURI	RESIDENTIAL		G	<u>GEN SERV</u>		GEN SERV		PRIMARY		PRIMARY		TRANS
1	BASE REVENUE	\$	2,331,499	\$	1,078,160	\$	251,997	\$	451,572	\$	202,566	\$	200,486	\$	146,718
2	OTHER REVENUE	\$	62,831	\$	32,743	\$	6,417	\$	10,700	\$	4,656	\$	4,991	\$	3,324
3	LIGHTING REVENUE	\$	27,111	\$	13,515	\$	3,093	\$	5,129	\$	2,117	\$	2.024	\$	1,231
4	SYSTEM REVENUE	\$	305,352	5	141,552	\$	34,164	\$	60,213	\$	26,163	s	25,343	S	17,917
5	RATE REVENUE VARIANCE	\$	(22)	\$	(11)	\$	_(2)	\$	(4)	\$	(2)	\$	(2)	\$	(1)
6	TOTAL OPERATING REVENUE	\$	2,726,770	\$	1,265,960	5	295,668	\$	527,610	\$		5		5	169.189
7							,		·	-	****			-	
8	TOTAL PROD., T&D, CUSTOMER, AND A&G EXP.	\$	1,468,790	\$	633,370	\$	151,474	\$	290,750	\$	138,667	\$	140,508	\$	114,022
9	TOTAL DEPR. AND AMMOR, EXPENSES	\$	386,941	\$	197,618	\$	44,796	\$	72,330	\$	28,930	\$	27,432	\$	15,834
10	REAL ESTATE AND PROPERTY TAXES	\$	99,528	\$	50,795	\$	11,520	\$	18,610	\$	7,447	\$	7,065	\$	4,092
11	INCOME TAXES	\$	233,191	\$	116,251	\$	26,604	\$	44,120	\$	18,212	\$	17,410	\$	10,592
12	PAYROLL TAXES	\$	19,601	\$	9,331	\$	2,093	\$	3,657	\$	1,732	\$	1,700	\$	1.087
13	FEDERAL EXCISE TAX	\$	-	\$	•	\$	-	\$	-	\$	-	\$		\$	
14	REVENUE TAXES	\$		\$		\$_	`	\$		\$		\$		\$	<u>. </u>
15															
16	TOTAL OPERATING EXPENSES	\$	2,208,051	\$	1,007,366	\$	236,489	\$	429,467	\$	194,988	\$	194,114	\$	145,627
17															
18	NET OPERATING INCOME	\$	518,719	\$	258,595	\$	59,180	\$	98,143	\$	40,512	\$	38,727	\$	23,562
19															
20	GROSS PLANT IN SERVICE	\$	11,224,426	\$	5,727,483	\$	1,298,968	\$	2,098,760	\$	840,189	\$	797,165	\$	461,861
21	RESERVES FOR DEPRECIATION	\$	4,500,562	\$	2,336,943	\$	524,193	\$	834,584	\$_	324,668	\$	306,876	\$	173,298
22															_
23	NET PLANT IN SERVICE	\$	6,723,865	\$	3,390,540	\$	774,776	\$	1,264,176	\$	515,521	\$	490,289	\$	288,563
24															
25	MATERIALS & SUPPLIES - FUEL	\$	227,226	\$	83,227	\$	22,416	\$	49,074	\$	24,304	\$	25,033	\$	23,172
26	MATERIALS & SUPPLIES -LOCAL	\$	21,434	\$	13,180	\$	2,694	\$	3,557	\$	1,060	\$	914	\$	29
27	CASH WORKING CAPITAL	\$	(13,595)	\$	(5,854)	\$	(1,403)	\$	(2,695)	\$	(1,285)	\$	(1,301)	\$	(1,057)
28	CUSTOMER ADVANCES & DEPOSITS	\$	(14,677)	\$	(6,243)	\$	(4,406)	\$	(2,673)	\$	(845)	\$	(511)	\$	
29	ACCUMULATED DEFERRED INCOME TAXES	\$	(1,095,577)	\$	(559,136)	<u>\$</u>	(126,813)	\$	(204,854)	\$_	(81,970)	\$	(77,764)	\$	(45,040)
30															
31	TOTAL NET ORIGINAL COST RATE BASE	\$	5,848,677	\$	2,915,713	\$	667,264	\$	1,108,586	\$	456,786	\$	436,660	\$	265,668
32															
33	RATE OF RETURN		8.869%		8.869%		8.869%		8.869%		8.869%		8.869%		8.869%

AmerenUE MISSOURI GAS OPERATIONS CLASS COST OF SERVICE ALLOCATION STUDY 12 MONTHS ENDED JUNE 2006

	Total Missouri		Residential		Small Gen Serv		_G	Large en Serv	!	Small Primary	!	Large Primary	Large Lg Trans		
Unbundled Class Cost of Service (\$000's)															
Customer	\$	139,183	\$	115,416	\$	16,672	\$	5,030	\$	1,050	\$	1,014	\$	1	
Production Demand	\$	879,465	\$	410,165	\$	97,518	\$	171,846	\$	75,656	\$	73,386	\$	50,892	
Production Energy	\$	917,295	\$	336,242	\$	90,202	\$	197,488	\$	98,370	\$	101,420	\$	93,573	
Transmission Demand	\$	22,365	\$	10,041	\$	2,259	\$	4,138	\$	2,136	\$	2,181	\$	1,609	
Distribution Demand	<u>\$</u> _	373,169	\$	206,284	<u>\$</u>	45,342	\$	73,066	\$_	25,351	<u>\$</u>	22,483	\$	642	
	\$:	2,331,477	\$	1,078,149	\$	251,994	\$	451,568	\$	202,564	\$	200,484	\$	146,717	