Exhibit No.:
Issue(s): Rate Design
Witness: James C. Watkins
Type of Exhibit: Direct
Sponsoring Party: MoPSC Staff
Case No.: EO-96-14

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

DIRECT TESTIMONY

OF

JAMES C. WATKINS

UNION ELECTRIC COMPANY

CASE NO. EO-96-14

Jefferson City, Missouri

February, 1999

DIRECT TESTIMONY

OF

JAMES C. WATKINS

UNION ELECTRIC COMPANY

CASE NO. EO-96-14

Q. Please state your name and business address.

A. My name is James C. Watkins and my business address is Missouri Public Service Commission, 301 West High Street, P. O. Box 360, Jefferson City, Missouri 65102.

Q. What is your present position with the Missouri Public Service Commission (Commission)?

A. I am a Regulatory Economist in the Electric Department of the Operations Division. My working title is Assistant Manager - Tariffs / Rate Design.

Q. Please review your educational background and work experience.

A. I have a Bachelor of Arts Degree in Economics from William Jewell College, a year of graduate study at the University of California at Los Angeles in the Masters Degree Program, and have completed all requirements except my dissertation for a Ph.D. in Economics from the University of Missouri-Columbia. My previous work experience has been as an Instructor of Economics at Columbia College, the University of Missouri-Rolla, and William Jewell College. I have been on the Staff of the Missouri Public Service Commission (Staff) since August 1, 1982.

Q. What is the purpose of your direct testimony in this case?

A. The purpose of my direct testimony is to recommend changes to the overall rate levels of Union Electric Company's (UE or Company) rate schedules serving each customer class in order to implement the rate reduction in this case.

This recommendation is being made pursuant to Section 6 of the Stipulation and Agreement approved by the Commission in Case No. EM-96-149:

> Earnings monitoring in Case No. EO-96-14 will result in a general change in rates charged and revenues collected after August 31, 1998. The change in revenues collected will be equal to the average annual total revenues credited to customers during the three ARP years ending June 30, 1998, adjusted to reflect normal weather. The procedures to determine the annual credits for the three years comprising the ARP are set forth in Attachment A appended hereto. Any rate reduction shall be spread within and among revenue classes on the basis of the Commission decision in Case No. EO-96-15, which is the UE customer class cost of service and comprehensive rate design docket created as a result of Case No. ER-95-411. <u>In the event that a Commission decision has not been reached in Case No. EO-96-15, the parties will jointly or severally propose to the Commission a basis or bases on which a rate reduction may be spread on an interim basis within and among the classes pending issuance of the Commission's decision in Case No. EO-96-15.</u> [emphasis added].

Q. Has the Staff compared current revenue levels to the cost of serving each class?

A. Yes. On a class-by-class basis, the Staff has determined the amount by which revenues differ from the cost of service and the percentage increase or decrease in rate levels that would be required to adjust class revenues to exactly recover the cost of serving each class on an overall revenue-neutral basis. The following results are based on the customer class cost-of-service study filed by the Staff in Case No. EO-96-15 on February 19, 1999.

	RES	SGS	LGS	LPS
Revenue Deficiency:	$20,808,000	($20,226,000)	($15,919,000)	$15,337,000
Required % Increase:	2.80%	(9.45%)	(2.82%)	10.33%

Notes: The dollar amounts and percentages are shown as a *positive* number if an *increase* in rates would be required and as a *negative* number if a *decrease* in rates would be required.

RES is Residential Service

SGS is Small General Service

LGS is Large General Service and Small Primary Service

LPS is Large Primary Service and Interruptible Power Rate Service

A more detailed summary of the results of the Staff's customer class cost of service study is shown in Schedule 1. Also shown in Schedule 1 is that, on a combined basis, the Small General Service, Large General Service, and Small Primary Service rates are higher than cost of service by 4.65%.

Q. What is the purpose of a customer class cost-of-service study?

A. A customer class cost-of-service study is a tool for developing the above comparisons. The preparation of such a study is as much art as science and is intended to provide a reasonable basis for the comparison of revenues to costs. The result of the customer class cost-of-service study is one factor that should be considered in determining the appropriate rate design for a utility.

Q. What is your recommendation to the Commission regarding class revenue shifts?

A. As a matter of policy, I believe that the Commission should order that rate levels be adjusted to move class revenues closer to class cost of service as determined by the Staff's study, after considering other relevant factors. In this particular case, the rate reduction should be spread to the customer classes in a manner that will not only lower the Company's overall rate level, but, also, move class revenues closer to cost of service.

Q. Are there other factors that should be considered by the Commission in this case?

A. In addition to the factors that would normally be considered in shifting class revenue requirement responsibility (impact on customer's bills, effect on economic development, etc.), the Commission should consider the relationship of this case to Case No. EO-96-15, which was established to consider any rate design changes that would shift revenues within or among customer classes and any adjustments that needed to be made to class revenue requirements, before implementing the rate reduction resulting from the First Experimental Alternative Regulation Plan and the Stipulation and Agreement in Case No. EM-96-149, on an equal percentage basis. It is important for rate stability that the Commission's decisions in Case No. EO-96-14 and Case No. EM-96-149 do not result in rate changes that are reversed by the Commission's decision in Case No. EO-96-15.

Q. Do you have a specific recommendation to the Commission for implementing the rate reduction resulting from the Stipulation and Agreement in Case No. EM-96-149 and Case No. EO-96-14?

A. My recommendation is conditioned on the magnitude of the overall rate reduction ordered by the Commission.

If the overall rate reduction is not more than $25,000,000, I recommend that the entire rate reduction be applied to the Small General Service, Large General Service, and Small Primary Service rate schedules by applying an equal percentage decrease to every rate and charge on each rate schedule.

If the overall rate reduction is more than $25,000,000, I recommend that the first $25,000,000 of the rate reduction be applied to the Small General Service, Large General Service, and Small Primary Service rate schedules by applying an equal percentage decrease to every rate and charge on each rate schedule. The remainder of the overall rate reduction should be applied to the rate schedules serving all customer classes, excluding the Lighting class, i.e., Residential Service, Small General Service, Large General Service, Small Primary Service, Large Primary Service, and the Interruptible Power Rate by applying an equal percentage decrease to every rate and charge on each rate schedule. The effect on the relationship between costs and revenues on a class-by-class basis of implementing this recommendation for a $25,000,000, or greater, rate reduction is shown in Schedule 2. Also shown in Schedule 2 is that, on a combined basis, the Small General Service, Large General Service, and Small Primary Service rates have been brought to within 3% of cost of service.

Q. Is there a possibility that adopting the Staff's recommendation will result in rate changes that would be reversed by the Commission's decision in Case No. EO-96-15?

A. Yes, there is a possibility. However, if the overall rate reduction is implemented on the basis of an "interim" rate design prior to the implementation of the rate design changes ordered in Case No. EO-96-15, the Staff recommends, and has recommended in Case No. EO-96-15, that no further shifts to class revenue requirements be implemented in Case No. EO-96-15.

In addition, the Staff's recommendation is consistent with the results of the cost of service studies filed by the other parties in Case No. EO-96-15 for rate reductions of no more than $25,000,000. It is only in the situation that the rate reduction exceeds $25,000,000 that the studies differ on whether or not the Residential and/or Large Power classes should share in the rate reduction in order to move toward cost of service.

I should note that because the study filed by the Office of the Public Counsel combines customers served under the Small Primary Service rate schedule with the customers served under the Large Primary Service and the Interruptible Power Rate rate schedules into a single "Primary" customer class, it is not clear whether or not that study supports the rate reduction for the Small Primary Service customers indicated by all of the other studies. All of the studies, including the study filed by the Office of the Public Counsel, indicate that the Small General Service and Large General Service rates are too high.

Q. Why shouldn't there be different class revenue requirements on a permanent basis than on an interim basis?

A. What I am recommending is that there should not be multiple rate changes within a short period of time; one that first lowers a customer's rate, followed shortly thereafter by another rate change that raises it, perhaps higher than it was before. It would be better in that situation to have only one change in the rate level for each customer class that incorporates both the rate increase or decrease resulting from the shift in class revenue requirements and the rate decrease due to the overall rate reduction, or wait until the end of the Second Experimental Alternative Regulation Plan to implement additional revenue shifts.

Q. Why haven't you shown the effect on the relationship between costs and revenues on a class-by-class basis of implementing a rate reduction of something less than $25,000,000?

A. The relationship between costs and revenues remains constant for rate reductions in excess of $25,000,000 because the additional rate reduction would be spread to all classes on an equal percentage basis. For rate reductions of less than $25,000,000 the resulting relationship between costs and revenues will depend on the exact amount of the rate reduction, but the result will be somewhere between the result shown for no reduction (shown on Schedule 1) and the result for a $25,000,000 reduction (shown on Schedule 2).

Q. Does this conclude your prefiled direct testimony?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the matter of the Monitoring of the Experimental Alternative Regulation Plan of Union Electric Company.	)))	 Case No. EO-96-14

AFFIDAVIT OF JAMES C. WATKINS

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

James C. Watkins, of lawful age, on his oath states: that he has participated in the preparation of the foregoing written testimony in question and answer form, consisting of 7 pages of testimony to be presented in the above case, that the answers in the attached written 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.

James C. Watkins

James C. Watkins

Subscribed and sworn to before me this 23rd day of February, 1999.

Joyce Neuner

Notary Public

Joyce C. Neuner
Notary Public, State of Missouri
County of Osage
My Commission Exp. 06/18/2001

My commission expires My Commission Exp. 06/18/2001

STAFF CUSTOMER CLASS COST-OF-SERVICE STUDY
UNION ELECTRIC COMPANY
Case No. EO-96-15

COSTS BY FUNCTIONAL CATEGORY			RES	SGS	LGS & SPS	LPS	TOTAL	Combined SGS, LGS & SPS
PRODUCTION	CAPACITY		$255,292	$71,129	$224,707	$70,638	$621,767	$295,837
PRODUCTION	ENERGY		$209,614	$62,131	$208,782	$69,181	$549,708	$270,913
TRANSMISSION	CAPACITY		$22,648	$6,275	$19,720	$6,172	$54,815	$25,996
DISTRIBUTION	SUBSTATIONS	DEMAND	$38,420	$9,795	$22,761	$5,169	$76,144	$32,556
								$0
DISTRIBUTION	POLES AND CONDUCTORS	CUSTOMER	$40,192	$4,671	$324	$2	$45,189	$4,996
DISTRIBUTION	POLES AND CONDUCTORS	PRIMARY DEMAND	$77,353	$19,721	$45,825	$10,406	$153,304	$65,546
DISTRIBUTION	POLES AND CONDUCTORS	SECONDARY DEMAND	$23,099	$6,015	$8,664	$0	$37,777	$14,679
								$0
DISTRIBUTION	TRANSFORMERS	CUSTOMER	$16,921	$1,967	$126	$0	$19,014	$2,093
DISTRIBUTION	TRANSFORMERS	DEMAND	$8,146	$2,121	$3,055	$0	$13,323	$5,177
								$0
DISTRIBUTION	INSTALLATIONS		$0	$0	$0	$3,444	$3,444	$0
DISTRIBUTION	SERVICES	CUSTOMER	$9,980	$1,160	$74	$0	$11,215	$1,234
DISTRIBUTION	SERVICES	DEMAND	$12,782	$2,569	$3,073	$0	$18,424	$5,642
DISTRIBUTION	METERS		$13,867	$3,392	$1,152	$810	$19,222	$4,544
								$0
	METER READING		$13,948	$2,418	$3,450	$20	$19,835	$5,867
	CUSTOMER SERVICE, SALES, COLLECTION, ETC.		$24,670	$4,276	$15,269	$88	$44,303	$19,546
	INTEREST ON CUSTOMER SURETY DEPOSITS		$13,231	$758	$426	$0	$14,415	$1,184
	EPRI		$1,983	$586	$1,894	$617	$5,080	$2,479
	ASSIGNED RESIDENTIAL		$74	$0	$0	$0	$74	$0
	OVERALL RATE REDUCTION		0	0	0	0	0	$0
	TOTAL COST OF SERVICE		**$782,220**	**$198,983**	**$559,304**	**$166,546**	**$1,707,054**	**$758,287**
REVENUES								
	FIRM RATE REVENUE		**$742,338**	**$214,090**	**$563,980**	**$148,434**	**$1,668,841**	**$778,070**
	NET LIGHTING RATE REVENUE		$10,758	$2,737	$7,692	$2,291	$23,478	$10,429
	INTERRUPTIBLE CREDITS		($1,307)	($332)	($934)	($278)	($2,852)	($1,267)
	OTHER REVENUE - LIGHTING CLASS		$211	$54	$151	$45	$461	$205
	OTHER REVENUE - STUDIED CLASSES		$9,412	$2,661	$4,335	$718	$17,125	$6,995
	TOTAL REVENUE		**$761,412**	**$219,209**	**$575,223**	**$151,209**	**$1,707,054**	**$794,432**
	REVENUE SHIFTS		**$0**	**$0**	**$0**	**$0**	**$0**	**($0)**
	% CHANGE FROM CURRENT RATES		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
REVENUE DEFICIENCY			**$20,808**	**($20,226)**	**($15,919)**	**$15,337**	**($0)**	**($36,145)**
% INCREASE (DECREASE) IN RATES REQUIRED TO GENERATE REVENUES EQUAL TO COST OF SERVICE			2.80%	(9.45%)	(2.82%)	10.33%	(0.00%)	(4.65%)

Schedule 1

STAFF CUSTOMER CLASS COST-OF-SERVICE STUDY
UNION ELECTRIC COMPANY
Case No. EO-96-15

COSTS BY FUNCTIONAL CATEGORY			RES	SGS	LGS & SPS	LPS	TOTAL	Combined SGS, LGS & SPS
PRODUCTION	CAPACITY		$255,292	$71,129	$224,707	$70,638	$621,767	$295,837
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DISTRIBUTION	SUBSTATIONS	DEMAND	$38,420	$9,795	$22,761	$5,169	$76,144	$32,556
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DISTRIBUTION	TRANSFORMERS	CUSTOMER	$16,921	$1,967	$126	$0	$19,014	$2,093
DISTRIBUTION	TRANSFORMERS	DEMAND	$8,146	$2,121	$3,055	$0	$13,323	$5,177
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DISTRIBUTION	INSTALLATIONS		$0	$0	$0	$3,444	$3,444	$0
DISTRIBUTION	SERVICES	CUSTOMER	$9,980	$1,160	$74	$0	$11,215	$1,234
DISTRIBUTION	SERVICES	DEMAND	$12,782	$2,569	$3,073	$0	$18,424	$5,642
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	INTEREST ON CUSTOMER SURETY DEPOSITS		$13,231	$758	$426	$0	$14,415	$1,184
	EPRI		$1,983	$586	$1,894	$617	$5,080	$2,479
	ASSIGNED RESIDENTIAL		$74	$0	$0	$0	$74	$0
	OVERALL RATE REDUCTION		-11,456	-2,914	-8,191	-2,439	-25,000	-11,105
	TOTAL COST OF SERVICE		**$770,765**	**$196,069**	**$551,113**	**$164,107**	**$1,682,054**	**$747,182**
REVENUES								
	FIRM RATE REVENUE		**$742,338**	**$214,090**	**$563,980**	**$148,434**	**$1,668,841**	**$778,070**
	NET LIGHTING RATE REVENUE		$10,758	$2,737	$7,692	$2,291	$23,478	$10,429
	INTERRUPTIBLE CREDITS		($1,307)	($332)	($934)	($278)	($2,852)	($1,267)
	OTHER REVENUE - LIGHTING CLASS		$211	$54	$151	$45	$461	$205
	OTHER REVENUE - STUDIED CLASSES		$9,412	$2,661	$4,335	$718	$17,125	$6,995
	TOTAL REVENUE		**$761,412**	**$219,209**	**$575,223**	**$151,209**	**$1,707,054**	**$794,432**
	REVENUE SHIFTS		**$0**	**($6,879)**	**($18,121)**	**$0**	**($25,000)**	**($25,000)**
	% CHANGE FROM CURRENT RATES		0.00%	-3.21%	-3.21%	0.00%	-1.50%	-3.21%
REVENUE DEFICIENCY			**$9,352**	**($16,261)**	**($5,989)**	**$12,898**	**($0)**	**($22,250)**
% INCREASE (DECREASE) IN RATES REQUIRED TO GENERATE REVENUES EQUAL TO COST OF SERVICE			**1.26%**	**(7.85%)**	**(1.10%)**	**8.69%**	**(0.00%)**	**(2.95%)**

Schedule 2