EXHIBIT

Exhibit No:
Issue: Depreciation
Witness: William W. Dunkel
Type of Exhibit: Surrebuttal Testimony
Case No.: ER-2008-0318
Date Testimony Prepared: November 5, 2008

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers In the Company's Missouri Service Area.	))))	**Case No. ER-2008-0318**

SURREBUTTAL TESTIMONY AND SCHEDULES

OF

WILLIAM W DUNKEL

ON BEHALF OF

OFFICE OF THE PUBLIC COUNSEL

OF THE STATE OF MISSOURI

DR Exhibit No. 400
Case No(s). ER-2008-0318
Date 11-24-08 Rptr KT

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers In the Company's Missouri Service Area.	))))	**Case No. ER-2008-0318**

AFFIDAVIT OF WILLIAM DUNKEL

COUNTY OF SANGAMON)
) ss
STATE OF ILLINOIS)

William Dunkel, of lawful age and being first duly sworn, deposes and states:

1. My name is William Dunkel. I am a Consultant for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

William Dunkel
Consultant

Subscribed and sworn to me this 31st day of October 2008.

April R Miles
Notary Public

My commission expires 9-11-2009.

"OFFICIAL SEAL"
April R. Miles
Notary Public, State of Illinois
My Commission Exp. 09/11/2009

Surrebuttal Testimony of William Dunkel

Q. Are you the same William Dunkel who filed Direct testimony on behalf of the Office of the Public Counsel of the State of Missouri (OPC) in this proceeding?

A. Yes.

Q. What is the purpose of this Surrebuttal testimony?

A. The purpose of this Surrebuttal testimony is to responds to the Rebuttal testimony of John F. Wiedmayer and the Rebuttal testimony of Guy C. Gilbert, pertaining to the depreciation rates for the Callaway Nuclear Production plant.

Q. In your Direct testimony you demonstrated that the book reserve amounts were not used in the calculation of the Callaway Nuclear Production depreciation rates. You also demonstrated that failure to include the book reserve amounts understates the amount of the Callaway investment that has actually been recovered from the customers, resulting in excessive depreciation rates for Callaway. Does either Mr. Wiedmayer or Mr. Gilbert in their Rebuttal testimonies dispute the fact that the Callaway Nuclear Production depreciation rates are improper?

A. No they do not. In my Direct testimony I demonstrated that excluding the book reserve amounts from the calculation of the depreciation rates produces improper depreciation rates, and neither Mr. Wiedmayer's nor Mr. Gilbert's Rebuttal testimonies deny that fact.

In discovery we asked Mr. Wiedmayer in how many cases out his past 10 depreciation study cases had he proposed depreciation rates that "excluded the book reserve amounts in the calculation of those depreciation rates." Mr. Wiedmayer's answer was

"There is none. The book reserve is a necessary input" for the calculation of the depreciation rates Mr. Wiedmayer had proposed in all 10 cases. (Emphasis added)[1]

Attached as Schedule WWD-SR7 is a copy of this request and Mr. Wiedmayer's response.

In part (b) of this same response, Mr. Wiedmayer also states that in every one of his 10 most recent cases, Mr. Wiedmayer supported "the use of: 1) remaining life rates; or 2) whole life rates used in connection with a separate amortization of the reserve variance". Both of these two ways of calculating depreciation rates use the book reserve as an input.

To use Mr. Wiedmayer's own words "The book reserve is a necessary input" but the book reserves were not used as an input to calculate the Callaway Nuclear Production depreciation rates that are being used in this proceeding.

The book reserve shows the net accumulated amount that has already been collected from the customers in past depreciation rates. It is necessary to know how much has already been collected, in order to determine how much remains to be collected in future depreciation rates, as discussed in more detail in my Direct testimony.

Q. Your Direct testimony contains your calculation of the corrected Callaway Nuclear Production depreciation rates that do use the book reserve amounts as an input. In their Rebuttal testimonies has any witness disputed the accuracy of your Callaway depreciation calculations?

[1] AmerenUE response to OPC Request 5035(c).

A. No. In their Rebuttal testimonies neither Mr. Wiedmayer nor Mr. Gilbert disputed the accuracy of my Callaway calculations.

In addition, in discovery we asked Mr. Wiedmayer if he disputed either the Book Depreciation Reserve or Theoretical Reserve amounts for Nuclear Production as of 12/31/2007 that were shown on Schedule WWD-5 attached to my Direct testimony. We also asked him to provide corrected figure if he did dispute either of these amounts. In response Mr. Wiedmayer provided no dispute with, nor any correction to, either of these figures.[2]

Q. If Mr. Wiedmayer's Rebuttal testimony does not dispute the fact that excluding the book reserve amounts from the calculation of the Callaway depreciation rates produces improper depreciation rates, or dispute the accuracy of your Callaway depreciation rate calculations, how does he support his opposition to correcting this problem in the Callaway depreciation rates?

A. Basically, he changed the subject.

For example, Mr. Wiedmayer devotes approximately one-half of his Rebuttal testimony to discussing the lives of the Steam Production plants.[3] However Callaway is a Nuclear Production plant. In my Direct testimony I did not propose any change in the lives of the Steam Production plants.

Q. What does the Staff witness Mr. Gilbert recommend?

[2] AmerenUE response to OPC Request 5036.
[3] Wiedmayer Rebuttal, page 6, line 3 to page 12 line 14.

A. It is clear from page 2 of his Rebuttal that Mr. Gilbert understands the problem with the Callaway depreciation rates, however he recommends:

> "It is the Staff's recommendation that a change in depreciation accrual of this magnitude should only be made in the context of a complete depreciation study when the over or under accrual of the depreciation reserve can be examined for all of the plant accounts."[4]

Q. Should the Commission correct the excess Callaway Nuclear Production plant depreciation rates in this proceeding, instead of waiting until a future proceeding to consider it?

A. Yes. In this proceeding, AmerenUE is asking for a large increase in the prices charged to customers. It is appropriate to correct the excess Callaway Nuclear Production plant depreciation rates prior to increasing the prices charged customers.

Q. What actions are required in this proceeding if the Commission adopts the Staff recommendation?

A. I recommend the Commission correct the excess Callaway Nuclear Production plant depreciation rates prior to increasing the prices charged customers in this case. However, if the Commission adopts the Staff's recommendation, then the order in this case should require that AmerenUE include in the next depreciation study the information needed to allow "the over or under accrual of the depreciation reserve" to "be examined for all of the plant accounts." Specifically for this examination to occur the information that needs to be provided for each account is (1) the book reserve amount, (2) the theoretical reserve amount, (3) the remaining life years, and (4) the whole life depreciation rate with the

[4] Page 2, lines 19-21 of Mr. Gilbert's Rebuttal testimony.

reserve variance amortized over the average remaining life. If the Staff recommendation is adopted, the Commission should order AmerenUE to include this information in its next depreciation study for each account.

AmerenUE did file all of this information in the depreciation study in the prior proceeding (Case No. ER-2007-0002), because in that case AmerenUE was proposing whole life depreciation rates with the reserve variance amortized over the average remaining life. The Commission should order that this same information be included in the next depreciation study, so that, as Staff recommends, "the over or under accrual of the depreciation reserve can be examined for all of the plant accounts."

Q. Starting on page 2, line 15 of his Rebuttal testimony Mr. Wiedmayer claims Mr. Dunkel's adjustment:

> **"should be rejected because Mr. Dunkel's depreciation adjustment only applies to one AmerenUE power plant, the Callaway Nuclear Plant, and ignores depreciation rates applicable to AmerenUE's other power plants, as well as depreciation rates applicable to its transmission, distribution and general plant."**

Did you ask for depreciation information for the other accounts?

A. Yes. I did discovery seeking depreciation information for all accounts, but AmerenUE objected to those requests, as is discussed in more detail on page 18 of my Direct testimony.[5]

In addition, on 2/5/08 AmerenUE first publicly stated that it will be filing for the 20 year extension of the Callaway plant's nuclear operating license, to the year 2044. This

[5] OPC 5026 and OPC 5027.

statement was after the Commission's 5/22/07 Report and Order in the prior case.[6]. This is a major change of circumstance only for Callaway, and is not a change of circumstance for the steam production plants.

Q. Mr. Wiedmayer states:

> **"Mr. Dunkel's adjustment is not appropriate since it ignores the possibility that the depreciation rates for other plant accounts may increase, which may reduce or eliminate his adjustment entirely."[7]**

What would be the impact if the book reserve was used as an input to calculate the depreciation rates for all of the accounts?

A. If the book reserve was used to calculate the depreciation rates for all of the accounts, the reduction of the depreciation expense would be a larger reduction than I have proposed. Using the Commission approved depreciation rates, below are the book reserve and theoretical reserve amounts:

	Book Reserve (12/31/2005)	Theoretical Reserve (12/31/2005)	Difference
Nuclear Production	$ 1,051,187,388	$ 831,722,335	$ 219,465,053
Steam Production	$ 1,158,435,783	$ 582,066,131	$ 576,369,652
All Other	$ 2,116,165,017	$ 2,089,582,236	$ 26,582,781
Total	$ 4,325,788,188	$ 3,503,370,702	$ 822,417,486

The sources for this table are attached hereto as Schedule WWD-SR8.

As you can see in the table above, for Nuclear Production the Book Reserve is larger than the Theoretical Reserve. Failure to include the book reserve amounts results in excessive

[6] AmerenUE response to request OPC 5033. Prior case is the prior AmerenUE Case No. ER-2007-0002.
[7] Starting on page 5, line 23 of the Wiedmayer Rebuttal testimony.

depreciation rates, because it understates the amount of the Nuclear Production investment that has actually already been recovered from customers.

However, the table also shows that if the book reserve was used in the depreciation rate calculations for all accounts, contrary to what Mr. Wiedmayer stated, that would not "reduce or eliminate his adjustment entirely." If the book reserve was used in the depreciation rate calculations for all account that would add to my adjustment. The Book Reserve is larger than the Theoretical Reserve for the accounts other than Nuclear, so if the book reserve was used in the depreciation rate calculations for all accounts, that would produce a larger reduction of depreciation expense than the reduction I have proposed.

Q. **Why did you show data as of 12/31/2005 in the above table?**

A. The data shown above is as of 12/31/2005 because AmerenUE objected to the OPC requests OPC 5026 and OPC 5027 that asked for more recent data for all accounts, as discussed in more detail on page 18 of my Direct testimony.

Q. On Schedule WWD-3 of your Direct testimony for Callaway you proposed whole life depreciation rates with the reserve variance amortized over the remaining life. What does Mr. Wiedmayer claim you proposed?

A. Mr. Wiedmayer falsely claims I proposed "remaining life" depreciation rates:

> "He has simply updated the *remaining life* accrual rates for the Callaway Nuclear Plant accounts even though the depreciation rates in the prior Commission order were based on *whole life* rates."[8]

Q. Did you propose Remaining Life depreciation rates?

A. No. I proposed Whole Life depreciation rates plus an amortization of the reserve variance, which is the same as Mr. Wiedmayer had proposed in the prior case.[9]

I used the Whole Life formula, and added the amortization of the reserve variance.

Q. Can you demonstrate that you used Whole Life depreciation rates plus an amortization of the reserve variance, which is the same as Mr. Wiedmayer had proposed in the prior case.

A. Yes.

In the prior case (Case No. ER-2007-0002), Mr. Wiedmayer proposed depreciation rates calculated on a "whole life basis plus an amortization of the reserve variance." This quotation from the prior case is shown on Schedule WWD-SR9 which is Page I-3 of Wiedmayer Exhibit JFW-E1 in the prior case.

In this proceeding I used the same "whole life basis plus an amortization of the reserve variance" formulas that Mr. Wiedmayer had used in the prior case.

On page 1 of Schedule WWD-3, attached to my Direct testimony, I calculate the Whole Life Rate. This uses the Whole Life formula, and is the same as the calculations shown

[8] Mr. Wiedmayer Rebuttal testimony, page 2.
[9] Case No. ER-2007-0002.

on page 4 of Schedule WWD-4, attached to my Direct testimony, which are Mr. Wiedmayer's calculations from the prior case.

On page 2 of Schedule WWD-3, I amortize the Reserve Variance over the Remaining Life. This is the same as the calculations shown on page 5 of Schedule WWD-4, which are Mr. Wiedmayer's calculations from the prior case.

On page 3 of Schedule WWD-3, I add the whole life Annual Accrual to the Reserve Variance Amortization to determine the Total Annual Depreciation. This is the same as the calculations shown on page 6 of Schedule WWD-4, which are Mr. Wiedmayer's calculations from the prior case.

One clear difference is the Whole Life formula uses the "Average Serve Life" in its calculation, as shown by the Whole Life formula on page 4 of Mr. Wiedmayer's Rebuttal testimony. However, the "Average Service Life" is not used anywhere in the Remaining Life depreciation rate calculation, as is shown in the Remaining Life formula shown on page 3, of Mr. Wiedmayer's Rebuttal testimony ("ARL" is Average Remaining Life). As Mr. Wiedmayer knows from the workpapers we provided,[10] the Whole Life rates I calculated on page 1 of Schedule WWD-3 are Whole Life calculations which used the Average Service Lives.

Q. On page 5, lines 8-9, of the Wiedmayer Rebuttal, it is stated that AmerenUE was not required to conduct a depreciation study for this proceeding. Is there any

[10] Workpapers provided to AmerenUE and other parties in an August 29, 2008 e-mail from Jere Buckman.

Commission rule which prohibits a party other than AmerenUE from addressing depreciation in this proceeding?

A. No. In response to discovery, AmerenUE agreed that there is no Commission rule which prohibits a party other than AmerenUE from addressing depreciation in this proceeding.[11]

Q. What do you recommend?

A. I recommend the depreciation rates for Callaway as shown on Schedule WWD-3 attached to my Direct testimony. No one disputes the fact that the book reserve was not used as an input in the calculation of the current Callaway depreciation rates. No one disputes the fact that excluding the book reserve creates improper depreciation rates; in fact in 10 out of his last 10 cases Mr. Wiedmayer has recommended depreciation rates that do use the book reserve as an input. No one disputes the fact that the failure to include the book reserve amounts understates the amount of the Callaway investment that has already actually been recovered from the customers, resulting in excessive depreciation rates for Callaway. Proper depreciation rates for Callaway should be used prior to calculating any increase in customer prices in this case.

I believe that this is the proper course for the Commission to take, but if the Commission chooses not to accept my recommendation, and instead adopts the Staff recommendation to wait for a "complete depreciation study when the over or under accrual of the depreciation reserve can be examined for all of the plant accounts" then the Commission should order AmerenUE to include certain information in its next depreciation study for

[11] AmerenUE response to request OPC 5034.

each account. Specifically for this Staff-recommended examination to occur, the information that needs to be provided for each account is (1) the book reserve amount, (2) the theoretical reserve amount, (3) the remaining life years, and (4) the whole life depreciation rate with the reserve variance amortized over the average remaining life.

Q. Does this conclude your Surrebuttal testimony?

A. Yes.

Ameren's Response to
OPC Data Request
MPSC Case No. ER-2008-0318
AmerenUE's Tariff Filing to Increase Rate for Electrical Service
Provided to Customers in the Company's Missouri Service Area

Requested From: Bill Dunkel

Data Request No. OPC 5035

On page 13, line 5-13, of his Rebuttal testimony Mr. Wiedmayer discuss the "industry practice" pertaining to the theoretical and book reserves.

(a) List the 10 most recent cases before state utility regulatory commissions in the United States in which Mr. Wiedmayer has presented a depreciation study pertaining to an electric utility. For each case, provide the docket (or case) number, the name of the state commission, the name of the utility, and the year and date when the study was filed.

(b) Separately for each of the cases listed in response to part (a), state whether the majority of the depreciation rates as proposed in the study presented by Mr. Wiedmayer included or excluded the book reserve amounts in the calculation of those depreciation rates. Examples of depreciation rate calculations that include the book reserve amounts in the calculation of those depreciation rates include, but are not necessarily limited to, (1) Remaining Life and (2) Whole Life with the variances between the calculated (theoretical) accrued depreciation and the book accumulated depreciation amortized.

(c) For any response to part (b) that indicts the majority of the depreciation rates as proposed in the study presented by Mr. Wiedmayer excluded the book reserve amounts in the calculation of those depreciation rates, provide the pages from that depreciation study which show the book reserve amounts were excluded in the calculation of those depreciation rates.

Response:

(a) Refer to the schedule on the following page.

(b) In general, Mr. Wiedmayer supports the use of: 1) remaining life rates; or 2) whole life rates used in connection with a separate amortization of the reserve variance in jurisdictions where remaining life rates previously have been accepted. Mr. Wiedmayer believes that any changes in depreciation rates should be made only after a thorough review of all plant accounts including their service life and net salvage parameters.

(c) There is none. The book reserve is a necessary input to the types of calculations referenced in part (b) of this response.

Prepared By: John Wiedmayer
Title: Project Manager, Depreciation Studies
Date: October 23, 2008

LIST OF CASES IN WHICH JOHN F. WIEDMAYER SUBMITTED TESTIMONY

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
1.	2000	Ky PSC	Case 2000-373	Jackson Energy Cooperative Corp.	Depreciation
2.	2002	Newf./Labrador Bd. Of Comm. of P.U.	GRA - 2003	Newfoundland Power, Inc.	Depreciation
3.	2003	Nova Scotia Util & Rev. Bd.	P-879	Nova Scotia Power	Depreciation
4.	2004	AZ Corp. Comm.	E-01345A-03-0437	Arizona Public Service Company	Depreciation
5.	2005	FERC	ER05-1245	Bangor Hydro Electric Company	Depreciation
6.	2006	FERC		Michigan Electric Transmission Co.	Depreciation
7.	2007	Mo. PSC	ER-2007-0002	AmerenUE - Electric	Depreciation
8.	2007	Mo. PSC	GR-2007-0002	AmerenUE - Gas	Depreciation
9.	2007	ICC	07-0585	AmerenCILCO – Electric	Depreciation
10.	2007	ICC	07-0586	AmerenCIPS – Electric	Depreciation
11.	2007	ICC	07-0587	AmerenIP – Electric	Depreciation
12.	2007	ICC	07-0588	AmerenCILCO - Gas	Depreciation
13.	2007	ICC	07-0589	AmerenCIPS – Gas	Depreciation
14.	2007	ICC	07-0590	AmerenIP – Gas	Depreciation
15.	2008	PA PUC	R-2008-2029325	Equitable Gas Company	Depreciation

DECEMBER 31, 2005 RESERVE VARIANCE BASED ON APPROVED DEPRECIATION RATES

	Depreciable Account	Original Cost at 12/31/05	Book Reserve at 12/31/05	Theoretical Reserve at 12/31/05	Reserve Variance	Source from Case No. ER-2007-0002
	Steam Production Plant					
	Meramec Steam Production Plant					
311	Structures & Improvements	36,285,697	25,263,302	8,394,417	(16,868,885)	SCH JLM-3
312	Boiler Plant Equipment	403,333,321	106,475,863	69,353,208	(37,122,655)	SCH JLM-3
314	Turbogenerator Units	81,963,286	48,578,106	17,419,607	(31,158,499)	SCH JLM-3
315	Accessory Electrical Equipment	36,268,698	20,649,350	6,346,626	(14,302,724)	SCH JLM-3
316	Miscellaneous Power Plant Equipment	13,521,142	4,171,242	1,217,186	(2,954,056)	SCH JLM-3
	Total Meramec Steam Production Plant	571,372,144	205,137,863	102,731,044	(102,406,819)	
	Sioux Steam Production Plant					
311	Structures & Improvements	25,194,894	14,050,331	4,733,268	(9,317,063)	SCH JLM-3
312	Boiler Plant Equipment	325,939,982	102,713,609	64,137,771	(38,575,838)	SCH JLM-3
314	Turbogenerator Units	89,835,326	28,261,696	12,190,819	(16,070,877)	SCH JLM-3
315	Accessory Electrical Equipment	34,600,610	11,833,776	4,083,579	(7,750,197)	SCH JLM-3
316	Miscellaneous Power Plant Equipment	7,713,733	2,339,741	808,867	(1,530,874)	SCH JLM-3
	Total Sioux Steam Production Plant	483,284,545	159,199,153	85,954,304	(73,244,849)	
	Labadie Steam Production Plant					
311	Structures & Improvements	61,791,585	34,038,755	11,381,888	(22,656,867)	SCH JLM-3
312	Boiler Plant Equipment	556,070,480	301,066,755	151,323,766	(149,742,989)	SCH JLM-3
312	Boiler Plant Equipment-Aluminum Coal Cars	121,206,826	38,100,712	47,259,725	9,159,013	SCH JLM-3
314	Turbogenerator Units	183,529,904	67,328,387	31,720,942	(35,607,445)	SCH JLM-3
315	Accessory Electrical Equipment	72,780,646	38,251,100	12,910,881	(25,340,219)	SCH JLM-3
316	Miscellaneous Power Plant Equipment	16,724,383	7,341,846	1,941,374	(5,400,472)	SCH JLM-3
	Total Labadie Steam Production Plant	1,012,103,823	486,127,555	256,538,576	(229,588,979)	
	Rush Island Steam Production Plant					
311	Structures & Improvements	52,312,785	31,645,884	10,041,911	(21,603,973)	SCH JLM-3
312	Boiler Plant Equipment	353,903,249	196,980,361	93,006,339	(103,974,022)	SCH JLM-3
314	Turbogenerator Units	136,041,231	53,484,413	24,219,734	(29,264,679)	SCH JLM-3
315	Accessory Electrical Equipment	32,922,076	16,492,597	5,322,043	(11,170,554)	SCH JLM-3
316	Miscellaneous Power Plant Equipment	10,112,325	4,266,116	1,057,750	(3,208,366)	SCH JLM-3
	Total Rush Island Steam Production Plant	585,291,666	302,869,371	133,647,777	(169,221,594)	
	Common					
311	Structures & Improvements	1,959,206	219,563	75,488	(144,075)	SCH JLM-3
312	Boiler Plant Equipment	37,071,156	4,537,148	2,992,835	(1,544,313)	SCH JLM-3
315	Accessory Electrical Equipment	3,129,975	342,692	125,433	(217,259)	SCH JLM-3
316	Miscellaneous Power Plant Equipment	20,843	2,438	674	(1,764)	SCH JLM-3
	Total Common	42,181,179	5,101,841	3,194,430	(1,907,411)	
	Total Steam Production Plant	2,694,233,356	1,158,435,783	582,066,131	(576,369,652)	
	Nuclear Production Plant					
	Callaway Nuclear Production Plant					
321	Structures & Improvements	892,849,632	440,030,469	291,000,765	(149,029,704)	SCH JLM-3
322	Reactor Plant Equipment	957,396,835	284,736,650	289,725,841	4,989,191	calculated
323	Turbogenerator Units	498,999,736	185,853,221	142,815,618	(43,037,603)	SCH JLM-3
324	Accessory Electrical Equipment	210,733,334	108,252,859	71,730,417	(36,522,442)	SCH JLM-3
325	Miscellaneous Power Plant Equipment	164,519,297	32,314,189	36,449,694	4,135,505	SCH JLM-3
	Total Nuclear Production Plant	2,724,498,833	1,051,187,388	831,722,335	(219,465,053)	

DECEMBER 31, 2005 RESERVE VARIANCE BASED ON APPROVED DEPRECIATION RATES

	Depreciable Account	Original Cost at 12/31/05	Book Reserve at 12/31/05	Theoretical Reserve at 12/31/05	Reserve Variance	Source from Case No. ER-2007-0002
	Hydraulic Production Plant					
	Osage Hydraulic Production Plant					
331	Structures & Improvements	3,750,644	1,323,513	1,252,090	(71,423)	SCH JLM-3
332	Reservoirs, Dams, & Waterways	25,597,635	13,601,792	6,841,613	(6,760,179)	SCH JLM-3
333	Water Wheels, Turbines, & Generators	19,301,223	6,980,750	8,133,720	1,152,970	SCH JLM-3
334	Accessory Electrical Equipment	4,112,456	1,373,647	1,059,095	(314,552)	SCH JLM-3
335	Miscellaneous Power Plant Equipment	1,699,727	364,885	201,228	(163,657)	SCH JLM-3
336	Roads, Railroads, & Bridges	77,445	115,104	63,923	(51,181)	SCH JLM-3
	Total Osage Hydraulic Production Plant	54,539,128	23,759,691	17,551,669	(6,208,022)	
	Keokuk Hydraulic Production Plant					
331	Structures & Improvements	3,791,127	1,354,660	1,099,249	(255,411)	SCH JLM-3
332	Reservoirs, Dams, & Waterways	12,170,523	5,716,963	2,919,957	(2,797,006)	SCH JLM-3
333	Water Wheels, Turbines, & Generators	58,830,125	5,533,101	10,394,544	4,861,443	SCH JLM-3
334	Accessory Electrical Equipment	9,161,004	788,470	1,211,779	423,309	SCH JLM-3
335	Miscellaneous Power Plant Equipment	2,630,627	660,867	284,061	(376,806)	SCH JLM-3
336	Roads, Railroads, & Bridges	114,926	54,102	50,972	(3,130)	SCH JLM-3
	Total Keokuk Hydraulic Production Plant	86,698,332	14,108,163	15,960,562	1,852,399	
	Taum Sauk Hydraulic Production Plant					
331	Structures & Improvements	5,468,208	1,645,912	1,518,917	(126,995)	SCH JLM-3
332	Reservoirs, Dams, & Waterways	27,594,082	9,785,917	4,972,983	(4,812,934)	SCH JLM-3
333	Water Wheels, Turbines, & Generators	37,277,699	7,479,328	12,424,960	4,945,632	SCH JLM-3
334	Accessory Electrical Equipment	4,106,261	1,129,100	879,083	(250,017)	SCH JLM-3
335	Miscellaneous Power Plant Equipment	1,620,780	509,509	146,641	(362,868)	SCH JLM-3
336	Roads, Railroads, & Bridges	45,570	56,387	28,093	(28,294)	SCH JLM-3
	Total Taum Sauk Hydraulic Production Plant	76,112,599	20,606,153	19,970,677	(635,476)	
	Total Hydraulic Production Plant	217,350,059	58,474,007	53,482,908	(4,991,099)	
	Other Production Plant					
341	Structures & Improvements	15,310,060	5,265,826	3,047,989	(2,217,837)	calculated
342	Fuel Holders, Producers, & Accessories	12,123,101	3,014,438	2,393,319	(621,119)	calculated
344	Generators	583,555,235	109,426,490	75,240,544	(34,185,946)	calculated
345	Accessory Electrical Equipment	26,830,796	7,644,957	5,954,320	(1,690,637)	calculated
346	Miscellaneous Power Plant Equipment	5,376,474	959,166	710,063	(249,103)	calculated
	Total Other Production Plant	643,195,666	126,310,877	87,346,235	(38,964,642)	
	Total Production Plant	6,279,277,914	2,394,408,055	1,554,617,610	(839,790,445)	
	Transmission Plant					
352	Structures & Improvements	6,219,705	2,050,542	2,130,385	79,843	EXH JFW-1
353	Station Equipment	178,211,332	57,763,437	47,646,322	(10,117,115)	EXH JFW-1
354	Towers & Fixtures	68,198,477	41,274,010	34,993,543	(6,280,467)	EXH JFW-1
355	Poles & Fixtures	103,511,061	42,267,580	54,341,351	12,073,771	EXH JFW-1
356	Overhead Conductor & Devices	112,346,062	43,131,874	59,674,339	16,542,465	EXH JFW-1
359	Roads & Trails	71,789	76,265	71,789	(4,476)	SCH JLM-3
	Total Transmission Plant	468,558,427	186,563,708	198,857,729	12,294,021	

DECEMBER 31, 2005 RESERVE VARIANCE BASED ON APPROVED DEPRECIATION RATES

Depreciable Account	Original Cost at 12/31/05	Book Reserve at 12/31/05	Theoretical Reserve at 12/31/05	Reserve Variance	Source from Case No. ER-2007-0002
Distribution Plant					
361 Structures & Improvements	15,759,383	4,953,060	4,928,091	(24,969)	EXH JFW-1
362 Station Equipment	513,217,383	159,407,965	158,604,372	(803,593)	EXH JFW-1
364 Poles & Fixtures	653,216,782	520,097,324	517,475,456	(2,621,868)	EXH JFW-1
365 Overhead Conductor & Devices	712,573,522	254,733,135	253,448,997	(1,284,138)	EXH JFW-1
366 Underground Conduit	164,964,341	57,721,787	57,430,805	(290,982)	EXH JFW-1
367 Underground Conductor & Devices	447,520,715	134,015,952	133,340,363	(675,589)	EXH JFW-1
368 Line Transformers	346,481,166	107,491,678	120,822,423	13,330,745	SCH JLM-3
369.1 Overhead Services	123,917,172	145,720,361	144,985,769	(734,592)	EXH JFW-1
369.2 Underground Services	118,053,966	73,486,852	73,116,397	(370,455)	EXH JFW-1
370 Meters	102,314,800	33,417,869	33,249,406	(168,463)	EXH JFW-1
371 Installation on Customers' Premises	164,854	120,584	119,976	(608)	EXH JFW-1
373 Street Lighting & Signal Systems	100,172,902	42,562,921	42,348,357	(214,564)	EXH JFW-1
Total Distribution Plant	3,298,356,987	1,533,729,488	1,539,870,412	6,140,924	
General Plant					
390 Structures & Improvements	164,206,365	46,077,375	45,845,094	(232,281)	EXH JFW-1
391 Office Furniture & Equipment	39,127,356	24,084,713	23,963,299	(121,414)	EXH JFW-1
391.1 Mainframe Computers	422,014	422,014	422,014	0	EXH JFW-1
391.2 Personal Computers	1,310,098	584,257	581,312	(2,945)	EXH JFW-1
392 Transportation Equipment	84,159,804	30,127,187	29,975,313	(151,874)	EXH JFW-1
393 Stores Equipment	2,065,007	1,324,092	1,317,417	(6,675)	EXH JFW-1
394 Tools, Shop, & Garage Equipment	10,524,040	5,996,285	5,966,057	(30,228)	EXH JFW-1
395 Laboratory Equipment	6,819,984	3,347,588	3,330,712	(16,876)	EXH JFW-1
396 Power Operated Equipment	10,465,818	4,232,262	4,210,927	(21,335)	EXH JFW-1
397 Communications Equipment	127,014,326	94,611,692	94,134,744	(476,948)	EXH JFW-1
398 Miscellaneous Equipment	637,305	279,472	278,063	(1,409)	EXH JFW-1
Total General Plant	446,752,116	211,086,937	210,024,952	(1,061,985)	
Total Depreciable Electric Plant	10,492,945,444	4,325,788,188	3,503,370,703	(822,417,485)	
Total Excluding Nuclear & Steam Production	5,074,213,255	2,116,165,017	2,089,582,236	(26,582,781)	

Source:

May 22, 2007 "Report and Order" in Case No. ER-2007-0002; June 28, 2007 "Order Denying Applications for Rehearing, Granting Clarification, and Correcting Order Nunc Pro Tunc" in Case No. ER-2007-0002; March 19, 2007 ; "Nonunanimous Stipulation and Agreement Regarding Certain Depreciation Issues" in Case No. ER-2007-0002; Exhibit JFW-1 in Case No. ER-2007-0002 pages III-4 thru III-18; Schedule JLM-2 and Schedule JLM-3 in Case No. ER-2007-0002.

Exhibit No.:
Issues: Depreciation
Witness: John F. Wiedmayer
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

JOHN F. WIEDMAYER

ON

BEHALF OF

UNION ELECTRIC COMPANY
d/b/a AmerenUE

St. Louis, Missouri
July, 2006

AmerenUE

ST. LOUIS, MISSOURI

DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AT DECEMBER 31, 2005

Gannett Fleming
Valuation and Rate Division

Harrisburg, Pennsylvania **Calgary, Alberta** **Valley Forge, Pennsylvania**

Schedule JFW-E1

the results of the study, including summary tables, survivor curve charts and life tables resulting from the retirement rate method of analysis, tabular results of the historical net salvage analyses, and detailed tabulations of the calculated annual accruals and accrued depreciation.

BASIS OF STUDY

Depreciation

The annual depreciation and accrued depreciation were calculated by the straight line method using the average service life procedure. The calculations were based on original cost, attained ages of plant in service and estimates of service lives and salvage. The calculations of annual depreciation use the whole life basis plus an amortization of the reserve variance. Variances between the calculated accrued depreciation and the book accumulated depreciation are amortized over the composite remaining life of the assets.

Service Life Estimates

The average service life estimates were based on informed judgment which incorporated analyses of available historical service life data related to the property, a review of management's current plans and operating policies, and a general knowledge of service lives experienced and estimated in the electric industry. The use of survivor curves to reflect the expected dispersion of retirements provides a consistent method of estimating depreciation for utility property. Iowa type survivor curves were used to depict the estimated survivor curves for the plant account property groups. For power plants other than combustion turbines, the life span technique was used. In this technique, the date of final retirement was estimated for each power plant, and the estimated interim survivor curves applied to each vintage were truncated at ages coinciding with the date of final retirement.