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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2007-0002

REBUTTAL TESTIMONY

OF

JOHN F. WIEDMAYER C.D.P.

ON

BEHALF OF

**UNION ELECTRIC COMPANY
d/b/a AmerenUE**

**St. Louis, Missouri
January, 2007**

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1 This is not a compelling reason to preclude one from making an estimate of the retirement
2 date using informed judgment. Incongruously, Ms. Mathis uses the life span approach for the
3 Callaway Nuclear Plant and selects a retirement date that is 20 years beyond the date that the
4 Company is legally allowed to operate the plant. Company Witness Stout will further
5 address the issue of using the life span approach for power plants.

6 The service lives determined by Ms. Mathis are not the result of an application
7 of informed judgment incorporating consideration of all appropriate factors. Rather, in most
8 cases they are simply the result of her acceptance of curve fitting performed by a computer
9 program. Ms. Mathis' approach conflicts with the recommendations of authoritative texts¹
10 that indicate statistical analyses are only one of the factors to be considered when estimating
11 depreciation parameters.

12 **Q. Have you prepared a report setting forth the results of your depreciation**
13 **study?**

14 A. Yes, I have. The Depreciation Study report prepared under my supervision was
15 presented with my direct testimony as Schedule JFW-E1. The depreciation study report was
16 titled, "Depreciation Study – Calculated Annual Depreciation Accruals Related to Utility Plant
17 at December 31, 2005."

18 **Q. Please summarize your recommendations and their bases.**

19 A. I recommend that the Commission approve the annual depreciation accrual
20 rates presented in Schedule 1, included as part of Schedule JFW-E2 attached hereto. I am

¹ Wolf, Frank K. and W. Chester Fitch, Depreciation Systems. Iowa State University Press.
1994. Public Utility Depreciation Practices, National Association of Regulatory Utility
Commissioners (NARUC), p. 128.1996.

1 also recommending that the Commission approve amortization of the variance between the
2 calculated accrued depreciation and the book accumulated depreciation. I recommend that
3 the variance be amortized over a period equal to the remaining life of the account. The
4 amortization amounts are set forth by account on Schedule 2 of Schedule JFW-E2.

5 The annual depreciation accrual rates and the reserve variance amortization
6 that I am recommending are based on the traditional straight line method, average service life
7 procedure, remaining life technique and estimates of survivor curves and net salvage
8 percents. These estimates are based on informed judgment that incorporates statistical
9 analyses of historical retirement data and other relevant factors such as the estimates made
10 for other electric utilities. Further, my estimated survivor characteristics for Production Plant
11 incorporate estimated dates of final retirement that are consistent with industry experience
12 and the outlook of AmerenUE management.

13 **Q. Could you describe the differences between the depreciation study that you**
14 **prepared for AmerenUE and the depreciation study prepared by Ms. Mathis?**

15 A. Yes. Here are the major differences: 1) For Steam, Nuclear and Hydraulic
16 Production Plant, I estimated interim survivor curves in conjunction with final retirement dates
17 for each power plant. Ms. Mathis did not estimate final retirement dates by location for Steam
18 and Hydraulic Production. Rather she treated these accounts as you would treat a mass plant
19 account such as poles. That is, she uses a single survivor curve to describe the survivor
20 characteristics for all vintages within a power production account which is inappropriate for
21 life span property. For Other Production, I essentially used the life span approach since there
22 are few interim additions and retirements associated with these accounts. The plant balances

1 were not available by location which precluded me from using truncated survivor curves, i.e.,
2 the same approach that I used from Steam, Nuclear and Hydraulic Production plant accounts.
3 Ms. Mathis used the same approach for Other Production as she did for Steam and Hydraulic
4 Production. 2) I based my net salvage estimate for steam production on a decommissioning
5 study performed by TLG Services, Inc. Ms. Mathis based her net salvage estimates on the
6 historical net salvage experienced by AmerenUE; and, 3) I calculated the theoretical reserve
7 by account and compared it with the book reserve and determined the reserve variance that I
8 recommended be amortized over the remaining life of the account. Ms. Mathis also calculated
9 a theoretical reserve based on her estimated depreciation parameters and determined the
10 reserve variance. She recommended the reserve variance be monitored for future studies.

11 Specifically, Ms. Mathis is recommending that the Commission adopt her
12 service life estimates for 15 Transmission, Distribution and General Plant accounts that are
13 based on her selection of the statistically best fit survivor curve. The terms “statistically best
14 fit” and “mathematically best fit” have the same meaning and are used interchangeably
15 throughout this testimony. The life estimation process requires the application of informed
16 judgment and is far more than a mechanical curve-fitting exercise. Ms. Mathis, however,
17 selects survivor curves based on strict adherence to the statistically best fit curve and ignores
18 other relevant information. This is not an accepted practice when conducting a service life
19 analysis as I will discuss later. For the 15 accounts that we have selected different survivor
20 curves, in most instances I used information external to the historical data of the Company and
21 applied judgment based on the nature of the assets that I was studying.

1 **Q. How did you estimate the life characteristics of Steam, Nuclear**
2 **and Hydraulic Production Plant?**

3 A. I estimated the life characteristics of Steam, Nuclear and Hydraulic Production
4 Plant using truncated survivor curves. I estimated an interim survivor curve for each account
5 based on retirement rate analyses of interim retirements and the interim survivor curves
6 estimated for other electric utilities. I also estimated probable retirement dates for each
7 power station based on discussions with management, operating licenses, and the life spans
8 used by other electric utilities for similar facilities. The resultant survivor characteristics for
9 each vintage at each station is then the interim survivor curve for the applicable plant account
10 truncated at the vintage's age at the date of the probable retirement year for the station. That
11 is, some vintages (property units) will last 60 years and others perhaps 5 years or less
12 depending on when they were installed during the plant's life span.

13 **III. TRANSMISSION AND DISTRIBUTION PLANT SERVICE LIVES**

14 **Q. Does Ms. Mathis propose service lives for AmerenUE's transmission and**
15 **distribution plant accounts that differ from AmerenUE's depreciation study?**

16 A. Yes, she does. Ms. Mathis proposes changes to the service life estimates in
17 AmerenUE's depreciation study for one Transmission Plant account and six Distribution Plant
18 accounts. She also proposes changes to the estimates in the depreciation study for eight General
19 Plant accounts that I will discuss later in my rebuttal testimony.

20 **Q. Would you explain in general terms how survivor curves are estimated?**

21 A. There are two distinct steps in the estimation of service lives and retirement
22 dispersions which must be recognized in the interpretation of the mathematical curve-fitting

1 results. The first step, termed “life analysis,” refers to the application of statistical
2 procedures to determine life and dispersion indications based solely on past experience. The
3 second step, termed “life estimation,” refers to the exercise of informed judgment in making
4 sound estimates of service lives and retirement dispersions. Life estimation incorporates
5 known historical retirement experience, estimated historical trends and estimated future
6 trends or events to define complete patterns of estimated service life characteristics.

7 The results of the life analyses are only one of the relevant factors to be
8 considered during the decisionmaking process of life estimation. Other important factors
9 include considerations of current operating policies and outlook as obtained through means
10 other than the historical life analyses.

11 **Q. Please explain your general process for estimating survivor curves.**

12 A. My service life and survivor curve estimates were based on professional
13 judgment which incorporated analyses of available historical property accounting data, a
14 review of current policies and outlook with management, a general knowledge of the electric
15 industry, the previous service life estimates used by AmerenUE and approved by the MPSC,
16 previous service life estimates proposed in the 2001 Complaint Case EC-2002-1 and
17 comparisons of the survivor curve estimates from studies of other electric companies. I have
18 considered all of the relevant factors and data, including the statistical analysis of the
19 Company's actual retirement experience.

1 **Q. Please discuss the approach used by Ms. Mathis to estimate survivor**
2 **curves.**

3 A. In contrast to my analysis, for certain accounts Ms. Mathis relied almost
4 exclusively on the statistical analyses of historical plant accounting data. Such sole reliance on
5 statistics is inappropriate and occasionally produces unreasonable life estimates. Further,
6 fitting of survivor curves should consider only that portion of the original life table that was
7 developed from sufficient plant exposures. The acceptance of data points based on
8 insignificant, and therefore unreliable, data has skewed the results of Ms. Mathis' life analyses.
9 Ms. Mathis did not apply reasonable judgment with respect to life estimation since she has
10 ignored other relevant factors such as the typical range of lives used in the electric industry and
11 the maximum lives resulting from her estimated survivor curve. Thus, Ms. Mathis' survivor
12 curve estimates are unreasonable and yield average and maximum lives for certain plant
13 accounts that are outside of the typical range of lives used in the electric industry.

14 **Q. Were your judgments predicated upon AmerenUE's actual retirement**
15 **experience?**

16 A. Yes, they were, but not exclusively.

17 **Q. What historical data did you analyze for purposes of estimating the service**
18 **life and net salvage characteristics of AmerenUE?**

19 A. The service life data consisted of entries made by AmerenUE to record electric
20 plant transactions through 2005. The transactions included additions, retirements, transfers,
21 acquisitions and the related balances. I classified data by depreciable group, type of
22 transaction, the year in which the transaction took place, and the year in which the plant was

1 installed. The net salvage data consisted of the entries to the book accumulated provision for
2 depreciation account. The transactions included retirements, cost of removal and gross
3 salvage.

4 **Q. What method did you use to analyze the service life data?**

5 A. I used the retirement rate method. The retirement rate method is the most
6 appropriate method when aged retirement data are available, because it develops the average
7 rates of retirement actually experienced during the study. The retirement rate method is
8 described in more detail in Part II of the depreciation study report.

9 **Q. Please describe the results of your use of the retirement rate method.**

10 A. Each retirement rate analysis resulted in a life table which, when plotted,
11 formed an original survivor curve. Each original survivor curve as plotted from the life table
12 represents the average survivor pattern experienced by the several vintage groups during the
13 experience band or period studied. Inasmuch as this survivor pattern does not necessarily
14 describe the life characteristics of the property group, interpretation of the original curves is
15 required in order to use them as valid considerations in the service life estimation. Iowa type
16 survivor curves were used in these interpretations.

17 **Q. What is an "Iowa type survivor curve" and how do you use it in estimating**
18 **service life characteristics?**

19 A. The range of survivor characteristics usually experienced by utility and
20 industrial properties is encompassed by a system of generalized survivor curves known as the
21 Iowa type curves. The Iowa curves were developed at Iowa State University through an

1 extensive process of observation and classification of the ages at which industrial property had
2 been retired.

3 Iowa type curves are used to smooth and extrapolate original survivor curves
4 determined by the retirement rate method. The Iowa curves were used in this study to describe
5 the forecasted rates of retirement based on the observed rates of retirement and the qualitative
6 outlook for future retirements.

7 A particular Iowa curve is identified by three elements. The first is the average
8 service life in years. The second is the type designator, which designates the general shape of
9 the curve. There are four families (also called modes) in the Iowa system. The left moded or
10 “L” curves are those in which the greatest frequency of retirements occurs to the left of, or
11 prior to, average service life. The symmetrical moded or “S” curves are those in which the
12 greatest frequency of retirement occurs at average service life. The right moded or “R” curves
13 are those in which the greatest frequency of retirement occurs to the right of, or after, average
14 service life. The origin mode or “O” curves are those in which the greatest frequency of
15 retirement occurs at the origin, or immediately after age zero. The letter designation of each
16 family of curves (L, S, R, or O) represents the location of the mode of the associated frequency
17 distribution curve with respect to the average service life. The third element is the relative
18 height of the type of curve. For each of these families of curves, a larger relative height number
19 indicates a progressively greater concentration of retirements with respect to the average. So,
20 for example, a 34-R2 Iowa curve indicates a 34-year average life, with a right-moded or R-type
21 curve shape of low relative height.

1 **Q. To what extent did you consider the actual retirement experience?**

2 A. I considered the Company's actual retirement experience, as represented by the
3 original survivor curve, to the extent that the percents surviving were developed from sufficient
4 plant exposures.

5 **Q. What do you mean by sufficient plant exposures?**

6 A. The original survivor curve that I am referring to is the plotting of the original
7 life table. The original life table is developed using the retirement rate method. In the
8 retirement rate method, retirements during an age interval are related to the plant exposed to
9 retirement at the beginning of that same age interval. The result is the development of percents
10 surviving by age. The exposures at relatively young ages tend to be large because many
11 vintages have experienced these ages including the significant plant added in recent years.
12 Because so much plant has experienced these age intervals, the rates of retirement that are
13 developed from the retirements and exposures at these ages are relatively reliable predictors of
14 future rates of retirement at these same ages. However, at older ages, the amount of plant that
15 has experienced the age interval is much less. Statistics, such as the retirement and survivor
16 ratios and the resultant percents surviving, that are developed from insufficient exposures
17 should not be relied on for purposes of forecasting the future survivor characteristics.

18 **Q. Please describe the process that you use in fitting Iowa curves to the**
19 **original survivor curve.**

20 A. The first step in fitting Iowa curves is the review of the original life table. The
21 level of exposures is reviewed as well as the retirements. The portion of the original survivor
22 curve (the plotted original life table) that should be fit is determined. Second, the complete

1 original life table is plotted on the screen allowing one to see the entire original survivor curve,
2 both the significant and insignificant portions. Third, the program can be requested to provide
3 best fit solutions between age zero and any age as selected by the analyst based on the review
4 of the original life table for significance. The resultant fits simply serve as a starting point for
5 the application of judgment in estimating the survivor curve for the account. Fourth, having
6 judged the significant portion of the original survivor curve and obtained statistical "goodness
7 of fit" information for one or more of the Iowa curves, judgment is applied by selecting a
8 survivor curve that considers all of the appropriate factors that I described earlier. Finally, the
9 estimated survivor curve is plotted along with the portion of the original survivor curve that is
10 considered significant. The resultant charts are presented in the depreciation study report.

11 **Q. Does Ms. Mathis' approach to the estimation of survivor curves result in**
12 **reasonable estimates?**

13 A. No, it does not. The absence of sound judgment in the selection of survivor
14 curves not only ignores standard professional practice, it also results in clearly unreasonable
15 estimates for several accounts.

16 **Q. Can you list the transmission and distribution plant accounts for which**
17 **you and Ms. Mathis have estimated different service lives?**

18 A. The table below presents a comparison of the currently approved average
19 service lives versus the proposed average service lives recommended by AmerenUE and Ms.
20 Mathis. In addition, the table presents the industry average service lives based on numerous
21 depreciation studies conducted by Gannett Fleming for North American electric companies.
22 The reasonableness of the average industry service lives using Gannett Fleming's database was

1 confirmed by my review of the depreciation parameters of other utilities for which Gannett
2 Fleming does not conduct depreciation studies. The depreciation parameters for other
3 companies not in Gannett Fleming's database are set forth in the Annual Reports (Form 1)
4 submitted to the Federal Energy Regulatory Commission (FERC). The Form 1 report is
5 available on FERC's website.

AmerenUE Transmission & Distribution Plant Accounts Comparison of Average Service Lives						
Plant Account	Description	Current MPSC Approved Avg Life	AmerenUE Proposed Avg Life	Mathis Proposed Avg Life	Industry Average Life	Typical Industry Range - Average Life
353	Station Equipment	50	55	64	44.4	39 - 50
362	Station Equipment	44	55	63	44.4	29 - 52
365	O/H Conductors and Devices	36	47	46	43.5	32 - 53
367	U/G Conductors and Devices	45	53	54	35.5	29 - 50
368	Line Transformers	40	45	42	34.4	29 - 39
371	Inst. on Cust. Premises(a)	46	20	28	21.6	11 - 30
373	St. Lighting & Signal Systems	23	33	37	25.8	20 - 32

(a) Equipment in this account is primary Dusk to Dawn Lighting

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7 **Q. Are there any accounts in particular that you would like to discuss or use**
8 **to illustrate your point?**

9 **A.** Yes. There are two Transmission & Distribution (T&D) accounts that Ms.
10 Mathis and I have significantly different estimates for and will illustrate how I included other
11 relevant information in addition to the results of the life analyses. The two accounts are
12 Account 353, Station Equipment – Transmission and Account 362, Station Equipment –
13 Distribution. While Ms. Mathis and I used the same accounting data to analyze and the same
14 depreciation software package, we reached our conclusions regarding the estimated service
15 lives in different manners. For Account 353, Station Equipment, Ms. Mathis estimated a 64-

1 R2.5 which was the statistical best fit curve of the original stub survivor curve. The “64” in a
2 64-R2.5 survivor curve estimate represents the average service life in years. The life
3 indications from the life analyses that I conducted were longer than the typical range of service
4 lives used by other electric companies. Also, the 64-R2.5 survivor curve proposed by Ms.
5 Mathis has a maximum life of 119 years. The major components within a substation yard
6 include transformers, relays and circuit breakers. Based on previous discussions with Ameren
7 engineers and engineers at other electric companies, the expected lives for these components
8 range from 30 to 50 years. Station equipment cannot reasonably be expected to last 64 year, on
9 average, as Ms. Mathis’ proposed survivor curve estimate implies. Also, the 64 year average
10 service life proposed by Ms. Mathis is the longest service life estimate that I’ve ever
11 encountered in the industry for this account by about 7 years. The mean service life of all
12 companies included in the Gannett Fleming database is 44 years, meaning that Ms. Mathis is
13 recommending that the Commission adopt a survivor curve estimate for this equipment that is
14 20 years longer than industry average. Ms. Mathis achieves this unreasonable result because
15 she has statistically fitted portions of the original survivor curve that were developed from
16 insufficient exposures and extrapolated the survivor curve without proper consideration of
17 either the type of equipment included in this plant account or the experience of other electric
18 utilities. In formulating my service life estimate for this account I considered relevant
19 information such as the life indications from the life analyses, discussions with substation
20 engineers, estimates used by others, etc. I estimated a 55-R2.5 which was at the upper end of
21 the typical range for this account but one that was reasonable based on the equipment included
22 in the account.

1 Similarly for Account 362, Station Equipment - Distribution, Ms. Mathis
2 proposes the use of the 63-R2 Iowa type survivor curve based on it being the best statistical fit
3 of the original stub survivor curve. The 63-R2 indicates a maximum life exceeding 117 years.
4 Ms. Mathis' extrapolation of this data to conclude that some substation equipment will last 117
5 years is inappropriate. Similar to Account 353, Station Equipment, the survivor curve Ms.
6 Mathis selects is one of the longest service life estimates in the industry that I've ever
7 encountered. Most companies estimate service lives in the 30 to 50 year range for distribution
8 station equipment. The mean service life of all companies included in the Gannett Fleming
9 database is 44 years. The currently approved service life for this account is 44 years. Ms.
10 Mathis is recommending that the Commission adopt a survivor curve estimate that is 18 years
11 longer than industry average. Such a significant change in service life and one well outside of
12 the typical industry range would certainly need to be supported with greater evidence than that
13 supplied by Ms. Mathis.

14 **IV. TRANSMISSION AND DISTRIBUTION PLANT**
15 **NET SALVAGE ESTIMATES**

16 **Q. Does Ms. Mathis explain how she determined the net salvage estimates for**
17 **Transmission and Distribution Plant accounts?**

18 A. Yes. On page 7 of her direct testimony she states:

19 For each account, I took the actual net salvage for the past 5 years
20 and divided it by the original cost of plant retired during those same
21 5 years. For a few accounts, an unusually high or low net salvage
22 amount was excluded to eliminate a percentage that may cause the
23 average to become skewed.

1 **Q. Do you also analyze the past five years when conducting a Net Salvage**
2 **Study?**

3 A. Yes.

4 **Q. What historical data did you analyze for the purpose of estimating net**
5 **salvage characteristics?**

6 A. The data consisted of the entries made by the Company to record retirements,
7 cost of removal and gross salvage during the period 1961 through 2005.

8 **Q. What method did you use to analyze this net salvage data?**

9 A. The net salvage data were analyzed by expressing the net salvage and its two
10 components, cost of removal and gross salvage, as percents of the original cost retired on
11 annual, three-year moving average and most recent five-year average bases. The use of
12 averages smooths the annual fluctuations and assists in identifying underlying trends.

13 **Q. Please describe the manner in which you used the analyses of net salvage**
14 **to estimate net salvage percents.**

15 A. The results of the net salvage analyses provided indications of historical net
16 salvage levels. The judgments of net salvage incorporated these historical indications and
17 consideration of estimates made for other electric companies.

18 **Q. Do you have any concerns regarding the net salvage data?**

19 A. Yes. There were two accounts that experienced an unusually high gross salvage
20 amounts in 2003 and 2004 that skewed Ms. Mathis net salvage analyses. The accounts that
21 experienced unusually high gross salvage in 2003 and 2004 were Accounts 355, Poles and

1 Fixtures and Account 366, Underground Conduit. Most of the gross salvage experienced
2 during the past 45 years for these two were recorded in 2003 and 2004.

3 **Q. What were the reasons for the increase in gross salvage in those years?**

4 A. The company received a significant amount from the government for relocating
5 their utility assets mostly in connection with the Metrolink Cross-County transit project. For
6 Account 355, the amount credited to accumulated depreciation related to government
7 relocations was approximately \$4 million. This was approximately 84 percent of the total gross
8 salvage recorded to this account during the past 45 years. For Account 366, the amount
9 credited to accumulated depreciation related to relocations was \$6.2 million in 2004. This
10 amount represents 91 percent of the gross salvage recorded to this account in the past 45 years.
11 Also, this is an account that does not typically receive any positive salvage. There also were
12 significant amounts credited to accumulated depreciation in 2003 and 2005 for Account 366.
13 Prior to July 1, 2005, reimbursements related to government relocations were credited to
14 accumulated depreciation. On July 1, 2005, the Company changed its accounting policy
15 regarding reimbursements related to government relocations. Currently, only cost of removal
16 incurred in connection with a relocation is charged to accumulated depreciation as a credit.
17 Other credits get charged against the new plant in service.

18 **Q. What adjustments did you make to the net salvage data?**

19 A. For Account 355, Poles and Fixtures, I excluded the gross salvage recorded in
20 2003 and 2004 since it represented reimbursements related to government relocations. The
21 amounts were excluded for the following reasons: 1) the Company's accounting policy
22 subsequently has changed and relocations will be credited primarily against plant in service and

1 not accumulated depreciation; and 2) reimbursements related to government relocations the
2 magnitude of a Metrolink transit project are not expected to occur frequently in the future.
3 When I excluded the gross salvage for those 2 years (2003 and 2004) for Account 355, the
4 overall net salvage percent for the past 45 years was negative 107 percent. I estimated negative
5 90 percent for Account 355. Also, I excluded the gross salvage amounts recorded to Account
6 366, Underground Conductors for the years 2003 through 2005. This is an account that
7 typically does not receive salvage and by excluding 2003 through 2005, the same holds true for
8 AmerenUE. The cost of removal percentage averaged negative 50 during the past 45 years and
9 gross salvage was zero percent when recent years' transactions are excluded. Therefore, I
10 estimated negative 50 percent for Account 366, Underground Conductors.

11 **V. GENERAL PLANT SERVICE LIVES**

12 **Q. Does Ms. Mathis propose different service lives for general plant accounts?**

13 A. Yes, she does. Ms. Mathis proposes changes to my service life estimates for
14 eight General Plant accounts. The differences between Ms. Mathis and my recommendations
15 are shown in the following table:

AmerenUE			
Comparison of Company versus Staff Proposed Life Estimates			
Account Number	Account Description	AmerenUE Proposed Life Estimates	Staff Proposed Life Estimates (a)
391	Office Furniture & Equipment	15	20 (20-L0)
391.1	Mainframe Computers	5	6 (6-L0)
391.2	Office Furn. & Equip.- PC Equip	5	9 (9-L2)
393	Stores Equipment	20	25 (25-L0)
394	Tools, Shop and Garage Equip	20	30 (30-L0.5)
395	Laboratory Equipment	20	26 (26-L0)
397	Communication Equipment	15	27 (27-L1)
398	Miscellaneous Equipment	20	23 (23-O2)
(a) Life Estimate, in years and the Iowa type survivor curve is in parentheses			

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2 **Q. Explain how you determined your service life estimates for General Plant.**

3 A. After conducting a traditional life analyses for General Plant accounts and
 4 reviewing the results, I decided to rely less on the life indications and more on information
 5 external from the life analyses. I based my service life estimates for certain General Plant
 6 accounts on professional judgment with consideration given to estimates used by others and
 7 the type of equipment included in the account. Traditionally, retirement amounts for most
 8 general plant accounts are underreported or delayed until a physical inventory can be
 9 conducted. This underreporting of retirements makes assets appear as if they are in service
 10 longer than they actually were and the life analyses can be misleading. Another reason to be
 11 cautious when using the historical data to estimate service lives for General Plant accounts is
 12 that certain assets are subject to a higher degree of technological obsolescence than others
 13 and using the past to help forecast the future is of no practical use for these accounts. For

1 example, Account 391.2, Personal Computers is subject to a higher degree of obsolescence
2 than a chair, desk or drill and the life estimate must consider all forces of retirement even
3 ones that were not present in the past. The life indications from the analyses of historical
4 data resulted in a 9 year average service life for PC equipment. This is the average service
5 life estimated by Ms. Mathis for PCs. In general, most people are aware that replacement
6 cycles for PCs are getting shorter. Most information technology professionals that I've
7 spoken with indicate that they will be replacing their office PCs on 3 or 4 year cycles. I made
8 a judgment that the past is not indicative of the future for PC equipment and I have estimated
9 a 5 year average life. Account 397, Communication Equipment is another account that is
10 subject to a higher degree of obsolescence than most others. I estimated a 15 year average
11 service life for Account 397, Communication Equipment. Ms. Mathis estimated a 27-L1
12 survivor curve based on her analyses of the historical data. The 27-L1 survivor curve
13 presumes that some Communication Equipment will be in service for 85 years. I also expect
14 the service life for office furniture to decrease in the future as more offices have installed
15 modular furniture which doesn't last as long as traditional office furniture. I have estimated a
16 15 year average service life for Account 391.0, Office Furniture and Equipment. Ms. Mathis
17 has estimated a 20-L0 survivor curve based on the historical service life analyses that she
18 conducted. The 20-L0 survivor curve was the statistically best fit curve for the original stub
19 survivor curve. The 20-L0 projects to a maximum age of 80 years which seems
20 unreasonably long for this account.

1 **VI. REVISED LIFE SPAN ESTIMATES – STEAM AND**
2 **HYDRAULIC PRODUCTION**

3 **Q. Are there any changes or revisions to your Direct Testimony and**
4 **workpapers?**

5 A. Yes. I have made revisions to two functional plant categories. I have estimated
6 location-specific retirement dates for each of the steam plants. Also, I have extended the
7 retirement date for the Osage Hydraulic Production Plant by ten years to 2046.

8 **Q. Describe the revisions to the life span estimates that the Company is**
9 **proposing for steam production.**

10 A. The original retirement date estimated for steam production plant was June 30,
11 2026. This date was used for all steam plants and it represented a mid-point of a period during
12 which these plants will be retired. The original date was selected as a reasonable period (20
13 years) to recover the undepreciated portion of the steam plants given the existing ages of the
14 steam plants and the uncertainties related to the future operation of the plants. These
15 uncertainties are likely to include factors such as more stringent environmental regulations,
16 higher fuel costs, technological advances in electricity generation from either new, coal-fired
17 plants or other sources of energy. These factors and others were considered when estimating
18 the future viability of steam plants that would range in age from 49 to 73 years old in 2026.
19 Retirement dates specific to each plant were not estimated in the depreciation study submitted
20 along with my Direct Testimony. AmerenUE, through its witness Mark Birk, has refined these
21 dates in its rebuttal position. The actual length of service that a steam plant will achieve is
22 dependent upon the cost of producing electricity at the plant. That is, steam plants will remain
23 in service until they are no longer economic to operate. However, uncertainties that affect the

1 economics of the plant in relation to other sources of electricity generation increase the further
2 into the future you project.

3 **Q. On pages 8 and 9 of his direct testimony, MIEC witness Selecky suggests**
4 **that it is unlikely that all 5,500 MW of the steam plant generating capacity will be retired**
5 **in the same year. Do you agree?**

6 A. Yes, I agree with Mr. Selecky's comment, in general. However, the original
7 proposed retirement date of June 30, 2026 was not intended to be the exact date when steam
8 plants were to be retired. Rather the June 30, 2026 retirement date represented a mid-point of a
9 period during which these plants will be retired. However, I have revised the life span
10 estimates for the steam plants to reflect that the steam plants will be retired over a period of
11 years. The revised estimated retirement dates are location-specific and were determined in
12 collaboration with the Company's generation planning management. AmerenUE witness
13 Mark Birk provided the revised retirement dates to me and I calculated revised depreciation
14 rates and amounts for steam production.

15 **Q. Previously the proposed estimated retirement date was mid-year 2026.**
16 **What are the revised estimated retirement dates?**

17 A. The revised estimated retirement dates for the four steam plants are as follows:
18 1) Meramec – 2021; 2) Sioux – 2027; 3) Labadie – 2033; 4) Rush Island – 2037. All the
19 steam plants are assumed to be retired at mid-year for the years listed above, i.e., June 30.
20 Based on the revised estimated retirement dates, the range of life spans for the specific units at
21 each plant are as follows: 1) Meramec - 60 to 68 years; 2) Sioux – 59 to 60 years; 3) Labadie –
22 60 to 63 years; 4) Rush Island – 60 to 61 years. While the above life spans are beyond those

1 typically estimated for steam plants, they are consistent with management's outlook and will be
2 retired over a 16 year period, i.e., 2021 through 2037, which is a reasonable time frame.

3 **Q. How did you estimate the net salvage percents for Steam Production**
4 **Plant?**

5 A. The estimated net salvage percents for each station are calculated in
6 Schedule 4 of the attached Schedule JFW-E2 and are based on the decommissioning cost
7 estimates in current dollars developed by TLG Services, Inc. and a future rate of inflation of
8 2.0 percent. In the schedule, the decommissioning or dismantling costs in 2005 dollars
9 estimated by TLG for each station, column 3, are inflated to the estimated price level in the
10 probable retirement year using the factor in column 5. The resultant costs in column 6 are
11 divided by the station's original cost in column 2 to calculate the net salvage percent in
12 column 7. These values were rounded to the nearest percent for use in the depreciation
13 calculations.

14 **Q. Describe the revisions to the life span estimate that you are proposing for**
15 **the Osage Hydraulic Production Plant.**

16 A. The 226-megawatt Osage Hydro Plant and Bagnell Dam was completed in
17 1931. The dam created Missouri's Lake of the Ozarks and the plant received the first federal
18 license issued in 1926 which was renewed in 1981. AmerenUE's operating license with
19 FERC for the Osage Hydro Plant was due to expire in 2006. It was assumed the plant would
20 be relicensed for 30 years as many others are, instead the Company asked for and was granted
21 a 40 year operating license expiring in 2046. My original estimated retirement date for the
22 plant was to coincide with the expiration of the license which I estimated to be 2036.

1 However, since the Company was granted a 40 year license expiring in 2046, I have revised
2 my estimate to reflect the 2046 date and have revised my depreciation calculations so that the
3 undepreciated portion of the plant will be recovered over 40 years.

4 **Q. What is the impact on depreciation expense as a result of these revisions?**

5 A. The overall reduction in depreciation including the reserve variance
6 amortizations related to Steam and Hydraulic Production Plant is approximately \$5.41 million.
7 The overall reduction in depreciation related to Steam Production Plant is approximately \$5.17
8 million or approximately 5 percent. The overall reduction in depreciation related to the Osage
9 Hydraulic Production Plant is \$0.24 million or approximately 19 percent. Attached are
10 Schedules 1 through 3 on Schedule JFW-E2 that present the revised depreciation calculations.
11 Schedules 1 through 3 originally were included in Part III of the depreciation study report
12 (Schedule JFW-E1).

13 **Q. Are there other concerns that you like to address?**

14 A. Yes. On pages 13 - 15 of my Direct Testimony I described how I made
15 adjustments to the book reserve for Distribution and General Plant. Essentially, a reserve
16 excess existed in Distribution Plant and large reserve deficiency existed in General Plant. In
17 my Direct Testimony, I proposed reallocating the reserve amounts among the accounts within
18 Distribution and General Plant and state my reasons for doing so. One reason is that the
19 reallocation would lower depreciation expense by \$41 million. While the issue was not
20 directly addressed by Staff in their Direct Testimony, Ms. Mathis lists my reallocated reserve
21 amounts in her workpapers (Schedule JLM-3) granting them tacit approval. However, Staff
22 Witness Edward Began uses the original reserve amounts prior to reallocation in his

Rebuttal Testimony of
John F. Wiedmayer

1 workpapers (Accounting Schedule 5 – Depreciation Reserve). I would like to affirm the
2 Company's position that the reallocation of the reserve is appropriate and beneficial to
3 ratepayers and recommend that the Commission approve this adjustment to accumulated
4 depreciation.

5 **Q. Does this complete your rebuttal testimony?**

6 **A. Yes, it does.**

AmerenUE - Electric

**SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST, CALCULATED ANNUAL DEPRECIATION ACCRUALS
AND CALCULATED ACCRUED DEPRECIATION RELATED TO UTILITY PLANT AT DECEMBER 31, 2005**

Depreciable Group (1)	Probable Retirement Year (2)	Survivor Curve (3)	Net Salvage, % (4)	Original Cost at December 31, 2005 (5)	Calculated Accrued Depreciation (6)	Calculated Annual Accrual	
						Amount (7)	Rate (8)=(7)/(5)
Depreciable Plant							
Steam Production Plant							
<i>Meramec Steam Production Plant</i>							
311	2021	120 - S0 *	(17)	36,285,697	22,227,391	1,330,320	3.67
312	2021	60 - L0.5 *	(17)	403,333,321	154,474,309	21,666,238	5.37
314	2021	70 - L0.5 *	(17)	81,963,286	39,548,627	3,827,501	4.67
315	2021	90 - R1 *	(17)	36,268,698	17,732,002	1,643,446	4.53
316	2021	60 - O1 *	(17)	13,521,142	5,442,201	720,401	5.33
Total Meramec Steam Production Plant				571,372,144	239,424,530	29,187,906	
<i>Sioux Steam Production Plant</i>							
311	2027	120 - S0 *	(22)	25,194,894	13,670,821	817,664	3.25
312	2027	60 - L0.5 *	(22)	325,939,982	129,827,766	13,731,360	4.21
314	2027	70 - L0.5 *	(22)	89,835,326	29,665,285	3,975,078	4.42
315	2027	90 - R1 *	(22)	34,600,610	11,694,295	1,478,849	4.27
316	2027	60 - O1 *	(22)	7,713,733	2,989,018	331,893	4.30
Total Sioux Steam Production Plant				483,284,545	187,847,185	20,334,844	
<i>Labadie Steam Production Plant</i>							
311	2033	120 - S0 *	(25)	61,791,585	31,106,297	1,749,336	2.83
312	2033	60 - L0.5 *	(25)	556,070,480	255,563,366	18,767,967	3.38
312.03		22 - R3	30	121,206,826	35,958,486	3,860,437	3.18
314	2033	70 - L0.5 *	(25)	183,529,904	66,749,855	6,580,539	3.59
315	2033	90 - R1 *	(25)	72,780,646	33,352,577	2,228,388	3.06
316	2033	60 - O1 *	(25)	16,724,383	5,884,636	627,849	3.75
Total Labadie Steam Production Plant				1,012,103,823	428,615,217	33,814,516	
<i>Rush Island Steam Production Plant</i>							
311	2037	120 - S0 *	(22)	52,312,785	24,714,978	1,307,355	2.50
312	2037	60 - L0.5 *	(22)	353,903,249	143,111,478	11,044,493	3.12
314	2037	70 - L0.5 *	(22)	136,041,231	46,488,794	4,324,674	3.18
315	2037	90 - R1 *	(22)	32,922,076	12,647,491	937,203	2.85
316	2037	60 - O1 *	(22)	10,112,325	2,901,944	351,283	3.47
Total Rush Island Steam Production Plant				585,291,666	229,864,685	17,965,008	

AmerenUE - Electric

**SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST, CALCULATED ANNUAL DEPRECIATION ACCRUALS
AND CALCULATED ACCRUED DEPRECIATION RELATED TO UTILITY PLANT AT DECEMBER 31, 2005**

Depreciable Group		Probable Retirement	Survivor	Net	Original	Calculated	Calculated	
		Year	Curve	Salvage, %	Cost at	Accrued	Annual Accrual	
(1)		(2)	(3)	(4)	December 31, 2005	Depreciation	Amount	Rate
					(5)	(6)	(7)	(8)=(7)/(5)
Steam Production Plant, Cont.								
<i>Common</i>								
311	Structures & Improvements	2033	120 - S0 *	(5)	1,959,206	289,973	65,904	3.36
312	Boiler Plant Equipment	2033	60 - L0.5 *	(5)	37,071,156	5,527,912	1,344,681	3.63
315	Accessory Electrical Equipment	2033	90 - R1 *	(5)	3,129,975	445,463	108,510	3.47
316	Miscellaneous Power Plant Equipment	2033	60 - O1 *	(5)	20,843	2,574	797	3.82
Total Common					42,181,179	6,265,922	1,519,892	3.60
Total Steam Production Plant					2,694,233,356	1,092,017,539	102,822,166	
Nuclear Production Plant								
<i>Callaway Nuclear Production Plant</i>								
321	Structures & Improvements	2024	100 - R1 *	0	892,849,632	434,654,823	25,165,774	2.82
322	Reactor Plant Equipment	2024	60 - S0 *	0	957,396,835	390,891,119	32,350,836	3.38
323	Turbogenerator Units	2024	100 - S0 *	0	498,999,736	208,726,905	15,888,649	3.18
324	Accessory Electrical Equipment	2024	80 - R2 *	0	210,733,334	105,299,723	5,775,099	2.74
325	Miscellaneous Power Plant Equipment	2024	60 - O1 *	0	164,519,297	59,951,889	6,087,886	3.70
Total Nuclear Production Plant					2,724,498,833	1,199,524,459	85,268,244	
Hydraulic Production Plant								
<i>Osage Hydraulic Production Plant</i>								
331	Structures & Improvements	2046	150 - R1.5 *	(10)	3,750,644	1,843,375	59,295	1.58
332	Reservoirs, Dams, & Waterways	2046	180 - R3 *	(20)	25,597,635	15,447,912	383,508	1.50
333	Water Wheels, Turbines, & Generators	2046	130 - S0 *	(10)	19,301,223	6,475,834	385,727	2.00
334	Accessory Electrical Equipment	2046	65 - O1 *	0	4,112,456	1,248,873	89,700	2.18
335	Miscellaneous Power Plant Equipment	2046	60 - O1 *	0	1,699,727	316,061	42,378	2.49
336	Roads, Railroads, & Bridges	2046	Square	0	77,445	42,486	864	1.12
Total Osage Hydraulic Production Plant					54,539,128	25,374,541	961,472	
<i>Keokuk Hydraulic Production Plant</i>								
331	Structures & Improvements	2036	160 - R1.5 *	(10)	3,791,127	1,811,913	79,678	2.10
332	Reservoirs, Dams, & Waterways	2036	180 - R3 *	(20)	12,170,523	7,238,534	243,785	2.00
333	Water Wheels, Turbines, & Generators	2036	130 - S0 *	(10)	58,830,125	11,553,069	1,793,069	3.05
334	Accessory Electrical Equipment	2036	65 - O1 *	0	9,161,004	1,937,515	273,200	2.98
335	Miscellaneous Power Plant Equipment	2036	60 - O1 *	0	2,630,627	585,968	78,292	2.98
336	Roads, Railroads, & Bridges	2036	Square	0	114,926	45,598	2,272	1.98

AmerenUE - Electric

**SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST, CALCULATED ANNUAL DEPRECIATION ACCRUALS
AND CALCULATED ACCRUED DEPRECIATION RELATED TO UTILITY PLANT AT DECEMBER 31, 2005**

Depreciable Group (1)	Probable Retirement Year (2)	Survivor Curve (3)	Net Salvage, % (4)	Original Cost at December 31, 2005 (5)	Calculated Accrued Depreciation (6)	Calculated Annual Accrual	
						Amount (7)	Rate (8)=(7)/(5)
Total Keokuk Hydraulic Production Plant				86,698,332	23,172,597	2,470,296	2.85
<i>Taum Sauk Hydraulic Production Plant</i>							
331 Structures & Improvements	2036	160 - R1.5 *	(10)	5,468,208	3,100,747	98,555	1.80
332 Reservoirs, Dams, & Waterways	2036	180 - R3 *	(20)	27,594,082	15,519,625	579,644	2.10
333 Water Wheels, Turbines, & Generators	2036	130 - S0 *	(10)	37,277,699	13,332,408	940,956	2.52
334 Accessory Electrical Equipment	2036	65 - O1 *	0	4,106,261	1,326,931	106,127	2.58
335 Miscellaneous Power Plant Equipment	2036	60 - O1 *	0	1,620,780	297,631	50,340	3.11
336 Roads, Railroads, & Bridges	2036	Square	0	45,570	24,729	683	1.50
Total Taum Sauk Hydraulic Production Plant				76,112,599	33,602,071	1,776,305	
Total Hydraulic Production Plant				217,350,059	82,149,209	5,208,073	
Other Production Plant							
341 Structures & Improvements		35 - SQ	(5)	15,310,060	3,498,977	437,537	2.86
342 Fuel Holders, Producers, & Accessories		35 - SQ	(5)	12,123,101	2,826,700	360,240	2.97
344 Generators		35 - SQ	(5)	583,555,235	87,823,660	17,281,842	2.96
345 Accessory Electrical Equipment		35 - SQ	(5)	26,830,796	7,015,500	775,482	2.89
346 Miscellaneous Power Plant Equipment		35 - SQ	(5)	5,376,474	804,756	152,018	2.83
Total Other Production Plant				643,195,666	101,969,593	19,007,119	
Total Production Plant				6,279,277,914	2,475,660,800	212,305,602	
Transmission Plant							
352 Structures & Improvements		60 - R2	(5)	6,219,705	2,130,385	109,063	1.75
353 Station Equipment		55 - R2.5	0	178,211,332	47,646,322	3,243,446	1.82
354 Towers & Fixtures		65 - R4	(10)	68,198,477	34,993,543	1,155,282	1.69
355 Poles & Fixtures		52 - R4	(90)	103,511,061	54,341,351	3,776,039	3.65
356 Overhead Conductor & Devices		55 - R4	(25)	112,346,062	59,674,339	2,551,275	2.27
359 Roads & Trails		50 - SQ	0	71,789	65,879	858	1.20
Total Transmission Plant				468,558,427	198,851,819	10,835,963	

AmerenUE - Electric

**SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST, CALCULATED ANNUAL DEPRECIATION ACCRUALS
AND CALCULATED ACCRUED DEPRECIATION RELATED TO UTILITY PLANT AT DECEMBER 31, 2005**

Depreciable Group		Probable Retirement	Survivor	Net	Original	Calculated	Calculated	
		Year	Curve	Salvage, %	Cost at	Accrued	Annual Accrual	
(1)		(2)	(3)	(4)	December 31, 2005	Depreciation	Amount	Rate
					(5)	(6)	(7)	(8)=(7)/(5)
Distribution Plant								
361	Structures & Improvements		60 - R2	(5)	15,759,383	4,928,091	276,341	1.75
362	Station Equipment		55 - R2.5	0	513,217,383	158,604,372	9,340,556	1.82
364	Poles & Fixtures		43 - R3	(135)	653,216,782	517,475,456	35,762,595	5.47
365	Overhead Conductors & Devices		47 - R1	(50)	712,573,522	253,448,997	22,766,724	3.19
366	Underground Conduit		65 - R3	(50)	164,964,341	57,430,805	3,810,676	2.31
367	Underground Conductor & Devices		53 - R2	(25)	447,520,715	133,340,363	10,572,677	2.36
368	Line Transformers		45 - L2	0	346,481,166	106,949,801	7,691,882	2.22
369.1	Overhead Services		37 - R2.5	(200)	123,917,172	144,985,769	10,021,467	8.09
369.2	Underground Services		45 - R3	(80)	118,053,966	73,116,397	4,712,626	3.99
370	Meters		28 - L2.5	0	102,314,800	33,249,406	3,652,176	3.57
371	Installation On Customers' Premises		20 - O1	0	164,854	119,976	6,161	3.74
373	Street Lighting & Signal Systems		33 - L1	(45)	100,172,902	42,348,357	4,401,096	4.39
Total Distribution Plant					3,298,356,987	1,525,997,790	113,014,977	
General Plant								
390	Structures & Improvements		45 - S0	(5)	164,206,365	45,845,094	3,827,261	2.33
391	Office Furniture & Equipment		15 - SQ	0	39,127,356	23,963,299	1,864,894	4.77
391.1	Mainframe Computers		5 - SQ	0	422,014	422,014	0	0.00
391.2	Personal Computers		5 - SQ	0	1,310,098	581,312	254,452	19.42
392	Transportation Equipment		11 - S0	9	84,159,804	29,975,313	6,925,535	8.23
393	Stores Equipment		20 - SQ	0	2,065,007	1,317,417	76,670	3.71
394	Tools, Shop, & Garage Equipment		20 - SQ	0	10,524,040	5,966,057	457,192	4.34
395	Laboratory Equipment		20 - SQ	0	6,819,984	3,330,712	305,591	4.48
396	Power Operated Equipment		15 - L2	15	10,465,818	4,210,927	593,360	5.67
397	Communications Equipment		15 - SQ	0	127,014,326	94,134,744	6,094,641	4.80
398	Miscellaneous Equipment		20 - SQ	0	637,305	278,063	30,860	4.84
Total General Plant					446,752,116	210,024,952	20,430,456	
TOTAL DEPRECIABLE ELECTRIC PLANT					10,492,945,444	4,410,535,361	356,586,998	

AmerenUE - Electric

**SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST, CALCULATED ANNUAL DEPRECIATION ACCRUALS
AND CALCULATED ACCRUED DEPRECIATION RELATED TO UTILITY PLANT AT DECEMBER 31, 2005**

Depreciable Group		Probable Retirement	Survivor	Net	Original	Calculated	Calculated	
		Year	Curve	Salvage, %	Cost at	Accrued	Annual Accrual	
(1)		(2)	(3)	(4)	December 31, 2005	Depreciation	Amount	Rate
					(5)	(6)	(7)	(8)=(7)/(5)
Accounts Not Studied								
303	Misc. Intangible Plant				10,573,011			
310	Land and Land Rights				1,808,944			
315	Accessory Elec Equip - Venice				18,217			
317	ARO - Steam Production				10,236,537			
320	Land & Land Rights				5,430,873			
326	ARO - Nuclear Production				99,491,002			
330	Land and Land Rights				18,133,499			
340	Land & Land Rights				3,932,947			
350	Land & Land Rights				29,346,862			
360	Land & Land Rights				22,296,934			
374	ARO Distribution Plant				337,836			
389	Land & Land Rights				10,589,067			
399.1	ARO General Plant				320,730			
Total Accounts Not Studied					212,516,459			
Rounding					15			
TOTAL ELECTRIC PLANT					<u>10,705,461,918</u>			

* Curve shown is interim survivor curve.

AmerenUE - Electric

**SCHEDULE 2. COMPARISON OF CALCULATED ACCRUED DEPRECIATION AND BOOK DEPRECIATION RESERVE
AT DECEMBER 31, 2005 AND CALCULATION OF ANNUAL AMORTIZATION OF THE RESERVE VARIANCE
BASED ON A COMPOSITE REMAINING LIFE PERIOD**

Depreciable Group		Original Cost at December 31, 2005	Book Reserve	Calculated Accrued Depreciation	Reserve Variance	Remaining Life	Annual Amortization True Up
(1)		(2)	(3)	(4)	(5) = (4) - (3)	(6)	(7) = (5) / (6)
Depreciable Plant							
Steam Production Plant							
<i>Meramec Steam Production Plant</i>							
311	Structures & Improvements	36,285,697	25,263,302	22,227,391	(3,035,911)	15.2	(199,731)
312	Boiler Plant Equipment	403,333,321	106,475,863	154,474,309	47,998,446	14.6	3,287,565
314	Turbogenerator Units	81,963,286	48,578,106	39,548,627	(9,029,479)	14.9	(606,005)
315	Accessory Electrical Equipment	36,268,698	20,649,350	17,732,002	(2,917,348)	15.1	(193,202)
316	Miscellaneous Power Plant Equipment	13,521,142	4,171,242	5,442,201	1,270,959	14.4	88,261
	Total Meramec Steam Production Plant	571,372,144	205,137,863	239,424,530	34,286,667		2,376,888
<i>Sioux Steam Production Plant</i>							
311	Structures & Improvements	25,194,894	14,050,331	13,670,821	(379,510)	20.9	(18,158)
312	Boiler Plant Equipment	325,939,982	102,713,609	129,827,766	27,114,157	19.4	1,397,637
314	Turbogenerator Units	89,835,326	28,261,696	29,665,285	1,403,589	20.1	69,830
315	Accessory Electrical Equipment	34,600,610	11,833,776	11,694,295	(139,481)	20.6	(6,771)
316	Miscellaneous Power Plant Equipment	7,713,733	2,339,741	2,989,018	649,277	19.3	33,641
	Total Sioux Steam Production Plant	483,284,545	159,199,153	187,847,185	28,648,032		1,476,179
<i>Labadie Steam Production Plant</i>							
311	Structures & Improvements	61,791,585	34,038,755	31,106,297	(2,932,458)	26.4	(111,078)
312	Boiler Plant Equipment	556,070,480	301,066,755	255,563,366	(45,503,389)	23.5	(1,936,314)
312.03	Boiler Plant Equipment - Aluminum Coal Cars	121,206,826	38,100,712	35,958,486	(2,142,226)	12.7	(168,679)
314	Turbogenerator Units	183,529,904	67,328,387	66,749,855	(578,532)	24.7	(23,422)
315	Accessory Electrical Equipment	72,780,646	38,251,100	33,352,577	(4,898,523)	25.9	(189,132)
316	Miscellaneous Power Plant Equipment	16,724,383	7,341,846	5,884,636	(1,457,210)	24.0	(60,717)
	Total Labadie Steam Production Plant	1,012,103,823	486,127,555	428,615,217	(57,512,338)		(2,489,343)

AmerenUE - Electric

**SCHEDULE 2. COMPARISON OF CALCULATED ACCRUED DEPRECIATION AND BOOK DEPRECIATION RESERVE
AT DECEMBER 31, 2005 AND CALCULATION OF ANNUAL AMORTIZATION OF THE RESERVE VARIANCE
BASED ON A COMPOSITE REMAINING LIFE PERIOD**

	Original Cost at December 31, 2005	Book Reserve	Calculated Accrued Depreciation	Reserve Variance	Remaining Life	Annual Amortization True Up
Depreciable Group (1)	(2)	(3)	(4)	(5) = (4) - (3)	(6)	(7) = (5) / (6)
Steam Production Plant, Cont.						
<i>Rush Island Steam Production Plant</i>						
311 Structures & Improvements	52,312,785	31,645,884	24,714,978	(6,930,906)	30.0	(231,030)
312 Boiler Plant Equipment	353,903,249	196,980,361	143,111,478	(53,868,883)	26.4	(2,040,488)
314 Turbogenerator Units	136,041,231	53,484,413	46,488,794	(6,995,619)	27.7	(252,549)
315 Accessory Electrical Equipment	32,922,076	16,492,597	12,647,491	(3,845,106)	29.4	(130,786)
316 Miscellaneous Power Plant Equipment	<u>10,112,325</u>	<u>4,266,116</u>	<u>2,901,944</u>	<u>(1,364,172)</u>	26.9	<u>(50,713)</u>
Total Rush Island Steam Production Plant	585,291,666	302,869,371	229,864,685	(73,004,686)		(2,705,566)
<i>Common</i>						
311 Structures & Improvements	1,959,206	219,563	289,973	70,410	26.8	2,627
312 Boiler Plant Equipment	37,071,156	4,537,148	5,527,912	990,764	24.8	39,950
315 Accessory Electrical Equipment	3,129,975	342,692	445,463	102,771	26.2	3,923
316 Miscellaneous Power Plant Equipment	<u>20,843</u>	<u>2,438</u>	<u>2,574</u>	<u>136</u>	24.2	<u>6</u>
Total Common	<u>42,181,179.07</u>	<u>5,101,841</u>	<u>6,265,922</u>	<u>1,164,081</u>		<u>46,506</u>
Total Steam Production Plant	2,694,233,356	1,158,435,783	1,092,017,539	(66,418,244)		(1,295,337)
Nuclear Production Plant						
<i>Callaway Nuclear Production Plant</i>						
321 Structures & Improvements	892,849,632	440,030,469	434,654,823	(5,375,646)	18.2	(295,365)
322 Reactor Plant Equipment	957,396,835	284,736,650	390,891,119	106,154,469	17.4	6,100,832
323 Turbogenerator Units	498,999,736	185,853,221	208,726,905	22,873,684	18.3	1,249,928
324 Accessory Electrical Equipment	210,733,334	108,252,859	105,299,723	(2,953,136)	18.3	(161,374)
325 Miscellaneous Power Plant Equipment	<u>164,519,297</u>	<u>32,314,189</u>	<u>59,951,889</u>	<u>27,637,700</u>	17.2	<u>1,606,843</u>
Total Nuclear Production Plant	2,724,498,833	1,051,187,388	1,199,524,459	148,337,071		8,500,864

AmerenUE - Electric

**SCHEDULE 2. COMPARISON OF CALCULATED ACCRUED DEPRECIATION AND BOOK DEPRECIATION RESERVE
AT DECEMBER 31, 2005 AND CALCULATION OF ANNUAL AMORTIZATION OF THE RESERVE VARIANCE
BASED ON A COMPOSITE REMAINING LIFE PERIOD**

Depreciable Group	Original Cost at December 31, 2005	Book Reserve	Calculated Accrued Depreciation	Reserve Variance	Remaining Life	Annual Amortization True Up
(1)	(2)	(3)	(4)	(5) = (4) - (3)	(6)	(7) = (5) / (6)
Hydraulic Production Plant						
<i>Osage Hydraulic Production Plant</i>						
331 Structures & Improvements	3,750,644	1,323,513	1,843,375	519,862	38.4	13,538
332 Reservoirs, Dams, & Waterways	25,597,635	13,601,792	15,447,912	1,846,120	39.7	46,502
333 Water Wheels, Turbines, & Generators	19,301,223	6,980,750	6,475,834	(504,916)	38.3	(13,183)
334 Accessory Electrical Equipment	4,112,456	1,373,647	1,248,873	(124,774)	32.1	(3,887)
335 Miscellaneous Power Plant Equipment	1,699,727	364,885	316,061	(48,824)	32.7	(1,493)
336 Roads, Railroads, & Bridges	77,445	115,104	42,486	(72,618)	40.5	(1,795)
Total Osage Hydraulic Production Plant	54,539,128	23,759,691	25,374,541	1,614,850		39,682
<i>Keokuk Hydraulic Production Plant</i>						
331 Structures & Improvements	3,791,127	1,354,660	1,811,913	457,253	29.5	15,500
332 Reservoirs, Dams, & Waterways	12,170,523	5,716,963	7,238,534	1,521,571	30.1	50,551
333 Water Wheels, Turbines, & Generators	58,830,125	5,533,101	11,553,069	6,019,968	29.6	203,377
334 Accessory Electrical Equipment	9,161,004	788,470	1,937,515	1,149,045	26.2	43,857
335 Miscellaneous Power Plant Equipment	2,630,627	660,867	585,968	(74,899)	26.2	(2,859)
336 Roads, Railroads, & Bridges	114,926	54,102	45,598	(8,504)	30.5	(279)
Total Keokuk Hydraulic Production Plant	86,698,332	14,108,163	23,172,597	9,064,434		310,147
<i>Taum Sauk Hydraulic Production Plant</i>						
331 Structures & Improvements	5,468,208	1,645,912	3,100,747	1,454,835	29.6	49,150
332 Reservoirs, Dams, & Waterways	27,594,082	9,785,917	15,519,625	5,733,708	30.3	189,231
333 Water Wheels, Turbines, & Generators	37,277,699	7,479,328	13,332,408	5,853,080	29.3	199,764
334 Accessory Electrical Equipment	4,106,261	1,129,100	1,326,931	197,831	26.1	7,580
335 Miscellaneous Power Plant Equipment	1,620,780	509,509	297,631	(211,878)	26.4	(8,026)
336 Roads, Railroads, & Bridges	45,570	56,387	24,729	(31,658)	1.0	(31,658)
Total Taum Sauk Hydraulic Production Plant	76,112,599	20,606,153	33,602,071	12,995,918		406,041
Total Hydraulic Production Plant	217,350,059	58,474,007	82,149,209	23,675,202		755,870

AmerenUE - Electric

**SCHEDULE 2. COMPARISON OF CALCULATED ACCRUED DEPRECIATION AND BOOK DEPRECIATION RESERVE
AT DECEMBER 31, 2005 AND CALCULATION OF ANNUAL AMORTIZATION OF THE RESERVE VARIANCE
BASED ON A COMPOSITE REMAINING LIFE PERIOD**

	Depreciable Group	Original Cost at December 31, 2005	Book Reserve	Calculated Accrued Depreciation	Reserve Variance	Remaining Life	Annual Amortization True Up
	(1)	(2)	(3)	(4)	(5) = (4) - (3)	(6)	(7) = (5) / (6)
	Other Production Plant						
341	Structures & Improvements	15,310,060	5,265,826	3,498,977	(1,766,849)	31.2	(56,630)
342	Fuel Holders, Producers, & Accessories	12,123,101	3,014,438	2,826,700	(187,738)	28.9	(6,496)
344	Generators	583,555,235	109,426,490	87,823,660	(21,602,830)	31.8	(679,334)
345	Accessory Electrical Equipment	26,830,796	7,644,957	7,015,500	(629,457)	29.3	(21,483)
346	Miscellaneous Power Plant Equipment	5,376,474	959,166	804,756	(154,410)	32.7	(4,722)
	Total Other Production Plant	643,195,666	126,310,877	101,969,593	(24,341,284)		(768,665)
	Total Production Plant	6,279,277,914	2,394,408,055	2,475,660,800	81,252,745		7,192,731
	Transmission Plant						
352	Structures & Improvements	6,219,705	2,050,542	2,130,385	79,843	40.1	1,991
353	Station Equipment	178,211,332	57,763,437	47,646,322	(10,117,115)	41.9	(241,459)
354	Towers & Fixtures	68,198,477	41,274,010	34,993,543	(6,280,467)	37.1	(169,285)
355	Poles & Fixtures	103,511,061	42,267,580	54,341,351	12,073,771	35.4	341,067
356	Overhead Conductor & Devices	112,346,062	43,131,874	59,674,339	16,542,465	27.2	608,179
359	Roads & Trails	71,789	76,265	65,879	(10,386)	1.0	(10,386)
	Total Transmission Plant	468,558,427	186,563,708	198,851,819	12,288,111		530,108

AmerenUE - Electric

**SCHEDULE 2. COMPARISON OF CALCULATED ACCRUED DEPRECIATION AND BOOK DEPRECIATION RESERVE
AT DECEMBER 31, 2005 AND CALCULATION OF ANNUAL AMORTIZATION OF THE RESERVE VARIANCE
BASED ON A COMPOSITE REMAINING LIFE PERIOD**

	Original Cost at December 31, 2005	Book Reserve	Calculated Accrued Depreciation	Reserve Variance	Remaining Life	Annual Amortization True Up
Depreciable Group (1)	(2)	(3)	(4)	(5) = (4) - (3)	(6)	(7) = (5) / (6)
Distribution Plant						
361 Structures & Improvements	15,759,383	4,953,060	4,928,091	(24,969)	42.5	(588)
362 Station Equipment	513,217,383	159,407,965	158,604,372	(803,593)	42.8	(18,776)
364 Poles & Fixtures	653,216,782	520,097,324	517,475,456	(2,621,868)	29.6	(88,577)
365 Overhead Conductors & Devices	712,573,522	254,733,135	253,448,997	(1,284,138)	35.8	(35,870)
366 Underground Conduit	164,964,341	57,721,787	57,430,805	(290,982)	48.0	(6,062)
367 Underground Conductor & Devices	447,520,715	134,015,952	133,340,363	(675,589)	39.6	(17,060)
368 Line Transformers	346,481,166	107,491,678	106,949,801	(541,877)	31.3	(17,312)
369.1 Overhead Services	123,917,172	145,720,361	144,985,769	(734,592)	22.2	(33,090)
369.2 Underground Services	118,053,966	73,486,852	73,116,397	(370,455)	26.3	(14,086)
370 Meters	102,314,800	33,417,869	33,249,406	(168,463)	19.4	(8,684)
371 Installation On Customers' Premises	164,854	120,584	119,976	(608)	3.4	(179)
373 Street Lighting & Signal Systems	100,172,902	42,562,921	42,348,357	(214,564)	25.7	(8,349)
Total Distribution Plant	3,298,356,987	1,533,729,488	1,525,997,790	(7,731,698)		(248,631)
General Plant						
390 Structures & Improvements	164,206,365	46,077,375	45,845,094	(232,281)	33.1	(7,018)
391 Office Furniture & Equipment	39,127,356	24,084,713	23,963,299	(121,414)	8.2	(14,807)
391.1 Mainframe Computers	422,014	422,014	422,014	0	1.0	0
391.2 Personal Computers	1,310,098	584,257	581,312	(2,945)	1.6	(1,841)
392 Transportation Equipment	84,159,804	30,127,187	29,975,313	(151,874)	8.9	(17,064)
393 Stores Equipment	2,065,007	1,324,092	1,317,417	(6,675)	6.0	(1,113)
394 Tools, Shop, & Garage Equipment	10,524,040	5,996,285	5,966,057	(30,228)	6.6	(4,580)
395 Laboratory Equipment	6,819,984	3,347,588	3,330,712	(16,876)	6.0	(2,813)
396 Power Operated Equipment	10,465,818	4,232,262	4,210,927	(21,335)	10.2	(2,092)
397 Communications Equipment	127,014,326	94,611,692	94,134,744	(476,948)	2.9	(164,465)
398 Miscellaneous Equipment	637,305	279,472	278,063	(1,409)	11.7	(120)
Total General Plant	446,752,116	211,086,937	210,024,952	(1,061,985)		(215,911)
TOTAL DEPRECIABLE ELECTRIC PLANT	10,492,945,444	4,325,788,188	4,410,535,361	84,747,173		7,258,297

AmerenUE - Electric

**SCHEDULE 2. COMPARISON OF CALCULATED ACCRUED DEPRECIATION AND BOOK DEPRECIATION RESERVE
AT DECEMBER 31, 2005 AND CALCULATION OF ANNUAL AMORTIZATION OF THE RESERVE VARIANCE
BASED ON A COMPOSITE REMAINING LIFE PERIOD**

	Original Cost at December 31, 2005	Book Reserve	Calculated Accrued Depreciation	Reserve Variance	Remaining Life	Annual Amortization True Up
Depreciable Group (1)	(2)	(3)	(4)	(5) = (4) - (3)	(6)	(7) = (5) / (6)
Accounts Not Studied						
303 Misc. Intangible Plant	10,573,011.00	1,816,932				
310 Land and Land Rights	1,808,944.00	0				
311 Structures & Impvmts -Venice	-	(4,087,670)				
312 Boiler Plant Equip -Venice	-	1,908,870				
314 Turbogenator Units - Venice	-	551,400				
315 Accessory Elec Equip - Venice	18,216.88	(236,507)				
316 Misc Power Plant Equip - Venice	-	(118,122)				
317 ARO - Steam Production	10,236,537.00	5,601,837				
320 Land & Land Rights	5,430,873.00	0				
326 ARO - Nuclear Production	99,491,002.00	74,646,654				
330 Land and Land Rights	18,133,499.00	0				
340 Land & Land Rights	3,932,947.00	0				
350 Land & Land Rights	29,346,862.00	0				
360 Land & Land Rights	22,296,934.00	369,053				
374 ARO Distribution Plant	337,836.00	0				
389 Land & Land Rights	10,589,067.00	(17)				
399.1 ARO General Plant	320,730.00	134,326				
Total Accounts Not Studied	212,516,458.88	80,586,756				
Rounding	15.13	(1)				
TOTAL ELECTRIC PLANT	<u>\$ 10,705,461,918.00</u>	<u>\$ 4,406,374,943</u>				

AmerenUE - Electric

**SCHEDULE 3. CALCULATION OF TOTAL ANNUAL DEPRECIATION INCLUDING AMORTIZATIONS OF THE RESERVE VARIANCE
AT DECEMBER 31, 2005**

	Original Cost at December 31, 2005	Annual Accrual Amount	Reserve Variance Amortization	Total Annual Depreciation
Depreciable Group (1)	(2)	(3)	(4)	(5)
Depreciable Plant				
Steam Production Plant				
<i>Meramec Steam Production Plant</i>				
311 Structures & Improvements	36,285,697	1,330,320	(199,731)	1,130,589
312 Boiler Plant Equipment	403,333,321	21,666,238	3,287,565	24,953,803
314 Turbogenerator Units	81,963,286	3,827,501	(606,005)	3,221,496
315 Accessory Electrical Equipment	36,268,698	1,643,446	(193,202)	1,450,244
316 Miscellaneous Power Plant Equipment	13,521,142	720,401	88,261	808,662
Total Meramec Steam Production Plant	571,372,144	29,187,906	2,376,888	31,564,794
<i>Sioux Steam Production Plant</i>				
311 Structures & Improvements	25,194,894	817,664	(18,158)	799,506
312 Boiler Plant Equipment	325,939,982	13,731,360	1,397,637	15,128,997
314 Turbogenerator Units	89,835,326	3,975,078	69,830	4,044,908
315 Accessory Electrical Equipment	34,600,610	1,478,849	(6,771)	1,472,078
316 Miscellaneous Power Plant Equipment	7,713,733	331,893	33,641	365,534
Total Sioux Steam Production Plant	483,284,545	20,334,844	1,476,179	21,811,023
<i>Labadie Steam Production Plant</i>				
311 Structures & Improvements	61,791,585	1,749,336	(111,078)	1,638,258
312 Boiler Plant Equipment	556,070,480	18,767,967	(1,936,314)	16,831,653
312.03 Boiler Plant Equipment - Aluminum Coal Cars	121,206,826	3,860,437	(168,679)	3,691,758
314 Turbogenerator Units	183,529,904	6,580,539	(23,422)	6,557,117
315 Accessory Electrical Equipment	72,780,646	2,228,388	(189,132)	2,039,256
316 Miscellaneous Power Plant Equipment	16,724,383	627,849	(60,717)	567,132
Total Labadie Steam Production Plant	1,012,103,823	33,814,516	(2,489,343)	31,325,173

AmerenUE - Electric

**SCHEDULE 3. CALCULATION OF TOTAL ANNUAL DEPRECIATION INCLUDING AMORTIZATIONS OF THE RESERVE VARIANCE
AT DECEMBER 31, 2005**

	Original Cost at December 31, 2005	Annual Accrual Amount	Reserve Variance Amortization	Total Annual Depreciation
Depreciable Group	(2)	(3)	(4)	(5)
<i>Rush Island Steam Production Plant</i>				
311 Structures & Improvements	52,312,785	1,307,355	(231,030)	1,076,325
312 Boiler Plant Equipment	353,903,249	11,044,493	(2,040,488)	9,004,005
314 Turbogenerator Units	136,041,231	4,324,674	(252,549)	4,072,125
315 Accessory Electrical Equipment	32,922,076	937,203	(130,786)	806,417
316 Miscellaneous Power Plant Equipment	10,112,325	351,283	(50,713)	300,570
Total Rush Island Steam Production Plant	585,291,666	17,965,008	(2,705,566)	15,259,442
<i>Common</i>				
311 Structures & Improvements	1,959,206	65,904	2,627	68,531
312 Boiler Plant Equipment	37,071,156	1,344,681	39,950	1,384,631
315 Accessory Electrical Equipment	3,129,975	108,510	3,923	112,433
316 Miscellaneous Power Plant Equipment	20,843	797	6	803
Total Common	42,181,179	1,519,892	46,506	1,566,398
Total Steam Production Plant	2,694,233,356	102,822,166	(1,295,337)	101,526,829
Nuclear Production Plant				
<i>Callaway Nuclear Production Plant</i>				
321 Structures & Improvements	892,849,632	25,165,774	(295,365)	24,870,409
322 Reactor Plant Equipment	957,396,835	32,350,836	6,100,832	38,451,668
323 Turbogenerator Units	498,999,736	15,888,649	1,249,928	17,138,577
324 Accessory Electrical Equipment	210,733,334	5,775,099	(161,374)	5,613,725
325 Miscellaneous Power Plant Equipment	164,519,297	6,087,886	1,606,843	7,694,729
Total Nuclear Production Plant	2,724,498,833	85,268,244	8,500,864	93,769,108

AmerenUE - Electric

**SCHEDULE 3. CALCULATION OF TOTAL ANNUAL DEPRECIATION INCLUDING AMORTIZATIONS OF THE RESERVE VARIANCE
AT DECEMBER 31, 2005**

	Original Cost at December 31, 2005	Annual Accrual Amount	Reserve Variance Amortization	Total Annual Depreciation
Depreciable Group (1)	(2)	(3)	(4)	(5)
Hydraulic Production Plant				
<i>Osage Hydraulic Production Plant</i>				
331 Structures & Improvements	3,750,644	59,295	13,538	72,833
332 Reservoirs, Dams, & Waterways	25,597,635	383,508	46,502	430,010
333 Water Wheels, Turbines, & Generators	19,301,223	385,727	(13,183)	372,544
334 Accessory Electrical Equipment	4,112,456	89,700	(3,887)	85,813
335 Miscellaneous Power Plant Equipment	1,699,727	42,378	(1,493)	40,885
336 Roads, Railroads, & Bridges	77,445	864	(1,795)	(931)
Total Osage Hydraulic Production Plant	54,539,128	961,472	39,682	1,001,154
<i>Keokuk Hydraulic Production Plant</i>				
331 Structures & Improvements	3,791,127	79,678	15,500	95,178
332 Reservoirs, Dams, & Waterways	12,170,523	243,785	50,551	294,336
333 Water Wheels, Turbines, & Generators	58,830,125	1,793,069	203,377	1,996,446
334 Accessory Electrical Equipment	9,161,004	273,200	43,857	317,057
335 Miscellaneous Power Plant Equipment	2,630,627	78,292	(2,859)	75,433
336 Roads, Railroads, & Bridges	114,926	2,272	(279)	1,993
Total Keokuk Hydraulic Production Plant	86,698,332	2,470,296	310,147	2,780,443
<i>Taum Sauk Hydraulic Production Plant</i>				
331 Structures & Improvements	5,468,208	98,555	49,150	147,705
332 Reservoirs, Dams, & Waterways	27,594,082	579,644	189,231	768,875
333 Water Wheels, Turbines, & Generators	37,277,699	940,956	199,764	1,140,720
334 Accessory Electrical Equipment	4,106,261	106,127	7,580	113,707
335 Miscellaneous Power Plant Equipment	1,620,780	50,340	(8,026)	42,314
336 Roads, Railroads, & Bridges	45,570	683	(31,658)	(30,975)
Total Taum Sauk Hydraulic Production Plant	76,112,599	1,776,305	406,041	2,182,346
Total Hydraulic Production Plant	217,350,059	5,208,073	755,870	5,963,943

AmerenUE - Electric

**SCHEDULE 3. CALCULATION OF TOTAL ANNUAL DEPRECIATION INCLUDING AMORTIZATIONS OF THE RESERVE VARIANCE
AT DECEMBER 31, 2005**

	Original Cost at December 31, 2005	Annual Accrual Amount	Reserve Variance Amortization	Total Annual Depreciation
Depreciable Group	(1)	(2)	(3)	(4)
(1)	(2)	(3)	(4)	(5)
Other Production Plant				
341 Structures & Improvements	15,310,060	437,537	(56,630)	380,907
342 Fuel Holders, Producers, & Accessories	12,123,101	360,240	(6,496)	353,744
344 Generators	583,555,235	17,281,842	(679,334)	16,602,508
345 Accessory Electrical Equipment	26,830,796	775,482	(21,483)	753,999
346 Miscellaneous Power Plant Equipment	5,376,474	152,018	(4,722)	147,296
Total Other Production Plant	643,195,666	19,007,119	(768,665)	18,238,454
Total Production Plant	6,279,277,914	212,305,602	7,192,731	219,498,333
Transmission Plant				
352 Structures & Improvements	6,219,705	109,063	1,991	111,054
353 Station Equipment	178,211,332	3,243,446	(241,459)	3,001,987
354 Towers & Fixtures	68,198,477	1,155,282	(169,285)	985,997
355 Poles & Fixtures	103,511,061	3,776,039	341,067	4,117,106
356 Overhead Conductor & Devices	112,346,062	2,551,275	608,179	3,159,454
359 Roads & Trails	71,789	858	(10,386)	(9,528)
Total Transmission Plant	468,558,427	10,835,963	530,108	11,366,071
Distribution Plant				
361 Structures & Improvements	15,759,383	276,341	(588)	275,753
362 Station Equipment	513,217,383	9,340,556	(18,776)	9,321,780
364 Poles & Fixtures	653,216,782	35,762,595	(88,577)	35,674,018
365 Overhead Conductors & Devices	712,573,522	22,766,724	(35,870)	22,730,854
366 Underground Conduit	164,964,341	3,810,676	(6,062)	3,804,614
367 Underground Conductor & Devices	447,520,715	10,572,677	(17,060)	10,555,617
368 Line Transformers	346,481,166	7,691,882	(17,312)	7,674,570
369.1 Overhead Services	123,917,172	10,021,467	(33,090)	9,988,377
369.2 Underground Services	118,053,966	4,712,626	(14,086)	4,698,540
370 Meters	102,314,800	3,652,176	(8,684)	3,643,492
371 Installation On Customers' Premises	164,854	6,161	(179)	5,982
373 Street Lighting & Signal Systems	100,172,902	4,401,096	(8,349)	4,392,747
Total Distribution Plant	3,298,356,987	113,014,977	(248,631)	112,766,346

AmerenUE - Electric

**SCHEDULE 3. CALCULATION OF TOTAL ANNUAL DEPRECIATION INCLUDING AMORTIZATIONS OF THE RESERVE VARIANCE
AT DECEMBER 31, 2005**

	Original Cost at December 31, 2005	Annual Accrual Amount	Reserve Variance Amortization	Total Annual Depreciation
Depreciable Group	(1)	(2)	(3)	(4)
	(5)			
General Plant				
390 Structures & Improvements	164,206,365	3,827,261	(7,018)	3,820,243
391 Office Furniture & Equipment	39,127,356	1,864,894	(14,807)	1,850,087
391.1 Mainframe Computers	422,014	0	0	0
391.2 Personal Computers	1,310,098	254,452	(1,841)	252,611
392 Transportation Equipment	84,159,804	6,925,535	(17,064)	6,908,471
393 Stores Equipment	2,065,007	76,670	(1,113)	75,558
394 Tools, Shop, & Garage Equipment	10,524,040	457,192	(4,580)	452,612
395 Laboratory Equipment	6,819,984	305,591	(2,813)	302,778
396 Power Operated Equipment	10,465,818	593,360	(2,092)	591,268
397 Communications Equipment	127,014,326	6,094,641	(164,465)	5,930,176
398 Miscellaneous Equipment	637,305	30,860	(120)	30,740
Total General Plant	<u>446,752,116</u>	<u>20,430,456</u>	<u>(215,911)</u>	<u>20,214,545</u>
TOTAL DEPRECIABLE ELECTRIC PLANT	<u>10,492,945,444</u>	<u>356,586,998</u>	<u>7,258,297</u>	<u>363,845,295</u>
Accounts Not Studied				
303 Misc. Intangible Plant	10,573,011			
310 Land and Land Rights	1,808,944			
315 Accessory Elec Equip - Venice	18,217			
317 ARO - Steam Production	10,236,537			
320 Land & Land Rights	5,430,873			
326 ARO - Nuclear Production	99,491,002			
330 Land and Land Rights	18,133,499			
340 Land & Land Rights	3,932,947			
350 Land & Land Rights	29,346,862			
360 Land & Land Rights	22,296,934			
374 ARO Distribution Plant	337,836			
389 Land & Land Rights	10,589,067			
399.1 ARO General Plant	320,730			
Total Accounts Not Studied	<u>212,516,459</u>			
Rounding	<u>15</u>			
TOTAL ELECTRIC PLANT	<u>10,705,461,918</u>			

AmerenUE - Electric

**Schedule 4. Net Salvage Calculations Related to the Dismantling of the Steam Production Plant Facilities
Related to Original Cost at December 31, 2005**

Station	Original Cost at 12/31/05	Dismantling Costs Stated in 2005 Dollars	Proposed Terminal Date	Inflation Factor	Dismantling Costs Inflated to the Proposed Terminal Date	Net Salvage Percent
(1)	(2)	(3)	(4)	(5)_(a)	(6)	(7)=(6)/(2)
Meramec	571,372,144	74,643,000	6-2021	1.36	101,514,480	17.8
Sioux	483,284,545	70,399,000	6-2027	1.53	107,710,470	22.3
Labadie	890,896,998	131,392,000	6-2033	1.72	225,994,240	25.4
Rush Island	<u>585,291,666</u>	<u>70,230,000</u>	6-2037	1.87	<u>131,330,100</u>	22.4
Total Steam Production Plant	<u>2,530,845,353</u>	<u>346,664,000</u>			<u>566,549,290</u>	22.4

(a) Column (5) = 1.02^{Column(4) - (12-2005)}

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.)

Commonwealth

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Susan F. Warner, Notary Public
Lower Providence Twp., Montgomery County
My Commission Expires July 3, 2008