

Exhibit No.:
Issues: Depreciation
Witness: John F. Wiedmayer
Sponsoring Party: Union Electric Company
Type of Exhibit: Rebuttal Testimony
Case No.: ER-2008-0318
Date Testimony Prepared: October 14, 2008

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2008-0318

REBUTTAL TESTIMONY

OF

JOHN F. WIEDMAYER C.D.P.

ON

BEHALF OF

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

St. Louis, Missouri

October, 2008

REBUTTAL TESTIMONY OF JOHN F. WIEDMAYER

ON BEHALF OF AmerenUE
CASE NO. ER-2008-0318

Line
No.

1

I. INTRODUCTION

2 **Q. Please state your name and address.**

3 A. John F. Wiedmayer. My business address is 1010 Adams Avenue, Audubon, Pennsylvania
4 19403.

5 **Q. Please describe your education and work experience.**

6 A. Please see Appendix A.

7 **Q. Have you previously submitted testimony in this proceeding?**

8 A. No. However, I did submit testimony on the subject of depreciation on behalf of Union
9 Electric Company d/b/a AmerenUE (AmerenUE or the Company) in the Company's
10 prior rate proceeding, Case No. ER-2007-0002.

11 **Q. What is the purpose of your rebuttal testimony?**

12 A. My testimony is in rebuttal to the direct testimony of Office of the Public Counsel (OPC)
13 witness William W. Dunkel.

14 **Q. What is the subject of your rebuttal testimony?**

15 A. The subject of my rebuttal testimony is the depreciation adjustment related to the
16 Callaway Nuclear Plant proposed by Mr. Dunkel.

17 **II. ADJUSTMENT RELATED TO CALLAWAY NUCLEAR PLANT**

18 **Q. Have you reviewed the direct testimony of OPC Witness Dunkel?**

19 A. Yes, I have.

1 **Q. Has Mr. Dunkel conducted a recent service life and net salvage study for all of**
2 **AmerenUE's plant accounts?**

3 A. No, he has not. He has simply updated the *remaining life* accrual rates for the Callaway
4 Nuclear Plant accounts even though the depreciation rates in the prior Commission order
5 were based on *whole life* rates.

6 **Q. What is the impact on AmerenUE's depreciation expense based upon Mr. Dunkel's**
7 **calculation?**

8 A. Mr. Dunkel is recommending a reduction of approximately \$7.1 million to the
9 Company's depreciation expense from the level currently approved for the Callaway
10 Nuclear Plant accounts.

11 **Q. What is your conclusion regarding the revised depreciation rates proposed by Mr.**
12 **Dunkel?**

13 A. My conclusion is that the significant reduction in depreciation rates for nuclear
14 production plant accounts proposed by Mr. Dunkel is inappropriate and should be
15 rejected because Mr. Dunkel's depreciation adjustment only applies to one AmerenUE
16 power plant, the Callaway Nuclear Plant, and ignores depreciation rates applicable to
17 AmerenUE's other power plants, as well as depreciation rates applicable to its
18 transmission, distribution and general plant. Proposed changes in depreciation rates
19 should be made only after a thorough review of all rates related to all plant accounts and
20 not just a select few. All rates should be reviewed at the same time, as some may
21 increase and others decrease. A thorough review of all depreciation accrual rates based
22 on an updated depreciation study is fair to both the customers and the Company. This is
23 consistent with the fact that Missouri Public Service Commission rules only require

1 depreciation studies to be conducted once every five years or, if a rate case is filed, within
2 three years.

3 Mr. Dunkel selectively focuses on the nuclear production plant accounts, updates
4 the *remaining life* rates for these few accounts and recommends that the Company's
5 depreciation expense should be reduced. His adjustment is not appropriate since he has
6 neither conducted a service life and net salvage study for all accounts nor has he
7 explained why it is appropriate for AmerenUE to use *remaining life* rates for one group
8 of accounts, i.e., nuclear production, at the same time it has been ordered to use *whole life*
9 rates for all other plant accounts.

10 **Q. What is the difference between remaining life and whole life depreciation rates?**

11 A. Remaining life and whole life depreciation rates both require estimates regarding the
12 average service life and net salvage. The difference between the two depreciation
13 techniques is that remaining life rates adjust up or down based upon past levels of capital
14 recovery. That is, if past depreciation levels were too high, remaining life rates will
15 decrease and, correspondingly, remaining life rates will increase if past depreciation
16 levels were too low. Whole life rates are based on the estimated average service life and
17 net salvage and do not consider past levels of capital recovery. Differences between
18 remaining life and whole life rates become apparent upon examination of the equations
19 used to calculate each type of depreciation rates. Remaining life rates are determined
20 using the following equation:

21
22
$$\text{Remaining Life Rate} = [(1 - \text{Book Reserve, \%} - \text{Future Net Salvage, \%}) / \text{ARL}]$$

23

1 where: 1) ARL represents the average remaining life of the group; and 2) the book
2 reserve and future net salvage are expressed as a percent of the original cost of electric
3 plant in service.

4
5 Whole life rates are determined using the following equation:

$$6 \qquad \qquad \qquad \textit{Whole Life Rate} = [(1 - \textit{Net Salvage, \%}) / \textit{Average Service Life}]$$

7
8
9 Mr. Dunkel's approach is closely analogous to single issue ratemaking, and should not be
10 allowed here when a comprehensive look at appropriate depreciation rates for all
11 accounts has not been conducted.

12 **Q. You earlier pointed out the Mr. Dunkel's adjustment uses *remaining life* rates for**
13 **the nuclear production plant accounts while *whole life* rates are being used for the**
14 **other production plant accounts. Please elaborate.**

15 A. In AmerenUE's previous rate case (Case No. ER-2007-0002) the Commission, based on
16 the recommendation of its Staff, ordered the use of whole life rates for all plant accounts.
17 Mr. Dunkel's adjustment uses remaining life rates for nuclear production accounts and,
18 implicitly, whole life rates for all other plant accounts. This is an inappropriate and
19 inconsistent methodology which should be rejected. The definition of depreciation
20 accounting as stated by the American Institute of Certified Public Accountants (AICPA)
21 is as follows:

22
23 *"Depreciation accounting is a system of accounting that aims to distribute*
24 *cost or other basic value of tangible capital assets, less salvage (if any),*

1 *over the estimated useful life of the unit (which may be a group of assets)*
2 *in a systematic and rational manner”.*
3

4 The use of remaining life rates for nuclear production plant accounts and the use of whole
5 life rates for all other plant accounts as proposed by Mr. Dunkel is inconsistent with the
6 AICPA definition of depreciation accounting since his proposed depreciation calculation
7 is neither systematic nor rational.

8 **Q. Was AmerenUE required to conduct a depreciation study for this proceeding?**

9 A. No. As noted earlier, a depreciation study was submitted within the last three years (in July
10 2006 in Case No. ER-2007-0002) based on data through December 31, 2005. Another
11 study is therefore not required until 2011, unless AmerenUE files a rate proceeding after
12 July 2009, in which case a new study would be required. AmerenUE is not proposing to
13 change any depreciation rates in this case, and thus no new depreciation study was
14 required.

15 **Q. You describe the depreciation adjustment made by Mr. Dunkel as analogous to single**
16 **issue ratemaking. Please elaborate.**

17 A. Mr. Dunkel’s adjustment, which reduces the Company’s depreciation expense by over \$7
18 million, is inappropriate since he only recommends making changes to the depreciation
19 rates for a select few plant accounts and he has not performed a depreciation study that
20 includes all plant accounts. His depreciation adjustment only pertains to the nuclear
21 production plant accounts and does not address the other accounts. The depreciation rates
22 for some plant accounts may increase and some may decrease but all plant accounts should
23 be considered as part of a depreciation study when deciding on changing accrual rates. Mr.
24 Dunkel’s adjustment is not appropriate since it ignores the possibility that the depreciation

1 rates for other plant accounts may increase, which may reduce or eliminate his adjustment
2 entirely.

3 **Q. Do you have reason to believe that an examination of all of the plant accounts**
4 **would in fact support adjustments to other plant accounts not included in**
5 **Mr. Dunkel's isolated adjustment to the nuclear production plant accounts?**

6 A. Yes. AmerenUE's current depreciation rates for steam production plant accounts are
7 among the lowest that I've observed in the 22 years that I have been conducting studies
8 for electric companies. The composite rate for AmerenUE's steam production plant
9 excluding coal cars is 1.91 percent, which is significantly less than the industry average
10 of approximately 3 percent. The depreciation accrual rates for Accounts 311, Structures
11 and Improvements and 315 Accessory Electrical Equipment are particularly low in
12 relation to the rates used for these accounts by other electric companies. The
13 depreciation rates for Accounts 311 and 315 are 1.05 and 1.21 percent, respectively. The
14 estimated *average* service lives for these two accounts are 115 and 90 years respectively.
15 These service life estimates are significantly longer than those used by other electric
16 companies. The prior average service life estimate for these two accounts was 35 years.
17 The oldest steam unit owned by AmerenUE is Unit 1 at Meramec which is only 55 years
18 old. The youngest steam unit owned by AmerenUE is Unit 2 at Rush Island which is 31
19 years old. The company's Venice Steam Plant was retired in 2003 with generating units
20 ranging from 53 to 61 years old. The range of lives experienced at Venice is
21 substantially different from Staff's estimate of 115 years that was used to develop the
22 depreciation rate for that account.

1 Property units associated with Account 311, Structures and Improvement include
2 elevators, HVAC, floor coverings, windows, doors, paving, sidewalks, siding, roofs,
3 landscaping, fencing, etc. The maximum age for the survivor curve (i.e., 115-R1.5)
4 recommended by the Staff and approved by the Commission in the prior case for Account
5 311, Structures and Improvements is 231 years. 115 years is the estimated *average*
6 service life for property units within Account 311. The current survivor curve estimate
7 for Account 311, the 115-R1, assumes that certain property units will remain in service
8 for 231 years. Since Meramec Unit 1 was placed in service in 1953, we will not know
9 until the year 2184 if the estimate upon which the current depreciation rates are based is
10 correct. Of course, the fact is that it is obviously unreasonable to expect that these plant
11 components will last an average of 115 years.

12 **Q. But those rates are being used by AmerenUE at this time, correct?**

13 A. Yes, that is true. My point is that when another comprehensive depreciation study is
14 completed, the steam production plant service lives will need to be reviewed very
15 carefully since the same analytical flaw that led to depreciation rates based upon a 115
16 year average service life for Account 311 is present in other steam production accounts.
17 In my opinion, this should lead the Commission to increase those depreciation rates when
18 a comprehensive look at all depreciation rates is again undertaken. The bottom line is
19 that isolated decreases in depreciation rates should not be made in this case when there is
20 good reason to believe that a comprehensive depreciation study would support an
21 increase in other depreciation rates.

22 **Q. Please explain the flaw that you observed in the service life analyses for steam**
23 **production plant that led to these unreasonably high service life estimates.**

1 A. In the prior case, I estimated interim survivor curves in connection with final retirement
2 dates for the Company's steam plants. Interim survivor curves describe the expected
3 survivor characteristics for all property units including those units that are not expected to
4 last the entire life span of the power plant. The interim survivor curve for Account 311
5 attempts to describe the survivor characteristics for items of property such as roofs,
6 elevators, HVAC units, etc. These are items that are assumed will be retired sometime
7 during the course of a power plant's life. For steam plant accounts, it is not uncommon to
8 experience that 20 to 60 percent of the original plant be retired in the interim period, i.e.,
9 the time in between when the plant begins operating and when it ceases to operate.

10 In estimating the interim survivor curve for steam plants, I choose to study only the
11 *interim retirements*, i.e., retirements not associated with the final retirement of the plant.
12 My life analyses of historical company property accounting data excluded final retirements.
13 The interim retirements in the property accounting database are coded as transaction code
14 "0" while the final retirements are coded as a transaction code "7". This allows certain
15 retirements to be included or excluded from the study. Since I was estimating an interim
16 survivor curve in connection with a final retirement date, i.e., truncated survivor curves, for
17 AmerenUE's steam plants, my analyses included only the interim retirements and excluded
18 the final retirements made at steam plants such as Mound, Cahokia and Venice.

19 The interim survivor curves that I had estimated were nearly identical to the
20 survivor curves estimated by Staff upon which the depreciation rates were ultimately based.
21 The exception being that Staff did not truncate their survivor curves, since they did not
22 estimate a date of final retirement for the steam plants. Choosing nearly identical survivor
23 curves could only have occurred if the Staff (which recommended those rates) had

1 excluded the final retirements for steam plants as well. The final retirements were more
2 than half of the total retirements experienced in Accounts 311 and 315 combined (and
3 nearly a quarter of the total retirements experienced in the steam production accounts) and
4 they were excluded from the Staff's analysis inadvertently.

5 In the prior case, Staff stated that since the estimated dates of final retirement for
6 the steam plants were not imminent an estimate should not be made until the retirement
7 date is known with greater certainty; otherwise the estimates would be speculative. This
8 led to a Staff recommendation to treat the steam plants as you would treat any other mass
9 plant account such as poles and meters – i.e., a final retirement year for the steam plants
10 was not estimated. While the Commission ultimately adopted this recommendation, it is
11 directly contrary to normal industry practice and contrary to the instructions for utilities in
12 Missouri conducting depreciation studies as set forth in 4 CSR 240-3.175. That is, one of
13 the requirements to be included in a depreciation study submitted to the Commission is to
14 provide the estimated date of final retirement for each electric generating facility. While
15 others might disagree with the estimated retirement dates used by the Company, that
16 disagreement does not mean retirement date estimates should not be made at all.
17 Moreover, the Staff's life analyses for steam production were also flawed because of the
18 exclusion of experienced final retirements, which comprised nearly 25 percent of the total
19 retirements experienced in the steam production accounts. By not including all retirements
20 related to the steam production accounts, the service life indications that were observed for
21 those accounts were substantially longer than they would have been otherwise.

22 When estimating an interim survivor curve for a particular plant account, it is
23 appropriate to include only the interim retirements in the life analyses. If one is not

1 estimating an interim survivor curve then all retirements, interim and final, need to be
2 included in the life analysis. The Staff's life analyses in the prior case did not include all
3 retirements, just interim retirements. Although I believe this was an inadvertent error, it
4 was an error that had a tremendous impact in reducing depreciation expense. This error
5 will need to be corrected when the next depreciation study is done. The inadvertent
6 exclusion of final retirements at Mound, Cahokia and Venice steam plants was a major
7 flaw in Staff's analyses which led to plant lives being significantly overstated and the
8 depreciation rates being significantly understated for steam production.

9 **Q. Please describe Life-Span property.**

10 **A.** Life-span property (or Life Span groups) is a term used to describe groups of property
11 that will be retired as a unit on a particular date in the future. Examples of life span
12 property include power plants, dams or other large facilities. A characteristic of life span
13 groups is that all property units related to life span property, such as power plants, will be
14 retired simultaneously regardless of the age of the units within the group. That is, some
15 property units at a power plant may be retired at age 53 while other property units may be
16 retired at age 3. Property units include items such as boilers, pumps, turbogenerators,
17 transformers, etc. The components of a power plant operate in unison and would not
18 operate independent from each other. Therefore, when management makes a decision to
19 cease operations at a power plant, such as AmerenUE's management did in 2003 related
20 to the Venice steam plant, all assets that comprised that facility were retired concurrently.

21 Two general forces can be associated with life spans. One force includes any
22 single event that can cause a facility to be retired. An example is the expiration of a
23 required license. Failure to renew the operating license of a hydroelectric or nuclear

1 plant is an example of a single force that causes retirement at a predetermined date. The
2 other general force of retirement is a combination of factors that render continued use of
3 the facility uneconomical.

4 **Q. How are life-span groups typically treated for depreciation purposes?**

5 A. Life-Span groups of property are different from mass plant property such as poles,
6 conductors and meters and therefore need to be treated differently for depreciation
7 purposes. With mass plant property, there isn't a specific date when all of the assets will
8 be retired. That is, the retirements related to mass plant property will be dispersed over
9 many years. However, for life span groups, such as a power plant, there is a specific date
10 in the future when retirements will occur. The exact date may not be known but an
11 estimate of the date of final retirement can be made based on informed judgment.

12 The date of final retirement is regularly estimated for life span groups of property.
13 Also, a part of the life span group is retired before the end of the facility's life span.
14 These are called interim retirements. The pattern of interim retirements is often described
15 by a portion of an Iowa type survivor curve, and is referred to as the interim survivor
16 curve. Therefore, for life span groups, interim survivor curves are estimated in
17 connection with an estimate of the final date of retirement related to the facility or group
18 being studied. For life span property a unique survivor curve is used for each vintage.
19 That is, even though the same interim survivor curve is used for all vintages, the age at
20 which the interim survivor curve is truncated varies by vintage. For example, if the
21 estimated date of final retirement is June 30, 2020, the survivor curve for property
22 installed in 1960 would not be truncated until age 60 while property installed in 2000
23 would be truncated at age 20. The average service life is determined by calculating the

1 area under the survivor curve and this area is different for every vintage of life span
2 property. The whole life depreciation rate for each vintage is determined using the
3 following equation: $[(1 - \text{Net Salvage \%}) / \text{Average Service Life}]$.

4
5 **Q. If these problems are corrected in the next depreciation study, what impact would**
6 **that have?**

7 A. The average service lives for steam production plant accounts would be reduced
8 significantly from currently approved levels. That is, the average service life estimate for
9 Account 311 would be approximately 55 years rather than 115 years if all retirements,
10 and not just the interim retirements, were included in the life analysis. A similar
11 reduction would occur for Account 315, Accessory Electric Equipment. Instead of a 90
12 year average service life, the life indications would be approximately 50 years. If these
13 new service lives were approved, depreciation expense would increase significantly to
14 levels that are more in line with those used by other electric companies.

15 **Q. What is the purpose of pointing out these very low accrual rates for steam production**
16 **accounts?**

17 A. My reason for pointing out that AmerenUE is using some of the lowest rates in the country
18 for steam plants that I've observed is that when changing depreciation rates, all plant
19 accounts should be reviewed as part of a depreciation study. Some depreciation rates may
20 go up and some depreciation rates may go down and it is appropriate only to change
21 accrual rates when all plant accounts are considered. Mr. Dunkel's proposed adjustment to
22 depreciation selectively focuses on only five accounts included within nuclear production.

1 His recommendation is to reduce the depreciation rates for these five accounts and to
2 ignore any changes to all of the other accounts.

3 **Q. Mr. Dunkel uses the term “fictional theoretical reserve” throughout his testimony.**
4 **Please comment on this and his characterization of the theoretical reserve.**

5 A. The theoretical reserve, also known as the calculated accrued depreciation, is as its name
6 implies a calculated amount or reserve and is a function of the age of the electric plant in
7 service and the depreciation parameters selected. The theoretical reserve is commonly used
8 in industry practice as a benchmark to assess the adequacy of a company’s book reserve.
9 The theoretical reserve is a calculated amount made at a particular point in time. The
10 Company’s accumulated depreciation or “book reserve” is the sum of actual monthly
11 charges that have been recorded by the Company throughout its history to accumulated
12 depreciation for items such as depreciation accruals, salvage, cost of retiring, retirements,
13 etc.

14 **Q. Mr. Dunkel suggests that AmerenUE, in calculating its depreciation expense for this**
15 **current case, replaced the book reserve with a “fictional theoretical reserve”. Is this**
16 **true?**

17 A. No, it is not true. AmerenUE simply used the whole life depreciation rates that were
18 approved by the Commission in the prior rate case (Case No. ER-2007-0002). The whole
19 life rates were based on revised depreciation parameters. The Commission approved the
20 use of whole life rates in the prior case based on the revised depreciation parameters and
21 AmerenUE simply used those rates to calculate its depreciation for the current
22 proceeding.

23 **Q. Does a “fictional theoretical reserve” even exist?**

1 A. No. Mr. Dunkel's uses the term "fictional theoretical reserve" seven times throughout his
2 testimony. In fact, this is a term of his own creation since you will not find it used in any
3 authoritative texts on depreciation. The term "fictional" implies that the Company made up
4 this number and improperly used this number to overstate depreciation.

5 **Q. Did the Company make up this number?**

6 A. No. The Company did not even calculate a theoretical reserve for the current proceeding
7 since it was using the whole life rates approved in the prior case. The use of whole life
8 rates does not require that the theoretical reserve be determined. Mr. Dunkel also suggests
9 that AmerenUE substituted this so-called "fictional theoretical reserve" in place of the book
10 reserve in order to calculate depreciation. The implication of this is that AmerenUE
11 deliberately and falsely calculated depreciation with the intention of overstating its
12 depreciation claim in the current case. Behavior of this type and magnitude would, if true,
13 be highly unethical and inappropriate. However, it is completely false. AmerenUE simply
14 used whole life rates *approved in the prior case* and multiplied those rates by the electric
15 plant in service balances in order to calculate its depreciation expense.

16 **Q. Could Mr. Dunkel have determined how AmerenUE calculated its depreciation**
17 **expense?**

18 A. Yes. If Mr. Dunkel was uncertain how AmerenUE determined its depreciation expense in
19 the current proceeding, he could easily have used the nearly five months between the filing
20 of this rate case and the filing of his testimony to ask the Company through discovery how
21 the Company determined its depreciation expense.

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

23 A. Yes, it does.

**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) Case No. ER-2008-0318
To Customers in the Company's)
Missouri Service Area.)

AFFIDAVIT OF JOHN F. WIEDMAYER, JR.

COMMONWEALTH OF PENNSYLVANIA)
) ss
COUNTY OF MONTGOMERY)

John F. Wiedmayer, Jr., being first duly sworn on his oath, states:

1. My name is John F. Wiedmayer. I am employed by Gannett Fleming, Inc. as a Project Manager, Depreciation Studies.
2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony on behalf of Union Electric Company, d/b/a AmerenUE, consisting of 14 pages, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

John F. Wiedmayer, Jr.
John F. Wiedmayer, Jr.

Subscribed and sworn to before me this 10th day of October, 2008.

Susan F. Warner
Notary Public

My commission expires: July 5, 2012

