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Issues: Depreciation
Witness: John F. Wiedmayer
Sponsoring Party: Union Electric Company
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Case No.: ER-2008-0318
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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.

I. INTRODUCTION

Q. Please state your name and address.

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

Q. Please describe your education and work experience.

A. Please see Appendix A.

Q. Have you previously submitted testimony in this proceeding?

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

Q. What is the purpose of your rebuttal testimony?

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

Q. What is the subject of your rebuttal testimony?

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

II. ADJUSTMENT RELATED TO CALLAWAY NUCLEAR PLANT

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

A. Yes, I have.

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

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

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

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

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

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

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

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

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

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

Remaining Life Rate = [(1 – Book Reserve,% – Future Net Salvage,%) / ARL]

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

Whole life rates are determined using the following equation:

Whole Life Rate = [(1- Net Salvage,%) / Average Service Life

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

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

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

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

over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner".

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Q. Please describe Life-Span property.

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

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

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

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

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

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

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

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

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

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

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

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

Q. Mr. Dunkel uses the term "fictional theoretical reserve" throughout his testimony. Please comment on this and his characterization of the theoretical reserve.

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

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

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

Q. Does a "fictional theoretical reserve" even exist?

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

Q. Did the Company make up this number?

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

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

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

Q. Does this complete your rebuttal testimony?

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

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.

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

Susan F. Warner
Notary Public

My commission expires: July 5, 2012

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Susan F. Warner, Notary Public
Lower Providence Twp., Montgomery County
My Commission Expires July 5, 2012
Member, Pennsylvania Association of Notaries