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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2010-0036

SURREBUTTAL TESTIMONY

OF

JOHN F. WIEDMAYER C.D.P.

ON

BEHALF OF

UNION ELECTRIC COMPANY
d/b/a AmerenUE

St. Louis, Missouri
March, 2010

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I. INTRODUCTION

Q. Please state your name and address.

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

Q. Have you previously submitted testimony in this proceeding?

A. Yes. My Direct Testimony was submitted in July 2009 and my Rebuttal Testimony was submitted in February 2010.

Q. What is the purpose of your Surrebuttal Testimony?

A. My testimony is in rebuttal to the Rebuttal Testimony of Missouri Public Service Commission Staff (Staff) witness Arthur W. Rice and the Rebuttal Testimony of Missouri Industrial Energy Consumers (MIEC) witnesses James T. Selecky and William W.Dunkel.

Q. What are the subjects of your Surrebuttal Testimony?

A. The subjects of my Surrebuttal Testimony are the estimation of life spans for power plants, the appropriate interim survivor curve and net salvage estimate for Account 322, Reactor Plant Equipment, and the proper accrual accounting treatment related to future net salvage for transmission and distribution accounts.

II. ESTIMATION OF POWER PLANT LIFE SPANS

Q. Have you reviewed the Rebuttal Testimony of Staff Witness Rice?

A. Yes, I have.

Q. What does Mr. Rice have to say about the life spans of 586 retired steam production plants' units presented in Appendix A-2 of the Black & Veatch report included with the Direct Testimony of AmerenUE witness Larry Loos?

A. Mr. Rice essentially dismissed the information saying that the 586 retired units were not comparable to AmerenUE's existing units since only three of the retired steam units had a generating capacity of 250 MW or more. The average life span of the 586 retired steam production plants presented in the Black & Veatch report was 44 years. While it is true, as Mr. Loos discusses in his Surrebuttal Testimony, that one should not rely solely on the average life spans of these retired units, the information is of some probative value as to the expected operating lives of steam plants. Obviously, Mr. Loos did not solely rely on this information either, since he estimated life spans for the Company's existing units ranging from 61 to 72 years. As Mr. Loos also testifies, there were many, many other considerations underlying Mr. Loos' life span estimates, including other data that Mr. Rice does not mention.

Q. With regard to Mr. Rice's criticism of 586 retired steam production plant units not being comparable to AmerenUE's existing units, have you prepared a schedule that presents retired units that are more comparable to AmerenUE's units?

A. Yes, I have prepared a schedule of retired steam units that are relatively comparable to the units at AmerenUE's Meramec Plant. Schedule JFW-SR19 contains

data on 31 coal-fired steam units with a maximum nameplate generating capacity of 137.5 MW and greater. Units 1 and 2 at Meramec are 137.5 MW units. I recognize that steam power plants are unique in terms of their design, size, location, heat rates, cost of production, etc. However, there is some value in looking at the life spans achieved at these retired steam plants, and they demonstrate that all power plants have defined life spans. These 31 coal-fired units were, for the most part, put into service around the same time as Meramec and are relatively comparable in size (MW). The average life span of these 31 retired steam units is 41.1 years (comparable to, and in fact slightly less than the average life span of the units examined in Schedule A-2 to the Black & Veatch Report). The life spans developed by Mr. Loos that I am using to calculate depreciation rates for the Company's steam production plants range from 61 to 72 years.

Q. Is there additional information that demonstrates that these steam units will retire, and that the life span estimates used by the Company in this case are reasonable, if not conservative?

A. Yes. Schedule JFW-SR20 includes the announced or actual retirements of 25 steam units that have occurred in just the past year or so. Schedule JFW-SR20 further demonstrates that retirements of coal plants of the Meramec era (mid 1950's, early 1960's) are beginning to occur around the country. Inevitably, this will also occur in Missouri, and this will also occur for other plants around the country installed in the Sioux, Rush Island and Labadie era. Ignoring that fact simply shifts a portion of the service value of these plants from current ratepayers, who should pay their fair share of that service value (as they are being served by the plants) to future generations of

customers who will end up having to pay for undepreciated investment in these plants at a time when they are not even receiving service from them.

Q. Mr. Rice states that Mr. Loos' estimated retirement dates are unreliable. You obviously disagree. How do Mr. Rice's claims about the reliability of Mr. Loos' estimated life spans relate to Mr. Rice's own average service life estimates for steam production plants?

A. In my opinion, Mr. Rice's estimates suffer from far more serious reliability problems than the reasoned, informed estimates developed by Mr. Loos. In developing his estimated average service lives, Mr. Rice relied on the Company's plant accounting data that contains the historical plant addition and retirement transactions by account and vintage. The plant accounting data for the Company's mass property accounts (poles, wires, etc) has substantial retirement history, which makes that data sufficient for a statistically reliable development of estimated average service lives. However, the plant accounting data for the Company's steam production units contains minimal final retirement history for steam plants and thus does not contain statistically sufficient or reliable data, which renders Mr. Rice's average service life estimates unreliable.

Q. Please explain.

A. The data included in the Company's database is insufficient and inappropriate to use for life analyses for the reasons I've addressed in my Rebuttal Testimony. Included in the Company's database are just three retired steam plants and four existing, in-service plants. The three retired steam plants were much smaller and less efficient than the existing steam plants. The three retired plants primarily were built during the 1920's and 1940's. All of the units at these three plants had a generating

capacity of 100 MW or less. In Mr. Rice's Rebuttal Testimony, he does not consider the life spans of the 586 retired steam units listed in the Black & Veatch report since there are only three units that have a generating capacity of 250 MW or greater. This fact, according to Mr. Rice, invalidates any comparison with AmerenUE's existing steam units, which are for the most part larger than 250 MW. Ironically, Mr. Rice uses a database which includes only three retired plants whose largest unit was 100 MW. Moreover, Mr. Rice places *sole* reliance on just those three smaller retired plants (since his development of average service life estimates is based upon an actuarial analysis of that data only), whereas Mr. Loos considers many factors and data sources in developing his estimated life spans.

Q. What other data are included in the database used by Mr. Rice to estimate the average service lives for the steam production plants?

A. The database also includes all historical plant accounting transactions related to existing plants. These accounting transactions include plant additions, transfers, retirements, etc. The retirements made at existing steam plants are all interim retirements. Interim retirements describe retirements made during the operating life of the plant.

Regarding interim retirements at the Company's existing steam power plants, only 12.90 percent[1] of the additions have been retired. So, Mr. Rice uses a database for his life analyses that includes just three smaller plants that have completed a full life cycle, along with four existing plants that have experienced very limited retirements to date, i.e., 12.90 percent. Mr. Rice's life analyses are flawed since the analyses are

[1] Rebuttal Testimony of John Wiedmayer, Schedule JFW-ER10, column 3.

based on insufficient and therefore misleading data. The determination of depreciation rates is essentially an effort to predict the future by analyzing past experience. But such analyses for power plants are unlikely to provide a reasonable indication of the future, unless the utility at issue has retired several plants with unit life spans similar to those expected for the remaining units. The retired steam units included in the Company's database are not similar units with similar life spans vis-à-vis the Company's existing steam units. Therefore the results of the life analyses are misleading since the data is not complete or sufficient.

Q. Does Mr. Rice recognize this problem?

A. Yes, his deposition testimony indicates that he does recognize the problem, but he chose to ignore it. Mr. Rice testified that he "questioned the amount of final retirement history that's in those [the steam production plant] accounts to give an accurate mass property result . . ." because there isn't much information in the data about final retirements. (Rice deposition, p. 73, l. 21 to p. 74, l. 2). Indeed, Mr. Rice stated:

> Q. And when you look at that very limited amount of data, and then you look at these four large existing steam production plants, that limited amount of data doesn't give you a whole lot to go on about what the life of these large, existing, more modern plants is going to be, does it?
>
> A. *No. it does not*. (Rice deposition, p. 74, l. 18-23).

Q. Mr. Rice estimates an average service life for the steam production plant accounts and you have estimated a final retirement date and life span for each plant. Is there a difference between the average service life used for a power plant and its life span?

A. Yes, there is a very important difference. The life span indicates the number of years a power plant has operated while the average service life of a plant describes the service lives of the individual components of a power plant, expressed as an average. The only time we can be certain of an asset's (or group of assets') service life is after it has been retired. At that time we can look back and determine exactly how long the average service life was for a group of assets. Prior to that time we have to estimate its service life. For example, the Venice II plant began operations in 1942 and was retired in 2002. We know therefore that the plant had a life span of 60 years while the average service life for the components of the plant was 39.9 years. I have also determined the average service lives for the existing plants using projected additions and retirements and have presented the results in Schedule JFW-ER11 to my Rebuttal Testimony. The average service lives shown in Schedule JFW-ER11 are much shorter by about 15 to 20 years than the average service lives proposed by Mr. Rice. The average service lives presented in Schedule JFW-ER11 of my Rebuttal Testimony are shorter than the imputed average service lives contained in my proposed rates. This suggests that in the future as additions are made to the steam plants the average service lives at those plants will be less with each subsequent year. This of course has to be true, since every year we get closer and closer to the date when the plants will in fact retire, so the life of a particular component put in later will necessarily be less, lowering the average service life of all components. To adopt Mr. Rice's average service lives (which are already too long as I have demonstrated in Schedule JFW-ER10 of my Rebuttal Testimony) would only exacerbate the problem of not ensuring complete capital recovery at the time the steam plant is retired.

Q. Does this relate to Mr. Selecky's criticism of Mr. Rice's life analysis in his Rebuttal Testimony?

A. Yes, it does. Mr. Selecky uses the Company's same plant accounting database to develop average service life estimates for use in the steam production plant depreciation rates he developed using the mass property approach also used by the Staff. Indeed, he criticizes Mr. Rice for including the final retirement history that does exist (the three smaller plants I discussed earlier), claiming that all final retirement history should be ignored. The problem with Mr. Selecky's criticism of Mr. Rice is that he takes data that was *already* statistically insignificant and unreliable for use in developing average service lives, and then makes it even *less* reliable by ignoring part of the data.

Q. Please elaborate.

A. Mr. Selecky excludes all final retirements from the database and analyzes interim retirements only. Mr. Selecky excludes the final retirements at the Venice I, Venice II and Cahokia Plants. Venice I was retired in 1973. Cahokia was retired in 1976 and Venice II was retired in 2002. Retirements that occur at the end of a power plant's operating life are termed final retirements. Retirements that occur during the operating life of a power plant are termed interim retirements.

Consequently, Mr. Selecky's criticism of Mr. Rice is misplaced. If one is going to calculate average service lives for use in the mass property approach, one must have sufficient data, including final retirement data, to use in developing those estimates. Mr. Rice didn't have sufficient data, and Mr. Selecky's criticism of Mr. Rice reflects an approach that makes that problem worse, not better. That is, the database used by Mr.

Selecky does not contain a single retired steam plant. The majority of steam plant retirements occur when the plant is retired, and Mr. Selecky's analyses do not include any final retirements. Mr. Selecky is in no position to criticize Mr. Rice's average service lives insofar as those proposed by Mr. Selecky are even more unreasonably long because of the even more flawed data he relies on. As Mr. Rice points out in his Rebuttal Testimony, what Mr. Selecky does is to make the same error in this case (of only studying interim retirements) that Staff witness Jolie Mathis made in Case No. ER-2007-0002. This led to Mr. Selecky's proposed average service lives being 25 to 100 percent longer than Mr. Rice's estimates, which themselves are too long for the reasons discussed earlier. Mr. Rice himself states that the Staff no longer considers Ms. Mathis' prior study to be reliable.

III. ACCOUNT 322, REACTOR PLANT EQUIPMENT

Q. Mr. Selecky also addresses Mr. Rice's depreciation expense for Account 322, Reactor Plant Equipment, in his Rebuttal Testimony. What changes does Mr. Selecky propose in comparison with the Staff's proposal for Account 322, Reactor Plant Equipment?

A. Mr. Selecky proposes to change the interim survivor curve and net salvage estimates for Account 322, Reactor Plant Equipment. Mr. Selecky proposes a 2.07 percent depreciation rate in comparison with the Staff's rate of 2.55 (the Company's proposed rate is 2.56 percent). Mr. Selecky's 2.07 percent is based on using the following depreciation parameters: 1) an estimated final retirement of October 2044; 2) an interim survivor curve that uses a constant retirement ratio of 0.498 percent, which assumes that approximately one-half of one percent of the account will be retired

each year; and 3) a net salvage estimate of negative 1.2%. Staff and the Company have proposed the same depreciation parameters, rates and amounts for all five Nuclear Production Accounts. Other than Account 322, MIEC proposes the same depreciation parameters, rates and amounts for the four other Nuclear Production plant accounts as the Company and Staff. Thus, it is only with respect to Account 322 that the parties have any material differences regarding the nuclear plant accounts.

Q. What reasons does Mr. Selecky specify for making the change?

A. Mr. Selecky claims that the retirement and removal of the original steam generators at the Callaway Plant was abnormal and skewed the life and net salvage data. He thus criticizes Mr. Rice's life and net salvage analyses on that basis.

Q. Does the steam generator retirements skew Mr. Rice's life analysis as Mr. Selecky suggests?

A. No, it does not. The detailed life analyses performed by Mr. Rice are set forth in his workpapers that he submitted after filing his Direct Testimony. The life table chart for Account 322 presented in Mr. Rice's workpapers shows his selection of the interim survivor curve, the Iowa 60-S0. The 60-S0 survivor curve is a good fit of the data points, i.e., the original survivor curve, through age 19.5, the year prior to the retirement of the steam generators. After the steam generator retirements, the life table indicates a drop from 93 percent surviving at age 19.5 to 83 percent surviving at age 20.5, a relatively significant drop for this account. However, Mr. Rice's selection of the 60-S0 indicates that Mr. Rice placed little weight on the steam generator retirement since his selected curve is well above the data points beyond age 19.5 after the steam generator retirements occurred in 2005. The Staff and I have used the same estimates

for Account 322 in this proceeding, including using the same interim survivor curve, 60-S0. In fact, I used the same interim survivor curve, the 60-S0, in Case No. EC-2002-1, as I have in this case so I have used the same life estimate before the steam generators were retired as after they were retired. Therefore, the steam generator retirements did not skew the data enough to cause a change in the life estimate, as Mr. Selecky claims.

Q. Does the steam generator retirements abnormally skew the net salvage analyses?

A. No. While the retirement and removal of the steam generators definitely has a larger impact on the net salvage analyses than it does on the life analyses, it does not skew the net salvage data. The net salvage indication when all retirements are included is negative 18 percent. The net salvage indication when the steam generator retirements are excluded is approximately negative 7 percent. Steam generators have been or will be replaced in nearly all nuclear power plants in the U.S., especially since many nuclear plants which were originally scheduled to operate for 40 years will likely operate for 60 years. In response to Data Request MIEC No. 16-4, the Company stated that the steam generators had an expected design life of 40 years. Therefore, it is reasonable to assume that the steam generators were going to be replaced at some point during Callaway's operating life once the life span for Callaway was increased in Case No. ER-2007-0002 from 40 years to 60 years. The steam generator retirements are not abnormal retirements, especially at nuclear plants that are now assumed to operate for 60 years. Also, had the steam generators lasted 40 years rather than 20 years, the cost of removal likely would have doubled from $25 million to approximately

$50 million. Since $25 million, not $50 million, is included in the net salvage data used to estimate the net salvage ratios, it can be argued that the steam generator retirements skew the net salvage data in the *opposite* direction to that claimed by Mr. Selecky in showing less, not more negative, net salvage than expected.

Q. Do you have any other comment regarding Mr. Selecky's Rebuttal Testimony related to Account 322, Reactor Plant Equipment?

A. Yes. On page 7 of his Rebuttal Testimony, Mr. Selecky presents the following question and answer:

> Q. Are you proposing that the Commission not allow AmerenUE to recover the cost and net salvage associated with the retirement of the subject steam generator?
>
> A. No. My depreciation rates for Account 322 reflect full recovery of the cost associated with the steam generator and any net salvage expense that AmerenUE incurred for this retirement.

Q. Does Mr. Selecky's depreciation rates reflect full recovery of the net salvage that AmerenUE incurred for removal of the original steam generators?

A. No. His net salvage estimate of negative 1.2 percent is far too low. Not only will it not provide for the complete recovery related to the steam generators, it does not provide for any future removal cost incurred at Callaway.

Q. Please explain.

A. The cost of removal in 2005, the year in which the steam generators were retired, was $27.063 million. Mr. Selecky proposes a net salvage estimate of negative 1.2 percent which as I have stated is far too low. On Schedule JTS-5 of his Direct Testimony, Mr. Selecky recommends $20,931,205 of total depreciation accruals for Account 322. The net salvage accrual contained in his total depreciation accruals for

Account 322 is just $248,196.[2] This net salvage accrual amount is based on using Mr. Selecky's net salvage estimate of negative 1.2 percent. The Callaway Plant is expected to operate for an additional 35 years and 10 months as of December 31, 2008. Therefore, using Mr. Selecky's net salvage accrual of $248,196 per year, he will have accrued a mere $8.894[3] million for net salvage over the next 35.83 years for Account 322. The Company has already spent $36.438 million on removal costs (and received $4.436 million in gross salvage) in Account 322 through 2008 – i.e., has already incurred net salvage of $32 million over the first 24 years of operation. Using Mr. Selecky's net salvage estimate would result in a significant under-recovery of the net salvage costs for Account 322 given that his $8.894 million (over 35-plus years) is barely one-fourth of the net salvage experienced over just 24 years – at a time when the plant was newer and one would expect removal costs to be less. In other words, Mr. Selecky's net salvage estimate is so low that it will not even recover amounts that the Company has *already spent* on removal costs through 2008 (during the first 24 years of operation), let alone future removal costs that will certainly occur over the next 35.83 years. The historical net salvage costs have exceeded the historical net salvage accruals in Account 322 by $10.609 million as of December 31, 2008. I have provided this information in response to MPSC DR 0329. Indeed, after 35 years using Mr. Selecky's net salvage rate there will remain a $1.715 million[4] balance of past removals un-recovered (and which will have to be recovered from future ratepayers who may not then be served by the plant) and will leave every additional cost of removal expenditure

[2] [(Depreciation Accrual)*(1-NS %-1)/(1-NS%)]
[3] $248,196* 35.833 years
[4] $10.609 million less $9.894 million = $1.715 million

unrecovered as well. Even if we assumed there will be no inflation for removal costs in the future (which of course is an unreasonable assumption), simply extrapolating the past net salvage costs of $32 million over 24 years into the future over 35.83 more years would suggest an additional approximately $47.765 million[5] in future removal costs. Thus, based on this over-simplified example, Mr. Selecky's proposed accrual would under-recover net salvage in this one account by at least $49 million.

IV. TRANSMISSION AND DISTRIBUTION NET SALVAGE

Q. Does Mr. Selecky criticize the Staff's transmission and distribution net salvage accruals in his Rebuttal Testimony?

A. Yes, he does.

Q. Did the Staff follow the Commission's policy regarding the treatment of net salvage?

A. Yes, they did. My understanding of the Commission's policy is based on the following statement from page 9 of the Third Report and Order in Case No. GR-99-315, Laclede Gas Company (Laclede):

> The Commission finds that the fundamental goal of depreciation accounting is to allocate the full cost of an asset, including its net salvage cost, over its economic or service life so that utility customers will be charged for the cost of the asset in proportion to the benefit they receive from its consumption. The Commission further finds that the method utilized by Laclede is consistent with that fundamental goal.

The method used by Laclede in Case No. GR-99-315 was the straight-line method of accruing for net salvage. The Commission essentially confirmed the *Laclede* order regarding net salvage in the Report and Order for the Empire District Electric

[5] $1.333 million * 35.833 years = $47.765 million

Company Case No. ER-2004-0570 and in the Report and Order for AmerenUE in Case No. ER-2007-0002. The straight-line method of accruing for net salvage is the same method that AmerenUE and Staff have used in this proceeding.

Q. What is the policy of other regulatory commissions regarding the treatment of net salvage?

A. Virtually all other regulatory commissions use the standard straight-line whole life or remaining life methods of depreciation incorporating accruals for net salvage costs during the life of the related asset.

Q. Is Mr. Selecky's proposal to reduce the net salvage accrual for transmission and distribution plant consistent with Commission's policy as set forth in the Laclede Gas order in Case No. GR-99-315?

A. No, it is not. Mr. Selecky's radical proposal to reduce depreciation expense by $35 million in substance amounts to an expensing net salvage approach. The Commission has rejected the theory that it is proper to base net salvage accruals on current or recent net salvage costs associated with plant that has already been retired.[6]

[6] Mr. Selecky essentially admits that his recommendation is based upon the discredited expense approach. "Q. Now, in the last case, as we've been referring to it [Case No. ER-2007-0002], you supported the expense method, not the traditional method, and your reasoning was that the net salvage accrual greatly exceed the recent historical levels of net salvage expense, correct? *A. Correct.* Q. And that's a contention you make in this case, too. Correct? *A. Yes, sir."* (Selecky deposition, p. 171, lines 14-22). Mr. Selecky admits that the Commission rejected this contention in that case. (Selecky deposition, p. 172, lines 5-14). Ironically, Mr. Selecky uses as justification for his presentation of steam production account rates in this case using the mass property approach what he erroneously claimed was the Commission's "rejection" of the life span approach, yet he seems to have no problem ignoring the fact that the Commission has consistently rejected relying on current or recent historical expense levels of net salvage as a basis for setting net salvage accruals.

Q. Mr. Selecky criticizes Mr. Rice's net salvage estimates for transmission and distribution and describes them as being "excessive." Do you agree?

A. No, I do not. The only metric, albeit a flawed one, that Mr. Selecky's uses to assess the net salvage accrual is to compare it with the net salvage costs experienced in the recent past, often using a five or ten year average. Mr. Selecky states on page 9 of his Rebuttal Testimony:

> Staff's Schedule AWR-6A indicates that the Staff's T&D depreciation rates include a net salvage provision that exceeds the expected annual cost by $36.643 million ($55.820M - $19.177M).

This difference is what Mr. Selecky describes as *excessive*. However, this is not a valid comparison as I will explain. The difference can be explained as the difference between cash accounting and accrual accounting. In the Report and Order for AmerenUE in Case No. ER-2007-0002, the Commission states the following:

> "The Commission will continue to use traditional accrual accounting for the calculation of net salvage".

Recent net salvage experience (what Mr. Selecky erroneously describes as the Company's "actual needs") represents costs associated with plant that served *earlier* generations of ratepayers. The net salvage accrual represents a portion of the costs associated with plant that is serving *the current* generation of ratepayers.

Mr. Selecky (and Mr. Dunkel) seem to think that the net salvage accrual and the historical net salvage costs are highly correlated. However, those amounts are not highly correlated for AmerenUE or for any other utility that has grown in the manner that AmerenUE has grown.

Q. Is the fact that net salvage, determined using the current accrual approach, is greater than current or recent past levels of net salvage any cause for concern?

A. No, it is not. In fact, it is to be expected, as Mr. Selecky admits: "Q. Conceptually, the fact that the utility has accrued more net salvage expense than it has been historically [incurring] does not mean its accruing too much, Right? *A. That's correct*." (Selecky deposition, p. 160, lines 5-8). So while I can understand that someone not familiar with the impacts of electric utility system growth might assume that the current net salvage accruals should approximate the current or recent net salvage costs, that same person, however, should then be concerned that current accruals of original costs related to plant investment are less than the current investment level for plant additions. Mr. Selecky does not seem to have this second concern and yet it is the same growth in plant and price levels that create both situations. As I discussed in my Rebuttal Testimony (see pages 68–73), it is to be expected (and is altogether reasonable) for the net salvage accrual to exceed recent net salvage experience for a utility that is continually expanding as AmerenUE has been over the past fifty years or so. System growth explains this occurrence. The size of the system has doubled in the past 50 years as has the number of customers, as shown in Schedule JFW-ER16 of my Rebuttal Testimony. This is real growth. The combination of real and inflationary growth has increased gross utility plant 141 times over the period 1950 through 2009 and is also shown on Schedule JFW-ER16 of my Rebuttal Testimony. AmerenUE is serving a greater number of customers with a much larger system than it was when the plant that recently was retired was placed into service, 40

or 50 years ago. Further, the amount being accrued today must be sufficient to offset removal costs that will occur 5, 20, 50, or even 80 years from now. Although Mr. Selecky (and Mr. Dunkel) suggest it is not fair to collect these future costs based on a price level that is greater than today's, it is no fairer to return to the AmerenUE their original cost – their original investment -- in dollars 5, 20, 50 or even 80 years after the amounts were expended.

For example, the cost to construct Bagnell Dam at the Company's Osage Hydro Plant in 1930 was $14.139 million. The cost to construct Bagnell Dam today, assuming 4 percent annual inflation over the 80 year period, would be a staggering $325.909 million, a 23-fold increase. Yet, depreciation accruals are recorded on the basis of the dam's original cost of $14.139 million and current customers pay their pro rata share of the $14.139 million, not the $325.909 million. This is fair, because both the customer and AmerenUE are compensated for the use of their money through the return on rate base, *i.e.*, original cost (Company) less accumulated depreciation (customer). Intergenerational equity requires that the future amounts of net salvage be recovered ratably as property renders service.

Q. On page 9 of Mr. Selecky's Rebuttal Testimony, Mr. Selecky references an amount of $582 million which represents the amount accrued for future net salvage related to transmission and distribution plant accounts. On page 9, lines 15-20, Mr. Selecky states "…AmerenUE has already accrued $582 million in its T&D plant accounts for future net salvage expense. That is, AmerenUE's past net salvage component for T&D plant accounts is significantly

in excess of its actual needs." Do you agree with his characterization of this amount?

A. No, I do not. His characterization of this amount is wrong and extremely misleading. I have already presented in my Rebuttal Testimony on Schedule JFW-ER16 that the number of customers has doubled in the past 50 years. The number of poles, conductors, transformers, services, meters, etc., also has doubled in order to serve this larger customer base. The net salvage accruals are larger than current net salvage costs since we are accruing dollars for a larger system than the system that existed 40 or 50 years ago. Plant that is being retired today was installed, on average, 40 or 50 years ago, and was part of a smaller system which served a much smaller customer base. In addition, we are accruing today for *future* net salvage costs and those costs in the future will almost certainly be higher than current costs, primarily removal costs, on account of inflation. The $582 million represents what has been accrued for future net salvage related to existing plant in service. It is not in excess of the Company's needs as Mr. Selecky states. It is reasonable to expect current plant to have an accrued balance for net salvage in accumulated depreciation just as it is reasonable to assume there is an accrued balance related to the recovery of plant investment. For example, if the reserve ratio (Accumulated Depreciation / Original Cost, Plant Investment) related to the recovery of plant investment is 0.3333 for Account 355, Poles and Fixtures, then it is reasonable to assume that we have recovered one-third of the future removal costs related to Account 355 as well. The $582 million represents how far along we are related to the recovery of future net salvage costs associated with current plant.

Q. Have you determined whether the Company has overcollected for net salvage in transmission and distribution as Mr. Selecky implies?

A. Yes, I have. I have prepared a schedule (Schedule JFW-SR21) that calculates the theoretical reserve related to the recovery of net salvage for transmission and distribution. The theoretical reserve amount related to net salvage for transmission and distribution is $720,260,641 and this amount significantly exceeds the $582 million amount referenced by Mr. Selecky.

Q. What does this indicate?

A. This indicates that the Company's net salvage accruals to-date should have been $720.2 million, but have only been $582 million. Thus, this indicates that the Company is behind in its recovery of net salvage, contrary to Mr. Selecky's misleading characterizations of this amount.

Q. On pages 18-20 of his Rebuttal Testimony, Mr. Dunkel presents an example illustrating how the net salvage treatment used by Staff (and AmereUE) overcharges present customers. He implies that Staff's net salvage treatment for transmission and distribution disadvantages present customers in comparison with future customers. Do you agree?

A. No. I disagree that it "disadvantages" present ratepayers to require them to pay the costs of providing service to them. Importantly, those net salvage costs, which will consist of removal costs (less any salvage) 5 – 80 years from now are associated with plant in service that is serving customers *today*. That is why customers, today, must pay these legitimate costs associated with the plant that serves them, just as customers, today, pay depreciation expense associated with the Company's

investment in plant that serves them today. In addition, the example used by Mr. Dunkel is overly simplistic, not realistic and misleading. In his example, he describes an asset that is installed in 2010 which has a 30-year life and estimated removal cost of $9,730. Under the straight-line accrual method approved by the Commission (and used by the Staff and the Company in this case), customers are required to pay 1/30th of the removal cost, or $324 per year. Mr. Dunkel claims this is unfair to current customers since $324 is worth more today than it would be in 2040. Thus, he claims the net salvage method used by Staff (and the Company) is inappropriate and in need of modification. However, in reality, customers are not served by one asset from one vintage (as his example assumes) but rather, they are served from millions of assets from numerous vintages.

For example, current customers are receiving benefits from poles that were installed in the 1940's through 2010, a range of 70 years. Thirty years ago, the previous generation of customers was served by poles that were installed from 1910 through 1980, also a range of 70 years. In 2040, the future generation of customers will be served by poles that were installed in the 1970's through 2040, a range of 70 years. The point is, the net salvage in reality is accrued from numerous vintages, some old, some new, some in between. Present customers are paying proportionally the same as the prior generation paid and the same as future generations will pay since all generations of customers are served by numerous vintages of poles, meter, wires, transformers, etc.

To take another example, consider a pole with an average service life of 45 years installed in 1965 at a cost of $360 and then retired in 2010 at a removal cost of $540.

The annual depreciation during the years 1965 through 2010 for this pole is $20 [($360 + $540) / 45]. Using Mr. Dunkel's logic, the "future" (2010) customer benefits from this 1965 pole since $20 is worth more in 1965 than in 2010. However, consider that the same 2010 customer is also paying for a brand new pole installed in 2010 that cost $900 with an estimated removal cost in 2055 of $1,350, for an annual depreciation amount of $50 [($900 + $1,350) / 45]. The same 2010 customer is being served by poles from numerous vintages and price levels and is charged depreciation for assets installed in 1965, assets installed in 2010 and all vintages in between. This demonstrates that in reality, the present customer is not "overcharged" as Mr. Dunkel claims.

Q. Why else does the existing net salvage accrual method not "disadvantage" present customers?

A. Under the existing net salvage accrual method used by Staff and the Company, future removal costs are accrued prospectively over the life of the asset (through depreciation expense). These accruals are recorded to accumulated depreciation, which in turn reduces rate base. Because of these reductions to rate base, the overall revenue requirement is *less* under the existing net salvage accrual method used by Staff and the Company than if Mr. Selecky's or Mr. Dunkel's approach is used.[7] Therefore, while depreciation *expense* may be higher using the existing

[7] Mr. Dunkel presumably agrees with Mr. Selecky's recommendation to reduce the transmission and distribution net salvage accrual by $35 million. On page 23 of his Rebuttal Testimony, Mr Dunkel states the following: "Under the Staff proposed depreciation rates, AmerenUE would collect $37 million more per year for net salvage than AmerenUE is expected to spend for net salvage. This is for the net salvage for transmission, distribution, and general plant. I recommend the accruals be modified to reduce or eliminate this problem." Mr. Dunkel recommends completely different net salvage amounts for steam production than Mr. Selecky so it is unclear exactly what MIEC's position is regarding net salvage for steam production.

accrual method vis-à-vis Mr. Selecky's expense approach, *rate base* will be lower and the return earned on rate base will be less. In short, the total revenue requirement (depreciation plus return plus income taxes) is less using the Staff's accruals (and the Company's) than if their proposal, which is in substance based current expense levels, is used.

Q. Please further explain the impact on revenue requirements related to net salvage.

A. The total revenue requirements that result from the approach proposed by Mr. Selecky and supported by Mr. Dunkel are greater than the total revenue requirements that result from accruing for net salvage during the life of the related asset. Although a comparison of the current revenue requirements under the standard approach to net salvage and the current revenue requirements under Mr. Selecky's approach may indicate that the accrual under the standard approach is almost always higher than the allowed net salvage costs under Mr. Selecky's approach, over time the revenue requirements will be less if we properly accrue for net salvage, as reflected in the Staff's and the Company's net salvage accruals.

The reason for these lower revenue requirements is the impact of the net salvage accruals on rate base. That is, as net salvage accruals are recorded to the depreciation reserve, the balance in the reserve increases and reduces subsequent determinations of rate base. That is, through the reduction in rate base, a return is provided to the customer for the amount by which previous net salvage accruals have exceeded net salvage costs. The rate of return provided on this net amount is the rate of return authorized by the Commission for the utility. Mr. Selecky recognizes this, as the

following deposition testimony regarding the net salvage accruals that are thus far recorded to the depreciation reserve (and thus reduce rate base) shows:

> Q. So that $582 million reduction to rate base, on an annual basis, is reducing customer rates by more than $50 million, right?
>
> *A. Something like that. Exactly.*
>
> Q. All right. So customers are not going without compensation . . . .are they?
>
> *A. Customers are getting compensated for that. . .*
>
> Q. . . . But just so the record is clear, customers are getting –
>
> *A. A return.*
>
> Q. – a pretty good return on that money that they've advanced, aren't they?
>
> *A. Correct.*

Q. Did Mr. Selecky make any specific proposal regarding the net salvage allowance for transmission and distribution plant vis-à-vis the Staff's proposed allowance?

A. Yes. Mr. Selecky recommends that Staff's net salvage accrual of $55.820 million for transmission and distribution be reduced by $25 million if the Commission approves Staff's proposed depreciation rates. He bases this recommendation on his view of the Company's current needs (current or near-term net salvage expense levels), instead of basing them on the necessary accruals for net salvage associated with plant serving customers today that will be removed in the future.

Q. Is Mr. Selecky's proposed reduction to Staff's net salvage accruals $10 million less than what he recommended regarding the Company's proposal?

A. Yes, it is. Mr. Selecky recommended a $35 million reduction to the Company's proposed net salvage accruals versus a $25 million reduction to Staff's net salvage accruals.

Q. What does this indicate?

A. This difference indicates the true nature of Mr. Selecky approach. He is simply adding a new twist on his prior recommended "expensing" approach to net salvage for transmission and distribution, which the Commission has rejected on several occasions. The $35 million reduction to the Company's net salvage accrual was arbitrary and was designed to provide the Company with a de facto net salvage accrual amount that was $25 million more than its 2008 net salvage expenditures.

Mr. Selecky states as much in his deposition:

> Q. And if you previously believed, based on your review of history and looking out the next several years -- five or ten years -- that accruing 25 million more than recent history was an appropriate amount to accrue, then isn't -- if it's 53 (million) and you've got 41 (million) in there now, right, we talked about those numbers before? Isn't your 35 (million) going to become about 12?
>
> *A. If I kept everything the same. That's correct.*
>
> Q. And why wouldn't you keep everything the same?
>
> *A. Well, the $35 million number was just kind of a number that I thought was reasonable to run up the flag pole. I guess it depends on what I determine is -- or what my recommendation will be is how much you should be allowed to accrue over what your needs may be.*

Q. Why does he recommend different reductions between the Company's and the Staff's net salvage accruals?

A. The reason for the difference is that Mr. Selecky had made an error in calculating the net salvage accrual contained in the Company's depreciation expense. I

have identified and explained Mr. Selecky's calculation error on pages 55 through 58 of my Rebuttal Testimony. Mr. Selecky admits that he indeed did make an error:

> "Q.Did you account for the fact that a portion of the depreciation expense that's in the book reserve was accrued in the past for net salvage?
>
> *A. I don't think I counted it properly.*
>
> . . . Q. You're not saying Mr. Wiedmayer is wrong [in pointing out this mistake] at this point. Conceptually, you're agreeing that you made a mistake, right?
>
> *A. I believe there is a problem there."* (Selecky deposition, p. 135, l. 18-21; p. 138, l. 23 to p. 139, l. 1).

Mr. Selecky's mistake was that he incorrectly assumed the Company's net salvage accrual for transmission and distribution is $76.131 million. As I pointed out, the correct amount is $53.684 million. Thus, Mr. Selecky's drastic $35 million reduction to the correct sum would result in an accrual amount of $18.684 million, which is just $1.523 million more than the Company's actual 2008 net salvage expense of $17.161 million.

The $25 million reduction to Staff's net salvage accrual proposed by Mr. Selecky results in an accrual amount of $30 million, which is approximately $11 million more than the current net salvage expense that was calculated by Staff.

Either way, Mr. Selecky's mistake leads him to recommend an accrual for net salvage that is far too small given the much larger universe of plant in service today, and the much larger removal costs that will be associated with retiring that plant over the next several decades.

Q. What does Mr. Selecky's error show?

A. Mr. Selecky's recommendation in this case was that the portion of AmerenUE's proposed depreciation expense for net salvage (thought by Mr. Selecky to be $76.131 million, but in reality, it was just $53.684 million) should be offset by $35 million, which would provide $41.1 million of net salvage accruals. Thus, Mr. Selecky agreed, when he filed his direct testimony (after having had more than four months to analyze the data and consider it) that AmerenUE should receive more than $40 million annually for net salvage. While this level is still too low, for the reasons already addressed in my Rebuttal Testimony and herein, it is far from Mr. Selecky's claim that the Staff's (and the Company's) rates were too high by $35 million, since by correcting his mistake it is shown that his view, as of his direct testimony filing, was that the accruals were too high by just approximately $12 million.

Q. Does Mr. Selecky agree?

A. Apparently, not entirely, although any disagreement on his part appears to be entirely "results oriented," that is, it appears to be an attempt to preserve most of his $35 million reduction to the Company's revenue requirement in this case even though the $35 million was determined based upon a substantial mistake on his part. I say this because in his Rebuttal Testimony Mr. Selecky is still proposing to reduce the Staff's approximately $55.8 million net salvage allowance down to approximately $30.8 million (a $25 million offset), which is more than $10 million below the level Mr. Selecky himself recommended in December.

Q. If that is in fact Mr. Selecky's position, what does that position suggest?

A. It not only suggests, but it demonstrates, that Mr. Selecky's approach is arbitrary and provides far too little accrual to cover the net salvage costs associated with the much larger universe of plant serving customers today that will be retired in the coming decades. Thus, the "twist" Mr. Selecky has attempted to put on the rejected expense approach would largely be eliminated and Mr. Selecky's recommendation would substantially amount to using a straight expense approach to net salvage, with an arbitrary, and inadequate "adder." However, for the reasons already discussed, the expense approach, and Mr. Selecky's arbitrary twist on it, will fall grossly short of accruing the net salvage expense associated with the plant that is serving customers today.

Q. Are there any authoritative sources that support Mr. Selecky's approach regarding net salvage for transmission and distribution?

A. No, there are none. His proposal in this case is just a slightly modified version of his earlier proposal that he presented in Case No. ER-2007-0002 and that has repeatedly been rejected. And, if he retains the large offset to the true net salvage accruals reflected in the Staff's and the Company's depreciation rates, it will be no modification at all. As the Commission stated in its *Laclede* decision: "…the fundamental goal of depreciation accounting is to allocate the full cost of an asset, including its net salvage cost, over its economic or service life so that utility customers will be charged for the cost of the asset in proportion to the benefit they receive from its consumption." Mr. Selecky's proposal does not meet this goal. The net salvage accruals in the depreciation rates proposed by Mr. Rice (and my similar rates) meet this goal.

Q. Does this conclude your surrebuttal 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's Tariffs to Increase its Annual Revenues for Electric Service.	)	Case No. ER-2010-0036
	)	Tracking No. YE-2010-0054
	)	Tracking No. YE-2010-0055

AFFIDAVIT OF JOHN F. WIEDMAYER

COMMONWEALTH OF PENNSYLVANIA)

) ss

COUNTY OF MONTGOMERY)

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

1. My name is John F. Wiedmayer. I work in Audubon, Pennsylvania and I am a Project Manager with the firm of Gannett Fleming, Inc.

2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of Union Electric Company d/b/a AmerenUE consisting of 29 pages and Schedules JFW-SR 19 through JFW-SR 21, 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

Subscribed and sworn to before me this 4th day of March, 2010.

Susan F. Warner

Notary Public

My commission expires: 7/5/2012

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

Retired Coal-Fired Steam Plants - Electricity Generating Units > 137.50 MW

Line Number	Owner	Plant	Unit	City	State	Country	Began Operating	MW Capacity	Year Retired	Plant Type	Primary Fuel	Alternate Fuel	Life Span
1	RRI ENERGY INC	AVON LAKE	AVON LAKE 8	Avon Lake	OH	USA	1959	235.00	1987	Steam	Coal	NONE	28
2	FIRSTENERGY GENERATION CORP	BAY SHORE	BAY SHORE 1	Toledo	OH	USA	1955	140.60	2008	Steam	Coal	NONE	53
3	TAMPA ELECTRIC CO	BAYSIDE (FL)	BAYSIDE (FL) GANNON 3	Tampa	FL	USA	1960	179.52	2003	Steam	Coal	NONE	43
4	TAMPA ELECTRIC CO	BAYSIDE (FL)	BAYSIDE (FL) GANNON 4	Tampa	FL	USA	1963	187.50	2003	Steam	Coal	NONE	40
5	TAMPA ELECTRIC CO	BAYSIDE (FL)	BAYSIDE (FL) GANNON 5	Tampa	FL	USA	1965	239.36	2003	Steam	Coal	NONE	38
6	TAMPA ELECTRIC CO	BAYSIDE (FL)	BAYSIDE (FL) GANNON 6	Tampa	FL	USA	1967	445.50	2003	Steam	Coal	NONE	36
7	INDIANA MICHIGAN POWER CO	BREED	BREED 1	Fairbanks	IN	USA	1960	495.60	1994	Steam	Coal	NONE	34
8	COLUMBUS SOUTHERN POWER (OH)	CONESVILLE	CONESVILLE 1	Conesville	OH	USA	1959	148.00	2005	Steam	Coal	NONE	46
9	CON EDISON CO OF NY INC	EAST RIVER	EAST RIVER 4	New York	NY	USA	1929	175.00	1975	Steam	Coal		46
10	MIDWEST GENERATION EME LLC	FISK	FISK 18	Chicago	IL	USA	1949	150.00	1978	Steam	Coal		29
11	DUQUESNE LIGHT CO	FR PHILLIPS	FR PHILLIPS 4	Cheswick	PA	USA	1956	179.70	2002	Steam	Coal	NONE	46
12	NORTHERN STATES POWER CO (MN)	HIGH BRIDGE	HIGH BRIDGE 6	Saint Paul	MN	USA	1959	172.00	2008	Steam	Coal	GAS	49
13	ONTARIO POWER GENERATION INC	LAKEVIEW	LAKEVIEW 1	Mississauga	ON	CA	1962	300.00	2005	Steam	Coal	NONE	43
14	ONTARIO POWER GENERATION INC	LAKEVIEW	LAKEVIEW 2	Mississauga	ON	CA	1963	300.00	2005	Steam	Coal	NONE	42
15	ONTARIO POWER GENERATION INC	LAKEVIEW	LAKEVIEW 3	Mississauga	ON	CA	1965	300.00	2005	Steam	Coal	NONE	40
16	ONTARIO POWER GENERATION INC	LAKEVIEW	LAKEVIEW 4	Mississauga	ON	CA	1965	300.00	2005	Steam	Coal	NONE	40
17	ONTARIO POWER GENERATION INC	LAKEVIEW	LAKEVIEW 5	Mississauga	ON	CA	1967	300.00	2005	Steam	Coal	NONE	38
18	ONTARIO POWER GENERATION INC	LAKEVIEW	LAKEVIEW 6	Mississauga	ON	CA	1969	300.00	2005	Steam	Coal	NONE	36
19	ONTARIO POWER GENERATION INC	LAKEVIEW	LAKEVIEW 7	Mississauga	ON	CA	1969	300.00	2005	Steam	Coal	NONE	36
20	ONTARIO POWER GENERATION INC	LAKEVIEW	LAKEVIEW 8	Mississauga	ON	CA	1969	300.00	2005	Steam	Coal	NONE	36
21	MIRANT CORP	MIRANT LOVETT	LOVETT 4	Tomkins Cove	NY	USA	1966	179.50	2007	Steam	Coal	GAS	41
22	MIRANT CORP	MIRANT LOVETT	LOVETT 5	Tomkins Cove	NY	USA	1969	200.60	2008	Steam	Coal	GAS	39
23	SOUTHERN CALIF EDISON CO	MOHAVE	MOHAVE 1	Laughlin	NV	USA	1970	818.10	2006	Steam	Coal	GAS	36
24	SOUTHERN CALIF EDISON CO	MOHAVE	MOHAVE 2	Laughlin	NV	USA	1971	818.10	2006	Steam	Coal	GAS	35
25	PPL GENERATION LLC	PPL MARTINS CREEK	PPL MARTINS CREEK 1	Bangor	PA	USA	1954	156.30	2007	Steam	Coal	NONE	53
26	PPL GENERATION LLC	PPL MARTINS CREEK	PPL MARTINS CREEK 2	Bangor	PA	USA	1956	156.30	2007	Steam	Coal	NONE	51
27	EXELON POWER	RICHMOND (PA)	RICHMOND (PA) 12	Philadelphia	PA	USA	1935	165.00	1980	Steam	Coal		45
28	RRI ENERGY INC	SEWARD	SEWARD 5	New Florence	PA	USA	1957	156.20	2003	Steam	Coal	NONE	46
29	DOMINION ENERGY INC	STATE LINE	STATE LINE 1	Hammond	IN	USA	1929	208.00	1977	Steam	Coal		48
30	DOMINION ENERGY INC	STATE LINE	STATE LINE 2	Hammond	IN	USA	1938	208.00	1979	Steam	Coal		41
31	TRANSALTA GENERATION LTD	WABAMUN	WABAMUN 3	Wabamun	AB	CA	1962	150.00	2002	Steam	Coal	NONE	40

Average Life Span ======> 41.1
Number of Units ======> 31

Announced Steam Plant Retirements - June 2009 through March 2010

Owner	Plant	City	State	Began Operating	MW Capacity	Planned Retirement Date	Plant Type	Primary Fuel	Life Span
Progress Energy Carolinas	W. H. Weatherspoon 1	Lumberton	NC	1949	46.0	2015	Steam	Coal	66
Progress Energy Carolinas	W. H. Weatherspoon 2	Lumberton	NC	1950	46.0	2015	Steam	Coal	65
Progress Energy Carolinas	W. H. Weatherspoon 3	Lumberton	NC	1952	74.0	2015	Steam	Coal	63
Progress Energy Carolinas	Cape Fear 5	Moncure	NC	1956	141.0	2015	Steam	Coal	59
Progress Energy Carolinas	Cape Fear 5	Moncure	NC	1958	163.0	2015	Steam	Coal	57
Progress Energy Carolinas	Sutton 1	Wilmington	NC	1954	104.0	2014	Steam	Coal	60
Progress Energy Carolinas	Sutton 2	Wilmington	NC	1955	104.0	2014	Steam	Coal	59
Progress Energy Carolinas	Sutton 3	Wilmington	NC	1972	447.0	2014	Steam	Coal	42
Progress Energy Carolinas	Lee 1	Goldsboro	NC	1952	75.0	2013	Steam	Coal	61
Progress Energy Carolinas	Lee 2	Goldsboro	NC	1952	75.0	2013	Steam	Coal	61
Progress Energy Carolinas	Lee 3	Goldsboro	NC	1962	253.0	2013	Steam	Coal	51
Exelon Power	Cromby 1	Phoenixville	PA	1954	160.0	2011	Steam	Coal	57
Exelon Power	Cromby 2	Phoenixville	PA	1955	211.0	2011	Steam	Oil	56
Exelon Power	Eddystone 1	Eddystone	PA	1960	354.0	2011	Steam	Coal	51
Exelon Power	Eddystone 2	Eddystone	PA	1960	354.0	2011	Steam	Coal	51
NRG Energy	Somerset 5	Somerset	MA	1951	74.0	2010	Steam	Coal	59
NRG Energy	Somerset 6	Somerset	MA	1959	120.0	2010	Steam	Coal	51
Xcel	Arapahoe 3	Denver	CO	1951	44.0	2012	Steam	Coal	61
Xcel	Arapahoe 4	Denver	CO	1955	100.0	2012	Steam	Coal	57
Xcel	Cameo 1	Palisade	CO	1957	22.0	2010	Steam	Coal	53
Xcel	Cameo 2	Palisade	CO	1960	44.0	2010	Steam	Coal	50
Duke Energy Indiana	Wabash River 2	W. Terre Haute	IN	1953	112.5	2009	Steam	Coal	56
Duke Energy Indiana	Wabash River 3	W. Terre Haute	IN	1954	123.5	2009	Steam	Coal	55
Duke Energy Indiana	Wabash River 4	W. Terre Haute	IN	1956	112.5	2009	Steam	Coal	53
PGE	Boardman 1	Boardman	OR	1980	601.0	2020	Steam	Coal	40
Average Life span ====>									**55.8**

AmerenUE - Electric

Calculation of the Theoretical Reserve for Net Salvage

Account		AmerenUE Proposed Net Salvage Estimate	12/31/2008 Theoretical Reserve	12/31/2008 Theoretical Reserve Net Salvage
(1)		(2)	(3)	(4)
	Transmission Plant			
352	Structures & Improvements	0	2,261,969	-
353	Station Equipment	0	56,004,397	-
354	Towers & Fixtures	(14)	36,355,774	4,464,744
355	Poles & Fixtures	(90)	68,508,484	32,451,387
356	Overhead Conductor & Devices	(20)	65,355,348	10,892,558
359	Roads & Trails	0	68,343	-
	Total Transmission Plant		**228,554,315**	**47,808,689**
	Distribution Plant			
361	Structures & Improvements	0	5,242,947	-
362	Station Equipment	(10)	185,375,225	16,852,293
364	Poles & Fixtures	(150)	579,921,871	347,953,123
365	Overhead Conductors & Devices	(53)	288,231,904	99,845,039
366	Underground Conduit	(40)	60,444,504	17,269,858
367	Underground Conductor & Devices	(25)	155,528,645	31,105,729
368	Line Transformers	0	134,595,997	-
369.1	Overhead Services	(215)	166,889,153	113,908,470
369.2	Underground Services	(80)	71,846,551	31,931,800
370	Meters	0	41,486,115	-
371	Installations On Customers' Premises	0	128,468	-
373	Street Lighting & Signal Systems	(43)	45,180,151	13,585,640
	Total Distribution Plant		**1,734,871,531**	**672,451,951**
TOTAL TRANSMISSION AND DISTRIBUTION			**1,963,425,846**	**720,260,641**

Note:
Col. 4 equals Col. 3 multiplied by the ratio [(1-NS%-1)/(1-NS%), where NS% is the net salvage estimate shown in Col. 2