Exhibit No:
Issue: Depreciation Rates
Witness: Thomas J. Sullivan
Sponsoring Party: Empire District Electric
Docket No: ER-2011-0004
Date Testimony Prepared: April 2011

# BEFORE THE

# MISSOURI PUBLIC SERVICE COMMISSION

**Case No. ER-2011-0004**

**The Empire District Electric Company**

**Surrebuttal Testimony of**

**Thomas J. Sullivan**

**SURREBUTTAL TESTIMONY**
**OF THOMAS J. SULLIVAN**
**BEFORE THE**
**MISSOURI PUBLIC SERVICE COMMISSION**
**CASE NO. ER-2011-0004**

**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. Thomas J. Sullivan, 11401 Lamar, Overland Park, Kansas 66211.

**Q. ARE YOU THE SAME THOMAS J. SULLIVAN WHO FILED DIRECT AND REBUTTAL TESTIMONY IN THIS MATTER BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION ("COMMISSION") ON BEHALF OF THE EMPIRE DISTRICT ELECTRIC COMPANY ("EMPIRE" OR "COMPANY")?**

A. Yes, I am.

**Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?**

A. I will address the rebuttal testimony and depreciation recommendations of Commission Staff ("Staff") witness John A. Robinett dated April 2011.

**Q. DO YOU SPONSOR ANY SCHEDULES WITH YOUR TESTIMONY?**

A. Yes. I sponsor the following schedules in addition to the schedules I filed with my direct and rebuttal testimony:

Schedule TJS-6 – Asbury Plant Depreciation Rate Calculation

Schedule TJS-7 – Asbury Plant Depreciation Rate Calculation (without mercury control equipment)

**Q. IS THERE A BROADER ISSUE YOU WOULD LIKE TO FIRST DISCUSS AS IT RELATES TO THE STAFF'S POSITIONS ON DEPRECIATION RATES?**

A. Yes. One of the primary issues related to depreciation rates in this case is related to either treating Empire's generating facilities as unit properties and

thereby utilizing a life span approach to determine the appropriate depreciation rates, or treating Empire's generating assets as mass properties (except for Iatan 2) and utilizing actuarial (Iowa curve) analysis to determine the appropriate depreciation rates.

**Q. HAS THE COMMISSION ADDRESSED THIS ISSUE BEFORE?**

A. Yes. This Commission made it very clear in Case No. ER-2010-0036 ("Ameren case") that the life span approach is the preferred and superior methodology for generating assets. The life span approach is the approach I am recommending for Empire in this case. The Staff is recommending a mass property approach.

**Q. WHAT IS THE EFFECT OF THE STAFF'S DEPRECIATION RECOMMENDATIONS?**

A. The net effect of the Staff's recommendations in this case is to continue to apply depreciation rates based on a methodology that the Commission rejected in the Ameren case. The Staff's proposed mass property approach has and will continue to result in depreciation rates that are significantly understated and will push prudently incurred generation investment cost to future rate payers or possibly restrict the Company's opportunity to recover its prudently incurred generation investment cost. Staff's proposed mass property approach further exacerbates this result when a whole life methodology is used and the utility is not allowed to correct the whole life methodology to amortize depreciation reserve deficiencies over the remaining life of the asset (such as what the Company is requesting for Riverton 7 and 8 in this case).

**Q. PLEASE SUMMARIZE YOUR SURREBUTTAL TESTIMONY.**

A. In my surrebuttal testimony, I will demonstrate the following:

1. The Staff's assertions that my recommended depreciation rates are remaining life rates are false;
2. The Staff's recommended treatment of Empire's generating facilities as mass property accounts is contrary to the Commission's order in the recent Ameren case;
3. Staff's historical approach to depreciation that treats Empire's generating facilities as mass property accounts has resulted in depreciation rates that have, and continue to, significantly under-recover the Company's investment in generating facilities;
4. The Staff's alleged deficiencies in the Company's current continuing property record are invalid;
5. The depreciation rates I am recommending for Empire in this case properly implement the Commission's intent to treat generating facilities as unit property by applying a life span approach;
6. The reserve amortization on Riverton Units 7 and 8 that Empire is requesting in this case is an inevitable and expected result of applying a mass property approach and whole life methodology to unit property that is nearing the end of its useful life; and
7. Empire's continuing property record represents a good faith effort by the Company to work with the Staff to balance the needs of the Company's record keeping and the needs for retirement history to perform depreciation rate studies. The resulting continuing property

record is superior to the flawed continuing property record that the Staff is recommending.

**Q. PLEASE DESCRIBE THE METHODOLOGY THAT IS USED IN YOUR RECOMMENDED DEPRECIATION RATES.**

A. As discussed on Page 4 of my direct testimony, the rates I am recommending are based on the whole life methodology. This is further stated and clearly demonstrated throughout Schedule TJS-2 (attached to my direct testimony). I use a mass property approach for transmission, distribution, and general plant and a unit property (i.e. life span) approach for generation plant. The calculation of my recommended depreciation rates for the generation plant are shown in Table 5-1 of Schedule TJS-2 and the calculation of my recommended depreciation rates for the transmission, distribution, and general plant are shown in Table 6-1 of Schedule TJS-2. The detailed calculations of the depreciation rates for generation plant are provided in the Appendix of Schedule TJS-2. In Table 5-1, I show the remaining life depreciation rates for comparative purposes, but I clearly show that the recommended depreciation rates are based on the whole life methodology. Nowhere in Schedule TJS-2 do I show any remaining life rates for the mass property accounts (transmission, distribution, and general plant).

**Q. WHAT DEPRECIATION METHODOLOGY DOES STAFF WITNESS ROBINETT CLAIM YOU USE?**

A. In several places in his rebuttal testimony, Staff witness Robinett indicates that I am proposing a remaining life method. The following is a listing of his claims:

1. "Staff concerns are:...2) The Company's effective use of the remaining life approach to recover estimated costs". (Page 2, Lines 4 and 5)
2. "Empire made an adjustment to effectuate the Remaining Life method". (Page 3, Line 7)
3. "While Mr. Sullivan claims his rates are based on the Whole Life (WL) technique, he has made an additional adjustment consistent with the Remaining Life (RL) technique and results in a depreciation rate nearly identical to the rate resulting from the RL technique. Therefore for purposes of clarity in this testimony, I will refer to Mr. Sullivan's methodology as RL. These adjustments of WL rates to defacto RL rates are best observed in Mr. Sullivan's Schedule TJS-2 wherein adjustments to the depreciation rates for lifespan, remaining life, interim net salvage, final net salvage, future additions, and future project costs are articulated." (Page 4, Lines 5 through 13)
4. "As described on pages 4 through 6 of Mr. Sullivan's direct testimony, Empire effectively seeks to discontinue calculating the depreciation accrual for the depreciation reserve under the Average Service Life – Whole Life method for depreciation and instead adopt adjustment that replicate the Average Service Life – Remaining Life method of accrual. " (Page 14, Lines 6 through 10)

5. "Mr. Sullivan uses the remaining life adjustments in part to develop his depreciation rates and inflated depreciation expense." (Page 15, Lines 8 and 9)

**Q. ARE ANY OF THESE STATEMENTS ACCURATE?**

A. No. These statements or claims are directly contradicted by my direct and rebuttal testimony and Schedule TJS-2 attached to my direct testimony.

**Q. DOES STAFF WITNESS ROBINETT'S TESTIMONY CONTAIN FURTHER STATEMENTS THAT YOU WISH TO RESPOND TO?**

A. Yes.

**Q. DID YOU ESTIMATE SHORTER LIVES THAN WERE USED TO CALCULATE THE EXISTING DEPRECIATION RATES IN THE DEPRECIATION STUDY AS ALLEGED BY STAFF WITNESS ROBINETT AT PAGE 3, LINES 14 AND 15 OF HIS REBUTTAL TESTIMONY?**

A. No. In Table 6-1 of Schedule TJS-2 attached to my direct testimony I show, of the 26 mass property accounts, my recommended average service lives are shorter for 3 accounts, longer for 15 accounts, and unchanged for 8 accounts.

**Q. DID YOU SHORTEN THE PLANT LIFE OF EMPIRE'S LIFE SPAN PROPERTY FOR PURPOSES OF THE DEPRECIATION STUDY IN THIS CASE AS INDICATED BY STAFF WITNESS ROBINETT AT PAGE 5, LINES 2 THROUGH 4 OF HIS REBUTTAL TESTIMONY?**

A. No. The final retirement dates I used for Empire's unit property were provided to me by the Company and are consistent with the retirement dates contained in Empire's latest integrated resource plan (IRP). I did not shorten the life spans of

the plants relative to what is in Empire's IRP for purposes of my depreciation study. Furthermore, it would not be possible to shorten a currently ordered plant life because the current rates are not based on final retirement of the plant, but rather the notion that the plants are part of a mass property that will last indefinitely.

**Q. HOW DO YOU RESPOND TO THE STATEMENT AT PAGE 7, LINES 1 THROUGH 10 OF MR. ROBINETT'S REBUTTAL TESTIMONY WHERE HE INDICATES THAT YOU HAVE PROPOSED AN INTERIM RETIREMENT CURVE AND TRUNCATED THE SURVIVOR CURVES IN YOUR LIFE SPAN ANALYSIS?**

A. These statements bear no resemblance to the analyses I provided in the Appendix to Schedule TJS-2 or any testimony I have filed in this case.

**Q. HOW DO YOU RESPOND TO STAFF WITNESS ROBINETT'S STATEMENT AT PAGE 8, LINE 8 OF HIS REBUTTAL TESTIMONY, WHERE HE INDICATES THAT YOUR LIFE SPAN ANALYSIS "IGNORES HISTORICAL DATA RELEVANT TO A DEPRECIATION STUDY"?**

A. Again, this statement does not accurately describe the analyses I performed in Schedule TJS-2. The analyses provided in the Appendix of TJS-2 are based on historical data. In fact, the analyses I performed for each of the Company's generating facilities in service at the time of my study are based on analysis of historical experience for those plants over the whole life of those plants since the date they were first put in service.

**Q. WHAT IS YOUR RESPONSE TO STAFF WITNESS ROBINETT'S STATEMENT AT PAGE 9, LINES 16 AND 17 OF HIS REBUTTAL TESTIMONY WHERE HE INDICATES THAT THE DATA PROVIDED TO STAFF DID NOT MATCH THE VALUES CLAIMED IN THE COMPANY'S STUDY?**

A. This statement is not accurate. As I discuss in my rebuttal testimony, the reconciliation of the depreciation database to Empire's general ledger was provided to the Staff in my workpapers and further explained to the Staff, including Mr. Robinett, in a conference call.

**Q. DO YOU AGREE WITH STAFF WITNESS ROBINETT'S STATEMENTS AT PAGE 11, LINES 9 THROUGH 19 OF HIS REBUTTAL TESTIMONY WHERE HE INDICATES THAT THE 6 GENERATORS AND 40 BOILERS THAT HAVE BEEN RETIRED AT THE RIVERTON PLANT PROVIDE AN APPROPRIATE ESTIMATION OF THE LIVES OF EMPIRE'S CURRENT PRODUCTION UNITS?**

A. No. This is, in fact, an excellent example of how the mass property method is inappropriate for life span property. Historically at Riverton, a turbine (or pair of turbines) was supplied steam by a much larger number of boilers. The reason being, a single boiler was not capable of producing significant steam flow. Many of the boilers operated around 200 psi, whereas Riverton 7 and 8 operate at 860 psi and Asbury 1 operates at 1850 psi. There is little resemblance between the early retired boilers and those currently operating at Riverton, and even less between the super-high efficiency boilers used by newer units like Iatan 2 and

Plum Point. To further demonstrate the differences, the boiler at Asbury is powering two generators.

The retired Riverton generators and boilers used a previous generation of technology, were operated very differently, and had life spans that are not representative of the lives of Empire's current production plants.

**Q. DO YOU AGREE WITH STAFF WITNESS ROBINETT'S STATEMENT AT PAGE 12, LINES 1 THROUGH 2 OF HIS REBUTTAL TESTIMONY THAT THE COMPANY DESTROYED, AND/OR NO LONGER POSSESSES, A RETIREMENT HISTORY FOR DEPRECIATION STUDY PURPOSES PRIOR TO 1999?**

A. No. As I discussed in my rebuttal testimony and above, this statement is not accurate. Empire maintains, and provided to Staff, a complete continuing property record (CPR). As I discuss in my rebuttal testimony, Empire spent significant time and effort to update its CPR as a result of Staff concerns from the previous depreciation study. Staff was included in the updating process that Staff instigated. Staff has chosen to ignore Empire's CPR, and is now claiming that a CPR does not exist. This claim is baffling.

Q. **DOES THE COMPANY'S PROPOSED METHOD OF RECOVERY FOR DEPRECIATION REDISTRIBUTE THE RESERVES IN A MANNER THAT CAUSES OLDER ASSETS TO APPEAR UNDER ACCRUED AS A RESULT OF INFLATION, ALTHOUGH THESE ASSETS HAVE BEEN ACCRUING RESERVES FOR THE LONGEST TIME AS INDICATED BY STAFF WITNESS**

**ROBINETT AT PAGE 14, LINES 16 THROUGH 19 OF HIS REBUTTAL TESTIMONY?**

A. No. The Company did not perform any redistribution of the depreciation reserve. Empire tracks depreciation reserve by generating unit in its fixed asset system. In addition, the level of depreciation reserve has no relevance to the depreciation rates I am recommending based on the whole life methodology.

**Q. WHY?**

A. The depreciation reserve is part of the calculation of remaining life depreciation rates. As discussed in my direct testimony and later in this surrebuttal testimony, I am recommending that the reserve deficiency attributable to Riverton 7 and 8 be amortized separately from the whole life depreciation rates. This adjustment is consistent with the whole life methodology and is even discussed as such in the Staff Report – Cost of Service dated February 23, 2011 ("Staff Report") on Page 61.

**Q. DOES THE REMAINING LIFE METHOD CAUSE IMBALANCES IN THE DETERMINATON OF DEPRECIATION RATES AS CLAIMED BY STAFF WITNESS ROBINETT ON PAGE 15, LINES 11 AND 12 OF HIS REBUTTAL TESTIMONY?**

A. No. In fact the opposite is true. The primary reason for using the remaining life is to correct imbalances. Mr. Robinett says as much on Page 15, Lines 13 and 14 where he states "the remaining life method of adjustment recognizes any depreciation reserve imbalances and adjusts the depreciation rate to eliminate that imbalance."

**Q. HAS EMPIRE EXAGGERATED THE EXISTENCE OF 'DEFICIENT RESERVES' BY SPLITTING OUT EACH OF THE PLANTS INTO ITS OWN SET OF ACCOUNTS AND ARBITRARILY ASSIGNING RESERVES TO THOSE NEWLY CREATED ACCOUNTS AS INDICATED BY STAFF WITNESS ROBINETT AT PAGE 16, LINES 21 THROUGH 23 OF HIS REBUTTAL TESTIMONY?**

A. No. The Company does not arbitrarily assign reserves to any newly created accounts. The Company tracks costs and depreciation reserve by plant in its fixed asset system.

**Q. AT PAGE 21, LINES 15 THROUGH 19 OF STAFF WITNESS ROBINETT'S REBUTTAL TESTIMONY HE INDICATES THAT YOU DID NOT USE EMPIRE'S CONTINUING PROPERTY RECORDS AS PART OF YOUR DEPRECIATION STUDY IN THIS CASE. HOW DO YOU RESPOND?**

A. Empire was able to build back the aged data for their continuing property record (CPR) by appending the transactions from the CPR used in prior studies to the transactions and balances contained in the PeopleSoft system. This new CPR was relied upon for the purpose of the depreciation study in this case. The quote of my testimony (Schedule TJS-2 Page 8) that Mr. Robinett uses on Lines 15 through 19 is not the complete quote from my Report. His partial restatement of what was actually stated in the report, leaves the impression that I did not use a complete Empire continuing property record when in fact the complete statement I made in the report clearly indicates that Empire's CPR was used in the depreciation study. The following is the entire excerpt from my Schedule

TJS-2, page 8 from which Staff witness Robinett lifted only a portion of in his rebuttal testimony:

> "4.1 Empire District Electric Data The property records of EDE are kept in accordance with the Uniform System of Accounts as prescribed by the FERC. We rely on these records as the basis for the information used for our analysis. In 1999 EDE converted their property accounting system to PeopleSoft. During the transition to the PeopleSoft system, only vintage balances were brought forward. As a result, aged data history (additions and retirements by vintage) was not retained in the PeopleSoft system. EDE was able to build back the aged data for their continuing property record (CPR) by appending the transactions from the CPR used in prior studies to the transactions and balances contained in the PeopleSoft system. This new CPR was relied upon for the purpose of this study."

As indicated, my report clearly states that Empire's CPR was relied upon in the Empire depreciation study.

**Q. HAVE YOU PREVIOUSLY ADDRESSED THE ISSUE REGARDING WHY THE LIFE SPAN METHODOLOGY SHOULD BE USED FOR EMPIRE?**

A. Yes. I discussed this in detail in my direct and rebuttal testimony. The Staff has not presented any testimony in this case that would support a decision to deviate from the life span methodology approved by the Commission in the recent Ameren case nor has the Staff presented any specific testimony or evidence to suggest that the life spans I relied on in the depreciation study are not appropriate.

**Q. HAVE YOU PREVIOUSLY DISCUSSED THE ISSUE REGARDING THE APPROPRIATE CONTINUING PROPERTY RECORD THAT SHOULD BE USED FOR DEPRECIATION RATE STUDIES FOR EMPIRE?**

A. Yes. I discuss in detail in my rebuttal testimony that the continuing property record currently being maintained by the Company is superior to the database recommended by the Staff. Further, the Staff was directly aware of the development of the Company's database and the Company actively sought their input before the Company expended significant effort developing the database I used. Furthermore, in preparing the depreciation rate study I sponsor in this case, I found this database to be acceptable and suitable for a depreciation rate study.

**Q. SINCE THE STAFF MISCONSTRUES THE WAY YOU DETERMINED THE DEPRECIATION RATES FOR EMPIRE'S GENERATION ASSETS, PLEASE DISCUSS IN SOME DETAIL THE METHODOLOGY YOU USED?**

A. I will use Asbury 1 as an example because it is reflective of the methodology I use for all the Company's generating facilities and it also will serve to explain how I reflected the mercury treatment facilities that the Company is planning on installing at this plant.

**Q. HAVE YOU PREPARED A SCHEDULE DEMONSTRATING THE METHODOLOGY YOU USED?**

A. Yes. Schedule TJS-6 is a copy of the analysis I included in the Appendix to Schedule TJS-2 and consists of 11 pages (A-3 through A-13).

**Q. PLEASE GENERALLY DESCRIBE THE INTENT OF THE ANALYSIS CONTAINED IN SCHEDULE TJS-6.**

A. The intent of this analysis is to develop a straight-line depreciation rate that would be applied over the whole life of the asset. The useful life of interim retirements and interim additions is by definition less than the useful life of the entire asset. The analysis contained in Schedule TJS-6 (and for all of the other generating facilities contained in the Appendix of Schedule TJS-2) explicitly reflects this.

**Q. HOW DOES THE USEFUL LIFE OF INTERIM RETIREMENTS AND INTERIM ADDITIONS AFFECT THE ANALYSIS?**

A. Failure to recognize that interim retirements and additions will have a useful life that is less than the life of the entire facility will introduce a significant bias that will produce depreciation rates that are too low over most of the life of the asset. The result of this approach is that the depreciation rates would then have to be ratcheted up significantly at the end of the plant's life in order to collect all of the investment in that facility. Alternatively, the remaining investment in the plant would be collected after the plant's useful life, which would be the result if a mass property approach is used. This produces a result whereby customers who use the facility at the end of its useful life (and possibly customers who never used the facility) end up subsidizing customers who used the facility in its earlier years or over most of the facility's useful life.

**Q. PLEASE DESCRIBE THE CONTENTS OF SCHEDULE TJS-6.**

A. I will begin with the summary, page A-3. On this page, I summarize the whole life depreciation rates, by account, that are calculated on the subsequent pages. I show total direct investment in Asbury plant as of 12/31/2009. I show the whole life weighted average depreciation rate of 4.57%. Below this, I show the procedure used to calculate the remaining life depreciation rate for Asbury plant. The remaining life rate with and without cost of removal are shown as 5.93% and 5.33% respectively. Referring to Schedule TJS-2, Table 7-1, Line 3, Column H, my recommended whole life depreciation rate for Asbury plant is 4.57%, which is the whole life rate shown on page A-3 of that same exhibit, not the remaining life rate.

**Q. PLEASE DISCUSS ONE OF THE ACCOUNTS IN DETAIL.**

A. I will focus on account 312 Boiler Plant Equipment on pages A-6 and A-7 to explain the method used to calculate the whole life depreciation rate for a single account for Asbury plant. This is the same method used for all plants and all accounts in the Appendix to Schedule TJS-2, with the exception of the forecast capital additions for mercury emission equipment that will be required only at Asbury plant.

**Q. PLEASE CONTINUE.**

A. Beginning with the assumptions at the top of page A-6, I show a) the estimated "Gross Salvage" equal to 5%, b) estimated "Cost of Removal" equal to 10%, c) estimated "Net Salvage" is calculated as Gross Salvage minus Cost of Removal and equals -5%, d) "Install Date" equals 1970 and is the year Asbury began commercial operation, e) the estimated final "Retirement Date" of 2030, and f)

"Service Life, Yrs" is calculated as the Retirement Date minus Install Date and equals 60 years.

Lines 1 through 40 show the Vintage Years 1970 through 2009 in Column A. Column B calculates the Vintage Age at the estimated final retirement date of 2030. Column C shows the per books transaction year balances for vintages prior to 1999. Column D shows the per books unitized additions for vintages newer than 1999. Column E shows the per books unitized retirement activity since 1999 for all vintages. Column F shows unitized retirement activity since 1999 by vintage. Column G shows advanced additions which are additions to Asbury plant which had not been unitized at the time of my study. Column H shows advanced retirements which are retirements that had not been unitized at the time of my study. Column I shows the transaction year additions including advances. Column J shows the transaction year retirements including advances. Column K shows transfer and adjustments. Column L shows the End of Year Plant Balance, which equals the additions in Column I minus the retirements in Column J, plus the adjustments in Column K.

Line 41 is a summation of the historical activity in the columns described above.

Lines 42 through 44 show Major Additions and Retirements that exist in the historical data. Line 45 shows the Routine Activity of interim additions and retirements. The Major Additions and Retirements are excluded from the interim additions and retirements. Line 46 shows the Historical Interim Activity (additions and retirements) as a percentage of the sum of historical end of year balances.

Line 47 shows the Forecast Interim Activity as a percent to be applied to future year end balances. In the case of Asbury plant, I have forecast interim activity to be the same as historical interim activity (excluding major additions) with the exception of years 2010 through 2015 where the forecast additions come from Empire's five year capital budget.

Lines 48 through 67 show the forecast Major Additions, interim (or routine) additions, interim retirements, Major Retirements, and end of year plant balances for 2010 through 2029. In lines 48 through 52, the Major Additions I forecast come directly from Empire's 2009 capital budget and the interim retirements are calculated as the Forecast Interim Activity percentage from Line 47 of the end of year plant balance. Line 53 shows the $114 million addition for scrubber and mercury MATC equipment that is forecast in Empire's IRP as well as final retirement of Asbury Unit 2.

Line 68 shows the final retirement of Asbury plant, and the following line is the summation of the historical and forecast activity.

The following page A-7 shows the Whole Life Depreciation Rate Calculation. The Historical Additions and Forecast Additions are shown, and the sum of the two as Total Additions. These amounts are followed by estimated Gross Salvage Value, Less Cost of Removal to calculate Net Salvage Value. The Total to be Recovered amount is the Total Additions minus Net Salvage Value. Forecast Plant Balances is the sum of all end of year plant balances from page A-6. The Whole Life Accrual Rate is calculated as the Total to be Recovered divided by Forecast Plant Balances and is expressed as a percentage (5.26%).

The schedule further shows the Cost of Removal Accrual Rate and Whole Life Accrual Rate (Excluding Cost of Removal). The Depreciable Service Life is the reciprocal of the Whole Accrual Rate expressed in years. Data required for the Remaining Life Depreciation Rate Calculation is the final information presented.

**Q. BY INCLUDING THE INTERIM ADDITIONS AND RETIREMENTS, AS WELL AS THE MERCURY EMISSIONS EQUIPMENT IN THE CASE OF ASBURY ACCOUNT 312, HAS EMPIRE REQUESTED AN ACCRUAL OF DEPRECIATION FOR EQUIPMENT NOT YET IN SERVICE AS STAFF WITNESS ROBINETT CONTENDS ON PAGE 22 LINES 2 THROUGH 12 OF HIS REBUTTAL TESTIMONY?**

A. No. Inclusion of forecast interim and major additions in my analysis is necessary to calculate a depreciation rate that, when applied to future plant balances, equitably collects depreciation expense for plant in service from customers receiving the benefit of that plant over the whole life of the plant. Collection of future additions only begins after plant is placed in service and customers enjoy the benefit of the plant. The depreciation rates I recommended are only applied to the actual plant balances, not prospective plant balances. The depreciation rates I recommended are only applied to future additions when those additions are actually placed in service and booked to plant.

My recommended depreciation rates are designed to collect, over the whole life of the unit property, an equitable share of the plant consumed by

customers by estimating a straight line depreciation rate that is suitable for the whole life of the plant.

**Q. DO CURRENT CUSTOMERS PAY ADDITIONAL DEPRECIATION EXPENSE BECAUSE YOUR RECOMMENDATION CONSIDERS THE FUTURE ADDITION OF MERCURY CONTROL EQUIPMENT AT ASBURY PLANT?**

A. No. The life extension of Asbury Unit 1 resulting from the capital additions more than offsets any additional depreciable dollars such that a lower depreciation rate actually results from the proper recognition of the future addition of the mercury control equipment relative to the Company not expending the investment and Asbury Unit 1 having a much shorter life span.

**Q. HAVE YOU PREPARED AN ANALYSIS DEMONSTRATING THIS POINT?**

A. Yes. I have prepared Schedule TJS-7, which shows what the effect on the depreciation rate for Asbury would be if mercury control equipment is not installed and instead, the entire plant retires in 2015. As shown on Schedule TJS-7, page 1, the whole life depreciation rate for Asbury plant without life extending mercury control equipment would be 5.43% versus 4.57% with the equipment. The whole life rate including the amortization of the under accrued depreciation reserve for the Asbury Plant (equivalent to the remaining life rate shown in Schedule TJS-7), which would be required to collect the entire investment in Asbury from customers receiving benefit from it, would be 15.84%.

**Q. WHY IS THERE SUCH A LARGE INCREASE IN THE DEPRECIATION RATE?**

A. The reason for this high remaining life depreciation accrual rate is that Empire has only been allowed to recover $40 million of the $150 million investment in

Asbury as of 12/31/2009. Therefore, $110 million would need to be collected over the final six years that Asbury would remain in service, without the addition of mercury emissions equipment.

This example not only demonstrates that including the mercury control equipment results in a lower depreciation rate for the Asbury Plant, but it also demonstrates how much the depreciation reserve for the Asbury Plant is under-accrued due to the low depreciation rates that have historically been set based on treating Empire's generating facilities as mass property accounts.

**Q. ARE THERE ANY GENERATING FACILITIES WHERE YOU DEVIATED FROM THIS METHODOLOGY?**

A. Yes. On Iatan 2 and Plum Point, my analyses were greatly simplified because these plants are new and therefore do not have sufficient historical data to perform such analyses.

A 50 year initial life is appropriate for these two plants. As I explained in my direct testimony, significant capital expenditure will be required just to run these plant for 50 years or longer and the depreciation rates should be reviewed periodically to ensure the retirement dates and depreciation rates are appropriate.

**Q. PLEASE DISCUSS THE AMORTIZATION OF RESERVE DEFICIENCY YOU ARE RECOMMENDING FOR RIVERTON 7 AND 8.**

A. As previously discuss in this testimony and my direct testimony, the Company is requesting that the reserve deficiency associated with Riverton 7 and 8 be amortized over the remaining life of this plant.

**Q. DOES THIS MEAN YOU ARE "DEFACTO" RECOMMENDING REMAINING LIFE RATES?**

A. No. As discussed in Schedule TJS-2 as well as Staff Report – Cost of Service, the use of a whole life depreciation rate can result in an over or under accrual of depreciation reserve. The generally accepted way to correct this under or over accrual is to amortize it over a time period where the over or under accrual is corrected. There should be no disagreement about this between the Staff and me; we both clearly state that this is part of using the whole life methodology. As discussed previously, such adjustments are not needed when a remaining life method is used because the remaining life method has this correction built into the calculation of the depreciation rate.

**Q. IS AN UNDER ACCRUAL OF DEPRECIATION RESERVE TO BE EXPECTED WHEN USING STAFF'S HISTORICAL APPROACH TO DETERMINING DEPRECIATION RATES FOR GENERATING FACILITIES?**

A. Yes. The interim additions to a power plant, by definition, must have a shorter life than the life of the power plant as a whole. For example, let's assume that a new power plant is expected to last 50 years and the resulting depreciation rate is therefore 2 percent (1 divided by 50). Throughout this 50 year period, there will be interim additions and retirements of components of this plant. In order to simplify the example, let's assume none of these additions are major life extending expenditures. Therefore, none of the additions that are added throughout the life of this plant are going to last 50 years. A component that is replaced in year 10 is only going to have a 40 year life. If the same 2 percent

depreciation rate is applied to this cost, only 80 percent of the cost will be depreciated at the end of the plant's life. Furthermore, the component that was replaced only lasted 10 years and was therefore only 20 percent depreciated when it was retired. Over the life of a plant, this under accruing associated with interim activity is significant. The whole life method treating generating assets as unit property I discuss earlier in my testimony attempts to correct for this. The whole life method when combined with a mass property approach advocated by the Staff cannot correct this situation and actually exacerbates the problem by overstating the life span of the plant. The Staff's approach thereby introduces inherent biases towards under accruing depreciation reserve for generating facilities.

**Q. DOES IT APPEAR AS THOUGH THE STAFF IS AWARE OF THIS BIAS?**

A. I believe so. Staff witness Robinett states that the amortization of Riverton 7 and 8 reserve deficiency "unfairly shifts costs ... from past ratepayers to current ratepayers" (Page 15, lines 1 and 2). This is an admission that costs have been shifted from past ratepayers to current ratepayers.

**Q. WHAT DEPRECIATION RATES ARE YOU RECOMMENDING?**

A. I recommend that the Commission approve the depreciation rates contained in Schedule TJS-2.

**Q. WHAT DATA SHOULD BE USED FOR THE COMPANY'S FUTURE DEPRECIATION RATE STUDIES?**

A. The Company should use the data in its current continuing property record, on which Schedule TJS-2 is based, as appended for future activity after December 31, 2009.

**Q. DOES THIS COMPLETE YOUR PREPARED SURREBUTTAL TESTIMONY?**

A. Yes, it does.

# AFFIDAVIT OF THOMAS J. SULLIVAN

**STATE OF MISSOURI** )
) **ss**
**COUNTY OF RAY** )

On the 26 day of April 2011, before me appeared Thomas J. Sullivan, to me personally known, who, being by me first duly sworn, states that he is a Managing Director in the Enterprise Management Solutions Division of Black & Veatch Corporation and acknowledged that he has read the above and foregoing document and believes that the statements therein are true and correct to the best of his information, knowledge and belief.

Thomas J. Sullivan

Subscribed and sworn to before me this 26 day of April, 2011

Notary Public

My commission expires: 7-27-13

CARRIE R MUELLER
Notary Public-Notary Seal
State of Missouri, Ray County
Commission # 09843250
My Commission Expires Jul 27, 2013