Exhibit No.
Issue: Depreciation Rates
Witness: Thomas J. Sullivan
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Sponsoring Party: Empire District Electric
Case No. ER-2012-0345
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Before the Public Service Commission
of the State of Missouri

Direct Testimony

of

Thomas J. Sullivan

July 2012

DIRECT TESTIMONY
OF
THOMAS J. SULLIVAN
BEFORE THE
MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. ER-2012-0345

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Thomas J. Sullivan, 15898 Millville Road, Richmond, Missouri 64085.

Q. WHAT IS YOUR OCCUPATION?

A. I am President and owner of Navillus Utility Consulting LLC.

Q. HOW LONG HAVE YOU BEEN WITH NAVILLUS UTILITY CONSULTING?

A. I started the company in June 2011. Prior to that date, I worked for Black & Veatch Corporation. I worked for Black & Veatch for over 31 years as an engineer, project engineer, project manager, vice president, and director.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I received a Bachelor of Science Degree in Civil Engineering Summa Cum Laude from the University of Missouri - Rolla in 1980 and a Master of Business Administration Degree in Business Administration from the University of Missouri - Kansas City in 1985.

Q. ARE YOU A REGISTERED PROFESSIONAL ENGINEER?

A. Yes, I am a Registered Professional Engineer in the State of Missouri.

Q. TO WHAT PROFESSIONAL ORGANIZATIONS DO YOU BELONG?

A. I am a member of the American Society of Civil Engineers and the American Public Gas Association.

Q. WHAT IS YOUR PROFESSIONAL EXPERIENCE?

A. I have been responsible for the preparation and presentation of numerous studies for gas, electric, water, and wastewater utilities. My clients served include investor-owned utilities, publicly-owned utilities, and their customers. The professional studies that I have prepared involve valuation and depreciation, cost of service, cost allocation, rate design, cost of capital, supply analysis, load forecasting, economic and financial feasibility, cost recovery mechanisms, and other engineering and economic matters.

Q. HAVE YOU PREVIOUSLY APPEARED AS AN EXPERT WITNESS?

A. Yes, I have. In Schedule TJS-1, I list cases where I have filed expert witness testimony and appeared as an expert witness. As noted on that schedule, I have appeared before the Missouri Public Service Commission ("Commission") as an expert witness on depreciation rates for Missouri Gas Energy in Case Nos. GR-2001-292, GR-2004-0209, GR-2006-0422, and GR-2009-0355, The Empire District Gas Company in Case No. GR-2009-0434, and The Empire District Electric Company in Case No. ER-2011-0004. I also served as an expert witness for Aquila, Inc. on class cost of service, rate design, and weather normalization in Case No. GR-2004-0072.

Q. FOR WHOM ARE YOU TESTIFYING IN THIS MATTER?

A. I am testifying on behalf of The Empire District Electric Company ("Empire" or "Company").

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. I am sponsoring Empire's proposed depreciation rates. The Company asked me to review the existing depreciation rates and, where appropriate, recommend changes to those rates such that the rates will, as accurately as possible, match the useful life of the property and the Company's experience with net salvage. A complete depreciation study was performed for Empire's plant in service at December 31, 2009.

In addition, I sponsor the Company's proposed amortization of the depreciation reserve deficiency associated with its Riverton coal-fired generating facilities.

Q. DO YOU SPONSOR ANY SCHEDULES WITH YOUR TESTIMONY?

A. Yes. I sponsor the following schedules:

Schedule TJS-1 - Expert Witness Testimony of Thomas J. Sullivan;

Schedule TJS-2 - Report on Depreciation Accrual Rates – Electric utility property through December 31, 2009 (Depreciation Study);

Schedule TJS-3 - Impact of Recommended Depreciation Accrual Rates;

Schedule TJS-4 – Empire District Electric Generating Facilities Statistics;

Schedule TJS-5 – Appendix B to the Unanimous Stipulation and Agreement in Case No. ER-94-174;

Schedule TJS-6 – Asbury Plant Depreciation Rate Calculation; and

Schedule TJS-7 – Riverton Plant Depreciation Rate Calculation.

Q. WHAT ARE YOUR RECOMMENDATIONS REGARDING THE COMPANY'S DEPRECIATION ACCRUAL RATES?

A. In my report, Schedule TJS-2, I recommended that Empire implement the depreciation expense rates shown in column H of Table 7-1, which are based on the whole life technique. I recommend that Empire implement these rates in the instant case with two exceptions, Asbury 1 and Riverton 7 and 8, which I discuss later in my direct testimony. My recommended depreciation accrual rates are shown in column H of Schedule TJS-3.

Q. WHAT IS THE IMPACT OF THE WHOLE LIFE DEPRECIATION RATES YOU ARE RECOMMENDING FOR EMPIRE?

A. As seen in Schedule TJS-3, which is a revised version of Table 7-1 contained in the Depreciation Study updated with my revised depreciation rates for Asbury 1 and Riverton 7 and 8, and to reflect plant balances at March 31, 2012, the depreciation rates I am recommending for this case result in an increase in annual depreciation expense of $2.8 million based on plant in service at March 31, 2012. The change in depreciation expense is primarily driven by two factors: 1) an increase due to a change from mass property treatment of production plants to the appropriate lifespan treatment; and 2) a decrease in mass property depreciation expense due to longer average service lives and decreased negative net salvage requirements.

Q. WHY DO YOU RECOMMEND USING LIFESPAN TREATMENT FOR EMPIRE'S PRODUCTION PLANTS?

A. Empire's production plants are considered to be unit property, or a heterogeneous property group that by the nature of their interconnected or integrated operation tends to be retired simultaneously, as a group. The

appropriate depreciation of unit property is the lifespan technique where all units of property at a production plant retire at the time the plant is retired. The whole life depreciation rates for Empire's production plants were developed based on final retirement dates provided by Empire that are consistent with the Company's integrated resource plan ("IRP").

Q. IS THERE A RECENT COMMISSION DECISION SUPPORTING THE USE OF LIFESPAN TREATMENT?

A. Yes. In Case No. ER-2010-0036, the Commission found that "(t)he problem with treating power plant equipment as mass property is that retirements of large electric power plants are rare events."[1] The Commission concluded "that it is appropriate to use a life span approach to determine depreciation rate...."[2] The depreciation recommendation for Empire in this case is consistent with the Commission findings and conclusions in Case No. ER-2010-0036.

Q. PLEASE EXPLAIN THE DIFFERENCE BETWEEN MASS PROPERTY AND UNIT PROPERTY.

A. Mass property generally refers to a group of assets that are relatively homogeneous and interchangeable and, in some cases, fungible. Mass property units within a given account lose their individual identity once they are placed into service. The retirements and replacement of mass property are typically common and routine. For example, distribution poles (Account 364) are

[1] Case No. ER-2010-0036, In the Matter of Union Electric Company, d/b/a AmerenUE's Tariffs to Increase Its Annual Revenues for Electric Service, Report and Order, page 29.
[2] *Id.*Case No. ER-2010-0036, In the Matter of Union Electric Company, d/b/a AmerenUE's Tariffs to Increase Its Annual Revenues for Electric Service, Report and Order, page 35.

generally considered a mass property account. While poles may be made of different materials and come in various lengths, all poles essentially provide the same function. Furthermore, once a pole is placed into service, it is virtually indistinguishable from the thousands of other poles in service. Importantly, the life of a pole is not directly linked to the life of other poles or other assets such as a conductor. A pole can be retired or replaced without having to retire or replace the conductor connected to the pole and vice versa.

Unit property, on the other hand, generally refers to assets that are non-homogeneous, relatively unique, and are not interchangeable. Unit properties maintain their individual identity once they are placed in service and retirements are infrequent, if not rare, occurrences. The components (even when they might consist of several FERC accounts) of a unit property are integrally connected. For example, power plants are generally considered a unit property. The retirement and replacement of a power plant is relatively rare and is never routine. While smaller components of a power plant may be replaced during the life span of a unit, the overall life of the power plant is largely a function of the obsolescence of the entire plant and the life of key, large components (the boiler and turbine, for example) of the plant.

Q. IS IT REASONABLE TO CONCLUDE THAT EMPIRE'S GENERATION ASSETS OPERATE AS A "FLEET" AND ARE THEREFORE MASS PROPERTY UNITS?

A. The issue as to whether Empire's generation assets are a fleet is largely semantic and has no relevance as to whether they should be treated as unit

properties for depreciation purposes. While all of the plants are generating electricity, each plant does so with different components, different usage characteristics, and significant cost differences. Even at a given site (Riverton, for example), the individual units were put into service at different times and serve significantly different functions.

Q. IS THERE ANOTHER IMPORTANT DISTINCTION BETWEEN HOW DEPRECIATION RATES ARE DETERMINED FOR MASS PROPERTY ACCOUNTS AND UNIT PROPERTIES?

A. Yes. For mass property accounts, the preferable approach to determine average service life is to perform actuarial analyses on historical retirements. For this analysis to be meaningful, there needs to be a history of retirements that are reflective of how the group would be retired over its entire useful life. For example, some poles (Account 364) are retired virtually every year and the retirement of one pole is very similar to the retirement of any other pole, so it is reasonable to expect that the historical experience is reflective of future experience.

However, for generating facilities, the interim historical retirements are typically either for smaller components of the plant or for major plant overhauls or upgrades that occur very infrequently. This infrequency provides relatively few consistent data points upon which to base a reasonable actuarial analysis. Furthermore, the activities at one plant or unit are not necessarily reflective of what the activities would be on other plants or units or even the same unit in the future. Of key importance is that the service lives of the property components

that make up a plant or unit are dependent on the overall life of the facility (i.e., life span). Therefore, it is more reasonable to treat generating facilities as unit properties.

Q. DO YOU HAVE INFORMATION THAT HIGHLIGHTS THE SIGNIFICANT DIFFERENCES BETWEEN EMPIRE'S GENERATION ASSETS?

A. Yes. Schedule TJS-4 consists of two pages that show the differences in components, usage characteristics, and fuel cost.

On Page 1 of 2 of Schedule TJS-4, I show each of Empire's generating units, the unit's in-service date, its rated capacity, primary function, primary fuel, boiler design, boiler pressure, cooling systems, and generator type. On Page 2 of 2, I additionally show each unit's environmental controls, 2011 fuel cost, 2011 number of starts, 2011 amount of electricity generated, 2011 unit fuel cost, 2011 capacity factor, and 2011 heat rate. Capacity factor is defined as the unit's average output divided by its rated capacity.

Q. WOULD IT BE REASONABLE TO CONSIDER THE COMPANY'S HYDRAULIC PLANTS AS MASS PROPERTY UNITS.

A. No. While Ozark Beach Units 1 through 4 were all put in service at the same time and are all of similar design, and the Company could retire individual turbines at this plant without retiring the entire facility; it is most likely that the units will be retired at the same time because they are all part of the same dam structure and are covered under the same permit. Further, as discussed earlier, treating these units as a mass property group and then relying upon actuarial analysis to determine average service life is problematic, and doesn't provide

reasonable results. As discussed earlier in my testimony, actuarial analysis performed on facilities that have infrequent or rare retirements and where the retirements are not reflective of the whole or the future is unreliable.

Q. IS IT REASONABLE TO CONSIDER THE COMPANY'S COAL-FIRED STEAM GENERATING UNITS ASBURY 1 AND 2, IATAN 1, PLUM POINT, AND RIVERTON 7 AND 8 AS ONE MASS PROPERTY GROUP?

A. No. Each of these plants has different physical components, different usage characteristics and differences in cost. There is very little these facilities have in common with mass property units (such as poles).

Asbury 1 was built in 1970 and has a capacity of 189 Megawatts ("MW"). Pollution control equipment was added to this plant in 2007, and additional equipment will need to be added to extend the life of this unit beyond 2015. This plant operated at a 71 percent capacity factor in 2011 with an average fuel cost of $25.50 per Megawatt-hour (MWh). Asbury 2 was built in 1986 and has a capacity of 18 MW and was primarily built to utilize excess steam capacity from Asbury Unit 1. Asbury Unit 2 can only be run if Unit 1 is also running. The Company is planning on retiring Asbury Unit 2 in 2014.

Iatan 1 was placed in service in 1980 with a capacity of 708 MW (Empire's share is 85 MW). This plant already includes adequate pollution control equipment based on current standards. This plant operated at a 58 percent capacity factor in 2011, with an average fuel cost of $17.12 per MWh. Even though this plant and Asbury have comparable heat rates, Iatan 1 is much larger

and incorporates newer technology. Iatan 1 produces electricity at a significantly lower unit cost than Asbury 1.

Plum Point was placed in service in 2010 with a capacity of 665 MW (Empire's share is 50 MW). Plum Point was operated at a capacity factor of 63 percent in 2011. Plum Point's average fuel cost in 2011 was $20.21 per MWh. Plum Point incorporates the latest turbine, boiler, and pollution control technologies. Asbury 1's boiler and turbine are over 40 years old.

Riverton 7 and 8 were placed in service in 1949 and 1954, respectively, and have rated capacities of 38 MW and 54 MW, respectively. These two units operate at higher heat rates and subsequently higher unit fuel costs, $36.19 per MWh (unit 7) and $33.74 per MWh (Unit 8), than the other three large coal-fired units. The Company expects to retire both of these units in 2016, primarily due to their age and because it would not be economical to install the equipment necessary to extend their lives.

Even though Asbury 1, Iatan 1, Plum Point, and Riverton are all operated as base load facilities, their technologies and costs are very different. Even though all of these units burn coal as their primary fuel, they can't burn the same coal because boilers and pollution control equipment are designed based on the specific type of coal that fuels the plant. Their components are not interchangeable and their lives are not interrelated. Each represents a different era in coal-fired power plant technology. The new plants, Iatan 1 and Plum Point are much more efficient and can generate electricity at much lower cost than the older units.

Q. IS IT REASONABLE TO CONSIDER THE COMPANY'S NATURAL GAS-FIRED GENERATING UNITS ENERGY CENTER 1 THROUGH 4, RIVERTON 9 THROUGH 12, AND STATE LINE 1 AND 2 AS ONE MASS PROPERTY GROUP?

A. No. These facilities have no more in common with each other than the coal-fired plants discussed above. The primary characteristic that these plants have in common is that they all burn natural gas.

Energy Center Unit 1 (85 MW) and Unit 2 (84 MW) are similar in design, usage characteristics and unit fuel cost. Energy Center Unit 3 (49 MW) and Unit 4 (49 MW) are similar to each other but very different from Units 1 and 2. All four are considered peaking units, but Units 1 and 2 operate very infrequently, as demonstrated by the relatively few starts shown in Schedule TJS-4. Units 3 and 4 have quick start capabilities that enhance their utility and they have significantly lower heat rates than Units 1 and 2; therefore, their capacity factors (reflecting how often the plants are run) are much higher than Units 1 and 2.

Riverton Units 9, 10, and 11 are small combustion turbines (12 MW, 16 MW, and 16 MW, respectively) that are run very infrequently. These three units have the highest heat rates of any of Empire's generating facilities. Riverton Unit 12 is a large (150 MW) combustion turbine. While it has similar cost and utilization to Energy Center Units 3 and 4, the equipment is not the same and is in no way interchangeable.

State Line Unit 1 is a 96 MW combustion turbine that ran infrequently during 2011. State Line Unit 2 is very different from any of the units discussed

above. State Line Unit 2 is a combined-cycle unit that operates like a hybrid of the peaking units and base load coal units. This plant, therefore, operates as an intermediate unit. Like the coal fired plants, this unit has a steam generator (boiler). This plant has a rated capacity of 500 MW (Empire's share is 300 MW). It had an average fuel cost that was the lowest of the natural gas fired units, but substantially more than the coal-fired units.

Q. DO YOU HAVE ANY OTHER CONCERNS ABOUT THE USE OF THE MASS PROPERTY APPROACH FOR LIFE SPAN PROPERTY?

A. Yes. My concern is that the use of the mass property approach for life span property will always result in the failure to recover plant investment over the life of the plant. Applying the mass property approach to life span property shifts the recovery of a portion of the investment in plants used to serve today's customers into the future, to be paid by customers who are then not taking service from the plant (and thus are deriving no benefit from it) and at a time when those same future customers will have to begin paying for replacement plants. This means customers today under-pay for the use of plants that serve them, by shifting costs associated with those plants to future generations.

Q. DOES THE COMPANY MAINTAIN SEPARATE ACCOUNTING RECORDS FOR EACH GENERATING FACILITY?

A. Yes, it does.

Q. HAS EMPIRE HAD SEPARATE DEPRECIATION RATES FOR EACH OF ITS GENERATING UNITS IN THE PAST?

A. Yes. In its Report and Order in Case No. ER-94-174, the Commission approved a Stipulation and Agreement and specifically ordered as follows: "3. That the Commission herby adopts the depreciation rates as agreed to by the parties herein as Appendix B to the Stipulation and Agreement."[3] In the Unanimous Stipulation and Agreement in Case No. ER-94-174, the parties agreed, in part, as follows: "A. The Order issued by the Commission should direct Empire to utilize the depreciation rates *developed by the Staff* and set out in Appendix B, effective August 15, 1994."[4] As shown in Appendix B attached to my testimony as Schedule TJS-5, Empire was ordered to use specific depreciation rates for Asbury, Riverton, Iatan (Unit 1), Ozark Beach, Riverton CT (Unit 9), and Energy Center CT (Unit 1).

Q. PLEASE SUMMARIZE THE IMPACT OF YOUR RECOMMENDED CHANGES FOR PRODUCTION PLANT DEPRECIATION RATES.

A. My recommended depreciation rates for production accounts results in an increase to annual depreciation expense of $5.9 million based on March 31, 2012 plant in service. This is a 28% increase over current rates. A detailed discussion of the power plant depreciation recommendation is provided in Section 5 of Schedule TJS-2 appended to this testimony.

[3] Case No. ER-94-174, In the Matter of The Empire District Electric Company for authority to file tariffs increasing rates for electric service provided to customers in the Missouri service area of the company, Report and Order, page 7.
[4] File No. ER-94-174, In the Matter of The Empire District Electric Company for authority to file tariffs increasing rates for electric service provided to customers in the Missouri service area of the company, Unanimous Stipulation and Agreement, page 7. (*emphasis added)*

Q. HAVE ANY ESTIMATES RELIED UPON IN YOUR STUDY CHANGED SUBSEQUENT TO THE COMPLETION OF YOUR PRODUCTION PLANT STUDY?

A. Yes, there are changes to two generating plants, Asbury and Riverton. First, the final estimate for mercury emission equipment at Empire's Asbury plant is approximately $121 million compared to the preliminary estimate or $114 million that was used in our study. Also, the planned retirement dates have changed from 2030 to 2035 for Unit 1 and from 2016 to 2014 for Unit 2. These updated estimates reduce the whole life depreciation rate for Asbury from 4.57% to 3.92%. The derivation of this rate is provided in Schedule TJS-6 which supersedes the calculation on Pages A-3 through A-13 of Schedule TJS-2.

The second change is that the planned retirement date of the Riverton steam generating units (7 and 8) is now 2016 rather than 2018. This changes the whole life depreciation rate from 3.18% to 3.20%. The derivation of this rate is provided in schedule TJS-7 which supersedes the calculation on Pages A-14 through A-24 of Schedule TJS-2.

Q. ARE THERE ANY OTHER PROPOSED CHANGES TO DEPRECIATION EXPENSE ACCRUALS AS A RESULT OF YOUR STUDY?

A. Yes. In addition to the increase in depreciation expense for production plant, there is a recommended decrease to transmission, distribution and general plant accounts. The primary reasons for the decrease in depreciation expense for the mass property accounts are a general trend of longer average service lives and a

reduction of negative net salvage requirement (decreased cost of removal). All recommended changes to depreciation rates are detailed in Schedule TJS-2.

Q. PLEASE SUMMARIZE THE IMPACT OF YOUR RECOMMENDED CHANGES FOR MASS PROPERTY DEPRECIATION RATES.

A. My recommended depreciation rates for transmission, distribution and general plant accounts result in a decrease to Empire's annual depreciation expense of $3.1 million based on March 31, 2012 plant in service. This is an 8.7% decrease compared to current rates. A detailed discussion of the transmission, distribution and general plant depreciation recommendation is provided in Section 6 of Schedule TJS-2 appended to this testimony.

Q. ARE THERE ANY ADDITIONAL RECOMMENDATIONS YOU ARE MAKING?

A. Yes, I am recommending that the Company amortize the depreciation reserve deficiency for its Riverton coal-fired generating facilities over the facilities' expected 4-year remaining life.

Q. WHAT IS THE AMOUNT OF THE AMORTIZATION THAT YOU RECOMMEND?

A. Based on the depreciation reserve deficiency of $13,140,709 shown on Line 45 of Schedule TJS-7 Page 1, I recommend that the Company amortize $3,285,177 per year for each year during the 2013 through 2016 period. This amount is in addition to the annual depreciation expense based on the recommended whole life depreciation rate of 3.20 percent for the Riverton coal-fired generating facility.

Q. WHAT IS THE BASIS FOR THE FOUR-YEAR PERIOD?

A. According to the Company's IRP, Empire is planning for the retirement of the coal-fired generating facilities at the Riverton Plant in mid-year 2016 due to environmental compliance issues and the age of the facilities.

Q. WHY IS THERE A RESERVE DEFICIENCY FOR THE RIVERTON COAL-FIRED GENERATING FACILITY?

A. In Missouri, the accepted depreciation method is the whole life method. The basic premise of the whole life method is that one straight-line depreciation rate is used over the entire life of the asset. If the life characteristics of an asset change over the life of that asset, or if additions are made to an asset that have a lifespan less than the whole life of the plant, depreciation rates based on the whole life method tend to have a bias towards under collecting depreciation expense, especially for unit type properties such as power plants.

The accumulated reserve for depreciation for the Riverton coal-fired facilities as of March 31, 2012 was $30,383,285 compared to a gross plant of $48,039,728 (excluding land). This means that there is approximately $17.6 million of gross plant remaining to be depreciated at March 31, 2012. The existing whole life depreciation rate of 1.62 percent is only accumulating about $778,000 per year, and my recommended rate whole life of 3.20 percent will only accumulate about $1.5 million per year. Over an additional five years (2012-2016), the recommended rate would only accumulate about $6.9 million in accumulated depreciation (the existing rate would accumulate only about half this much). This is clearly not enough.

The Company's proposed whole life rate for this plant is 3.20 percent. But, as stated above, the whole life method assumes that this rate has been used over the whole life of the plant. Since the existing rate is only 1.62 percent, this assumption is not correct. Further, whole life rates are not explicitly designed to make up for the fact that the historical rate for the plant (at least in the recent history) has been too low.

Q. HOW CAN THIS BIAS IN THE WHOLE LIFE METHODOLOGY BE CORRECTED?

A. There are two generally accepted ways to correct it. The more straightforward way is to use remaining life depreciation rates. Under the remaining life method, the amount of an asset that is not yet depreciated is depreciated over the remaining life of the asset. Therefore, there would be no reserve deficiency at final retirement when using the remaining life method. The remaining life depreciation rate for the Riverton coal-plant is 9.28 percent, as shown on Line 26 of Schedule TJS-7.

The second way to correct the whole life rate is to amortize the depreciation reserve deficiency (or excess if that is the case) over the remaining life of the asset. This is the method the Company is recommending in this case.

Q. WHY IS THE AMORTIZATION OF THE DEPRECIATION RESERVE DEFICIENCY APPROPRIATE FOR THE RIVERTON COAL PLANT AND NOT OTHER COMPANY ASSETS?

A. Reserve variance amortization is appropriate for all of the Company's assets, and I believe that remaining life rates are the most appropriate way to handle any

depreciation reserve variances. That said, amortizing the reserve deficiency for the Riverton coal units is absolutely necessary because the reserve deficiency for Riverton is both quantifiably significant and immediate. The Company can forecast the retirement of this facility with a high degree of certainty due to the environmental compliance issues forthcoming in the very near future and the age of the Riverton coal fired facilities. Also, the reserve deficiency is not only quantifiable, but significant.

Q. ARE THERE OTHER REASONS TO BEGIN AMORTIZING THE RIVERTON DEPRECIATION RESERVE DEFICIENCY NOW?

A. Yes. There are two primary reasons. First, there is sufficient time until the expected retirement date such that the annual amortization is not unduly disruptive. Second, it makes sense to begin amortizing the deficiency now so that the investment in the plant can be recovered from the current ratepayers who are receiving the benefits from the use of this facility.

Q. PLEASE EXPLAIN THE CONTINUING PROPERTY RECORD YOU USED IN PREPARING THE DEPRECIATION STUDY.

A. In a letter to Empire's counsel, Jim Swearengen, dated October 28, 2009, Staff's Chief Litigation Attorney expressed concern that Staff and Public Counsel had "significant doubts about the validity of Empire's depreciation study" in Case No. ER-2008-0093. As a direct result of this communication, Empire undertook the substantial task of correcting its continuing property record in preparation for the Depreciation Study that was prepared just prior to the Company's last electric rate case (Case No. ER-2011-0004). Empire went to great effort to review and

compile their data into a depreciation database. The finished product provided a depreciation database that retained the historical information, reconciled with the account balances retained in Empire's accounting system, and more accurately reflects the in-service date and related activity of assets. Empire personnel believe this reconstructed depreciation database rectifies concerns addressed in the Staff's letter.

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 DIRECT TESTIMONY?

A. Yes, it does.

Expert Witness Testimony of Thomas J. Sullivan

- *Peoples Natural Gas Company of South Carolina, South Carolina Public Service Commission Docket No. 88-52-G (1988).* Natural gas utility revenue requirements and rate design.
- *Peoples Natural Gas (UtiliCorp United, Inc.), Iowa Utilities Board Docket No. RPU-92-6 (1992).* Natural gas utility class cost of service study and peak day demand requirements.
- *Peoples Natural Gas (UtiliCorp United, Inc.), Kansas Corporation Commission Docket No. 193,787-U (1996).* Natural gas utility class cost of service study, rate design, and peak day demand requirements.
- *Southern Union Gas Company, Railroad Commission of Texas Gas Utilities Docket No. 8878 (1998).* Natural gas utility depreciation rates.
- *Southern Union Gas Company, City of El Paso (1999).* Natural Gas utility depreciation rates.
- *UtiliCorp United, Inc., Kansas Corporation Commission Docket No. 00-UTCG-336-RTS (1999).* Natural gas utility weather normalization, class cost of service, and rate design.
- *Philadelphia Gas Works, Pennsylvania Public Utility Commission Docket No. R-00006042 (2001).* Natural gas utility revenue requirements.
- *Missouri Gas Energy, Missouri Public Service Commission Docket No. GR-2001-292 (2001).* Natural gas utility depreciation rates.
- *Aquila Networks, Iowa Utilities Board Docket No. RPU-02-5 (2002).* Natural gas utility class cost of service study, rate design, and weather normalization adjustment.
- *Aquila Networks, Michigan Gas Utilities, Michigan Public Service Commission Case No. U-13470 (2002).* Natural gas utility class cost of service study, rate design, and weather normalization adjustment.
- *Aquila Networks, Nebraska Public Service Commission Docket No. NG-0001, NG0002, NG0003 (2003).* Natural gas utility weather normalization adjustment.
- *Aquila Networks, Missouri Public Service Commission Docket No. GR-2003 (2003).* Natural gas utility class cost of service study, rate design, annualization adjustment, and weather normalization adjustment.
- *North Carolina Natural Gas, North Carolina Utilities Commission Docket No. G-21-Sub 442 (2003).* Filed intervener testimony on behalf of the municipal customers regarding natural gas cost of service and rates related to intrastate transmission service.
- *Texas Gas Service Company, Division of ONEOK, Railroad Commission of Texas Gas Utilities Docket No. 9465 (2004).* Natural gas utility depreciation rates.

- *Missouri Gas Energy, Missouri Public Service Commission Docket No. GR-2004-0209 (2004).* Natural gas utility depreciation rates.

- *Aquila Networks, Kansas Corporation Commission Docket No. 05-AQLG-367-RTS (2004).* Natural gas utility class cost of service study, rate design, and weather normalization adjustment.

- *Aquila Networks, Iowa Utilities Board Docket No. RPU-05-02 (2005).* Natural gas utility class cost of service study, rate design, grain drying adjustment and weather normalization adjustment.

- *PJM Interconnection, LLC, Federal Energy Regulatory Commission Docket No. ER05-1181 (2005).* Operating cash reserve requirements.

- *Kinder Morgan, Inc., LLC, Wyoming Public Service Commission Docket No. 30022-GR-6-73 (2006).* Natural gas utility weather normalization adjustment, development of load factors, billing cycle adjustment, determination of test year billing units and revenue, and depreciation rates.

- *Missouri Gas Energy, Missouri Public Service Commission Docket No. GR-2006-0422 (2006).* Natural gas utility depreciation rates.

- *Kinder Morgan, Inc., Nebraska Public Service Commission Docket No. NG-0036 (2006).* Natural gas utility weather normalization adjustment, test year billing determinants and revenues under existing rates, customer and usage trends and rate design.

- *Aquila Networks, Kansas Corporation Commission Docket No. 07-AQLG-431-RTS (2006).* Natural gas utility class cost of service study, rate design, irrigation adjustment, and weather normalization adjustment.

- *Aquila Networks, Nebraska Public Service Commission Docket No. NG-0041 (2006).* Natural gas utility jurisdictional and class cost of service study, rate design, and revenue synchronization adjustment.

- *Zia Natural Gas Company, New Mexico Public Regulation Commission Case No. 08-00036-UT (2008).* Natural gas utility billing determinants and revenues, weather normalization adjustment, customer growth adjustment, peak day analysis, revenue requirement, class cost of service study, and rate design.

- *SourceGas Distribution, LLC, The Public Utilities Commission of the State of Colorado Docket No. 08S-0108G (2008).* Natural gas utility weather normalization adjustment, irrigation adjustment, group load factor analysis, therm billing, test year billing determinants and revenues, and trends in customer usage.

- *Black Hills/Iowa Gas Utility Company, LLC (fka Aquila Networks), Iowa Utilities Board Docket No. RPU-08-3 (2008)* Natural gas utility weather normalization adjustment, grain

drying adjustment, revenue synchronization adjustment, class cost of service study, and rate design.

- *Black Hills/Colorado Gas Utility Company, LLC (fka Aquila Networks), The Public Utilities Commission of the State of Colorado Docket No. 08S-430G (2008)* Natural gas utility weather normalization, revenue synchronization adjustment, customer reclassification, thermal billing, test year billing determinants, revenues under existing and proposed rates, class cost of service study, and rate design.

- *Wyoming Gas Company, Wyoming Public Service Commission Docket No 30009-48-GR-8 (2008)* Natural gas utility weather normalization adjustment, test year billing determinants, revenues under existing and proposed rates, rate of return, revenue requirement, class cost of service study, and rate design.

- *Missouri Gas Energy, Missouri Public Service Commission Docket No. GR-2009-0355 (2009).* Natural gas utility depreciation rates.

- *Empire District Gas Company, Missouri Public Service Commission Docket No. GR-2009-0434* (2009). Natural gas utility depreciation rates.

- *SourceGas Distribution, LLC, Nebraska Public Service Commission Docket No. NG-0060 (2009).* Natural gas utility customer and usage trends and adjustments; weather normalization adjustment, customer change adjustment, use per customer adjustment, and inflation adjustment riders; and competitive factors.

- *Black Hills/Nebraska Gas Utility Company, LLC (fka Aquila Networks), Nebraska Public Service Commission Docket No. NG-0061 (2009).* Natural gas utility jurisdictional and class cost of service study, rate design, and revenue synchronization adjustment.

- *SourceGas Distribution, LLC, Wyoming Public Service Commission Docket No. 30022-148-GR -10 (2010).* Natural gas utility customer and usage trends; use per customer adjustment, inflation adjustment, and uncollectible accounts riders.

- *Black Hills/Nebraska Gas Utility Company, LLC (f.n.a. Aquila Networks) Iowa Utilities Board Docket No. RPU-2010-0002 (2010).* Natural gas utility jurisdictional class cost of service study, rate design, weather normalization adjustment, grain dryer adjustment, annualization adjustment, ethanol plant adjustment, and synchronization adjustment.

- *The Empire District Electric Company, Missouri Public Service Commission Docket No ER 2011-0004 (2010).* Electric utility depreciation rates.

- *The Empire District Electric Company, Corporation Commission of Oklahoma Cause No. PUD 201100082 (2011).* Electric utility depreciation rates.

- *SourceGas Distribution, LLC, Nebraska Public Service Commission Docket No. NG-0067-RTS (2011).* Natural gas utility jurisdictional and class cost of service study, rate design, customer and usage trends, number of customer change adjustment, use per customer adjustment, and competitive factors.

- *Interstate Power and Light Company, Iowa Utilities Board Docket No. RPU-2012- 0002 (2012).* Natural gas utility class cost of service study and weather normalization adjustment.

Schedule TJS-2

Report on Depreciation Accrual Rates – Electric utility property through December 31, 2009

BUILDING A WORLD OF DIFFERENCE®

THE EMPIRE DISTRICT ELECTRIC COMPANY

Report on
Depreciation Accrual Rates

Electric utility property
through December 31, 2009

September 2010

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September 1, 2010

Ms. Laurie Delano
Controller, Assistant Secretary & Assistant Treasurer
The Empire District Electric Company
602 S. Joplin Avenue
Joplin, MO 64801

Dear Ms. Delano:

We are enclosing our Report on Depreciation Accrual Rates for the electric utility property of The Empire District Electric Company ("EDE"). The findings, conclusions, and recommendations that we present in the report are representative of plant activity through December 31, 2009. In the report, we have provided discussions relative to depreciation accounting, the processes utilized and historical information relied upon, the determination of appropriate depreciation expense rates, as well as a review of the adequacy of current depreciation reserves. The Executive Summary of the report summarizes our major findings and recommendations.

We appreciate the opportunity to be of service in this matter and wish to thank EDE and their staff for their cooperation and assistance provided in the completion of the report.

Very Truly Yours,

BLACK & VEATCH CORPORATION

Thomas J Sullivan
Managing Director,
Black & Veatch Management Consulting

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APPENDIX

DISCLAIMER

Subject to the limitations set forth herein, this report was prepared for EDE by Black & Veatch Corporation ("B&V") and is based on information not within the control of B&V. B&V has not been requested to make an independent analysis, to verify the information provided to us, or to render an independent judgment of the validity of the information provided by others. As such, B&V cannot, and does not, guarantee the accuracy thereof to the extent that such information, data, or opinions are based on information provided by others.

1.0 EXECUTIVE SUMMARY

This report describes the analyses conducted and the results obtained for the depreciation expense rates and accumulated provision for depreciation of the electric utility property of The Empire District Electric Company ("EDE" or "Company"). This report is based on plant activity through December 31, 2009, with recognition given to known or planned changes since that date. We consider the rates developed and recommended herein to be reasonable and appropriate for prospective use. We recommend, however, that depreciation rates be reviewed at a minimum of once every five years. Current EDE depreciation rates are based on a Stipulation and Agreement ordered in Missouri Public Service Commission ("MoPSC") Case No. ER-2004-0570.

Plant in service and accumulated depreciation as of December 31, 2009 for the classes of plant are summarized below:

Table 1-1
Plant in Service and Accumulated Reserve
As of December 31, 2009

Line	[A] Description	[B] Plant in Service	[C] Accumulated Reserve
		$	$
1	Production Plant	686,779,828	195,152,025
2	Transmission Plant	203,435,387	69,478,122
3	Distribution Plant	651,556,418	258,003,121
4	General Plant	60,805,815	36,263,265
5	Total Plant in Service at 12/31/09	1,602,577,449	558,896,532

We base our recommended depreciation accrual rates on application of the whole life depreciation method. This method is premised on recovery of plant investment in generally equal amounts over the average service life of plant facilities. This method recognizes changes that have occurred or are occurring, with respect to changes in investment level and life characteristics of individual property units.

For unit property, specifically production plant, we develop whole life depreciation expense rates based on the prospective life span (retirement date) of each generating unit. The prospective retirement dates we use in this report were provided by EDE and are consistent with the Company's integrated resource planning. Consistent with the life span concept and the prospective retirement date used, we include allowance for interim additions and retirements of individual pieces of property, as well as an adjustment for net salvage (gross salvage less cost of removal). The whole life rates and the resulting change in depreciation expense for unit property accounts are summarized in Table 1-2 and shown in detail in Table 5-1. It should be noted that the whole life rates are recommended because the MoPSC has shown recent preference to this method.

For mass property, specifically transmission, distribution, and general plant, the basis for our recommended accrual rates begins with the development of appropriate average service lives (ASL) and Iowa curves for each plant account using the actuarial analysis method. After developing our recommended ASL and Iowa curve, we adjust for net salvage to develop a whole life depreciation rate. Recommended depreciation rates for unit and mass property are summarized by function in Table 1-2 below and presented in detail in Table 1-3 at the end of this Executive Summary.

Table 1-2
Recommended Changes in Depreciation Rates and Expense

Line	[A] Description	[B] Current Composite Accrual Rate	[C] Composite Recommended Accrual Rate	[D] Change in Depreciation Expense
1	Production Plant	2.15%	2.99%	$ 5,729,164
2	Transmission Plant	2.41%	2.24%	$ (343,392)
3	Distribution Plant	3.63%	3.26%	$ (2,382,578)
4	General Plant	5.88%	5.75%	$ (74,112)
5	Total with Plant in Service at 12/31/09	2.93%	3.11%	$ 2,929,083

As shown in Table 1-2, application of the recommended whole life depreciation rates results in $2.9 million increase in annual depreciation expense when applied to total depreciable assets as of December 31, 2009. The overall increase in depreciation expense is primarily attributable to a change from mass property treatment to the appropriate lifespan treatment of production plant property. This increase is partially offset by a reduction in depreciation expense due to a general trend of longer service lives for transmission, distribution and general plant accounts, as well as a decrease in negative net salvage requirement. In total, with plant in service balances as of December 31, 2009, our recommended composite depreciation rate is 3.11%, increased from the existing composite depreciation rate of 2.93%.

We further recommend establishing depreciation rates for Iatan 2 and Plum Point at 2.10%. This rate should be used for all accounts at the time these facilities are commercially in service.

The scope of this report includes:

1. A discussion of the practice of depreciation accounting (Section 3).
2. The types of information examined in our analysis and the methods applied (Section 4).
3. The results of the analyses conducted pertaining to the production plant (Section 5).
4. The results of the mass property analyses conducted of EDE's transmission, distribution, and general plant (Section 6).
5. The recommended depreciation rates (Section 7).

Table 1-3
Recommended Depreciation Rates

Line	[A] FERC Acct	[B] Description	[C] Current Depreciation Rate	[D] Recommended Depreciation Rate	[E] Change in Depreciation Expense
1		Production Plant			
2		Steam Production Plant			
3	310	Land and Land Rights			
4	311-316	Asbury	1.75%	4.57%	4,228,413
5	311-316	Riverton	1.62%	3.18%	717,865
6	311-316	Iatan 1	1.84%	3.12%	1,705,081
7	311-316	Iatan 2		2.10%	-
8	311-316	Plum Point		2.10%	-
9		Total Steam Production	*1.77%*	*3.79%*	6,651,359
10		Hydro Production Plant			
11	310	Land and Land Rights			
12	331-335	Ozark Beach	1.62%	2.13%	28,092
13		Total Hydro Production	*1.62%*	*2.13%*	28,092
14		Other Production Plant			
15	340	Land and Land Rights			
16	341-346	State Line Combined Cycle	2.86%	2.14%	(1,165,471)
17	341-346	State Line CT	2.22%	3.25%	442,922
18	341-346	Energy Center Unit 1&2	2.15%	2.28%	51,203
19	341-347	Energy Center Unit 3&4 (FT8)	2.11%	1.97%	(76,446)
20	341-348	Riverton CT	2.37%	1.97%	(202,496)
21		Total Other Production	*2.51%*	*2.24%*	(950,288)
22		Total Production Plant	2.15%	2.99%	5,729,164
23		Transmission Plant			
24	350	Land and Land Rights			
25	352	Structures and Improvements	2.09%	1.82%	(7,807)
26	353	Station Equipment	2.20%	2.17%	(26,868)
27	354	Towers and Fixtures	1.92%	1.54%	(3,038)
28	355	Poles and Fixtures	3.33%	2.36%	(385,563)
29	356	Overhead Conductors and Devices	2.15%	2.28%	79,885
30	359	Roads and Trails	0.00%	0.00%	-
31		Total Transmission Plant	*2.41%*	*2.24%*	(343,392)
32		Distribution Plant			
33	360	Land and Land Rights			
34	361	Structures and Improvements	2.08%	1.56%	(50,733)
35	362	Station Equipment	1.89%	2.25%	262,837
36	364	Poles, Towers and Fixtures	4.35%	4.35%	-
37	365	Overhead Conductors and Devices	3.77%	3.39%	(553,602)
38	366	Underground Conduit	3.92%	2.22%	(485,612)
39	367	Underground Conductors and Devices	3.59%	2.38%	(636,399)
40	368	Line Transformers	2.78%	2.06%	(639,109)
41	369	Services	5.00%	4.65%	(228,969)
42	370	Meters	2.27%	2.42%	27,468
43	371	Installations on Customer Premises	5.80%	5.07%	(114,507)
44	373	Street Lighting and Signal Systems	3.13%	3.38%	36,047
45		Total Distribution Plant	*3.63%*	*3.26%*	(2,382,578)
46		General Plant			
47	389	Land and Land Rights			
48	390	Structures and Improvements	2.75%	3.57%	77,811
49	391.1	Office Furniture and Equipment	5.00%	5.00%	-
50	391.2	Computer Equipment	10.00%	9.00%	(114,631)
51	392	Transportation Equipment	7.08%	7.54%	36,555
52	393	Stores Equipment	3.17%	2.50%	(2,982)
53	394	Tools, Shop and Garage Equipment	4.50%	5.00%	19,118
54	395	Laboratory Equipment	2.63%	2.09%	(5,113)
55	396	Power Operated Equipment	6.33%	5.88%	(51,868)
56	397	Communication Equipment	4.00%	3.70%	(30,325)
57	398	Miscellaneous Equipment	4.55%	3.13%	(2,677)
58		Total General Plant	*5.88%*	*5.75%*	(74,112)
		Total Plant in Service @ 12/31/09	2.93%	3.11%	2,929,083

2.0 INTRODUCTION

In this report, we present the results of our analysis of the depreciation expense requirements for the electric utility property of EDE. We primarily base our analysis on plant activity through December 31, 2009. Implications of certain known and measurable changes that have occurred or are anticipated to occur subsequent to December 31, 2009 are incorporated in our analyses as appropriate.

Currently, EDE accrues depreciation expense and accumulates reserve by Federal Energy Regulatory Commission (FERC) account. EDE records accruals for recovery of original cost (life portion) separately from recovery of cost of removal less gross salvage (net salvage portion).Within the production function, EDE separately accumulates reserve and calculates depreciation expense for each generating facility. In this report, annual depreciation accrual rates are calculated by individual FERC account and for each generating facility using the whole life method.

In Section 3.0, we briefly discuss the practice of depreciation accounting. In Section 4.0, we discuss the type of information examined in our analysis and the methods applied in analyzing the information. The results of the analyses performed are discussed in Sections 5.0 and 6.0. These discussions include a determination of depreciation accrual rates for unit property accounts (Section 5.0), whole life depreciation accrual rates for mass property accounts (Section 6.1), and our analysis of the adequacy of current depreciation reserve amounts (Section 6.2).

2.1 Existing Plant in Service and Depreciation Rates

In Table 2-1 we show the plant in service and existing depreciation rates for production, transmission, distribution, and general plant. In Column D of Table 2-1, we show that EDE has an accumulated depreciation reserve of $559 million as of December 31, 2009. The depreciation reserve accumulated for production plant is $195 million. EDE reports depreciation reserve of $364 million for transmission, distribution, and general plant as of December 31, 2009 (Table 2-1, Column D).

To the extent that the depreciation accrual rates recommended in this report are different from the rates currently used, the change results generally from one or more of the following factors:

- Additional information regarding the history of the plant account (retirement history).
- Changes in life characteristics due to changes in equipment and/or manufacturing methods included in the plant.
- Changes in the anticipated retirement date of production plants.
- Changes in estimated salvage and cost of removal.
- Changing unit property depreciation rates to life span versus mass property treatment.

Table 2-1
Depreciable Plant in Service, Depreciation Reserve, and Existing Rates

Line	[A] Description	[B] FERC Acct	[C] Plant in Service At 12/31/2009	[D] Depreciation Reserve At 12/31/2009	[E] Existing Depreciation Rate
			$	$	%
1	Production Plant				
2	Steam Production Plant				
3	Land and Land Rights	310	939,473		
4	Asbury	311-316	149,946,466	40,318,934	1.75%
5	Riverton	311-316	46,083,525	28,774,554	1.62%
6	Iatan 1	311-316	133,285,135	36,078,829	1.84%
7	Iatan 2	311-316			
8	Plum Point	311-316			
9	Total Steam Production		330,254,599	105,172,317	
10	Hydro Production Plant				
11	Land and Land Rights	330	226,487.71		
12	Ozark Beach	331-335	5,509,271	2,486,302	1.62%
13	Total Hydro Production		5,735,759	2,486,302	
14	Other Production Plant				
15	Land and Land Rights	340	1,025,253		
16	State Line Combined Cycle	341-346	162,639,173	28,081,610	2.86%
17	State Line CT	341-346	42,673,128	17,852,776	2.22%
18	Energy Center Unit 1&2	341-346	39,234,417	29,086,085	2.15%
19	Energy Center Unit 3&4 (FT8)	341-347	54,061,994	2,712,381	2.11%
20	Riverton CT	341-348	51,155,505	9,760,554	2.37%
21	Total Other Production		350,789,470	87,493,405	
22	Total Production Plant		686,779,828	195,152,025	
23	Transmission Plant				
24	Land and Land Rights	350	8,985,871		
25	Structures and Improvements	352	2,891,646	1,116,705	2.09%
26	Station Equipment	353	89,559,756	33,370,653	2.20%
27	Towers and Fixtures	354	799,508	772,934	1.92%
28	Poles and Fixtures	355	39,748,752	15,828,439	3.33%
29	Overhead Conductors and Devices	356	61,449,854	18,389,391	2.15%
30	Roads and Trails	359	-	-	
31	Total Transmission Plant		203,435,387	69,478,122	
32	Distribution Plant				
33	Land and Land Rights	360	2,360,393		
34	Structures and Improvements	361	9,756,326	3,743,037	2.08%
35	Station Equipment	362	73,010,259	27,212,036	1.89%
36	Poles, Towers and Fixtures	364	136,982,762	62,395,624	4.35%
37	Overhead Conductors and Devices	365	145,684,661	51,546,185	3.77%
38	Underground Conduit	366	28,565,405	9,335,602	3.92%
39	Underground Conducters and Devices	367	52,594,929	19,089,710	3.59%
40	Line Transformers	368	88,765,104	30,719,356	2.78%
41	Services	369	65,419,731	33,344,987	5.00%
42	Meters	370	18,312,044	6,232,010	2.27%
43	Installations on Customer Premises	371	15,685,879	9,252,140	5.80%
44	Street Lighting and Signal Systems	373	14,418,926	5,132,435	3.13%
45	Total Distribution Plant		651,556,418	258,003,121	
46	General Plant				
47	Land and Land Rights	389	679,466		
48	Structures and Improvements	390	9,489,178	5,944,294	2.75%
49	Office Furniture and Equipment	391.1	4,188,701	2,258,842	5.00%
50	Computer Equipment	391.2	11,463,123	5,765,537	10.00%
51	Transportation Equipment	392	7,946,771	6,776,560	7.08%
52	Stores Equipment	393	445,006	293,685	3.17%
53	Tools, Shop and Garage Equipment	394	3,823,571	2,246,913	4.50%
54	Laboratory Equipment	395	946,905	690,181	2.63%
55	Power Operated Equipment	396	11,526,119	7,229,509	6.33%
56	Communication Equipment	397	10,108,470	4,930,474	4.00%
57	Miscellaneous Equipment	398	188,505	127,270	4.55%
58	Total General Plant		60,805,815	36,263,265	
59	Total Plant in Service @ 12/31/09		1,602,577,449	558,896,532	

3.0 DEPRECIATION ACCOUNTING

The FERC Uniform System of Accounts defines depreciation as:

> "The loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric plant in the course of service from causes that are known to be in current operation and against which the system is not protected by insurance. Among the causes considered are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand, and requirements of public authorities."

Depreciation accounting provides a method whereby charges for the loss in service value are made against current income derived from operating the system. By properly charging depreciation, the total cost of utility property is appropriately distributed over the useful life in such a way as to equitably allocate cost to the period during which service is provided through the use and consumption of such property. For the purpose of this report, we use the term "total cost" to mean the original investment cost (gross plant), less salvage value (if any), plus cost of removal (if any).

3.1 Annual Depreciation Expense

Annual depreciation expense represents the annual charge against income associated with the loss of service value of utility property. Historically, utilities have relied on a number of methods to identify the appropriate level of depreciation expense. Some of these methods include:

- A direct apportionment by management;
- A percentage of revenues;
- An amount equal to the original cost investment retired during the year;
- A charge per unit of delivery (kWh, kW, etc.); and
- A percentage of the investment in depreciable property.

3.2 Depreciation Reserve

Depreciation reserve is a balance sheet item that reflects the accumulation of annual depreciation activities and associated retirement accounting. Under the FERC System of Accounts, depreciation reserve is shown on the balance sheet as "Accumulated Provision for Depreciation."

The depreciation expense charged against income is credited to (accumulated in) depreciation reserve. For utility properties, FERC provides that upon retirement of an asset, the utility reduces (debits) depreciation reserve by the original cost of the asset retired, increases (credits) reserve by any benefits derived from the sale of assets removed (salvage), and reduces (debits) reserve by the costs attributable to removal. As such, the use of appropriate depreciation rates corresponding to the service life of utility properties will result in accruals to the depreciation reserve which equal the total investment ultimately retired, as adjusted for salvage and cost of removal.

For the purpose of this report, we have included consideration of net salvage (gross salvage less cost of removal) where appropriate. More specifically, for the depreciation rates recommended for unit and mass property accounts, we have provided allowance for net salvage based on industry trends and our experience with similar property. For the mass property accounts, we have also used as a reference, the historical salvage, cost of removal and retirement experience of EDE.

4.0 HISTORICAL INFORMATION

Depreciation expense rates are intended to recover the net investment (total cost) in utility property over its useful life. In this regard, depreciation rates typically consist of three components. These components, which are further defined below, include: (i) service life of the property; (ii) total cost to be recovered; and (iii) reserve deficiency.

Normally, the determination of average service life is largely dependent on analyses of detailed utility records. Such records generally provide information regarding additions and retirements by transaction year (year added or retired) and vintage (year originally installed) for each account. We adjust average service life based on historical experience to reflect expectations over the remaining service life based on our experience, judgment, and those conditions anticipated to occur.

We develop average service lives by account. We first separate accounts into two groups: mass property and unit property. Mass property represents relatively homogeneous property units that tend to be retired individually. Meters, conduit, conductor, services, and line transformers are examples of mass property. Conversely, unit property represents a more heterogeneous property group, which by the nature of their interconnected or integrated operations, tends (in large part) to be retired simultaneously, as a group. We normally consider power generation facilities for electric utilities as unit property. Generally, utilities maintain detailed unit property data by physical location. Utilities typically maintain mass property data on an aggregate level. For unit property accounts, we typically define service life based on planned retirement dates.[1]

For unit property, we normally develop a history of investment activity by account for each location or site. This life history reflects gross additions, retirements, surviving property, and account balances. Based on the estimated life (planned retirement date) for each unit property (generating station), we typically forecast plant investment activity (interim additions, retirements, and account balances) at the account level for each year that units within such an account are forecast to remain in service. We then calculate a whole life, straight line depreciation accrual rate by dividing the investment to be recovered (original investment, plus interim additions, plus cost of removal, less gross salvage) by the sum of the forecast annual depreciable balances over the full lifespan of the unit property accounts.

For mass property, we initially define service lives and Iowa curves by account based on actuarial analysis (retirement or survivor curve analysis) or semi-actuarial analysis (simulated plant balance). These analyses rely on historical plant activity (retirements). Specifically, using a least squares technique, actual survivor stub curves representing the percent of original placements surviving at various ages are developed. We compare these stub curves to general survivor curves to identify the average service life which best fits historical experience. By comparing the results produced with results using other curve shapes, we determine the curve shape and average service life which best predicts historical experience. We use the average service life we developed as a principal determinant of the reasonable average service life applicable to each account. In addition to our analysis of historical experience, we consider our experience in the industry, practices of other utilities, and basic information regarding expected life characteristics of the property. Results derived from the application of these methodologies are then evaluated in connection with other available information such as: (i) past, present and anticipated economic conditions; (ii) recent industry trends; and (iii) engineering experience and judgment.

We further discuss these techniques, including a summary of the information required and the information provided by EDE in the following.

[1] EDE provided estimated retirement dates for each production unit.

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.

4.1.1 Mass Property Data

The investment in mass property accounts (transmission, distribution and general plant) is maintained within PeopleSoft as well as all transactions since 1999. EDE's CPR is maintained outside of PeopleSoft as the property accounting data contained in PeopleSoft does not have aged data detail prior to 1999. Using the Company's CPR, we are able to perform actuarial studies as a basis to determine the experienced mortality characteristics for each FERC account.

EDE maintains salvage history since 1988, reported by account by transaction year. EDE has transaction and vintage retirement salvage data from 1999 forward. Salvage and cost of removal (COR) data by account for the transaction years 2000 through 2009 were used to develop reasonable gross salvage, COR and net salvage allowances for the mass property accounts.

4.1.2 Planned Retirements (Unit Property Accounts)

For EDE's unit property, EDE provided the data needed to develop an investment history. A life history of net additions prior to 1999 and gross additions, retirements, surviving property, and account balances by year since 1999 was provided for the analysis. Based on the estimated retirement date that EDE provided for the various units, we forecast plant investment activity (interim additions, retirements, and plant balances) for each year that we expect the property to remain in service. In the event that other reasonably anticipated planned additions and retirements are required in order for the property to reach the retirement date, we consider implications of such additions and retirements as well.

Based on the data described above, we calculate whole life, straight line depreciation accrual rates by dividing the investment to be recovered (original investment, plus interim additions, plus cost of removal, less gross salvage) by the sum of the forecast annual depreciable balances over the full lifespan of the unit property accounts. Forecast annual depreciable balances are based on the existing plant balances reported at December 31, 2009 plus forecast additions and retirements as adjusted for net salvage. Our recommended depreciation rates for unit property accounts are discussed in Section 5.0.

To accurately determine the composite depreciation accrual rate for the generating units, it is important to understand the retirement date and investment in each generating unit. EDE maintains historical data that includes additions, retirements, transfers, and net salvage by FERC account. This data provides sufficient information to evaluate interim additions, retirements, and salvage on an aggregate level for the steam, hydraulic and other production accounts for the period ending December 31, 2009. We supplement this information with EDE's Continuing Property Record data as a means to identify additions and retirements specific to generating units to determine approximate investment by generating unit.

5.0 UNIT PROPERTY ANALYSIS

Table 5-1 summarizes the recommended whole life depreciation rates for EDE's generating stations. We also show plant investment as of December 31, 2009, existing depreciation accrual rates, and the resulting change in annual depreciation expense by generating unit. The whole life accrual rate is defined as the rate which, when applied to the annual depreciable balances, will result in recovery of the original cost of gross additions over the entire life of the property. Adjustments to the whole life rates are made to reflect estimated salvage value and cost of removal. We also show the remaining life depreciation rates in Table 5-1. With the remaining life method, undepreciated investment plus forecast additions, cost of removal and salvage is recovered over the remaining life (of depreciable plant balances) of the property.

The annual accrual rates we develop will fully recover EDE's investment, including consideration of the impact of terminal net salvage. The principal forecasts, for which assumptions are made, that we rely on in the analyses include:

- The retirement date (life span) of the individual facilities.
- The level of interim additions and retirements.
- The level of major plant additions, upgrades, and improvements required for the individual units to reach the planned retirement date.
- The net salvage values associated with interim and final retirements.

We analyzed the investment history by account for steam production, hydraulic production and other production plant through December 31, 2009. The life history reflects gross additions, retirements, surviving property and account balances. Based on the planned retirement date, we forecast plant investment activity (interim additions, retirements, and balances) for each year that we forecast the generating plant will remain in service. EDE provided us the data regarding the life span of unit property.

We calculate a whole life, straight line depreciation accrual rate by dividing the gross investment (plant investment as of December 31, 2009 plus forecast interim additions less net salvage and accumulated depreciation) by the sum of the annual depreciable plant balances over the full lifespan of the unit. Annual depreciable balances are based on plant balances as of December 31, 2009 plus forecast additions and retirements. Our recommended whole life depreciation rate calculations are shown in the Appendix and are summarized in Table 5-1. For the total existing production plant, the composite proposed whole life rate is 2.99 percent and the change in annual depreciation expense based on depreciable plant in service as of December 31, 2009 is an increase of about $5.7 million as shown in Table 5-1.

UNIT PROPERTY ANALYSIS

Table 5-1
Unit Property Analysis

Line	[A] FERC Account	[B] Description	[C] Plant in Service at 12/31/2009	[D] Existing Accrual Rate	[E] Recommended Whole Life Accrual Rate	[F] Recommended Life Rate	[G] Recommended Salvage Rate	[H] Recommended COR Rate	[I] Remaining Life Rate	[J] Change in Depreciation Expense
					[F]-[G]-[H]					([E]-[D])*[C]
		Asbury								
1	311	Structure & Improvements	13,777,707	1.06%	2.79%	2.68%	0.11%	-0.22%		238,354
2	312	Boiler Plant Equipment	105,624,742	1.87%	5.26%	5.03%	0.23%	-0.46%		3,580,679
3	314	Turbo Generator Equipment	22,407,291	1.60%	2.82%	2.70%	0.13%	-0.26%		273,369
4	315	Accessory Electric Equipment	6,025,504	1.79%	3.35%	3.14%	0.21%	-0.42%		93,998
5	316	Misc Power Equipment	2,111,222	1.95%	3.94%	3.76%	0.18%	-0.36%		42,013
6	311-316	Total Asbury	149,946,466	***1.75%***	***4.57%***	***4.37%***	***0.20%***	***-0.40%***	***5.93%***	4,228,413
		Riverton								
7	311	Structure & Improvements	11,401,579	1.05%	3.67%	3.51%	0.16%	-0.33%		298,721
8	312	Boiler Plant Equipment	23,866,301	1.86%	3.08%	2.94%	0.14%	-0.28%		291,169
9	314	Turbo Generator Equipment	7,130,957	1.59%	2.39%	2.28%	0.11%	-0.22%		57,048
10	315	Accessory Electric Equipment	1,570,338	1.79%	1.85%	1.75%	0.10%	-0.20%		942
11	316	Misc Power Equipment	2,114,351	1.96%	5.27%	5.02%	0.25%	-0.50%		69,985
12	311-316	Total Riverton	46,083,525	***1.62%***	***3.18%***	***3.03%***	***0.14%***	***-0.29%***	***6.01%***	717,865
		Iatan 1								
13	311	Structure & Improvements	4,192,135	1.06%	2.08%	1.99%	0.10%	-0.19%		42,760
14	312	Boiler Plant Equipment	111,979,462	1.89%	3.16%	3.02%	0.14%	-0.28%		1,422,139
15	314	Turbo Generator Equipment	9,352,356	1.62%	2.42%	2.32%	0.11%	-0.21%		74,819
16	315	Accessory Electric Equipment	6,786,095	1.81%	4.06%	3.89%	0.17%	-0.33%		152,687
17	316	Misc Power Equipment	975,086	1.95%	3.25%	3.11%	0.14%	-0.28%		12,676
18	311-316	Total Iatan 1	133,285,135	***1.84%***	***3.12%***	***2.98%***	***0.14%***	***-0.28%***	***3.21%***	1,705,081
		Iatan 2								
19	311	Structure & Improvements			2.10%	2.00%	0.10%	-0.20%		-
20	312	Boiler Plant Equipment			2.10%	2.00%	0.10%	-0.20%		-
21	314	Turbo Generator Equipment			2.10%	2.00%	0.10%	-0.20%		-
22	315	Accessory Electric Equipment			2.10%	2.00%	0.10%	-0.20%		-
23	316	Misc Power Equipment			2.10%	2.00%	0.10%	-0.20%		-
24	311-316	Total Iatan 2	0		***2.10%***	***2.00%***	***0.10%***	***-0.20%***	***2.10%***	-
		Plum Point								
25	311	Structure & Improvements			2.10%	2.00%	0.10%	-0.20%		-
26	312	Boiler Plant Equipment			2.10%	2.00%	0.10%	-0.20%		-
27	314	Turbo Generator Equipment			2.10%	2.00%	0.10%	-0.20%		-
28	315	Accessory Electric Equipment			2.10%	2.00%	0.10%	-0.20%		-
29	316	Misc Power Equipment			2.10%	2.00%	0.10%	-0.20%		-
30	311-316	Total Plum Point	0		***2.10%***	***2.00%***	***0.10%***	***-0.20%***	***2.10%***	-
		Total Steam Production								
31	311	Structure & Improvements	29,371,421	1.06%	3.03%	8.18%	0.37%	-0.26%		579,835
32	312	Boiler Plant Equipment	241,470,505	1.88%	4.07%	10.96%	0.51%	-0.36%		5,293,987
33	314	Turbo Generator Equipment	38,890,605	1.60%	2.64%	7.30%	0.34%	-0.23%		405,235
34	315	Accessory Electric Equipment	14,381,938	1.80%	3.52%	8.78%	0.44%	-0.34%		247,627
35	316	Misc Power Equipment	5,200,659	1.95%	4.35%	11.90%	0.57%	-0.40%		124,674
36	311-316	Total Total Steam Production	329,315,127	***1.77%***	***3.79%***				***4.84%***	6,651,359
		Ozark Beach Hydro								
37	331	Structures & Improvements	677,760	1.66%	2.00%	1.91%	0.09%	-0.18%		2,304
38	332	Reservoirs, Dams, and Waterways	1,518,257	1.67%	0.98%	0.93%	0.04%	-0.09%		(10,476)
39	333	Water Wheels, Turbines & Generators	1,619,458	1.47%	3.00%	2.84%	0.16%	-0.32%		24,778
40	334	Accessory Electric Equipment	1,237,583	1.44%	1.97%	1.87%	0.10%	-0.20%		6,559
41	335	Misc. Power Plant Equipment	456,214	2.44%	3.52%	3.36%	0.16%	-0.33%		4,927
42	331-335	Total Ozark Beach Hydro	5,509,271	***1.62%***	***2.13%***	***2.02%***	***0.11%***	***-0.21%***	***2.70%***	28,092

Table 5-1
Unit Property Analysis – continued

Line	[A] FERC Account	[B] Description	[C] Plant in Service at 12/31/2009	[D] Existing Accrual Rate	[E] Recommended Whole Life Accrual Rate	[F] Recommended Life Rate	[G] Recommended Salvage Rate	[H] Recommended COR Rate	[I] Remaining Life Rate	[J] Change in Depreciation Expense
					[F]-[G]-[H]					([E]-[D])*[C]
		State Line CC								
43	341	Structures & Improvements	10,537,350	2.86%	2.11%	2.07%	0.17%	-0.21%		(79,030)
44	342	Fuel Holders	2,411,871	2.86%	4.58%	4.52%	0.26%	-0.33%		41,484
45	343	Prime Movers	107,266,868	2.86%	2.01%	2.11%	0.20%	-0.10%		(911,768)
46	344	Generators	28,471,627	2.86%	2.44%	2.54%	0.20%	-0.10%		(119,581)
47	345	Accessory Electric Equipment	11,132,359	2.86%	2.19%	2.15%	0.17%	-0.21%		(74,587)
48	346	Misc. Power Equipment	2,819,098	2.86%	2.08%	2.04%	0.16%	-0.20%		(21,989)
49	341-346	Total State Line CC	162,639,173	***2.86%***	***2.14%***	***2.22%***	***0.20%***	***-0.12%***	***2.07%***	(1,165,471)
		State Line CT								
50	341	Structures & Improvements	1,103,838	1.82%	4.24%	4.20%	0.14%	-0.17%		26,713
51	342	Fuel Holders	3,230,198	3.85%	2.31%	2.27%	0.16%	-0.19%		(49,745)
52	343	Prime Movers	27,222,287	1.93%	3.56%	3.67%	0.22%	-0.11%		443,723
53	344	Generators	7,178,570	1.82%	2.62%	2.72%	0.20%	-0.10%		57,429
54	345	Accessory Electric Equipment	2,892,158	3.57%	2.40%	2.36%	0.17%	-0.21%		(33,838)
55	346	Misc. Power Equipment	1,046,076	3.99%	3.86%	3.80%	0.24%	-0.30%		(1,360)
56	341-346	Total State Line CT	42,673,128	***2.22%***	***3.25%***	***3.33%***	***0.21%***	***-0.13%***	***1.97%***	442,922
		Energy Center Unit 1&2								
57	341	Structures & Improvements	1,948,262	1.82%	2.19%	2.15%	0.17%	-0.21%		7,209
58	342	Fuel Holders	1,679,645	3.85%	3.03%	2.97%	0.24%	-0.30%		(13,773)
59	343	Prime Movers	27,551,778	1.92%	2.33%	2.43%	0.19%	-0.09%		112,962
60	344	Generators	4,504,458	1.82%	2.10%	2.17%	0.13%	-0.07%		12,612
61	345	Accessory Electric Equipment	2,091,865	3.57%	1.20%	1.12%	0.31%	-0.39%		(49,577)
62	346	Misc. Power Equipment	1,458,408	4.00%	2.75%	2.70%	0.21%	-0.26%		(18,230)
63	341-346	Total Energy Center Unit 1&2	39,234,417	***2.15%***	***2.28%***	***2.35%***	***0.19%***	***-0.13%***	***1.28%***	51,203
		Energy Center Unit 3&4 (FT8s)								
64	341	Structures & Improvements	1,107,790	1.82%	2.04%	2.00%	0.16%	-0.20%		2,437
65	342	Fuel Holders	1,390,886	3.85%	2.04%	2.00%	0.16%	-0.20%		(25,175)
66	343	Prime Movers	46,538,833	1.92%	1.96%	2.06%	0.20%	-0.10%		18,616
67	344	Generators	531,753	1.82%	1.91%	2.01%	0.20%	-0.10%		479
68	345	Accessory Electric Equipment	3,443,294	3.57%	2.05%	2.01%	0.16%	-0.20%		(52,338)
69	346	Misc. Power Equipment	1,049,438	3.99%	2.04%	2.00%	0.16%	-0.20%		(20,464)
70	341-346	Total Energy Center Unit 3&4 (FT8s)	54,061,994	***2.11%***	***1.97%***	***2.05%***	***0.20%***	***-0.11%***	***2.12%***	(76,446)
		Riverton CT								
71	341	Structures & Improvements	977,547	1.82%	1.69%	1.67%	0.06%	-0.08%		(1,271)
72	342	Fuel Holders	1,413,776	3.85%	2.03%	2.00%	0.11%	-0.13%		(25,731)
73	343	Prime Movers	22,647,967	1.92%	2.02%	2.11%	0.17%	-0.08%		22,648
74	344	Generators	13,466,633	1.82%	1.91%	2.00%	0.17%	-0.08%		12,120
75	345	Accessory Electric Equipment	11,079,331	3.57%	1.95%	1.91%	0.15%	-0.18%		(179,485)
76	346	Misc. Power Equipment	1,570,252	4.00%	2.04%	2.00%	0.15%	-0.19%		(30,777)
77	341-346	Total Riverton CT	51,155,505	***2.37%***	***1.97%***	***2.02%***	***0.16%***	***-0.11%***	***1.93%***	(202,496)
78	Total		684,588,615		***2.99%***					5,729,164

5.1 Steam Production Plant

The steam electric generating stations owned by EDE as of December 31, 2009 include two units at Asbury, one unit at Iatan (12% ownership), and two units at Riverton. Iatan Unit 2 and Plum Point are currently under construction and are scheduled to be placed in service in 2010. EDE owns a 100 MW or 12% share of Iatan 2 and a 50 MW or 7.52% share of Plum Point.

Table 5-2 summarizes the nameplate rating, year of installation, and forecast retirement date for each unit as provided by EDE.

Table 5-2
Steam Production Plant Data

Line	[A] Steam Production Plant	[B] Nameplate Rating MW	[C] Date Installed	[D] Estimated Retirement	[E] Estimated Service Life years
1	Asbury 1	189	1970	2030	60
2	Asbury 2	18	1986	2015	29
3	Riverton 7	38	1950	2018	68
4	Riverton 8	54	1954	2018	64
5	Iatan 1 (a)	85	1980	2040	60
6	Iatan 2 (b)	100	2010	2060	50
7	Plum Point (c)	50	2010	2060	50

(a) EDE owns a 12% share of Iatan 1
(b) EDE owns a 12% share of Iatan 2
(c) EDE owns a 7.52% share of Pulm Point

Asbury. This station, located in Asbury, MO, has two steam generating units with a maximum net capability of 207 MW. The age of this station at the end of 2009 was 39 years and the remaining life is estimated to be 21 years based on the forecast retirement of the plant in 2030. In order to achieve this life, it is expected that Asbury will have major capital additions of approximately $114 million in 2015 to install mercury emissions controls to Unit 1. Unit 2 was placed in service in 1986 and will be retired coincident with the Unit 1 environmental upgrade in 2015. Other than this major capital addition, nominal levels of interim additions and interim retirements are expected to be made over the remaining life of the station. The Appendix summarizes the derivation of whole life rates and remaining life rates (with and without cost of removal) applicable to Asbury. A whole life accrual rate of 4.57 percent and a remaining life accrual rate of 5.93 percent (with cost of removal) are shown in Table 5-1. The accumulated depreciation reserve for the Asbury is $13,050,958 compared to the plant balance of $149,946,466 as of December 31, 2009.

Riverton. The Riverton Plant is located in Riverton, KS and has been in service since 1905. The currently operational steam units were placed in service in 1950 and 1954. The steam production facilities at this location include two coal-fired units, 38 MW (Unit 7) and 54 MW (Unit 8). At the end of 2009, the age of the units were 59 and 55 years and the remaining life of both units is estimated to be 9 years based on the forecast retirement of the units in 2018.

Based on the unit property methodology, the whole life accrual rate for Riverton Units 7 and 8 is 3.18 percent and the remaining life rate (with cost of removal) is 6.01 percent as shown in Table 5-1. The accumulated depreciation reserve is $28,774,554 compared to the plant balance of $46,083,525 as of December 31, 2009. The analysis showing the development of these rates is shown in the Appendix.

Iatan 1. The Iatan Plant is located in Weston, MO and was placed in service in 1980. EDE owns a 12% share of Iatan 1, or approximately 85 MW. At the end of 2009, the age of the facility was 29 years and the remaining life is estimated to be 31 years based on the forecast retirement of the unit in 2040.

Based on the unit property methodology, the whole life accrual rate for Iatan 1 is 3.12 percent and the remaining life rate (with cost of removal) is 3.21 percent as shown in Table 5-1. The accumulated depreciation reserve is $36,078,829 compared to the plant balance of $133,285,135 as of December 31, 2009. The analysis showing the development of these rates is shown in the Appendix.

5.2 Hydraulic Production Plant

EDE owns the Ozark Beach hydraulic production plant which consists of four generating units installed in 1931. The current licensing period for Ozark Beach ends in 2022, however EDE expects to extend the life of the Ozark Beach plant through another 30 year licensing period. We have used an estimated final retirement date of 2053 which corresponds to the expiration of the renewed licensing period. We believe that substantial additional capital additions may be required to achieve this estimated retirement date.

Table 5-3
Hydraulic Production Plant Data

Line	[A] Hydraulic Production Plant	[B] Nameplate Rating	[C] Date Installed	[D] Estimated Retirement	[E] Estimated Service Life
		MW			years
1	Ozark Beach 1	4	1931	2053	122
2	Ozark Beach 2	4	1931	2053	122
3	Ozark Beach 3	4	1931	2053	122
4	Ozark Beach 4	4	1931	2053	122

5.3 Other Production Plant

The other electric generating stations owned by EDE as of December 31, 2009 include the Energy Center combustion turbines, the Riverton combustion turbines, and the State Line combined cycle and combustion turbine. EDE forecasts 50 year service lives for a majority of combustion turbines as well as for the combined cycle plant. These forecast retirement dates result in services lives considerably greater than those we normally use for this type equipment. However, when considering EDE's capital maintenance schedules and limited use of these facilities, we find the estimates to be reasonable.

Table 5-4 summarizes the nameplate rating, year of installation, and forecast retirement date for each unit as provided by EDE.

Table 5-4
Other Production Plant Data

Line	[A] Other Production Plant	[B] Nameplate Rating	[C] Date Installed	[D] Estimated Retirement	[E] Estimated Service Life
		MW			years
1	Energy Center 1	85	1978	2028	50
2	Energy Center 2	84	1981	2031	50
3	Energy Center 3 (FT8)	49	2003	2053	50
4	Energy Center 4 (FT8)	49	2003	2053	50
5	Riverton 9	12	1964	2018	54
6	Riverton 10	16	1988	2038	50
7	Riverton 11	16	1988	2038	50
8	Riverton 12	150	2007	2057	50
9	State Line 1, CT	96	1995	2045	50
10	State Line 2, CC (a)	300	2001	2051	50

(a) EDE owns a 300 MW share of State Line 2 (combined cycle)

Energy Center. The Energy Center is located in LaRussell, MO. Units 1 and 2 are combustion turbines and were installed in the period 1978 and 1984, respectively. Units 3 and 4 are FT8 combustion turbines and were installed in 1993. All units are forecast to be in service for 50 years.

Based on the unit property methodology, the whole life accrual rate for Energy Center Units 1 and 2 is 2.28 percent and the remaining life rate (with cost of removal) is 1.28 percent as shown in Table 5-1. The accumulated depreciation for the Units 1 and 2 is $29,086,085 compared to the plant balance of $39,234,417 for the period ending December 31, 2009.

For Energy Center Units 3 and 4, the whole life accrual rate is 1.97 percent and the remaining life rate (with cost of removal) is 2.12 percent as shown in Table 5-1. The accumulated depreciation for the plant is $2,712,381 compared to the plant balance of $54,061,994 for the period ending December 31, 2009. The analysis showing the development of these rates is shown in the Appendix.

Riverton. The combustion turbines at Riverton were installed between 1964 and 2007. Unit 9 is forecast to retire at the same time as the steam units in 2018. Units 10, 11 and 12 are forecast to be in service for 50 years. Based on the unit property methodology, the whole life accrual rate for the Riverton combustion turbines is 1.97 percent and the remaining life rate (with cost of removal) is 1.93 percent as shown in Table 5-1. The accumulated depreciation reserve is $9,760,554 compared to the plant balance of $51,155,505 as of December 31, 2009. The analysis showing the development of these rates is shown in the Appendix.

State Line. The State Line plant is located west of Joplin, MO and consists of a combustion turbine installed in 1995 and a combined cycle unit installed in 2001 of which EDE owns a 300MW share. At the end of 2009, the ages of the units were 14 and 8 years and the remaining life was estimated to be 36 and 42 years based on the forecast lifespan of 50 years.

Based on the unit property methodology, the whole life accrual rate for State Line combustion turbine is 3.25 percent and the remaining life rate (with cost of removal) is 1.97 percent as shown in Table 5-1. The accumulated depreciation is $17,852,776 compared to the plant balance of $42,673,128 for the period ending December 31, 2009.

For the State Line combined cycle plant, the whole life accrual rate is 2.14 percent and the remaining life rate (with cost of removal) is 2.07 percent as shown in Table 5-1. The accumulated depreciation for the plant is $28,081,610 compared to the plant balance of $162,639,173 for the period ending December 31, 2009. The analysis showing the development of these rates is shown in the Appendix.

5.4 Iatan 2 and Plum Point Depreciation Rates

EDE owns a share of the Iatan 2 and Plum Point plants which are scheduled to begin commercial service in 2010. EDE asked that we recommend depreciation rates for its investment these plants. We recommend an initial depreciation rate of both Iatan 2 and Plum Point plants of 2.10%. This whole life deprecation rate is based on an initial estimated 50 year lifespan and -5% terminal cost of removal. We recommend EDE use this initial depreciation rate for all accounts (Account 311 – Account 316). Our initial depreciation rate recommendation does not include consideration of future major capital investment that likely will be required to operate the plants for 50 years or longer and will change as the plants histories develop.

6.0 MASS PROPERTY ANALYSIS

There are two fundamental approaches (methods) used to develop depreciation rates. These are the whole life approach and the remaining life approach. The basic equation used to determine a whole life depreciation rate is as follows:

$$\text{Whole Life Rate} = \frac{1 - \text{Salvage Ratio}}{\text{Average Service Life}}$$

As evident from the above, this equation consists of two elements. The first element reflects recovery of the initial investment (1/ASL). The second element (-SR/ASL) reflects credit for net salvage. As we previously indicated, the purpose of considering net salvage in determining the accrual rate is to credit salvage and recover cost of removal over the life of the property.

An underlying assumption of the whole life method is that for mass property accounts, as property is retired and new property is installed, the average service life of the group does not change significantly. The whole life method is predicated on homogeneity of the property units included in the group. For mass property accounts that have significant retirement history, where vintage retirement history is available, and where we consider life characteristics in the future to be similar to those observed in the past, we use an actuarial analysis as the principal basis to estimate average service life.

Conversely, the basic equation used to determine a remaining life depreciation rate is as follows:

$$\text{Remaining Life Rate} = \frac{1 - \text{Salvage Ratio} - \text{Reserve Ratio}}{\text{Estimated Average Remaining Life}}$$

As demonstrated above, the whole life and remaining life equations are comparable. The only difference is, as the names imply, that under the whole life approach, investment is recovered equally over the entire life. With the remaining life method, undepreciated investment is recovered over the remaining life. So long as no change in life or other characteristics occur, the whole life and remaining life depreciation rates will be the same. Typically an adjustment to reflect the amortization of reserve variance converts the whole life rate to a remaining life rate.

The traditional approach for incorporating allowances for net salvage is to compare annual net salvage (gross salvage minus cost of removal) to the original cost of the plant retired during that year. Typically this approach involves activity over a representative historical period, preferably at least 10 years. The traditional approach assumes that the ratio of net salvage dollars to the original cost dollars of the retirements is representative of the allowance that will ultimately apply to all plant in service over the life of the asset. In a whole life depreciation calculation, this allowance (ratio) is deducted before dividing by the average service life.

6.1 Whole Life Analysis for Mass Property

In Table 6-1, we summarize our recommended average service lives (ASL), Iowa curves, and net salvage ratios we use to calculate our indicated whole life depreciation rates applicable to mass property accounts. For mass property accounts (transmission, distribution, and general plant), we develop average service lives based on retirement (actuarial) analyses. We base our recommended net salvage ratios on EDE history, previous experience with similar systems, and judgment.

In this section, we summarize EDE's existing whole life rates and indicated whole life depreciation rates. To determine the average service life (ASL), we rely on retirement analyses for transmission, distribution and general plant.

EDE provided us with salvage and cost of removal data by plant account for the years 1988 through 2009. We analyzed the data, and developed average gross salvage, cost of removal and net salvage for transmission, distribution, and general plant accounts. Our recommended gross salvage, cost of removal, and net salvage adjustments are based on the last 10 years of EDE's net salvage history, our experience, and professional judgment.

Table 6-1 shows the development of our indicated whole life rates using our recommended average service lives, Iowa curves, and net salvage adjustment.

6.1.1 Transmission Plant

Based on the review of the results of our actuarial analyses, along with consideration of the average age of retired properties and engineering judgment, we developed indicated service lives for transmission plant. The net salvage ratios are based on EDE data, our experience and professional judgment. A listing of average service lives and net salvage ratios for each plant account is shown in Table 6-1.

The actuarial analysis indicated a few changes in the whole life rates as compared to the existing rates. As shown in Table 6-1, actuarial analyses suggest that the average service life for Station Equipment (Account 353) increased by 2 years, while Poles and Fixtures (Account 355) and Overhead Conductors and Devices (Account 356) decreased by 5 and 7 years, respectively. Structures and Improvements (Account 352) and Towers and Fixtures (Account 354) did not have adequate retirement history for actuarial analysis and we are recommending no change to ASL. An analysis of the historical salvage and cost of removal data indicates that, in general, the transmission function has a negative net salvage (cost of removal exceeds salvage value). Net salvage ratios for transmission plant have trended less negative (reduction in cost of removal) and are shown in Table 6-1, Column R. As shown in Table 6-1, the indicated composite whole life rate for transmission plant is 2.24%.

6.1.2 Distribution Plant

EDE's distribution plant consists of substations, overhead and underground lines, transformers, services, meters, and lighting facilities. A listing of average service lives, Iowa curves, and net salvage ratios we use for each plant account is shown in Table 6-1.

Much like our actuarial analysis of transmission plant, some changes were identified for distribution plant accrual rates. As shown in Table 6-1, the actuarial analysis suggests that Meters (Account 370) and Street Lighting and Signal Systems (Account 373) decrease ASL by 1 and 3 years, respectively. Of the remaining 9 distribution accounts, the actuarial analysis indicates 8 show the need for longer average service lives. The specific changes are shown below:

- Structures and Improvements (Account 361) increases from 60 to 64 years
- Station Equipment (Account 362) increases from 45 to 52 years,
- Overhead Conductor and Devices (Account 365) increases from 53 to 59 years,
- Underground Conduit (Account 366) increases from 37 to 50 years,
- Underground Conductors and Devices (Account 367) increases from 32 to 45 years,
- Line Transformers (Account 368) increases from 45 to 48 years,
- Services (Account 369) increases from 40 to 43 years,
- Installations (Account 371) increases from 25 to 28 years.

Based on our analysis of EDE's history of gross salvage and cost of removal, as well as our experience, we recommend changes in net salvage ratios for 8 distribution accounts, as summarized below:

- Structures and Improvements (Account 361) changes from -25% to 0%,
- Station Equipment (Account 362) changes from 15% to -17%,
- Underground Conduit (Account 366) changes from -45% to -11%,

- Underground Conductors and Devices (Account 367) changes from -15% to -7%,
- Line Transformers (Account 368) changes from -25% to 1%,
- Meters (Account 370) changes from 0% to -4%,
- Installations (Account 371) changes from -45% to -42%,
- Street Lighting and Signal Systems (Account 373) changes from -50% to -52%.

Net salvage was capped at a maximum of -100% for of our recommendations. As shown in Table 6-1, the indicated composite whole life rate for distribution plant is 3.26%

6.1.3 General Plant

General plant consists of facilities and equipment which are used to support all functional activities. A listing of the average service lives and net salvage ratios for each plant account is shown in Table 6-1.

Based on the results of our actuarial analysis, six general plant accounts indicated the need for longer services lives. Specific recommended changes are shown below:

- Transportation Equipment (Account 392) increases from 12 to 13 years,
- Stores Equipment (Account 393) increases from 30 to 40 years,
- Laboratory Equipment (Account 395) increases from 38 to 46 years,
- Power Operated Equipment (Account 396) increases from 15 to 17 years,
- Communication Equipment (Account 397) increases from 25 to 27 years,
- Miscellaneous Equipment (Account 398) increases from 22 to 32 years.

We recommend changes to net salvage ratios for seven accounts shown below:

- Structures and Improvements (Account 361) changes from -10% to 0%,
- Computer Equipment (Account 391.2) changes from 0% to 10%,
- Transportation Equipment (Account 392) changes from 15% to 2%,
- Stores Equipment (Account 393) changes from 5% to 0%,
- Tools Shop and Garage Equipment (Account 393) changes from 10% to 0%,
- Laboratory Equipment (Account 395) changes from 0% to 4%,
- Power Operated Equipment (Account 396) changes from 5% to 0%.

As shown in Table 6-1, the indicated composite whole life rate for general plant accounts is 5.75%

Table 6-1
Summary of Mass Property Analysis

Line	[A] FERC Acct	[B] Description	[C] Plant in Service At 12/31/2009	[D] Average Service Life	[E] Gross Salvage	[F] Cost of Removal	[G] Net Salvage	[H] Whole Life Rate	[I] Existing Life Accrual	[J] Salvage Accrual	[K] COR Accrual	[L] NS Accrual	[M] Total Accrual
								(1 - [G])/[D]	[C] * 1/[D]	[C] * [E]/[D]	[C] * [F]/[D]	[J] + [K]	[I] - [L]
1		Transmission Plant											
2	350	Land and Land Rights	8,985,871										
3	352	Structures and Improvements	2,891,646	55	0%	-15%	-15%	2.09%	52,575	-	(7,886)	(7,886)	60,462
4	353	Station Equipment	89,559,756	50	0%	-10%	-10%	2.20%	1,791,195	-	(179,120)	(179,120)	1,970,315
5	354	Towers and Fixtures	799,508	65	0%	-25%	-25%	1.92%	12,300	-	(3,075)	(3,075)	15,375
6	355	Poles and Fixtures	39,748,752	60	65%	-165%	-100%	3.33%	662,479	430,611	(1,093,091)	(662,479)	1,324,958
7	356	Overhead Conductors and Devices	61,449,854	65	60%	-100%	-40%	2.15%	945,382	567,229	(945,382)	(378,153)	1,323,535
8	359	Roads and Trails											
9		Total Transmission Plant	203,435,387					2.41%	3,463,932	997,841	(2,228,554)	(1,230,713)	4,694,645
10		Distribution Plant											
11	360	Land and Land Rights	2,360,393										
12	361	Structures and Improvements	9,756,326	60	0.0%	-25.0%	-25%	2.08%	162,605	-	(40,651)	(40,651)	203,257
13	362	Station Equipment	73,010,259	45	40.0%	-25.0%	15%	1.89%	1,622,450	648,980	(405,613)	243,368	1,379,083
14	364	Poles, Towers and Fixtures	136,982,762	46	55.0%	-155.0%	-100%	4.35%	2,977,886	1,637,837	(4,615,723)	(2,977,886)	5,955,772
15	365	Overhead Conductors and Devices	145,684,661	53	50.0%	-150.0%	-100%	3.77%	2,748,767	1,374,384	(4,123,151)	(2,748,767)	5,497,534
16	366	Underground Conduit	28,565,405	37	10.0%	-55.0%	-45%	3.92%	772,038	77,204	(424,621)	(347,417)	1,119,455
17	367	Underground Conductors & Devices	52,594,929	32	5.0%	-20.0%	-15%	3.59%	1,643,592	82,180	(328,718)	(246,539)	1,890,130
18	368	Line Transformers	88,765,104	45	3.0%	-28.0%	-25%	2.78%	1,972,558	59,177	(552,316)	(493,139)	2,465,697
19	369	Services	65,419,731	40	20.0%	-120.0%	-100%	5.00%	1,635,493	327,099	(1,962,592)	(1,635,493)	3,270,987
20	370	Meters	18,312,044	44	0.0%	0.0%	0%	2.27%	416,183	-	-	-	416,183
21	371	Installations on Cust. Premises	15,685,879	25	10.0%	-55.0%	-45%	5.80%	627,435	62,744	(345,089)	(282,346)	909,781
22	373	Street Lighting & Signal Systems	14,418,926	48	25.0%	-75.0%	-50%	3.13%	300,394	75,099	(225,296)	(150,197)	450,591
23		Total Distribution Plant	651,556,418						14,879,402	4,344,702	(13,023,771)	(8,679,069)	23,558,471
24		General Plant											
25	389	Land and Land Rights	679,466										
26	390	Structures and Improvements	9,489,178	40	0.0%	-10.0%	-10%	2.75%	237,229	-	(23,723)	(23,723)	260,952
27	391.1	Office Furniture and Equipment	4,188,701	20	0.0%	0.0%	0%	5.00%	209,435	-	-	-	209,435
28	391.2	Computer Equipment	11,463,123	10	0.0%	0.0%	0%	10.00%	1,146,312	-	-	-	1,146,312
29	392	Transportation Equipment	7,946,771	12	15.0%	0.0%	15%	7.08%	662,231	99,335	-	99,335	562,896
30	393	Stores Equipment	445,006	30	5.0%	0.0%	5%	3.17%	14,834	742	-	742	14,092
31	394	Tools, Shop & Garage Equipment	3,823,571	20	10.0%	0.0%	10%	4.50%	191,179	19,118	-	19,118	172,061
32	395	Laboratory Equipment	946,905	38	0.0%	0.0%	0%	2.63%	24,919	-	-	-	24,919
33	396	Power Operated Equipment	11,526,119	15	5.0%	0.0%	5%	6.33%	768,408	38,420	-	38,420	729,988
34	397	Communication Equipment	10,108,470	25	0.0%	0.0%	0%	4.00%	404,339	-	-	-	404,339
35	398	Miscellaneous Equipment	188,505	22	0.0%	0.0%	0%	4.55%	8,568	-	-	-	8,568
36		Total General Plant	60,805,815						3,667,453	157,615	(23,723)	133,892	3,533,562
		Total Mass Property	915,797,620						22,010,788	5,500,157	(15,276,047)	(9,775,890)	31,786,678

Table 6-1 continued
Summary of Mass Property Analysis

Line	[A] FERC Acct	[B] Description	[C] Plant in Service At 12/31/2009	[N] Iowa Curve	[O] Average Service Life	[P] Gross Salvage	[Q] Cost of Removal	[R] Net Salvage	[S] Whole Life Rates	[T] Recommended Life Accrual [C] * 1/[O]	[U] Salvage Accrual [C] * [P]/[O]	[V] COR Accrual [C] * [Q]/[O]	[W] NS Accrual [U] + [V]	[X] Total Accrual [T] - [W]
1		Transmission Plant												
2	350	Land and Land Rights	8,985,871											
3	352	Structures and Improvements	2,891,646		55	0%	0%	0%	1.82%	52,575	-	-	-	52,575
4	353	Station Equipment	89,559,756	R2	52	0%	-13%	-13%	2.17%	1,722,303	-	(223,899)	(223,899)	1,946,202
5	354	Towers and Fixtures	799,508		65	0%	0%	0%	1.54%	12,300	-	-	-	12,300
6	355	Poles and Fixtures	39,748,752	R4	55	245%	-275%	-30%	2.36%	722,705	1,770,626	(1,987,438)	(216,811)	939,516
7	356	Overhead Conductors and Devices	61,449,854	R2	58	151%	-183%	-32%	2.28%	1,059,480	1,599,815	(1,938,849)	(339,034)	1,398,514
8	359	Roads and Trails												
9		Total Transmission Plant	203,435,387						*2.24%*	3,569,363	3,370,441	(4,150,186)	(779,744)	4,349,108
10		Distribution Plant												
11	360	Land and Land Rights	2,360,393											
12	361	Structures and Improvements	9,756,326	S1	64	0%	0%	0%	1.56%	152,443	-	-	-	152,443
13	362	Station Equipment	73,010,259	L1	52	17%	-34%	-17%	2.25%	1,404,043	238,687	(477,375)	(238,687)	1,642,731
14	364	Poles, Towers and Fixtures	136,982,762	R3	46	88%	-188%	-100%	4.35%	2,977,886	2,620,540	(5,598,426)	(2,977,886)	5,955,772
15	365	Overhead Conductors and Devices	145,684,661	R2.5	59	91%	-191%	-100%	3.39%	2,469,232	2,247,001	(4,716,232)	(2,469,232)	4,938,463
16	366	Underground Conduit	28,565,405	R2.5	50	17%	-28%	-11%	2.22%	571,308	97,122	(159,966)	(62,844)	634,152
17	367	Underground Conductors & Devices	52,594,929	R1	45	9%	-16%	-7%	2.38%	1,168,776	105,190	(187,004)	(81,814)	1,250,591
18	368	Line Transformers	88,765,104	S0.5	48	6%	-5%	1%	2.06%	1,849,273	110,956	(92,464)	18,493	1,830,780
19	369	Services	65,419,731	R4	43	19%	-119%	-100%	4.65%	1,521,389	289,064	(1,810,453)	(1,521,389)	3,042,778
20	370	Meters	18,312,044	S0	43	0%	-4%	-4%	2.42%	425,861	-	(17,034)	(17,034)	442,896
21	371	Installations on Cust. Premises	15,685,879	R1	28	13%	-55%	-42%	5.07%	560,210	72,827	(308,115)	(235,288)	795,498
22	373	Street Lighting & Signal Systems	14,418,926	R1	45	14%	-66%	-52%	3.38%	320,421	44,859	(211,478)	(166,619)	487,039
23		Total Distribution Plant	651,556,418						*3.26%*	13,420,842	5,826,247	(13,578,548)	(7,752,301)	21,173,143
24		General Plant												
25	389	Land and Land Rights	679,466											
26	390	Structures and Improvements	9,489,178	L3	28	0%	0%	0%	3.57%	338,899	-	-	-	338,899
27	391.1	Office Furniture and Equipment	4,188,701	L0	20	0%	0%	0%	5.00%	209,435	-	-	-	209,435
28	391.2	Computer Equipment	11,463,123		10	8%	2%	10%	9.00%	1,146,312	91,705	22,926	114,631	1,031,681
29	392	Transportation Equipment	7,946,771	R1	13	0%	2%	2%	7.54%	611,290	-	12,226	12,226	599,064
30	393	Stores Equipment	445,006	R1	40	0%	0%	0%	2.50%	11,125	-	-	-	11,125
31	394	Tools, Shop & Garage Equipment	3,823,571		20	0%	0%	0%	5.00%	191,179	-	-	-	191,179
32	395	Laboratory Equipment	946,905	R3	46	4%	0%	4%	2.09%	20,585	823	-	823	19,761
33	396	Power Operated Equipment	11,526,119	R3	17	0%	0%	0%	5.88%	678,007	-	-	-	678,007
34	397	Communication Equipment	10,108,470	S0	27	0%	0%	0%	3.70%	374,388	-	-	-	374,388
35	398	Miscellaneous Equipment	188,505	S0	32	0%	0%	0%	3.13%	5,891	-	-	-	5,891
36		Total General Plant	60,805,815						*5.75%*	3,587,111	92,528	35,152	127,680	3,459,430
		Total Mass Property	915,797,620							20,577,316	9,289,216	(17,693,581)	(8,404,365)	28,981,681

Table 6-1 continued
Summary of Mass Property Analysis

Line	[A] FERC Acct	[B] Description	[C] Plant in Service At 12/31/2009	[Y] Life Accrual [T] - [I]	[Z] Salvage Accrual [U] - [J]	[AA] Difference COR Accrual [V] - [K]	[AB] NS Accrual [W] - [L]	[AC] Total Accrual [X] - [M]
1		Transmission Plant						
2	350	Land and Land Rights	8,985,871	-	-	7,886	7,886	(7,886)
3	352	Structures and Improvements	2,891,646	-	-	(44,780)	(44,780)	(24,112)
4	353	Station Equipment	89,559,756	(68,892)	-	3,075	3,075	(3,075)
5	354	Towers and Fixtures	799,508	-	-	-	-	-
6	355	Poles and Fixtures	39,748,752	60,225	1,340,015	(894,347)	445,668	(385,442)
7	356	Overhead Conductors and Devices	61,449,854	114,098	1,032,586	(993,466)	39,119	74,979
8	359	Roads and Trails						
9		Total Transmission Plant	203,435,387	105,431	2,372,600	(1,921,632)	450,969	(345,537)
10		Distribution Plant						
11	360	Land and Land Rights	2,360,393					
12	361	Structures and Improvements	9,756,326	(10,163)	-	40,651	40,651	(50,814)
13	362	Station Equipment	73,010,259	(218,407)	(410,293)	(71,762)	(482,055)	263,648
14	364	Poles, Towers and Fixtures	136,982,762	-	982,702	(982,702)	-	-
15	365	Overhead Conductors and Devices	145,684,661	(279,536)	872,617	(593,081)	279,536	(559,071)
16	366	Underground Conduit	28,565,405	(200,730)	19,919	264,655	284,573	(485,303)
17	367	Underground Conductors & Devices	52,594,929	(474,815)	23,010	141,714	164,724	(639,540)
18	368	Line Transformers	88,765,104	(123,285)	51,780	459,853	511,632	(634,917)
19	369	Services	65,419,731	(114,104)	(38,035)	152,139	114,104	(228,208)
20	370	Meters	18,312,044	9,679	-	(17,034)	(17,034)	26,713
21	371	Installations on Cust. Premises	15,685,879	(67,225)	10,084	36,974	47,058	(114,283)
22	373	Street Lighting & Signal Systems	14,418,926	20,026	(30,240)	13,818	(16,422)	36,448
23		Total Distribution Plant	651,556,418	(1,458,560)	1,481,545	(554,777)	926,768	(2,385,327)
24		General Plant						
25	389	Land and Land Rights	679,466					
26	390	Structures and Improvements	9,489,178	101,670	-	23,723	23,723	77,947
27	391.1	Office Furniture and Equipment	4,188,701	-	-	-	-	-
28	391.2	Computer Equipment	11,463,123	-	91,705	22,926	114,631	(114,631)
29	392	Transportation Equipment	7,946,771	(50,941)	(99,335)	12,226	(87,109)	36,168
30	393	Stores Equipment	445,006	(3,708)	(742)	-	(742)	(2,967)
31	394	Tools, Shop & Garage Equipment	3,823,571	-	(19,118)	-	(19,118)	19,118
32	395	Laboratory Equipment	946,905	(4,334)	823	-	823	(5,157)
33	396	Power Operated Equipment	11,526,119	(90,401)	(38,420)	-	(38,420)	(51,981)
34	397	Communication Equipment	10,108,470	(29,951)	-	-	-	(29,951)
35	398	Miscellaneous Equipment	188,505	(2,678)	-	-	-	(2,678)
36		Total General Plant	60,805,815	(80,343)	(65,086)	58,875	(6,211)	(74,132)
		Total Mass Property	915,797,620	(1,433,471)	3,789,059	(2,417,534)	1,371,525	(2,804,996)

6.2 Depreciation Reserve Analysis

After developing indicated accrual rates, we evaluate the adequacy of the depreciation reserve balance (Table 6-2). In order to correct any imbalances in the depreciation reserve accounts, we first determine a theoretical level of where depreciation reserve should be. We calculate this based on the weighted age of the assets in each account, relative to our recommended average service lives. Without adjustment, to the extent that calculated reserve, Table 6-2, Column L, is greater than or less than the book reserve, Table 6-2, Column D, the Company will under- or over-recover, respectively, its depreciable plant investment. Differences between the calculated theoretical reserve and the book reserve can be attributed primarily to changes in life characteristics or historical rates which have not properly reflected life characteristics or changes in life characteristics. These changing life characteristics and the degree to which these changes are recognized and reflected in the depreciation rates directly affect the book reserves.

By subtracting the calculated depreciation reserve from the actual depreciation reserve, we determine the reserve excess or deficiency (Column M). Any amounts that have been over- or under-recovered should be amortized over the remaining life of the asset group. We calculate a reserve deficiency of $56.4 million for production plant and a reserve excess of $34.7 million for transmission, distribution and general plant at December 31, 2009. Because the Missouri Public Service Commission has a preference for whole life depreciation rates, we do not recommend using remaining life rates or any other amortization method to adjust the depreciation reserve at this time.

Table 6-2
Depreciation Reserve Analysis

Line	[A] FERC Acct	[B] Description	[C] Plant in Service At 12/31/2009	[D] Depreciation Reserve At 12/31/2009	[E] Reserve Ratio	[F] Average Age	[G] Average Service Life	[H] Gross Salvage	[I] Cost of Removal	[J] Net Salvage	[K] Remaining Life	[L] Calculated Reserve	[M] Excess/ (Deficiency)
			$	$	[D] / [C]	years							[D] - [L]
1		Production Plant											
2		Steam Production Plant											
3	310	Land and Land Rights	939,473										
4	311-316	Asbury	149,946,466	40,318,934	26.9%							112,556,869	(72,237,935)
5	311-316	Riverton	46,083,525	28,774,554	62.4%							39,512,335	(10,737,782)
6	311-316	Iatan 1	133,285,135	36,078,829	27.1%							39,983,640	(3,904,810)
7	311-316	Iatan 2											
8	311-316	Plum Point											
9		Total Steam Production	330,254,599	105,172,317								192,052,844	(86,880,528)
10		Hydro Production Plant											
11	310	Land and Land Rights	226,488										
12	331-335	Ozark Beach	5,509,271	2,486,302	45.1%							4,960,422	(2,474,119)
13		Total Hydro Production	5,735,759	2,486,302								192,052,844	(2,474,119)
14		Other Production Plant											
15	340	Land and Land Rights	1,025,253										
16	341-346	State Line Combined Cycle	162,639,173	28,081,610	17.3%							22,636,284	5,445,325
17	341-346	State Line CT	42,673,128	17,852,776	41.8%							(3,323,550)	21,176,326
18	341-346	Energy Center Unit 1&2	39,234,417	29,086,085	74.1%							20,212,950	8,873,135
19	341-347	Energy Center Unit 3&4 (FT8)	54,061,994	2,712,381	5.0%							6,481,203	(3,768,823)
20	341-348	Riverton CT	51,155,505	9,760,554	19.1%							8,666,586	1,093,968
21		Total Other Production	350,789,470	87,493,405								54,673,475	32,819,931
22		Total Production Plant	686,779,828	195,152,025	28.4%							438,779,163	(56,534,716)
23		Transmission Plant											
24	350	Land and Land Rights	8,985,871										
25	352	Structures and Improvements	2,891,646	1,116,705	38.6%	16.9	55	0%	0%	0%	40.3	777,923	338,782
26	353	Station Equipment	89,559,756	33,370,653	37.3%	16.3	52	0%	-13%	-13%	38.4	25,686,730	7,683,923
27	354	Towers and Fixtures	799,508	772,934	96.7%	59.8	65	0%	0%	0%	14.6	711,099	61,835
28	355	Poles and Fixtures	39,748,752	15,828,439	39.8%	14.5	55	245%	-275%	-30%	41.0	12,305,356	3,523,083
29	356	Overhead Conductors and Devices	61,449,854	18,389,391	29.9%	17.9	58	151%	-183%	-32%	42.9	21,301,191	(2,911,800)
30	359	Roads and Trails	-										
31		Total Transmission Plant	203,435,387	69,478,122	34.2%							60,782,299	8,695,823

Table 6-2
Depreciation Reserve Analysis

Line	[A] FERC Acct	[B] Description	[C] Plant in Service At 12/31/2009	[D] Depreciation Reserve At 12/31/2009	[E] Reserve Ratio	[F] Average Age	[G] Average Service Life	[H] Gross Salvage	[I] Cost of Removal	[J] Net Salvage	[K] Remaining Life	[L] Calculated Reserve	[M] Excess/ (Deficiency)
			$	$	[D] / [C]	years							[D] - [L]
32		Distribution Plant											
33	360	Land and Land Rights	2,360,393										
34	361	Structures and Improvements	9,756,326	3,743,037	38.4%	20.6	64	0%	0%	0%	46.3	2,685,552	1,057,485
35	362	Station Equipment	73,010,259	27,212,036	37.3%	15.3	52	17%	-34%	-17%	40.8	12,224,466	14,987,570
36	364	Poles, Towers and Fixtures	136,982,762	62,395,624	45.5%	13.5	46	88%	-188%	-100%	33.7	69,943,589	(7,547,965)
37	365	Overhead Conductors and Devices	145,684,661	51,546,185	35.4%	14.5	59	91%	-191%	-100%	46.0	64,498,285	(12,952,100)
38	366	Underground Conduit	28,565,405	9,335,602	32.7%	9.7	50	17%	-28%	-11%	41.2	5,564,994	3,770,608
39	367	Underground Conductors and Devices	52,594,929	19,089,710	36.3%	11.0	45	9%	-16%	-7%	37.3	9,244,706	9,845,004
40	368	Line Transformers	88,765,104	30,719,356	34.6%	14.6	48	6%	-5%	1%	36.5	20,835,340	9,884,016
41	369	Services	65,419,731	33,344,987	51.0%	13.3	43	19%	-119%	-100%	30.2	38,690,746	(5,345,759)
42	370	Meters	18,312,044	6,232,010	34.0%	16.7	43	0%	-4%	-4%	31.1	5,140,802	1,091,208
43	371	Installations on Customer Premises	15,685,879	9,252,140	59.0%	12.1	28	13%	-55%	-42%	19.8	6,478,769	2,773,371
44	373	Street Lighting and Signal Systems	14,418,926	5,132,435	35.6%	14.6	45	14%	-66%	-52%	34.8	4,914,293	218,142
45		Total Distribution Plant	651,556,418	258,003,121	39.6%							240,221,542	17,781,579
46		General Plant											
47	389	Land and Land Rights	679,466										
48	390	Structures and Improvements	9,489,178	5,944,294	62.6%	20.6	28	0%	0%	0%	10.9	5,685,106	259,188
49	391.1	Office Furniture and Equipment	4,188,701	2,258,842	53.9%	9.7	20	0%	0%	0%	15.2	2,031,520	227,322
50	391.2	Computer Equipment*	11,463,123	5,765,537	50.3%		10	8%	2%	10%		5,731,562	33,975
51	392	Transportation Equipment	7,946,771	6,776,560	85.3%	7.9	13	0%	2%	2%	7.7	3,155,609	3,620,951
52	393	Stores Equipment	445,006	293,685	66.0%	18.4	40	0%	0%	0%	27.6	134,675	159,010
53	394	Tools, Shop and Garage Equipment	3,823,571	2,246,913	58.8%	21.4	20	0%	0%	0%	10.1	1,856,267	390,646
54	395	Laboratory Equipment	946,905	690,181	72.9%	20.9	46	4%	0%	4%	26.6	383,532	306,649
55	396	Power Operated Equipment	11,526,119	7,229,509	62.7%	9.5	17	0%	0%	0%	8.7	5,613,976	1,615,533
56	397	Communication Equipment	10,108,470	4,930,474	48.8%	16.7	27	0%	0%	0%	16.0	3,429,288	1,501,186
57	398	Miscellaneous Equipment	188,505	127,270	67.5%	16.0	32	0%	0%	0%	21.1	64,019	63,251
58		Total General Plant	60,805,815	36,263,265	59.6%							28,085,553	8,177,711
59		Total Transmission, Distribution, General	915,797,620	363,744,507	39.7%							329,089,395	34,655,113
60		Total Plant in Service @ 12/31/09	1,602,577,449	558,896,532	34.9%							767,868,558	(21,879,603)

* Computer and Office Equipment are combined in CPR

7.0 RECOMMENDED DEPRECIATION RATES

We summarize our recommended depreciation rates for unit property and mass property in Table 7-1.

7.1 Unit Property Depreciation Rates

Our recommended composite depreciation rate for Steam Production Plant is 3.79%, an increase from the existing rate of 1.77%. This increase is primarily due to the effect of switching to the appropriate life span treatment of unit property. For Hydraulic Production Plant, the composite depreciation rate increases from 1.62% to 2.13%. For Other Production Plant, the composite rate decrease from 2.51% to 1.97%. Both Hydraulic and Other Production Plant have the effect of switching to the appropriate life span treatment offset by the extension of final retirement dates. For all generation facilities, the composite rate increases from 2.15% to 2.99%, resulting in an estimated increase in depreciation expense of $5.7 million.

We further recommend establishing depreciation rates for Iatan 2 and Plum Point at 2.10%. This rate should be used for all accounts at the time these facilities are commercially in service.

7.2 Mass Property Depreciation Rates

For transmission accounts, the composite rate decreases from 2.41% to 2.24%. This results in an estimated decrease in depreciation expense of $343,392. The composite rate for distribution accounts decreases from 3.63% to 3.26%, which results in an estimated decrease in depreciation expense of $2.4 million. For general plant accounts, the composite rate decreases from 5.88% to 5.75%, a decrease of $74,112 in depreciation expense. We attribute these decreases to two main factors: first, we find a general trend of longer average service lives compared to the current ASLs, and second, we find the net salvage requirements are less negative (reduction in cost of removal) than the existing allowance.

7.3 Summary

Overall, our recommended depreciation rates are 6% higher than existing, based on plant balances at December 31, 2009. The overall impact is an increase in annual depreciation expense of $2.9 million. This increase is composed of a $5.7 million increase in unit property depreciation accrual primarily attributable to switching from mass property treatment to life span treatment, and a $2.8 million decrease in mass property depreciation accrual due to changes in ASL and net salvage requirements.

Table 7-1
Recommended Depreciation Rates

Line	[A] Description	[B] FERC Acct	[C] Plant in Service At 12/31/2009	[D] Existing Depreciation Rate	[E] Existing Life Rate	[F] Existing Net Salvage Rate	[G] Existing Depreciation Expense	[H] Recommended Depreciation Rate	[I] Recommended Life Rate	[J] Recommended Net Salvage Rate	[K] Recommended Depreciation Expense	[L] Change in Expense
			$	%	%	%	$	%	%	%	$	$
1	Production Plant											
2	Steam Production Plant											
3	Land and Land Rights	310	939,473									
4	Asbury	311-316	149,946,466	1.75%	1.74%	-0.02%	2,628,768	4.57%	4.37%	-0.20%	6,857,182	4,228,413
5	Riverton	311-316	46,083,525	1.62%	1.61%	-0.01%	746,562	3.18%	3.03%	-0.14%	1,464,427	717,865
6	Iatan 1	311-316	133,285,135	1.84%	1.80%	-0.04%	2,454,199	3.12%	2.98%	-0.14%	4,159,280	1,705,081
7	Iatan 2	311-316						2.10%	2.00%	-0.10%		
8	Plum Point	311-316						2.10%	2.00%	-0.10%		
9	Total Steam Production		330,254,599	*1.77%*			5,829,530	*3.79%*			12,480,889	6,651,359
10	Hydro Production Plant											
11	Land and Land Rights	310	226,488									
12	Ozark Beach	331-335	5,509,271	1.62%	1.62%	0.00%	89,365	2.13%	2.02%	-0.11%	117,457	28,092
13	Total Hydro Production		5,735,759	*1.62%*			89,365	*2.13%*			117,457	28,092
14	Other Production Plant											
15	Land and Land Rights	340	1,025,253									
16	State Line Combined Cycle	341-346	162,639,173	2.86%	2.86%	0.00%	4,651,480	2.14%	2.22%	0.08%	3,486,009	(1,165,471)
17	State Line CT	341-346	42,673,128	2.22%	2.21%	-0.01%	945,481	3.25%	3.33%	0.08%	1,388,403	442,922
18	Energy Center Unit 1&2	341-346	39,234,417	2.15%	2.15%	0.00%	844,116	2.28%	2.35%	0.06%	895,319	51,203
19	Energy Center Unit 3&4 (FT8)	341-347	54,061,994	2.11%	2.11%	0.00%	1,141,733	1.97%	2.05%	0.08%	1,065,287	(76,446)
20	Riverton CT	341-348	51,155,505	2.37%	2.37%	0.00%	1,210,498	1.97%	2.02%	0.05%	1,008,002	(202,496)
21	Total Other Production		350,789,470	*2.51%*			8,793,307	*2.24%*			7,843,019	(950,288)
22	Total Production Plant		686,779,828	*2.15%*			14,712,202	*2.99%*			20,441,366	5,729,164
23	Transmission Plant											
24	Land and Land Rights	350	8,985,871									
25	Structures and Improvements	352	2,891,646	2.09%	1.82%	-0.27%	60,435	1.82%	1.82%	0.00%	52,628	(7,807)
26	Station Equipment	353	89,559,756	2.20%	2.00%	-0.20%	1,970,315	2.17%	1.92%	-0.25%	1,943,447	(26,868)
27	Towers and Fixtures	354	799,508	1.92%	1.54%	-0.38%	15,351	1.54%	1.54%	0.00%	12,312	(3,038)
28	Poles and Fixtures	355	39,748,752	3.33%	1.67%	-1.66%	1,323,633	2.36%	1.82%	-0.54%	938,071	(385,563)
29	Overhead Conductors and Devices	356	61,449,854	2.15%	1.54%	-0.61%	1,321,172	2.28%	1.72%	-0.56%	1,401,057	79,885
30	Roads and Trails	359	-				-				-	-
31	Total Transmission Plant		203,435,387	*2.41%*			4,690,906	*2.24%*			4,347,514	(343,392)

Table 7-1 continued
Recommended Depreciation Rates

Line	[A] Description	[B] FERC Acct	[C] Plant in Service At 12/31/2009	Existing [D] Depreciation Rate	Existing [E] Life Rate	Existing [F] Net Salvage Rate	[G] Depreciation Expense	[H] Depreciation Rate	[I] Life Rate	Recommended [J] Net Salvage Rate	Recommended [K] Depreciation Expense	[L] Change in Expense
			$	%	%	%	$	%	%	%	$	$
32	Distribution Plant						-					
33	Land and Land Rights	360	2,360,393									
34	Structures and Improvements	361	9,756,326	2.08%	1.67%	-0.41%	202,932	1.56%	1.56%	0.00%	152,199	(50,733)
35	Station Equipment	362	73,010,259	1.89%	2.22%	0.33%	1,379,894	2.25%	1.92%	-0.33%	1,642,731	262,837
36	Poles, Towers and Fixtures	364	136,982,762	4.35%	2.17%	-2.18%	5,958,750	4.35%	2.17%	-2.18%	5,958,750	-
37	Overhead Conductors and Devices	365	145,684,661	3.77%	1.89%	-1.88%	5,492,312	3.39%	1.69%	-1.70%	4,938,710	(553,602)
38	Underground Conduit	366	28,565,405	3.92%	2.70%	-1.22%	1,119,764	2.22%	2.00%	-0.22%	634,152	(485,612)
39	Underground Conductors & Devices	367	52,594,929	3.59%	3.13%	-0.46%	1,888,158	2.38%	2.22%	-0.16%	1,251,759	(636,399)
40	Line Transformers	368	88,765,104	2.78%	2.22%	-0.56%	2,467,670	2.06%	2.08%	0.02%	1,828,561	(639,109)
41	Services	369	65,419,731	5.00%	2.50%	-2.50%	3,270,987	4.65%	2.33%	-2.32%	3,042,017	(228,969)
42	Meters	370	18,312,044	2.27%	2.27%	0.00%	415,683	2.42%	2.33%	-0.09%	443,151	27,468
43	Installations on Customer Premises	371	15,685,879	5.80%	4.00%	-1.80%	909,781	5.07%	3.57%	-1.50%	795,274	(114,507)
44	Street Lighting and Signal Systems	373	14,418,926	3.13%	2.08%	-1.05%	451,312	3.38%	2.22%	-1.16%	487,360	36,047
45	Total Distribution Plant		651,556,418	*3.63%*			23,557,242	*3.26%*			21,174,665	(2,382,578)
46	General Plant											
47	Land and Land Rights	389	679,466									
48	Structures and Improvements	390	9,489,178	2.75%	2.50%	-0.25%	260,952	3.57%	3.57%	0.00%	338,764	77,811
49	Office Furniture and Equipment	391.1	4,188,701	5.00%	5.00%	0.00%	209,435	5.00%	5.00%	0.00%	209,435	-
50	Computer Equipment	391.2	11,463,123	10.00%	10.00%	0.00%	1,146,312	9.00%	10.00%	1.00%	1,031,681	(114,631)
51	Transportation Equipment	392	7,946,771	7.08%	8.33%	1.25%	562,631	7.54%	7.69%	0.15%	599,187	36,555
52	Stores Equipment	393	445,006	3.17%	3.33%	0.16%	14,107	2.50%	2.50%	0.00%	11,125	(2,982)
53	Tools, Shop and Garage Equipment	394	3,823,571	4.50%	5.00%	0.50%	172,061	5.00%	5.00%	0.00%	191,179	19,118
54	Laboratory Equipment	395	946,905	2.63%	2.63%	0.00%	24,904	2.09%	2.17%	0.08%	19,790	(5,113)
55	Power Operated Equipment	396	11,526,119	6.33%	6.67%	0.34%	729,603	5.88%	5.88%	0.00%	677,736	(51,868)
56	Communication Equipment	397	10,108,470	4.00%	4.00%	0.00%	404,339	3.70%	3.70%	0.00%	374,013	(30,325)
57	Miscellaneous Equipment	398	188,505	4.55%	4.55%	0.00%	8,577	3.13%	3.13%	0.00%	5,900	(2,677)
58	Total General Plant		60,805,815	*5.88%*			3,532,921	*5.75%*			3,458,810	(74,112)
							46,493,271	*3.11%*			49,422,354	2,929,083
59	Total Plant in Service @ 12/31/09		1,602,577,449	*2.93%*								

APPENDIX
UNIT PROPERTY ANALYSIS

Unit Property Analysis

The unit property analysis for each plant is presented in the following sections. The analysis for each plant is done by account on a whole life basis, including recognition of interim and forecast additions and retirements and final net salvage. The remaining life portion of these analyses are summarized by plant and adjusted to reflect accumulated depreciation to determine a forecast remaining life balance. The recommended whole life results in this Appendix are carried forward to Table 5-1 in the body of the report.

Summary by Plant
The Empire District Electric Company
Asbury Plant

Account	Description	Direct Investment 2009$	Depreciation Rate
310	Land	0	0.00%
311	Structure & Improvements	13,777,714	2.79%
312	Boiler Plant Equipment	105,624,762	5.26%
314	Turbo Generator Equipment	22,407,288	2.82%
315	Accessory Electric Equipment	6,025,504	3.35%
316	Misc Power Equipment	2,111,227	3.94%
	Total	149,946,495	4.57% whole life weighted average rate

Remaining Life Depreciation Rate Calculation

Per Books Balance 12/31/09	149,946,495
Forecast Interim Additions	188,911,424
Forecast Gross Salvage Value	15,928,042
Forecast Less Cost of Removal	31,856,084
Forecast Net Salvage Value	(15,928,042)
Forecast Total to be Recovered with COR	354,785,961
Forecast Total to be Recovered w/o COR	322,929,877
Accumulated Depreciation (2009 EOY)	(40,313,340)
Forecast Remaining Life Balance with COR	314,472,621
Forecast Remaining Life Balance w/o COR	282,616,537
Forecast Plant Balances	5,300,540,177
Remaining Life Rate with COR	5.93%
Remaining Life Rate w/o COR	5.33%
Reserve Variance with COR	(72,089,638)

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2030
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances

Accou 311 Structures & Improvements — Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1970	60	733,336		-	10,008			733,336	-		733,336
2	1971	59	8,946		-	-			8,946	-		742,282
3	1972	58	1,192		-	-			1,192	-		743,474
4	1973	57	-		-	-			-	-		743,474
5	1974	56	-		-	-			-	-		743,474
6	1975	55	-		-	-			-	-		743,474
7	1976	54	-		-	-			-	-		743,474
8	1977	53	-		-	-			-	-		743,474
9	1978	52	120,977		-	-			120,977	-		864,451
10	1979	51	41,006		-	-			41,006	-		905,457
11	1980	50	29,783		-	-			29,783	-		935,240
12	1981	49	5,687		-	-			5,687	-		940,927
13	1982	48	1,644		-	-			1,644	-		942,571
14	1983	47	-		-	-			-	-		942,571
15	1984	46	25,765		-	6,677			25,765	-		968,336
16	1985	45	-		-	-			-	-		968,336
17	1986	44	2,392,445		-	6,600			2,392,445	-		3,360,781
18	1987	43	91,974		-	9,364			91,974	-		3,452,755
19	1988	42	12,344		-	-			12,344	-		3,465,099
20	1989	41	-		-	-			-	-		3,465,099
21	1990	40	8,888,648		-	3,558			8,888,648	-		12,353,747
22	1991	39	29,680		-	-			29,680	-		12,383,427
23	1992	38	99,952		-	43,081			99,952	-		12,483,379
24	1993	37	235,141		-	-			235,141	-		12,718,520
25	1994	36	60,961		-	-			60,961	-		12,779,481
26	1995	35	93,854		-	-			93,854	-		12,873,335
27	1996	34	134,029		-	-			134,029	-		13,007,364
28	1997	33	180,858		-	-			180,858	-		13,188,222
29	1998	32	72,408		-	-			72,408	-		13,260,630
30	1999	31	-		59,445	-			-	59,445		13,201,185
31	2000	30		68,843	4,600	-			68,843	4,600		13,265,428
32	2001	29		46,200	-	2,415			46,200	-		13,311,628
33	2002	28		102,502	-	-			102,502	-		13,414,130
34	2003	27		11,386	-	-			11,386	-		13,425,516
35	2004	26		119,746	10,235	-			119,746	10,235		13,535,027
36	2005	25		75,007	-	-			75,007	-		13,610,034
37	2006	24		44,811	-	-			44,811	-		13,654,845
38	2007	23		67,255	2,415	-	329		67,584	2,415		13,720,014
39	2008	22	-	-	5,008	-	62,708		62,708	5,008		13,777,714
40	2009	21	-	-	-	-	-		-	-		13,777,714
41	Total		$ 13,260,630	$ 535,750	$ 81,703	$ 81,703	$ 63,037	$ -	$ 13,859,417	$ 81,703	$ -	$ 290,889,424
42	Major Additions/Retirements											
43	Routine Activity			$ 598,787	$ 81,703							
44	Historical Interim Activity			0.21%	0.03%							
45	Forecast Interim Activity			0.21%	0.03%							
								Major Additions**			Major Retirements	
46	2010	20							28,361	3,870		13,802,205
47	2011	19							28,411	3,877		13,826,740
48	2012	18							28,462	3,884		13,851,318
49	2013	17							28,513	3,890		13,875,940
50	2014	16							28,563	3,897		13,900,606
51	2015	15	UNIT 2 RETIRES IN 2015						28,614	3,904	2,392,445	11,532,871
52	2016	14							23,740	3,239		11,553,372
53	2017	13							23,782	3,245		11,573,909
54	2018	12							23,825	3,251		11,594,483
55	2019	11							23,867	3,257		11,615,093
56	2020	10							23,909	3,262		11,635,740
57	2021	9							23,952	3,268		11,656,424
58	2022	8							23,994	3,274		11,677,144
59	2023	7							24,037	3,280		11,697,901
60	2024	6							24,080	3,286		11,718,695
61	2025	5							24,123	3,291		11,739,526
62	2026	4							24,165	3,297		11,760,395
63	2027	3							24,208	3,303		11,781,300
64	2028	2							24,251	3,309		11,802,242
65	2029	1							24,295	3,315		11,823,222
66	2030	0									(11,823,222)	-
									$ -	$ 14,366,570	$ 150,903	$ 535,308,550

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2030
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances
Accou 311 Structures & Improvements
Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	13,859,417
Forecast Additions	507,153
Total Additions	14,366,570
Gross Salvage Value	591,161
Less Cost of Removal	1,182,322
Net Salvage Value	(591,161)
Total to be Recovered	14,957,731
Forecast Plant Balances	535,308,550
Whole Life Accrual Rate	2.79%
Cost of Removal Accrual Rate	0.22%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.57%
Depreciable Service Life, years	35.8

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	13,777,714
Forecast Additions	507,153
Gross Salvage Value	591,161
Less Cost of Removal	1,182,322
Net Salvage Value	(591,161)
Forecast Plant Balances	244,419,126

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Asbury Plant

Historical and Forecast Plant Additions & Balances

Accou 312 Boiler Plant Equipment

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2030
Service Life, Yrs	60
Initial Plant Balance	

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1970	60	12,597,910		-	3,484,551			12,597,910	-		12,597,910
2	1971	59	248,135		-	-			248,135	-		12,846,045
3	1972	58	67,779		-	-			67,779	-		12,913,824
4	1973	57	56,263		-	18,179			56,263	-		12,970,087
5	1974	56	207,476		-	127,723			207,476	-		13,177,563
6	1975	55	61,298		-	6,335			61,298	-		13,238,861
7	1976	54	224,592		-	47,296			224,592	-		13,463,453
8	1977	53	208,546		-	71,046			208,546	-		13,671,999
9	1978	52	394,454		-	22,409			394,454	-		14,066,453
10	1979	51	3,845,385		-	154,106			3,845,385	-		17,911,838
11	1980	50	150,595		-	-			150,595	-		18,062,433
12	1981	49	288,683		-	192,950			288,683	-		18,351,116
13	1982	48	263,675		-	54,077			263,675	-		18,614,791
14	1983	47	347,742		-	77,382			347,742	-		18,962,533
15	1984	46	300,303		-	222,695			300,303	-		19,262,836
16	1985	45	77,137		-	-			77,137	-		19,339,973
17	1986	44	1,346,623		-	3,957			1,346,623	-		20,686,596
18	1987	43	1,593,575		-	787,069			1,593,575	-		22,280,171
19	1988	42	1,526,147		-	59,093			1,526,147	-		23,806,318
20	1989	41	872,427		-	176,494			872,427	-		24,678,745
21	1990	40	12,451,299		-	35,441			12,451,299	-		37,130,044
22	1991	39	712,943		-	149,625			712,943	-		37,842,987
23	1992	38	798,020		-	32,439			798,020	-		38,641,007
24	1993	37	1,286,297		-	246,644			1,286,297	-		39,927,304
25	1994	36	1,297,618		-	11,037			1,297,618	-		41,224,922
26	1995	35	1,127,004		-	1,315			1,127,004	-		42,351,926
27	1996	34	3,035,892		-	364,245			3,035,892	-		45,387,818
28	1997	33	1,115,228		-	124,481			1,115,228	-		46,503,046
29	1998	32	2,318,768		-	26,168			2,318,768	-		48,821,814
30	1999	31		3,889,558	2,199,465	17,000			3,889,558	2,199,465		50,511,907
31	2000	30		1,819,015	116,307	-			1,819,015	116,307		52,214,615
32	2001	29		1,221,566	-	10,456			1,221,566	-		53,436,181
33	2002	28		10,836,668	-	141,120			10,836,668	-		64,272,849
34	2003	27		942,978	446,115	-			942,978	446,115		64,769,712
35	2004	26		1,282,373	1,944,362	-			1,282,373	1,944,362		64,107,723
36	2005	25		4,623,075	-	-			4,623,075	-		68,730,798
37	2006	24		477,876	-	-	1,256		479,132	-		69,209,930
38	2007	23		188,334	1,880,069	-	5,083,485		5,271,819	1,880,069		72,601,680
39	2008	22		-	79,015	-	32,601,224		32,601,224	79,015		105,123,889
40	2009	21		-	-	-	500,873		500,873	-		105,624,762
41	Total		$ 48,821,814	$ 25,281,443	$ 6,665,333	$ 6,665,333	$ 38,186,838	$ -	$ 112,290,095	$ 6,665,333	$ -	$1,489,338,460

42	Major Additions/Retirements		
43	2002	$ 10,836,668	
44	2008	$ 32,601,224	
45	Routine Activity	$ 20,030,389	$ 6,665,333
46	Historical Interim Activity	1.34%	0.45%
47	Forecast Interim Activity	1.34%	0.45%

				Major Additions**			Major Retirements	
48	2010	20		2,848,000		472,709		108,000,053
49	2011	19		2,123,000		483,340		109,639,713
50	2012	18		3,640,000		490,678		112,789,036
51	2013	17		8,380,913		504,772		120,665,177
52	2014	16		1,885,000		540,021		122,010,156
53	2015	15	UNIT 2 RETIRES IN 2015	114,000,000		546,040	1,346,623	234,117,493
54	2016	14			3,148,690	1,047,761		236,218,421
55	2017	13			3,176,945	1,057,164		238,338,203
56	2018	12			3,205,455	1,066,650		240,477,007
57	2019	11			3,234,220	1,076,222		242,635,005
58	2020	10			3,263,243	1,085,880		244,812,368
59	2021	9			3,292,527	1,095,625		247,009,270
60	2022	8			3,322,073	1,105,457		249,225,887
61	2023	7			3,351,885	1,115,377		251,462,396
62	2024	6			3,381,964	1,125,386		253,718,974
63	2025	5			3,412,314	1,135,485		255,995,803
64	2026	4			3,442,935	1,145,675		258,293,063
65	2027	3			3,473,831	1,155,956		260,610,939
66	2028	2			3,505,005	1,166,329		262,949,614
67	2029	1			3,536,458	1,176,795		265,309,277
68	2030	0					##########	-
				##########	$ 159,037,641	$ 25,258,654		$5,803,616,316

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget, and $114 million in 2015 for scrubber and Mercury MACT equipment (per IRP)

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2030
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances
Accou 312 Boiler Plant Equipment

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	112,290,095
Forecast Additions	179,624,459
Total Additions	291,914,554
Gross Salvage Value	13,265,464
Less Cost of Removal	26,530,928
Net Salvage Value	(13,265,464)
Total to be Recovered	305,180,018
Forecast Plant Balances	5,803,616,316
Whole Life Accrual Rate	5.26%
Cost of Removal Accrual Rate	0.46%
Whole Life Accrual Rate (Excluding Cost of Removal)	4.80%
Depreciable Service Life, years	19.0

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/08	105,624,762
Forecast Additions	179,624,459
Gross Salvage Value	13,265,464
Less Cost of Removal	26,530,928
Net Salvage Value	(13,265,464)
Forecast Plant Balances	4,314,277,856

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Asbury Plant

Historical and Forecast Plant Additions & Balances

Accou 314 Turbogenerator Equipment

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2030
Service Life, Yrs	60
Initial Plant Balance	

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1970	60	8,192,128		-	1,530,807			8,192,128	-		8,192,128
2	1971	59	43,107		-	20,408			43,107	-		8,235,235
3	1972	58	1,450		-	-			1,450	-		8,236,685
4	1973	57	1,799		-	1,799			1,799	-		8,238,484
5	1974	56	-		-	-			-	-		8,238,484
6	1975	55	7,376		-	6,647			7,376	-		8,245,860
7	1976	54	7,330		-	7,330			7,330	-		8,253,190
8	1977	53	-		-	-			-	-		8,253,190
9	1978	52	-		-	-			-	-		8,253,190
10	1979	51	20,706		-	5,915			20,706	-		8,273,896
11	1980	50	-		-	-			-	-		8,273,896
12	1981	49	351,350		-	351,350			351,350	-		8,625,246
13	1982	48	-		-	-			-	-		8,625,246
14	1983	47	10,677		-	-			10,677	-		8,635,923
15	1984	46	10,598		-	-			10,598	-		8,646,521
16	1985	45	27,959		-	-			27,959	-		8,674,480
17	1986	44	3,889,736		-	94,803			3,889,736	-		12,564,216
18	1987	43	4,677		-	-			4,677	-		12,568,893
19	1988	42	226,936		-	176,141			226,936	-		12,795,829
20	1989	41	75,782		-	67,172			75,782	-		12,871,611
21	1990	40	4,931		-	-			4,931	-		12,876,542
22	1991	39	632,830		-	436,620			632,830	-		13,509,372
23	1992	38	11,469		-	7,432			11,469	-		13,520,841
24	1993	37	16,859		-	-			16,859	-		13,537,700
25	1994	36	73,804		-	-			73,804	-		13,611,504
26	1995	35	12,296		-	-			12,296	-		13,623,800
27	1996	34	910,483		-	-			910,483	-		14,534,283
28	1997	33	4,944,045		-	50,400			4,944,045	-		19,478,328
29	1998	32	1,501,271		-	-			1,501,271	-		20,979,599
30	1999	31		52,578	1,550,734	-			52,578	1,550,734		19,481,443
31	2000	30		1,241,408	-	-			1,241,408	-		20,722,851
32	2001	29		585,311	-	-			585,311	-		21,308,162
33	2002	28		811,453	-	-			811,453	-		22,119,615
34	2003	27		-	-	-			-	-		22,119,615
35	2004	26		-	1,004,131	-			-	1,004,131		21,115,484
36	2005	25		-	-	-			-	-		21,115,484
37	2006	24		352,969	-	-	210,874		563,843	-		21,679,327
38	2007	23		-	55,892	-	162,925		162,925	55,892		21,786,360
39	2008	22		-	146,067	-	1,280,744		1,280,744	146,067		22,921,037
40	2009	21		-	-	-	(513,749)		(513,749)	-		22,407,288
41	Total		$ 20,979,599	$ 3,043,719	$ 2,756,824	$ 2,756,824	$ 1,140,794	$ -	$ 25,164,112	$ 2,756,824	$ -	$ 557,150,838
42	Major Additions/Retirements											
43	Routine Activity			$ 4,184,513	$ 2,756,824							
44	Historical Interim Activity			0.75%	0.49%							
45	Forecast Interim Activity			0.75%	0.49%							
								Major Additions**			Major Retirements	
46	2010	20							168,291	110,873		22,464,706
47	2011	19							168,722	111,157		22,522,272
48	2012	18							169,155	111,442		22,579,985
49	2013	17							169,588	111,727		22,637,845
50	2014	16							170,023	112,014		22,695,854
51	2015	15	UNIT 2 RETIRES IN 2015						170,459	112,301	3,889,736	26,643,748
52	2016	14							200,109	131,835		26,712,022
53	2017	13							200,622	132,173		26,780,471
54	2018	12							201,136	132,512		26,849,096
55	2019	11							201,652	132,851		26,917,896
56	2020	10							202,168	133,192		26,986,873
57	2021	9							202,686	133,533		27,056,026
58	2022	8							203,206	133,875		27,125,357
59	2023	7							203,727	134,218		27,194,865
60	2024	6							204,249	134,562		27,264,551
61	2025	5							204,772	134,907		27,334,416
62	2026	4							205,297	135,253		27,404,460
63	2027	3							205,823	135,599		27,474,684
64	2028	2							206,350	135,947		27,545,087
65	2029	1							206,879	136,295		27,615,671
66	2030	0									(27,615,671)	-
								$ -	$ 29,029,026	$ 5,303,091		$1,076,956,724

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Historical and Forecast Plant Additions & Balances
Accou 314 Turbogenerator Equipment

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2030
Service Life, Yrs	60
Initial Plant Balance	

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	25,164,112
Forecast Additions	3,864,914
Total Additions	29,029,026
Gross Salvage Value	1,380,784
Less Cost of Removal	2,761,567
Net Salvage Value	(1,380,784)
Total to be Recovered	30,409,809
Forecast Plant Balances	1,076,956,724
Whole Life Accrual Rate	2.82%
Cost of Removal Accrual Rate	0.26%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.57%
Depreciable Service Life, years	35.4

Remaining Life Depreciation Rate Calculation

Account Balance - 12/31/08	22,407,288
Forecast Additions	3,864,914
Gross Salvage Value	1,380,784
Less Cost of Removal	2,761,567
Net Salvage Value	(1,380,784)
Forecast Plant Balances	519,805,886

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2030
Service Life, Yrs	60

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Historical and Forecast Plant Additions & Balances
Accou 315 Accessory Electric Equipment Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1970	60	1,382,577		-	1,705			1,382,577	-		1,382,577
2	1971	59	-		-	-			-	-		1,382,577
3	1972	58	-		-	-			-	-		1,382,577
4	1973	57	-		-	-			-	-		1,382,577
5	1974	56	4,334		-	-			4,334	-		1,386,911
6	1975	55	-		-	-			-	-		1,386,911
7	1976	54	-		-	-			-	-		1,386,911
8	1977	53	-		-	-			-	-		1,386,911
9	1978	52	-		-	-			-	-		1,386,911
10	1979	51	-		-	-			-	-		1,386,911
11	1980	50	736		-	-			736	-		1,387,647
12	1981	49	2,375		-	-			2,375	-		1,390,022
13	1982	48	-		-	-			-	-		1,390,022
14	1983	47	-		-	-			-	-		1,390,022
15	1984	46	-		-	-			-	-		1,390,022
16	1985	45	-		-	-			-	-		1,390,022
17	1986	44	836,455		-	-			836,455	-		2,226,477
18	1987	43	7,082		-	-			7,082	-		2,233,559
19	1988	42	6,227		-	-			6,227	-		2,239,786
20	1989	41	-		-	-			-	-		2,239,786
21	1990	40	-		-	-			-	-		2,239,786
22	1991	39	-		-	-			-	-		2,239,786
23	1992	38	-		-	-			-	-		2,239,786
24	1993	37	3,638		-	-			3,638	-		2,243,424
25	1994	36	-		-	-			-	-		2,243,424
26	1995	35	10,190		-	-			10,190	-		2,253,614
27	1996	34	37,644		-	-			37,644	-		2,291,258
28	1997	33	15,577		-	-			15,577	-		2,306,835
29	1998	32	7,290		-	-			7,290	-		2,314,125
30	1999	31		-	-	-			-	-		2,314,125
31	2000	30		-	-	-			-	-		2,314,125
32	2001	29		-	-	-			-	-		2,314,125
33	2002	28		-	-	-			-	-		2,314,125
34	2003	27		-	-	-			-	-		2,314,125
35	2004	26		-	-	-			-	-		2,314,125
36	2005	25		-	-	-			-	-		2,314,125
37	2006	24		-	-	-			-	-		2,314,125
38	2007	23		11,085	1,705	-			11,085	1,705		2,323,505
39	2008	22		-	-	-			-	-	1,852,342	4,175,847
40	2009	21		-	-	-	1,849,657		1,849,657	-		6,025,504
41	Total		$ 2,314,125	$ 11,085	$ 1,705	$ 1,705	$ 1,849,657	$ -	$ 4,174,867	$ 1,705	$ 1,852,342	$ 82,539,033

42 Major Additions/Retirements

43	Routine Activity	$ 1,860,742	$ 1,705	
44	Historical Interim Activity	2.25%	0.00%	
45	Forecast Interim Activity	2.25%	0.00%	

				Major Additions**		Major Retirements	
46	2010	20			135,838	124	6,161,217
47	2011	19			138,897	127	6,299,987
48	2012	18			142,026	130	6,441,882
49	2013	17			145,224	133	6,586,974
50	2014	16			148,495	136	6,735,333
51	2015	15	UNIT 2 RETIRES IN 2015		151,840	139 836,455	7,723,489
52	2016	14			174,117	160	7,897,446
53	2017	13			178,038	163	8,075,321
54	2018	12			182,048	167	8,257,203
55	2019	11			186,149	171	8,443,181
56	2020	10			190,341	174	8,633,347
57	2021	9			194,628	178	8,827,797
58	2022	8			199,012	182	9,026,627
59	2023	7			203,494	186	9,229,935
60	2024	6			208,078	191	9,437,822
61	2025	5			212,764	195	9,650,391
62	2026	4			217,556	199	9,867,748
63	2027	3			222,456	204	10,090,000
64	2028	2			227,467	208	10,317,259
65	2029	1			232,590	213	10,549,636
66	2030	0				(10,549,636)	-
				$ -	$ 7,865,926	$ 5,087	$ 250,791,627

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2030
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances
Accou 315 Accessory Electric Equipment

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year			Adjusted Transaction Year			Plant
Line	Vintage Year	Vintage Age	Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	4,174,867
Forecast Additions	3,691,059
Total Additions	7,865,926
Gross Salvage Value	527,482
Less Cost of Removal	1,054,964
Net Salvage Value	(527,482)
Total to be Recovered	8,393,408
Forecast Plant Balances	250,791,627
Whole Life Accrual Rate	3.35%
Cost of Removal Accrual Rate	0.42%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.93%
Depreciable Service Life, years	29.9

Remaining Life Depreciation Rate Calculation

Account Balance - 12/31/08	6,025,504
Forecast Additions	3,691,059
Gross Salvage Value	527,482
Less Cost of Removal	1,054,964
Net Salvage Value	(527,482)
Forecast Plant Balances	168,252,594

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2030
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances
Accou 316 Miscellaneous Plant Equipment

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1970	60	378,805		-	48,866			378,805	-		378,805
2	1971	59	5,008		-	-			5,008	-		383,813
3	1972	58	6,698		-	2,595			6,698	-		390,511
4	1973	57	9,550		-	4,094			9,550	-		400,061
5	1974	56	8,466		-	-			8,466	-		408,527
6	1975	55	11,191		-	-			11,191	-		419,718
7	1976	54	9,438		-	-			9,438	-		429,156
8	1977	53	4,645		-	-			4,645	-		433,801
9	1978	52	4,158		-	-			4,158	-		437,959
10	1979	51	10,249		-	-			10,249	-		448,208
11	1980	50	10,393		-	-			10,393	-		458,601
12	1981	49	28,348		-	15,503			28,348	-		486,949
13	1982	48	20,435		-	-			20,435	-		507,384
14	1983	47	1,916		-	-			1,916	-		509,300
15	1984	46	5,070		-	-			5,070	-		514,370
16	1985	45	8,126		-	-			8,126	-		522,496
17	1986	44	58,491		-	1,582			58,491	-		580,987
18	1987	43	60,920		-	-			60,920	-		641,907
19	1988	42	57,101		-	-			57,101	-		699,008
20	1989	41	139,742		-	-			139,742	-		838,750
21	1990	40	4,102		-	-			4,102	-		842,852
22	1991	39	4,845		-	-			4,845	-		847,697
23	1992	38	77,564		-	-			77,564	-		925,261
24	1993	37	54,920		-	-			54,920	-		980,181
25	1994	36	38,387		-	-			38,387	-		1,018,568
26	1995	35	73,167		-	-			73,167	-		1,091,735
27	1996	34	22,810		-	-			22,810	-		1,114,545
28	1997	33	117,747		-	20,000			117,747	-		1,232,292
29	1998	32	102,928		-	-			102,928	-		1,335,220
30	1999	31		78,705	15,503	-			78,705	15,503		1,398,422
31	2000	30		69,546	4,094	-			69,546	4,094		1,463,874
32	2001	29		60,689	-	-			60,689	-		1,524,563
33	2002	28		13,953	-	-			13,953	-		1,538,516
34	2003	27		14,273	-	-			14,273	-		1,552,789
35	2004	26		16,876	53,043	-			16,876	53,043		1,516,622
36	2005	25		42,810	-	-			42,810	-		1,559,432
37	2006	24		5,234	-	-			5,234	-		1,564,666
38	2007	23		2,962	20,000	-	354,390		357,352	20,000		1,902,018
39	2008	22		-	-	-	44,543		44,543	-		1,946,561
40	2009	21		-	-	-	164,666		164,666	-		2,111,227
41	Total		$ 1,335,220	$ 305,048	$ 92,640	$ 92,640	$ 563,599	$ -	$ 2,203,867	$ 92,640	$ -	$ 37,357,352

42 Major Additions/Retirements

43	Routine Activity		$ 868,647	$ 92,640
44	Historical Interim Activity		2.33%	0.25%
45	Forecast Interim Activity		2.33%	0.25%

				Major Additions**		Major Retirements	
46	2010	20			49,091	5,235	2,155,083
47	2011	19			50,111	5,344	2,199,849
48	2012	18			51,152	5,455	2,245,546
49	2013	17			52,214	5,569	2,292,191
50	2014	16			53,299	5,684	2,339,806
51	2015	15	UNIT 2 RETIRES IN 2015		54,406	5,802	58,491 2,446,901
52	2016	14			56,896	6,068	2,497,729
53	2017	13			58,078	6,194	2,549,613
54	2018	12			59,285	6,323	2,602,575
55	2019	11			60,516	6,454	2,656,637
56	2020	10			61,773	6,588	2,711,822
57	2021	9			63,056	6,725	2,768,154
58	2022	8			64,366	6,865	2,825,655
59	2023	7			65,703	7,007	2,884,351
60	2024	6			67,068	7,153	2,944,266
61	2025	5			68,461	7,301	3,005,426
62	2026	4			69,883	7,453	3,067,857
63	2027	3			71,335	7,608	3,131,584
64	2028	2			72,817	7,766	3,196,635
65	2029	1			74,329	7,927	3,263,037
66	2030	0					(3,263,037) -
				$ -	$ 3,427,707	$ 223,161	$ 91,142,068

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2030
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances
Accou 316 Miscellaneous Plant Equipment

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	2,203,867
Forecast Additions	1,223,840
Total Additions	3,427,707
Gross Salvage Value	163,152
Less Cost of Removal	326,304
Net Salvage Value	(163,152)
Total to be Recovered	3,590,859
Forecast Plant Balances	91,142,068
Whole Life Accrual Rate	3.94%
Cost of Removal Accrual Rate	0.36%
Whole Life Accrual Rate (Excluding Cost of Removal)	3.58%
Depreciable Service Life, years	25.4

Remaining Life Depreciation Rate Calculation

Account Balance - 12/31/08	2,111,227
Forecast Additions	1,223,840
Gross Salvage Value	163,152
Less Cost of Removal	326,304
Net Salvage Value	(163,152)
Forecast Plant Balances	53,784,716

Summary by Plant
The Empire District Electric Company
Riverton Plant

Account	Description	Direct Investment 2009$	Depreciation Rate
310	Land	0	0.00%
311	Structure & Improvements	11,401,578	3.67%
312	Boiler Plant Equipment	23,866,305	3.08%
314	Turbo Generator Equipment	7,130,958	2.39%
315	Accessory Electric Equipment	1,570,339	1.85%
316	Misc Power Equipment	2,114,350	5.27%
	Total	46,083,530	3.18% whole life weighted average rate

Remaining Life Depreciation Rate Calculation

Per Books Balance 12/31/09	46,083,530
Forecast Interim Additions	3,066,861
Forecast Gross Salvage Value	2,423,448
Forecast Less Cost of Removal	4,846,897
Forecast Net Salvage Value	(2,423,448)
Forecast Total to be Recovered with COR	51,573,839
Forecast Total to be Recovered w/o COR	46,726,942
Accumulated Depreciation (2009 EOY)	(28,774,554)
Forecast Remaining Life Balance with COR	22,799,286
Forecast Remaining Life Balance w/o COR	17,952,389
Forecast Plant Balances	379,292,566
Remaining Life Rate with COR	6.01%
Remaining Life Rate w/o COR	4.73%
Reserve Variance with COR	(10,744,830)

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2015
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances
Accou 311 Structures & Improvements

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1904	114	220,083		-	-			220,083	-		220,083
2	1905	113	94,254		-	1,097			94,254	-		314,337
3	1906	112	-		-	-			-	-		314,337
4	1907	111	-		-	-			-	-		314,337
5	1908	110	-		-	-			-	-		314,337
6	1909	109	-		-	-			-	-		314,337
7	1910	108	-		-	-			-	-		314,337
8	1911	107	27,462		-	27,119			27,462	-		341,799
9	1912	106	-		-	-			-	-		341,799
10	1913	105	-		-	-			-	-		341,799
11	1914	104	560		-	-			560	-		342,359
12	1915	103	-		-	-			-	-		342,359
13	1916	102	2,576		-	2,576			2,576	-		344,935
14	1917	101	-		-	-			-	-		344,935
15	1918	100	37,494		-	-			37,494	-		382,429
16	1919	99	-		-	-			-	-		382,429
17	1920	98	-		-	-			-	-		382,429
18	1921	97	-		-	-			-	-		382,429
19	1922	96	-		-	-			-	-		382,429
20	1923	95	-		-	-			-	-		382,429
21	1924	94	22,985		-	22,985			22,985	-		405,414
22	1925	93	8,517		-	-			8,517	-		413,931
23	1926	92	-		-	-			-	-		413,931
24	1927	91	31,619		-	-			31,619	-		445,550
25	1928	90	362		-	362			362	-		445,912
26	1929	89	-		-	-			-	-		445,912
27	1930	88	-		-	-			-	-		445,912
28	1931	87	5,328		-	5,328			5,328	-		451,240
29	1932	86	-		-	-			-	-		451,240
30	1933	85	-		-	-			-	-		451,240
31	1934	84	-		-	-			-	-		451,240
32	1935	83	1,610		-	1,610			1,610	-		452,850
33	1936	82	415		-	415			415	-		453,265
34	1937	81	252,839		-	33,722			252,839	-		706,104
35	1938	80	947		-	899			947	-		707,051
36	1939	79	-		-	-			-	-		707,051
37	1940	78	14,536		-	14,394			14,536	-		721,587
38	1941	77	1,508		-	1,424			1,508	-		723,095
39	1942	76	9		-	9			9	-		723,104
40	1943	75	-		-	-			-	-		723,104
41	1944	74	11,230		-	11,230			11,230	-		734,334
42	1945	73	527		-	105			527	-		734,861
43	1946	72	-		-	-			-	-		734,861
44	1947	71	-		-	-			-	-		734,861
45	1948	70	4,138		-	-			4,138	-		738,999
46	1949	69	674		-	-			674	-		739,673
47	1950	68	826,499		-	5,000			826,499	-		1,566,172
48	1951	67	-		-	-			-	-		1,566,172
49	1952	66	6,689		-	6,125			6,689	-		1,572,861
50	1953	65	2,599		-	-			2,599	-		1,575,460
51	1954	64	867,697		-	1,378			867,697	-		2,443,157
52	1955	63	16,697		-	-			16,697	-		2,459,854
53	1956	62	69,402		-	9,758			69,402	-		2,529,256
54	1957	61	7,594		-	-			7,594	-		2,536,850
55	1958	60	3,219		-	911			3,219	-		2,540,069
56	1959	59	3,818		-	-			3,818	-		2,543,887
57	1960	58	9,565		-	800			9,565	-		2,553,452
58	1961	57	100		-	-			100	-		2,553,552
59	1962	56	6,376		-	-			6,376	-		2,559,928
60	1963	55	4,401		-	2,942			4,401	-		2,564,329
61	1964	54	-		-	-			-	-		2,564,329
62	1965	53	7,966		-	-			7,966	-		2,572,295
63	1966	52	12,542		-	-			12,542	-		2,584,837
64	1967	51	3,623		-	1,939			3,623	-		2,588,460
65	1968	50	-		-	-			-	-		2,588,460
66	1969	49	7,423		-	2,278			7,423	-		2,595,883
67	1970	48	1,854		-	-			1,854	-		2,597,737
68	1971	47	-		-	-			-	-		2,597,737
69	1972	46	2,934		-	-			2,934	-		2,600,671
70	1973	45	20,437		-	19,857			20,437	-		2,621,108
71	1974	44	1,210		-	-			1,210	-		2,622,318
72	1975	43	2,046		-	-			2,046	-		2,624,364
73	1976	42	4,148		-	814			4,148	-		2,628,512
74	1977	41	-		-	-			-	-		2,628,512
75	1978	40	7,009		-	3,717			7,009	-		2,635,521
76	1979	39	95,519		-	94,927			95,519	-		2,731,040

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2015
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances

Accou 311 Structures & Improvements

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year			Adjusted Transaction Year			
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
77	1980	38	62,039		-	2,787			62,039	-		2,793,079
78	1981	37	12,705		-	12,705			12,705	-		2,805,784
79	1982	36	94,697		-	1,010			94,697	-		2,900,481
80	1983	35	82,733		-	8,295			82,733	-		2,983,214
81	1984	34	33,019		-	21,761			33,019	-		3,016,233
82	1985	33	71,410		-	40,326			71,410	-		3,087,643
83	1986	32	5,738		-	3,841			5,738	-		3,093,381
84	1987	31	92,459		-	-			92,459	-		3,185,840
85	1988	30	256,108		-	-			256,108	-		3,441,948
86	1989	29	-		-	-			-	-		3,441,948
87	1990	28	2,349,529		-	4,658			2,349,529	-		5,791,477
88	1991	27	44,572		-	10,437			44,572	-		5,836,049
89	1992	26	61,592		-	-			61,592	-		5,897,641
90	1993	25	118,636		-	118,636			118,636	-		6,016,277
91	1994	24	288,189		-	110,975			288,189	-		6,304,466
92	1995	23	90,731		-	-			90,731	-		6,395,197
93	1996	22	99,274		-	2,671			99,274	-		6,494,471
94	1997	21	1,366,201		-	215,787			1,366,201	-		7,860,672
95	1998	20	-		-	-			-	-		7,860,672
96	1999	19		488,258	3,229	12,597			488,258	3,229		8,345,701
97	2000	18		77,561	358,573	-			77,561	358,573		8,064,689
98	2001	17		168,962	-	5,592			168,962	-		8,233,651
99	2002	16		240,314	-	-			240,314	-		8,473,965
100	2003	15		12,250	52,221	-			12,250	52,221		8,433,994
101	2004	14		-	-	-			-	-		8,433,994
102	2005	13		99,376	-	-	9,063		108,439	-		8,542,433
103	2006	12		272,593	421,427	-	-		272,593	421,427		8,393,599
104	2007	11		2,739,512	9,758	-	-		2,739,512	9,758		11,123,353
105	2008	10		9,364	591	-	27,952		37,316	591	239,691	11,399,769
106	2009	9		1,809	-	-	-		1,809	-		11,401,578
107	Total		$ 7,860,672	$ 4,109,999	$ 845,799	$ 845,799	$ 37,015	$ -	$ 12,007,686	$ 845,799	$ 239,691	$ 285,356,968
108	Major Additions/Retirements											
109	2009			$ -								
110	Routine Activity			$ 4,147,014	$ 845,799							
111	Historical Interim Activity			1.45%	0.30%							
112	Forecast Interim Activity			1.45%	0.30%							
								Major Additions**				
113	2010	8							165,696	33,794		11,533,480
114	2011	7							167,613	34,185		11,666,907
115	2012	6							169,552	34,581		11,801,878
116	2013	5							171,513	34,981		11,938,411
117	2014	4							173,498	35,385		12,076,523
118	2015	3							175,505	35,795		12,216,233
119	2016	2							177,535	36,209		12,357,559
120	2017	1							179,589	36,628		12,500,520
121	2018	0									(12,500,520)	-
									$ 13,388,187	$ 1,127,357		$ 381,448,481

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	12,007,686
Forecast Additions	1,380,501
Total Additions	13,388,187
Gross Salvage Value	625,026
Less Cost of Removal	1,250,052
Net Salvage Value	(625,026)
Total to be Recovered	14,013,213
Forecast Plant Balances	381,448,481
Whole Life Accrual Rate	3.67%
Cost of Removal Accrual Rate	0.33%
Whole Life Accrual Rate (Excluding Cost of Removal)	3.35%
Depreciable Service Life, years	27.2

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	11,401,578
Forecast Additions	1,380,501
Gross Salvage Value	625,026
Less Cost of Removal	1,250,052
Net Salvage Value	(625,026)
Forecast Plant Balances	96,091,513

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2015
Service Life, Yrs	65

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Historical and Forecast Plant Additions & Balances
Accou 312 Boiler Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1904	114	-		-	-			-	-		-
2	1905	113	-		-	-			-	-		-
3	1906	112	-		-	-			-	-		-
4	1907	111	-		-	-			-	-		-
5	1908	110	-		-	-			-	-		-
6	1909	109	-		-	-			-	-		-
7	1910	108	-		-	-			-	-		-
8	1911	107	-		-	-			-	-		-
9	1912	106	-		-	-			-	-		-
10	1913	105	-		-	-			-	-		-
11	1914	104	-		-	-			-	-		-
12	1915	103	-		-	-			-	-		-
13	1916	102	-		-	-			-	-		-
14	1917	101	30,164		-	-			30,164	-		30,164
15	1918	100	35,143		-	3,711			35,143	-		65,307
16	1919	99	622		-	-			622	-		65,929
17	1920	98	4,519		-	-			4,519	-		70,448
18	1921	97	-		-	-			-	-		70,448
19	1922	96	-		-	-			-	-		70,448
20	1923	95	-		-	-			-	-		70,448
21	1924	94	878		-	-			878	-		71,326
22	1925	93	10		-	-			10	-		71,336
23	1926	92	2,809		-	-			2,809	-		74,145
24	1927	91	-		-	-			-	-		74,145
25	1928	90	285		-	-			285	-		74,430
26	1929	89	1,239		-	-			1,239	-		75,669
27	1930	88	-		-	-			-	-		75,669
28	1931	87	163		-	-			163	-		75,832
29	1932	86	-		-	-			-	-		75,832
30	1933	85	175		-	-			175	-		76,007
31	1934	84	625		-	-			625	-		76,632
32	1935	83	-		-	-			-	-		76,632
33	1936	82	-		-	-			-	-		76,632
34	1937	81	60,415		-	-			60,415	-		137,047
35	1938	80	1,875		-	-			1,875	-		138,922
36	1939	79	563		-	-			563	-		139,485
37	1940	78	491		-	-			491	-		139,976
38	1941	77	2,596		-	-			2,596	-		142,572
39	1942	76	591		-	-			591	-		143,163
40	1943	75	-		-	-			-	-		143,163
41	1944	74	317		-	-			317	-		143,480
42	1945	73	3,258		-	-			3,258	-		146,738
43	1946	72	1,510		-	-			1,510	-		148,248
44	1947	71	759		-	-			759	-		149,007
45	1948	70	680		-	-			680	-		149,687
46	1949	69	9,956		-	-			9,956	-		159,643
47	1950	68	1,906,106		-	75,377			1,906,106	-		2,065,749
48	1951	67	1,962		-	-			1,962	-		2,067,711
49	1952	66	33,642		-	-			33,642	-		2,101,353
50	1953	65	-		-	-			-	-		2,101,353
51	1954	64	2,810,573		-	117,957			2,810,573	-		4,911,926
52	1955	63	902		-	-			902	-		4,912,828
53	1956	62	64,370		-	-			64,370	-		4,977,198
54	1957	61	938		-	-			938	-		4,978,136
55	1958	60	3,978		-	-			3,978	-		4,982,114
56	1959	59	-		-	-			-	-		4,982,114
57	1960	58	3,368		-	-			3,368	-		4,985,482
58	1961	57	-		-	-			-	-		4,985,482
59	1962	56	-		-	-			-	-		4,985,482
60	1963	55	4,188		-	-			4,188	-		4,989,670
61	1964	54	18,211		-	-			18,211	-		5,007,881
62	1965	53	-		-	-			-	-		5,007,881
63	1966	52	104,666		-	828			104,666	-		5,112,547
64	1967	51	2,764		-	-			2,764	-		5,115,311
65	1968	50	69		-	-			69	-		5,115,380
66	1969	49	-		-	-			-	-		5,115,380
67	1970	48	-		-	-			-	-		5,115,380
68	1971	47	6,448		-	-			6,448	-		5,121,828
69	1972	46	1,435		-	-			1,435	-		5,123,263
70	1973	45	18,909		-	-			18,909	-		5,142,172
71	1974	44	13,649		-	-			13,649	-		5,155,821
72	1975	43	15,105		-	-			15,105	-		5,170,926
73	1976	42	1,557,467		-	41,196			1,557,467	-		6,728,393
74	1977	41	5,598,642		-	173,632			5,598,642	-		12,327,035
75	1978	40	104,650		-	-			104,650	-		12,431,685
76	1979	39	103,884		-	-			103,884	-		12,535,569

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2015
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances

Accou 312 Boiler Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
				Transaction Year								
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Vintage Year Retirements	Advance Additions	Advance Retirements	Adjusted Transaction Year Additions	Adjusted Transaction Year Retirements	Transfers and Adjustments	Plant Balance*
77	1980	38	184,232		-	32,348			184,232	-		12,719,801
78	1981	37	62,966		-	6,841			62,966	-		12,782,767
79	1982	36	45,232		-	-			45,232	-		12,827,999
80	1983	35	15,129		-	-			15,129	-		12,843,128
81	1984	34	64,368		-	-			64,368	-		12,907,496
82	1985	33	202,313		-	54,055			202,313	-		13,109,809
83	1986	32	193,980		-	23,463			193,980	-		13,303,789
84	1987	31	186,363		-	15,783			186,363	-		13,490,152
85	1988	30	59,406		-	-			59,406	-		13,549,558
86	1989	29	674,786		-	6,597			674,786	-		14,224,344
87	1990	28	3,068,616		-	14,137			3,068,616	-		17,292,960
88	1991	27	85,692		-	-			85,692	-		17,378,652
89	1992	26	347,743		-	-			347,743	-		17,726,395
90	1993	25	86,320		-	-			86,320	-		17,812,715
91	1994	24	631,694		-	593,716			631,694	-		18,444,409
92	1995	23	377,924		-	-			377,924	-		18,822,333
93	1996	22	198,256		-	-			198,256	-		19,020,589
94	1997	21	248,912		-	-			248,912	-		19,269,501
95	1998	20	212,008		-	-			212,008	-		19,481,509
96	1999	19		570,328	145,899	9,052			570,328	145,899		19,905,938
97	2000	18		757,724	41,724	-			757,724	41,724		20,621,938
98	2001	17		149,931	-	-			149,931	-		20,771,869
99	2002	16		133,323	-	-			133,323	-		20,905,192
100	2003	15		447,227	128,257	-			447,227	128,257		21,224,162
101	2004	14		422,067	-	-			422,067	-		21,646,229
102	2005	13		544,536	-	-			544,536	-		22,190,765
103	2006	12		1,406,514	177,855	-	(147)		1,406,367	177,855		23,419,277
104	2007	11		700,053	639,459	-	63,207		763,260	639,459		23,543,078
105	2008	10		22,576	35,499	-	36,070		58,646	35,499		23,566,225
106	2009	9		-	-	-	300,080		300,080	-		23,866,305
107	Total		$ 19,481,509	$ 5,154,279	$ 1,168,693	$ 1,168,693	$ 399,210	$ -	$ 25,034,998	$ 1,168,693	$ -	$ 705,320,544
108	Major Additions/Retirements											
109	2009			$ 300,080								
110	Routine Activity			$ 5,253,409	$ 1,168,693							
111	Historical Interim Activity			0.74%	0.17%							
112	Forecast Interim Activity			0.74%	0.17%							
								Major Additions**				
113	2010	8							177,762	39,546		24,004,522
114	2011	7							178,792	39,775		24,143,539
115	2012	6							179,827	40,005		24,283,361
116	2013	5							180,869	40,237		24,423,993
117	2014	4							181,916	40,470		24,565,440
118	2015	3							182,970	40,704		24,707,705
119	2016	2							184,029	40,940		24,850,795
120	2017	1							185,095	41,177		24,994,713
121	2018	0									(24,994,713)	-
									$ 26,486,259	$ 1,491,546		$ 901,294,611

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	25,034,998
Forecast Additions	1,451,261
Total Additions	26,486,259
Gross Salvage Value	1,249,736
Less Cost of Removal	2,499,471
Net Salvage Value	(1,249,736)
Total to be Recovered	27,735,994
Forecast Plant Balances	901,294,611
Whole Life Accrual Rate	3.08%
Cost of Removal Accrual Rate	0.28%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.80%
Depreciable Service Life, years	32.5

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	23,866,305
Forecast Additions	1,451,261
Gross Salvage Value	1,249,736
Less Cost of Removal	2,499,471
Net Salvage Value	(1,249,736)
Forecast Plant Balances	195,974,067

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2015
Service Life, Yrs	65

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Historical and Forecast Plant Additions & Balances
Accou 314 Turbogenerator Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year			Adjusted Transaction Year			
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
1	1904	114	-		-	-			-	-		-
2	1905	113	-		-	-			-	-		-
3	1906	112	-		-	-			-	-		-
4	1907	111	-		-	-			-	-		-
5	1908	110	-		-	-			-	-		-
6	1909	109	-		-	-			-	-		-
7	1910	108	-		-	-			-	-		-
8	1911	107	-		-	-			-	-		-
9	1912	106	-		-	-			-	-		-
10	1913	105	-		-	-			-	-		-
11	1914	104	-		-	-			-	-		-
12	1915	103	-		-	-			-	-		-
13	1916	102	-		-	-			-	-		-
14	1917	101	29,383		-	-			29,383	-		29,383
15	1918	100	-		-	-			-	-		29,383
16	1919	99	-		-	-			-	-		29,383
17	1920	98	-		-	-			-	-		29,383
18	1921	97	-		-	-			-	-		29,383
19	1922	96	-		-	-			-	-		29,383
20	1923	95	-		-	-			-	-		29,383
21	1924	94	1,935		-	-			1,935	-		31,318
22	1925	93	4,590		-	-			4,590	-		35,908
23	1926	92	-		-	-			-	-		35,908
24	1927	91	-		-	-			-	-		35,908
25	1928	90	-		-	-			-	-		35,908
26	1929	89	-		-	-			-	-		35,908
27	1930	88	-		-	-			-	-		35,908
28	1931	87	-		-	-			-	-		35,908
29	1932	86	-		-	-			-	-		35,908
30	1933	85	-		-	-			-	-		35,908
31	1934	84	-		-	-			-	-		35,908
32	1935	83	-		-	-			-	-		35,908
33	1936	82	-		-	-			-	-		35,908
34	1937	81	-		-	-			-	-		35,908
35	1938	80	98		-	-			98	-		36,006
36	1939	79	-		-	-			-	-		36,006
37	1940	78	-		-	-			-	-		36,006
38	1941	77	-		-	-			-	-		36,006
39	1942	76	-		-	-			-	-		36,006
40	1943	75	-		-	-			-	-		36,006
41	1944	74	-		-	-			-	-		36,006
42	1945	73	3,775		-	-			3,775	-		39,781
43	1946	72	-		-	-			-	-		39,781
44	1947	71	292		-	-			292	-		40,073
45	1948	70	11,779		-	-			11,779	-		51,852
46	1949	69	-		-	-			-	-		51,852
47	1950	68	1,349,679		-	24,993			1,349,679	-		1,401,531
48	1951	67	694		-	-			694	-		1,402,225
49	1952	66	-		-	-			-	-		1,402,225
50	1953	65	-		-	-			-	-		1,402,225
51	1954	64	1,826,349		-	103,960			1,826,349	-		3,228,574
52	1955	63	10,815		-	-			10,815	-		3,239,389
53	1956	62	-		-	-			-	-		3,239,389
54	1957	61	-		-	-			-	-		3,239,389
55	1958	60	1,574		-	-			1,574	-		3,240,963
56	1959	59	3,364		-	2,173			3,364	-		3,244,327
57	1960	58	-		-	-			-	-		3,244,327
58	1961	57	10,472		-	-			10,472	-		3,254,799
59	1962	56	14,132		-	-			14,132	-		3,268,931
60	1963	55	12,125		-	-			12,125	-		3,281,056
61	1964	54	52,617		-	-			52,617	-		3,333,673
62	1965	53	23,989		-	-			23,989	-		3,357,662
63	1966	52	1,575		-	-			1,575	-		3,359,237
64	1967	51	3,920		-	-			3,920	-		3,363,157
65	1968	50	3,074		-	-			3,074	-		3,366,231
66	1969	49	839		-	-			839	-		3,367,070
67	1970	48	-		-	-			-	-		3,367,070
68	1971	47	-		-	-			-	-		3,367,070
69	1972	46	9,414		-	-			9,414	-		3,376,484
70	1973	45	1,878		-	-			1,878	-		3,378,362
71	1974	44	1,241		-	-			1,241	-		3,379,603
72	1975	43	6,631		-	-			6,631	-		3,386,234
73	1976	42	743		-	-			743	-		3,386,977
74	1977	41	-		-	-			-	-		3,386,977
75	1978	40	-		-	-			-	-		3,386,977
76	1979	39	-		-	-			-	-		3,386,977

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2015
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances

Accou 314 Turbogenerator Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
77	1980	38	122,826		-	-			122,826	-		3,509,803
78	1981	37	-		-	-			-	-		3,509,803
79	1982	36	-		-	-			-	-		3,509,803
80	1983	35	19,432		-	-			19,432	-		3,529,235
81	1984	34	-		-	-			-	-		3,529,235
82	1985	33	21,143		-	-			21,143	-		3,550,378
83	1986	32	-		-	-			-	-		3,550,378
84	1987	31	867,609		-	-			867,609	-		4,417,987
85	1988	30	1,427,939		-	-			1,427,939	-		5,845,926
86	1989	29	-		-	-			-	-		5,845,926
87	1990	28	242,432		-	-			242,432	-		6,088,358
88	1991	27	15,255		-	15,255			15,255	-		6,103,613
89	1992	26	-		-	-			-	-		6,103,613
90	1993	25	21,095		-	-			21,095	-		6,124,708
91	1994	24	39,119		-	-			39,119	-		6,163,827
92	1995	23	176,085		-	-			176,085	-		6,339,912
93	1996	22	21,299		-	-			21,299	-		6,361,211
94	1997	21	-		-	-			-	-		6,361,211
95	1998	20	97,565		-	-			97,565	-		6,458,776
96	1999	19		6,188	15,280	-			6,188	15,280		6,449,684
97	2000	18		106,786	25,295	-			106,786	25,295		6,531,175
98	2001	17		-	15,255	-			-	15,255		6,515,920
99	2002	16		-	-	-			-	-		6,515,920
100	2003	15		30,765	1,871	-			30,765	1,871		6,544,814
101	2004	14		-	-	-			-	-		6,544,814
102	2005	13		-	-	-			-	-		6,544,814
103	2006	12		11,837	16,020	-			11,837	16,020		6,540,631
104	2007	11		-	-	-			-	-		6,540,631
105	2008	10		-	-	-	654,710		654,710	-		7,195,341
106	2009	9		-	72,660	-	8,277		8,277	72,660		7,130,958
107	Total		$ 6,458,776	$ 155,576	$ 146,381	$ 146,381	$ 662,987	$ -	$ 7,277,339	$ 146,381	$ -	$ 263,176,700
108	Major Additions/Retirements											
109	2008			$ 654,710								
110	Routine Activity			$ 163,853	$ 146,381							
111	Historical Interim Activity			0.06%	0.06%							
112	Forecast Interim Activity			0.06%	0.06%							
								Major Additions**				
113	2010	8							4,440	3,966		7,131,431
114	2011	7							4,440	3,967		7,131,905
115	2012	6							4,440	3,967		7,132,378
116	2013	5							4,441	3,967		7,132,852
117	2014	4							4,441	3,967		7,133,325
118	2015	3							4,441	3,968		7,133,799
119	2016	2							4,441	3,968		7,134,273
120	2017	1							4,442	3,968		7,134,746
121	2018	0									(7,134,746)	-
									$ 7,312,865	$ 178,119		$ 320,241,410

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	7,277,339
Forecast Additions	35,526
Total Additions	7,312,865
Gross Salvage Value	356,737
Less Cost of Removal	713,475
Net Salvage Value	(356,737)
Total to be Recovered	7,669,602
Forecast Plant Balances	320,241,410
Whole Life Accrual Rate	2.39%
Cost of Removal Accrual Rate	0.22%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.17%
Depreciable Service Life, years	41.8

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	7,130,958
Forecast Additions	35,526
Gross Salvage Value	356,737
Less Cost of Removal	713,475
Net Salvage Value	(356,737)
Forecast Plant Balances	57,064,710

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2015
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances
Accou 315 Accessory Electric Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1904	114	-		-	-			-	-		-
2	1905	113	-		-	-			-	-		-
3	1906	112	-		-	-			-	-		-
4	1907	111	-		-	-			-	-		-
5	1908	110	-		-	-			-	-		-
6	1909	109	-		-	-			-	-		-
7	1910	108	-		-	-			-	-		-
8	1911	107	-		-	-			-	-		-
9	1912	106	-		-	-			-	-		-
10	1913	105	-		-	-			-	-		-
11	1914	104	-		-	-			-	-		-
12	1915	103	-		-	-			-	-		-
13	1916	102	-		-	-			-	-		-
14	1917	101	-		-	-			-	-		-
15	1918	100	-		-	-			-	-		-
16	1919	99	-		-	-			-	-		-
17	1920	98	-		-	-			-	-		-
18	1921	97	-		-	-			-	-		-
19	1922	96	-		-	-			-	-		-
20	1923	95	-		-	-			-	-		-
21	1924	94	-		-	-			-	-		-
22	1925	93	-		-	-			-	-		-
23	1926	92	-		-	-			-	-		-
24	1927	91	-		-	-			-	-		-
25	1928	90	-		-	-			-	-		-
26	1929	89	-		-	-			-	-		-
27	1930	88	-		-	-			-	-		-
28	1931	87	-		-	-			-	-		-
29	1932	86	-		-	-			-	-		-
30	1933	85	-		-	-			-	-		-
31	1934	84	-		-	-			-	-		-
32	1935	83	-		-	-			-	-		-
33	1936	82	-		-	-			-	-		-
34	1937	81	-		-	-			-	-		-
35	1938	80	-		-	-			-	-		-
36	1939	79	-		-	-			-	-		-
37	1940	78	-		-	-			-	-		-
38	1941	77	-		-	-			-	-		-
39	1942	76	-		-	-			-	-		-
40	1943	75	-		-	-			-	-		-
41	1944	74	-		-	-			-	-		-
42	1945	73	-		-	-			-	-		-
43	1946	72	-		-	-			-	-		-
44	1947	71	-		-	-			-	-		-
45	1948	70	3,430		-	-			3,430	-		3,430
46	1949	69	-		-	-			-	-		3,430
47	1950	68	398,415		-	1,064			398,415	-		401,845
48	1951	67	-		-	-			-	-		401,845
49	1952	66	4,503		-	-			4,503	-		406,348
50	1953	65	-		-	-			-	-		406,348
51	1954	64	459,042		-	-			459,042	-		865,390
52	1955	63	-		-	-			-	-		865,390
53	1956	62	103,869		-	99,991			103,869	-		969,259
54	1957	61	-		-	-			-	-		969,259
55	1958	60	2,127		-	-			2,127	-		971,386
56	1959	59	-		-	-			-	-		971,386
57	1960	58	127		-	-			127	-		971,513
58	1961	57	-		-	-			-	-		971,513
59	1962	56	-		-	-			-	-		971,513
60	1963	55	14,243		-	-			14,243	-		985,756
61	1964	54	18,942		-	-			18,942	-		1,004,698
62	1965	53	-		-	-			-	-		1,004,698
63	1966	52	2,238		-	2,238			2,238	-		1,006,936
64	1967	51	7,484		-	-			7,484	-		1,014,420
65	1968	50	14,939		-	-			14,939	-		1,029,359
66	1969	49	-		-	-			-	-		1,029,359
67	1970	48	37,364		-	-			37,364	-		1,066,723
68	1971	47	4,478		-	-			4,478	-		1,071,201
69	1972	46	260		-	-			260	-		1,071,461
70	1973	45	-		-	-			-	-		1,071,461
71	1974	44	-		-	-			-	-		1,071,461
72	1975	43	-		-	-			-	-		1,071,461
73	1976	42	8,522		-	8,522			8,522	-		1,079,983
74	1977	41	-		-	-			-	-		1,079,983
75	1978	40	7,545		-	-			7,545	-		1,087,528
76	1979	39	-		-	-			-	-		1,087,528

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2015
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances

Accou 315 Accessory Electric Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
77	1980	38	-		-	-			-	-		1,087,528
78	1981	37	-		-	-			-	-		1,087,528
79	1982	36	-		-	-			-	-		1,087,528
80	1983	35	-		-	-			-	-		1,087,528
81	1984	34	-		-	-			-	-		1,087,528
82	1985	33	99,278		-	-			99,278	-		1,186,806
83	1986	32	3,013		-	-			3,013	-		1,189,819
84	1987	31	-		-	-			-	-		1,189,819
85	1988	30	-		-	-			-	-		1,189,819
86	1989	29	-		-	-			-	-		1,189,819
87	1990	28	-		-	-			-	-		1,189,819
88	1991	27	76,269		-	76,269			76,269	-		1,266,088
89	1992	26	990		-	-			990	-		1,267,078
90	1993	25	-		-	-			-	-		1,267,078
91	1994	24	-		-	-			-	-		1,267,078
92	1995	23	14,112		-	-			14,112	-		1,281,190
93	1996	22	-		-	-			-	-		1,281,190
94	1997	21	-		-	-			-	-		1,281,190
95	1998	20	-		-	-			-	-		1,281,190
96	1999	19		27,808	8,522	-			27,808	8,522		1,300,476
97	2000	18		-	-	-			-	-		1,300,476
98	2001	17		12,106	25,423	-			12,106	25,423		1,287,159
99	2002	16		13,787	-	-			13,787	-		1,300,946
100	2003	15		-	1,064	-			-	1,064		1,299,882
101	2004	14		-	-	-			-	-		1,299,882
102	2005	13		14,368	-	-			14,368	-		1,314,250
103	2006	12		-	50,846	-			-	50,846	0	1,263,404
104	2007	11		-	102,229	-			-	102,229	0	1,161,175
105	2008	10		-	-	-			-	-	409,164	1,570,339
106	2009	9		-	-	-			-	-		1,570,339
107	Total		$ 1,281,190	$ 68,069	$ 188,084	$ 188,084	$ -	$ -	$ 1,349,259	$ 188,084	$ 409,164	$ 65,417,822
108	Major Additions/Retirements											
109	2009			$ -								
110	Routine Activity			$ 68,069	$ 188,084							
111	Historical Interim Activity			0.10%	0.29%							
112	Forecast Interim Activity			0.10%	0.29%							
								Major Additions**				
113	2010	8							1,634	4,515		1,567,458
114	2011	7							1,631	4,507		1,564,582
115	2012	6							1,628	4,498		1,561,712
116	2013	5							1,625	4,490		1,558,847
117	2014	4							1,622	4,482		1,555,987
118	2015	3							1,619	4,474		1,553,132
119	2016	2							1,616	4,465		1,550,283
120	2017	1							1,613	4,457		1,547,439
121	2018	0									(1,547,439)	-
									$ 1,362,247	$ 223,972		$ 77,877,263

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	1,349,259
Forecast Additions	12,988
Total Additions	1,362,247
Gross Salvage Value	77,372
Less Cost of Removal	154,744
Net Salvage Value	(77,372)
Total to be Recovered	1,439,619
Forecast Plant Balances	77,877,263
Whole Life Accrual Rate	1.85%
Cost of Removal Accrual Rate	0.20%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.65%
Depreciable Service Life, years	54.1

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	1,570,339
Forecast Additions	12,988
Gross Salvage Value	77,372
Less Cost of Removal	154,744
Net Salvage Value	(77,372)
Forecast Plant Balances	12,459,441

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2015
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances
Accou 316 Miscellaneous Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
1	1904	114	-		-	-			-	-		-
2	1905	113	-		-	-			-	-		-
3	1906	112	-		-	-			-	-		-
4	1907	111	-		-	-			-	-		-
5	1908	110	-		-	-			-	-		-
6	1909	109	-		-	-			-	-		-
7	1910	108	-		-	-			-	-		-
8	1911	107	-		-	-			-	-		-
9	1912	106	-		-	-			-	-		-
10	1913	105	1,097		-	-			1,097	-		1,097
11	1914	104	-		-	-			-	-		1,097
12	1915	103	-		-	-			-	-		1,097
13	1916	102	818		-	-			818	-		1,915
14	1917	101	500		-	-			500	-		2,415
15	1918	100	2,324		-	-			2,324	-		4,739
16	1919	99	209		-	-			209	-		4,948
17	1920	98	-		-	-			-	-		4,948
18	1921	97	2,783		-	-			2,783	-		7,731
19	1922	96	-		-	-			-	-		7,731
20	1923	95	347		-	-			347	-		8,078
21	1924	94	321		-	-			321	-		8,399
22	1925	93	-		-	-			-	-		8,399
23	1926	92	1,726		-	-			1,726	-		10,125
24	1927	91	308		-	-			308	-		10,433
25	1928	90	3,044		-	-			3,044	-		13,477
26	1929	89	1,049		-	-			1,049	-		14,526
27	1930	88	515		-	-			515	-		15,041
28	1931	87	-		-	-			-	-		15,041
29	1932	86	-		-	-			-	-		15,041
30	1933	85	186		-	-			186	-		15,227
31	1934	84	666		-	-			666	-		15,893
32	1935	83	-		-	-			-	-		15,893
33	1936	82	253		-	-			253	-		16,146
34	1937	81	500		-	-			500	-		16,646
35	1938	80	99		-	-			99	-		16,745
36	1939	79	76		-	-			76	-		16,821
37	1940	78	309		-	-			309	-		17,130
38	1941	77	468		-	-			468	-		17,598
39	1942	76	252		-	-			252	-		17,850
40	1943	75	1,483		-	-			1,483	-		19,333
41	1944	74	1,015		-	-			1,015	-		20,348
42	1945	73	399		-	-			399	-		20,747
43	1946	72	211		-	-			211	-		20,958
44	1947	71	5,486		-	-			5,486	-		26,444
45	1948	70	1,587		-	-			1,587	-		28,031
46	1949	69	12,224		-	-			12,224	-		40,255
47	1950	68	29,246		-	-			29,246	-		69,501
48	1951	67	2,325		-	-			2,325	-		71,826
49	1952	66	2,884		-	-			2,884	-		74,710
50	1953	65	2,866		-	-			2,866	-		77,576
51	1954	64	27,479		-	-			27,479	-		105,055
52	1955	63	4,077		-	-			4,077	-		109,132
53	1956	62	1,279		-	-			1,279	-		110,411
54	1957	61	19,305		-	-			19,305	-		129,716
55	1958	60	653		-	-			653	-		130,369
56	1959	59	4,094		-	-			4,094	-		134,463
57	1960	58	1,751		-	-			1,751	-		136,214
58	1961	57	2,001		-	-			2,001	-		138,215
59	1962	56	3,353		-	-			3,353	-		141,568
60	1963	55	25,617		-	-			25,617	-		167,185
61	1964	54	2,013		-	-			2,013	-		169,198
62	1965	53	4,117		-	-			4,117	-		173,315
63	1966	52	829		-	-			829	-		174,144
64	1967	51	800		-	-			800	-		174,944
65	1968	50	997		-	-			997	-		175,941
66	1969	49	6,491		-	-			6,491	-		182,432
67	1970	48	7,547		-	-			7,547	-		189,979
68	1971	47	2,753		-	-			2,753	-		192,732
69	1972	46	9,240		-	-			9,240	-		201,972
70	1973	45	14,110		-	-			14,110	-		216,082
71	1974	44	5,044		-	-			5,044	-		221,126
72	1975	43	6,847		-	-			6,847	-		227,973
73	1976	42	4,893		-	-			4,893	-		232,866
74	1977	41	1,968		-	-			1,968	-		234,834
75	1978	40	340		-	-			340	-		235,174
76	1979	39	-		-	-			-	-		235,174

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2015
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances

Accou 316 Miscellaneous Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year			Adjusted Transaction Year			
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
77	1980	38	7,013		-	-			7,013	-		242,187
78	1981	37	1,375		-	-			1,375	-		243,562
79	1982	36	11,252		-	-			11,252	-		254,814
80	1983	35	5,053		-	-			5,053	-		259,867
81	1984	34	28,015		-	-			28,015	-		287,882
82	1985	33	1,268		-	-			1,268	-		289,150
83	1986	32	40,307		-	-			40,307	-		329,457
84	1987	31	293,366		-	-			293,366	-		622,823
85	1988	30	3,965		-	-			3,965	-		626,788
86	1989	29	20,978		-	15,210			20,978	-		647,766
87	1990	28	48,456		-	-			48,456	-		696,222
88	1991	27	13,773		-	-			13,773	-		709,995
89	1992	26	39,650		-	-			39,650	-		749,645
90	1993	25	13,348		-	-			13,348	-		762,993
91	1994	24	13,033		-	-			13,033	-		776,026
92	1995	23	41,865		-	-			41,865	-		817,891
93	1996	22	33,991		-	-			33,991	-		851,882
94	1997	21	12,254		-	-			12,254	-		864,136
95	1998	20	10,171		-	-			10,171	-		874,307
96	1999	19		30,720	-	-			30,720	-		905,027
97	2000	18		9,938	-	-			9,938	-		914,965
98	2001	17		38,880	-	-			38,880	-		953,845
99	2002	16		14,996	-	-			14,996	-		968,841
100	2003	15		-	-	-			-	-		968,841
101	2004	14		6,589	-	-			6,589	-		975,430
102	2005	13		21,156	-	-	32,556		53,712	-		1,029,142
103	2006	12		1,859	15,210	-			1,859	15,210		1,015,791
104	2007	11		135,370	-	-			135,370	-		1,151,161
105	2008	10		3,003	-	-	7,274		10,277	-		1,161,438
106	2009	9		-	-	-	952,912		952,912	-		2,114,350
107	Total		$ 874,307	$ 262,511	$ 15,210	$ 15,210	$ 992,742	$ -	$ 2,129,560	$ 15,210	$ -	$ 28,398,394
108	Major Additions/Retirements											
109	2009			$ 952,912								
110	Routine Activity			$ 302,341	$ 15,210							
111	Historical Interim Activity			1.06%	0.05%							
112	Forecast Interim Activity			1.06%	0.05%							
								Major Additions**				
113	2010	8							22,510	1,132		2,135,728
114	2011	7							22,738	1,144		2,157,322
115	2012	6							22,968	1,155		2,179,134
116	2013	5							23,200	1,167		2,201,167
117	2014	4							23,435	1,179		2,223,422
118	2015	3							23,671	1,191		2,245,903
119	2016	2							23,911	1,203		2,268,611
120	2017	1							24,153	1,215		2,291,549
121	2018	0									(2,291,549)	-
									$ 2,316,145	$ 24,597		$ 46,101,230

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	2,129,560
Forecast Additions	186,585
Total Additions	2,316,145
Gross Salvage Value	114,577
Less Cost of Removal	229,155
Net Salvage Value	(114,577)
Total to be Recovered	2,430,723
Forecast Plant Balances	46,101,230
Whole Life Accrual Rate	5.27%
Cost of Removal Accrual Rate	0.50%
Whole Life Accrual Rate (Excluding Cost of Removal)	4.78%
Depreciable Service Life, years	19.0

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	2,114,350
Forecast Additions	186,585
Gross Salvage Value	114,577
Less Cost of Removal	229,155
Net Salvage Value	(114,577)
Forecast Plant Balances	17,702,836

Summary by Plant
The Empire District Electric Company
Iatan Plant

Account	Description	Direct Investment 2009$	Depreciation Rate
310	Land	0	0.00%
311	Structure & Improvements	4,192,135	2.08%
312	Boiler Plant Equipment	111,979,459	3.16%
314	Turbo Generator Equipment	9,352,355	2.42%
315	Accessory Electric Equipment	6,786,104	4.06%
316	Misc Power Equipment	975,096	3.25%
	Total	133,285,149	3.12% whole life weighted average rate

Remaining Life Depreciation Rate Calculation

Per Books Balance 12/31/09	133,285,149
Forecast Interim Additions	41,726,870
Forecast Gross Salvage Value	8,206,942
Forecast Less Cost of Removal	16,413,883
Forecast Net Salvage Value	(8,206,942)
Forecast Total to be Recovered with COR	183,218,960
Forecast Total to be Recovered w/o COR	166,805,077
Accumulated Depreciation (2009 EOY)	(36,078,829)
Forecast Remaining Life Balance with COR	147,140,131
Forecast Remaining Life Balance w/o COR	130,726,248
Forecast Plant Balances	4,590,010,202
Remaining Life Rate with COR	3.21%
Remaining Life Rate w/o COR	2.85%
Reserve Variance with COR	(3,939,183)

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Iatan Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1980
Retirement Date	2040
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances

Accou 311 Structures & Improvements

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1980	60	3,179,510		-	65,537			3,179,510	-		3,179,510
2	1981	59	-		-	-			-	-		3,179,510
3	1982	58	-		-	-			-	-		3,179,510
4	1983	57	50,794		-	-			50,794	-		3,230,304
5	1984	56	2,939		-	-			2,939	-		3,233,243
6	1985	55	8,370		-	-			8,370	-		3,241,613
7	1986	54	2,000		-	-			2,000	-		3,243,613
8	1987	53	-		-	-			-	-		3,243,613
9	1988	52	-		-	-			-	-		3,243,613
10	1989	51	1,670		-	-			1,670	-		3,245,283
11	1990	50	4,939		-	-			4,939	-		3,250,222
12	1991	49	51,815		-	-			51,815	-		3,302,037
13	1992	48	118,212		-	-			118,212	-		3,420,249
14	1993	47	-		-	-			-	-		3,420,249
15	1994	46	176,285		-	-			176,285	-		3,596,534
16	1995	45	51,965		-	2,699			51,965	-		3,648,499
17	1996	44	168,815		-	-			168,815	-		3,817,314
18	1997	43	16,480		-	-			16,480	-		3,833,794
19	1998	42	18,183		-	-			18,183	-		3,851,977
20	1999	41		3,495	-	-			3,495	-		3,855,472
21	2000	40		9,462	-	-			9,462	-		3,864,934
22	2001	39		6,592	-	-			6,592	-		3,871,526
23	2002	38		6,079	-	-			6,079	-		3,877,605
24	2003	37		21,394	-	-			21,394	-		3,898,999
25	2004	36		7,910	-	-			7,910	-		3,906,909
26	2005	35		8,161	-	-			8,161	-		3,915,070
27	2006	34		21,064	-	-			21,064	-		3,936,134
28	2007	33		7,041	68,236	-			7,041	68,236		3,874,939
29	2008	32		-	-	-	40,286		40,286	-		3,915,225
30	2009	31		-	-	-	276,910		276,910	-		4,192,135
31	Total		$ 3,851,977	$ 91,198	$ 68,236	$ 68,236	$ 317,196	$ -	$ 4,260,371	$ 68,236	$ -	$ 107,469,635
32	Major Additions/Retirements											
33	Routine Activity			$ 408,394	$ 68,236							
34	Historical Interim Activity			0.38%	0.06%							
35	Forecast Interim Activity			0.38%	0.06%							
								Major Additions**				
36	2010	30							15,930	2,662		4,205,404
37	2011	29							15,981	2,670		4,218,715
38	2012	28							16,031	2,679		4,232,067
39	2013	27							16,082	2,687		4,245,463
40	2014	26							16,133	2,696		4,258,900
41	2015	25							16,184	2,704		4,272,380
42	2016	24							16,235	2,713		4,285,903
43	2017	23							16,287	2,721		4,299,468
44	2018	22							16,338	2,730		4,313,077
45	2019	21							16,390	2,739		4,326,728
46	2020	20							16,442	2,747		4,340,423
47	2021	19							16,494	2,756		4,354,161
48	2022	18							16,546	2,765		4,367,943
49	2023	17							16,599	2,773		4,381,768
50	2024	16							16,651	2,782		4,395,637
51	2025	15							16,704	2,791		4,409,550
52	2026	14							16,757	2,800		4,423,507
53	2027	13							16,810	2,809		4,437,508
54	2028	12							16,863	2,818		4,451,553
55	2029	11							16,916	2,826		4,465,643
56	2030	10							16,970	2,835		4,479,778
57	2031	9							17,024	2,844		4,493,957
58	2032	8							17,077	2,853		4,508,181
59	2033	7							17,131	2,862		4,522,450
60	2034	6							17,186	2,871		4,536,764
61	2035	5							17,240	2,881		4,551,124
62	2036	4							17,295	2,890		4,565,529
63	2037	3							17,349	2,899		4,579,979
64	2038	2							17,404	2,908		4,594,476
65	2039	1							17,459	2,917		4,609,018
66	2040	0									(4,609,018)	-
								$ -	$ 4,760,881	$ 151,863		$ 239,596,691

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Iatan Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1980
Retirement Date	2040
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances

Accou 311 Structures & Improvements

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	4,260,371
Forecast Additions	500,510
Total Additions	4,760,881
Gross Salvage Value	230,451
Less Cost of Removal	460,902
Net Salvage Value	(230,451)
Total to be Recovered	4,991,332
Forecast Plant Balances	239,596,691
Whole Life Accrual Rate	2.08%
Cost of Removal Accrual Rate	0.19%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.89%
Depreciable Service Life, years	48.0

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	4,192,135
Forecast Additions	500,510
Gross Salvage Value	230,451
Less Cost of Removal	460,902
Net Salvage Value	(230,451)
Forecast Plant Balances	132,127,056

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Iatan Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1980
Retirement Date	2040
Service Life, Yrs	60

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Historical and Forecast Plant Additions & Balances
Account: 312 Boiler Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year						
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Adjusted Transaction Year Additions	Adjusted Transaction Year Retirements	Transfers and Adjustments	Plant Balance*
1	1980	60	26,030,607		-	1,622,696			26,030,607	-		26,030,607
2	1981	59	-		-	-			-	-		26,030,607
3	1982	58	-		-	-			-	-		26,030,607
4	1983	57	159,024		-	38,915			159,024	-		26,189,631
5	1984	56	133,092		-	112,329			133,092	-		26,322,723
6	1985	55	43,315		-	1,442			43,315	-		26,366,038
7	1986	54	22,975		-	-			22,975	-		26,389,013
8	1987	53	63,339		-	750			63,339	-		26,452,352
9	1988	52	6,996		-	-			6,996	-		26,459,348
10	1989	51	107,911		-	4,971			107,911	-		26,567,259
11	1990	50	48,647		-	34,703			48,647	-		26,615,906
12	1991	49	273,477		-	3,319			273,477	-		26,889,383
13	1992	48	321,108		-	10,681			321,108	-		27,210,491
14	1993	47	-		-	-			-	-		27,210,491
15	1994	46	179,351		-	27,129			179,351	-		27,389,842
16	1995	45	63,212		-	341			63,212	-		27,453,054
17	1996	44	380,926		-	28,648			380,926	-		27,833,980
18	1997	43	165,192		-	3,658			165,192	-		27,999,172
19	1998	42	36,366		-	10,463			36,366	-		28,035,538
20	1999	41		23,451	-	-			23,451	-		28,058,989
21	2000	40		354,275	-	15,955			354,275	-		28,413,264
22	2001	39		130,586	-	2,937			130,586	-		28,543,850
23	2002	38		635,875	-	36,116			635,875	-		29,179,725
24	2003	37		487,438	-	12,674			487,438	-		29,667,163
25	2004	36		244,581	-	-			244,581	-		29,911,744
26	2005	35		330,971	-	-			330,971	-		30,242,715
27	2006	34		162,083	-	3,735	4,925		167,008	-		30,409,723
28	2007	33		473,257	1,803,878	-	1,001,700		1,474,957	1,803,878		30,080,802
29	2008	32		937	167,584	-	630,928		631,865	167,584		30,545,083
30	2009	31				-	81,434,376		81,434,376	-		111,979,459
31	Total		$ 28,035,538	$ 2,843,454	$ 1,971,462	$ 1,971,462	$ 83,071,929	$ -	##########	$ 1,971,462	$ -	$ 916,508,559
32	Major Additions/Retirements											
	2009			$ 81,434,376								
33	Routine Activity			$ 4,481,007	$ 1,971,462							
34	Historical Interim Activity			0.49%	0.22%							
35	Forecast Interim Activity			0.49%	0.22%							
								Major Additions**				
36	2010	30						2,686,500		240,874		114,425,085
37	2011	29						5,238,273		246,135		119,417,223
38	2012	28						1,463,864		256,873		120,624,213
39	2013	27						2,151,955		259,470		122,516,698
40	2014	26						1,361,591		263,540		123,614,749
41	2015	25							604,379	265,902		123,953,225
42	2016	24							606,034	266,630		124,292,629
43	2017	23							607,693	267,361		124,632,962
44	2018	22							609,357	268,093		124,974,226
45	2019	21							611,026	268,827		125,316,426
46	2020	20							612,699	269,563		125,659,562
47	2021	19							614,377	270,301		126,003,637
48	2022	18							616,059	271,041		126,348,655
49	2023	17							617,746	271,783		126,694,618
50	2024	16							619,437	272,527		127,041,528
51	2025	15							621,133	273,274		127,389,387
52	2026	14							622,834	274,022		127,738,200
53	2027	13							624,539	274,772		128,087,967
54	2028	12							626,250	275,524		128,438,692
55	2029	11							627,964	276,279		128,790,377
56	2030	10							629,684	277,035		129,143,026
57	2031	9							631,408	277,794		129,496,640
58	2032	8							633,137	278,555		129,851,222
59	2033	7							634,870	279,317		130,206,775
60	2034	6							636,609	280,082		130,563,302
61	2035	5							638,352	280,849		130,920,805
62	2036	4							640,100	281,618		131,279,286
63	2037	3							641,853	282,389		131,638,750
64	2038	2							643,610	283,162		131,999,198
65	2039	1							645,372	283,938		132,360,632
66	2040	0									##########	-
								$ 12,902,182	##########	$ 10,108,993		##########

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Iatan Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1980
Retirement Date	2040
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances

Account: 312 Boiler Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	113,950,921
Forecast Additions	28,518,704
Total Additions	142,469,625
Gross Salvage Value	6,618,032
Less Cost of Removal	13,236,063
Net Salvage Value	(6,618,032)
Total to be Recovered	149,087,657
Forecast Plant Balances	4,719,928,251
Whole Life Accrual Rate	3.16%
Cost of Removal Accrual Rate	0.28%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.88%
Depreciable Service Life, years	31.7

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	111,979,459
Forecast Additions	28,518,704
Gross Salvage Value	6,618,032
Less Cost of Removal	13,236,063
Net Salvage Value	(6,618,032)
Forecast Plant Balances	3,803,419,692

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Iatan Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1980
Retirement Date	2040
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances
Account: 314 Turbogenerator Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year			Adjusted Transaction Year			Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Balance*
1	1980	60	7,168,194		-	348211			7,168,194	-		7,168,194
2	1981	59	-		-	-			-	-		7,168,194
3	1982	58	-		-	-			-	-		7,168,194
4	1983	57	14,962		-	1,163			14,962	-		7,183,156
5	1984	56	4,814		-	-			4,814	-		7,187,970
6	1985	55	9,230		-	9,230			9,230	-		7,197,200
7	1986	54	-		-	-			-	-		7,197,200
8	1987	53	44,068		-	3,029			44,068	-		7,241,268
9	1988	52	7		-	-			7	-		7,241,275
10	1989	51	900		-	-			900	-		7,242,175
11	1990	50	9,097		-	-			9,097	-		7,251,272
12	1991	49	146,125		-	-			146,125	-		7,397,397
13	1992	48	243,821		-	-			243,821	-		7,641,218
14	1993	47	-		-	-			-	-		7,641,218
15	1994	46	20,490		-	1,620			20,490	-		7,661,708
16	1995	45	-		-	-			-	-		7,661,708
17	1996	44	-		-	-			-	-		7,661,708
18	1997	43	13,769		-	6,890			13,769	-		7,675,477
19	1998	42	17,980		-	7,172			17,980	-		7,693,457
20	1999	41		-	-	-			-	-		7,693,457
21	2000	40		118,246	-	25,016			118,246	-		7,811,703
22	2001	39		4,616	-	-			4,616	-		7,816,319
23	2002	38		26,194	-	1,462			26,194	-		7,842,513
24	2003	37		34,241	-	468			34,241	-		7,876,754
25	2004	36		9,235	-	1,284			9,235	-		7,885,989
26	2005	35		155,500	-	-			155,500	-		8,041,489
27	2006	34		56,127	-	-			56,127	-		8,097,616
28	2007	33		208,839	336,830	-	9,615		218,454	336,830		7,979,240
29	2008	32		-	68,715	-	16,026		16,026	68,715		7,926,551
30	2009	31		-	-	-	1,425,804		1,425,804	-		9,352,355
31	Total		$ 7,693,457	$ 612,998	$ 405,545	$ 405,545	$ 1,451,445	$ -	$ 9,757,900	$ 405,545	$ -	$ 228,603,975
32	Major Additions/Retirements											
33	Routine Activity			$ 2,064,443	$ 405,545							
34	Historical Interim Activity			0.90%	0.18%							
35	Forecast Interim Activity			0.90%	0.18%							
								Major Additions**				
36	2010	30							84,458	16,591		9,420,222
37	2011	29							85,071	16,712		9,488,581
38	2012	28							85,688	16,833		9,557,436
39	2013	27							86,310	16,955		9,626,791
40	2014	26							86,936	17,078		9,696,649
41	2015	25							87,567	17,202		9,767,014
42	2016	24							88,203	17,327		9,837,890
43	2017	23							88,843	17,452		9,909,280
44	2018	22							89,487	17,579		9,981,188
45	2019	21							90,137	17,707		10,053,618
46	2020	20							90,791	17,835		10,126,574
47	2021	19							91,450	17,965		10,200,059
48	2022	18							92,113	18,095		10,274,077
49	2023	17							92,782	18,226		10,348,632
50	2024	16							93,455	18,359		10,423,729
51	2025	15							94,133	18,492		10,499,370
52	2026	14							94,816	18,626		10,575,560
53	2027	13							95,504	18,761		10,652,303
54	2028	12							96,197	18,897		10,729,603
55	2029	11							96,895	19,034		10,807,464
56	2030	10							97,598	19,173		10,885,890
57	2031	9							98,307	19,312		10,964,885
58	2032	8							99,020	19,452		11,044,454
59	2033	7							99,739	19,593		11,124,599
60	2034	6							100,462	19,735		11,205,327
61	2035	5							101,191	19,878		11,286,640
62	2036	4							101,926	20,023		11,368,543
63	2037	3							102,665	20,168		11,451,040
64	2038	2							103,410	20,314		11,534,136
65	2039	1							104,161	20,462		11,617,836
66	2040	0									(11,617,836)	-
								$ -	$ 12,577,215	$ 959,379		$ 543,063,369

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Iatan Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1980
Retirement Date	2040
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances

Account: 314 Turbogenerator Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	9,757,900
Forecast Additions	2,819,315
Total Additions	12,577,215
Gross Salvage Value	580,892
Less Cost of Removal	1,161,784
Net Salvage Value	(580,892)
Total to be Recovered	13,158,106
Forecast Plant Balances	543,063,369
Whole Life Accrual Rate	2.42%
Cost of Removal Accrual Rate	0.21%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.21%
Depreciable Service Life, years	41.3

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	9,352,355
Forecast Additions	2,819,315
Gross Salvage Value	580,892
Less Cost of Removal	1,161,784
Net Salvage Value	(580,892)
Forecast Plant Balances	314,459,394

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Iatan Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1980
Retirement Date	2040
Service Life, Yrs	60

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Historical and Forecast Plant Additions & Balances

Account: 315 Accessory Electric Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year			Adjusted Transaction Year			Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Balance*
1	1980	60	3,184,218		-	712,849			3,184,218	-		3,184,218
2	1981	59	-		-	-			-	-		3,184,218
3	1982	58	-		-	-			-	-		3,184,218
4	1983	57	2,284		-	2,284			2,284	-		3,186,502
5	1984	56	2,741		-	2,741			2,741	-		3,189,243
6	1985	55	1,648		-	-			1,648	-		3,190,891
7	1986	54	20,565		-	20,565			20,565	-		3,211,456
8	1987	53	8,983		-	3,061			8,983	-		3,220,439
9	1988	52	-		-	-			-	-		3,220,439
10	1989	51	9,030		-	9,030			9,030	-		3,229,469
11	1990	50	2,537		-	2,537			2,537	-		3,232,006
12	1991	49	44,236		-	-			44,236	-		3,276,242
13	1992	48	4,348		-	-			4,348	-		3,280,590
14	1993	47	-		-	-			-	-		3,280,590
15	1994	46	203,198		-	-			203,198	-		3,483,788
16	1995	45	-		-	-			-	-		3,483,788
17	1996	44	19,468		-	-			19,468	-		3,503,256
18	1997	43	20,483		-	-			20,483	-		3,523,739
19	1998	42	10,828		-	-			10,828	-		3,534,567
20	1999	41		-	-	-			-	-		3,534,567
21	2000	40		75,988	-	30,717			75,988	-		3,610,555
22	2001	39		539,053	-	8,436			539,053	-		4,149,608
23	2002	38		1,439,220	-	10,124			1,439,220	-		5,588,828
24	2003	37		70,512	-	-			70,512	-		5,659,340
25	2004	36		16,441	-	-			16,441	-		5,675,781
26	2005	35		30,751	-	-			30,751	-		5,706,532
27	2006	34		2,681	-	-			2,681	-		5,709,213
28	2007	33		2,943	802,344	-	22,579		25,522	802,344		4,932,391
29	2008	32		1,086	-	-	265,334		266,420	-	338,149	5,536,960
30	2009	31		-	-	-	1,249,144		1,249,144	-		6,786,104
31	Total		$ 3,534,567	$ 2,178,675	$ 802,344	$ 802,344	$ 1,537,057	$ -	$ 7,250,299	$ 802,344	$ 338,149	$ 119,489,538
32	Major Additions/Retirements											
33	Routine Activity			$ 3,715,732	$ 802,344							
34	Historical Interim Activity			3.11%	0.67%							
35	Forecast Interim Activity			3.11%	0.67%							
								Major Additions**				
36	2010	30							211,026	45,567		6,951,562
37	2011	29							216,171	46,678		7,121,055
38	2012	28							221,441	47,816		7,294,680
39	2013	27							226,841	48,982		7,472,539
40	2014	26							232,371	50,176		7,654,734
41	2015	25							238,037	51,400		7,841,371
42	2016	24							243,841	52,653		8,032,559
43	2017	23							249,786	53,937		8,228,409
44	2018	22							255,876	55,252		8,429,033
45	2019	21							262,115	56,599		8,634,550
46	2020	20							268,506	57,979		8,845,077
47	2021	19							275,053	59,393		9,060,737
48	2022	18							281,759	60,841		9,281,655
49	2023	17							288,629	62,324		9,507,960
50	2024	16							295,666	63,844		9,739,783
51	2025	15							302,875	65,400		9,977,258
52	2026	14							310,260	66,995		10,220,523
53	2027	13							317,825	68,628		10,469,719
54	2028	12							325,574	70,302		10,724,991
55	2029	11							333,512	72,016		10,986,487
56	2030	10							341,644	73,772		11,254,359
57	2031	9							349,974	75,570		11,528,763
58	2032	8							358,507	77,413		11,809,856
59	2033	7							367,248	79,300		12,097,804
60	2034	6							376,202	81,234		12,392,772
61	2035	5							385,374	83,215		12,694,932
62	2036	4							394,771	85,243		13,004,459
63	2037	3							404,396	87,322		13,321,533
64	2038	2							414,256	89,451		13,646,338
65	2039	1							424,356	91,632		13,979,062
66	2040	0									(13,979,062)	-
								$ -	$ 16,424,190	$ 2,783,277		$ 421,694,099

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Steam Production, Iatan Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1980
Retirement Date	2040
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances

Account: 315 Accessory Electric Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	7,250,299
Forecast Additions	9,173,891
Total Additions	16,424,190
Gross Salvage Value	698,953
Less Cost of Removal	1,397,906
Net Salvage Value	(698,953)
Total to be Recovered	17,123,144
Forecast Plant Balances	421,694,099
Whole Life Accrual Rate	4.06%
Cost of Removal Accrual Rate	0.33%
Whole Life Accrual Rate (Excluding Cost of Removal)	3.73%
Depreciable Service Life, years	24.6

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	6,786,104
Forecast Additions	9,173,891
Gross Salvage Value	698,953
Less Cost of Removal	1,397,906
Net Salvage Value	(698,953)
Forecast Plant Balances	302,204,561

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Iatan Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1980
Retirement Date	2040
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances
Account: 316 Miscellaneous Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year			Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Adjustments	Balance*
1	1980	60	425,090		-	20,794			425,090	-		425,090
2	1981	59	-		-	-			-	-		425,090
3	1982	58	-		-	-			-	-		425,090
4	1983	57	9,163		-	271			9,163	-		434,253
5	1984	56	9,331		-	-			9,331	-		443,584
6	1985	55	5,728		-	1,878			5,728	-		449,312
7	1986	54	19,419		-	15,898			19,419	-		468,731
8	1987	53	3,690		-	179			3,690	-		472,421
9	1988	52	1,582		-	407			1,582	-		474,003
10	1989	51	20,797		-	17,850			20,797	-		494,800
11	1990	50	4,203		-	522			4,203	-		499,003
12	1991	49	8,354		-	-			8,354	-		507,357
13	1992	48	13,794		-	-			13,794	-		521,151
14	1993	47	-		-	-			-	-		521,151
15	1994	46	23,918		-	-			23,918	-		545,069
16	1995	45	9,920		-	-			9,920	-		554,989
17	1996	44	95,116		-	-			95,116	-		650,105
18	1997	43	9,018		-	-			9,018	-		659,123
19	1998	42	21,620		-	-			21,620	-		680,743
20	1999	41		-	-	-			-	-		680,743
21	2000	40		24,743	-	-			24,743	-		705,486
22	2001	39		13,727	-	-			13,727	-		719,213
23	2002	38		16,443	-	-			16,443	-		735,656
24	2003	37		21,801	-	-			21,801	-		757,457
25	2004	36		25,299	-	-			25,299	-		782,756
26	2005	35		7,091	-	-			7,091	-		789,847
27	2006	34		14,947	-	-	1,184		16,131	-		805,978
28	2007	33		7,473	57,799	-	32,087		39,560	57,799		787,739
29	2008	32		-	-	-	158,235		158,235	-		945,974
30	2009	31		-	-	-	29,122		29,122	-		975,096
31	Total		$ 680,743	$ 131,524	$ 57,799	$ 57,799	$ 220,628	$ -	$ 1,032,895	$ 57,799	$ -	$ 18,337,010
32	Major Additions/Retirements											
33	Routine Activity			$ 352,152	$ 57,799							
34	Historical Interim Activity			1.92%	0.32%							
35	Forecast Interim Activity			1.92%	0.32%							
								Major Additions**				
36	2010	30							18,726	3,074		990,749
37	2011	29							19,027	3,123		1,006,653
38	2012	28							19,332	3,173		1,022,812
39	2013	27							19,643	3,224		1,039,230
40	2014	26							19,958	3,276		1,055,912
41	2015	25							20,278	3,328		1,072,862
42	2016	24							20,604	3,382		1,090,084
43	2017	23							20,934	3,436		1,107,583
44	2018	22							21,271	3,491		1,125,362
45	2019	21							21,612	3,547		1,143,427
46	2020	20							21,959	3,604		1,161,782
47	2021	19							22,311	3,662		1,180,431
48	2022	18							22,670	3,721		1,199,380
49	2023	17							23,033	3,780		1,218,633
50	2024	16							23,403	3,841		1,238,195
51	2025	15							23,779	3,903		1,258,071
52	2026	14							24,161	3,965		1,278,266
53	2027	13							24,548	4,029		1,298,785
54	2028	12							24,942	4,094		1,319,634
55	2029	11							25,343	4,160		1,340,817
56	2030	10							25,750	4,226		1,362,340
57	2031	9							26,163	4,294		1,384,209
58	2032	8							26,583	4,363		1,406,429
59	2033	7							27,010	4,433		1,429,006
60	2034	6							27,443	4,504		1,451,944
61	2035	5							27,884	4,577		1,475,252
62	2036	4							28,331	4,650		1,498,933
63	2037	3							28,786	4,725		1,522,994
64	2038	2							29,248	4,801		1,547,442
65	2039	1							29,718	4,878		1,572,282
66	2040	0									(1,572,282)	-
								$ -	$ 1,747,345	$ 175,062		$ 56,136,509

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Iatan Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1980
Retirement Date	2040
Service Life, Yrs	60

Historical and Forecast Plant Additions & Balances
Account: 316 Miscellaneous Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year						End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Adjusted Transaction Year Additions	Adjusted Transaction Year Retirements	Transfers and Adjustments	Plant Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	1,032,895
Forecast Additions	714,450
Total Additions	1,747,345
Gross Salvage Value	78,614
Less Cost of Removal	157,228
Net Salvage Value	(78,614)
Total to be Recovered	1,825,959
Forecast Plant Balances	56,136,509
Whole Life Accrual Rate	3.25%
Cost of Removal Accrual Rate	0.28%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.97%
Depreciable Service Life, years	30.7

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	975,096
Forecast Additions	714,450
Gross Salvage Value	78,614
Less Cost of Removal	157,228
Net Salvage Value	(78,614)
Forecast Plant Balances	37,799,499

Summary by Plant
The Empire District Electric Company
Ozark Beach Hydro Plant

Account	Description	Direct Investment 2009$	Depreciation Rate
331	Structures & Improvements	677,755	2.00%
332	Reservoirs, Dams, and Waterways	1,518,255	0.98%
333	Water Wheels, Turbines and Generators	1,619,458	3.00%
334	Accessory Electric Equipment	1,237,587	1.97%
335	Miscellaneous Power Plant Equipment	456,215	3.52%
	Total	5,509,271	2.13% whole life weighted average rate

Remaining Life Depreciation Rate Calculation

Per Books Balance 12/31/09	5,509,271
Forecast Interim Additions	7,961,087
Forecast Gross Salvage Value	714,882
Forecast Less Cost of Removal	1,429,764
Forecast Net Salvage Value	(714,882)
Forecast Total to be Recovered with COR	14,185,240
Forecast Total to be Recovered w/o COR	12,755,476
Accumulated Depreciation (2009 EOY)	(2,486,302)
Forecast Remaining Life Balance with COR	11,698,938
Forecast Remaining Life Balance w/o COR	10,269,173
Forecast Plant Balances	432,686,246
Remaining Life Rate with COR	2.70%
Remaining Life Rate w/o COR	2.37%
Reserve Variance with COR	(2,478,953)

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Hydraulic Production, Ozark Beach Hydro Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1931
Retirement Date	2053
Service Life, Yrs	122

Historical and Forecast Plant Additions & Balances

Accou 331 Structures & Improvements

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
1	1913	140	101,713		-	5,000			101,713	-		101,713
2	1914	139	620		-	-			620	-		102,333
3	1915	138	-		-	-			-	-		102,333
4	1916	137	2,570		-	-			2,570	-		104,903
5	1917	136	-		-	-			-	-		104,903
6	1918	135	-		-	-			-	-		104,903
7	1919	134	-		-	-			-	-		104,903
8	1920	133	-		-	-			-	-		104,903
9	1921	132	-		-	-			-	-		104,903
10	1922	131	-		-	-			-	-		104,903
11	1923	130	65		-	-			65	-		104,968
12	1924	129	-		-	-			-	-		104,968
13	1925	128	2,200		-	-			2,200	-		107,168
14	1926	127	1,233		-	810			1,233	-		108,401
15	1927	126	428		-	-			428	-		108,829
16	1928	125	753		-	-			753	-		109,582
17	1929	124	-		-	-			-	-		109,582
18	1930	123	313		-	-			313	-		109,895
19	1931	122	12,230		-	-			12,230	-		122,125
20	1932	121	-		-	-			-	-		122,125
21	1933	120	616		-	-			616	-		122,741
22	1934	119	-		-	-			-	-		122,741
23	1935	118	-		-	-			-	-		122,741
24	1936	117	-		-	-			-	-		122,741
25	1937	116	-		-	-			-	-		122,741
26	1938	115	216		-	-			216	-		122,957
27	1939	114	334		-	334			334	-		123,291
28	1940	113	2,700		-	-			2,700	-		125,991
29	1941	112	475		-	-			475	-		126,466
30	1942	111	-		-	-			-	-		126,466
31	1943	110	-		-	-			-	-		126,466
32	1944	109	2,524		-	1,599			2,524	-		128,990
33	1945	108	7,828		-	-			7,828	-		136,818
34	1946	107	27		-	27			27	-		136,845
35	1947	106	1,216		-	-			1,216	-		138,061
36	1948	105	-		-	-			-	-		138,061
37	1949	104	-		-	-			-	-		138,061
38	1950	103	-		-	-			-	-		138,061
39	1951	102	-		-	-			-	-		138,061
40	1952	101	-		-	-			-	-		138,061
41	1953	100	22		-	-			22	-		138,083
42	1954	99	-		-	-			-	-		138,083
43	1955	98	487		-	-			487	-		138,570
44	1956	97	81		-	-			81	-		138,651
45	1957	96	-		-	-			-	-		138,651
46	1958	95	4,625		-	4,625			4,625	-		143,276
47	1959	94	91		-	-			91	-		143,367
48	1960	93	-		-	-			-	-		143,367
49	1961	92	-		-	-			-	-		143,367
50	1962	91	396		-	-			396	-		143,763
51	1963	90	196		-	-			196	-		143,959
52	1964	89	2,018		-	-			2,018	-		145,977
53	1965	88	1,194		-	980			1,194	-		147,171
54	1966	87	2,185		-	-			2,185	-		149,356
55	1967	86	3,036		-	-			3,036	-		152,392
56	1968	85	3,958		-	-			3,958	-		156,350
57	1969	84	2,012		-	-			2,012	-		158,362
58	1970	83	28		-	-			28	-		158,390
59	1971	82	8,662		-	-			8,662	-		167,052
60	1972	81	-		-	-			-	-		167,052
61	1973	80	2,467		-	387			2,467	-		169,519
62	1974	79	41		-	-			41	-		169,560
63	1975	78	-		-	-			-	-		169,560
64	1976	77	4,262		-	-			4,262	-		173,822
65	1977	76	1,353		-	-			1,353	-		175,175
66	1978	75	1,968		-	-			1,968	-		177,143
67	1979	74	260		-	-			260	-		177,403
68	1980	73	-		-	-			-	-		177,403
69	1981	72	431		-	-			431	-		177,834
70	1982	71	3,144		-	-			3,144	-		180,978
71	1983	70	-		-	-			-	-		180,978
72	1984	69	-		-	-			-	-		180,978
73	1985	68	-		-	-			-	-		180,978
74	1986	67	6,521		-	-			6,521	-		187,499
75	1987	66	11,288		-	-			11,288	-		198,787
76	1988	65	12,219		-	-			12,219	-		211,006
77	1989	64	75,968		-	-			75,968	-		286,974
78	1990	63	18,588		-	-			18,588	-		305,562
79	1991	62	2,279		-	1,152			2,279	-		307,841
80	1992	61	6,477		-	-			6,477	-		314,318
81	1993	60	22,600		-	-			22,600	-		336,918
82	1994	59	6,200		-	-			6,200	-		343,118
83	1995	58	-		-	-			-	-		343,118
84	1996	57	-		-	-			-	-		343,118
85	1997	56	114,148		-	-			114,148	-		457,266
86	1998	55	17,595		-	-			17,595	-		474,861

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Hydraulic Production, Ozark Beach Hydro Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1931
Retirement Date	2053
Service Life, Yrs	122

Historical and Forecast Plant Additions & Balances
Accou 331 Structures & Improvements

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
				Transaction Year		Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
87	1999	54		1,118	-	-			1,118	-		475,979
88	2000	53		-	5,980	-			-	5,980		469,999
89	2001	52		33,581	-	-			33,581	-		503,580
90	2002	51		-	-	-			-	-		503,580
91	2003	50		60,586	7,782	-			60,586	7,782		556,384
92	2004	49		-	-	-			-	-		556,384
93	2005	48		-	-	-			-	-		556,384
94	2006	47		-	-	-			-	-		556,384
95	2007	46		-	-	-			-	-		556,384
96	2008	45		121,138	-	-			121,138	-		677,522
97	2009	44		1,385	1,152	-	-		1,385	1,152		677,755
98	Total		$ 474,861	$ 217,808	$ 14,914	$ 14,914	$ -	$ -	$ 692,669	$ 14,914	$ -	$ 20,191,995
99	Major Additions/Retirements											
100	Routine Activity			$ 217,808	$ 14,914							
101	Historical Interim Activity			1.08%	0.07%							
102	Forecast Interim Activity			1.08%	0.07%							
								Major Additions**				
103	2010	43							7,311	501		684,565
104	2011	42							7,384	506		691,444
105	2012	41							7,459	511		698,392
106	2013	40							7,533	516		705,409
107	2014	39							7,609	521		712,497
108	2015	38							7,686	526		719,657
109	2016	37							7,763	532		726,888
110	2017	36							7,841	537		734,192
111	2018	35							7,920	542		741,569
112	2019	34							7,999	548		749,021
113	2020	33							8,080	553		756,547
114	2021	32							8,161	559		764,149
115	2022	31							8,243	564		771,827
116	2023	30							8,326	570		779,583
117	2024	29							8,409	576		787,416
118	2025	28							8,494	582		795,329
119	2026	27							8,579	587		803,320
120	2027	26							8,665	593		811,392
121	2028	25							8,752	599		819,545
122	2029	24							8,840	605		827,780
123	2030	23							8,929	611		836,098
124	2031	22							9,019	618		844,499
125	2032	21							9,109	624		852,985
126	2033	20							9,201	630		861,556
127	2034	19							9,293	636		870,213
128	2035	18							9,387	643		878,957
129	2036	17							9,481	649		887,789
130	2037	16							9,576	656		896,710
131	2038	15							9,673	662		905,720
132	2039	14							9,770	669		914,821
133	2040	13							9,868	676		924,014
134	2041	12							9,967	682		933,298
135	2042	11							10,067	689		942,676
136	2043	10							10,169	696		952,148
137	2044	9							10,271	703		961,716
138	2045	8							10,374	710		971,379
139	2046	7							10,478	717		981,140
140	2047	6							10,583	725		990,999
141	2048	5							10,690	732		1,000,957
142	2049	4							10,797	739		1,011,014
143	2050	3							10,906	747		1,021,173
144	2051	2							11,015	754		1,031,434
145	2052	1							11,126	762		1,041,798
146	2053	0									(1,041,798)	-
									$ 1,083,472	$ 41,674		$ 56,785,617

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	692,669
Forecast Additions	390,803
Total Additions	1,083,472
Gross Salvage Value	52,090
Less Cost of Removal	104,180
Net Salvage Value	(52,090)
Total to be Recovered	1,135,562
Forecast Plant Balances	56,785,617
Whole Life Accrual Rate	2.00%
Cost of Removal Accrual Rate	0.18%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.82%
Depreciable Service Life, years	50.0

Remaining Life Depreciation Rate Calculation

Account Balance - 12/31/09	677,755
Forecast Additions	390,803
Gross Salvage Value	52,090
Less Cost of Removal	104,180
Net Salvage Value	(52,090)
Forecast Plant Balances	36,593,622

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Hydraulic Production, Ozark Beach Hydro Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1931
Retirement Date	2053
Service Life, Yrs	122

Historical and Forecast Plant Additions & Balances

Accou 332 Reservoirs, Dams, and Waterways

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1913	140	976,972		-	-			976,972	-		976,972
2	1914	139	-		-	-			-	-		976,972
3	1915	138	-		-	-			-	-		976,972
4	1916	137	-		-	-			-	-		976,972
5	1917	136	-		-	-			-	-		976,972
6	1918	135	-		-	-			-	-		976,972
7	1919	134	-		-	-			-	-		976,972
8	1920	133	-		-	-			-	-		976,972
9	1921	132	-		-	-			-	-		976,972
10	1922	131	-		-	-			-	-		976,972
11	1923	130	-		-	-			-	-		976,972
12	1924	129	-		-	-			-	-		976,972
13	1925	128	-		-	-			-	-		976,972
14	1926	127	-		-	-			-	-		976,972
15	1927	126	-		-	-			-	-		976,972
16	1928	125	-		-	-			-	-		976,972
17	1929	124	-		-	-			-	-		976,972
18	1930	123	-		-	-			-	-		976,972
19	1931	122	-		-	-			-	-		976,972
20	1932	121	-		-	-			-	-		976,972
21	1933	120	-		-	-			-	-		976,972
22	1934	119	-		-	-			-	-		976,972
23	1935	118	-		-	-			-	-		976,972
24	1936	117	-		-	-			-	-		976,972
25	1937	116	207,338		-	-			207,338	-		1,184,310
26	1938	115	502		-	-			502	-		1,184,812
27	1939	114	1,073		-	-			1,073	-		1,185,885
28	1940	113	54		-	-			54	-		1,185,939
29	1941	112	-		-	-			-	-		1,185,939
30	1942	111	-		-	-			-	-		1,185,939
31	1943	110	-		-	-			-	-		1,185,939
32	1944	109	-		-	-			-	-		1,185,939
33	1945	108	-		-	-			-	-		1,185,939
34	1946	107	-		-	-			-	-		1,185,939
35	1947	106	-		-	-			-	-		1,185,939
36	1948	105	-		-	-			-	-		1,185,939
37	1949	104	-		-	-			-	-		1,185,939
38	1950	103	-		-	-			-	-		1,185,939
39	1951	102	-		-	-			-	-		1,185,939
40	1952	101	-		-	-			-	-		1,185,939
41	1953	100	-		-	-			-	-		1,185,939
42	1954	99	-		-	-			-	-		1,185,939
43	1955	98	-		-	-			-	-		1,185,939
44	1956	97	-		-	-			-	-		1,185,939
45	1957	96	-		-	-			-	-		1,185,939
46	1958	95	1,707		-	-			1,707	-		1,187,646
47	1959	94	-		-	-			-	-		1,187,646
48	1960	93	-		-	-			-	-		1,187,646
49	1961	92	-		-	-			-	-		1,187,646
50	1962	91	-		-	-			-	-		1,187,646
51	1963	90	-		-	-			-	-		1,187,646
52	1964	89	-		-	-			-	-		1,187,646
53	1965	88	-		-	-			-	-		1,187,646
54	1966	87	-		-	-			-	-		1,187,646
55	1967	86	-		-	-			-	-		1,187,646
56	1968	85	-		-	-			-	-		1,187,646
57	1969	84	-		-	-			-	-		1,187,646
58	1970	83	-		-	-			-	-		1,187,646
59	1971	82	-		-	-			-	-		1,187,646
60	1972	81	-		-	-			-	-		1,187,646
61	1973	80	-		-	-			-	-		1,187,646
62	1974	79	-		-	-			-	-		1,187,646
63	1975	78	-		-	-			-	-		1,187,646
64	1976	77	-		-	-			-	-		1,187,646
65	1977	76	-		-	-			-	-		1,187,646
66	1978	75	-		-	-			-	-		1,187,646
67	1979	74	-		-	-			-	-		1,187,646
68	1980	73	45,160		-	-			45,160	-		1,232,806
69	1981	72	-		-	-			-	-		1,232,806
70	1982	71	-		-	-			-	-		1,232,806
71	1983	70	-		-	-			-	-		1,232,806
72	1984	69	-		-	-			-	-		1,232,806
73	1985	68	3,332		-	-			3,332	-		1,236,138
74	1986	67	12,376		-	-			12,376	-		1,248,514
75	1987	66	15,800		-	-			15,800	-		1,264,314
76	1988	65	90,509		-	15,000			90,509	-		1,354,823
77	1989	64	8,330		-	-			8,330	-		1,363,153
78	1990	63	-		-	-			-	-		1,363,153
79	1991	62	5,896		-	-			5,896	-		1,369,049
80	1992	61	-		-	-			-	-		1,369,049
81	1993	60	13,235		-	13,235			13,235	-		1,382,284
82	1994	59	14,976		-	-			14,976	-		1,397,260
83	1995	58	-		-	-			-	-		1,397,260
84	1996	57	9,363		-	-			9,363	-		1,406,623
85	1997	56	5,210		-	-			5,210	-		1,411,833
86	1998	55	10,957		-	-			10,957	-		1,422,790

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Hydraulic Production, Ozark Beach Hydro Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1931
Retirement Date	2053
Service Life, Yrs	122

Historical and Forecast Plant Additions & Balances
Accou 332 Reservoirs, Dams, and Waterways

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
				Transaction Year		Vintage Year						End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Adjusted Transaction Year Additions	Adjusted Transaction Year Retirements	Transfers and Adjustments	Plant Balance*
87	1999	54		-	-	-			-	-		1,422,790
88	2000	53		-	-	-			-	-		1,422,790
89	2001	52		-	-	-			-	-		1,422,790
90	2002	51		25,562	-	25,562			25,562	-		1,448,352
91	2003	50		-	13,235	-			-	13,235		1,435,117
92	2004	49		49,728	-	26,286			49,728	-		1,484,845
93	2005	48		-	15,000	-			-	15,000		1,469,845
94	2006	47		-	19,547	-			-	19,547		1,450,298
95	2007	46		-	-	-			-	-		1,450,298
96	2008	45		85,752	6,015	-			85,752	6,015		1,530,035
97	2009	44		-	26,286		14,506		14,506	26,286		1,518,255
98	Total		$ 1,422,790	$ 161,042	$ 80,083	$ 80,083	$ 14,506	$ -	$ 1,598,338	$ 80,083	$ -	$ 115,683,137
99	Major Additions/Retirements											
100	Routine Activity			$ 175,548	$ 80,083							
101	Historical Interim Activity			0.15%	0.07%							
102	Forecast Interim Activity			0.15%	0.07%							
								Major Additions**				
103	2010	43							2,304	1,051		1,519,508
104	2011	42							2,306	1,052		1,520,762
105	2012	41							2,308	1,053		1,522,017
106	2013	40							2,310	1,054		1,523,273
107	2014	39							2,312	1,055		1,524,530
108	2015	38							2,313	1,055		1,525,788
109	2016	37							2,315	1,056		1,527,047
110	2017	36							2,317	1,057		1,528,308
111	2018	35							2,319	1,058		1,529,569
112	2019	34							2,321	1,059		1,530,831
113	2020	33							2,323	1,060		1,532,094
114	2021	32							2,325	1,061		1,533,359
115	2022	31							2,327	1,061		1,534,624
116	2023	30							2,329	1,062		1,535,891
117	2024	29							2,331	1,063		1,537,158
118	2025	28							2,333	1,064		1,538,426
119	2026	27							2,335	1,065		1,539,696
120	2027	26							2,336	1,066		1,540,967
121	2028	25							2,338	1,067		1,542,238
122	2029	24							2,340	1,068		1,543,511
123	2030	23							2,342	1,069		1,544,785
124	2031	22							2,344	1,069		1,546,060
125	2032	21							2,346	1,070		1,547,335
126	2033	20							2,348	1,071		1,548,612
127	2034	19							2,350	1,072		1,549,890
128	2035	18							2,352	1,073		1,551,169
129	2036	17							2,354	1,074		1,552,449
130	2037	16							2,356	1,075		1,553,731
131	2038	15							2,358	1,076		1,555,013
132	2039	14							2,360	1,076		1,556,296
133	2040	13							2,362	1,077		1,557,580
134	2041	12							2,364	1,078		1,558,866
135	2042	11							2,366	1,079		1,560,152
136	2043	10							2,368	1,080		1,561,440
137	2044	9							2,369	1,081		1,562,728
138	2045	8							2,371	1,082		1,564,018
139	2046	7							2,373	1,083		1,565,308
140	2047	6							2,375	1,084		1,566,600
141	2048	5							2,377	1,084		1,567,893
142	2049	4							2,379	1,085		1,569,187
143	2050	3							2,381	1,086		1,570,482
144	2051	2							2,383	1,087		1,571,778
145	2052	1							2,385	1,088		1,573,075
146	2053	0									(1,573,075)	-
									$ 1,699,144	$ 126,069		$ 182,167,182

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	1,598,338
Forecast Additions	100,806
Total Additions	1,699,144
Gross Salvage Value	78,654
Less Cost of Removal	157,307
Net Salvage Value	(78,654)
Total to be Recovered	1,777,798
Forecast Plant Balances	182,167,182
Whole Life Accrual Rate	0.98%
Cost of Removal Accrual Rate	0.09%
Whole Life Accrual Rate (Excluding Cost of Removal)	0.89%
Depreciable Service Life, years	102.5

Remaining Life Depreciation Rate Calculation

Account Balance - 12/31/09	1,518,255
Forecast Additions	100,806
Gross Salvage Value	78,654
Less Cost of Removal	157,307
Net Salvage Value	(78,654)
Forecast Plant Balances	66,484,045

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Hydraulic Production, Ozark Beach Hydro Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1931
Retirement Date	2053
Service Life, Yrs	122

Historical and Forecast Plant Additions & Balances

Accou 333 Water Wheels, Turbines and Generators

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1913	140	16,105		-	-			16,105	-		16,105
2	1914	139	-		-	-			-	-		16,105
3	1915	138	-		-	-			-	-		16,105
4	1916	137	-		-	-			-	-		16,105
5	1917	136	-		-	-			-	-		16,105
6	1918	135	-		-	-			-	-		16,105
7	1919	134	-		-	-			-	-		16,105
8	1920	133	-		-	-			-	-		16,105
9	1921	132	-		-	-			-	-		16,105
10	1922	131	-		-	-			-	-		16,105
11	1923	130	-		-	-			-	-		16,105
12	1924	129	-		-	-			-	-		16,105
13	1925	128	-		-	-			-	-		16,105
14	1926	127	-		-	-			-	-		16,105
15	1927	126	-		-	-			-	-		16,105
16	1928	125	-		-	-			-	-		16,105
17	1929	124	-		-	-			-	-		16,105
18	1930	123	-		-	-			-	-		16,105
19	1931	122	278,688		-	95,792			278,688	-		294,793
20	1932	121	-		-	-			-	-		294,793
21	1933	120	-		-	-			-	-		294,793
22	1934	119	-		-	-			-	-		294,793
23	1935	118	-		-	-			-	-		294,793
24	1936	117	-		-	-			-	-		294,793
25	1937	116	-		-	-			-	-		294,793
26	1938	115	-		-	-			-	-		294,793
27	1939	114	-		-	-			-	-		294,793
28	1940	113	-		-	-			-	-		294,793
29	1941	112	-		-	-			-	-		294,793
30	1942	111	-		-	-			-	-		294,793
31	1943	110	-		-	-			-	-		294,793
32	1944	109	-		-	-			-	-		294,793
33	1945	108	-		-	-			-	-		294,793
34	1946	107	-		-	-			-	-		294,793
35	1947	106	-		-	-			-	-		294,793
36	1948	105	-		-	-			-	-		294,793
37	1949	104	12,212		-	-			12,212	-		307,005
38	1950	103	-		-	-			-	-		307,005
39	1951	102	-		-	-			-	-		307,005
40	1952	101	-		-	-			-	-		307,005
41	1953	100	-		-	-			-	-		307,005
42	1954	99	-		-	-			-	-		307,005
43	1955	98	-		-	-			-	-		307,005
44	1956	97	-		-	-			-	-		307,005
45	1957	96	-		-	-			-	-		307,005
46	1958	95	-		-	-			-	-		307,005
47	1959	94	-		-	-			-	-		307,005
48	1960	93	34,564		-	-			34,564	-		341,569
49	1961	92	-		-	-			-	-		341,569
50	1962	91	-		-	-			-	-		341,569
51	1963	90	-		-	-			-	-		341,569
52	1964	89	145		-	-			145	-		341,714
53	1965	88	-		-	-			-	-		341,714
54	1966	87	-		-	-			-	-		341,714
55	1967	86	-		-	-			-	-		341,714
56	1968	85	-		-	-			-	-		341,714
57	1969	84	-		-	-			-	-		341,714
58	1970	83	-		-	-			-	-		341,714
59	1971	82	-		-	-			-	-		341,714
60	1972	81	-		-	-			-	-		341,714
61	1973	80	-		-	-			-	-		341,714
62	1974	79	-		-	-			-	-		341,714
63	1975	78	9,762		-	-			9,762	-		351,476
64	1976	77	-		-	-			-	-		351,476
65	1977	76	-		-	-			-	-		351,476
66	1978	75	-		-	-			-	-		351,476
67	1979	74	-		-	-			-	-		351,476
68	1980	73	-		-	-			-	-		351,476
69	1981	72	-		-	-			-	-		351,476
70	1982	71	-		-	-			-	-		351,476
71	1983	70	-		-	-			-	-		351,476
72	1984	69	680		-	-			680	-		352,156
73	1985	68	881		-	-			881	-		353,037
74	1986	67	-		-	-			-	-		353,037
75	1987	66	-		-	-			-	-		353,037
76	1988	65	-		-	-			-	-		353,037
77	1989	64	-		-	-			-	-		353,037
78	1990	63	-		-	-			-	-		353,037
79	1991	62	-		-	-			-	-		353,037
80	1992	61	-		-	-			-	-		353,037
81	1993	60	-		-	-			-	-		353,037
82	1994	59	-		-	-			-	-		353,037
83	1995	58	-		-	-			-	-		353,037
84	1996	57	-		-	-			-	-		353,037
85	1997	56	-		-	-			-	-		353,037
86	1998	55	-		-	-			-	-		353,037

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Hydraulic Production, Ozark Beach Hydro Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1931
Retirement Date	2053
Service Life, Yrs	122

Historical and Forecast Plant Additions & Balances
Accou 333 Water Wheels, Turbines and Generators

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
				Transaction Year								
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Vintage Year Retirements	Advance Additions	Advance Retirements	Adjusted Transaction Year Additions	Adjusted Transaction Year Retirements	Transfers and Adjustments	End of Year Plant Balance*
87	1999	54		-	-	-			-	-		353,037
88	2000	53		-	-	-			-	-		353,037
89	2001	52		-	-	-			-	-		353,037
90	2002	51		434,538	-	-			434,538	-		787,575
91	2003	50		326,058	47,896	-			326,058	47,896		1,065,737
92	2004	49		-	23,948	-			-	23,948		1,041,789
93	2005	48		352,248	-	-			352,248	-		1,394,037
94	2006	47		241,070	23,948	-			241,070	23,948		1,611,159
95	2007	46		8,299	-	-			8,299	-		1,619,458
96	2008	45		-	-	-			-	-		1,619,458
97	2009	44		-	-	-			-	-		1,619,458
98	Total		$ 353,037	$ 1,362,213	$ 95,792	$ 95,792	$ -	$ -	$ 1,715,250	$ 95,792	$ -	$ 34,374,089
99	Major Additions/Retirements											
100	2002			$ 434,538								
101	Routine Activity			$ 927,675	$ 95,792							
102	Historical Interim Activity			2.70%	0.28%							
103	Forecast Interim Activity			2.70%	0.28%							
								Major Additions**				
104	2010	43						95,000		4,513		1,709,945
105	2011	42						610,000		4,765		2,315,180
106	2012	41						540,000		6,452		2,848,728
107	2013	40						540,000		7,939		3,380,789
108	2014	39							91,239	9,421		3,462,607
109	2015	38							93,448	9,649		3,546,405
110	2016	37							95,709	9,883		3,632,232
111	2017	36							98,025	10,122		3,720,135
112	2018	35							100,398	10,367		3,810,165
113	2019	34							102,827	10,618		3,902,375
114	2020	33							105,316	10,875		3,996,815
115	2021	32							107,865	11,138		4,093,542
116	2022	31							110,475	11,408		4,192,609
117	2023	30							113,149	11,684		4,294,074
118	2024	29							115,887	11,967		4,397,994
119	2025	28							118,691	12,256		4,504,430
120	2026	27							121,564	12,553		4,613,441
121	2027	26							124,506	12,857		4,725,090
122	2028	25							127,519	13,168		4,839,441
123	2029	24							130,605	13,486		4,956,560
124	2030	23							133,766	13,813		5,076,513
125	2031	22							137,003	14,147		5,199,369
126	2032	21							140,319	14,489		5,325,199
127	2033	20							143,714	14,840		5,454,073
128	2034	19							147,192	15,199		5,586,066
129	2035	18							150,755	15,567		5,721,254
130	2036	17							154,403	15,944		5,859,713
131	2037	16							158,140	16,330		6,001,524
132	2038	15							161,967	16,725		6,146,766
133	2039	14							165,887	17,130		6,295,523
134	2040	13							169,901	17,544		6,447,880
135	2041	12							174,013	17,969		6,603,924
136	2042	11							178,224	18,403		6,763,745
137	2043	10							182,537	18,849		6,927,433
138	2044	9							186,955	19,305		7,095,083
139	2045	8							191,479	19,772		7,266,791
140	2046	7							196,113	20,251		7,442,653
141	2047	6							200,860	20,741		7,622,772
142	2048	5							205,721	21,243		7,807,250
143	2049	4							210,699	21,757		7,996,192
144	2050	3							215,798	22,283		8,189,707
145	2051	2							221,021	22,823		8,387,905
146	2052	1							226,370	23,375		8,590,900
147	2053	0									(8,590,900)	-
									$ 7,525,309	$ 719,409		$ 265,124,881

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	1,715,250
Forecast Additions	5,810,059
Total Additions	7,525,309
Gross Salvage Value	429,545
Less Cost of Removal	859,090
Net Salvage Value	(429,545)
Total to be Recovered	7,954,854
Forecast Plant Balances	265,124,881
Whole Life Accrual Rate	3.00%
Cost of Removal Accrual Rate	0.32%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.68%
Depreciable Service Life, years	33.3

Remaining Life Depreciation Rate Calculation

Account Balance - 12/31/09	1,619,458
Forecast Additions	5,810,059
Gross Salvage Value	429,545
Less Cost of Removal	859,090
Net Salvage Value	(429,545)
Forecast Plant Balances	230,750,792

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Hydraulic Production, Ozark Beach Hydro Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1931
Retirement Date	2053
Service Life, Yrs	122

Historical and Forecast Plant Additions & Balances

Accou 334 Accessory Electric Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
1	1913	140	-		-	-			-	-		-
2	1914	139	-		-	-			-	-		-
3	1915	138	-		-	-			-	-		-
4	1916	137	-		-	-			-	-		-
5	1917	136	-		-	-			-	-		-
6	1918	135	-		-	-			-	-		-
7	1919	134	-		-	-			-	-		-
8	1920	133	-		-	-			-	-		-
9	1921	132	-		-	-			-	-		-
10	1922	131	-		-	-			-	-		-
11	1923	130	-		-	-			-	-		-
12	1924	129	-		-	-			-	-		-
13	1925	128	-		-	-			-	-		-
14	1926	127	-		-	-			-	-		-
15	1927	126	-		-	-			-	-		-
16	1928	125	-		-	-			-	-		-
17	1929	124	-		-	-			-	-		-
18	1930	123	-		-	-			-	-		-
19	1931	122	63,663		-	34,118			63,663	-		63,663
20	1932	121	-		-	-			-	-		63,663
21	1933	120	-		-	-			-	-		63,663
22	1934	119	-		-	-			-	-		63,663
23	1935	118	-		-	-			-	-		63,663
24	1936	117	-		-	-			-	-		63,663
25	1937	116	20,340		-	-			20,340	-		84,003
26	1938	115	-		-	-			-	-		84,003
27	1939	114	-		-	-			-	-		84,003
28	1940	113	22		-	22			22	-		84,025
29	1941	112	159		-	159			159	-		84,184
30	1942	111	259		-	-			259	-		84,443
31	1943	110	-		-	-			-	-		84,443
32	1944	109	-		-	-			-	-		84,443
33	1945	108	-		-	-			-	-		84,443
34	1946	107	1,161		-	1,161			1,161	-		85,604
35	1947	106	874		-	-			874	-		86,478
36	1948	105	-		-	-			-	-		86,478
37	1949	104	-		-	-			-	-		86,478
38	1950	103	399		-	-			399	-		86,877
39	1951	102	-		-	-			-	-		86,877
40	1952	101	-		-	-			-	-		86,877
41	1953	100	-		-	-			-	-		86,877
42	1954	99	2,342		-	-			2,342	-		89,219
43	1955	98	-		-	-			-	-		89,219
44	1956	97	-		-	-			-	-		89,219
45	1957	96	-		-	-			-	-		89,219
46	1958	95	-		-	-			-	-		89,219
47	1959	94	-		-	-			-	-		89,219
48	1960	93	-		-	-			-	-		89,219
49	1961	92	197		-	-			197	-		89,416
50	1962	91	-		-	-			-	-		89,416
51	1963	90	9,687		-	9,539			9,687	-		99,103
52	1964	89	-		-	-			-	-		99,103
53	1965	88	1,224		-	529			1,224	-		100,327
54	1966	87	508		-	508			508	-		100,835
55	1967	86	-		-	-			-	-		100,835
56	1968	85	-		-	-			-	-		100,835
57	1969	84	-		-	-			-	-		100,835
58	1970	83	1,115		-	-			1,115	-		101,950
59	1971	82	-		-	-			-	-		101,950
60	1972	81	-		-	-			-	-		101,950
61	1973	80	-		-	-			-	-		101,950
62	1974	79	-		-	-			-	-		101,950
63	1975	78	-		-	-			-	-		101,950
64	1976	77	-		-	-			-	-		101,950
65	1977	76	244		-	-			244	-		102,194
66	1978	75	-		-	-			-	-		102,194
67	1979	74	-		-	-			-	-		102,194
68	1980	73	-		-	-			-	-		102,194
69	1981	72	-		-	-			-	-		102,194
70	1982	71	-		-	-			-	-		102,194
71	1983	70	-		-	-			-	-		102,194
72	1984	69	-		-	-			-	-		102,194
73	1985	68	-		-	-			-	-		102,194
74	1986	67	3,303		-	-			3,303	-		105,497
75	1987	66	-		-	-			-	-		105,497
76	1988	65	-		-	-			-	-		105,497
77	1989	64	-		-	-			-	-		105,497
78	1990	63	1,663		-	-			1,663	-		107,160
79	1991	62	-		-	-			-	-		107,160
80	1992	61	-		-	-			-	-		107,160
81	1993	60	-		-	-			-	-		107,160
82	1994	59	-		-	-			-	-		107,160
83	1995	58	630,185		-	24,442			630,185	-		737,345
84	1996	57	-		-	-			-	-		737,345
85	1997	56	-		-	-			-	-		737,345
86	1998	55	-		-	-			-	-		737,345

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Hydraulic Production, Ozark Beach Hydro Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1931
Retirement Date	2053
Service Life, Yrs	122

Historical and Forecast Plant Additions & Balances
Accou 334 Accessory Electric Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
				Transaction Year		Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
87	1999	54		-	-	-			-	-		737,345
88	2000	53		145,459	-	-			145,459	-		882,804
89	2001	52		-	-	-			-	-		882,804
90	2002	51		-	-	-			-	-		882,804
91	2003	50		-	70,478	-			-	70,478		812,326
92	2004	49		-	-	-			-	-		812,326
93	2005	48		-	-	-			-	-		812,326
94	2006	47		-	-	-			-	-		812,326
95	2007	46		-	-	-			-	-		812,326
96	2008	45		-	-	-			-	-	393,832	1,206,158
97	2009	44		-	-	-	31,429		31,429	-		1,237,587
98	Total		$ 737,345	$ 145,459	$ 70,478	$ 70,478	$ 31,429	$ -	$ 914,233	$ 70,478	$ 393,832	$ 18,769,448
99	Major Additions/Retirements											
100	Routine Activity			$ 176,888	$ 70,478							
101	Historical Interim Activity			0.94%	0.38%							
102	Forecast Interim Activity			0.94%	0.38%							
								Major Additions**				
103	2010	43							11,663	4,647		1,244,603
104	2011	42							11,729	4,673		1,251,659
105	2012	41							11,796	4,700		1,258,755
106	2013	40							11,863	4,727		1,265,892
107	2014	39							11,930	4,753		1,273,068
108	2015	38							11,998	4,780		1,280,286
109	2016	37							12,066	4,807		1,287,544
110	2017	36							12,134	4,835		1,294,844
111	2018	35							12,203	4,862		1,302,185
112	2019	34							12,272	4,890		1,309,567
113	2020	33							12,342	4,917		1,316,991
114	2021	32							12,412	4,945		1,324,458
115	2022	31							12,482	4,973		1,331,967
116	2023	30							12,553	5,001		1,339,518
117	2024	29							12,624	5,030		1,347,112
118	2025	28							12,696	5,058		1,354,749
119	2026	27							12,767	5,087		1,362,430
120	2027	26							12,840	5,116		1,370,154
121	2028	25							12,913	5,145		1,377,922
122	2029	24							12,986	5,174		1,385,734
123	2030	23							13,060	5,203		1,393,590
124	2031	22							13,134	5,233		1,401,491
125	2032	21							13,208	5,263		1,409,436
126	2033	20							13,283	5,292		1,417,427
127	2034	19							13,358	5,322		1,425,462
128	2035	18							13,434	5,353		1,433,544
129	2036	17							13,510	5,383		1,441,671
130	2037	16							13,587	5,413		1,449,844
131	2038	15							13,664	5,444		1,458,064
132	2039	14							13,741	5,475		1,466,330
133	2040	13							13,819	5,506		1,474,643
134	2041	12							13,897	5,537		1,483,003
135	2042	11							13,976	5,569		1,491,411
136	2043	10							14,055	5,600		1,499,866
137	2044	9							14,135	5,632		1,508,370
138	2045	8							14,215	5,664		1,516,921
139	2046	7							14,296	5,696		1,525,521
140	2047	6							14,377	5,728		1,534,170
141	2048	5							14,458	5,761		1,542,867
142	2049	4							14,540	5,793		1,551,614
143	2050	3							14,623	5,826		1,560,411
144	2051	2							14,706	5,859		1,569,257
145	2052	1							14,789	5,892		1,578,154
146	2053	0									(1,578,154)	-
									$ 1,480,366	$ 296,044		$ 79,181,954

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	914,233
Forecast Additions	566,133
Total Additions	1,480,366
Gross Salvage Value	78,908
Less Cost of Removal	157,815
Net Salvage Value	(78,908)
Total to be Recovered	1,559,274
Forecast Plant Balances	79,181,954
Whole Life Accrual Rate	1.97%
Cost of Removal Accrual Rate	0.20%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.77%
Depreciable Service Life, years	50.8

Remaining Life Depreciation Rate Calculation

Account Balance - 12/31/09	1,237,587
Forecast Additions	566,133
Gross Salvage Value	78,908
Less Cost of Removal	157,815
Net Salvage Value	(78,908)
Forecast Plant Balances	60,412,506

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Hydraulic Production, Ozark Beach Hydro Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1931
Retirement Date	2053
Service Life, Yrs	122

Historical and Forecast Plant Additions & Balances

Accou 335 Miscellaneous Power Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
1	1913	140	-		-	-			-	-		-
2	1914	139	-		-	-			-	-		-
3	1915	138	-		-	-			-	-		-
4	1916	137	-		-	-			-	-		-
5	1917	136	-		-	-			-	-		-
6	1918	135	-		-	-			-	-		-
7	1919	134	-		-	-			-	-		-
8	1920	133	-		-	-			-	-		-
9	1921	132	-		-	-			-	-		-
10	1922	131	-		-	-			-	-		-
11	1923	130	-		-	-			-	-		-
12	1924	129	-		-	-			-	-		-
13	1925	128	-		-	-			-	-		-
14	1926	127	418		-	-			418	-		418
15	1927	126	-		-	-			-	-		418
16	1928	125	-		-	-			-	-		418
17	1929	124	-		-	-			-	-		418
18	1930	123	-		-	-			-	-		418
19	1931	122	16,621		-	-			16,621	-		17,039
20	1932	121	-		-	-			-	-		17,039
21	1933	120	5		-	-			5	-		17,044
22	1934	119	-		-	-			-	-		17,044
23	1935	118	147		-	-			147	-		17,191
24	1936	117	125		-	-			125	-		17,316
25	1937	116	-		-	-			-	-		17,316
26	1938	115	-		-	-			-	-		17,316
27	1939	114	69		-	-			69	-		17,385
28	1940	113	2,595		-	-			2,595	-		19,980
29	1941	112	-		-	-			-	-		19,980
30	1942	111	-		-	-			-	-		19,980
31	1943	110	415		-	-			415	-		20,395
32	1944	109	8		-	-			8	-		20,403
33	1945	108	152		-	-			152	-		20,555
34	1946	107	69		-	-			69	-		20,624
35	1947	106	153		-	-			153	-		20,777
36	1948	105	160		-	-			160	-		20,937
37	1949	104	49		-	-			49	-		20,986
38	1950	103	93		-	-			93	-		21,079
39	1951	102	-		-	-			-	-		21,079
40	1952	101	409		-	-			409	-		21,488
41	1953	100	-		-	-			-	-		21,488
42	1954	99	4,276		-	-			4,276	-		25,764
43	1955	98	2,676		-	-			2,676	-		28,440
44	1956	97	-		-	-			-	-		28,440
45	1957	96	193		-	-			193	-		28,633
46	1958	95	-		-	-			-	-		28,633
47	1959	94	311		-	-			311	-		28,944
48	1960	93	5,213		-	-			5,213	-		34,157
49	1961	92	-		-	-			-	-		34,157
50	1962	91	744		-	-			744	-		34,901
51	1963	90	873		-	-			873	-		35,774
52	1964	89	271		-	-			271	-		36,045
53	1965	88	845		-	-			845	-		36,890
54	1966	87	7,279		-	-			7,279	-		44,169
55	1967	86	60		-	-			60	-		44,229
56	1968	85	160		-	-			160	-		44,389
57	1969	84	44		-	-			44	-		44,433
58	1970	83	-		-	-			-	-		44,433
59	1971	82	-		-	-			-	-		44,433
60	1972	81	990		-	-			990	-		45,423
61	1973	80	4,585		-	-			4,585	-		50,008
62	1974	79	199		-	-			199	-		50,207
63	1975	78	6,669		-	-			6,669	-		56,876
64	1976	77	3,253		-	-			3,253	-		60,129
65	1977	76	902		-	-			902	-		61,031
66	1978	75	570		-	-			570	-		61,601
67	1979	74	-		-	-			-	-		61,601
68	1980	73	-		-	-			-	-		61,601
69	1981	72	6,661		-	-			6,661	-		68,262
70	1982	71	85		-	-			85	-		68,347
71	1983	70	-		-	-			-	-		68,347
72	1984	69	922		-	-			922	-		69,269
73	1985	68	9,742		-	-			9,742	-		79,011
74	1986	67	15,650		-	3,422			15,650	-		94,661
75	1987	66	31,251		-	-			31,251	-		125,912
76	1988	65	6,156		-	-			6,156	-		132,068
77	1989	64	6,433		-	4,164			6,433	-		138,501
78	1990	63	6,068		-	-			6,068	-		144,569
79	1991	62	17,280		-	-			17,280	-		161,849
80	1992	61	8,291		-	-			8,291	-		170,140
81	1993	60	17,109		-	-			17,109	-		187,249
82	1994	59	12,311		-	-			12,311	-		199,560
83	1995	58	-		-	-			-	-		199,560
84	1996	57	2,378		-	-			2,378	-		201,938
85	1997	56	18,598		-	-			18,598	-		220,536
86	1998	55	11,501		-	-			11,501	-		232,037

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Hydraulic Production, Ozark Beach Hydro Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1931
Retirement Date	2053
Service Life, Yrs	122

Historical and Forecast Plant Additions & Balances
Accou 335 Miscellaneous Power Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
87	1999	54		12,489	-	-			12,489	-		244,526
88	2000	53		37,313	-	-			37,313	-		281,839
89	2001	52		41,130	-	-			41,130	-		322,969
90	2002	51		641	-	-			641	-		323,610
91	2003	50		1,468	-	-			1,468	-		325,078
92	2004	49		23,777	-	-			23,777	-		348,855
93	2005	48		17,792	-	-			17,792	-		366,647
94	2006	47		-	-	-			-	-		366,647
95	2007	46		-	-	-			-	-		366,647
96	2008	45		-	7,586	-			-	7,586		359,061
97	2009	44		10,049	-	-	87,105		97,154	-		456,215
98	Total		$ 232,037	$ 144,659	$ 7,586	$ 7,586	$ 87,105	$ -	$ 463,801	$ 7,586	$ -	$ 7,925,782
99	Major Additions/Retirements											
100	Routine Activity			$ 231,764	$ 7,586							
101	Historical Interim Activity			2.92%	0.10%							
102	Forecast Interim Activity			2.92%	0.10%							
								Major Additions**				
103	2010	43							13,341	437		469,119
104	2011	42							13,718	449		482,388
105	2012	41							14,106	462		496,032
106	2013	40							14,505	475		510,062
107	2014	39							14,915	488		524,489
108	2015	38							15,337	502		539,324
109	2016	37							15,771	516		554,579
110	2017	36							16,217	531		570,265
111	2018	35							16,676	546		586,395
112	2019	34							17,147	561		602,981
113	2020	33							17,632	577		620,036
114	2021	32							18,131	593		637,573
115	2022	31							18,644	610		655,607
116	2023	30							19,171	628		674,151
117	2024	29							19,713	645		693,219
118	2025	28							20,271	664		712,826
119	2026	27							20,844	682		732,988
120	2027	26							21,434	702		753,721
121	2028	25							22,040	721		775,039
122	2029	24							22,664	742		796,961
123	2030	23							23,305	763		819,503
124	2031	22							23,964	784		842,682
125	2032	21							24,642	807		866,517
126	2033	20							25,339	829		891,027
127	2034	19							26,055	853		916,229
128	2035	18							26,792	877		942,144
129	2036	17							27,550	902		968,792
130	2037	16							28,329	927		996,194
131	2038	15							29,131	953		1,024,372
132	2039	14							29,954	980		1,053,346
133	2040	13							30,802	1,008		1,083,139
134	2041	12							31,673	1,037		1,113,775
135	2042	11							32,569	1,066		1,145,278
136	2043	10							33,490	1,096		1,177,672
137	2044	9							34,437	1,127		1,210,982
138	2045	8							35,411	1,159		1,245,234
139	2046	7							36,413	1,192		1,280,455
140	2047	6							37,443	1,226		1,316,673
141	2048	5							38,502	1,260		1,353,914
142	2049	4							39,591	1,296		1,392,209
143	2050	3							40,711	1,333		1,431,588
144	2051	2							41,862	1,370		1,472,080
145	2052	1							43,046	1,409		1,513,717
146	2053	0									(1,513,717)	-
									$ 1,557,088	$ 43,371		$ 46,371,063

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	463,801
Forecast Additions	1,093,287
Total Additions	1,557,088
Gross Salvage Value	75,686
Less Cost of Removal	151,372
Net Salvage Value	(75,686)
Total to be Recovered	1,632,774
Forecast Plant Balances	46,371,063
Whole Life Accrual Rate	3.52%
Cost of Removal Accrual Rate	0.33%
Whole Life Accrual Rate (Excluding Cost of Removal)	3.19%
Depreciable Service Life, years	28.4

Remaining Life Depreciation Rate Calculation

Account Balance - 12/31/09	456,215
Forecast Additions	1,093,287
Gross Salvage Value	75,686
Less Cost of Removal	151,372
Net Salvage Value	(75,686)
Forecast Plant Balances	38,445,281

Summary by Plant
The Empire District Electric Company
State Line Combined Cycle

Account	Description	Direct Investment 2009$	Depreciation Rate
341	Structures & Improvements	10,537,351	2.11%
342	Fuel Holders, Producers & Accessories	2,411,873	4.58%
343	Prime Movers	107,266,879	2.01%
344	Generators	28,471,627	2.44%
345	Accessory Electric Equipment	11,132,362	2.19%
346	Misc Power Equipment	2,819,098	2.08%
	Total	162,639,190	2.14% whole life weighted average rate

Remaining Life Depreciation Rate Calculation

Per Books Balance 12/31/09	162,639,190
Forecast Interim Additions	20,976,935
Forecast Gross Salvage Value	17,231,306
Forecast Less Cost of Removal	10,484,965
Forecast Net Salvage Value	6,746,341
Forecast Total to be Recovered with COR	176,869,784
Forecast Total to be Recovered w/o COR	166,384,819
Accumulated Depreciation (2009 EOY)	(28,081,610)
Forecast Remaining Life Balance with COR	148,788,174
Forecast Remaining Life Balance w/o COR	138,303,209
Forecast Plant Balances	7,195,737,454
Remaining Life Rate with COR	2.07%
Remaining Life Rate w/o COR	1.92%
Reserve Variance with COR	5,418,734

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, State Line Combined Cycle

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	2001
Retirement Date	2051
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances
Accou 341 Structures & Improvements

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
1	1995	56	2,052,941		-	-			2,052,941	-		2,052,941
2	1996	55	-		-	-			-	-		2,052,941
3	1997	54	980,448		-	-			980,448	-		3,033,389
4	1998	53	-		-	-			-	-		3,033,389
5	1999	52		-	-	-			-	-		3,033,389
6	2000	51		-	-	-			-	-		3,033,389
7	2001	50		5,168,284	-	-			5,168,284	-		8,201,673
8	2002	49		2,070,108	-	-			2,070,108	-		10,271,781
9	2003	48		84,232	-	-			84,232	-		10,356,013
10	2004	47		130,126	-	-			130,126	-		10,486,139
11	2005	46		43,991	-	-			43,991	-		10,530,130
12	2006	45		-	-	-			-	-		10,530,130
13	2007	44		-	-	-			-	-		10,530,130
14	2008	43		-	-	-	11,522		11,522	-		10,541,652
15	2009	42		-	-	-	(4,301)		(4,301)	-		10,537,351
16	Total		$ 3,033,389	$ 7,496,741	$ -	$ -	$ 7,221	$ -	$ 10,537,351	$ -	$ -	$ 108,224,437
17	Major Additions/Retirements											
18	2001			$ 5,168,284								
19	2002			$ 2,070,108								
20	Routine Activity (excluding Westar advances)			$ 258,349	$ -							
21	Historical Interim Activity			0.24%	0.00%							
22	Forecast Interim Activity			0.24%	0.00%							
								Major Additions**				
23	2010	41							25,154	-		10,562,505
24	2011	40							25,214	-		10,587,720
25	2012	39							25,275	-		10,612,994
26	2013	38							25,335	-		10,638,329
27	2014	37							25,395	-		10,663,725
28	2015	36							25,456	-		10,689,181
29	2016	35							25,517	-		10,714,697
30	2017	34							25,578	-		10,740,275
31	2018	33							25,639	-		10,765,914
32	2019	32							25,700	-		10,791,614
33	2020	31							25,761	-		10,817,375
34	2021	30							25,823	-		10,843,198
35	2022	29							25,884	-		10,869,082
36	2023	28							25,946	-		10,895,029
37	2024	27							26,008	-		10,921,037
38	2025	26							26,070	-		10,947,107
39	2026	25							26,132	-		10,973,239
40	2027	24							26,195	-		10,999,434
41	2028	23							26,257	-		11,025,692
42	2029	22							26,320	-		11,052,012
43	2030	21							26,383	-		11,078,395
44	2031	20							26,446	-		11,104,841
45	2032	19							26,509	-		11,131,350
46	2033	18							26,572	-		11,157,922
47	2034	17							26,636	-		11,184,558
48	2035	16							26,699	-		11,211,257
49	2036	15							26,763	-		11,238,020
50	2037	14							26,827	-		11,264,847
51	2038	13							26,891	-		11,291,738
52	2039	12							26,955	-		11,318,693
53	2040	11							27,020	-		11,345,713
54	2041	10							27,084	-		11,372,797
55	2042	9							27,149	-		11,399,945
56	2043	8							27,213	-		11,427,159
57	2044	7							27,278	-		11,454,437
58	2045	6							27,344	-		11,481,781
59	2046	5							27,409	-		11,509,190
60	2047	4							27,474	-		11,536,664
61	2048	3							27,540	-		11,564,204
62	2049	2							27,606	-		11,591,810
63	2050	1							27,671	-		11,619,481
64	2051	0									(11,619,481)	-
								$ -	$ 11,619,481	$ -		$ 562,619,397

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	10,537,351
Forecast Additions	1,082,130
Total Additions	11,619,481
Gross Salvage Value	929,558
Less Cost of Removal	1,161,948
Net Salvage Value	(232,390)
Total to be Recovered	11,851,871
Forecast Plant Balances	562,619,397
Whole Life Accrual Rate	2.11%
Cost of Removal Accrual Rate	0.21%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.90%
Depreciable Service Life, years	47.5

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	10,537,351
Forecast Additions	1,082,130
Gross Salvage Value	929,558
Less Cost of Removal	1,161,948
Net Salvage Value	(232,390)
Forecast Plant Balances	454,394,960

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, State Line Combined Cycle

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	2001
Retirement Date	2051
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances

Accou 342 Fuel Holders, Producers & Accessories

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1995	56	158,054		-	-			158,054	-		158,054
2	1996	55	-		-	-			-	-		158,054
3	1997	54	56,724		-	6,152			56,724	-		214,778
4	1998	53	1,256		-	-			1,256	-		216,034
5	1999	52		-	-	-			-	-		216,034
6	2000	51		-	-	-			-	-		216,034
7	2001	50		121,724	-	80,899			121,724	-		337,758
8	2002	49		-	-	-			-	-		337,758
9	2003	48		-	-	-			-	-		337,758
10	2004	47		90,038	-	-			90,038	-		427,796
11	2005	46		-	-	-			-	-		427,796
12	2006	45		-	-	-	-		-	-		427,796
13	2007	44		-	-	-	-		-	-		427,796
14	2008	43		-	80,899	-	185,929		185,929	80,899		532,826
15	2009	42		-	6,152	-	1,885,199		1,885,199	6,152		2,411,873
16	Total		$ 216,034	$ 211,762	$ 87,051	$ 87,051	$ 2,071,128	$ -	$ 2,498,924	$ 87,051	$ -	$ 6,848,145
17	Major Additions/Retirements											
18	Routine Activity (excluding Westar advances)			$ 211,762	$ 87,051							
19	Historical Interim Activity			3.09%	1.27%							
20	Forecast Interim Activity			3.09%	1.27%							
								Major Additions**				
21	2010	41							74,581	30,659		2,455,795
22	2011	40							75,939	31,217		2,500,518
23	2012	39							77,322	31,786		2,546,054
24	2013	38							78,730	32,364		2,592,420
25	2014	37							80,164	32,954		2,639,631
26	2015	36							81,624	33,554		2,687,701
27	2016	35							83,111	34,165		2,736,646
28	2017	34							84,624	34,787		2,786,483
29	2018	33							86,165	35,421		2,837,228
30	2019	32							87,734	36,066		2,888,896
31	2020	31							89,332	36,723		2,941,506
32	2021	30							90,959	37,391		2,995,073
33	2022	29							92,615	38,072		3,049,616
34	2023	28							94,302	38,766		3,105,152
35	2024	27							96,019	39,472		3,161,700
36	2025	26							97,768	40,190		3,219,278
37	2026	25							99,548	40,922		3,277,904
38	2027	24							101,361	41,667		3,337,597
39	2028	23							103,207	42,426		3,398,378
40	2029	22							105,086	43,199		3,460,265
41	2030	21							107,000	43,986		3,523,280
42	2031	20							108,949	44,787		3,587,442
43	2032	19							110,933	45,602		3,652,773
44	2033	18							112,953	46,433		3,719,293
45	2034	17							115,010	47,278		3,787,025
46	2035	16							117,104	48,139		3,855,990
47	2036	15							119,237	49,016		3,926,211
48	2037	14							121,408	49,908		3,997,711
49	2038	13							123,619	50,817		4,070,513
50	2039	12							125,871	51,743		4,144,641
51	2040	11							128,163	52,685		4,220,119
52	2041	10							130,497	53,645		4,296,971
53	2042	9							132,873	54,621		4,375,223
54	2043	8							135,293	55,616		4,454,899
55	2044	7							137,757	56,629		4,536,027
56	2045	6							140,265	57,660		4,618,632
57	2046	5							142,820	58,710		4,702,742
58	2047	4							145,421	59,779		4,788,383
59	2048	3							148,069	60,868		4,875,584
60	2049	2							150,765	61,977		4,964,373
61	2050	1							153,511	63,105		5,054,779
62	2051	0									(5,054,779)	-
								$ -	$ 6,986,636	$ 1,931,857		$ 154,618,599

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	2,498,924
Forecast Additions	4,487,712
Total Additions	6,986,636
Gross Salvage Value	404,382
Less Cost of Removal	505,478
Net Salvage Value	(101,096)
Total to be Recovered	7,087,731
Forecast Plant Balances	154,618,599
Whole Life Accrual Rate	4.58%
Cost of Removal Accrual Rate	0.33%
Whole Life Accrual Rate (Excluding Cost of Removal)	4.26%
Depreciable Service Life, years	21.8
Account Balance 12/31/09	2,411,873
Forecast Additions	4,487,712
Gross Salvage Value	404,382
Less Cost of Removal	505,478
Net Salvage Value	(101,096)
Forecast Plant Balances	147,770,454

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, State Line Combined Cycle

Gross Salvage	10%
Cost of Removal	5%
Net Salvage	5%
Install Date	2001
Retirement Date	2051
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances
Accou 343 Prime Movers

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1995	56	-		-	-			-	-		-
2	1996	55	-		-	-			-	-		-
3	1997	54	12,678,547		-	205,620			12,678,547	-		12,678,547
4	1998	53	-		-	-			-	-		12,678,547
5	1999	52		74,707	-	-			74,707	-		12,753,254
6	2000	51		212,156	-	-			212,156	-		12,965,410
7	2001	50		90,852,813	-	441,808	(4,087,066)		86,765,747	-		99,731,157
8	2002	49		1,702,065	-	-			1,702,065	-		101,433,222
9	2003	48		-	-	-			-	-		101,433,222
10	2004	47		68,742	-	-			68,742	-		101,501,964
11	2005	46		-	-	-			-	-		101,501,964
12	2006	45		354,505	-	-	-		354,505	-		101,856,469
13	2007	44		-	-	-	(413)		(413)	-		101,856,056
14	2008	43		-	415,707	-	177,666		177,666	415,707		101,618,015
15	2009	42		5,594,032	231,721	-	286,553		5,880,585	231,721		107,266,879
16	Total		$ 12,678,547	$ 98,859,020	$ 647,428	$ 647,428	$ (3,623,260)	$ -	$ 107,914,307	$ 647,428	$ -	$ 969,274,706
17	Major Additions/Retirements											
18	2001			$ 90,852,813								
19	2002			$ 1,702,065								
20	2009			$ 5,594,032								
21	Routine Activity (excluding Westar advances)			$ 710,110	$ 647,428							
22	Historical Interim Activity			0.07%	0.07%							
23	Forecast Interim Activity			0.07%	0.07%							
								Major Additions**				
24	2010	41						855,000		71,649		108,050,230
25	2011	40						1,440,000		72,172		109,418,058
26	2012	39						4,020,000		73,086		113,364,972
27	2013	38						4,230,000		75,722		117,519,250
28	2014	37						1,200,000		78,497		118,640,752
29	2015	36							86,919	79,246		118,648,425
30	2016	35							86,924	79,251		118,656,098
31	2017	34							86,930	79,256		118,663,771
32	2018	33							86,935	79,262		118,671,445
33	2019	32							86,941	79,267		118,679,119
34	2020	31							86,947	79,272		118,686,794
35	2021	30							86,952	79,277		118,694,470
36	2022	29							86,958	79,282		118,702,145
37	2023	28							86,964	79,287		118,709,822
38	2024	27							86,969	79,292		118,717,499
39	2025	26							86,975	79,297		118,725,176
40	2026	25							86,980	79,303		118,732,854
41	2027	24							86,986	79,308		118,740,532
42	2028	23							86,992	79,313		118,748,211
43	2029	22							86,997	79,318		118,755,890
44	2030	21							87,003	79,323		118,763,570
45	2031	20							87,009	79,328		118,771,250
46	2032	19							87,014	79,333		118,778,931
47	2033	18							87,020	79,339		118,786,612
48	2034	17							87,025	79,344		118,794,294
49	2035	16							87,031	79,349		118,801,977
50	2036	15							87,037	79,354		118,809,659
51	2037	14							87,042	79,359		118,817,343
52	2038	13							87,048	79,364		118,825,027
53	2039	12							87,054	79,369		118,832,711
54	2040	11							87,059	79,374		118,840,396
55	2041	10							87,065	79,380		118,848,081
56	2042	9							87,070	79,385		118,855,767
57	2043	8							87,076	79,390		118,863,453
58	2044	7							87,082	79,395		118,871,140
59	2045	6							87,087	79,400		118,878,827
60	2046	5							87,093	79,405		118,886,515
61	2047	4							87,099	79,410		118,894,203
62	2048	3							87,104	79,416		118,901,892
63	2049	2							87,110	79,421		118,909,581
64	2050	1							87,116	79,426		118,917,271
65	2051	0									(118,917,271)	-
								$ 11,745,000	$ 111,046,920	$ 3,874,649		$5,812,448,716

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	107,914,307
Forecast Additions	14,877,613
Total Additions	122,791,920
Gross Salvage Value	11,891,727
Less Cost of Removal	5,945,864
Net Salvage Value	5,945,864
Total to be Recovered	116,846,056
Forecast Plant Balances	5,812,448,716
Whole Life Accrual Rate	2.01%
Cost of Removal Accrual Rate	0.10%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.91%
Depreciable Service Life, years	49.7

Account Balance 12/31/09	107,266,879
Forecast Additions	14,877,613
Gross Salvage Value	11,891,727
Less Cost of Removal	5,945,864
Net Salvage Value	5,945,864
Forecast Plant Balances	4,843,174,010

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, State Line Combined Cycle

Gross Salvage	10%
Cost of Removal	5%
Net Salvage	5%
Install Date	2001
Retirement Date	2051
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances
Accou 344 Generators

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1995	56	-		-	-			-	-		-
2	1996	55	-		-	-			-	-		-
3	1997	54	4,381,640		-	-			4,381,640	-		4,381,640
4	1998	53	-		-	-			-	-		4,381,640
5	1999	52		-	-	-			-	-		4,381,640
6	2000	51		-	-	-			-	-		4,381,640
7	2001	50		26,044,201	-	8,467,351			26,044,201	-		30,425,841
8	2002	49		-	-	-			-	-		30,425,841
9	2003	48		-	-	-			-	-		30,425,841
10	2004	47		-	-	-			-	-		30,425,841
11	2005	46		-	-	-			-	-		30,425,841
12	2006	45		-	-	-			-	-		30,425,841
13	2007	44		-	-	-			-	-		30,425,841
14	2008	43		-	-	-	137,659		137,659	-		30,563,500
15	2009	42		-	8,467,351	-	6,375,478		6,375,478	8,467,351		28,471,627
16	Total		$ 4,381,640	$ 26,044,201	$ 8,467,351	$ 8,467,351	$ 6,513,137	$ -	$ 36,938,978	$ 8,467,351	$ -	$ 289,542,574
17	Major Additions/Retirements											
18	2001			$ 26,044,201								
19	2009				$ 8,467,351							
20	Routine Activity (excluding Westar advances)			$ -	$ -							
21	Historical Interim Activity			0.00%	0.00%							
22	Forecast Interim Activity			0.00%	0.00%							
								Major Additions**				
23	2010	41							-	-		28,471,627
24	2011	40							-	-		28,471,627
25	2012	39							-	-		28,471,627
26	2013	38							-	-		28,471,627
27	2014	37							-	-		28,471,627
28	2015	36							-	-		28,471,627
29	2016	35							-	-		28,471,627
30	2017	34							-	-		28,471,627
31	2018	33							-	-		28,471,627
32	2019	32							-	-		28,471,627
33	2020	31							-	-		28,471,627
34	2021	30							-	-		28,471,627
35	2022	29							-	-		28,471,627
36	2023	28							-	-		28,471,627
37	2024	27							-	-		28,471,627
38	2025	26							-	-		28,471,627
39	2026	25							-	-		28,471,627
40	2027	24							-	-		28,471,627
41	2028	23							-	-		28,471,627
42	2029	22							-	-		28,471,627
43	2030	21							-	-		28,471,627
44	2031	20							-	-		28,471,627
45	2032	19							-	-		28,471,627
46	2033	18							-	-		28,471,627
47	2034	17							-	-		28,471,627
48	2035	16							-	-		28,471,627
49	2036	15							-	-		28,471,627
50	2037	14							-	-		28,471,627
51	2038	13							-	-		28,471,627
52	2039	12							-	-		28,471,627
53	2040	11							-	-		28,471,627
54	2041	10							-	-		28,471,627
55	2042	9							-	-		28,471,627
56	2043	8							-	-		28,471,627
57	2044	7							-	-		28,471,627
58	2045	6							-	-		28,471,627
59	2046	5							-	-		28,471,627
60	2047	4							-	-		28,471,627
61	2048	3							-	-		28,471,627
62	2049	2							-	-		28,471,627
63	2050	1							-	-		28,471,627
64	2051	0									(28,471,627)	-
								$ -	$ 36,938,978	$ 8,467,351		$ 1,456,879,281

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	36,938,978
Forecast Additions	-
Total Additions	36,938,978
Gross Salvage Value	2,847,163
Less Cost of Removal	1,423,581
Net Salvage Value	1,423,581
Total to be Recovered	35,515,397
Forecast Plant Balances	1,456,879,281
Whole Life Accrual Rate	2.44%
Cost of Removal Accrual Rate	0.10%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.34%
Depreciable Service Life, years	41.0
Account Balance 12/31/09	28,471,627
Forecast Additions	-
Gross Salvage Value	2,847,163
Less Cost of Removal	1,423,581
Net Salvage Value	1,423,581
Forecast Plant Balances	1,167,336,707

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, State Line Combined Cycle

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	2001
Retirement Date	2051
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances
Accou 345 Accessory Electric Equipment

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
1	1995	56	23,217		-	-			23,217	-		23,217
2	1996	55	-		-	-			-	-		23,217
3	1997	54	1,455,677		-	-			1,455,677	-		1,478,894
4	1998	53	-		-	-			-	-		1,478,894
5	1999	52		-	-	-			-	-		1,478,894
6	2000	51		-	-	-			-	-		1,478,894
7	2001	50		5,494,738	-	-			5,494,738	-		6,973,632
8	2002	49		-	-	-			-	-		6,973,632
9	2003	48		-	-	-			-	-		6,973,632
10	2004	47		-	-	-			-	-		6,973,632
11	2005	46		-	-	-			-	-		6,973,632
12	2006	45		68,578	-	-			68,578	-		7,042,210
13	2007	44		-	-	-			-	-		7,042,210
14	2008	43		-	-	-			-	-		7,042,210
15	2009	42		-	-	-	4,090,152		4,090,152	-		11,132,362
16	Total		$ 1,478,894	$ 5,563,316	$ -	$ -	$ 4,090,152	$ -	$ 11,132,362	$ -	$ -	$ 73,089,162
17	Major Additions/Retirements											
18	2001			$ 5,494,738								
19	Routine Activity (excluding Westar advances)			$ 68,578	$ -							
20	Historical Interim Activity			0.09%	0.00%							
21	Forecast Interim Activity			0.09%	0.00%							
								Major Additions**				
22	2010	41							10,445	-		11,142,807
23	2011	40							10,455	-		11,153,262
24	2012	39							10,465	-		11,163,727
25	2013	38							10,475	-		11,174,202
26	2014	37							10,485	-		11,184,686
27	2015	36							10,494	-		11,195,181
28	2016	35							10,504	-		11,205,685
29	2017	34							10,514	-		11,216,199
30	2018	33							10,524	-		11,226,723
31	2019	32							10,534	-		11,237,257
32	2020	31							10,544	-		11,247,800
33	2021	30							10,554	-		11,258,354
34	2022	29							10,563	-		11,268,917
35	2023	28							10,573	-		11,279,491
36	2024	27							10,583	-		11,290,074
37	2025	26							10,593	-		11,300,667
38	2026	25							10,603	-		11,311,271
39	2027	24							10,613	-		11,321,884
40	2028	23							10,623	-		11,332,507
41	2029	22							10,633	-		11,343,140
42	2030	21							10,643	-		11,353,783
43	2031	20							10,653	-		11,364,436
44	2032	19							10,663	-		11,375,099
45	2033	18							10,673	-		11,385,772
46	2034	17							10,683	-		11,396,455
47	2035	16							10,693	-		11,407,148
48	2036	15							10,703	-		11,417,851
49	2037	14							10,713	-		11,428,564
50	2038	13							10,723	-		11,439,287
51	2039	12							10,733	-		11,450,021
52	2040	11							10,743	-		11,460,764
53	2041	10							10,753	-		11,471,517
54	2042	9							10,763	-		11,482,281
55	2043	8							10,774	-		11,493,054
56	2044	7							10,784	-		11,503,838
57	2045	6							10,794	-		11,514,632
58	2046	5							10,804	-		11,525,436
59	2047	4							10,814	-		11,536,250
60	2048	3							10,824	-		11,547,074
61	2049	2							10,834	-		11,557,908
62	2050	1							10,845	-		11,568,753
63	2051	0									(11,568,753)	-
							$ -		$ 11,568,753	$ -		$ 538,622,918

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	11,132,362
Forecast Additions	436,391
Total Additions	11,568,753
Gross Salvage Value	925,500
Less Cost of Removal	1,156,875
Net Salvage Value	(231,375)
Total to be Recovered	11,800,128
Forecast Plant Balances	538,622,918
Whole Life Accrual Rate	2.19%
Cost of Removal Accrual Rate	0.21%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.98%
Depreciable Service Life, years	45.6

Account Balance 12/31/09	11,132,362
Forecast Additions	436,391
Gross Salvage Value	925,500
Less Cost of Removal	1,156,875
Net Salvage Value	(231,375)
Forecast Plant Balances	465,533,756

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, State Line Combined Cycle

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	2001
Retirement Date	2051
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances
Accou 346 Misc Power Equipment

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1995	56	61,635		-	-			61,635	-		61,635
2	1996	55	19,381		-	-			19,381	-		81,016
3	1997	54	5,673		-	-			5,673	-		86,689
4	1998	53	-		-	-			-	-		86,689
5	1999	52		-	-	-			-	-		86,689
6	2000	51		-	-	-			-	-		86,689
7	2001	50		2,660,298	-	-			2,660,298	-		2,746,987
8	2002	49		6,360	-	-			6,360	-		2,753,347
9	2003	48		13,837	-	-			13,837	-		2,767,184
10	2004	47		-	-	-			-	-		2,767,184
11	2005	46		-	-	-	(9,375)		(9,375)	-		2,757,809
12	2006	45		-	-	-	-		-	-		2,757,809
13	2007	44		-	-	-	7,704		7,704	-		2,765,513
14	2008	43		-	-	-	89,172		89,172	-		2,854,685
15	2009	42		-	-	-	(35,587)		(35,587)	-		2,819,098
16	Total		$ 86,689	$ 2,680,495	$ -	$ -	$ 51,914	$ -	$ 2,819,098	$ -	$ -	$ 25,479,023
17	Major Additions/Retirements											
18	2001			$ 2,660,298								
19	Routine Activity (excluding Westar advances)			$ 20,197	$ -							
20	Historical Interim Activity			0.08%	0.00%							
21	Forecast Interim Activity			0.08%	0.00%							
								Major Additions**				
22	2010	41							2,235	-		2,821,333
23	2011	40							2,236	-		2,823,569
24	2012	39							2,238	-		2,825,807
25	2013	38							2,240	-		2,828,047
26	2014	37							2,242	-		2,830,289
27	2015	36							2,244	-		2,832,533
28	2016	35							2,245	-		2,834,778
29	2017	34							2,247	-		2,837,025
30	2018	33							2,249	-		2,839,274
31	2019	32							2,251	-		2,841,525
32	2020	31							2,252	-		2,843,777
33	2021	30							2,254	-		2,846,031
34	2022	29							2,256	-		2,848,287
35	2023	28							2,258	-		2,850,545
36	2024	27							2,260	-		2,852,805
37	2025	26							2,261	-		2,855,066
38	2026	25							2,263	-		2,857,329
39	2027	24							2,265	-		2,859,594
40	2028	23							2,267	-		2,861,861
41	2029	22							2,269	-		2,864,130
42	2030	21							2,270	-		2,866,400
43	2031	20							2,272	-		2,868,672
44	2032	19							2,274	-		2,870,946
45	2033	18							2,276	-		2,873,222
46	2034	17							2,278	-		2,875,500
47	2035	16							2,279	-		2,877,779
48	2036	15							2,281	-		2,880,060
49	2037	14							2,283	-		2,882,343
50	2038	13							2,285	-		2,884,628
51	2039	12							2,287	-		2,886,915
52	2040	11							2,288	-		2,889,203
53	2041	10							2,290	-		2,891,493
54	2042	9							2,292	-		2,893,785
55	2043	8							2,294	-		2,896,079
56	2044	7							2,296	-		2,898,375
57	2045	6							2,298	-		2,900,672
58	2046	5							2,299	-		2,902,972
59	2047	4							2,301	-		2,905,273
60	2048	3							2,303	-		2,907,576
61	2049	2							2,305	-		2,909,881
62	2050	1							2,307	-		2,912,187
63	2051	0									(2,912,187)	-
								$ -	$ 2,912,187	$ -		$ 143,006,590

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	2,819,098
Forecast Additions	93,089
Total Additions	2,912,187
Gross Salvage Value	232,975
Less Cost of Removal	291,219
Net Salvage Value	(58,244)
Total to be Recovered	2,970,431
Forecast Plant Balances	143,006,590
Whole Life Accrual Rate	2.08%
Cost of Removal Accrual Rate	0.20%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.87%
Depreciable Service Life, years	48.1

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	2,819,098
Forecast Additions	93,089
Gross Salvage Value	232,975
Less Cost of Removal	291,219
Net Salvage Value	(58,244)
Forecast Plant Balances	117,527,567

Summary by Plant
The Empire District Electric Company
State Line Combustion Turbine

Account	Description	Direct Investment 2009$	Depreciation Rate
341	Structures & Improvements	1,103,839	4.24%
342	Fuel Holders, Producers & Accessories	3,230,198	2.31%
343	Prime Movers	27,222,288	3.56%
344	Generators	7,178,571	2.62%
345	Accessory Electric Equipment	2,892,158	2.40%
346	Misc Power Equipment	1,046,080	3.86%
	Total	42,673,134	3.25% whole life weighted average rate

Remaining Life Depreciation Rate Calculation

Per Books Balance 12/31/09	42,673,134
Forecast Interim Additions	9,631,130
Forecast Gross Salvage Value	4,918,456
Forecast Less Cost of Removal	2,984,923
Forecast Net Salvage Value	1,933,533
Forecast Total to be Recovered with COR	50,370,731
Forecast Total to be Recovered w/o COR	47,385,808
Accumulated Depreciation (2009 EOY)	(17,852,776)
Forecast Remaining Life Balance with COR	32,517,955
Forecast Remaining Life Balance w/o COR	29,533,032
Forecast Plant Balances	1,650,315,863
Remaining Life Rate with COR	1.97%
Remaining Life Rate w/o COR	1.79%
Reserve Variance with COR	21,187,059

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, State Line Combustion Turbine

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	1995
Retirement Date	2045
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances
Accou 341 Structures & Improvements Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
1	1995	50	2,072,573		-	1,025,088			2,072,573	-		2,072,573
2	1996	49	-		-	-			-	-		2,072,573
3	1997	48	582,614		-	532,896			582,614	-		2,655,187
4	1998	47	-		-	-			-	-		2,655,187
5	1999	46		-	-	-			-	-		2,655,187
6	2000	45		5,958	-	-			5,958	-		2,661,145
7	2001	44		678	1,557,829	-			678	1,557,829		1,103,994
8	2002	43		-	-	-			-	-		1,103,994
9	2003	42		-	-	-			-	-		1,103,994
10	2004	41		-	-	-			-	-		1,103,994
11	2005	40		-	-	-			-	-		1,103,994
12	2006	39		-	-	-			-	-		1,103,994
13	2007	38		-	-	-			-	-		1,103,994
14	2008	37		-	-	-			-	-		1,103,994
15	2009	36		-	155	-			-	155		1,103,839
16	Total		$ 2,655,187	$ 6,636	$ 1,557,984	$ 1,557,984	$ -	$ -	$ 2,661,823	$ 1,557,984	$ -	$ 24,707,643
17	Major Additions/Retirements											
18	2001				$ 1,557,829							
19	Routine Activity			$ 6,636	$ 155							
20	Historical Interim Activity			0.03%	0.00%							
21	Forecast Interim Activity			0.00%	0.00%							
								Major Additions**				
22	2010	35							-	-		1,103,839
23	2011	34							-	-		1,103,839
24	2012	33							-	-		1,103,839
25	2013	32							-	-		1,103,839
26	2014	31							-	-		1,103,839
27	2015	30							-	-		1,103,839
28	2016	29							-	-		1,103,839
29	2017	28							-	-		1,103,839
30	2018	27							-	-		1,103,839
31	2019	26							-	-		1,103,839
32	2020	25							-	-		1,103,839
33	2021	24							-	-		1,103,839
34	2022	23							-	-		1,103,839
35	2023	22							-	-		1,103,839
36	2024	21							-	-		1,103,839
37	2025	20							-	-		1,103,839
38	2026	19							-	-		1,103,839
39	2027	18							-	-		1,103,839
40	2028	17							-	-		1,103,839
41	2029	16							-	-		1,103,839
42	2030	15							-	-		1,103,839
43	2031	14							-	-		1,103,839
44	2032	13							-	-		1,103,839
45	2033	12							-	-		1,103,839
46	2034	11							-	-		1,103,839
47	2035	10							-	-		1,103,839
48	2036	9							-	-		1,103,839
49	2037	8							-	-		1,103,839
50	2038	7							-	-		1,103,839
51	2039	6							-	-		1,103,839
52	2040	5							-	-		1,103,839
53	2041	4							-	-		1,103,839
54	2042	3							-	-		1,103,839
55	2043	2							-	-		1,103,839
56	2044	1							-	-		1,103,839
57	2045	0									(1,103,839)	-
							$ -	$ -	$ 2,661,823	$ 1,557,984		$ 63,342,008

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	2,661,823
Forecast Additions	-
Total Additions	2,661,823
Gross Salvage Value	88,307
Less Cost of Removal	110,384
Net Salvage Value	(22,077)
Total to be Recovered	2,683,900
Forecast Plant Balances	63,342,008
Whole Life Accrual Rate	4.24%
Cost of Removal Accrual Rate	0.17%
Whole Life Accrual Rate (Excluding Cost of Removal)	4.06%
Depreciable Service Life, years	23.6

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	1,103,839
Forecast Additions	-
Gross Salvage Value	88,307
Less Cost of Removal	110,384
Net Salvage Value	(22,077)
Forecast Plant Balances	38,634,365

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, State Line Combustion Turbine

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	1995
Retirement Date	2045
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances
Accou 342 Fuel Holders, Producers & Accessories Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
1	1995	50	2,272,367		-	84,876			2,272,367	-		2,272,367
2	1996	49	-		-	-			-	-		2,272,367
3	1997	48	1,009,128		-	37,816			1,009,128	-		3,281,495
4	1998	47	28,567		-	28,566			28,567	-		3,310,062
5	1999	46		-	-	-			-	-		3,310,062
6	2000	45		-	-	-			-	-		3,310,062
7	2001	44		-	145,291	-			-	145,291		3,164,771
8	2002	43		-	-	-			-	-		3,164,771
9	2003	42		-	-	-			-	-		3,164,771
10	2004	41		-	-	-			-	-		3,164,771
11	2005	40		-	-	-			-	-		3,164,771
12	2006	39		70,554	-	-			70,554	-		3,235,325
13	2007	38		-	-	-			-	-		3,235,325
14	2008	37		-	-	-			-	-		3,235,325
15	2009	36		-	5,967	-	840		840	5,967		3,230,198
16	Total		$ 3,310,062	$ 70,554	$ 151,258	$ 151,258	$ 840	$ -	$ 3,381,456	$ 151,258	$ -	$ 46,516,443
17	Major Additions/Retirements											
18	Routine Activity			$ 71,394	$ 151,258							
19	Historical Interim Activity			0.15%	0.33%							
20	Forecast Interim Activity			0.15%	0.33%							
								Major Additions**				
21	2010	35							4,958	10,504		3,224,652
22	2011	34							4,949	10,486		3,219,116
23	2012	33							4,941	10,468		3,213,589
24	2013	32							4,932	10,450		3,208,071
25	2014	31							4,924	10,432		3,202,563
26	2015	30							4,915	10,414		3,197,065
27	2016	29							4,907	10,396		3,191,576
28	2017	28							4,898	10,378		3,186,096
29	2018	27							4,890	10,360		3,180,626
30	2019	26							4,882	10,342		3,175,165
31	2020	25							4,873	10,325		3,169,714
32	2021	24							4,865	10,307		3,164,272
33	2022	23							4,857	10,289		3,158,839
34	2023	22							4,848	10,272		3,153,416
35	2024	21							4,840	10,254		3,148,002
36	2025	20							4,832	10,236		3,142,597
37	2026	19							4,823	10,219		3,137,201
38	2027	18							4,815	10,201		3,131,815
39	2028	17							4,807	10,184		3,126,438
40	2029	16							4,798	10,166		3,121,070
41	2030	15							4,790	10,149		3,115,712
42	2031	14							4,782	10,131		3,110,362
43	2032	13							4,774	10,114		3,105,022
44	2033	12							4,766	10,097		3,099,691
45	2034	11							4,757	10,079		3,094,369
46	2035	10							4,749	10,062		3,089,057
47	2036	9							4,741	10,045		3,083,753
48	2037	8							4,733	10,027		3,078,458
49	2038	7							4,725	10,010		3,073,173
50	2039	6							4,717	9,993		3,067,897
51	2040	5							4,709	9,976		3,062,629
52	2041	4							4,701	9,959		3,057,371
53	2042	3							4,692	9,942		3,052,122
54	2043	2							4,684	9,925		3,046,882
55	2044	1							4,676	9,908		3,041,651
56	2045	0									(3,041,651)	-
							$ -	$ -	$ 3,550,007	$ 508,356		$ 156,146,476

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	3,381,456
Forecast Additions	168,551
Total Additions	3,550,007
Gross Salvage Value	243,332
Less Cost of Removal	304,165
Net Salvage Value	(60,833)
Total to be Recovered	3,610,840
Forecast Plant Balances	156,146,476
Whole Life Accrual Rate	2.31%
Cost of Removal Accrual Rate	0.19%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.12%
Depreciable Service Life, years	43.2
Account Balance 12/31/09	3,230,198
Forecast Additions	168,551
Gross Salvage Value	243,332
Less Cost of Removal	304,165
Net Salvage Value	(60,833)
Forecast Plant Balances	109,630,033

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, State Line Combustion Turbine

Gross Salvage	10%
Cost of Removal	5%
Net Salvage	5%
Install Date	1995
Retirement Date	2045
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances
Accou 343 Prime Movers Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
				Transaction Year								
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Vintage Year Retirements	Advance Additions	Advance Retirements	Adjusted Transaction Year Additions	Adjusted Transaction Year Retirements	Transfers and Adjustments	End of Year Plant Balance*
1	1995	50	28,558,733		-	4,814,872			28,558,733	-		28,558,733
2	1996	49	-		-	-			-	-		28,558,733
3	1997	48	10,153,242		-	8,552,366			10,153,242	-		38,711,975
4	1998	47	-		-	-			-	-		38,711,975
5	1999	46		1,699,597	-	1,699,597			1,699,597	-		40,411,572
6	2000	45		3,484,498	-	3,484,498			3,484,498	-		43,896,070
7	2001	44		4,342,181	17,779,191	4,080,654			4,342,181	17,779,191		30,459,060
8	2002	43		-	-	-			-	-		30,459,060
9	2003	42		-	-	-			-	-		30,459,060
10	2004	41		658,543	-	-			658,543	-		31,117,603
11	2005	40		867,296	-	-			867,296	-		31,984,899
12	2006	39		20,217	2,687,951	20,217			20,217	2,687,951		29,317,165
13	2007	38		12,000	136,081	-			12,000	136,081		29,193,084
14	2008	37		-	1,899,982	-			-	1,899,982		27,293,102
15	2009	36		-	148,999	-	78,185		78,185	148,999		27,222,288
16	Total		$ 38,711,975	$ 11,084,332	$ 22,652,204	$ 22,652,204	$ 78,185	$ -	$ 49,874,492	$ 22,652,204	$ -	$ 486,354,379
17	Major Additions/Retirements											
18	2000			$ 3,484,498								
19	2001			$ 4,342,181	$ 17,779,191							
20	2006				$ 2,687,951							
21	2008				$ 1,899,982							
22	Routine Activity			$ 3,335,838	$ 285,080							
23	Historical Interim Activity			0.69%	0.06%							
24	Forecast Interim Activity			0.69%	0.06%							
								Major Additions**				
25	2010	35						295,000		15,957		27,501,331
26	2011	34						350,000		16,120		27,835,211
27	2012	33						375,000		16,316		28,193,896
28	2013	32						450,000		16,526		28,627,370
29	2014	31						400,000		16,780		29,010,589
30	2015	30							198,980	17,005		29,192,564
31	2016	29							200,228	17,111		29,375,681
32	2017	28							201,484	17,219		29,559,946
33	2018	27							202,748	17,327		29,745,367
34	2019	26							204,019	17,435		29,931,950
35	2020	25							205,299	17,545		30,119,705
36	2021	24							206,587	17,655		30,308,637
37	2022	23							207,883	17,766		30,498,754
38	2023	22							209,187	17,877		30,690,064
39	2024	21							210,499	17,989		30,882,573
40	2025	20							211,819	18,102		31,076,291
41	2026	19							213,148	18,216		31,271,223
42	2027	18							214,485	18,330		31,467,378
43	2028	17							215,830	18,445		31,664,764
44	2029	16							217,184	18,561		31,863,388
45	2030	15							218,547	18,677		32,063,257
46	2031	14							219,917	18,794		32,264,381
47	2032	13							221,297	18,912		32,466,766
48	2033	12							222,685	19,031		32,670,420
49	2034	11							224,082	19,150		32,875,352
50	2035	10							225,488	19,270		33,081,570
51	2036	9							226,902	19,391		33,289,081
52	2037	8							228,325	19,513		33,497,893
53	2038	7							229,757	19,635		33,708,016
54	2039	6							231,199	19,758		33,919,456
55	2040	5							232,649	19,882		34,132,223
56	2041	4							234,108	20,007		34,346,324
57	2042	3							235,577	20,132		34,561,769
58	2043	2							237,054	20,259		34,778,564
59	2044	1							238,541	20,386		34,996,720
60	2045	0									(34,996,720)	-
							$ 1,870,000		$ 56,420,000	$ 23,293,280		$ 1,587,822,852

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	49,874,492
Forecast Additions	8,415,508
Total Additions	58,290,000
Gross Salvage Value	3,499,672
Less Cost of Removal	1,749,836
Net Salvage Value	1,749,836
Total to be Recovered	56,540,164
Forecast Plant Balances	1,587,822,852
Whole Life Accrual Rate	3.56%
Cost of Removal Accrual Rate	0.11%
Whole Life Accrual Rate (Excluding Cost of Removal)	3.45%
Depreciable Service Life, years	28.1

Account Balance 12/31/09	27,222,288
Forecast Additions	8,415,508
Gross Salvage Value	3,499,672
Less Cost of Removal	1,749,836
Net Salvage Value	1,749,836
Forecast Plant Balances	1,101,468,473

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, State Line Combustion Turbine

Gross Salvage	10%
Cost of Removal	5%
Net Salvage	5%
Install Date	1995
Retirement Date	2045
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances
Accou 344 Generators

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
1	1995	50	6,716,153		-	-			6,716,153	-		6,716,153
2	1996	49	-		-	-			-	-		6,716,153
3	1997	48	3,145,772		-	2,812,721			3,145,772	-		9,861,925
4	1998	47	-		-	-			-	-		9,861,925
5	1999	46		-	-	-			-	-		9,861,925
6	2000	45		-	-	-			-	-		9,861,925
7	2001	44		-	2,812,721	-			-	2,812,721		7,049,204
8	2002	43		-	-	-			-	-		7,049,204
9	2003	42		-	-	-			-	-		7,049,204
10	2004	41		-	-	-			-	-		7,049,204
11	2005	40		-	-	-			-	-		7,049,204
12	2006	39		-	-	-			-	-		7,049,204
13	2007	38		-	-	-			-	-		7,049,204
14	2008	37		-	-	-			-	-		7,049,204
15	2009	36		-	-	-	129,367		129,367	-		7,178,571
16	Total		$ 9,861,925	$ -	$ 2,812,721	$ 2,812,721	$ 129,367	$ -	$ 9,991,292	$ 2,812,721	$ -	$ 116,452,209
17	Major Additions/Retirements											
18	2001				$ 2,812,721							
19	Routine Activity			$ -	$ -							
20	Historical Interim Activity			0.00%	0.00%							
21	Forecast Interim Activity			0.00%	0.00%							
								Major Additions**				
22	2010	35							-	-		7,178,571
23	2011	34							-	-		7,178,571
24	2012	33							-	-		7,178,571
25	2013	32							-	-		7,178,571
26	2014	31							-	-		7,178,571
27	2015	30							-	-		7,178,571
28	2016	29							-	-		7,178,571
29	2017	28							-	-		7,178,571
30	2018	27							-	-		7,178,571
31	2019	26							-	-		7,178,571
32	2020	25							-	-		7,178,571
33	2021	24							-	-		7,178,571
34	2022	23							-	-		7,178,571
35	2023	22							-	-		7,178,571
36	2024	21							-	-		7,178,571
37	2025	20							-	-		7,178,571
38	2026	19							-	-		7,178,571
39	2027	18							-	-		7,178,571
40	2028	17							-	-		7,178,571
41	2029	16							-	-		7,178,571
42	2030	15							-	-		7,178,571
43	2031	14							-	-		7,178,571
44	2032	13							-	-		7,178,571
45	2033	12							-	-		7,178,571
46	2034	11							-	-		7,178,571
47	2035	10							-	-		7,178,571
48	2036	9							-	-		7,178,571
49	2037	8							-	-		7,178,571
50	2038	7							-	-		7,178,571
51	2039	6							-	-		7,178,571
52	2040	5							-	-		7,178,571
53	2041	4							-	-		7,178,571
54	2042	3							-	-		7,178,571
55	2043	2							-	-		7,178,571
56	2044	1							-	-		7,178,571
57	2045	0									(7,178,571)	-
									$ -	$ 9,991,292	$ 2,812,721	$ 367,702,194

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	9,991,292
Forecast Additions	-
Total Additions	9,991,292
Gross Salvage Value	717,857
Less Cost of Removal	358,929
Net Salvage Value	358,929
Total to be Recovered	9,632,363
Forecast Plant Balances	367,702,194
Whole Life Accrual Rate	2.62%
Cost of Removal Accrual Rate	0.10%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.52%
Depreciable Service Life, years	38.2

Account Balance 12/31/09	7,178,571
Forecast Additions	-
Gross Salvage Value	717,857
Less Cost of Removal	358,929
Net Salvage Value	358,929
Forecast Plant Balances	251,249,985

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, State Line Combustion Turbine

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	1995
Retirement Date	2045
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances
Accou 345 Accessory Electric Equipment

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year			Adjusted Transaction Year			End of Year
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Plant Balance*
1	1995	50	2,213,217		-	11,591			2,213,217	-		2,213,217
2	1996	49	4,151		-	-			4,151	-		2,217,368
3	1997	48	969,686		-	969,686			969,686	-		3,187,054
4	1998	47	-		-	-			-	-		3,187,054
5	1999	46		-	-	-			-	-		3,187,054
6	2000	45		25,422	-	-			25,422	-		3,212,476
7	2001	44		19,648	981,277	-			19,648	981,277		2,250,847
8	2002	43		-	-	-			-	-		2,250,847
9	2003	42		-	-	-			-	-		2,250,847
10	2004	41		-	-	-			-	-		2,250,847
11	2005	40		-	-	-			-	-		2,250,847
12	2006	39		-	-	-			-	-		2,250,847
13	2007	38		-	-	-			-	-		2,250,847
14	2008	37		-	-	-			-	-	639,824	2,890,671
15	2009	36		-	-	-	1,487		1,487	-		2,892,158
16	Total		$ 3,187,054	$ 45,070	$ 981,277	$ 981,277	$ 1,487	$ -	$ 3,233,611	$ 981,277	$ 639,824	$ 38,742,981
17	Major Additions/Retirements											
18	2001				981,277							
19	Routine Activity			$ 45,070	$ -							
20	Historical Interim Activity			0.12%	0.00%							
21	Forecast Interim Activity			0.12%	0.00%							
								Major Additions**				
22	2010	35							3,364	-		2,895,522
23	2011	34							3,368	-		2,898,891
24	2012	33							3,372	-		2,902,263
25	2013	32							3,376	-		2,905,639
26	2014	31							3,380	-		2,909,020
27	2015	30							3,384	-		2,912,404
28	2016	29							3,388	-		2,915,792
29	2017	28							3,392	-		2,919,184
30	2018	27							3,396	-		2,922,580
31	2019	26							3,400	-		2,925,979
32	2020	25							3,404	-		2,929,383
33	2021	24							3,408	-		2,932,791
34	2022	23							3,412	-		2,936,203
35	2023	22							3,416	-		2,939,618
36	2024	21							3,420	-		2,943,038
37	2025	20							3,424	-		2,946,462
38	2026	19							3,428	-		2,949,889
39	2027	18							3,432	-		2,953,321
40	2028	17							3,436	-		2,956,757
41	2029	16							3,440	-		2,960,196
42	2030	15							3,444	-		2,963,640
43	2031	14							3,448	-		2,967,087
44	2032	13							3,452	-		2,970,539
45	2033	12							3,456	-		2,973,995
46	2034	11							3,460	-		2,977,454
47	2035	10							3,464	-		2,980,918
48	2036	9							3,468	-		2,984,386
49	2037	8							3,472	-		2,987,858
50	2038	7							3,476	-		2,991,333
51	2039	6							3,480	-		2,994,813
52	2040	5							3,484	-		2,998,297
53	2041	4							3,488	-		3,001,785
54	2042	3							3,492	-		3,005,277
55	2043	2							3,496	-		3,008,773
56	2044	1							3,500	-		3,012,273
57	2045	0									(3,012,273)	-
							$ -	$ -	$ 3,353,726	$ 981,277		$ 142,116,342

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	3,873,435
Forecast Additions	(519,709)
Total Additions	3,353,726
Gross Salvage Value	240,982
Less Cost of Removal	301,227
Net Salvage Value	(60,245)
Total to be Recovered	3,413,972
Forecast Plant Balances	142,116,342
Whole Life Accrual Rate	2.40%
Cost of Removal Accrual Rate	0.21%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.19%
Depreciable Service Life, years	41.6
Account Balance 12/31/09	2,892,158
Forecast Additions	120,115
Gross Salvage Value	240,982
Less Cost of Removal	301,227
Net Salvage Value	(60,245)
Forecast Plant Balances	103,373,361

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, State Line Combustion Turbine

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	1995
Retirement Date	2045
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances
Accou 346 Misc Power Equipment

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1995	50	34,968		-	30,771			34,968	-		34,968
2	1996	49	9,676		-	9,676			9,676	-		44,644
3	1997	48	35,383		-	2,832			35,383	-		80,027
4	1998	47	-		-	-			-	-		80,027
5	1999	46		-	-	-			-	-		80,027
6	2000	45		2,001	-	-			2,001	-		82,028
7	2001	44		666,782	43,279	9,880			666,782	43,279		705,531
8	2002	43		-	-	-			-	-		705,531
9	2003	42		-	-	-			-	-		705,531
10	2004	41		17,476	-	-	-		17,476	-		723,007
11	2005	40		33,490	-	-	-		33,490	-		756,497
12	2006	39		39,554	-	9,089	(2,168)		37,386	-		793,883
13	2007	38		10,815	-	-	-		10,815	-		804,698
14	2008	37		205,238	-	-	2,168		207,406	-		1,012,104
15	2009	36		-	18,969	-	52,945		52,945	18,969		1,046,080
16	Total		$ 80,027	$ 975,356	$ 62,248	$ 62,248	$ 52,945	$ -	$ 1,108,328	$ 62,248	$ -	$ 7,654,583
17	Major Additions/Retirements											
18	2001			$ 666,782								
19	2008			$ 205,238								
20	Routine Activity			$ 156,281	$ 62,248							
21	Historical Interim Activity			2.04%	0.81%							
22	Forecast Interim Activity			2.04%	0.81%							
								Major Additions**				
23	2010	35							21,357	8,507		1,058,931
24	2011	34							21,620	8,611		1,071,939
25	2012	33							21,885	8,717		1,085,107
26	2013	32							22,154	8,824		1,098,437
27	2014	31							22,426	8,933		1,111,931
28	2015	30							22,702	9,042		1,125,591
29	2016	29							22,981	9,153		1,139,418
30	2017	28							23,263	9,266		1,153,415
31	2018	27							23,549	9,380		1,167,584
32	2019	26							23,838	9,495		1,181,928
33	2020	25							24,131	9,612		1,196,447
34	2021	24							24,427	9,730		1,211,145
35	2022	23							24,728	9,849		1,226,023
36	2023	22							25,031	9,970		1,241,084
37	2024	21							25,339	10,093		1,256,331
38	2025	20							25,650	10,217		1,271,764
39	2026	19							25,965	10,342		1,287,387
40	2027	18							26,284	10,469		1,303,202
41	2028	17							26,607	10,598		1,319,211
42	2029	16							26,934	10,728		1,335,417
43	2030	15							27,265	10,860		1,351,822
44	2031	14							27,600	10,993		1,368,429
45	2032	13							27,939	11,128		1,385,239
46	2033	12							28,282	11,265		1,402,256
47	2034	11							28,629	11,403		1,419,482
48	2035	10							28,981	11,543		1,436,920
49	2036	9							29,337	11,685		1,454,572
50	2037	8							29,697	11,829		1,472,441
51	2038	7							30,062	11,974		1,490,529
52	2039	6							30,432	12,121		1,508,839
53	2040	5							30,805	12,270		1,527,375
54	2041	4							31,184	12,421		1,546,138
55	2042	3							31,567	12,573		1,565,131
56	2043	2							31,955	12,728		1,584,358
57	2044	1							32,347	12,884		1,603,821
58	2045	0									(1,603,821)	-
								$ -	$ 2,035,283	$ 431,462		$ 53,614,229

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	1,108,328
Forecast Additions	926,955
Total Additions	2,035,283
Gross Salvage Value	128,306
Less Cost of Removal	160,382
Net Salvage Value	(32,076)
Total to be Recovered	2,067,360
Forecast Plant Balances	53,614,229
Whole Life Accrual Rate	3.86%
Cost of Removal Accrual Rate	0.30%
Whole Life Accrual Rate (Excluding Cost of Removal)	3.56%
Depreciable Service Life, years	25.9

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	1,046,080
Forecast Additions	926,955
Gross Salvage Value	128,306
Less Cost of Removal	160,382
Net Salvage Value	(32,076)
Forecast Plant Balances	45,959,646

Summary by Plant
The Empire District Electric Company
Energy Center Combustion Turbine

Account	Description	Direct Investment 2009$	Depreciation Rate
341	Structures & Improvements	1,948,256	2.19%
342	Fuel Holders, Producers & Accessories	1,679,636	3.03%
343	Prime Movers	27,551,769	2.33%
344	Generators	4,504,459	2.10%
345	Accessory Electric Equipment	2,091,864	1.20%
346	Misc Power Equipment	1,458,410	2.75%
	Total	39,234,394	2.28% whole life weighted average rate

Remaining Life Depreciation Rate Calculation

Per Books Balance 12/31/09	39,234,394
Forecast Interim Additions	2,290,136
Forecast Gross Salvage Value	3,311,566
Forecast Less Cost of Removal	2,168,476
Forecast Net Salvage Value	1,143,090
Forecast Total to be Recovered with COR	40,381,440
Forecast Total to be Recovered w/o COR	38,212,964
Accumulated Depreciation (2009 EOY)	(29,086,085)
Forecast Remaining Life Balance with COR	11,295,355
Forecast Remaining Life Balance w/o COR	9,126,879
Forecast Plant Balances	883,818,086
Remaining Life Rate with COR	1.28%
Remaining Life Rate w/o COR	1.03%
Reserve Variance with COR	8,889,380

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, Energy Center Combustion Turb

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	1978
Retirement Date	2031
Service Life, Yrs	53

Historical and Forecast Plant Additions & Balances
Accou 341 Structures & Improvements

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year			Adjusted Transaction Year			Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Balance*
1	1977	54	763		-	-			763	-		763
2	1978	53	1,453,319		-	1,657			1,453,319	-		1,454,082
3	1979	52	-		-	-			-	-		1,454,082
4	1980	51	-		-	-			-	-		1,454,082
5	1981	50	227,761		-	-			227,761	-		1,681,843
6	1982	49	1,369		-	-			1,369	-		1,683,212
7	1983	48	-		-	-			-	-		1,683,212
8	1984	47	-		-	-			-	-		1,683,212
9	1985	46	-		-	-			-	-		1,683,212
10	1986	45	-		-	-			-	-		1,683,212
11	1987	44	-		-	-			-	-		1,683,212
12	1988	43	-		-	-			-	-		1,683,212
13	1989	42	-		-	-			-	-		1,683,212
14	1990	41	-		-	-			-	-		1,683,212
15	1991	40	-		-	-			-	-		1,683,212
16	1992	39	-		-	-			-	-		1,683,212
17	1993	38	-		-	-			-	-		1,683,212
18	1994	37	1,786		-	-			1,786	-		1,684,998
19	1995	36	-		-	-			-	-		1,684,998
20	1996	35	-		-	-			-	-		1,684,998
21	1997	34	11,045		-	-			11,045	-		1,696,043
22	1998	33	39,665		-	-			39,665	-		1,735,708
23	1999	32		113,958	-	-			113,958	-		1,849,666
24	2000	31		35,111	-	-			35,111	-		1,884,777
25	2001	30		-	-	-			-	-		1,884,777
26	2002	29		-	-	-			-	-		1,884,777
27	2003	28		-	1,657	-			-	1,657		1,883,120
28	2004	27		50,612	-	-			50,612	-		1,933,732
29	2005	26		-	-	-			-	-		1,933,732
30	2006	25		-	-	-			-	-		1,933,732
31	2007	24		8,819	-	-			8,819	-		1,942,551
31	2008	23		5,705	-	-			5,705	-		1,948,256
32	2009	22		-	-	-			-	-		1,948,256
33	Total		$ 1,735,708	$ 214,205	$ 1,657	$ 1,657	$ -	$ -	$ 1,949,913	$ 1,657	$ -	$ 55,757,517
34	Major Additions/Retirements											
35	Routine Activity			$ 214,205	$ 1,657							
36	Historical Interim Activity			0.38%	0.00%							
37	Forecast Interim Activity			0.38%	0.00%							
								Major Additions**				
38	2010	21							7,485	58		1,955,683
39	2011	20							7,513	58		1,963,138
40	2012	19							7,542	58		1,970,621
41	2013	18							7,571	59		1,978,133
42	2014	17							7,599	59		1,985,674
43	2015	16							7,628	59		1,993,243
44	2016	15							7,657	59		2,000,842
45	2017	14							7,687	59		2,008,469
46	2018	13							7,716	60		2,016,125
47	2019	12							7,745	60		2,023,811
48	2020	11							7,775	60		2,031,525
49	2021	10							7,805	60		2,039,270
50	2022	9							7,834	61		2,047,043
51	2023	8							7,864	61		2,054,847
52	2024	7							7,894	61		2,062,680
53	2025	6							7,924	61		2,070,543
54	2026	5							7,954	62		2,078,436
55	2027	4							7,985	62		2,086,359
56	2028	3							8,015	62		2,094,312
57	2029	2							8,046	62		2,102,295
58	2030	1							8,076	62		2,110,309
59	2031	0									(2,110,309)	-
									$ 2,113,230	$ 2,920		$ 98,430,875

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	1,949,913
Forecast Additions	163,317
Total Additions	2,113,230
Gross Salvage Value	168,825
Less Cost of Removal	211,031
Net Salvage Value	(42,206)
Total to be Recovered	2,155,436
Forecast Plant Balances	98,430,875
Whole Life Accrual Rate	2.19%
Cost of Removal Accrual Rate	0.21%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.98%
Depreciable Service Life, years	45.7

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	1,948,256
Forecast Additions	163,317
Gross Salvage Value	168,825
Less Cost of Removal	211,031
Net Salvage Value	(42,206)
Forecast Plant Balances	42,673,358

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, Energy Center Combustion Turb

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	1978
Retirement Date	2031
Service Life, Yrs	53

Historical and Forecast Plant Additions & Balances
Accou 342 Fuel Holders, Producers & Accessories

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1977	54	-		-	-			-	-		-
2	1978	53	877,616		-	-			877,616	-		877,616
3	1979	52	-		-	-			-	-		877,616
4	1980	51	-		-	-			-	-		877,616
5	1981	50	98,049		-	-			98,049	-		975,665
6	1982	49	1,310		-	-			1,310	-		976,975
7	1983	48	489		-	-			489	-		977,464
8	1984	47	-		-	-			-	-		977,464
9	1985	46	-		-	-			-	-		977,464
10	1986	45	-		-	-			-	-		977,464
11	1987	44	4,948		-	-			4,948	-		982,412
12	1988	43	-		-	-			-	-		982,412
13	1989	42	-		-	-			-	-		982,412
14	1990	41	-		-	-			-	-		982,412
15	1991	40	-		-	-			-	-		982,412
16	1992	39	-		-	-			-	-		982,412
17	1993	38	-		-	-			-	-		982,412
18	1994	37	-		-	-			-	-		982,412
19	1995	36	183,052		-	-			183,052	-		1,165,464
20	1996	35	-		-	-			-	-		1,165,464
21	1997	34	-		-	-			-	-		1,165,464
22	1998	33	-		-	-			-	-		1,165,464
23	1999	32		-	-	-			-	-		1,165,464
24	2000	31		42,527	-	-			42,527	-		1,207,991
25	2001	30		-	-	-			-	-		1,207,991
26	2002	29		-	-	-			-	-		1,207,991
27	2003	28		1,363	-	-			1,363	-		1,209,354
28	2004	27		-	-	-			-	-		1,209,354
29	2005	26		78,675	-	-			78,675	-		1,288,029
30	2006	25		36,643	-	-			36,643	-		1,324,672
31	2007	24		-	-	-			-	-		1,324,672
31	2008	23		-	-	-			-	-		1,324,672
32	2009	22		-	-	-	354,964		354,964	-		1,679,636
33	Total		$ 1,165,464	$ 159,208	$ -	$ -	$ 354,964	$ -	$ 1,679,636	$ -	$ -	$ 35,166,322
34	Major Additions/Retirements											
35	Routine Activity			$ 514,172	$ -							
36	Historical Interim Activity			1.46%	0.00%							
37	Forecast Interim Activity			1.46%	0.00%							
								Major Additions**				
38	2010	21							24,558	-		1,704,194
39	2011	20							24,917	-		1,729,111
40	2012	19							25,282	-		1,754,393
41	2013	18							25,651	-		1,780,044
42	2014	17							26,026	-		1,806,071
43	2015	16							26,407	-		1,832,477
44	2016	15							26,793	-		1,859,270
45	2017	14							27,185	-		1,886,455
46	2018	13							27,582	-		1,914,037
47	2019	12							27,985	-		1,942,023
48	2020	11							28,395	-		1,970,417
49	2021	10							28,810	-		1,999,227
50	2022	9							29,231	-		2,028,458
51	2023	8							29,658	-		2,058,116
52	2024	7							30,092	-		2,088,208
53	2025	6							30,532	-		2,118,740
54	2026	5							30,978	-		2,149,719
55	2027	4							31,431	-		2,181,150
56	2028	3							31,891	-		2,213,041
57	2029	2							32,357	-		2,245,398
58	2030	1							32,830	-		2,278,229
59	2031	0									(2,278,229)	-
									$ 2,278,229	$ -		$ 76,705,102

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	1,679,636
Forecast Additions	598,593
Total Additions	2,278,229
Gross Salvage Value	182,258
Less Cost of Removal	227,823
Net Salvage Value	(45,565)
Total to be Recovered	2,323,793
Forecast Plant Balances	76,705,102
Whole Life Accrual Rate	3.03%
Cost of Removal Accrual Rate	0.30%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.73%
Depreciable Service Life, years	33.0
Account Balance 12/31/09	1,679,636
Forecast Additions	598,593
Gross Salvage Value	182,258
Less Cost of Removal	227,823
Net Salvage Value	(45,565)
Forecast Plant Balances	41,538,780

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, Energy Center Combustion Turb

Gross Salvage	10%
Cost of Removal	5%
Net Salvage	5%
Install Date	1978
Retirement Date	2031
Service Life, Yrs	53

Historical and Forecast Plant Additions & Balances
Accou 343 Prime Movers

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1977	54	-		-	-			-	-		-
2	1978	53	7,750,964		-	182,824			7,750,964	-		7,750,964
3	1979	52	-		-	-			-	-		7,750,964
4	1980	51	-		-	-			-	-		7,750,964
5	1981	50	8,758,466		-	550,419			8,758,466	-		16,509,430
6	1982	49	-		-	-			-	-		16,509,430
7	1983	48	-		-	-			-	-		16,509,430
8	1984	47	-		-	-			-	-		16,509,430
9	1985	46	-		-	-			-	-		16,509,430
10	1986	45	7,094		-	-			7,094	-		16,516,524
11	1987	44	-		-	-			-	-		16,516,524
12	1988	43	2,027		-	-			2,027	-		16,518,551
13	1989	42	-		-	-			-	-		16,518,551
14	1990	41	9,866		-	-			9,866	-		16,528,417
15	1991	40	2,422		-	-			2,422	-		16,530,839
16	1992	39	-		-	-			-	-		16,530,839
17	1993	38	-		-	-			-	-		16,530,839
18	1994	37	-		-	-			-	-		16,530,839
19	1995	36	892,976		-	-			892,976	-		17,423,815
20	1996	35	3,257,394		-	752,122			3,257,394	-		20,681,209
21	1997	34	716,643		-	644,122			716,643	-		21,397,852
22	1998	33	17,178		-	-			17,178	-		21,415,030
23	1999	32		4,787,367	52,189	-			4,787,367	52,189		26,150,208
24	2000	31		-	138,000	-			-	138,000		26,012,208
25	2001	30		-	-	-			-	-		26,012,208
26	2002	29		13,736	-	-			13,736	-		26,025,944
27	2003	28		-	387,855	-			-	387,855		25,638,089
28	2004	27		787,282	-	-			787,282	-		26,425,371
29	2005	26		-	166,824	-			-	166,824		26,258,547
30	2006	25		-	740,497	-			-	740,497		25,518,050
31	2007	24		1,232,771	629,194	-			1,232,771	629,194		26,121,627
31	2008	23		-	14,928	-			-	14,928		26,106,699
32	2009	22		25,188		-	1,419,882		1,445,070	-		27,551,769
33	Total		$ 21,415,030	$ 6,846,344	$ 2,129,487	$ 2,129,487	$ 1,419,882	$ -	$ 29,681,256	$ 2,129,487	$ -	$ 623,260,591
34	Major Additions/Retirements											
35	1999			$ 4,787,367								
36	2006				$ 740,497							
37	2007			$ 1,232,771	$ 629,194							
38	2009			$ 1,419,882								
39	Routine Activity			$ 826,206	$ 759,796							
40	Historical Interim Activity			0.13%	0.12%							
41	Forecast Interim Activity			0.13%	0.12%							
								Major Additions**				
42	2010	21						2,107,500		33,587		29,625,682
43	2011	20						357,500		36,116		29,947,066
44	2012	19						495,000		36,507		30,405,558
45	2013	18						407,500		37,066		30,775,992
46	2014	17						370,000		37,518		31,108,474
47	2015	16							41,238	37,923		31,111,789
48	2016	15							41,242	37,927		31,115,104
49	2017	14							41,247	37,931		31,118,419
50	2018	13							41,251	37,935		31,121,735
51	2019	12							41,256	37,939		31,125,051
52	2020	11							41,260	37,944		31,128,367
53	2021	10							41,264	37,948		31,131,684
54	2022	9							41,269	37,952		31,135,001
55	2023	8							41,273	37,956		31,138,319
56	2024	7							41,278	37,960		31,141,637
57	2025	6							41,282	37,964		31,144,955
58	2026	5							41,286	37,968		31,148,274
59	2027	4							41,291	37,972		31,151,593
60	2028	3	UNIT 1 RETIRES IN 2028						41,295	37,976	(7,750,964)	23,403,948
61	2029	2							31,025	28,531		23,406,442
62	2030	1							31,028	28,534		23,408,936
63	2031	0									(23,408,936)	-
									$ 30,321,040	$ 2,898,641		$1,250,054,616

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	29,681,256
Forecast Additions	639,784
Total Additions	30,321,040
Gross Salvage Value	2,340,894
Less Cost of Removal	1,170,447
Net Salvage Value	1,170,447
Total to be Recovered	29,150,594
Forecast Plant Balances	1,250,054,616
Whole Life Accrual Rate	2.33%
Cost of Removal Accrual Rate	0.09%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.24%
Depreciable Service Life, years	42.9

Account Balance 12/31/09	27,551,769
Forecast Additions	639,784
Gross Salvage Value	2,340,894
Less Cost of Removal	1,170,447
Net Salvage Value	1,170,447
Forecast Plant Balances	626,794,025

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, Energy Center Combustion Turb

Gross Salvage	10%
Cost of Removal	5%
Net Salvage	5%
Install Date	1978
Retirement Date	2031
Service Life, Yrs	53

Historical and Forecast Plant Additions & Balances
Accou 344 Generators

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1977	54	-		-	-			-	-		-
2	1978	53	1,884,020		-	12,000			1,884,020	-		1,884,020
3	1979	52	-		-	-			-	-		1,884,020
4	1980	51	-		-	-			-	-		1,884,020
5	1981	50	2,267,290		-	-			2,267,290	-		4,151,310
6	1982	49	1,766		-	-			1,766	-		4,153,076
7	1983	48	-		-	-			-	-		4,153,076
8	1984	47	-		-	-			-	-		4,153,076
9	1985	46	-		-	-			-	-		4,153,076
10	1986	45	1,225		-	-			1,225	-		4,154,301
11	1987	44	-		-	-			-	-		4,154,301
12	1988	43	-		-	-			-	-		4,154,301
13	1989	42	-		-	-			-	-		4,154,301
14	1990	41	6,082		-	-			6,082	-		4,160,383
15	1991	40	-		-	-			-	-		4,160,383
16	1992	39	-		-	-			-	-		4,160,383
17	1993	38	-		-	-			-	-		4,160,383
18	1994	37	-		-	-			-	-		4,160,383
19	1995	36	-		-	-			-	-		4,160,383
20	1996	35	-		-	-			-	-		4,160,383
21	1997	34	-		-	-			-	-		4,160,383
22	1998	33	-		-	-			-	-		4,160,383
23	1999	32		-	-	-			-	-		4,160,383
24	2000	31		-	-	-			-	-		4,160,383
25	2001	30		-	-	-			-	-		4,160,383
26	2002	29		-	-	-			-	-		4,160,383
27	2003	28		-	-	-			-	-		4,160,383
28	2004	27		356,076	-	-			356,076	-		4,516,459
29	2005	26		-	-	-			-	-		4,516,459
30	2006	25		-	-	-			-	-		4,516,459
31	2007	24		-	-	-			-	-		4,516,459
31	2008	23		-	12,000	-			-	12,000		4,504,459
32	2009	22		-	-	-			-	-		4,504,459
33	Total		$ 4,160,383	$ 356,076	$ 12,000	$ 12,000	$ -	$ -	$ 4,516,459	$ 12,000	$ -	$ 128,352,994
34	Major Additions/Retirements											
35	Routine Activity			$ 356,076	$ 12,000							
36	Historical Interim Activity			0.28%	0.01%							
37	Forecast Interim Activity			0.28%	0.01%							
								Major Additions**				
38	2010	21							12,496	421		4,516,534
39	2011	20							12,530	422		4,528,642
40	2012	19							12,563	423		4,540,782
41	2013	18							12,597	425		4,552,954
42	2014	17							12,631	426		4,565,159
43	2015	16							12,665	427		4,577,397
44	2016	15							12,699	428		4,589,668
45	2017	14							12,733	429		4,601,971
46	2018	13							12,767	430		4,614,308
47	2019	12							12,801	431		4,626,677
48	2020	11							12,835	433		4,639,080
49	2021	10							12,870	434		4,651,516
50	2022	9							12,904	435		4,663,985
51	2023	8							12,939	436		4,676,488
52	2024	7							12,973	437		4,689,024
53	2025	6							13,008	438		4,701,594
54	2026	5							13,043	440		4,714,198
55	2027	4							13,078	441		4,726,835
56	2028	3	UNIT 1 RETIRES IN 2028						13,113	442	(1,884,020)	2,855,486
57	2029	2							7,922	267		2,863,141
58	2030	1							7,943	268		2,870,816
59	2031	0									(2,870,816)	-
									$ 4,775,568	$ 20,732		$ 220,119,248

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	4,516,459
Forecast Additions	259,109
Total Additions	4,775,568
Gross Salvage Value	287,082
Less Cost of Removal	143,541
Net Salvage Value	143,541
Total to be Recovered	4,632,028
Forecast Plant Balances	220,119,248
Whole Life Accrual Rate	2.10%
Cost of Removal Accrual Rate	0.07%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.04%
Depreciable Service Life, years	47.5
Account Balance 12/31/09	4,504,459
Forecast Additions	259,109
Gross Salvage Value	287,082
Less Cost of Removal	143,541
Net Salvage Value	143,541
Forecast Plant Balances	91,766,254

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, Energy Center Combustion Turb

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	1978
Retirement Date	2031
Service Life, Yrs	53

Historical and Forecast Plant Additions & Balances
Accou 345 Accessory Electric Equipment

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1977	54	-		-	-			-	-		-
2	1978	53	258,607		-	-			258,607	-		258,607
3	1979	52	-		-	-			-	-		258,607
4	1980	51	-		-	-			-	-		258,607
5	1981	50	63,365		-	-			63,365	-		321,972
6	1982	49	-		-	-			-	-		321,972
7	1983	48	-		-	-			-	-		321,972
8	1984	47	-		-	-			-	-		321,972
9	1985	46	-		-	-			-	-		321,972
10	1986	45	-		-	-			-	-		321,972
11	1987	44	-		-	-			-	-		321,972
12	1988	43	-		-	-			-	-		321,972
13	1989	42	-		-	-			-	-		321,972
14	1990	41	-		-	-			-	-		321,972
15	1991	40	-		-	-			-	-		321,972
16	1992	39	-		-	-			-	-		321,972
17	1993	38	-		-	-			-	-		321,972
18	1994	37	-		-	-			-	-		321,972
19	1995	36	-		-	-			-	-		321,972
20	1996	35	-		-	-			-	-		321,972
21	1997	34	-		-	-			-	-		321,972
22	1998	33	-		-	-			-	-		321,972
23	1999	32		-	-	-			-	-		321,972
24	2000	31		-	-	-			-	-		321,972
25	2001	30		-	-	-			-	-		321,972
26	2002	29		17,443	-	-			17,443	-		339,415
27	2003	28		-	-	-			-	-		339,415
28	2004	27		-	-	-			-	-		339,415
29	2005	26		43,425	-	-			43,425	-		382,840
30	2006	25		16,545	-	-			16,545	-		399,385
31	2007	24		-	-	-			-	-		399,385
31	2008	23		5,342	-	-			5,342	-	1,687,137	2,091,864
32	2009	22		-	-	-			-	-		2,091,864
33	Total		$ 321,972	$ 82,755	$ -	$ -	$ -	$ -	$ 404,727	$ -	$ 1,687,137	$ 13,920,816
34	Major Additions/Retirements											
35	Routine Activity			$ 82,755	$ -							
36	Historical Interim Activity			0.59%	0.00%							
37	Forecast Interim Activity			0.59%	0.00%							
								Major Additions**				
38	2010	21							12,435	-		2,104,299
39	2011	20							12,509	-		2,116,809
40	2012	19							12,584	-		2,129,393
41	2013	18							12,659	-		2,142,051
42	2014	17							12,734	-		2,154,785
43	2015	16							12,810	-		2,167,595
44	2016	15							12,886	-		2,180,480
45	2017	14							12,962	-		2,193,443
46	2018	13							13,039	-		2,206,482
47	2019	12							13,117	-		2,219,599
48	2020	11							13,195	-		2,232,794
49	2021	10							13,273	-		2,246,067
50	2022	9							13,352	-		2,259,419
51	2023	8							13,432	-		2,272,851
52	2024	7							13,511	-		2,286,362
53	2025	6							13,592	-		2,299,954
54	2026	5							13,673	-		2,313,626
55	2027	4							13,754	-		2,327,380
56	2028	3							13,836	-		2,341,216
57	2029	2							13,918	-		2,355,134
58	2030	1							14,001	-		2,369,134
59	2031	0									(2,369,134)	-
									$ 681,997	$ -		$ 60,839,688

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	404,727
Forecast Additions	277,270
Total Additions	681,997
Gross Salvage Value	189,531
Less Cost of Removal	236,913
Net Salvage Value	(47,383)
Total to be Recovered	729,380
Forecast Plant Balances	60,839,688
Whole Life Accrual Rate	1.20%
Cost of Removal Accrual Rate	0.39%
Whole Life Accrual Rate (Excluding Cost of Removal)	0.81%
Depreciable Service Life, years	83.4

Account Balance 12/31/09	2,091,864
Forecast Additions	277,270
Gross Salvage Value	189,531
Less Cost of Removal	236,913
Net Salvage Value	(47,383)
Forecast Plant Balances	46,918,872

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Other Production, Energy Center Combustion Turb

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	1978
Retirement Date	2031
Service Life, Yrs	53

Historical and Forecast Plant Additions & Balances
Accou 346 Misc Power Equipment

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1977	54	-		-	-			-	-		-
2	1978	53	47,757		-	-			47,757	-		47,757
3	1979	52	-		-	-			-	-		47,757
4	1980	51	356		-	-			356	-		48,113
5	1981	50	990,166		-	2,483			990,166	-		1,038,279
6	1982	49	8,388		-	-			8,388	-		1,046,667
7	1983	48	16,388		-	-			16,388	-		1,063,055
8	1984	47	-		-	-			-	-		1,063,055
9	1985	46	4,078		-	-			4,078	-		1,067,133
10	1986	45	2,024		-	-			2,024	-		1,069,157
11	1987	44	6,465		-	-			6,465	-		1,075,622
12	1988	43	7,375		-	-			7,375	-		1,082,997
13	1989	42	18,665		-	14,674			18,665	-		1,101,662
14	1990	41	-		-	-			-	-		1,101,662
15	1991	40	1,587		-	-			1,587	-		1,103,249
16	1992	39	-		-	-			-	-		1,103,249
17	1993	38	-		-	-			-	-		1,103,249
18	1994	37	1,899		-	-			1,899	-		1,105,148
19	1995	36	-		-	-			-	-		1,105,148
20	1996	35	10,526		-	-			10,526	-		1,115,674
21	1997	34	3,913		-	-			3,913	-		1,119,587
22	1998	33	9,903		-	-			9,903	-		1,129,490
23	1999	32		8,711	-	-			8,711	-		1,138,201
24	2000	31		35,181	-	-			35,181	-		1,173,382
25	2001	30		-	-	-			-	-		1,173,382
26	2002	29		48,967	-	-			48,967	-		1,222,349
27	2003	28		48,373	17,157	6,112			48,373	17,157		1,253,565
28	2004	27		14,909	-	-			14,909	-		1,268,474
29	2005	26		52,126	-	-			52,126	-		1,320,600
30	2006	25		20,484	-	-			20,484	-		1,341,084
31	2007	24		7,717	-	-	7,697		15,414	-		1,356,498
31	2008	23		9,926	-	-	-		9,926	-		1,366,424
32	2009	22		2,823	6,112	-	95,275		98,098	6,112		1,458,410
33	Total		$ 1,129,490	$ 249,217	$ 23,269	$ 23,269	$ 102,972	$ -	$ 1,481,679	$ 23,269	$ -	$ 33,810,079
34	Major Additions/Retirements											
35	Routine Activity			$ 352,189	$ 23,269							
36	Historical Interim Activity			1.04%	0.07%							
37	Forecast Interim Activity			1.04%	0.07%							
								Major Additions**				
38	2010	21							15,192	1,004		1,472,598
39	2011	20							15,340	1,013		1,486,924
40	2012	19							15,489	1,023		1,501,390
41	2013	18							15,640	1,033		1,515,996
42	2014	17							15,792	1,043		1,530,744
43	2015	16							15,945	1,053		1,545,636
44	2016	15							16,100	1,064		1,560,673
45	2017	14							16,257	1,074		1,575,856
46	2018	13							16,415	1,085		1,591,186
47	2019	12							16,575	1,095		1,606,666
48	2020	11							16,736	1,106		1,622,296
49	2021	10							16,899	1,117		1,638,079
50	2022	9							17,063	1,127		1,654,015
51	2023	8							17,229	1,138		1,670,106
52	2024	7							17,397	1,149		1,686,353
53	2025	6							17,566	1,161		1,702,759
54	2026	5							17,737	1,172		1,719,324
55	2027	4							17,910	1,183		1,736,051
56	2028	3							18,084	1,195		1,752,940
57	2029	2							18,260	1,206		1,769,993
58	2030	1							18,437	1,218		1,787,212
59	2031	0									(1,787,212)	-
									$ 1,833,742	$ 46,530		$ 67,936,876

* Through vintage year 1999 the balances are 1999 remaining plant balances.
** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	1,481,679
Forecast Additions	352,063
Total Additions	1,833,742
Gross Salvage Value	142,977
Less Cost of Removal	178,721
Net Salvage Value	(35,744)
Total to be Recovered	1,869,486
Forecast Plant Balances	67,936,876
Whole Life Accrual Rate	2.75%
Cost of Removal Accrual Rate	0.26%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.49%
Depreciable Service Life, years	36.3

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	1,458,410
Forecast Additions	352,063
Gross Salvage Value	142,977
Less Cost of Removal	178,721
Net Salvage Value	(35,744)
Forecast Plant Balances	34,126,797

Summary by Plant
The Empire District Electric Company
Energy Center FT8s

Account	Description	Direct Investment 2009$	Depreciation Rate
341	Structures & Improvements	1,107,790	2.04%
342	Fuel Holders, Producers & Accessories	1,390,887	2.04%
343	Prime Movers	46,538,833	1.96%
344	Generators	531,753	1.91%
345	Accessory Electric Equipment	3,443,296	2.05%
346	Misc Power Equipment	1,049,437	2.04%
	Total	54,061,996	1.97% whole life weighted average rate

Remaining Life Depreciation Rate Calculation

Per Books Balance 12/31/09	54,061,996
Forecast Interim Additions	2,952,500
Forecast Gross Salvage Value	5,561,621
Forecast Less Cost of Removal	3,200,295
Forecast Net Salvage Value	2,361,326
Forecast Total to be Recovered with COR	54,653,170
Forecast Total to be Recovered w/o COR	51,452,875
Accumulated Depreciation (2009 EOY)	(2,712,381)
Forecast Remaining Life Balance with COR	51,940,789
Forecast Remaining Life Balance w/o COR	48,740,494
Forecast Plant Balances	2,444,668,328
Remaining Life Rate with COR	2.12%
Remaining Life Rate w/o COR	1.99%
Reserve Variance with COR	(3,809,048)

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Energy Center FT8s

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	2003
Retirement Date	2053
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances

Accou 341 Structures & Improvements — Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	2003	50		1,107,790					1,107,790	-		1,107,790
2	2004	49							-	-		1,107,790
3	2005	48							-	-		1,107,790
4	2006	47							-	-		1,107,790
5	2007	46							-	-		1,107,790
6	2008	45							-	-		1,107,790
7	2009	44							-	-		1,107,790
8	Total		$ -	$ 1,107,790	$ -	$ -	$ -	$ -	$ 1,107,790	$ -	$ -	$ 7,754,530
9	Major Additions/Retirements											
10	2003			$ 1,107,790								
11	Routine Activity			$ -	$ -							
12	Historical Interim Activity			0.00%	0.00%							
13	Forecast Interim Activity			0.00%	0.00%							
								Major Additions**				
14	2010	43							-	-		1,107,790
15	2011	42							-	-		1,107,790
16	2012	41							-	-		1,107,790
17	2013	40							-	-		1,107,790
18	2014	39							-	-		1,107,790
19	2015	38							-	-		1,107,790
20	2016	37							-	-		1,107,790
21	2017	36							-	-		1,107,790
22	2018	35							-	-		1,107,790
23	2019	34							-	-		1,107,790
24	2020	33							-	-		1,107,790
25	2021	32							-	-		1,107,790
26	2022	31							-	-		1,107,790
27	2023	30							-	-		1,107,790
28	2024	29							-	-		1,107,790
29	2025	28							-	-		1,107,790
30	2026	27							-	-		1,107,790
31	2027	26							-	-		1,107,790
32	2028	25							-	-		1,107,790
33	2029	24							-	-		1,107,790
34	2030	23							-	-		1,107,790
35	2031	22							-	-		1,107,790
36	2032	21							-	-		1,107,790
37	2033	20							-	-		1,107,790
38	2034	19							-	-		1,107,790
39	2035	18							-	-		1,107,790
40	2036	17							-	-		1,107,790
41	2037	16							-	-		1,107,790
42	2038	15							-	-		1,107,790
43	2039	14							-	-		1,107,790
44	2040	13							-	-		1,107,790
45	2041	12							-	-		1,107,790
46	2042	11							-	-		1,107,790
47	2043	10							-	-		1,107,790
48	2044	9							-	-		1,107,790
49	2045	8							-	-		1,107,790
50	2046	7							-	-		1,107,790
51	2047	6							-	-		1,107,790
52	2048	5							-	-		1,107,790
53	2049	4							-	-		1,107,790
54	2050	3							-	-		1,107,790
55	2051	2							-	-		1,107,790
56	2052	1							-	-		1,107,790
57	2053	0									(1,107,790)	-
							$ -		$ 1,107,790	$ -		$ 55,389,500

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	1,107,790
Forecast Additions	-
Total Additions	1,107,790
Gross Salvage Value	88,623
Less Cost of Removal	110,779
Net Salvage Value	(22,156)
Total to be Recovered	1,129,946
Forecast Plant Balances	55,389,500
Whole Life Accrual Rate	2.04%
Cost of Removal Accrual Rate	0.20%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.84%
Depreciable Service Life, years	49.0

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	1,107,790
Forecast Additions	-
Gross Salvage Value	88,623
Less Cost of Removal	110,779
Net Salvage Value	(22,156)
Forecast Plant Balances	47,634,970

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Energy Center FT8s

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	2003
Retirement Date	2053
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances

Accou 342 Fuel Holders, Producers & Accessories Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	2003	50		1,390,887					1,390,887	-		1,390,887
2	2004	49							-	-		1,390,887
3	2005	48							-	-		1,390,887
4	2006	47							-	-		1,390,887
5	2007	46							-	-		1,390,887
6	2008	45							-	-		1,390,887
7	2009	44							-	-		1,390,887
8	Total		$ -	$ 1,390,887	$ -	$ -	$ -	$ -	$ 1,390,887	$ -	$ -	$ 9,736,209
9	Major Additions/Retirements											
10	2003			$ 1,390,887								
11	Routine Activity			$ -	$ -							
12	Historical Interim Activity			0.00%	0.00%							
13	Forecast Interim Activity			0.00%	0.00%							
								Major Additions**				
14	2010	43							-	-		1,390,887
15	2011	42							-	-		1,390,887
16	2012	41							-	-		1,390,887
17	2013	40							-	-		1,390,887
18	2014	39							-	-		1,390,887
19	2015	38							-	-		1,390,887
20	2016	37							-	-		1,390,887
21	2017	36							-	-		1,390,887
22	2018	35							-	-		1,390,887
23	2019	34							-	-		1,390,887
24	2020	33							-	-		1,390,887
25	2021	32							-	-		1,390,887
26	2022	31							-	-		1,390,887
27	2023	30							-	-		1,390,887
28	2024	29							-	-		1,390,887
29	2025	28							-	-		1,390,887
30	2026	27							-	-		1,390,887
31	2027	26							-	-		1,390,887
32	2028	25							-	-		1,390,887
33	2029	24							-	-		1,390,887
34	2030	23							-	-		1,390,887
35	2031	22							-	-		1,390,887
36	2032	21							-	-		1,390,887
37	2033	20							-	-		1,390,887
38	2034	19							-	-		1,390,887
39	2035	18							-	-		1,390,887
40	2036	17							-	-		1,390,887
41	2037	16							-	-		1,390,887
42	2038	15							-	-		1,390,887
43	2039	14							-	-		1,390,887
44	2040	13							-	-		1,390,887
45	2041	12							-	-		1,390,887
46	2042	11							-	-		1,390,887
47	2043	10							-	-		1,390,887
48	2044	9							-	-		1,390,887
49	2045	8							-	-		1,390,887
50	2046	7							-	-		1,390,887
51	2047	6							-	-		1,390,887
52	2048	5							-	-		1,390,887
53	2049	4							-	-		1,390,887
54	2050	3							-	-		1,390,887
55	2051	2							-	-		1,390,887
56	2052	1							-	-		1,390,887
57	2053	0									(1,390,887)	-
								$ -	$ 1,390,887	$ -		$ 69,544,350

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	1,390,887
Forecast Additions	-
Total Additions	1,390,887
Gross Salvage Value	111,271
Less Cost of Removal	139,089
Net Salvage Value	(27,818)
Total to be Recovered	1,418,705
Forecast Plant Balances	69,544,350
Whole Life Accrual Rate	2.04%
Cost of Removal Accrual Rate	0.20%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.84%
Depreciable Service Life, years	49.0

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	1,390,887
Forecast Additions	-
Gross Salvage Value	111,271
Less Cost of Removal	139,089
Net Salvage Value	(27,818)
Forecast Plant Balances	59,808,141

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Energy Center FT8s

Gross Salvage	10%
Cost of Removal	5%
Net Salvage	5%
Install Date	2003
Retirement Date	2053
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances

Accou 343 Prime Movers — Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	2003	50		47,557,139	-	1,024,044			47,557,139	-		47,557,139
2	2004	49		-	-	-			-	-		47,557,139
3	2005	48		5,738	-	-			5,738	-		47,562,877
4	2006	47			-	-			-	-		47,562,877
5	2007	46			-	-			-	-		47,562,877
6	2008	45			-	-			-	-		47,562,877
7	2009	44			1,024,044	-			-	1,024,044		46,538,833
8	Total		$ -	$ 47,562,877	$ 1,024,044	$ 1,024,044	$ -	$ -	$ 47,562,877	$ 1,024,044	$ -	$ 331,904,619
9	Major Additions/Retirements											
10	2003			$ 47,557,139								
11	2009				$ 1,024,044							
12	Routine Activity			$ 5,738	$ -							
13	Historical Interim Activity			0.00%	0.00%							
14	Forecast Interim Activity			0.00%	0.00%							
								Major Additions**				
15	2010	43						292,500	-	-		46,831,333
16	2011	42						862,500	-	-		47,693,833
17	2012	41						320,000	-	-		48,013,833
18	2013	40						457,500	-	-		48,471,333
19	2014	39						1,020,000	-	-		49,491,333
20	2015	38							-	-		49,491,333
21	2016	37							-	-		49,491,333
22	2017	36							-	-		49,491,333
23	2018	35							-	-		49,491,333
24	2019	34							-	-		49,491,333
25	2020	33							-	-		49,491,333
26	2021	32							-	-		49,491,333
27	2022	31							-	-		49,491,333
28	2023	30							-	-		49,491,333
29	2024	29							-	-		49,491,333
30	2025	28							-	-		49,491,333
31	2026	27							-	-		49,491,333
32	2027	26							-	-		49,491,333
33	2028	25							-	-		49,491,333
34	2029	24							-	-		49,491,333
35	2030	23							-	-		49,491,333
36	2031	22							-	-		49,491,333
37	2032	21							-	-		49,491,333
38	2033	20							-	-		49,491,333
39	2034	19							-	-		49,491,333
40	2035	18							-	-		49,491,333
41	2036	17							-	-		49,491,333
42	2037	16							-	-		49,491,333
43	2038	15							-	-		49,491,333
44	2039	14							-	-		49,491,333
45	2040	13							-	-		49,491,333
46	2041	12							-	-		49,491,333
47	2042	11							-	-		49,491,333
48	2043	10							-	-		49,491,333
49	2044	9							-	-		49,491,333
50	2045	8							-	-		49,491,333
51	2046	7							-	-		49,491,333
52	2047	6							-	-		49,491,333
53	2048	5							-	-		49,491,333
54	2049	4							-	-		49,491,333
55	2050	3							-	-		49,491,333
56	2051	2							-	-		49,491,333
57	2052	1							-	-		49,491,333
58	2053	0									(49,491,333)	-
								$ 2,952,500	$ 47,562,877	$ 1,024,044		$2,453,076,938

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	47,562,877
Forecast Additions	2,952,500
Total Additions	50,515,377
Gross Salvage Value	4,949,133
Less Cost of Removal	2,474,567
Net Salvage Value	2,474,567
Total to be Recovered	48,040,810
Forecast Plant Balances	2,453,076,938
Whole Life Accrual Rate	1.96%
Cost of Removal Accrual Rate	0.10%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.86%
Depreciable Service Life, years	51.1

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	46,538,833
Forecast Additions	2,952,500
Gross Salvage Value	4,949,133
Less Cost of Removal	2,474,567
Net Salvage Value	2,474,567
Forecast Plant Balances	2,121,172,319

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Energy Center FT8s

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	10%
Cost of Removal	5%
Net Salvage	5%
Install Date	2003
Retirement Date	2053
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances

Accou 344 Generators Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	2003	50		508,989					508,989	-		508,989
2	2004	49		-					-	-		508,989
3	2005	48		-					-	-		508,989
4	2006	47		11,382					11,382	-		520,371
5	2007	46		-					-	-		520,371
6	2008	45		11,382					11,382	-		531,753
7	2009	44							-	-		531,753
8	Total		$ -	$ 531,753	$ -	$ -	$ -	$ -	$ 531,753	$ -	$ -	$ 3,631,215
9	Major Additions/Retirements											
10	2003			$ 508,989								
11	Routine Activity			$ 22,764	$ -							
12	Historical Interim Activity			0.63%	0.00%							
13	Forecast Interim Activity			0.00%	0.00%							
								Major Additions**				
14	2010	43							-	-		531,753
15	2011	42							-	-		531,753
16	2012	41							-	-		531,753
17	2013	40							-	-		531,753
18	2014	39							-	-		531,753
19	2015	38							-	-		531,753
20	2016	37							-	-		531,753
21	2017	36							-	-		531,753
22	2018	35							-	-		531,753
23	2019	34							-	-		531,753
24	2020	33							-	-		531,753
25	2021	32							-	-		531,753
26	2022	31							-	-		531,753
27	2023	30							-	-		531,753
28	2024	29							-	-		531,753
29	2025	28							-	-		531,753
30	2026	27							-	-		531,753
31	2027	26							-	-		531,753
32	2028	25							-	-		531,753
33	2029	24							-	-		531,753
34	2030	23							-	-		531,753
35	2031	22							-	-		531,753
36	2032	21							-	-		531,753
37	2033	20							-	-		531,753
38	2034	19							-	-		531,753
39	2035	18							-	-		531,753
40	2036	17							-	-		531,753
41	2037	16							-	-		531,753
42	2038	15							-	-		531,753
43	2039	14							-	-		531,753
44	2040	13							-	-		531,753
45	2041	12							-	-		531,753
46	2042	11							-	-		531,753
47	2043	10							-	-		531,753
48	2044	9							-	-		531,753
49	2045	8							-	-		531,753
50	2046	7							-	-		531,753
51	2047	6							-	-		531,753
52	2048	5							-	-		531,753
53	2049	4							-	-		531,753
54	2050	3							-	-		531,753
55	2051	2							-	-		531,753
56	2052	1							-	-		531,753
57	2053	0									(531,753)	-
								$ -	$ 531,753	$ -		$ 26,496,594

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	531,753
Forecast Additions	-
Total Additions	531,753
Gross Salvage Value	53,175
Less Cost of Removal	26,588
Net Salvage Value	26,588
Total to be Recovered	505,165
Forecast Plant Balances	26,496,594
Whole Life Accrual Rate	1.91%
Cost of Removal Accrual Rate	0.10%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.81%
Depreciable Service Life, years	52.5

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	531,753
Forecast Additions	-
Gross Salvage Value	53,175
Less Cost of Removal	26,588
Net Salvage Value	26,588
Forecast Plant Balances	22,865,379

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Energy Center FT8s

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	2003
Retirement Date	2053
Service Life, Yrs	50

Historical and Forecast Plant Additions & Balances

Accou 345 Accessory Electric Equipment — Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	2003	50		3,355,133					3,355,133	-		3,355,133
2	2004	49							-	-		3,355,133
3	2005	48							-	-		3,355,133
4	2006	47							-	-		3,355,133
5	2007	46							-	-		3,355,133
6	2008	45							-	-		3,355,133
7	2009	44					88,163		88,163	-		3,443,296
8	Total		$ -	$ 3,355,133	$ -	$ -	$ 88,163	$ -	$ 3,443,296	$ -	$ -	$ 23,574,094
9	Major Additions/Retirements											
10	2003			$ 3,355,133								
11	Routine Activity			$ -	$ -							
12	Historical Interim Activity			0.00%	0.00%							
13	Forecast Interim Activity			0.00%	0.00%							
								Major Additions**				
14	2010	43							-	-		3,443,296
15	2011	42							-	-		3,443,296
16	2012	41							-	-		3,443,296
17	2013	40							-	-		3,443,296
18	2014	39							-	-		3,443,296
19	2015	38							-	-		3,443,296
20	2016	37							-	-		3,443,296
21	2017	36							-	-		3,443,296
22	2018	35							-	-		3,443,296
23	2019	34							-	-		3,443,296
24	2020	33							-	-		3,443,296
25	2021	32							-	-		3,443,296
26	2022	31							-	-		3,443,296
27	2023	30							-	-		3,443,296
28	2024	29							-	-		3,443,296
29	2025	28							-	-		3,443,296
30	2026	27							-	-		3,443,296
31	2027	26							-	-		3,443,296
32	2028	25							-	-		3,443,296
33	2029	24							-	-		3,443,296
34	2030	23							-	-		3,443,296
35	2031	22							-	-		3,443,296
36	2032	21							-	-		3,443,296
37	2033	20							-	-		3,443,296
38	2034	19							-	-		3,443,296
39	2035	18							-	-		3,443,296
40	2036	17							-	-		3,443,296
41	2037	16							-	-		3,443,296
42	2038	15							-	-		3,443,296
43	2039	14							-	-		3,443,296
44	2040	13							-	-		3,443,296
45	2041	12							-	-		3,443,296
46	2042	11							-	-		3,443,296
47	2043	10							-	-		3,443,296
48	2044	9							-	-		3,443,296
49	2045	8							-	-		3,443,296
50	2046	7							-	-		3,443,296
51	2047	6							-	-		3,443,296
52	2048	5							-	-		3,443,296
53	2049	4							-	-		3,443,296
54	2050	3							-	-		3,443,296
55	2051	2							-	-		3,443,296
56	2052	1							-	-		3,443,296
57	2053	0									(3,443,296)	-
								$ -	$ 3,443,296	$ -		$ 171,635,822

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	3,443,296
Forecast Additions	-
Total Additions	3,443,296
Gross Salvage Value	275,464
Less Cost of Removal	344,330
Net Salvage Value	(68,866)
Total to be Recovered	3,512,162
Forecast Plant Balances	171,635,822
Whole Life Accrual Rate	2.05%
Cost of Removal Accrual Rate	0.20%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.85%
Depreciable Service Life, years	48.9

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	3,443,296
Forecast Additions	-
Gross Salvage Value	275,464
Less Cost of Removal	344,330
Net Salvage Value	(68,866)
Forecast Plant Balances	148,061,728

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Energy Center FT8s

Gross Salvage	8%
Cost of Removal	10%
Net Salvage	-2%
Install Date	2003
Retirement Date	2053
Service Life, Yrs	50

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Historical and Forecast Plant Additions & Balances

Accou 346 Misc Power Equipment — Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	2003	50		1,034,531					1,034,531	-		1,034,531
2	2004	49		14,906					14,906	-		1,049,437
3	2005	48							-	-		1,049,437
4	2006	47							-	-		1,049,437
5	2007	46							-	-		1,049,437
6	2008	45							-	-		1,049,437
7	2009	44							-	-		1,049,437
8	Total		$ -	$ 1,049,437	$ -	$ -	$ -	$ -	$ 1,049,437	$ -	$ -	$ 7,331,153
9	Major Additions/Retirements											
10	2003			$ 1,034,531								
11	Routine Activity			$ 14,906	$ -							
12	Historical Interim Activity			0.20%	0.00%							
13	Forecast Interim Activity			0.00%	0.00%							
								Major Additions**				
14	2010	43							-	-		1,049,437
15	2011	42							-	-		1,049,437
16	2012	41							-	-		1,049,437
17	2013	40							-	-		1,049,437
18	2014	39							-	-		1,049,437
19	2015	38							-	-		1,049,437
20	2016	37							-	-		1,049,437
21	2017	36							-	-		1,049,437
22	2018	35							-	-		1,049,437
23	2019	34							-	-		1,049,437
24	2020	33							-	-		1,049,437
25	2021	32							-	-		1,049,437
26	2022	31							-	-		1,049,437
27	2023	30							-	-		1,049,437
28	2024	29							-	-		1,049,437
29	2025	28							-	-		1,049,437
30	2026	27							-	-		1,049,437
31	2027	26							-	-		1,049,437
32	2028	25							-	-		1,049,437
33	2029	24							-	-		1,049,437
34	2030	23							-	-		1,049,437
35	2031	22							-	-		1,049,437
36	2032	21							-	-		1,049,437
37	2033	20							-	-		1,049,437
38	2034	19							-	-		1,049,437
39	2035	18							-	-		1,049,437
40	2036	17							-	-		1,049,437
41	2037	16							-	-		1,049,437
42	2038	15							-	-		1,049,437
43	2039	14							-	-		1,049,437
44	2040	13							-	-		1,049,437
45	2041	12							-	-		1,049,437
46	2042	11							-	-		1,049,437
47	2043	10							-	-		1,049,437
48	2044	9							-	-		1,049,437
49	2045	8							-	-		1,049,437
50	2046	7							-	-		1,049,437
51	2047	6							-	-		1,049,437
52	2048	5							-	-		1,049,437
53	2049	4							-	-		1,049,437
54	2050	3							-	-		1,049,437
55	2051	2							-	-		1,049,437
56	2052	1							-	-		1,049,437
57	2053	0									(1,049,437)	-
								$ -	$ 1,049,437	$ -		$ 52,456,944

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	1,049,437
Forecast Additions	-
Total Additions	1,049,437
Gross Salvage Value	83,955
Less Cost of Removal	104,944
Net Salvage Value	(20,989)
Total to be Recovered	1,070,426
Forecast Plant Balances	52,456,944
Whole Life Accrual Rate	2.04%
Cost of Removal Accrual Rate	0.20%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.84%
Depreciable Service Life, years	49.0

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	1,049,437
Forecast Additions	-
Gross Salvage Value	83,955
Less Cost of Removal	104,944
Net Salvage Value	(20,989)
Forecast Plant Balances	45,125,791

Summary by Plant
The Empire District Electric Company
Riverton Combustion Turbines

Account	Description	Direct Investment 2009$	Depreciation Rate
341	Structures & Improvements	977,547	1.69%
342	Fuel Holders, Producers & Accessories	1,413,780	2.03%
343	Prime Movers	22,647,973	2.02%
344	Generators	13,466,632	1.91%
345	Accessory Electric Equipment	11,079,327	1.95%
346	Misc Power Equipment	1,570,252	2.04%
	Total	51,155,511	1.97% whole life weighted average rate

Remaining Life Depreciation Rate Calculation

Per Books Balance 12/31/09	51,155,511
Forecast Interim Additions	14,040,000
Forecast Gross Salvage Value	5,070,600
Forecast Less Cost of Removal	3,311,882
Forecast Net Salvage Value	1,758,718
Forecast Total to be Recovered with COR	63,436,793
Forecast Total to be Recovered w/o COR	60,124,911
Accumulated Depreciation (2009 EOY)	(9,760,554)
Forecast Remaining Life Balance with COR	53,676,239
Forecast Remaining Life Balance w/o COR	50,364,357
Forecast Plant Balances	2,779,555,842
Remaining Life Rate with COR	1.93%
Remaining Life Rate w/o COR	1.81%
Reserve Variance with COR	1,134,135

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Riverton Combustion Turbines

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	8%					
Cost of Removal	10%					
Net Salvage	-2%					
Install Date	1964	Unit 9	1988	Units 10, 11	2007	Unit 12
Retirement Date	2018	Unit 9	2038	Units 10, 11	2057	Unit 12
Service Life, Yrs	54	Unit 9	50	Units 10, 11	50	Unit 12

Historical and Forecast Plant Additions & Balances

Accou 341 Structures & Improvements — Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1964	93	45,386		-	-			45,386	-		45,386
2	1965	92	-		-	-			-	-		45,386
3	1966	91	-		-	-			-	-		45,386
4	1967	90	-		-	-			-	-		45,386
5	1968	89	-		-	-			-	-		45,386
6	1969	88	-		-	-			-	-		45,386
7	1970	87	-		-	-			-	-		45,386
8	1971	86	-		-	-			-	-		45,386
9	1972	85	-		-	-			-	-		45,386
10	1973	84	-		-	-			-	-		45,386
11	1974	83	-		-	-			-	-		45,386
12	1975	82	-		-	-			-	-		45,386
13	1976	81	-		-	-			-	-		45,386
14	1977	80	-		-	-			-	-		45,386
15	1978	79	-		-	-			-	-		45,386
16	1979	78	-		-	-			-	-		45,386
17	1980	77	-		-	-			-	-		45,386
18	1981	76	-		-	-			-	-		45,386
19	1982	75	-		-	-			-	-		45,386
20	1983	74	-		-	-			-	-		45,386
21	1984	73	-		-	-			-	-		45,386
22	1985	72	-		-	-			-	-		45,386
23	1986	71	-		-	-			-	-		45,386
24	1987	70	-		-	-			-	-		45,386
25	1988	69	513,310		-	-			513,310	-		558,696
26	1989	68	-		-	-			-	-		558,696
27	1990	67	11,784		-	-			11,784	-		570,480
28	1991	66	-		-	-			-	-		570,480
29	1992	65	-		-	-			-	-		570,480
30	1993	64	-		-	-			-	-		570,480
31	1994	63	-		-	-			-	-		570,480
32	1995	62	12,726		-	-			12,726	-		583,206
33	1996	61	-		-	-			-	-		583,206
34	1997	60	-		-	-			-	-		583,206
35	1998	59	-		-	-			-	-		583,206
36	1999	58		-	-	-			-	-		583,206
37	2000	57		-	-	-			-	-		583,206
38	2001	56		-	-	-			-	-		583,206
39	2002	55		-	-	-			-	-		583,206
40	2003	54		-	-	-			-	-		583,206
41	2004	53		-	-	-			-	-		583,206
42	2005	52		-	-	-			-	-		583,206
43	2006	51		-	-	-			-	-		583,206
44	2007	50		232,337	-	-			232,337	-		815,543
45	2008	49		-	-	-			-	-	162,004	977,547
46	2009	48		-	-	-						977,547
47	Total		$ 583,206	$ 232,337	$ -	$ -	$ -	$ -	$ 815,543	$ -	$ 162,004	$ 14,828,165
48	Major Additions/Retirements											
49	2007			$ 232,337								
50	Routine Activity			$ -	$ -							
51	Historical Interim Activity			0.00%	0.00%							
52	Forecast Interim Activity			0.00%	0.00%							

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Riverton Combustion Turbines

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	8%					
Cost of Removal	10%					
Net Salvage	-2%					
Install Date	1964	Unit 9	1988	Units 10, 11	2007	Unit 12
Retirement Date	2018	Unit 9	2038	Units 10, 11	2057	Unit 12
Service Life, Yrs	54	Unit 9	50	Units 10, 11	50	Unit 12

Historical and Forecast Plant Additions & Balances

Accou 341 Structures & Improvements Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
								Major Additions**			Major Retirements	
53	2010	47							-	-		977,547
54	2011	46							-	-		977,547
55	2012	45							-	-		977,547
56	2013	44							-	-		977,547
57	2014	43							-	-		977,547
58	2015	42							-	-		977,547
59	2016	41							-	-		977,547
60	2017	40							-	-		977,547
61	2018	39	UNIT 9 RETIRES IN 2018						-	-	(45,386)	932,161
62	2019	38							-	-		932,161
63	2020	37							-	-		932,161
64	2021	36							-	-		932,161
65	2022	35							-	-		932,161
66	2023	34							-	-		932,161
67	2024	33							-	-		932,161
68	2025	32							-	-		932,161
69	2026	31							-	-		932,161
70	2027	30							-	-		932,161
71	2028	29							-	-		932,161
72	2029	28							-	-		932,161
73	2030	27							-	-		932,161
74	2031	26							-	-		932,161
75	2032	25							-	-		932,161
76	2033	24							-	-		932,161
77	2034	23							-	-		932,161
78	2035	22							-	-		932,161
79	2036	21							-	-		932,161
80	2037	20							-	-		932,161
81	2038	19	UNITS 10 & 11 RETIRE IN 2038						-	-	(537,820)	394,341
82	2039	18							-	-		394,341
83	2040	17							-	-		394,341
84	2041	16							-	-		394,341
85	2042	15							-	-		394,341
86	2043	14							-	-		394,341
87	2044	13							-	-		394,341
88	2045	12							-	-		394,341
89	2046	11							-	-		394,341
90	2047	10							-	-		394,341
91	2048	9							-	-		394,341
92	2049	8							-	-		394,341
93	2050	7							-	-		394,341
94	2051	6							-	-		394,341
95	2052	5							-	-		394,341
96	2053	4							-	-		394,341
97	2054	3							-	-		394,341
98	2055	2							-	-		394,341
99	2056	1							-	-		394,341
100	2057	0									(394,341)	-
								$ -	$ 815,543	$ -		$ 48,784,240

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	815,543
Forecast Additions	-
Total Additions	815,543
Gross Salvage Value	31,547
Less Cost of Removal	39,434
Net Salvage Value	(7,887)
Total to be Recovered	823,430
Forecast Plant Balances	48,784,240
Whole Life Accrual Rate	1.69%
Cost of Removal Accrual Rate	0.08%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.61%
Depreciable Service Life, years	59.2

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	977,547
Forecast Additions	-
Gross Salvage Value	31,547
Less Cost of Removal	39,434
Net Salvage Value	(7,887)
Forecast Plant Balances	33,956,075

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Riverton Combustion Turbines

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	8%					
Cost of Removal	10%					
Net Salvage	-2%					
Install Date	1964	Unit 9	1988	Units 10, 11	2007	Unit 12
Retirement Date	2018	Unit 9	2038	Units 10, 11	2057	Unit 12
Service Life, Yrs	54	Unit 9	50	Units 10, 11	50	Unit 12

Historical and Forecast Plant Additions & Balances

Accou 342 Fuel Holders, Producers & Accessories Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1964	93	1,641		-	-			1,641	-		1,641
2	1965	92	-		-	-			-	-		1,641
3	1966	91	-		-	-			-	-		1,641
4	1967	90	-		-	-			-	-		1,641
5	1968	89	-		-	-			-	-		1,641
6	1969	88	-		-	-			-	-		1,641
7	1970	87	-		-	-			-	-		1,641
8	1971	86	-		-	-			-	-		1,641
9	1972	85	-		-	-			-	-		1,641
10	1973	84	-		-	-			-	-		1,641
11	1974	83	190		-	-			190	-		1,831
12	1975	82	-		-	-			-	-		1,831
13	1976	81	-		-	-			-	-		1,831
14	1977	80	-		-	-			-	-		1,831
15	1978	79	-		-	-			-	-		1,831
16	1979	78	-		-	-			-	-		1,831
17	1980	77	-		-	-			-	-		1,831
18	1981	76	-		-	-			-	-		1,831
19	1982	75	-		-	-			-	-		1,831
20	1983	74	-		-	-			-	-		1,831
21	1984	73	-		-	-			-	-		1,831
22	1985	72	-		-	-			-	-		1,831
23	1986	71	-		-	-			-	-		1,831
24	1987	70	-		-	-			-	-		1,831
25	1988	69	449,148		-	-			449,148	-		450,979
26	1989	68	-		-	-			-	-		450,979
27	1990	67	8,882		-	-			8,882	-		459,861
28	1991	66	-		-	-			-	-		459,861
29	1992	65	-		-	-			-	-		459,861
30	1993	64	891		-	-			891	-		460,752
31	1994	63	7,426		-	-			7,426	-		468,178
32	1995	62	-		-	-			-	-		468,178
33	1996	61	-		-	-			-	-		468,178
34	1997	60	-		-	-			-	-		468,178
35	1998	59	-		-	-			-	-		468,178
36	1999	58		-	-	-			-	-		468,178
37	2000	57		-	-	-			-	-		468,178
38	2001	56		-	-	-			-	-		468,178
39	2002	55		-	-	-			-	-		468,178
40	2003	54		-	-	-			-	-		468,178
41	2004	53		-	-	-			-	-		468,178
42	2005	52		-	-	-			-	-		468,178
43	2006	51		-	-	-			-	-		468,178
44	2007	50		945,602	-	-			945,602	-		1,413,780
45	2008	49		-	-	-			-	-		1,413,780
46	2009	48		-	-	-			-	-		1,413,780
47	Total		$ 468,178	$ 945,602	$ -	$ -	$ -	$ -	$ 1,413,780	$ -	$ -	$ 13,111,991
48	Major Additions/Retirements											
49	2007			$ 945,602								
50	Routine Activity			$ -	$ -							
51	Historical Interim Activity			0.00%	0.00%							
52	Forecast Interim Activity			0.00%	0.00%							

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Riverton Combustion Turbines

Historical and Forecast Plant Additions & Balances

Accou 342 Fuel Holders, Producers & Accessories

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	8%			
Cost of Removal	10%			
Net Salvage	-2%			
Install Date	1964 Unit 9	1988 Units 10, 11	2007 Unit 12	
Retirement Date	2018 Unit 9	2038 Units 10, 11	2057 Unit 12	
Service Life, Yrs	54 Unit 9	50 Units 10, 11	50 Unit 12	
Initial Plant Balance				

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
								Major Additions**			Major Retirements	
53	2010	47							-	-		1,413,780
54	2011	46							-	-		1,413,780
55	2012	45							-	-		1,413,780
56	2013	44							-	-		1,413,780
57	2014	43							-	-		1,413,780
58	2015	42							-	-		1,413,780
59	2016	41							-	-		1,413,780
60	2017	40							-	-		1,413,780
61	2018	39	UNIT 9 RETIRES IN 2018						-	-	(1,831)	1,411,949
62	2019	38							-	-		1,411,949
63	2020	37							-	-		1,411,949
64	2021	36							-	-		1,411,949
65	2022	35							-	-		1,411,949
66	2023	34							-	-		1,411,949
67	2024	33							-	-		1,411,949
68	2025	32							-	-		1,411,949
69	2026	31							-	-		1,411,949
70	2027	30							-	-		1,411,949
71	2028	29							-	-		1,411,949
72	2029	28							-	-		1,411,949
73	2030	27							-	-		1,411,949
74	2031	26							-	-		1,411,949
75	2032	25							-	-		1,411,949
76	2033	24							-	-		1,411,949
77	2034	23							-	-		1,411,949
78	2035	22							-	-		1,411,949
79	2036	21							-	-		1,411,949
80	2037	20							-	-		1,411,949
81	2038	19	UNITS 10 & 11 RETIRE IN 2038						-	-	(466,347)	945,602
82	2039	18							-	-		945,602
83	2040	17							-	-		945,602
84	2041	16							-	-		945,602
85	2042	15							-	-		945,602
86	2043	14							-	-		945,602
87	2044	13							-	-		945,602
88	2045	12							-	-		945,602
89	2046	11							-	-		945,602
90	2047	10							-	-		945,602
91	2048	9							-	-		945,602
92	2049	8							-	-		945,602
93	2050	7							-	-		945,602
94	2051	6							-	-		945,602
95	2052	5							-	-		945,602
96	2053	4							-	-		945,602
97	2054	3							-	-		945,602
98	2055	2							-	-		945,602
99	2056	1							-	-		945,602
100	2057	0									(945,602)	-
								$ -	$ 1,413,780	$ -		$ 70,627,649

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	1,413,780
Forecast Additions	-
Total Additions	1,413,780
Gross Salvage Value	75,648
Less Cost of Removal	94,560
Net Salvage Value	(18,912)
Total to be Recovered	1,432,692
Forecast Plant Balances	70,627,649
Whole Life Accrual Rate	2.03%
Cost of Removal Accrual Rate	0.13%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.89%
Depreciable Service Life, years	49.3

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	1,413,780
Forecast Additions	-
Gross Salvage Value	75,648
Less Cost of Removal	94,560
Net Salvage Value	(18,912)
Forecast Plant Balances	57,515,658

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Riverton Combustion Turbines

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	10%					
Cost of Removal	5%					
Net Salvage	5%					
Install Date	1964	Unit 9	1988	Units 10, 11	2007	Unit 12
Retirement Date	2018	Unit 9	2038	Units 10, 11	2057	Unit 12
Service Life, Yrs	54	Unit 9	50	Units 10, 11	50	Unit 12

Historical and Forecast Plant Additions & Balances

Accou 343 Prime Movers Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1964	93	661,755		-	85,300			661,755	-		661,755
2	1965	92	-		-	-			-	-		661,755
3	1966	91	-		-	-			-	-		661,755
4	1967	90	7,215		-	-			7,215	-		668,970
5	1968	89	-		-	-			-	-		668,970
6	1969	88	40,983		-	-			40,983	-		709,953
7	1970	87	-		-	-			-	-		709,953
8	1971	86	72,731		-	-			72,731	-		782,684
9	1972	85	-		-	-			-	-		782,684
10	1973	84	115,319		-	-			115,319	-		898,003
11	1974	83	38,131		-	-			38,131	-		936,134
12	1975	82	-		-	-			-	-		936,134
13	1976	81	2,454		-	-			2,454	-		938,588
14	1977	80	-		-	-			-	-		938,588
15	1978	79	-		-	-			-	-		938,588
16	1979	78	304,302		-	-			304,302	-		1,242,890
17	1980	77	-		-	-			-	-		1,242,890
18	1981	76	-		-	-			-	-		1,242,890
19	1982	75	-		-	-			-	-		1,242,890
20	1983	74	90,968		-	10,988			90,968	-		1,333,858
21	1984	73	-		-	-			-	-		1,333,858
22	1985	72	-		-	-			-	-		1,333,858
23	1986	71	-		-	-			-	-		1,333,858
24	1987	70	-		-	-			-	-		1,333,858
25	1988	69	3,785,653		-	72,286			3,785,653	-		5,119,511
26	1989	68	968,268		-	-			968,268	-		6,087,779
27	1990	67	24,597		-	-			24,597	-		6,112,376
28	1991	66	-		-	-			-	-		6,112,376
29	1992	65	128,552		-	-			128,552	-		6,240,928
30	1993	64	-		-	-			-	-		6,240,928
31	1994	63	10,260		-	-			10,260	-		6,251,188
32	1995	62	1,077,981		-	-			1,077,981	-		7,329,169
33	1996	61	33,474		-	-			33,474	-		7,362,643
34	1997	60	32,883		-	-			32,883	-		7,395,526
35	1998	59	521,983		-	-			521,983	-		7,917,509
36	1999	58		20,678	-	-			20,678	-		7,938,187
37	2000	57		-	96,288	-			-	96,288		7,841,899
38	2001	56		-	-	-			-	-		7,841,899
39	2002	55		-	-	-			-	-		7,841,899
40	2003	54		-	-	-			-	-		7,841,899
41	2004	53		12,495	-	-			12,495	-		7,854,394
42	2005	52		-	-	-			-	-		7,854,394
43	2006	51		-	72,286	-			-	72,286		7,782,108
44	2007	50		14,865,865	-	-			14,865,865	-		22,647,973
45	2008	49		-	-	-			-	-		22,647,973
46	2009	48							-	-		22,647,973
47	Total		$ 7,917,509	$ 14,899,038	$ 168,574	$ 168,574	$ -	$ -	$ 22,816,547	$ 168,574	$ -	$ 226,445,895
48	Major Additions/Retirements											
49	2007			$ 14,865,865								
50	Routine Activity			$ 33,173	$ 168,574							
51	Historical Interim Activity			0.01%	0.07%							
52	Forecast Interim Activity			0.00%	0.00%							

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Riverton Combustion Turbines

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	10%			
Cost of Removal	5%			
Net Salvage	5%			
Install Date	1964 Unit 9	1988 Units 10, 11	2007 Unit 12	
Retirement Date	2018 Unit 9	2038 Units 10, 11	2057 Unit 12	
Service Life, Yrs	54 Unit 9	50 Units 10, 11	50 Unit 12	

Historical and Forecast Plant Additions & Balances

Accou 343 Prime Movers Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
								Major Additions**			Major Retirements	
53	2010	47						3,315,000		-		25,962,973
54	2011	46						2,055,000		-		28,017,973
55	2012	45						570,000		-		28,587,973
56	2013	44						7,550,000		-		36,137,973
57	2014	43						550,000		-		36,687,973
58	2015	42							-	-		36,687,973
59	2016	41							-	-		36,687,973
60	2017	40							-	-		36,687,973
61	2018	39	UNIT 9 RETIRES IN 2018						-	-	(1,237,570)	35,450,403
62	2019	38							-	-		35,450,403
63	2020	37							-	-		35,450,403
64	2021	36							-	-		35,450,403
65	2022	35							-	-		35,450,403
66	2023	34							-	-		35,450,403
67	2024	33							-	-		35,450,403
68	2025	32							-	-		35,450,403
69	2026	31							-	-		35,450,403
70	2027	30							-	-		35,450,403
71	2028	29							-	-		35,450,403
72	2029	28							-	-		35,450,403
73	2030	27							-	-		35,450,403
74	2031	26							-	-		35,450,403
75	2032	25							-	-		35,450,403
76	2033	24							-	-		35,450,403
77	2034	23							-	-		35,450,403
78	2035	22							-	-		35,450,403
79	2036	21							-	-		35,450,403
80	2037	20							-	-		35,450,403
81	2038	19	UNITS 10 & 11 RETIRE IN 2038						-	-	(6,544,538)	28,905,865
82	2039	18							-	-		28,905,865
83	2040	17							-	-		28,905,865
84	2041	16							-	-		28,905,865
85	2042	15							-	-		28,905,865
86	2043	14							-	-		28,905,865
87	2044	13							-	-		28,905,865
88	2045	12							-	-		28,905,865
89	2046	11							-	-		28,905,865
90	2047	10							-	-		28,905,865
91	2048	9							-	-		28,905,865
92	2049	8							-	-		28,905,865
93	2050	7							-	-		28,905,865
94	2051	6							-	-		28,905,865
95	2052	5							-	-		28,905,865
96	2053	4							-	-		28,905,865
97	2054	3							-	-		28,905,865
98	2055	2							-	-		28,905,865
99	2056	1							-	-		28,905,865
100	2057	0									(28,905,865)	-
								$ 14,040,000	$ 22,816,547	$ 168,574		$1,750,124,174

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	22,816,547
Forecast Additions	14,040,000
Total Additions	36,856,547
Gross Salvage Value	2,890,587
Less Cost of Removal	1,445,293
Net Salvage Value	1,445,293
Total to be Recovered	35,411,254
Forecast Plant Balances	1,750,124,174
Whole Life Accrual Rate	2.02%
Cost of Removal Accrual Rate	0.08%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.94%
Depreciable Service Life, years	49.4

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	22,647,973
Forecast Additions	14,040,000
Gross Salvage Value	2,890,587
Less Cost of Removal	1,445,293
Net Salvage Value	1,445,293
Forecast Plant Balances	1,523,678,279

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Riverton Combustion Turbines

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	10%					
Cost of Removal	5%					
Net Salvage	5%					
Install Date	1964	Unit 9	1988	Units 10, 11	2007	Unit 12
Retirement Date	2018	Unit 9	2038	Units 10, 11	2057	Unit 12
Service Life, Yrs	54	Unit 9	50	Units 10, 11	50	Unit 12

Historical and Forecast Plant Additions & Balances

Accou 344 Generators Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1964	93	177,827		-	-			177,827	-		177,827
2	1965	92	-		-	-			-	-		177,827
3	1966	91	-		-	-			-	-		177,827
4	1967	90	-		-	-			-	-		177,827
5	1968	89	-		-	-			-	-		177,827
6	1969	88	-		-	-			-	-		177,827
7	1970	87	-		-	-			-	-		177,827
8	1971	86	-		-	-			-	-		177,827
9	1972	85	-		-	-			-	-		177,827
10	1973	84	-		-	-			-	-		177,827
11	1974	83	-		-	-			-	-		177,827
12	1975	82	-		-	-			-	-		177,827
13	1976	81	-		-	-			-	-		177,827
14	1977	80	-		-	-			-	-		177,827
15	1978	79	-		-	-			-	-		177,827
16	1979	78	-		-	-			-	-		177,827
17	1980	77	-		-	-			-	-		177,827
18	1981	76	-		-	-			-	-		177,827
19	1982	75	-		-	-			-	-		177,827
20	1983	74	-		-	-			-	-		177,827
21	1984	73	-		-	-			-	-		177,827
22	1985	72	-		-	-			-	-		177,827
23	1986	71	-		-	-			-	-		177,827
24	1987	70	-		-	-			-	-		177,827
25	1988	69	1,764,496		-	-			1,764,496	-		1,942,323
26	1989	68	-		-	-			-	-		1,942,323
27	1990	67	-		-	-			-	-		1,942,323
28	1991	66	-		-	-			-	-		1,942,323
29	1992	65	-		-	-			-	-		1,942,323
30	1993	64	-		-	-			-	-		1,942,323
31	1994	63	-		-	-			-	-		1,942,323
32	1995	62	78,601		-	-			78,601	-		2,020,924
33	1996	61	-		-	-			-	-		2,020,924
34	1997	60	-		-	-			-	-		2,020,924
35	1998	59	-		-	-			-	-		2,020,924
36	1999	58		-	-	-			-	-		2,020,924
37	2000	57		-	-	-			-	-		2,020,924
38	2001	56		-	-	-			-	-		2,020,924
39	2002	55		-	-	-			-	-		2,020,924
40	2003	54		-	-	-			-	-		2,020,924
41	2004	53		-	-	-			-	-		2,020,924
42	2005	52		-	-	-			-	-		2,020,924
43	2006	51		-	-	-			-	-		2,020,924
44	2007	50		11,445,708	-	-			11,445,708	-		13,466,632
45	2008	49		-	-	-			-	-		13,466,632
46	2009	48		-	-	-			-	-		13,466,632
47	Total		$ 2,020,924	$ 11,445,708	$ -	$ -	$ -	$ -	$ 13,466,632	$ -	$ -	$ 82,515,093
48	Major Additions/Retirements											
49	2007			$ 11,445,708								
50	Routine Activity			$ -	$ -							
51	Historical Interim Activity			0.00%	0.00%							
52	Forecast Interim Activity			0.00%	0.00%							

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Riverton Combustion Turbines

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	10%				
Cost of Removal	5%				
Net Salvage	5%				
Install Date	1964 Unit 9	1988 Units 10, 11	2007 Unit 12		
Retirement Date	2018 Unit 9	2038 Units 10, 11	2057 Unit 12		
Service Life, Yrs	54 Unit 9	50 Units 10, 11	50 Unit 12		

Historical and Forecast Plant Additions & Balances

Accou 344 Generators

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
								Major Additions**			Major Retirements	
53	2010	47							-	-		13,466,632
54	2011	46							-	-		13,466,632
55	2012	45							-	-		13,466,632
56	2013	44							-	-		13,466,632
57	2014	43							-	-		13,466,632
58	2015	42							-	-		13,466,632
59	2016	41							-	-		13,466,632
60	2017	40							-	-		13,466,632
61	2018	39	UNIT 9 RETIRES IN 2018						-	-	(177,827)	13,288,805
62	2019	38							-	-		13,288,805
63	2020	37							-	-		13,288,805
64	2021	36							-	-		13,288,805
65	2022	35							-	-		13,288,805
66	2023	34							-	-		13,288,805
67	2024	33							-	-		13,288,805
68	2025	32							-	-		13,288,805
69	2026	31							-	-		13,288,805
70	2027	30							-	-		13,288,805
71	2028	29							-	-		13,288,805
72	2029	28							-	-		13,288,805
73	2030	27							-	-		13,288,805
74	2031	26							-	-		13,288,805
75	2032	25							-	-		13,288,805
76	2033	24							-	-		13,288,805
77	2034	23							-	-		13,288,805
78	2035	22							-	-		13,288,805
79	2036	21							-	-		13,288,805
80	2037	20							-	-		13,288,805
81	2038	19	UNITS 10 & 11 RETIRE IN 2038						-	-	(1,843,097)	11,445,708
82	2039	18							-	-		11,445,708
83	2040	17							-	-		11,445,708
84	2041	16							-	-		11,445,708
85	2042	15							-	-		11,445,708
86	2043	14							-	-		11,445,708
87	2044	13							-	-		11,445,708
88	2045	12							-	-		11,445,708
89	2046	11							-	-		11,445,708
90	2047	10							-	-		11,445,708
91	2048	9							-	-		11,445,708
92	2049	8							-	-		11,445,708
93	2050	7							-	-		11,445,708
94	2051	6							-	-		11,445,708
95	2052	5							-	-		11,445,708
96	2053	4							-	-		11,445,708
97	2054	3							-	-		11,445,708
98	2055	2							-	-		11,445,708
99	2056	1							-	-		11,445,708
100	2057	0									(11,445,708)	-
								$ -	$ 13,466,632	$ -		$ 673,492,701

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	13,466,632
Forecast Additions	-
Total Additions	13,466,632
Gross Salvage Value	1,144,571
Less Cost of Removal	572,285
Net Salvage Value	572,285
Total to be Recovered	12,894,347
Forecast Plant Balances	673,492,701
Whole Life Accrual Rate	1.91%
Cost of Removal Accrual Rate	0.08%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.83%
Depreciable Service Life, years	52.2

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	13,466,632
Forecast Additions	-
Gross Salvage Value	1,144,571
Less Cost of Removal	572,285
Net Salvage Value	572,285
Forecast Plant Balances	590,977,608

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Riverton Combustion Turbines

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	8%			
Cost of Removal	10%			
Net Salvage	-2%			
Install Date	1964 Unit 9	1988 Units 10, 11	2007 Unit 12	
Retirement Date	2018 Unit 9	2038 Units 10, 11	2057 Unit 12	
Service Life, Yrs	54 Unit 9	50 Units 10, 11	50 Unit 12	

Historical and Forecast Plant Additions & Balances

Accou 345 Accessory Electric Equipment Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1964	93	45,121		-	-			45,121	-		45,121
2	1965	92	-		-	-			-	-		45,121
3	1966	91	-		-	-			-	-		45,121
4	1967	90	-		-	-			-	-		45,121
5	1968	89	-		-	-			-	-		45,121
6	1969	88	-		-	-			-	-		45,121
7	1970	87	-		-	-			-	-		45,121
8	1971	86	-		-	-			-	-		45,121
9	1972	85	-		-	-			-	-		45,121
10	1973	84	-		-	-			-	-		45,121
11	1974	83	-		-	-			-	-		45,121
12	1975	82	-		-	-			-	-		45,121
13	1976	81	-		-	-			-	-		45,121
14	1977	80	-		-	-			-	-		45,121
15	1978	79	-		-	-			-	-		45,121
16	1979	78	-		-	-			-	-		45,121
17	1980	77	-		-	-			-	-		45,121
18	1981	76	-		-	-			-	-		45,121
19	1982	75	-		-	-			-	-		45,121
20	1983	74	-		-	-			-	-		45,121
21	1984	73	-		-	-			-	-		45,121
22	1985	72	-		-	-			-	-		45,121
23	1986	71	-		-	-			-	-		45,121
24	1987	70	-		-	-			-	-		45,121
25	1988	69	203,186		-	32,082			203,186	-		248,307
26	1989	68	-		-	-			-	-		248,307
27	1990	67	-		-	-			-	-		248,307
28	1991	66	38,826		-	-			38,826	-		287,133
29	1992	65	-		-	-			-	-		287,133
30	1993	64	-		-	-			-	-		287,133
31	1994	63	-		-	-			-	-		287,133
32	1995	62	674,923		-	-			674,923	-		962,056
33	1996	61	-		-	-			-	-		962,056
34	1997	60	-		-	-			-	-		962,056
35	1998	59	-		-	-			-	-		962,056
36	1999	58		-	-	-			-	-		962,056
37	2000	57		-	-	-			-	-		962,056
38	2001	56		-	-	-			-	-		962,056
39	2002	55		27,610	-	-			27,610	-		989,666
40	2003	54		-	-	-			-	-		989,666
41	2004	53		3,580	-	-			3,580	-		993,246
42	2005	52		-	-	-			-	-		993,246
43	2006	51		-	32,082	-			-	32,082		961,164
44	2007	50		9,477,936	-	-			9,477,936	-		10,439,100
45	2008	49		-	-	-			-	-	639,599	11,078,699
46	2009	48		628	-	-			628	-		11,079,327
47	Total		$ 962,056	$ 9,509,754	$ 32,082	$ 32,082	$ -	$ -	$ 10,471,810	$ 32,082	$ 639,599	$ 47,234,863
48	Major Additions/Retirements											
49	2007			$ 9,477,936								
50	Routine Activity			$ 31,818	$ 32,082							
51	Historical Interim Activity			0.07%	0.07%							
52	Forecast Interim Activity			0.00%	0.00%							

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Riverton Combustion Turbines

Historical and Forecast Plant Additions & Balances

Accou 345 Accessory Electric Equipment

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	8%			
Cost of Removal	10%			
Net Salvage	-2%			
Install Date	1964 Unit 9	1988 Units 10, 11	2007 Unit 12	
Retirement Date	2018 Unit 9	2038 Units 10, 11	2057 Unit 12	
Service Life, Yrs	54 Unit 9	50 Units 10, 11	50 Unit 12	
Initial Plant Balance				

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
								Major Additions**			Major Retirements	
53	2010	47							-	-		11,079,327
54	2011	46							-	-		11,079,327
55	2012	45							-	-		11,079,327
56	2013	44							-	-		11,079,327
57	2014	43							-	-		11,079,327
58	2015	42							-	-		11,079,327
59	2016	41							-	-		11,079,327
60	2017	40							-	-		11,079,327
61	2018	39	UNIT 9 RETIRES IN 2018						-	-	(45,121)	11,034,206
62	2019	38							-	-		11,034,206
63	2020	37							-	-		11,034,206
64	2021	36							-	-		11,034,206
65	2022	35							-	-		11,034,206
66	2023	34							-	-		11,034,206
67	2024	33							-	-		11,034,206
68	2025	32							-	-		11,034,206
69	2026	31							-	-		11,034,206
70	2027	30							-	-		11,034,206
71	2028	29							-	-		11,034,206
72	2029	28							-	-		11,034,206
73	2030	27							-	-		11,034,206
74	2031	26							-	-		11,034,206
75	2032	25							-	-		11,034,206
76	2033	24							-	-		11,034,206
77	2034	23							-	-		11,034,206
78	2035	22							-	-		11,034,206
79	2036	21							-	-		11,034,206
80	2037	20							-	-		11,034,206
81	2038	19	UNITS 10 & 11 RETIRE IN 2038						-	-	(916,043)	10,118,163
82	2039	18							-	-		10,118,163
83	2040	17							-	-		10,118,163
84	2041	16							-	-		10,118,163
85	2042	15							-	-		10,118,163
86	2043	14							-	-		10,118,163
87	2044	13							-	-		10,118,163
88	2045	12							-	-		10,118,163
89	2046	11							-	-		10,118,163
90	2047	10							-	-		10,118,163
91	2048	9							-	-		10,118,163
92	2049	8							-	-		10,118,163
93	2050	7							-	-		10,118,163
94	2051	6							-	-		10,118,163
95	2052	5							-	-		10,118,163
96	2053	4							-	-		10,118,163
97	2054	3							-	-		10,118,163
98	2055	2							-	-		10,118,163
99	2056	1							-	-		10,118,163
100	2057	0									(10,118,163)	-
								$ -	$ 10,471,810	$ 32,082		$ 548,798,696

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	10,471,810
Forecast Additions	-
Total Additions	10,471,810
Gross Salvage Value	809,453
Less Cost of Removal	1,011,816
Net Salvage Value	(202,363)
Total to be Recovered	10,674,173
Forecast Plant Balances	548,798,696
Whole Life Accrual Rate	1.95%
Cost of Removal Accrual Rate	0.18%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.76%
Depreciable Service Life, years	51.4

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	11,079,327
Forecast Additions	-
Gross Salvage Value	809,453
Less Cost of Removal	1,011,816
Net Salvage Value	(202,363)
Forecast Plant Balances	501,563,833

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Riverton Combustion Turbines

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	8%					
Cost of Removal	10%					
Net Salvage	-2%					
Install Date	1964	Unit 9	1988	Units 10, 11	2007	Unit 12
Retirement Date	2018	Unit 9	2038	Units 10, 11	2057	Unit 12
Service Life, Yrs	54	Unit 9	50	Units 10, 11	50	Unit 12

Historical and Forecast Plant Additions & Balances

Accou 346 Misc Power Equipment Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	End of Year Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1964	93	-		-	-			-	-		-
2	1965	92	-		-	-			-	-		-
3	1966	91	-		-	-			-	-		-
4	1967	90	15,348		-	-			15,348	-		15,348
5	1968	89	-		-	-			-	-		15,348
6	1969	88	-		-	-			-	-		15,348
7	1970	87	-		-	-			-	-		15,348
8	1971	86	-		-	-			-	-		15,348
9	1972	85	-		-	-			-	-		15,348
10	1973	84	466		-	-			466	-		15,814
11	1974	83	-		-	-			-	-		15,814
12	1975	82	-		-	-			-	-		15,814
13	1976	81	-		-	-			-	-		15,814
14	1977	80	-		-	-			-	-		15,814
15	1978	79	-		-	-			-	-		15,814
16	1979	78	-		-	-			-	-		15,814
17	1980	77	-		-	-			-	-		15,814
18	1981	76	-		-	-			-	-		15,814
19	1982	75	-		-	-			-	-		15,814
20	1983	74	-		-	-			-	-		15,814
21	1984	73	-		-	-			-	-		15,814
22	1985	72	-		-	-			-	-		15,814
23	1986	71	-		-	-			-	-		15,814
24	1987	70	-		-	-			-	-		15,814
25	1988	69	69,511		-	-			69,511	-		85,325
26	1989	68	-		-	-			-	-		85,325
27	1990	67	-		-	-			-	-		85,325
28	1991	66	-		-	-			-	-		85,325
29	1992	65	-		-	-			-	-		85,325
30	1993	64	-		-	-			-	-		85,325
31	1994	63	-		-	-			-	-		85,325
32	1995	62	-		-	-			-	-		85,325
33	1996	61	-		-	-			-	-		85,325
34	1997	60	-		-	-			-	-		85,325
35	1998	59	-		-	-			-	-		85,325
36	1999	58		-	-	-			-	-		85,325
37	2000	57		-	-	-			-	-		85,325
38	2001	56		-	-	-			-	-		85,325
39	2002	55		-	-	-			-	-		85,325
40	2003	54		-	-	-			-	-		85,325
41	2004	53		-	-	-			-	-		85,325
42	2005	52		-	-	-			-	-		85,325
43	2006	51		-	-	-			-	-		85,325
44	2007	50		1,484,186	-	-			1,484,186	-		1,569,511
45	2008	49		-	-	-			-	-		1,569,511
46	2009	48		-	-	-	741		741	-		1,570,252
47	Total		$ 85,325	$ 1,484,186	$ -	$ -	$ 741	$ -	$ 1,570,252	$ -	$ -	$ 6,659,747
48	Major Additions/Retirements											
49	2007			$ 1,484,186								
50	Routine Activity			$ 741	$ -							
51	Historical Interim Activity			0.01%	0.00%							
52	Forecast Interim Activity			0.00%	0.00%							

The Empire District Electric Company

Unit Property Depreciation Rate Analysis

Unit Property: Other Production, Riverton Combustion Turbines

THE EMPIRE DISTRICT ELECTRIC COMPANY
DEPRECIATION STUDY

Gross Salvage	8%					
Cost of Removal	10%					
Net Salvage	-2%					
Install Date	1964	Unit 9	1988	Units 10, 11	2007	Unit 12
Retirement Date	2018	Unit 9	2038	Units 10, 11	2057	Unit 12
Service Life, Yrs	54	Unit 9	50	Units 10, 11	50	Unit 12

Historical and Forecast Plant Additions & Balances

Accou 346 Misc Power Equipment Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
								Major Additions**			Major Retirements	
53	2010	47							-	-		1,570,252
54	2011	46							-	-		1,570,252
55	2012	45							-	-		1,570,252
56	2013	44							-	-		1,570,252
57	2014	43							-	-		1,570,252
58	2015	42							-	-		1,570,252
59	2016	41							-	-		1,570,252
60	2017	40							-	-		1,570,252
61	2018	39	UNIT 9 RETIRES IN 2018						-	-	(15,814)	1,554,438
62	2019	38							-	-		1,554,438
63	2020	37							-	-		1,554,438
64	2021	36							-	-		1,554,438
65	2022	35							-	-		1,554,438
66	2023	34							-	-		1,554,438
67	2024	33							-	-		1,554,438
68	2025	32							-	-		1,554,438
69	2026	31							-	-		1,554,438
70	2027	30							-	-		1,554,438
71	2028	29							-	-		1,554,438
72	2029	28							-	-		1,554,438
73	2030	27							-	-		1,554,438
74	2031	26							-	-		1,554,438
75	2032	25							-	-		1,554,438
76	2033	24							-	-		1,554,438
77	2034	23							-	-		1,554,438
78	2035	22							-	-		1,554,438
79	2036	21							-	-		1,554,438
80	2037	20							-	-		1,554,438
81	2038	19	UNITS 10 & 11 RETIRE IN 2038						-	-	(69,511)	1,484,927
82	2039	18							-	-		1,484,927
83	2040	17							-	-		1,484,927
84	2041	16							-	-		1,484,927
85	2042	15							-	-		1,484,927
86	2043	14							-	-		1,484,927
87	2044	13							-	-		1,484,927
88	2045	12							-	-		1,484,927
89	2046	11							-	-		1,484,927
90	2047	10							-	-		1,484,927
91	2048	9							-	-		1,484,927
92	2049	8							-	-		1,484,927
93	2050	7							-	-		1,484,927
94	2051	6							-	-		1,484,927
95	2052	5							-	-		1,484,927
96	2053	4							-	-		1,484,927
97	2054	3							-	-		1,484,927
98	2055	2							-	-		1,484,927
99	2056	1							-	-		1,484,927
100	2057	0									(1,484,927)	-
								$ -	$ 1,570,252	$ -		$ 78,524,136

* Through vintage year 1999 the balances are 1999 remaining plant balances.

** From 2009 capital budget

Whole Life Depreciation Rate Calculation

Historical Additions	1,570,252
Forecast Additions	-
Total Additions	1,570,252
Gross Salvage Value	118,794
Less Cost of Removal	148,493
Net Salvage Value	(29,699)
Total to be Recovered	1,599,951
Forecast Plant Balances	78,524,136
Whole Life Accrual Rate	2.04%
Cost of Removal Accrual Rate	0.19%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.85%
Depreciable Service Life, years	49.1

Remaining Life Depreciation Rate Calculation

Account Balance 12/31/09	1,570,252
Forecast Additions	-
Gross Salvage Value	118,794
Less Cost of Removal	148,493
Net Salvage Value	(29,699)
Forecast Plant Balances	71,864,389

The Empire District Electric Company
Impact of Recommended Depreciation Rates

Line	[A] Description	[B] FERC Acct	[C] Plant in Service At 3/31/2012	[D] Existing Depreciation Rate	[E] Existing Life Rate	[F] Existing Net Salvage Rate	[G] Existing Depreciation Expense	[H] Recommended Depreciation Rate	[I] Recommended Life Rate	[J] Recommended Net Salvage Rate	[K] Recommended Depreciation Expense	[L] Change in Depreciation Expense
			$	%	%	%	$	%	%	%	$	$
1	Production Plant											
2	Steam Production Plant											
3	Land and Land Rights	310	1,895,222									
4	Asbury	311-316	151,565,968	1.75%	1.74%	-0.02%	2,657,160	3.92%	3.75%	-0.17%	5,941,386	3,284,225
5	Riverton	311-316	48,039,728	1.62%	1.61%	-0.01%	778,253	3.20%	3.05%	-0.15%	1,537,271	759,018
6	Iatan 1	311-316	149,892,752	1.84%	1.80%	-0.04%	2,759,998	3.12%	2.98%	-0.14%	4,676,654	1,916,656
7	Iatan 2	311-316	213,114,626	1.79%	1.79%	0.00%	3,810,545	2.10%	2.00%	-0.10%	4,475,407	664,862
8	Plum Point	311-316	103,936,355	1.91%	1.90%	-0.01%	1,981,507	2.10%	2.00%	-0.10%	2,182,663	201,157
9	Total Steam Production		668,444,651	*1.80%*			11,987,463	*2.82%*			18,813,382	6,825,918
10	Hydro Production Plant											
11	Land and Land Rights	330	226,488									
12	Ozark Beach	331-335	7,590,116	1.62%	1.62%	0.00%	123,117	2.13%	2.02%	-0.11%	161,669	38,552
13	Total Hydro Production		7,816,604	*1.62%*			123,117	*2.13%*			161,669	38,552
14	Other Production Plant											
15	Land and Land Rights	340	1,025,253									
16	State Line Combined Cycle	341-346	160,440,212	2.86%	2.86%	0.00%	4,588,590	2.14%	2.22%	0.08%	3,433,421	(1,155,170)
17	State Line CT	341-346	40,603,486	2.22%	2.21%	-0.01%	899,625	3.25%	3.33%	0.08%	1,319,613	419,988
18	Energy Center Unit 1&2	341-346	38,220,885	2.15%	2.15%	0.00%	822,310	2.28%	2.35%	0.06%	871,436	49,126
19	Energy Center Unit 3&4 (FT8)	341-347	55,411,639	2.11%	2.11%	0.00%	1,170,236	1.97%	2.05%	0.08%	1,091,609	(78,626)
20	Riverton CT	341-348	51,295,676	2.37%	2.37%	0.00%	1,213,814	1.97%	2.02%	0.05%	1,010,525	(203,290)
21	Total Other Production		346,997,151	*2.51%*			8,694,576	*2.23%*			7,726,604	(967,971)
22	Total Production Plant		1,023,258,406	*2.04%*			20,805,156	*2.62%*			26,701,655	5,896,499
23	Transmission Plant											
24	Land and Land Rights	350	11,283,373									
25	Structures and Improvements	352	2,369,229	2.09%	1.82%	-0.27%	49,517	1.82%	1.82%	0.00%	43,120	(6,397)
26	Station Equipment	353	100,781,614	2.20%	2.00%	-0.20%	2,217,196	2.17%	1.92%	-0.25%	2,186,961	(30,234)
27	Towers and Fixtures	354	799,508	1.92%	1.54%	-0.38%	15,351	1.54%	1.54%	0.00%	12,312	(3,038)
28	Poles and Fixtures	355	54,106,894	3.33%	1.67%	-1.66%	1,801,760	2.36%	1.82%	-0.54%	1,276,923	(524,837)
29	Overhead Conductors and Devices	356	67,599,408	2.15%	1.54%	-0.61%	1,453,387	2.28%	1.72%	-0.56%	1,541,267	87,879
30	Roads and Trails	359	-				-				-	-
31	Total Transmission Plant		236,940,026	*2.45%*			5,537,210	*2.24%*			5,060,583	(476,627)

The Empire District Electric Company
Impact of Recommended Depreciation Rates

Line	[A] Description	[B] FERC Acct	[C] Plant in Service At 3/31/2012	[D] Existing Depreciation Rate	[E] Existing Life Rate	[F] Existing Net Salvage Rate	[G] Existing Depreciation Expense	[H] Recommended Depreciation Rate	[I] Recommended Life Rate	[J] Recommended Net Salvage Rate	[K] Recommended Depreciation Expense	[L] Change in Depreciation Expense
			$	%	%	%	$	%	%	%	$	$
32	Distribution Plant											
33	Land and Land Rights	360	3,378,921				-					
34	Structures and Improvements	361	10,304,892	2.08%	1.67%	-0.41%	214,342	1.56%	1.56%	0.00%	160,756	(53,585)
35	Station Equipment	362	83,616,998	1.89%	2.22%	0.33%	1,580,361	2.25%	1.92%	-0.33%	1,881,382	301,021
36	Poles, Towers and Fixtures	364	168,292,627	4.35%	2.17%	-2.18%	7,320,729	4.35%	2.17%	-2.18%	7,320,729	-
37	Overhead Conductors and Devices	365	159,077,959	3.77%	1.89%	-1.88%	5,997,239	3.39%	1.69%	-1.70%	5,392,743	(604,496)
38	Underground Conduit	366	31,710,605	3.92%	2.70%	-1.22%	1,243,056	2.22%	2.00%	-0.22%	703,975	(539,080)
39	Underground Conductors & Devices	367	57,118,555	3.59%	3.13%	-0.46%	2,050,556	2.38%	2.22%	-0.16%	1,359,422	(691,135)
40	Line Transformers	368	94,871,781	2.78%	2.22%	-0.56%	2,637,436	2.06%	2.08%	0.02%	1,954,359	(683,077)
41	Services	369	70,503,129	5.00%	2.50%	-2.50%	3,525,156	4.65%	2.33%	-2.32%	3,278,395	(246,761)
42	Meters	370	19,139,663	2.27%	2.27%	0.00%	434,470	2.42%	2.33%	-0.09%	463,180	28,709
43	Installations on Customer Premises	371	16,177,188	5.80%	4.00%	-1.80%	938,277	5.07%	3.57%	-1.50%	820,183	(118,093)
44	Street Lighting and Signal Systems	373	16,747,228	3.13%	2.08%	-1.05%	524,188	3.38%	2.22%	-1.16%	566,056	41,868
45	Total Distribution Plant		730,939,546	*3.64%*			26,465,811	*3.29%*			23,901,182	(2,564,629)
46	General Plant											
47	Land and Land Rights	389	679,466									
48	Structures and Improvements	390	9,443,239	2.75%	2.50%	-0.25%	259,689	3.57%	3.57%	0.00%	337,124	77,435
49	Office Furniture and Equipment	391.1	4,445,841	5.00%	5.00%	0.00%	222,292	5.00%	5.00%	0.00%	222,292	-
50	Computer Equipment	391.2	12,811,666	10.00%	10.00%	0.00%	1,281,167	9.00%	10.00%	1.00%	1,153,050	(128,117)
51	Transportation Equipment	392	10,228,764	7.08%	8.33%	1.25%	724,197	7.54%	7.69%	0.15%	771,249	47,052
52	Stores Equipment	393	441,240	3.17%	3.33%	0.16%	13,987	2.50%	2.50%	0.00%	11,031	(2,956)
53	Tools, Shop and Garage Equipment	394	4,975,542	4.50%	5.00%	0.50%	223,899	5.00%	5.00%	0.00%	248,777	24,878
54	Laboratory Equipment	395	1,009,864	2.63%	2.63%	0.00%	26,559	2.09%	2.17%	0.08%	21,106	(5,453)
55	Power Operated Equipment	396	12,918,744	6.33%	6.67%	0.34%	817,756	5.88%	5.88%	0.00%	759,622	(58,134)
56	Communication Equipment	397	10,729,321	4.00%	4.00%	0.00%	429,173	3.70%	3.70%	0.00%	396,985	(32,188)
57	Miscellaneous Equipment	398	224,558	4.55%	4.55%	0.00%	10,217	3.13%	3.13%	0.00%	7,029	(3,189)
58	Total General Plant		67,908,247	*5.96%*			4,008,937	*5.84%*			3,928,264	(80,673)
59	Total Plant in Service @ 3/31/12		2,059,046,224	*2.78%*			56,817,114	*2.92%*			59,591,684	2,774,570

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]
Plant / Unit	**In-Service**	**Rated Capacity MW**	**Utilization**	**Primary Fuel**	**Boiler Design**	**Turbine Trottle Pressure**	**Cooling/ Condensing**	**Generator Type**
Asbury Unit 1	1970	189	Base Load	Crushed Blend - 88% Subbituminous Coal / 12% Bituminous Coal	Babcock & Wilcox Cyclone	1850 psi	Cooling Tower utilizing well water	Westinghouse Steam TG
Asbury Unit 2	1986	18	Peaking	Crushed Blend - 88% Subbituminous Coal / 12% Bituminous Coal	excess capacity of Unit 1 boiler	750 psi	Cooling lake	Westinghouse Steam TG
Energy Center 1	1978	82	Peaking	Natural Gas	N/A	N/A		Westinghouse Combustion TG
Energy Center 2	2003	82	Peaking	Natural Gas	N/A	N/A		Westinghouse Combustion TG
Energy Center 3	2003	49	Quick Start Peaking	Natural Gas	N/A	N/A		Pratt-Whitney Combustion TG
Energy Center 4	1978	49	Quick Start Peaking	Natural Gas	N/A	N/A		Pratt-Whitney Combustion TG
Iatan 1	1980	708	Base Load	Pulverized Coal	Babcock & Wilcox Drum-Type	2400 psi	Once-through cooling system utilizing river	Westinghouse Steam TG
Iatan 2	2010	850	Base Load	Pulverized Coal	Alstom Supercritical	3600 psi	Closed system with cooling tower	Toshiba Steam TG
Ozark Beach 5	1930	4	Intermittent	Hydro	N/A	N/A		
Ozark Beach 6	1930	4	Intermittent	Hydro	N/A	N/A		
Ozark Beach 7	1930	4	Intermittent	Hydro	N/A	N/A		
Ozark Beach 8	1930	4	Intermittent	Hydro	N/A	N/A		
Plum Point	2010	665	Base Load	Pulverized Coal	IHI Drum-Type	2500 psi	Cooling Tower utilizing river water	Toshiba Steam TG
Riverton 7	1949	38	Base Load	Pulverized Blend - 83% Subbituminous Coal / 17% Petroleum Coke	Foster-Wheeler Drum Type Front Fired	960 psi	Once-through cooling system utilizing river	Westinghouse Steam TG
Riverton 8	1954	54	Base Load	Pulverized Blend - 83% Subbituminous Coal / 17% Petroleum Coke	Combustion Engineering Drum Type Tangentially Fired	960 psi	Once-through cooling system utilizing river	Westinghouse Steam TG
Riverton 9	1963	12	Peaking	Natural Gas	N/A	N/A		Westinghouse Combustion TG
Riverton 10	1989	16	Peaking	Natural Gas	N/A	N/A		Westinghouse Combustion TG
Riverton 11	1989	17	Peaking	Natural Gas	N/A	N/A		Westinghouse Combustion TG
Riverton 12	2008	142	Peaking	Natural Gas	N/A	N/A		Siemens Combustion TG
State Line 1	1995	94	Peaking	Natural Gas	N/A	N/A		Siemens Combustion TG
State Line CC	1995/2000	495	Intermediate/ Peaking	Natural Gas	Nooter Heat Recovery Steam Generators (HRSG)	N/A	Cooling tower utilizing well water	Combined Cycle: 2 CTG + 2 HRSG

[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T]	[U]
Plant / Unit	**Generator Cooling**	**Environmental Controls**	**2011 EDE Fuel Cost ($)**	**2011 Total Fuel Cost ($)**	**2011 Unit Starts**	**2011 Hours**	**2011 MWh Generated**	**2011 Fuel $/MWh**	**2011 Capacity Factor**	**Total Fuel mmBtu**	**2011 Heat Rate**
Asbury Unit 1	Hydrogen	SCR, Electrostatic Precipitator, Overfire Air	29,857,355	29,857,355	9	7,237	1,170,947	25.50	70.72%	12,814,698	10,944
Asbury Unit 2	Hydrogen		-	-	1	41	447		0.28%		
Energy Center 1	Hydrogen	Water injection	80,846	80,846	3	20	461	175.37	0.06%	14,977	32,488
Energy Center 2	Hydrogen	Water injection	412,714	412,714	15	93	4,393	93.95	0.61%	72,546	16,514
Energy Center 3	Air	Water injection, oxidation catalyst	1,946,559	1,946,559	174	1,057	29,579	65.81	6.89%	361,927	12,236
Energy Center 4	Air	Water injection, oxidation catalyst	1,596,298	1,596,298	177	854	25,112	63.57	5.85%	309,513	12,325
Iatan 1	Hydrogen	Overfire Air, Fabric Filter, SCR, Wet Scrubber utilizing crushed	7,417,311	61,810,925	14	6,561	3,610,875	17.12	58.22%	36,794,975	10,190
Iatan 2	Hydrogen	Overfire Air, Fabric Filter, SCR, Wet Scrubber utilizing crushed	9,837,757	81,981,308	6	7,460	5,470,675	14.99	73.47%	49,885,667	9,119
Ozark Beach 5*	Air				N/A	3,380	12,227		34.89%		
Ozark Beach 6*	Air				N/A	3,380	12,227		34.89%		
Ozark Beach 7*	Air				N/A	3,380	12,227		34.89%		
Ozark Beach 8*	Air				N/A	3,380	12,227		34.89%		
Plum Point	Hydrogen	Overfire Air, SCR, SDA utilizing quick lime, Fabric Filter, Carbon	5,577,772	74,172,500	13	7,082	3,669,814	20.21	63.00%	37,558,231	10,234
Riverton 7	Hydrogen	Electrostatic precipitator	2,989,034	2,989,034	5	4,638	82,589	36.19	24.81%	1,270,149	15,379
Riverton 8	Hydrogen	Electrostatic precipitator	6,275,116	6,275,116	4	5,212	186,005	33.74	39.32%	2,551,372	13,717
Riverton 9	Air	None	20,179	20,179	3	21	208	97.01	0.20%	3,982	19,144
Riverton 10	Air	Water injection	31,363	31,363	9	23	252	124.46	0.18%	5,923	23,504
Riverton 11	Air	Water injection	11,624	11,624	4	13	149	78.01	0.10%	2,138	14,349
Riverton 12	Air	Dry Low-NOx burners	11,440,980	11,440,980	125	1,167	141,869	80.64	11.40%	1,543,005	10,876
State Line 1	Air	Water injection, Dry Low-NOx burners	766,855	766,855	21	145	10,385	73.84	1.26%	144,849	13,948
State Line CC	CTG 2-1 Air; CTG 2-2 Hydrogen; STG Air	SCR; Dry Low-NOx burners	47,695,033	47,695,033	13	6,540	1,271,513	37.51	29.32%	9,379,223	7,376

* Ozark Beach units reported together on FERC Form 1

Case ER-94-174
Rates effective 9/94.

APPENDIX B

Acct. #	Description	Depr. Rate
Production - Riverton - Steam		
311.200	Structures & Improvements	2.0500
312.200	Boiler Plant Equipment	2.7700
314.200	Turbogenerator Units	1.7900
315.200	Accessory Electric Equipment	1.9800
316.200	Miscellaneous Power Plant Equipment	2.0200
Production - Asbury - Steam		
311.300	Structures & Improvements	2.1500
312.300	Boiler Plant Equipment	2.9100
312.700	Unit Train	5.6700
314.300	Turbogenerator Units	2.6000
315.300	Accessory Electric Equipment	2.1000
316.300	Miscellaneous Power Plant Equipment	2.1000
Production - Iatan - Steam		
311.600	Structures & Improvements	3.3500
312.600	Boiler Plant Equipment	4.1900
312.500	Unit Train	5.6700
314.600	Turbogenerator Units	3.0000
315.600	Accessory Electric Equipment	3.1800
316.600	Miscellaneous Power Plant Equipment	2.9400
Production - Ozark Beach - Hydro		
331.300	Structures & Improvements	1.9800
332.300	Reservoirs, Dams & Waterways	1.9000
335.300	Miscellaneous Power Plant Equipment	2.1000
Production - Riverton - CT		
341.200	Structures & Improvements	3.0200
342.200	Fuel Holders, Producers & Access.	3.7100
343.200	Prime Movers	3.4000
344.200	Generators	3.1000
345.200	Accessory Electric Equipment	3.4400
346.200	Miscellaneous Power Plant Equipment	3.8600
Production - Energy Center - CT		
341.300	Structures & Improvements	3.1600
342.300	Fuel Holders, Producers & Access.	3.7100
343.300	Prime Movers	3.4400
344.300	Generators	3.1600
345.300	Accessory Electric Equipment	3.4400
346.300	Miscellaneous Power Plant Equipment	3.8600

Effective about Sept 94

Transmission Plant		
352.000	Structures & Improvements	1.5800
353.000	Station Equipment	2.5700
354.000	Towers & Fixtures	1.5600
355.000	Poles & Fixtures	2.7100
356.000	Overhead Conductors & Devices	2.2500
Distribution Plant		
361.000	Structures & Improvements	2.2500
362.000	Station Equipment	3.0000
364.000	Poles, Towers & Fixtures	4.2500
365.000	Overhead Conductors & Devices	2.8700
366.000	Underground Conduit	3.9600
367.000	Underground Conduit & Devices	4.1900
368.000	Line Transformers	2.8200
369.000	Services	4.1900
370.000	Meters	2.6300
371.000	Installation on Customers' Premises	5.8200
373.000	Street Lighting & Signal Systems	2.4800
General Plant		
390.000	Structures & Improvements	4.6800
391.000	Office Furniture & Equipment	4.6700
392.000	Transportation Equipment	9.0000
393.000	Stores Equipment	4.5700
394.000	Tools, Shop & Garage Equipment	3.6700
395.000	Laboratory Equipment	3.0000
396.000	Power Operated Equipment	6.7100
397.000	Communication Equipment	4.7600
398.000	Miscellaneous Equipment	3.8800

Summary by Plant
The Empire District Electric Company
Asbury Plant

Account	Description	Direct Investment 2011$	Depreciation Rate
311	Structure & Improvements	14,436,389	2.75%
312	Boiler Plant Equipment	107,156,983	4.38%
314	Turbo Generator Equipment	21,978,073	2.52%
315	Accessory Electric Equipment	5,630,055	3.73%
316	Misc Power Equipment	2,257,497	3.85%
	Total	151,458,996	3.92% whole life weighted average rate

Remaining Life Depreciation Rate Calculation

Per Books Balance 3/31/12	151,565,968
Forecast Interim Additions	210,060,454
Forecast Gross Salvage Value	16,814,200
Forecast Less Cost of Removal	33,628,399
Forecast Net Salvage Value	(16,814,200)
Forecast Total to be Recovered with COR	378,440,621
Forecast Total to be Recovered w/o COR	344,812,222
Accumulated Depreciation (3/31/2012)	(45,087,002)
Forecast Remaining Life Balance with COR	333,353,619
Forecast Remaining Life Balance w/o COR	299,725,220
Forecast Plant Balances	6,899,900,641
Remaining Life Rate with COR	4.83%
Remaining Life Rate w/o COR	4.34%
Reserve Variance with COR	(62,877,514)

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2035
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances
Accou 311 Structures & Improvements Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1970	65	733,333		-	13,108			733,333	-		733,333
2	1971	64	8,946		-	-			8,946	-		742,280
3	1972	63	1,192		-	-			1,192	-		743,472
4	1973	62	-		-	-			-	-		743,472
5	1974	61	-		-	-			-	-		743,472
6	1975	60	-		-	-			-	-		743,472
7	1976	59	-		-	-			-	-		743,472
8	1977	58	-		-	-			-	-		743,472
9	1978	57	120,976		-	-			120,976	-		864,449
10	1979	56	41,005		-	-			41,005	-		905,454
11	1980	55	29,782		-	-			29,782	-		935,235
12	1981	54	5,687		-	-			5,687	-		940,922
13	1982	53	1,644		-	-			1,644	-		942,566
14	1983	52	-		-	-			-	-		942,566
15	1984	51	25,765		-	6,677			25,765	-		968,331
16	1985	50	-		-	-			-	-		968,331
17	1986	49	2,392,445		-	6,600			2,392,445	-		3,360,776
18	1987	48	91,975		-	9,364			91,975	-		3,452,750
19	1988	47	12,344		-	-			12,344	-		3,465,094
20	1989	46	-		-	-			-	-		3,465,094
21	1990	45	8,888,649		-	319,714			8,888,649	-		12,353,744
22	1991	44	29,679		-	-			29,679	-		12,383,423
23	1992	43	99,953		-	43,081			99,953	-		12,483,376
24	1993	42	235,140		-	-			235,140	-		12,718,515
25	1994	41	60,962		-	-			60,962	-		12,779,477
26	1995	40	93,854		-	-			93,854	-		12,873,331
27	1996	39	134,029		-	-			134,029	-		13,007,360
28	1997	38	180,856		-	-			180,856	-		13,188,216
29	1998	37	72,409		-	0			72,409	-		13,260,624
30	1999	36	-		59,445	-			-	59,445		13,201,179
31	2000	35		68,843	4,600	-			68,843	4,600		13,265,422
32	2001	34		46,199	-	2,415			46,199	-		13,311,621
33	2002	33		102,501	-	-			102,501	-		13,414,122
34	2003	32		11,386	-	-			11,386	-		13,425,508
35	2004	31		119,747	10,235	-			119,747	10,235		13,535,020
36	2005	30		75,007	-	1,774			75,007	-		13,610,027
37	2006	29		44,811	-	-			44,811	-		13,654,837
38	2007	28		70,748	2,415	-			70,748	2,415		13,723,171
39	2008	27		66,059	5,008	-			66,059	5,008		13,784,222
40	2009	26		33,136	-	-			33,136	-		13,817,357
41	2010	25		446,383	3,100	-			446,383	3,100		14,260,640
42	2011	24		2,114	317,930	-	491,565		493,679	317,930		14,436,389
43	Total		$ 13,260,624	$ 1,086,932	$ 402,733	$ 402,733	$ 491,565	$ -	$ 14,839,121	$ 402,733	$ -	$ 319,635,596

44 Major Additions/Retirements

45	Routine Activity		$ 1,578,497	$ 402,733
46	Historical Interim Activity		0.49%	0.13%
47	Forecast Interim Activity		0.49%	0.13%

				2012 Additions Through 3/31	Major Additions			Major Retirements	
48	2012	23		27,728		68,236	17,410		14,514,944
49	2013	22				71,681	18,288		14,568,336
50	2014	21	UNIT 2 RETIRES IN 2014			71,945	18,356	2,354,742	12,267,183
51	2015	20				60,581	15,456		12,312,307
52	2016	19				60,803	15,513		12,357,597
53	2017	18				61,027	15,570		12,403,054
54	2018	17				61,252	15,628		12,448,678
55	2019	16				61,477	15,685		12,494,470
56	2020	15				61,703	15,743		12,540,430
57	2021	14				61,930	15,801		12,586,559
58	2022	13				62,158	15,859		12,632,859
59	2023	12				62,386	15,917		12,679,328
60	2024	11				62,616	15,976		12,725,968
61	2025	10				62,846	16,034		12,772,780
62	2026	9				63,077	16,093		12,819,764
63	2027	8				63,309	16,153		12,866,921
64	2028	7				63,542	16,212		12,914,251
65	2029	6				63,776	16,272		12,961,756
66	2030	5				64,011	16,331		13,009,435
67	2031	4				64,246	16,392		13,057,290
68	2032	3				64,482	16,452		13,105,320
69	2033	2				64,720	16,512		13,153,527
70	2034	1				64,958	16,573		13,201,912
71	2035	0						(13,201,912)	-
					$ -	$ 16,305,884	$ 776,958		$ 616,030,264

* Through vintage year 1999 the balances are 1999 remaining plant balances.

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2035
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances
Accou 311 Structures & Improvements Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	14,839,121
Forecast Additions	1,466,763
Total Additions	16,305,884
Gross Salvage Value	660,096
Less Cost of Removal	1,320,191
Net Salvage Value	(660,096)
Total to be Recovered	16,965,980
Forecast Plant Balances	616,030,264
Whole Life Accrual Rate	2.75%
Cost of Removal Accrual Rate	0.21%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.54%
Depreciable Service Life, years	36.3

Remaining Life Depreciation Rate Calculation

Account Balance -12/31/11	14,464,117
Forecast Additions	1,439,034
Gross Salvage Value	660,096
Less Cost of Removal	1,320,191
Net Salvage Value	(660,096)
Forecast Plant Balances	296,394,668

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2035
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances
Accou 312 Boiler Plant Equipment

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1970	65	12,597,912		-	3,566,382			12,597,912	-		12,597,912
2	1971	64	248,134		-	-			248,134	-		12,846,046
3	1972	63	67,780		-	-			67,780	-		12,913,825
4	1973	62	56,263		-	18,178			56,263	-		12,970,089
5	1974	61	207,477		-	127,723			207,477	-		13,177,566
6	1975	60	61,298		-	6,335			61,298	-		13,238,864
7	1976	59	224,595		-	47,297			224,595	-		13,463,458
8	1977	58	208,546		-	71,047			208,546	-		13,672,004
9	1978	57	394,456		-	22,409			394,456	-		14,066,460
10	1979	56	3,845,387		-	154,106			3,845,387	-		17,911,846
11	1980	55	150,595		-	6,000			150,595	-		18,062,441
12	1981	54	288,684		-	192,949			288,684	-		18,351,125
13	1982	53	263,676		-	54,077			263,676	-		18,614,801
14	1983	52	347,743		-	77,382			347,743	-		18,962,543
15	1984	51	300,302		-	222,695			300,302	-		19,262,846
16	1985	50	77,136		-	-			77,136	-		19,339,982
17	1986	49	1,346,614		-	3,957			1,346,614	-		20,686,597
18	1987	48	1,593,577		-	787,070			1,593,577	-		22,280,173
19	1988	47	1,526,144		-	59,092			1,526,144	-		23,806,317
20	1989	46	872,424		-	176,494			872,424	-		24,678,741
21	1990	45	12,451,298		-	165,873			12,451,298	-		37,130,039
22	1991	44	712,946		-	149,625			712,946	-		37,842,985
23	1992	43	798,022		-	32,439			798,022	-		38,641,007
24	1993	42	1,286,295		-	291,669			1,286,295	-		39,927,302
25	1994	41	1,297,617		-	11,036			1,297,617	-		41,224,919
26	1995	40	1,127,003		-	1,315			1,127,003	-		42,351,921
27	1996	39	3,036,572		-	364,245			3,036,572	-		45,388,493
28	1997	38	1,115,227		-	124,480			1,115,227	-		46,503,720
29	1998	37	2,318,769		-	47,104			2,318,769	-		48,822,489
30	1999	36		3,888,877	2,199,464	17,000			3,888,877	2,199,464		50,511,902
31	2000	35		1,819,013	116,307	-			1,819,013	116,307		52,214,608
32	2001	34		1,221,566	-	10,456			1,221,566	-		53,436,173
33	2002	33		10,836,657	-	151,161			10,836,657	-		64,272,830
34	2003	32		942,978	446,115	-			942,978	446,115		64,769,693
35	2004	31		1,282,372	1,944,362	-			1,282,372	1,944,362		64,107,703
36	2005	30		4,623,076	-	60,832			4,623,076	-		68,730,779
37	2006	29		477,876	-	-			477,876	-		69,208,655
38	2007	28		5,586,061	1,880,071	-			5,586,061	1,880,071		72,914,645
39	2008	27		32,303,917	79,015	-			32,303,917	79,015		105,139,547
40	2009	26		494,582	-	-			494,582	-		105,634,129
41	2010	25		526,769	312,584	-	54,435		581,204	312,584		105,902,749
42	2011	24		-	42,511	-	1,296,744		1,296,744	42,511		107,156,983
43	Total		$ 48,822,489	$ 64,003,741	$ 7,020,427	$ 7,020,427	$ 1,351,180	$ -	$ 114,177,410	$ 7,020,427	$ -	$ 1,702,736,909

44	Major Additions/Retirements			
45	2002	$ 10,836,657		
46	2008	$ 32,303,917		
47	Routine Activity	$ 22,214,347	$ 7,020,427	
48	Historical Interim Activity	1.30%	0.41%	
49	Forecast Interim Activity	1.30%	0.41%	

				2012 Additions Through 3/31	Major Additions		Major Retirements	
50	2012	23		48,030	34,079,910	435,532		140,849,390
51	2013	22			56,755,501	580,726		197,024,166
52	2014	21	UNIT 2 RETIRES IN 2014		26,652,271	812,336	256,512	222,607,590
53	2015	20			17,461,427	917,817		239,151,200
54	2016	19			1,510,741	986,026		239,675,914
55	2017	18			3,856,097	988,190		242,543,821
56	2018	17				3,164,290	1,000,014	244,708,096
57	2019	16				3,192,525	1,008,938	246,891,684
58	2020	15				3,221,013	1,017,941	249,094,756
59	2021	14				3,249,755	1,027,024	251,317,487
60	2022	13				3,278,753	1,036,188	253,560,052
61	2023	12				3,308,010	1,045,435	255,822,628
62	2024	11				3,337,528	1,054,763	258,105,393
63	2025	10				3,367,310	1,064,175	260,408,528
64	2026	9				3,397,357	1,073,671	262,732,214
65	2027	8				3,427,673	1,083,252	265,076,635
66	2028	7				3,458,259	1,092,918	267,441,976
67	2029	6				3,489,117	1,102,670	269,828,423
68	2030	5				3,520,252	1,112,509	272,236,165
69	2031	4				3,551,664	1,122,437	274,665,392
70	2032	3				3,583,356	1,132,452	277,116,296
71	2033	2				3,615,331	1,142,558	279,589,069
72	2034	1				3,647,592	1,152,753	282,083,908
73	2035	0					(282,083,908)	-
					$ 140,315,947	$ 171,987,194	$ 30,010,751	$ 7,455,267,693

* Through vintage year 1999 the balances are 1999 remaining plant balances.

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant
Historical and Forecast Plant Additions & Balances
Accou 312 Boiler Plant Equipment

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2035
Service Life, Yrs	65
Initial Plant Balance	

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	114,177,410
Forecast Additions	198,125,731
Total Additions	312,303,141
Gross Salvage Value	14,104,195
Less Cost of Removal	28,208,391
Net Salvage Value	(14,104,195)
Total to be Recovered	326,407,336
Forecast Plant Balances	7,455,267,693
Whole Life Accrual Rate	4.38%
Cost of Removal Accrual Rate	0.38%
Whole Life Accrual Rate (Excluding Cost of Removal)	4.00%
Depreciable Service Life, years	22.8

Remaining Life Depreciation Rate Calculation

Account Balance - 3/31/12	107,205,013
Forecast Additions	198,077,701
Gross Salvage Value	14,104,195
Less Cost of Removal	28,208,391
Net Salvage Value	(14,104,195)
Forecast Plant Balances	5,752,530,784

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2035
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances
Accou 314 Turbogenerator Equipment Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1970	65	8,192,130		-	1,530,807			8,192,130	-		8,192,130
2	1971	64	43,107		-	20,408			43,107	-		8,235,237
3	1972	63	1,450		-	-			1,450	-		8,236,686
4	1973	62	1,799		-	1,799			1,799	-		8,238,486
5	1974	61	-		-	-			-	-		8,238,486
6	1975	60	7,377		-	6,648			7,377	-		8,245,863
7	1976	59	7,329		-	7,329			7,329	-		8,253,192
8	1977	58	-		-	-			-	-		8,253,192
9	1978	57	-		-	-			-	-		8,253,192
10	1979	56	20,706		-	5,915			20,706	-		8,273,898
11	1980	55	-		-	-			-	-		8,273,898
12	1981	54	351,350		-	351,350			351,350	-		8,625,248
13	1982	53	-		-	-			-	-		8,625,248
14	1983	52	10,678		-	-			10,678	-		8,635,926
15	1984	51	10,598		-	-			10,598	-		8,646,524
16	1985	50	27,959		-	-			27,959	-		8,674,483
17	1986	49	3,889,739		-	94,803			3,889,739	-		12,564,222
18	1987	48	4,677		-	-			4,677	-		12,568,899
19	1988	47	226,935		-	176,140			226,935	-		12,795,835
20	1989	46	75,782		-	67,172			75,782	-		12,871,617
21	1990	45	4,931		-	-			4,931	-		12,876,547
22	1991	44	632,828		-	436,619			632,828	-		13,509,375
23	1992	43	11,469		-	7,432			11,469	-		13,520,845
24	1993	42	16,859		-	-			16,859	-		13,537,704
25	1994	41	73,805		-	-			73,805	-		13,611,508
26	1995	40	12,296		-	-			12,296	-		13,623,805
27	1996	39	910,481		-	-			910,481	-		14,534,286
28	1997	38	4,944,045		-	107,862			4,944,045	-		19,478,331
29	1998	37	1,501,272		-	-			1,501,272	-		20,979,603
30	1999	36		52,578	1,550,734	-			52,578	1,550,734		19,481,447
31	2000	35		1,241,408	-	-			1,241,408	-		20,722,855
32	2001	34		585,310	-	-			585,310	-		21,308,165
33	2002	33		812,946	-	200			812,946	-		22,121,111
34	2003	32		(1,492)	-	-			(1,492)	-		22,119,619
35	2004	31		-	1,004,131	-			-	1,004,131		21,115,488
36	2005	30		-	-	-			-	-		21,115,488
37	2006	29		352,969	-	-			352,969	-		21,468,457
38	2007	28		9,649	55,892	-			9,649	55,892		21,422,213
39	2008	27		705,769	146,067	-			705,769	146,067		21,981,915
40	2009	26		21,390	-	-			21,390	-		22,003,305
41	2010	25		-	57,662	-			-	57,662		21,945,644
42	2011	24			-	-	32,430		32,430	-		21,978,073
43	Total		$ 20,979,603	$ 3,780,526	$ 2,814,485	$ 2,814,485	$ 32,430	$ -	$ 24,792,559	$ 2,814,485	$ -	$ 599,158,046

44 Major Additions/Retirements

45	Routine Activity			$ 3,812,956	$ 2,814,485							
46	Historical Interim Activity			0.64%	0.47%							
47	Forecast Interim Activity			0.64%	0.47%		2012 Additions					
							Through 3/31	Major Additions			Major Retirements	
48	2012	23					(9,304)		140,026	103,358		22,005,437
49	2013	22							140,039	103,368		22,042,108
50	2014	21	UNIT 2 RETIRES IN 2014						140,273	103,541	3,268,227	25,347,066
51	2015	20							161,305	119,065		25,389,306
52	2016	19							161,574	119,264		25,431,616
53	2017	18							161,843	119,462		25,473,997
54	2018	17							162,113	119,662		25,516,448
55	2019	16							162,383	119,861		25,558,970
56	2020	15							162,654	120,061		25,601,563
57	2021	14							162,925	120,261		25,644,227
58	2022	13							163,196	120,461		25,686,962
59	2023	12							163,468	120,662		25,729,768
60	2024	11							163,741	120,863		25,772,646
61	2025	10							164,013	121,064		25,815,595
62	2026	9							164,287	121,266		25,858,615
63	2027	8							164,561	121,468		25,901,707
64	2028	7							164,835	121,671		25,944,871
65	2029	6							165,109	121,873		25,988,107
66	2030	5							165,385	122,077		26,031,415
67	2031	4							165,660	122,280		26,074,796
68	2032	3							165,936	122,484		26,118,248
69	2033	2							166,213	122,688		26,161,773
70	2034	1							166,490	122,892		26,205,370
71	2035	0									(26,205,370)	-
							$ -	$ -	$ 28,490,586	$ 5,544,138		$ 1,184,458,660

* Through vintage year 1999 the balances are 1999 remaining plant balances.

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant
Historical and Forecast Plant Additions & Balances
Accou 314 Turbogenerator Equipment

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2035
Service Life, Yrs	65
Initial Plant Balance	

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	24,792,559
Forecast Additions	3,698,028
Total Additions	28,490,586
Gross Salvage Value	1,310,269
Less Cost of Removal	2,620,537
Net Salvage Value	(1,310,269)
Total to be Recovered	29,800,855
Forecast Plant Balances	1,184,458,660
Whole Life Accrual Rate	2.52%
Cost of Removal Accrual Rate	0.22%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.29%
Depreciable Service Life, years	39.7

Remaining Life Depreciation Rate Calculation

Account Balance - 3/31/12	21,968,769
Forecast Additions	3,707,332
Gross Salvage Value	1,310,269
Less Cost of Removal	2,620,537
Net Salvage Value	(1,310,269)
Forecast Plant Balances	585,300,614

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2035
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances
Accou 315 Accessory Electric Equipment
Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1970	65	1,741,617		-	407,241			1,741,617	-		1,741,617
2	1971	64	-		-	-			-	-		1,741,617
3	1972	63	-		-	-			-	-		1,741,617
4	1973	62	-		-	-			-	-		1,741,617
5	1974	61	4,334		-	-			4,334	-		1,745,951
6	1975	60	-		-	-			-	-		1,745,951
7	1976	59	-		-	-			-	-		1,745,951
8	1977	58	-		-	-			-	-		1,745,951
9	1978	57	50,877		-	-			50,877	-		1,796,828
10	1979	56	-		-	-			-	-		1,796,828
11	1980	55	736		-	-			736	-		1,797,563
12	1981	54	2,375		-	-			2,375	-		1,799,939
13	1982	53	-		-	-			-	-		1,799,939
14	1983	52	-		-	-			-	-		1,799,939
15	1984	51	-		-	-			-	-		1,799,939
16	1985	50	-		-	-			-	-		1,799,939
17	1986	49	889,259		-	-			889,259	-		2,689,198
18	1987	48	7,083		-	-			7,083	-		2,696,281
19	1988	47	34,286		-	-			34,286	-		2,730,567
20	1989	46	-		-	-			-	-		2,730,567
21	1990	45	-		-	-			-	-		2,730,567
22	1991	44	-		-	-			-	-		2,730,567
23	1992	43	5,956		-	-			5,956	-		2,736,523
24	1993	42	3,639		-	-			3,639	-		2,740,162
25	1994	41	-		-	-			-	-		2,740,162
26	1995	40	10,190		-	-			10,190	-		2,750,352
27	1996	39	37,644		-	-			37,644	-		2,787,996
28	1997	38	15,577		-	-			15,577	-		2,803,573
29	1998	37	7,290		-	-			7,290	-		2,810,863
30	1999	36		-	-	-			-	-		2,810,863
31	2000	35		-	-	-			-	-		2,810,863
32	2001	34		-	-	-			-	-		2,810,863
33	2002	33		1,355,604	-	-			1,355,604	-		4,166,468
34	2003	32		-	-	-			-	-		4,166,468
35	2004	31		-	-	-			-	-		4,166,468
36	2005	30		-	-	-			-	-		4,166,468
37	2006	29		-	-	-			-	-		4,166,468
38	2007	28		11,085	1,705	-			11,085	1,705		4,175,847
39	2008	27		-	-	-			-	-		4,175,847
40	2009	26		1,849,657	-	-			1,849,657	-		6,025,504
41	2010	25		10,087	89,408	-			10,087	89,408		5,946,183
42	2011	24		-	316,128	-			-	316,128		5,630,055
43	Total		$ 2,810,863	$ 3,226,433	$ 407,241	$ 407,241	$ -	$ -	$ 6,037,296	$ 407,241	$ -	$ 119,236,922

44 Major Additions/Retirements

45	Routine Activity			$ 3,226,433	$ 407,241							
46	Historical Interim Activity			2.71%	0.34%							
47	Forecast Interim Activity			2.71%	0.34%		2012 Additions					
							Through 3/31	Major Additions			Major Retirements	
48	2012	23							163,044	20,579		5,772,519
49	2013	22							156,199	19,715		5,909,002
50	2014	21	UNIT 2 RETIRES IN 2014						159,892	20,182	841,926	6,890,639
51	2015	20							186,454	23,534		7,053,559
52	2016	19							190,862	24,091		7,220,330
53	2017	18							195,375	24,660		7,391,045
54	2018	17							199,994	25,243		7,565,796
55	2019	16							204,723	25,840		7,744,678
56	2020	15							209,563	26,451		7,927,791
57	2021	14							214,518	27,077		8,115,232
58	2022	13							219,590	27,717		8,307,106
59	2023	12							224,782	28,372		8,503,516
60	2024	11							230,097	29,043		8,704,569
61	2025	10							235,537	29,730		8,910,377
62	2026	9							241,106	30,432		9,121,050
63	2027	8							246,807	31,152		9,336,705
64	2028	7							252,642	31,889		9,557,458
65	2029	6							258,615	32,643		9,783,431
66	2030	5							264,730	33,414		10,014,747
67	2031	4							270,989	34,204		10,251,532
68	2032	3							277,396	35,013		10,493,915
69	2033	2							283,955	35,841		10,742,029
70	2034	1							290,669	36,688		10,996,009
71	2035	0									(10,996,009)	-
							$ -	$ -	$ 11,214,835	$ 1,060,752		$ 315,549,957

* Through vintage year 1999 the balances are 1999 remaining plant balances.

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2035
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances
Accou 315 Accessory Electric Equipment
Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	6,037,296
Forecast Additions	5,177,539
Total Additions	11,214,835
Gross Salvage Value	549,800
Less Cost of Removal	1,099,601
Net Salvage Value	(549,800)
Total to be Recovered	11,764,635
Forecast Plant Balances	315,549,957
Whole Life Accrual Rate	3.73%
Cost of Removal Accrual Rate	0.35%
Whole Life Accrual Rate (Excluding Cost of Removal)	3.38%
Depreciable Service Life, years	26.8

Remaining Life Depreciation Rate Calculation

Account Balance - 3/31/12	5,630,055
Forecast Additions	5,177,539
Gross Salvage Value	549,800
Less Cost of Removal	1,099,601
Net Salvage Value	(549,800)
Forecast Plant Balances	196,313,035

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2035
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances
Accou 316 Miscellaneous Plant Equipment

Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1970	65	378,798		-	48,864			378,798	-		378,798
2	1971	64	5,008		-	-			5,008	-		383,806
3	1972	63	6,700		-	2,595			6,700	-		390,505
4	1973	62	9,551		-	4,094			9,551	-		400,056
5	1974	61	8,464		-	-			8,464	-		408,520
6	1975	60	11,192		-	-			11,192	-		419,712
7	1976	59	9,437		-	-			9,437	-		429,149
8	1977	58	4,644		-	-			4,644	-		433,793
9	1978	57	4,159		-	-			4,159	-		437,953
10	1979	56	10,248		-	-			10,248	-		448,201
11	1980	55	10,393		-	-			10,393	-		458,593
12	1981	54	28,348		-	15,503			28,348	-		486,941
13	1982	53	20,437		-	-			20,437	-		507,378
14	1983	52	1,916		-	-			1,916	-		509,294
15	1984	51	5,071		-	-			5,071	-		514,365
16	1985	50	8,125		-	-			8,125	-		522,491
17	1986	49	58,491		-	1,582			58,491	-		580,981
18	1987	48	60,921		-	-			60,921	-		641,902
19	1988	47	57,102		-	-			57,102	-		699,004
20	1989	46	139,739		-	-			139,739	-		838,743
21	1990	45	4,102		-	-			4,102	-		842,844
22	1991	44	4,845		-	-			4,845	-		847,689
23	1992	43	77,564		-	-			77,564	-		925,253
24	1993	42	54,920		-	-			54,920	-		980,173
25	1994	41	38,388		-	-			38,388	-		1,018,561
26	1995	40	73,167		-	7,034			73,167	-		1,091,728
27	1996	39	22,809		-	2,682			22,809	-		1,114,537
28	1997	38	117,746		-	20,000			117,746	-		1,232,283
29	1998	37	102,925		-	21,080			102,925	-		1,335,208
30	1999	36		78,705	15,503	-			78,705	15,503		1,398,410
31	2000	35		70,106	4,094	-			70,106	4,094		1,464,422
32	2001	34		60,694	-	-			60,694	-		1,525,116
33	2002	33		13,954	-	0			13,954	-		1,539,070
34	2003	32		13,714	-	-			13,714	-		1,552,784
35	2004	31		16,875	53,042	-			16,875	53,042		1,516,617
36	2005	30		42,809	-	-			42,809	-		1,559,426
37	2006	29		5,235	-	-			5,235	-		1,564,661
38	2007	28		146,257	20,000	-			146,257	20,000		1,690,918
39	2008	27		329,743	-	-			329,743	-		2,020,661
40	2009	26		121,705	-	-			121,705	-		2,142,366
41	2010	25		32,678	21,094	-			32,678	21,094		2,153,950
42	2011	24			9,703	-	113,250		113,250	9,703		2,257,497
43	Total		$ 1,335,208	$ 932,475	$ 123,436	$ 123,436	$ 113,250	$ -	$ 2,380,933	$ 123,436	$ -	$ 41,664,362
44	Major Additions/Retirements											
45	Routine Activity			$ 1,045,725	$ 123,436							
46	Historical Interim Activity			2.51%	0.30%							
47	Forecast Interim Activity			2.51%	0.30%		2012 Additions Through 3/31	Major Additions		Major Retirements		
48	2012	23					40,518		53,771	6,347		2,345,439
49	2013	22							58,868	6,949		2,397,358
50	2014	21							60,171	7,102		2,450,426
51	2015	20							61,503	7,260		2,504,669
52	2016	19							62,864	7,420		2,560,113
53	2017	18							64,256	7,585		2,616,784
54	2018	17							65,678	7,753		2,674,709
55	2019	16							67,132	7,924		2,733,917
56	2020	15							68,618	8,100		2,794,435
57	2021	14							70,137	8,279		2,856,293
58	2022	13							71,689	8,462		2,919,521
59	2023	12							73,276	8,649		2,984,148
60	2024	11							74,898	8,841		3,050,205
61	2025	10							76,556	9,037		3,117,725
62	2026	9							78,251	9,237		3,186,740
63	2027	8							79,983	9,441		3,257,282
64	2028	7							81,754	9,650		3,329,386
65	2029	6							83,564	9,864		3,403,085
66	2030	5							85,413	10,082		3,478,417
67	2031	4							87,304	10,305		3,555,415
68	2032	3							89,237	10,533		3,634,119
69	2033	2							91,212	10,766		3,714,564
70	2034	1							93,231	11,005		3,796,790
71	2035	0									(3,796,790)	-
								$ -	$ 4,080,299	$ 324,026		$ 111,025,901

* Through vintage year 1999 the balances are 1999 remaining plant balances.

The Empire District Electric Company
Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Asbury Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1970
Retirement Date	2035
Service Life, Yrs	65

Historical and Forecast Plant Additions & Balances
Accou 316 Miscellaneous Plant Equipment Initial Plant Balance

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
	Vintage	Vintage	Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Year	Age	Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*

Whole Life Depreciation Rate Calculation

Historical Additions	2,380,933
Forecast Additions	1,699,366
Total Additions	4,080,299
Gross Salvage Value	189,840
Less Cost of Removal	379,679
Net Salvage Value	(189,840)
Total to be Recovered	4,270,138
Forecast Plant Balances	111,025,901
Whole Life Accrual Rate	3.85%
Cost of Removal Accrual Rate	0.34%
Whole Life Accrual Rate (Excluding Cost of Removal)	3.50%
Depreciable Service Life, years	26.0

Remaining Life Depreciation Rate Calculation

Account Balance - 3/31/12	2,298,015
Forecast Additions	1,658,848
Gross Salvage Value	189,840
Less Cost of Removal	379,679
Net Salvage Value	(189,840)
Forecast Plant Balances	69,361,539

Summary by Plant
The Empire District Electric Company
Riverton Plant

Line	Account	Description	Direct Investment 2011$	Depreciation Rate	
1					
2	311	Structure & Improvements	11,623,415	3.49%	
3	312	Boiler Plant Equipment	25,170,829	3.23%	
4	314	Turbo Generator Equipment	8,405,141	2.86%	
5	315	Accessory Electric Equipment	1,629,267	2.02%	
6	316	Misc Power Equipment	1,151,873	3.60%	
7					
8					
9		**Total**	47,980,525	3.20%	whole life weighted average rate
10					
11					

Remaining Life Depreciation Rate Calculation

12	Per Books Balance 3/31/12	48,039,728
13	Forecast Interim Additions	0
14	Forecast Gross Salvage Value	2,401,986
15	Forecast Less Cost of Removal	4,803,973
16	Forecast Net Salvage Value	(2,401,986)
17	Forecast Total to be Recovered with COR	50,441,715
18	Forecast Total to be Recovered w/o COR	45,637,742
19	Accumulated Depreciation (3/31/12)	(30,383,285)
20		
21	Forecast Remaining Life Balance with COR	20,058,430
22	Forecast Remaining Life Balance w/o COR	15,254,457
23	Forecast Plant Balances	216,178,778
24		
25	Remaining Life Rate with COR	9.28%
26	Remaining Life Rate w/o COR	7.06%
27		
28	Reserve Variance with COR	(13,140,709)
29		
30		

Reserve Deficiency Calculation

Year	Average Plant Balance	Depreciation Expense Accrual		
2012	48,039,728	1,537,271		
2013	48,039,728	1,537,271		
2014	48,039,728	1,537,271		
2015	48,039,728	1,537,271		
2016	24,019,864	768,636	(a)	
	216,178,778	6,917,721		Sum of Lines 35 through 39

Total dollars to be collected by Final Retirement Date (full recovery)	20,058,430	Line 22
Depreciation Expense Accrual by Final Retirement Date	6,917,721	Line 40
Total dollars unrecovered using Whole Life Depreciation Rate	13,140,709	Line 43 minus Line 44
Time period over which to collect total dollars 2016-2013	÷ 4	years (assumes rates in effect 1/1/13)
Annual Additional dollars to achieve full recovery by retirement date	3,285,177	Line 45 divided by Line 46

(a) Based on a June 2016 retirement date, assumed 1/2 year of depreciation expense

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2016
Service Life, Yrs	66

Historical and Forecast Plant Additions & Balances
Accou 311 Structures & Improvements

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1904	112	220,083		-	-			220,083	-		220,083
2	1905	111	94,254		-	1,097			94,254	-		314,337
3	1906	110	-		-	-			-	-		314,337
4	1907	109	-		-	-			-	-		314,337
5	1908	108	-		-	-			-	-		314,337
6	1909	107	-		-	-			-	-		314,337
7	1910	106	8,738		-	-			8,738	-		323,074
8	1911	105	27,462		-	27,119			27,462	-		350,536
9	1912	104	-		-	-			-	-		350,536
10	1913	103	-		-	-			-	-		350,536
11	1914	102	560		-	-			560	-		351,096
12	1915	101	-		-	-			-	-		351,096
13	1916	100	19,174		-	2,576			19,174	-		370,270
14	1917	99	-		-	-			-	-		370,270
15	1918	98	37,494		-	-			37,494	-		407,764
16	1919	97	-		-	-			-	-		407,764
17	1920	96	-		-	-			-	-		407,764
18	1921	95	-		-	-			-	-		407,764
19	1922	94	-		-	-			-	-		407,764
20	1923	93	-		-	-			-	-		407,764
21	1924	92	41,379		-	22,985			41,379	-		449,143
22	1925	91	8,517		-	-			8,517	-		457,660
23	1926	90	-		-	-			-	-		457,660
24	1927	89	31,619		-	-			31,619	-		489,279
25	1928	88	187,011		-	362			187,011	-		676,290
26	1929	87	-		-	-			-	-		676,290
27	1930	86	-		-	-			-	-		676,290
28	1931	85	5,328		-	5,328			5,328	-		681,618
29	1932	84	-		-	-			-	-		681,618
30	1933	83	-		-	-			-	-		681,618
31	1934	82	-		-	-			-	-		681,618
32	1935	81	1,610		-	1,610			1,610	-		683,228
33	1936	80	415		-	415			415	-		683,642
34	1937	79	252,839		-	33,722			252,839	-		936,481
35	1938	78	948		-	900			948	-		937,429
36	1939	77	-		-	-			-	-		937,429
37	1940	76	14,536		-	14,395			14,536	-		951,965
38	1941	75	1,508		-	1,424			1,508	-		953,473
39	1942	74	9		-	9			9	-		953,482
40	1943	73	-		-	-			-	-		953,482
41	1944	72	11,230		-	11,230			11,230	-		964,712
42	1945	71	527		-	105			527	-		965,239
43	1946	70	-		-	-			-	-		965,239
44	1947	69	-		-	-			-	-		965,239
45	1948	68	4,138		-	-			4,138	-		969,377
46	1949	67	674		-	-			674	-		970,051
47	1950	66	826,498		-	5,000			826,498	-		1,796,549
48	1951	65	-		-	-			-	-		1,796,549
49	1952	64	6,687		-	6,124			6,687	-		1,803,237
50	1953	63	2,599		-	-			2,599	-		1,805,836
51	1954	62	867,700		-	1,378			867,700	-		2,673,536
52	1955	61	16,696		-	-			16,696	-		2,690,233
53	1956	60	69,401		-	9,758			69,401	-		2,759,634
54	1957	59	7,594		-	-			7,594	-		2,767,228
55	1958	58	3,219		-	911			3,219	-		2,770,447
56	1959	57	3,817		-	-			3,817	-		2,774,264
57	1960	56	9,565		-	800			9,565	-		2,783,829
58	1961	55	100		-	-			100	-		2,783,929
59	1962	54	6,376		-	-			6,376	-		2,790,305
60	1963	53	4,400		-	2,942			4,400	-		2,794,705
61	1964	52	-		-	-			-	-		2,794,705
62	1965	51	7,966		-	-			7,966	-		2,802,671
63	1966	50	12,542		-	-			12,542	-		2,815,213
64	1967	49	3,622		-	1,938			3,622	-		2,818,835
65	1968	48	-		-	-			-	-		2,818,835
66	1969	47	7,424		-	2,279			7,424	-		2,826,259
67	1970	46	1,854		-	-			1,854	-		2,828,113
68	1971	45	-		-	-			-	-		2,828,113
69	1972	44	2,934		-	-			2,934	-		2,831,046
70	1973	43	20,436		-	19,856			20,436	-		2,851,482
71	1974	42	1,210		-	-			1,210	-		2,852,692
72	1975	41	2,047		-	-			2,047	-		2,854,739
73	1976	40	4,147		-	814			4,147	-		2,858,886
74	1977	39	-		-	-			-	-		2,858,886
75	1978	38	7,009		-	3,717			7,009	-		2,865,895
76	1979	37	95,519		-	94,928			95,519	-		2,961,414

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2016
Service Life, Yrs	66

Historical and Forecast Plant Additions & Balances
Accou 311 Structures & Improvements

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year			Adjusted Transaction Year			Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Advance Additions	Advance Retirements	Additions	Retirements	Transfers and Adjustments	Balance*
77	1980	36	62,039		-	2,787			62,039	-		3,023,453
78	1981	35	12,705		-	12,705			12,705	-		3,036,159
79	1982	34	94,697		-	1,010			94,697	-		3,130,856
80	1983	33	82,734		-	8,295			82,734	-		3,213,589
81	1984	32	33,018		-	21,761			33,018	-		3,246,607
82	1985	31	71,411		-	40,326			71,411	-		3,318,018
83	1986	30	5,739		-	3,841			5,739	-		3,323,756
84	1987	29	92,459		-	-			92,459	-		3,416,216
85	1988	28	256,109		-	-			256,109	-		3,672,324
86	1989	27	-		-	-			-	-		3,672,324
87	1990	26	2,349,529		-	4,658			2,349,529	-		6,021,854
88	1991	25	53,885		-	10,437			53,885	-		6,075,738
89	1992	24	61,592		-	-			61,592	-		6,137,331
90	1993	23	118,637		-	118,637			118,637	-		6,255,968
91	1994	22	288,189		-	110,974			288,189	-		6,544,157
92	1995	21	90,732		-	-			90,732	-		6,634,889
93	1996	20	99,274		-	2,671			99,274	-		6,734,164
94	1997	19	1,366,201		-	215,787			1,366,201	-		8,100,365
95	1998	18	-		-	-			-	-		8,100,365
96	1999	17		488,256	3,229	12,597			488,256	3,229		8,585,392
97	2000	16		77,560	358,573	-			77,560	358,573		8,304,379
98	2001	15		168,961	-	5,592			168,961	-		8,473,340
99	2002	14		240,314	-	-			240,314	-		8,713,654
100	2003	13		12,250	52,220	-			12,250	52,220		8,673,684
101	2004	12		-	0	-			-	0		8,673,684
102	2005	11		99,376	-	-			99,376	-		8,773,060
103	2006	10		272,593	421,427	-			272,593	421,427		8,624,226
104	2007	9		2,739,513	9,758	-			2,739,513	9,758		11,353,981
105	2008	8		223,686	591	-			223,686	591		11,577,076
106	2009	7		9,065	-	-			9,065	-		11,586,141
107	2010	6		-	-	-	-		-	-		11,586,141
108	2011	5		-	-	-	37,274		37,274	-		11,623,415
109	Total		$ 8,100,365	$ 4,331,574	$ 845,798	$ 845,798	$ 37,274	$ -	$ 12,469,213	$ 845,798	$ -	$ 327,919,682
110	Major Additions/Retirements											
111	2009			$ -								
112	Routine Activity			$ 4,368,848	$ 845,798							
113	Historical Interim Activity			1.33%	0.26%							
114	Forecast Interim Activity			0.00%	0.00%							
							2012 additions	Major Additions				
115	2012	4					17,273		-	-		11,640,688
116	2013	3							-	-		11,640,688
117	2014	2							-	-		11,640,688
118	2015	1							-	-		11,640,688
119	2016	0									(11,640,688)	-
									$ 12,469,213	$ 845,798		$ 374,482,434

* Through vintage year 1999 the balances are 1999 remaining plant balances.

Whole Life Depreciation Rate Calculation

Historical Additions	12,469,213
Forecast Additions	-
Total Additions	12,469,213
Gross Salvage Value	582,034
Less Cost of Removal	1,164,069
Net Salvage Value	(582,034)
Total to be Recovered	13,051,247
Forecast Plant Balances	374,482,434
Whole Life Accrual Rate	3.49%
Cost of Removal Accrual Rate	0.31%
Whole Life Accrual Rate (Excluding Cost of Removal)	3.17%
Depreciable Service Life, years	28.7

Remaining Life Depreciation Rate Calculation

Account Balance 3/31/12	11,640,688
Forecast Additions	-
Gross Salvage Value	582,034
Less Cost of Removal	1,164,069
Net Salvage Value	(582,034)
Forecast Plant Balances	52,383,095

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2016
Service Life, Yrs	66

Historical and Forecast Plant Additions & Balances
Accou 312 Boiler Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1904	112	-		-	-			-	-		-
2	1905	111	-		-	-			-	-		-
3	1906	110	-		-	-			-	-		-
4	1907	109	-		-	-			-	-		-
5	1908	108	-		-	-			-	-		-
6	1909	107	-		-	-			-	-		-
7	1910	106	-		-	-			-	-		-
8	1911	105	-		-	-			-	-		-
9	1912	104	-		-	-			-	-		-
10	1913	103	-		-	-			-	-		-
11	1914	102	-		-	-			-	-		-
12	1915	101	-		-	-			-	-		-
13	1916	100	-		-	-			-	-		-
14	1917	99	30,165		-	0			30,165	-		30,165
15	1918	98	35,144		-	3,711			35,144	-		65,308
16	1919	97	622		-	-			622	-		65,930
17	1920	96	4,518		-	-			4,518	-		70,448
18	1921	95	-		-	-			-	-		70,448
19	1922	94	-		-	-			-	-		70,448
20	1923	93	-		-	-			-	-		70,448
21	1924	92	878		-	-			878	-		71,326
22	1925	91	10		-	-			10	-		71,336
23	1926	90	2,809		-	-			2,809	-		74,144
24	1927	89	-		-	-			-	-		74,144
25	1928	88	285		-	-			285	-		74,430
26	1929	87	1,239		-	-			1,239	-		75,668
27	1930	86	-		-	-			-	-		75,668
28	1931	85	163		-	-			163	-		75,832
29	1932	84	-		-	-			-	-		75,832
30	1933	83	175		-	-			175	-		76,007
31	1934	82	626		-	-			626	-		76,632
32	1935	81	-		-	-			-	-		76,632
33	1936	80	-		-	-			-	-		76,632
34	1937	79	60,415		-	0			60,415	-		137,047
35	1938	78	1,875		-	-			1,875	-		138,922
36	1939	77	563		-	-			563	-		139,485
37	1940	76	491		-	-			491	-		139,976
38	1941	75	2,596		-	-			2,596	-		142,572
39	1942	74	591		-	-			591	-		143,163
40	1943	73	-		-	-			-	-		143,163
41	1944	72	317		-	-			317	-		143,480
42	1945	71	3,258		-	-			3,258	-		146,738
43	1946	70	1,510		-	-			1,510	-		148,248
44	1947	69	759		-	-			759	-		149,007
45	1948	68	680		-	-			680	-		149,688
46	1949	67	9,956		-	-			9,956	-		159,644
47	1950	66	1,906,097		-	95,890			1,906,097	-		2,065,741
48	1951	65	1,962		-	-			1,962	-		2,067,703
49	1952	64	33,642		-	-			33,642	-		2,101,344
50	1953	63	-		-	-			-	-		2,101,344
51	1954	62	2,810,574		-	117,956			2,810,574	-		4,911,918
52	1955	61	902		-	-			902	-		4,912,820
53	1956	60	64,369		-	0			64,369	-		4,977,190
54	1957	59	938		-	-			938	-		4,978,128
55	1958	58	3,978		-	-			3,978	-		4,982,105
56	1959	57	-		-	-			-	-		4,982,105
57	1960	56	3,368		-	-			3,368	-		4,985,473
58	1961	55	-		-	-			-	-		4,985,473
59	1962	54	-		-	-			-	-		4,985,473
60	1963	53	4,188		-	-			4,188	-		4,989,661
61	1964	52	18,212		-	-			18,212	-		5,007,873
62	1965	51	-		-	-			-	-		5,007,873
63	1966	50	104,667		-	828			104,667	-		5,112,540
64	1967	49	2,764		-	-			2,764	-		5,115,304
65	1968	48	69		-	-			69	-		5,115,373
66	1969	47	-		-	-			-	-		5,115,373
67	1970	46	-		-	-			-	-		5,115,373
68	1971	45	6,447		-	-			6,447	-		5,121,821
69	1972	44	1,435		-	-			1,435	-		5,123,256
70	1973	43	18,910		-	-			18,910	-		5,142,166
71	1974	42	13,649		-	0			13,649	-		5,155,815
72	1975	41	15,105		-	-			15,105	-		5,170,920
73	1976	40	1,557,468		-	41,196			1,557,468	-		6,728,388
74	1977	39	5,598,637		-	213,288			5,598,637	-		12,327,026
75	1978	38	104,651		-	-			104,651	-		12,431,676
76	1979	37	103,884		-	-			103,884	-		12,535,560

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2016
Service Life, Yrs	66

Historical and Forecast Plant Additions & Balances
Accou 312 Boiler Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
77	1980	36	184,230		-	32,347			184,230	-		12,719,791
78	1981	35	62,968		-	6,841			62,968	-		12,782,758
79	1982	34	45,233		-	-			45,233	-		12,827,991
80	1983	33	15,129		-	-			15,129	-		12,843,120
81	1984	32	64,368		-	-			64,368	-		12,907,488
82	1985	31	202,311		-	54,054			202,311	-		13,109,800
83	1986	30	193,980		-	23,463			193,980	-		13,303,780
84	1987	29	186,364		-	15,783			186,364	-		13,490,144
85	1988	28	59,407		-	0			59,407	-		13,549,550
86	1989	27	674,787		-	6,597			674,787	-		14,224,337
87	1990	26	3,068,615		-	14,137			3,068,615	-		17,292,952
88	1991	25	85,690		-	-			85,690	-		17,378,642
89	1992	24	347,743		-	-			347,743	-		17,726,385
90	1993	23	86,320		-	-			86,320	-		17,812,705
91	1994	22	631,695		-	593,717			631,695	-		18,444,400
92	1995	21	377,925		-	18,233			377,925	-		18,822,325
93	1996	20	198,257		-	-			198,257	-		19,020,582
94	1997	19	248,912		-	-			248,912	-		19,269,494
95	1998	18	212,008		-	4,595			212,008	-		19,481,502
96	1999	17		570,330	145,897	9,052			570,330	145,897		19,905,935
97	2000	16		757,725	41,724	-			757,725	41,724		20,621,936
98	2001	15		149,932	-	-			149,932	-		20,771,868
99	2002	14		133,322	-	-			133,322	-		20,905,191
100	2003	13		447,228	128,257	-			447,228	128,257		21,224,161
101	2004	12		422,064	0	15,590			422,064	0		21,646,225
102	2005	11		544,536	0	-			544,536	0		22,190,761
103	2006	10		1,412,353	177,855	9,231			1,412,353	177,855		23,425,259
104	2007	9		755,710	639,459	-			755,710	639,459		23,541,510
105	2008	8		485,846	35,499	-			485,846	35,499		23,991,857
106	2009	7		561,683	-	-			561,683	-		24,553,539
107	2010	6		634,536	12,227	-			634,536	12,227		25,175,848
108	2011	5		90,571	95,590	-			90,571	95,590		25,170,829
109	Total		$ 19,481,502	$ 6,965,835	$ 1,276,509	$ 1,276,509	$ -	$ -	$ 26,447,337	$ 1,276,509	$ -	$ 756,784,090
110	Major Additions/Retirements											
111	2009			$ -								
112	Routine Activity			$ 6,965,835	$ 1,276,509							
113	Historical Interim Activity			0.92%	0.17%							
114	Forecast Interim Activity			0.00%	0.00%							
							2012 additions	Major Additions				
115	2012	4					14,873		-	-		25,185,701
116	2013	3							-	-		25,185,701
117	2014	2							-	-		25,185,701
118	2015	1							-	-		25,185,701
119	2016	0									(25,185,701)	-
									$ 26,447,337	$ 1,276,509		$ 857,526,895

* Through vintage year 1999 the balances are 1999 remaining plant balances.

Whole Life Depreciation Rate Calculation

Historical Additions	26,447,337
Forecast Additions	-
Total Additions	26,447,337
Gross Salvage Value	1,259,285
Less Cost of Removal	2,518,570
Net Salvage Value	(1,259,285)
Total to be Recovered	27,706,623
Forecast Plant Balances	857,526,895
Whole Life Accrual Rate	3.23%
Cost of Removal Accrual Rate	0.29%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.94%
Depreciable Service Life, years	31.0

Remaining Life Depreciation Rate Calculation

Account Balance 3/31/12	25,185,701
Forecast Additions	-
Gross Salvage Value	1,259,285
Less Cost of Removal	2,518,570
Net Salvage Value	(1,259,285)
Forecast Plant Balances	113,335,656

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2016
Service Life, Yrs	66

Historical and Forecast Plant Additions & Balances
Accou 314 Turbogenerator Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1904	112	-		-	-			-	-		-
2	1905	111	-		-	-			-	-		-
3	1906	110	-		-	-			-	-		-
4	1907	109	-		-	-			-	-		-
5	1908	108	-		-	-			-	-		-
6	1909	107	-		-	-			-	-		-
7	1910	106	-		-	-			-	-		-
8	1911	105	-		-	-			-	-		-
9	1912	104	-		-	-			-	-		-
10	1913	103	-		-	-			-	-		-
11	1914	102	-		-	-			-	-		-
12	1915	101	-		-	-			-	-		-
13	1916	100	-		-	-			-	-		-
14	1917	99	29,383		-	0			29,383	-		29,383
15	1918	98	-		-	-			-	-		29,383
16	1919	97	-		-	-			-	-		29,383
17	1920	96	-		-	-			-	-		29,383
18	1921	95	-		-	-			-	-		29,383
19	1922	94	-		-	-			-	-		29,383
20	1923	93	-		-	-			-	-		29,383
21	1924	92	1,936		-	-			1,936	-		31,319
22	1925	91	4,590		-	-			4,590	-		35,908
23	1926	90	-		-	-			-	-		35,908
24	1927	89	-		-	-			-	-		35,908
25	1928	88	-		-	-			-	-		35,908
26	1929	87	-		-	-			-	-		35,908
27	1930	86	-		-	-			-	-		35,908
28	1931	85	-		-	-			-	-		35,908
29	1932	84	-		-	-			-	-		35,908
30	1933	83	-		-	-			-	-		35,908
31	1934	82	-		-	-			-	-		35,908
32	1935	81	-		-	-			-	-		35,908
33	1936	80	-		-	-			-	-		35,908
34	1937	79	-		-	-			-	-		35,908
35	1938	78	98		-	-			98	-		36,006
36	1939	77	-		-	-			-	-		36,006
37	1940	76	-		-	-			-	-		36,006
38	1941	75	-		-	-			-	-		36,006
39	1942	74	-		-	-			-	-		36,006
40	1943	73	-		-	-			-	-		36,006
41	1944	72	-		-	-			-	-		36,006
42	1945	71	3,775		-	-			3,775	-		39,781
43	1946	70	-		-	-			-	-		39,781
44	1947	69	292		-	-			292	-		40,073
45	1948	68	11,780		-	-			11,780	-		51,852
46	1949	67	-		-	-			-	-		51,852
47	1950	66	1,349,679		-	25,681			1,349,679	-		1,401,532
48	1951	65	694		-	-			694	-		1,402,225
49	1952	64	-		-	-			-	-		1,402,225
50	1953	63	-		-	-			-	-		1,402,225
51	1954	62	1,826,348		-	103,961			1,826,348	-		3,228,573
52	1955	61	10,815		-	-			10,815	-		3,239,388
53	1956	60	-		-	-			-	-		3,239,388
54	1957	59	-		-	-			-	-		3,239,388
55	1958	58	1,574		-	-			1,574	-		3,240,962
56	1959	57	3,364		-	2,173			3,364	-		3,244,326
57	1960	56	-		-	-			-	-		3,244,326
58	1961	55	10,473		-	-			10,473	-		3,254,799
59	1962	54	14,132		-	-			14,132	-		3,268,930
60	1963	53	12,125		-	-			12,125	-		3,281,055
61	1964	52	52,617		-	-			52,617	-		3,333,672
62	1965	51	23,988		-	-			23,988	-		3,357,660
63	1966	50	1,575		-	-			1,575	-		3,359,235
64	1967	49	3,920		-	-			3,920	-		3,363,155
65	1968	48	3,074		-	-			3,074	-		3,366,229
66	1969	47	839		-	-			839	-		3,367,068
67	1970	46	-		-	-			-	-		3,367,068
68	1971	45	-		-	-			-	-		3,367,068
69	1972	44	9,414		-	-			9,414	-		3,376,482
70	1973	43	1,878		-	-			1,878	-		3,378,360
71	1974	42	1,241		-	-			1,241	-		3,379,600
72	1975	41	6,632		-	-			6,632	-		3,386,232
73	1976	40	743		-	-			743	-		3,386,975
74	1977	39	-		-	-			-	-		3,386,975
75	1978	38	-		-	-			-	-		3,386,975
76	1979	37	-		-	-			-	-		3,386,975

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2016
Service Life, Yrs	66

Historical and Forecast Plant Additions & Balances
Accou 314 Turbogenerator Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
77	1980	36	122,826		-	-			122,826	-		3,509,801
78	1981	35	-		-	-			-	-		3,509,801
79	1982	34	-		-	-			-	-		3,509,801
80	1983	33	19,432		-	-			19,432	-		3,529,233
81	1984	32	-		-	-			-	-		3,529,233
82	1985	31	21,143		-	-			21,143	-		3,550,376
83	1986	30	-		-	-			-	-		3,550,376
84	1987	29	867,608		-	-			867,608	-		4,417,984
85	1988	28	1,427,940		-	-			1,427,940	-		5,845,924
86	1989	27	-		-	-			-	-		5,845,924
87	1990	26	242,433		-	-			242,433	-		6,088,357
88	1991	25	15,255		-	15,255			15,255	-		6,103,612
89	1992	24	-		-	-			-	-		6,103,612
90	1993	23	21,095		-	-			21,095	-		6,124,707
91	1994	22	39,119		-	-			39,119	-		6,163,826
92	1995	21	176,085		-	-			176,085	-		6,339,912
93	1996	20	21,299		-	-			21,299	-		6,361,211
94	1997	19	-		-	-			-	-		6,361,211
95	1998	18	97,565		-	-			97,565	-		6,458,776
96	1999	17		6,188	15,280	-			6,188	15,280		6,449,684
97	2000	16		106,786	25,295	-			106,786	25,295		6,531,175
98	2001	15		-	15,255	-			-	15,255		6,515,920
99	2002	14		-	-	-			-	-		6,515,920
100	2003	13		30,765	1,872	-			30,765	1,872		6,544,813
101	2004	12		-	0	-			-	0		6,544,813
102	2005	11		-	-	-			-	-		6,544,813
103	2006	10		11,837	16,020	-			11,837	16,020		6,540,630
104	2007	9		7,550	-	-			7,550	-		6,548,180
105	2008	8		653,471	-	-			653,471	-		7,201,651
106	2009	7		-	72,660	-			-	72,660		7,128,991
107	2010	6		1,271,030	687	-			1,271,030	687		8,399,334
108	2011	5			-	-	5,807		5,807	-		8,405,141
109	Total		$ 6,458,776	$ 2,087,627	$ 147,069	$ 147,069	$ 5,807	$ -	$ 8,552,210	$ 147,069	$ -	$ 279,993,004
110	Major Additions/Retirements											
111	2008			$ -								
112	Routine Activity			$ 2,093,434	$ 147,069							
113	Historical Interim Activity			0.75%	0.05%							
114	Forecast Interim Activity			0.00%	0.00%							
							2012 additions	Major Additions				
115	2012	4					-		-	-		8,405,141
116	2013	3							-	-		8,405,141
117	2014	2							-	-		8,405,141
118	2015	1							-	-		8,405,141
119	2016	0									(8,405,141)	-
									$ 8,552,210	$ 147,069		$ 313,613,568

* Through vintage year 1999 the balances are 1999 remaining plant balances.

Whole Life Depreciation Rate Calculation

Historical Additions	8,552,210
Forecast Additions	-
Total Additions	8,552,210
Gross Salvage Value	420,257
Less Cost of Removal	840,514
Net Salvage Value	(420,257)
Total to be Recovered	8,972,467
Forecast Plant Balances	313,613,568
Whole Life Accrual Rate	2.86%
Cost of Removal Accrual Rate	0.27%
Whole Life Accrual Rate (Excluding Cost of Removal)	2.59%
Depreciable Service Life, years	35.0

Remaining Life Depreciation Rate Calculation

Account Balance 3/31/12	8,405,141
Forecast Additions	-
Gross Salvage Value	420,257
Less Cost of Removal	840,514
Net Salvage Value	(420,257)
Forecast Plant Balances	37,823,134

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2016
Service Life, Yrs	66

Historical and Forecast Plant Additions & Balances
Accou 315 Accessory Electric Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1904	112	-		-	-			-	-		-
2	1905	111	-		-	-			-	-		-
3	1906	110	-		-	-			-	-		-
4	1907	109	-		-	-			-	-		-
5	1908	108	-		-	-			-	-		-
6	1909	107	-		-	-			-	-		-
7	1910	106	-		-	-			-	-		-
8	1911	105	-		-	-			-	-		-
9	1912	104	-		-	-			-	-		-
10	1913	103	-		-	-			-	-		-
11	1914	102	-		-	-			-	-		-
12	1915	101	-		-	-			-	-		-
13	1916	100	-		-	-			-	-		-
14	1917	99	-		-	-			-	-		-
15	1918	98	-		-	-			-	-		-
16	1919	97	-		-	-			-	-		-
17	1920	96	-		-	-			-	-		-
18	1921	95	-		-	-			-	-		-
19	1922	94	-		-	-			-	-		-
20	1923	93	-		-	-			-	-		-
21	1924	92	-		-	-			-	-		-
22	1925	91	-		-	-			-	-		-
23	1926	90	-		-	-			-	-		-
24	1927	89	-		-	-			-	-		-
25	1928	88	16,083		-	-			16,083	-		16,083
26	1929	87	-		-	-			-	-		16,083
27	1930	86	-		-	-			-	-		16,083
28	1931	85	-		-	-			-	-		16,083
29	1932	84	-		-	-			-	-		16,083
30	1933	83	-		-	-			-	-		16,083
31	1934	82	-		-	-			-	-		16,083
32	1935	81	-		-	-			-	-		16,083
33	1936	80	-		-	-			-	-		16,083
34	1937	79	-		-	-			-	-		16,083
35	1938	78	-		-	-			-	-		16,083
36	1939	77	-		-	-			-	-		16,083
37	1940	76	-		-	-			-	-		16,083
38	1941	75	-		-	-			-	-		16,083
39	1942	74	-		-	-			-	-		16,083
40	1943	73	-		-	-			-	-		16,083
41	1944	72	-		-	-			-	-		16,083
42	1945	71	-		-	-			-	-		16,083
43	1946	70	-		-	-			-	-		16,083
44	1947	69	-		-	-			-	-		16,083
45	1948	68	3,430		-	-			3,430	-		19,513
46	1949	67	-		-	-			-	-		19,513
47	1950	66	403,984		-	1,064			403,984	-		423,497
48	1951	65	-		-	-			-	-		423,497
49	1952	64	4,503		-	-			4,503	-		428,000
50	1953	63	-		-	-			-	-		428,000
51	1954	62	597,492		-	-			597,492	-		1,025,492
52	1955	61	-		-	-			-	-		1,025,492
53	1956	60	103,868		-	99,989			103,868	-		1,129,360
54	1957	59	-		-	-			-	-		1,129,360
55	1958	58	2,127		-	-			2,127	-		1,131,486
56	1959	57	-		-	-			-	-		1,131,486
57	1960	56	127		-	-			127	-		1,131,613
58	1961	55	-		-	-			-	-		1,131,613
59	1962	54	-		-	-			-	-		1,131,613
60	1963	53	14,243		-	-			14,243	-		1,145,857
61	1964	52	18,942		-	0			18,942	-		1,164,799
62	1965	51	-		-	-			-	-		1,164,799
63	1966	50	2,238		-	2,238			2,238	-		1,167,037
64	1967	49	232,581		-	-			232,581	-		1,399,618
65	1968	48	21,281		-	-			21,281	-		1,420,899
66	1969	47	-		-	-			-	-		1,420,899
67	1970	46	37,363		-	-			37,363	-		1,458,262
68	1971	45	4,478		-	-			4,478	-		1,462,740
69	1972	44	260		-	-			260	-		1,463,001
70	1973	43	-		-	-			-	-		1,463,001
71	1974	42	-		-	-			-	-		1,463,001
72	1975	41	-		-	-			-	-		1,463,001
73	1976	40	8,523		-	8,523			8,523	-		1,471,523
74	1977	39	-		-	-			-	-		1,471,523
75	1978	38	7,545		-	-			7,545	-		1,479,069
76	1979	37	-		-	-			-	-		1,479,069

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2016
Service Life, Yrs	66

Historical and Forecast Plant Additions & Balances
Accou 315 Accessory Electric Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
77	1980	36	-		-	-			-	-		1,479,069
78	1981	35	-		-	-			-	-		1,479,069
79	1982	34	-		-	-			-	-		1,479,069
80	1983	33	-		-	-			-	-		1,479,069
81	1984	32	-		-	-			-	-		1,479,069
82	1985	31	99,278		-	-			99,278	-		1,578,347
83	1986	30	3,013		-	-			3,013	-		1,581,360
84	1987	29	-		-	-			-	-		1,581,360
85	1988	28	-		-	-			-	-		1,581,360
86	1989	27	-		-	-			-	-		1,581,360
87	1990	26	-		-	-			-	-		1,581,360
88	1991	25	76,268		-	76,268			76,268	-		1,657,628
89	1992	24	990		-	-			990	-		1,658,618
90	1993	23	-		-	-			-	-		1,658,618
91	1994	22	-		-	-			-	-		1,658,618
92	1995	21	14,112		-	-			14,112	-		1,672,730
93	1996	20	6,704		-	-			6,704	-		1,679,434
94	1997	19	10,916		-	-			10,916	-		1,690,351
95	1998	18	-		-	-			-	-		1,690,351
96	1999	17		27,808	8,523	-			27,808	8,523		1,709,636
97	2000	16		-	-	-			-	-		1,709,636
98	2001	15		12,106	25,423	-			12,106	25,423		1,696,320
99	2002	14		13,786	-	-			13,786	-		1,710,106
100	2003	13		-	1,064	-			-	1,064		1,709,042
101	2004	12		-	0	-			-	0		1,709,042
102	2005	11		14,368	-	-			14,368	-		1,723,410
103	2006	10		-	50,845	-			-	50,845		1,672,565
104	2007	9		-	102,227	-			-	102,227		1,570,338
105	2008	8		-	-	-			-	-		1,570,338
106	2009	7		-	-	-			-	-		1,570,338
107	2010	6			-	-	12,824		12,824	-		1,583,162
108	2011	5			-	-	46,106		46,106	-		1,629,267
109	Total		$ 1,690,351	$ 68,069	$ 188,081	$ 188,081	$ 58,929	$ -	$ 1,817,349	$ 188,081	$ -	$ 87,399,334
110	Major Additions/Retirements											
111	2009			$ -								
112	Routine Activity			$ 126,998	$ 188,081							
113	Historical Interim Activity			0.15%	0.22%							
114	Forecast Interim Activity			0.00%	0.00%							
							2012 additions	Major Additions				
115	2012	4					14,817		-	-		1,644,084
116	2013	3							-	-		1,644,084
117	2014	2							-	-		1,644,084
118	2015	1							-	-		1,644,084
119	2016	0									(1,644,084)	-
									$ 1,817,349	$ 188,081		$ 93,975,671

* Through vintage year 1999 the balances are 1999 remaining plant balances.

Whole Life Depreciation Rate Calculation

Historical Additions	1,817,349
Forecast Additions	-
Total Additions	1,817,349
Gross Salvage Value	82,204
Less Cost of Removal	164,408
Net Salvage Value	(82,204)
Total to be Recovered	1,899,553
Forecast Plant Balances	93,975,671
Whole Life Accrual Rate	2.02%
Cost of Removal Accrual Rate	0.17%
Whole Life Accrual Rate (Excluding Cost of Removal)	1.85%
Depreciable Service Life, years	49.5

Remaining Life Depreciation Rate Calculation

Account Balance 3/31/12	1,644,084
Forecast Additions	-
Gross Salvage Value	82,204
Less Cost of Removal	164,408
Net Salvage Value	(82,204)
Forecast Plant Balances	7,398,378

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2016
Service Life, Yrs	66

Historical and Forecast Plant Additions & Balances
Accou 316 Miscellaneous Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
1	1904	112	-		-	-			-	-		-
2	1905	111	-		-	-			-	-		-
3	1906	110	-		-	-			-	-		-
4	1907	109	-		-	-			-	-		-
5	1908	108	-		-	-			-	-		-
6	1909	107	-		-	-			-	-		-
7	1910	106	-		-	-			-	-		-
8	1911	105	-		-	-			-	-		-
9	1912	104	-		-	-			-	-		-
10	1913	103	1,097		-	0			1,097	-		1,097
11	1914	102	-		-	-			-	-		1,097
12	1915	101	-		-	-			-	-		1,097
13	1916	100	818		-	-			818	-		1,915
14	1917	99	500		-	-			500	-		2,415
15	1918	98	2,325		-	-			2,325	-		4,739
16	1919	97	209		-	-			209	-		4,949
17	1920	96	-		-	-			-	-		4,949
18	1921	95	2,783		-	-			2,783	-		7,732
19	1922	94	-		-	-			-	-		7,732
20	1923	93	347		-	-			347	-		8,079
21	1924	92	320		-	-			320	-		8,399
22	1925	91	-		-	-			-	-		8,399
23	1926	90	1,726		-	-			1,726	-		10,125
24	1927	89	307		-	-			307	-		10,433
25	1928	88	3,044		-	-			3,044	-		13,476
26	1929	87	1,048		-	-			1,048	-		14,525
27	1930	86	515		-	-			515	-		15,039
28	1931	85	-		-	-			-	-		15,039
29	1932	84	-		-	-			-	-		15,039
30	1933	83	186		-	-			186	-		15,226
31	1934	82	666		-	-			666	-		15,892
32	1935	81	-		-	-			-	-		15,892
33	1936	80	252		-	-			252	-		16,144
34	1937	79	500		-	-			500	-		16,644
35	1938	78	99		-	-			99	-		16,744
36	1939	77	76		-	-			76	-		16,819
37	1940	76	309		-	-			309	-		17,129
38	1941	75	468		-	-			468	-		17,597
39	1942	74	251		-	-			251	-		17,848
40	1943	73	1,483		-	-			1,483	-		19,331
41	1944	72	1,014		-	-			1,014	-		20,345
42	1945	71	399		-	-			399	-		20,744
43	1946	70	211		-	-			211	-		20,955
44	1947	69	5,486		-	-			5,486	-		26,441
45	1948	68	1,588		-	-			1,588	-		28,029
46	1949	67	12,223		-	-			12,223	-		40,252
47	1950	66	29,247		-	-			29,247	-		69,499
48	1951	65	2,325		-	-			2,325	-		71,825
49	1952	64	2,884		-	-			2,884	-		74,709
50	1953	63	2,864		-	-			2,864	-		77,573
51	1954	62	27,481		-	-			27,481	-		105,054
52	1955	61	4,077		-	-			4,077	-		109,131
53	1956	60	1,280		-	-			1,280	-		110,411
54	1957	59	19,306		-	-			19,306	-		129,717
55	1958	58	653		-	-			653	-		130,370
56	1959	57	4,094		-	-			4,094	-		134,464
57	1960	56	1,751		-	-			1,751	-		136,215
58	1961	55	2,000		-	-			2,000	-		138,215
59	1962	54	3,354		-	-			3,354	-		141,569
60	1963	53	25,618		-	-			25,618	-		167,187
61	1964	52	2,013		-	-			2,013	-		169,200
62	1965	51	4,117		-	-			4,117	-		173,317
63	1966	50	829		-	-			829	-		174,145
64	1967	49	799		-	-			799	-		174,944
65	1968	48	997		-	-			997	-		175,942
66	1969	47	6,491		-	-			6,491	-		182,432
67	1970	46	7,547		-	-			7,547	-		189,979
68	1971	45	2,752		-	-			2,752	-		192,731
69	1972	44	9,239		-	-			9,239	-		201,971
70	1973	43	14,109		-	-			14,109	-		216,080
71	1974	42	5,044		-	-			5,044	-		221,124
72	1975	41	6,844		-	-			6,844	-		227,967
73	1976	40	4,894		-	-			4,894	-		232,861
74	1977	39	1,970		-	-			1,970	-		234,831
75	1978	38	341		-	-			341	-		235,172
76	1979	37	-		-	-			-	-		235,172

The Empire District Electric Company

Unit Property Depreciation Rate Analysis
Unit Property: Steam Production, Riverton Plant

Gross Salvage	5%
Cost of Removal	10%
Net Salvage	-5%
Install Date	1950
Retirement Date	2016
Service Life, Yrs	66

Historical and Forecast Plant Additions & Balances
Accou 316 Miscellaneous Plant Equipment

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
			Reported Per Books				Adjustments					End of Year
			Transaction Year			Vintage Year	Advance	Advance	Adjusted Transaction Year		Transfers and	Plant
Line	Vintage Year	Vintage Age	Beg Balance	Additions	Retirements	Retirements	Additions	Retirements	Additions	Retirements	Adjustments	Balance*
77	1980	36	7,012		-	-			7,012	-		242,184
78	1981	35	1,375		-	1,375			1,375	-		243,559
79	1982	34	11,251		-	-			11,251	-		254,811
80	1983	33	5,054		-	-			5,054	-		259,864
81	1984	32	28,016		-	-			28,016	-		287,880
82	1985	31	1,269		-	-			1,269	-		289,149
83	1986	30	40,305		-	15,210			40,305	-		329,454
84	1987	29	293,368		-	-			293,368	-		622,821
85	1988	28	3,967		-	-			3,967	-		626,788
86	1989	27	20,978		-	-			20,978	-		647,766
87	1990	26	48,457		-	-			48,457	-		696,223
88	1991	25	13,773		-	-			13,773	-		709,996
89	1992	24	39,649		-	-			39,649	-		749,645
90	1993	23	13,348		-	-			13,348	-		762,993
91	1994	22	13,033		-	-			13,033	-		776,026
92	1995	21	41,864		-	3,184			41,864	-		817,891
93	1996	20	33,991		-	-			33,991	-		851,882
94	1997	19	12,255		-	-			12,255	-		864,137
95	1998	18	10,170		-	-			10,170	-		874,307
96	1999	17		30,720	-	-			30,720	-		905,027
97	2000	16		9,937	-	-			9,937	-		914,964
98	2001	15		38,880	-	-			38,880	-		953,844
99	2002	14		14,996	-	-			14,996	-		968,840
100	2003	13		-	15,210	-			-	15,210		953,630
101	2004	12		6,589	0	-			6,589	0		960,219
102	2005	11		21,156	-	-			21,156	-		981,375
103	2006	10		1,859	-	-			1,859	-		983,234
104	2007	9		135,371	-	-			135,371	-		1,118,605
105	2008	8		10,278	-	-			10,278	-		1,128,883
106	2009	7		4,044	-	-			4,044	-		1,132,926
107	2010	6		8,509	-	-			8,509	-		1,141,435
108	2011	5			4,560	-	14,998		14,998	4,560		1,151,873
109	Total		$ 874,307	$ 282,338	$ 19,770	$ 19,770	$ 14,998	$ -	$ 1,171,643	$ 19,770	$ -	$ 29,534,347
110	Major Additions/Retirements											
111	2009			$ -								
112	Routine Activity			$ 297,336	$ 19,770							
113	Historical Interim Activity			1.01%	0.07%							
114	Forecast Interim Activity			0.00%	0.00%							
							2012 additions	Major Additions				
115	2012	4					12,241		-	-		1,164,114
116	2013	3							-	-		1,164,114
117	2014	2							-	-		1,164,114
118	2015	1							-	-		1,164,114
119	2016	0									(1,164,114)	-
									$ 1,171,643	$ 19,770		$ 34,190,804

* Through vintage year 1999 the balances are 1999 remaining plant balances.

Whole Life Depreciation Rate Calculation

Historical Additions	1,171,643
Forecast Additions	-
Total Additions	1,171,643
Gross Salvage Value	58,206
Less Cost of Removal	116,411
Net Salvage Value	(58,206)
Total to be Recovered	1,229,849
Forecast Plant Balances	34,190,804
Whole Life Accrual Rate	3.60%
Cost of Removal Accrual Rate	0.34%
Whole Life Accrual Rate (Excluding Cost of Removal)	3.26%
Depreciable Service Life, years	27.8

Remaining Life Depreciation Rate Calculation

Account Balance 3/31/12	1,164,114
Forecast Additions	-
Gross Salvage Value	58,206
Less Cost of Removal	116,411
Net Salvage Value	(58,206)
Forecast Plant Balances	5,238,514