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REVIEW OF THE RATES OF SHARYLAND UTILITY COMPANY	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

DIRECT TESTIMONY AND EXHIBITS OF

DAVID J. GARRETT

ON BEHALF OF

THE CITY OF MISSION

FEBRUARY 28, 2017

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I. INTRODUCTION

Q. STATE YOUR NAME AND OCCUPATION.

A. My name is David J. Garrett. I am a consultant specializing in public utility regulation. I am the managing member of Resolve Utility Consulting, PLLC. I focus my practice on the primary capital recovery mechanisms for public utility companies: cost of capital and depreciation.

Q. SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I received a B.B.A. degree with a major in Finance, an M.B.A., and a Juris Doctor from the University of Oklahoma. I worked in private legal practice for several years before accepting a position as assistant general counsel at the Oklahoma Corporation Commission in 2011. At the Oklahoma commission, I worked in the Office of General Counsel in regulatory proceedings. In 2012, I began working for the Public Utility Division as a regulatory analyst providing testimony in regulatory proceedings. After leaving the commission I formed Resolve Utility Consulting, PLLC, where I have represented various consumer groups and state agencies in utility regulatory proceedings, primarily in the areas of cost of capital and depreciation. I am a Certified Depreciation Professional with the Society of Depreciation Professionals, and I currently serve on the society's board of directors as president. I am also a Certified Rate of Return Analyst with the Society of Utility and Regulatory Financial Analysts. A more complete description of my qualifications and regulatory experience is included in my curriculum vitae.[1]

[1] Exhibit DJG-1.

Q. DESCRIBE THE PURPOSE AND SCOPE OF YOUR TESTIMONY IN THIS PROCEEDING.

A. I am testifying on behalf of the City of Mission ("Mission") regarding the proposed depreciation rates of Sharyland Utilities, L.P. ("Sharyland" or the "Company"). I am responding to the Company's depreciation study sponsored by Mr. Dane A. Watson.

II. EXECUTIVE SUMMARY

Q. SUMMARIZE THE KEY POINTS OF YOUR TESTIMONY.

A. In the context of utility ratemaking, "depreciation" refers to a cost allocation system designed to measure the rate by which a utility may recover its capital investments in a systematic and rational manner. The table below compares the proposed depreciation expense amounts by plant function as of the study date.

Figure 1:
Depreciation Expense Comparison by Plant Function

Plant Function	Plant 12/31/2015	Company Proposal	Mission Proposal	Mission Adjustment
Transmission	$ 980,453,092	$ 23,653,060	$ 20,555,974	$ (3,097,086)
Distributrion	474,368,417	15,788,982	12,983,161	(2,805,821)
General	31,051,516	1,215,098	1,215,098	-
Total	$ 1,485,873,025	$ 40,657,139	$ 34,754,233	$ (5,902,906)

In recommending depreciation rates in this case, I employed a well-established depreciation system using actuarial analysis and simulated plant record analysis to statistically analyze the Company's depreciable assets. Mission's total adjustment reduces the Company's proposed annual depreciation expense by $5.9 million when applied to plant balances at December 31, 2015.

Q. SUMMARIZE YOUR ADJUSTMENTS BY ACCOUNT.

A. I am proposing adjustments to several of the Company's transmission and distribution accounts, which are summarized as follows by my proposed rates, annual accruals, and adjustments to the Company's proposal.

Figure 2:
Detailed Proposals by Account

Account	Description	Rate	Accrual	Adjustment
352	Structures & Improvements	1.61%	$ 1,117,009	$ (341,778)
353	Station Equipment	1.88%	6,049,742	(1,790,089)
353	Transmission OCC Equipment	9.91%	554,733	-
354	Towers & Fixtures	1.78%	4,785,868	(574,761)
355	Poles & Fixtures	2.62%	2,644,424	(149,248)
356	Overhead Conductor & Devices	2.61%	5,155,425	(215,183)
359	Roads and Trails	1.51%	248,772	(26,027)
	Total Transmission Plant	2.10%	20,555,974	(3,097,086)
	Distribution Plant			
361	Structures & Improvements	1.79%	317,291	(60,311)
362	Station Equipment	1.82%	1,273,911	(718,807)
364	Poles, Towers & Fixtures	4.10%	5,205,443	4,050
365	Overhead Conductor & Devices	2.15%	1,981,521	(1,019,174)
366	Underground Conduit	1.58%	110,916	(14,603)
367	Underground Conductor & Devices	2.32%	485,244	(133,657)
368	Line Transformers	2.38%	1,998,426	(309,037)
369	Services	2.28%	826,796	(554,282)
370	Meters	4.01%	607,716	-
371	Installations On Customer Premises	4.83%	49,829	-
373	Street Light & Signal Systems	3.89%	126,071	-
			-	
	Total Distribution Plant	2.74%	$ 12,983,161	$ (2,805,821)

Q. PLEASE SUMMARIZE THE PRIMARY FACTORS DRIVING MISSION'S ADJUSTMENT.

A. As discussed above, I am proposing adjustments to several of the Company's transmission and distribution accounts. For most of these accounts, the remaining lives I propose are

longer than those proposed by the Company, which results in lower depreciation rates and expense. My understanding of the regulatory standards governing utility depreciation expense, as further discussed below, is that the Company must provide convincing and adequate data to demonstrate that its proposed depreciation rates are not excessive.[2] However, because the Company's actuarial data used to conduct the depreciation study is insufficient to provide reliable indications of the average service lives of the Company's accounts, the Company has not demonstrated that its proposed rates are not excessive. Under these circumstances, it is important to make sure that the service lives adopted by the Commission are reflective of industry norms. Applying this standard will help reduce the negative financial impact to customers while avoiding financial harm to the Company. The accounts to which I propose adjustments are further discussed below.

Q. DESCRIBE WHY IT IS IMPORTANT NOT TO OVERESTIMATE DEPRECIATION RATES.

A. Under the rate base rate of return model, the utility is allowed to recover the original cost of its prudent investments required to provide service. Depreciation systems are designed to recover those costs in a systematic and rational manner – specifically, over the service life of the utility's assets. If costs are recovered too quickly by assuming shorter service lives, it encourages economic inefficiency. Unlike competitive firms, regulated utility companies are not always incentivized by natural market forces to make the most economically efficient decisions. If a utility is allowed to recover the cost of an asset before the end of its useful life, this could incentivize the utility to unnecessarily replace the asset

[2] *See Lindheimer v. Illinois Bell Tel. Co.*, 292 U.S. 151, 167 (1934).

in order to increase rate base, which results in economic waste. Thus, from a public policy perspective, it is preferable for regulators to ensure that assets are not depreciated before the end of their true useful lives. While underestimating the useful lives of depreciable assets could financially harm current ratepayers and encourage economic waste, there is little corresponding risk of harm to the Company if depreciable lives are slightly overestimated. This is because if an asset's life is overestimated early on, there are a variety of measures that regulators can use to ensure the utility is not financially harmed. One such measure would be adjusting the depreciation rates in future proceedings based on more complete data. Another measure would be the use of a regulatory asset account if an unrecovered balance remains when assets are retired. In that case, the Company's original cost investment in these assets would remain in the Company's rate base until they are recovered. Thus, the process of depreciation strives for a perfect match between actual and estimated useful life. When these estimates are not exact, however, for the reasons stated above, it is therefore better that useful lives are overestimated rather than underestimated.

Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION?

A. I recommend that the Commission adopt the depreciation rates listed in Exhibit DJG-3. These rates should be applied to updated plant balances to determine the Company's depreciation expense included in rates.

III. REGULATORY STANDARDS

Q. DISCUSS THE STANDARD BY WHICH REGULATED UTILITIES ARE ALLOWED TO RECOVER DEPRECIATION EXPENSE.

A. In *Lindheimer v. Illinois Bell Telephone Co.*, the U.S. Supreme Court stated that "depreciation is the loss, not restored by current maintenance, which is due to all the factors causing the ultimate retirement of the property. These factors embrace wear and tear, decay, inadequacy, and obsolescence."[3] The *Lindheimer* Court also recognized that the original cost of plant assets, rather than present value or some other measure, is the proper basis for calculating depreciation expense.[4] Moreover, the *Lindheimer* Court found:

> [T]he company has the burden of making a convincing showing that the amounts it has charged to operating expenses for depreciation have not been excessive. That burden is not sustained by proof that its general accounting system has been correct.[5]

Thus, Sharyland must make a "convincing showing" that its proposed depreciation rates are not excessive.

Q. HAS SHARYLAND MADE A CONVINCING SHOWING THAT ITS PROPOSED DEPRECIATION RATES ARE NOT EXCESSIVE?

A. No. Obtaining reliable indications of the average service lives of grouped property requires sufficient retirement experience. In short, depreciation professionals use past retirement

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[3] *Lindheimer v. Illinois Bell Tel. Co.*, 292 U.S. 151, 167 (1934).

[4] *Id*. (Referring to the straight-line method, the *Lindheimer* Court stated that "[a]ccording to the principle of this accounting practice, the loss is computed upon the actual cost of the property as entered upon the books, less the expected salvage, and the amount charged each year is one year's pro rata share of the total amount."). The original cost standard was reaffirmed by the Court in *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591, 606 (1944). The *Hope* Court stated: "Moreover, this Court recognized in [*Lindheimer*], supra, the propriety of basing annual depreciation on cost. By such a procedure the utility is made whole and the integrity of its investment maintained. No more is required."

[5] *Id*. at 169.

experience to estimate the future mortality characteristics and average service lives of grouped asset accounts. For many of the accounts in this case, the Company has not provided enough historical data to obtain a reliable indication of future retirement patterns and average remaining life. For example, there were only 10 years of retirement history for some accounts containing assets that are expected to survive more than 70 years. This does not mean the Company withheld information, or that the information provided was inaccurate; rather, it means that it will take more time for the Company to obtain a sufficient retirement history of actuarial data in order to provide a more objective basis upon which to reliably estimate the average service lives of these accounts. This concept is illustrated and explained further below. Under these circumstances, it is important that the Commission take a more conservative approach to ensure that the Company's depreciation rates are not too high. Doing so will incentivize economic efficiency and reduce the negative financial impact to ratepayers while avoiding financial harm to the Company.

Q. DOES MR. WATSON ALSO AGREE THAT THE COMPANY'S DATA IS INSUFFICIENT?

A. Yes. For every account that was analyzed using actuarial analysis, Mr. Watson correctly acknowledges that the Company's data was either "insufficient" or "limited."[6]

Q. SHOULD DEPRECIATION REPRESENT AN ALLOCATED COST OF CAPITAL TO OPERATION, RATHER THAN A MECHANISM TO DETERMINE LOSS OF VALUE?

A. Yes. While the *Lindheimer* case and other early literature recognized depreciation as a necessary expense, the language indicated that depreciation was primarily a mechanism to

[6] *See* Exhibit DAW-2 (Depreciation Study), pp. 19-42.

determine loss of value.[7] Adoption of this "value concept" would require annual appraisals of extensive utility plant, and is thus not practical in this context. Rather, the "cost allocation concept" recognizes that depreciation is a cost of providing service, and that in addition to receiving a "return on" invested capital through the allowed rate of return, a utility should also receive a "return of" its invested capital in the form of recovered depreciation expense. The cost allocation concept also satisfies several fundamental accounting principles, including verifiability, neutrality, and the matching principle.[8] The definition of "depreciation accounting" published by the American Institute of Certified Public Accountants ("AICPA") properly reflects the cost allocation concept:

> Depreciation accounting is a system of accounting that aims to distribute cost or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner. It is a process of allocation, not of valuation.[9]

Thus, the concept of depreciation as "the allocation of cost has proven to be the most useful and most widely used concept."[10]

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[7] *See* Frank K. Wolf & W. Chester Fitch, *Depreciation Systems* 71 (Iowa State University Press 1994).

[8] National Association of Regulatory Utility Commissioners, *Public Utility Depreciation Practices* 12 (NARUC 1996).

[9] American Institute of Accountants, *Accounting Terminology Bulletins Number 1: Review and Résumé* 25 (American Institute of Accountants 1953).

[10] Wolf *supra* n. 7, at 73.

IV. ANALYTIC METHODS

Q. DISCUSS YOUR APPROACH TO ANALYZING THE COMPANY'S DEPRECIABLE PROPERTY IN THIS CASE.

A. I obtained and reviewed all of the data that was used to conduct the Company's depreciation study. The depreciation rates proposed by Mr. Watson were developed based on depreciable property recorded as of December 31, 2015. I used the same data and plant balances to develop my proposed depreciation rates.[11] I used a reasonable depreciation system to develop my proposed depreciation rates.

Q. DISCUSS THE DEFINITION AND PURPOSE OF A DEPRECIATION SYSTEM, AS WELL AS THE DEPRECIATION SYSTEM YOU EMPLOYED FOR THIS PROJECT.

A. The regulatory standards set forth above do not mandate a specific procedure for conducting depreciation analysis. These standards, however, direct that analysts use a system for estimating depreciation rates that will result in the "systematic and rational" allocation of capital recovery for the utility. Over the years, analysts have developed "depreciation systems" designed to analyze grouped property in accordance with this standard. A depreciation system may be defined by several primary parameters: 1) a method of allocation; 2) a procedure for applying the method of allocation; 3) a technique of applying the depreciation rate; and 4) a model for analyzing the characteristics of vintage property groups.[12] In this case, I used the straight line method, the average life procedure, the remaining life technique, and the broad group model to analyze the Company's

[11] *See* Exhibit DJG-4.

[12] *See* Wolf *supra* n. 7, at 70, 140.

actuarial data; this system would be denoted as an "SL-AL-RL-BG" system. This depreciation system conforms to the regulatory standards set forth above, and is commonly used by depreciation analysts in regulatory proceedings. I provide a more detailed discussion of depreciation system parameters, theories, and equations in Appendix A

Q. ARE THERE OTHER REASONABLE DEPRECIATION SYSTEMS THAT ANALYSTS MAY USE?

A. Yes. There are multiple combinations of depreciation systems that analysts may use to develop deprecation rates. For example, an analyst might choose to use the whole life technique instead of the remaining life technique, or choose to use the equal life group model instead of the broad group model. As long as the depreciation system facilitates the systematic and rational allocation and recovery of capital investments, it should be considered reasonable.

Q. DID YOU USE THE SAME DEPRECIATION SYSTEM AS MR. WATSON USED IN THIS CASE?

A. Yes, I used the same depreciation system that Mr. Watson used.[13] Although some of our assumptions and inputs differed, the analytical system we used is essentially the same.

Q. DESCRIBE THE COMPANY'S PLANT DATA AND HOW IT AFFECTED YOUR APPROACH AND ANALYSIS IN THIS CASE.

A. For some accounts, including the transmission accounts and two distribution accounts (Accounts 361 and 366), I used actuarial analysis on the "aged data" provided by the Company. Aged data refers to a collection of property data for which the dates of

[13] *See* Exhibit DAW-2 (Depreciation Study), p. 5. There, Mr. Watson states that he used the straight-line, broad group, remaining life depreciation system.

placements, retirements, transfers, and other actions are known. In keeping aged data, when a utility retires an asset, it would not only record the year it was retired, but it would also track the year the asset was placed into service, or the "vintage" year. The Company, however, did not have aged data available for all of its accounts. When aged data is not available, the year-end balances of each account are known, but analysts must "simulate" an actuarial analysis by estimating the proportion that each vintage group contributed to year-end balances. For this reason, simulated data is not as reliable as aged data. In order to analyze accounts that do not contain aged data, analysts use the "simulated plant record" ("SPR") method. Because the analytical approach is not the same for actuarial and simulated data, I will separately discuss each approach and the corresponding accounts below.

V. ACTUARIAL ANALYSIS

Q. DESCRIBE THE GENERAL PROCESS YOU USED TO SORT AND ANALYZE THE COMPANY'S DEPRECIABLE PROPERTY DATA.

A. The study of retirement patterns of industrial property is derived from the actuarial process used to study human mortality. Just as actuaries study historical human mortality data in order to predict how long a group of people will live, depreciation analysts study historical plant data in order to estimate the average lives of property groups. The most common actuarial method used by depreciation analysts is called the "retirement rate method." In the retirement rate method, original property data, including additions, retirements,

transfers, and other transactions, are organized by vintage and transaction year.[14] The retirement rate method is ultimately used to develop an "observed life table," ("OLT") which shows the percentage of property surviving at each age interval. This pattern of property retirement is described as a "survivor curve." The survivor curve derived from the observed life table, however, must be fitted and smoothed with a complete curve in order to determine the ultimate average life of the group.[15] The most widely used survivor curves for this curve fitting process were developed at Iowa State University in the early 1900s and are commonly known as the "Iowa curves."[16] A more detailed explanation of how the Iowa curves are used in the actuarial analysis of depreciable property is set forth in Appendix C.

Q. DESCRIBE THE APPROACH YOU USED TO ESTIMATE THE AVERAGE SERVICE LIVES OF THE COMPANY'S GROUPED ASSET ACCOUNTS.

A. I used all of the Company's aged property data to create an observed life table ("OLT") for each account. The data points on the OLT can be plotted to form a curve (the "OLT curve"). The OLT curve is not a theoretical curve, rather, it is actual observed data from the Company's records that indicate the rate of retirement for each property group. An OLT curve by itself, however, is rarely a smooth curve, and is often not a "complete" curve (i.e., it does not end at zero percent surviving). In order to calculate average life (the area

[14] The "vintage" year refers to the year that a group of property was placed in service (aka "placement" year). The "transaction" year refers to the accounting year in which a property transaction occurred, such as an addition, retirement, or transfer (aka "experience" year).

[15] *See* Appendix C for a more detailed discussion of the actuarial analysis used to determine the average lives of grouped industrial property.

[16] *See* Appendix B for a more detailed discussion of the Iowa curves.

under a curve), a complete survivor curve is needed. The Iowa curves are empirically-derived curves based on the extensive studies of the actual mortality patterns of many different types of industrial property. The curve-fitting process involves selecting the best Iowa curve to fit the OLT curve. This can be accomplished through a combination of visual and mathematical curve-fitting techniques, as well as professional judgment. The first step of my approach to curve-fitting involves visually inspecting the OLT curve for any irregularities. For example, if the "tail" end of the curve is erratic and shows a sharp decline over a short period of time, it may indicate that this portion of the data is less reliable, as further discussed below. After inspecting the OLT curve, I use a mathematical curve-fitting technique which essentially involves measuring the distance between the OLT curve and the selected Iowa curve in order to get an objective, mathematical assessment of how well the curve fits. After selecting an Iowa curve, I observe the OLT curve along with the Iowa curve on the same graph to determine how well the curve fits. I may repeat this process several times for any given account to ensure that the most reasonable Iowa curve is selected.

Q. DO YOU ALWAYS SELECT THE MATHEMATICALLY BEST-FITTING CURVE?

A. Not necessarily. Mathematical fitting is an important part of the curve-fitting process because it promotes objective, unbiased results. While mathematical curve fitting is important, however, it may not always yield the best, most reasonable result.

Q. DESCRIBE WHAT YOU MEAN BY THE "BEST RESULT."

A. In general, the "best" result for each account would be achieved by selecting the Iowa curve that most accurately reflects the future retirement pattern and average remaining life of the

assets within that account. The process of selecting the best curve would include mathematical and visual Iowa curve-fitting techniques, along with professional judgment. Sometimes the mathematically best fitting curve indicates an average life that is unreasonable, especially when there is insufficient retirement history in the account. In this case, for example, the mathematically best fitting Iowa curve for Account 353 (Station Equipment) is the R3-145 curve. Choosing the R3-145 curve for this account necessarily suggests that the assets in this account will have an average service life of 145 years, meaning some assets will survive much longer. However, professional judgement, including observations of this account among other electric utilities, should lead an analyst to conclude that a 145-year average life for this account is not reasonable, despite the fact that it would be based on the current best-fitting Iowa curve from a mathematical standpoint. Once the Company experiences more retirement history in this account, a survivor curve pattern should develop that would indicate the average life for the assets in this account are in the range of 50 – 60 years.

Q. SHOULD EVERY PORTION OF THE OLT CURVE BE GIVEN EQUAL WEIGHT?

A. Not necessarily. Many analysts have observed that the points comprising the "tail end" of the OLT curve may often have less analytical value than other portions of the curve. In fact, "[p]oints at the end of the curve are often based on fewer exposures and may be given less weight than points based on larger samples. The weight placed on those points will depend on the size of the exposures."[17]

[17] Wolf *supra* n. 7, at 46.

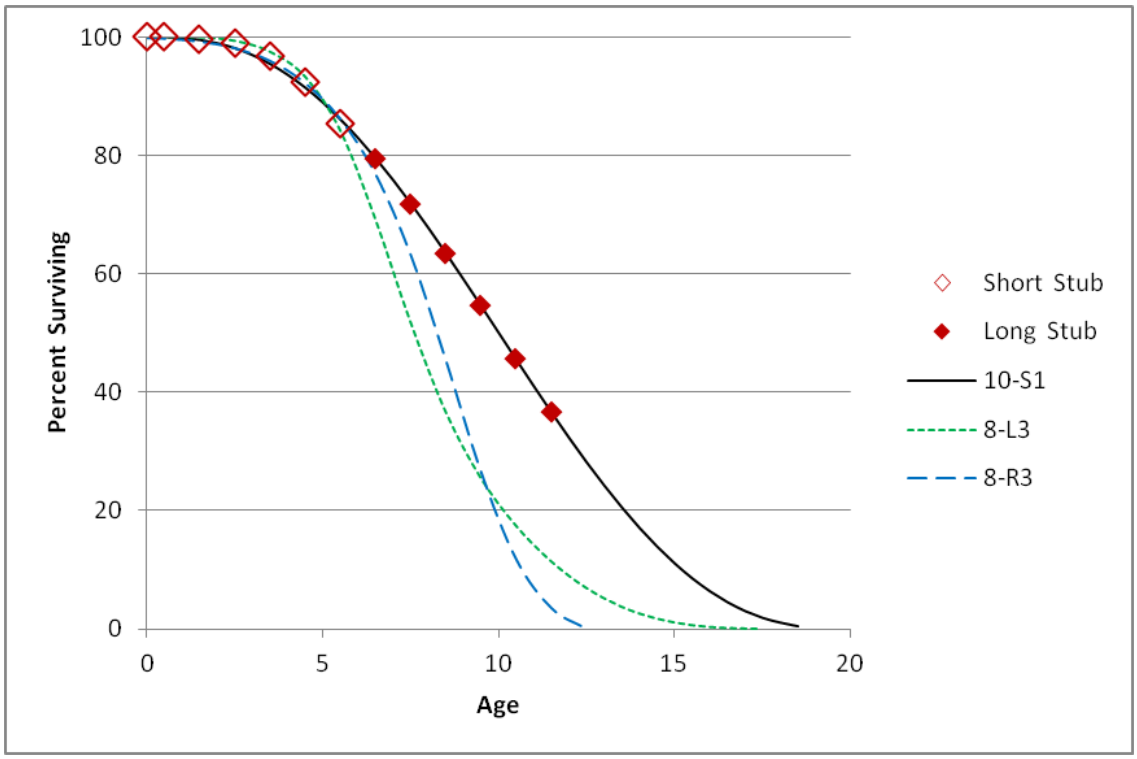
Q. DID SHARYLAND'S LACK OF SUFFICIENT ACTUARIAL DATA IN THIS CASE INFLUENCE YOUR APPROACH AND ANALYSIS?

A. Yes. As discussed above, the actuarial data provided by the Company was insufficient to obtain a reliable indication of the average service life. I will illustrate this fact below. In cases where there is sufficient data, it is preferable to place more emphasis on the statistical analysis of the data provided by the utility being studied. Because Sharyland's data is insufficient, however, I gave more consideration to the service lives observed across the electric utility industry. Below I will further discuss approach and analysis for each of the Company's transmission accounts for which there was limited actuarial data provided.

Q. PLEASE ILLUSTRATE WHY THE COMPANY'S ACTUARIAL DATA IS INSUFFICIENT TO GIVE A CLEAR INDICATION OF FUTURE RETIREMENT PATTERNS AND AVERAGE LIFE.

A. As discussed above, depreciation analysts use utility actuarial data to construct an observed life table ("OLT") for each account. An OLT curve, however, is often not a "complete" curve (i.e., it does not end at zero percent surviving). For this reason, it is sometimes called a "stub" survivor curve. In order to calculate average life (the area under a curve), however, a complete survivor curve, such as an Iowa curve, is required. The graph below shows an example of a typical OLT "stub" curve that is generated from actuarial data using the retirement rate method. If a utility does not have sufficient actuarial retirement history, the data will produce a shorter OLT stub curve.

Figure 3:
OLT "Stub" Curve Example



The first seven data points (the clear diamonds) show an OLT curve that is arguably too short to provide a good foundation for Iowa curve fitting. This graph also shows three Iowa curves. If an analyst were working with only the first seven data points of the OLT curve, it would be difficult to determine the best fitting Iowa curve, since many Iowa curves have similar shapes toward the top portion of the curves. However, as shown in the graph, when more data points are added to the OLT curve to form a longer stub curve, the best-fitting Iowa curve becomes more clear. In this case, all of Sharyland's OLT curves for its actuarial accounts are too short to provide a good indication of the average life. Therefore, it is helpful to look to other recommended service lives across the industry that were based on more complete actuarial data. Over time, as Sharyland accumulates more actuarial

retirement history, the Iowa curve fitting process will become more valuable as an indicator of average service life.

A. Account 352 – Structures and Improvements

Q. DISCUSS THE COMPANY'S POSITION ON ACCOUNT 352.

A. In his depreciation study, Mr. Watson acknowledged that "[t]here was insufficient data to perform actuarial analysis for this account."[18] Nevertheless, Mr. Watson proposed an Iowa R3-50 curve for this account, which corresponds to a depreciation rate of 2.10% and an annual accrual of $1.5 million.[19] This recommendation results in an estimated life of only 50 years for this account.

Q. DO YOU AGREE WITH THE COMPANY'S POSITION?

A. No. An estimated average life of only 50 years is far too short for this account. Since the actuarial data provided by the Company for this account is insufficient, it is instructive to consider the average lives observed for other utilities with more reliable actuarial data. For transmission structures and improvements, the majority of depreciation studies I have reviewed utilized average lives of around 65 years.[20]

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[18] *Id*. at 19.

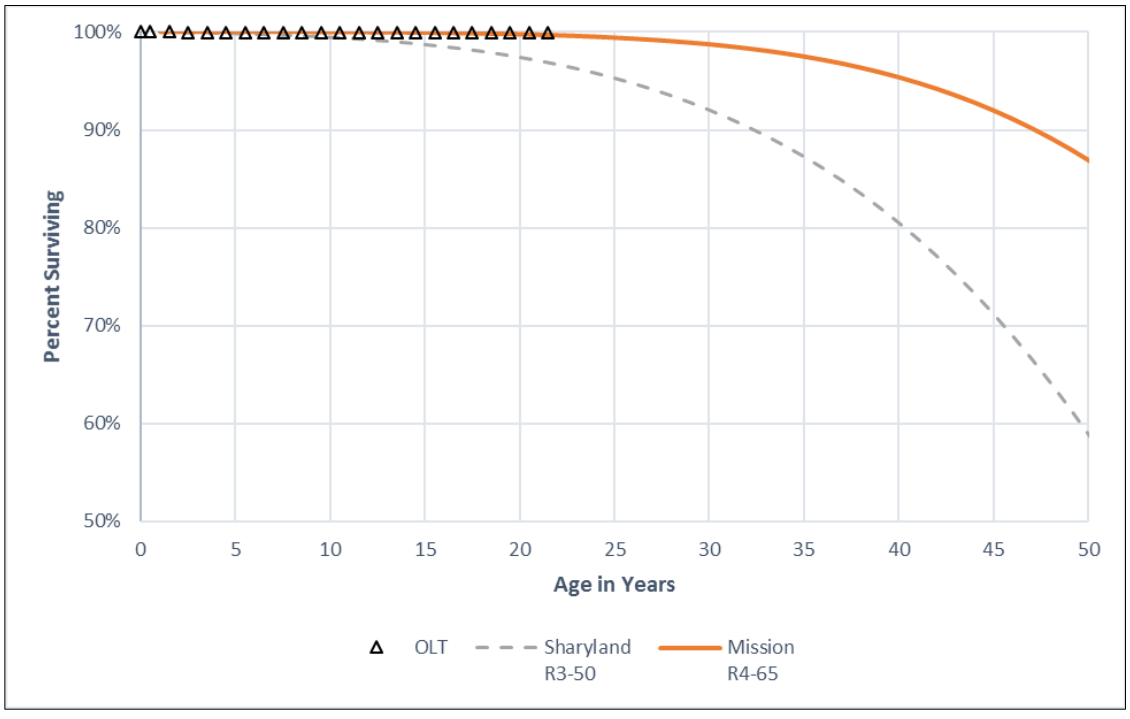
[19] Exhibit DAW-2 (Depreciation Study), pp. 55, 57.

[20] *See generally* the following depreciation studies: (1) El Paso Electric 2014 depreciation study, TX PUC, No. 44941; (2) Idaho Power Company 2015 depreciation study, ID PUC, No. IPC-E-16-23; (3) Oklahoma Gas and Electric Co. 2014 depreciation study, OK PUC, No. 201500273; (4) Public Service Company of Oklahoma 2014 depreciation study, OK PUC, No. 201500208; and (5) Southwestern Electric Power Company 2015 depreciation study, TX PUC, No. 46449. Relevant portions of these depreciation studies are attached hereto as Exhibit DJG-10. Full copies of the studies are publicly available, and can also be provided upon request.

Q. ALTHOUGH THE ACTUARIAL DATA PROVIDED BY THE COMPANY FOR THIS ACCOUNT IS RELATIVELY INSUFFICIENT, ARE THERE STATISTICAL INDICATIONS THAT THE COMPANY'S PROPOSED SERVICE LIFE IS TOO SHORT FOR THIS ACCOUNT?

A. Yes. The graph below shows the OLT curve for this account, along with the proposed Iowa curves. Just as illustrated above, the OLT curve is too short to provide much statistical value from a curve-fitting standpoint. This OLT curve however, is arguably long enough to show that the Company's proposed curve / average service life is too short. The OLT curve in this graph is represented by the black triangles. Because there is an insufficient history of retirement data, the OLT curve is relatively flat, and has not yet begun to decline in the form of a typical survivor curve.

Figure 4:
Account 352 – Structures and Improvements



However, notice that by selecting the R3-50 curve to represent the mortality characteristics of this account, the Company is suggesting that around the 15-year age interval, the

percentage surviving in this account began to steadily decline. As the OLT curve shows, however, this has not been the case. Therefore, even the limited actuarial data available still demonstrates that the Company's selected Iowa curve has diverged from the actuarial data, resulting in an average service life that is too short.

Q. IS YOUR SELECTED IOWA CURVE A BETTER MATHEMATICAL FIT TO THE OLT CURVE?

A. Yes. Although, as discussed above, the limited actuarial data provided by the Company is not ideal for conventional mathematical curve-fitting techniques, the Iowa R4-65 curve I selected nonetheless provides a better mathematical fit to the OLT curve than the Company's selected curve. Mathematical curve fitting essentially involves measuring the distance between the OLT curve and the selected Iowa curve. The best mathematically-fitted curve is the one that minimizes the distance between the OLT curve and the Iowa curve, thus providing the closest fit. The "distance" between the curves is calculated using the "sum-of-squared differences" ("SSD") technique. In Account 352, the total SSD, or "distance" between the Company's curve and the OLT curve is 0.0061, while the total SSD between R4-65 and the OLT curve is only 0.0029.[21] This is because the Company's selected curve begins declining too early. Thus, the R4-65 curve I selected provides a better mathematical fit.

Q. WHAT IS YOUR RECOMMENDATION FOR ACCOUNT 352?

A. I propose the Iowa R4-65 curve be used to calculate the remaining life and depreciation rate for this account. An average life estimate of 65 years is reasonable when compared to

[21] Exhibit DJG-5.

the average lives observed throughout the industry for this account. Additionally, the R4-65 curve provides a better fit to the limited actuarial data available, as the Company's selected curve is clearly too short. In light of these observations, along with the fact that the Company did not provide sufficient actuarial data for this account, it is clear that the Company has failed to make a convincing showing that its proposed rates are not excessive. Applying the R4-65 curve to this account results in a remaining life of 62.7 years, a depreciation rate of 1.61%, and an annual accrual of $1.1 million.[22]

B. Account 353 – Station Equipment

Q. DISCUSS THE COMPANY'S POSITION ON ACCOUNT 353.

A. Mr. Watson proposed an Iowa R5-45 curve for this account, which corresponds to a depreciation rate of 2.43% and an annual accrual of $7.8 million.[23] In his depreciation study, Mr. Watson acknowledged that "[t]here was insufficient data to perform actuarial analysis for this account."[24]

Q. DO YOU AGREE WITH THE COMPANY'S POSITION?

A. No. An estimated average life of only 45 years is far too short for this account. Since the actuarial data provided by the Company for this account is insufficient, it is instructive to consider the average lives observed for other utilities with more reliable actuarial data.

[22] *See* Exhibit DJG-4 for depreciation calculations; *see also* Exhibit DJG-9 for detailed remaining life calculations.

[23] Exhibit DAW-2 (Depreciation Study), pp. 55, 57.

[24] *Id*. at 19.

With respect to Account 353, I have observed depreciation studies proposing average lives of approximately 54 years, and as much as 60 years.[25]

Q. WHAT IS YOUR RECOMMENDATION FOR THIS ACCOUNT?

A. In the interest of reasonableness, I am proposing an average life of 54 years, which is longer than the average life proposed by the Company, but still shorter than some of the average lives proposed by utilities for this account. All else held constant, shorter average lives result in higher depreciation rates. In light of these observations, along with the fact that the Company did not provide sufficient actuarial data for this account, the Company has not made a convincing showing that its proposed rates are not excessive. Specifically, I propose an R5-54 curve to describe the future mortality rate and average service life for this account. The curve shape is the same as the one proposed by the Company, but an average life of 54 is much more reflective of industry norms than an average life of only 45 years. Applying these parameters to this account results in a remaining life of 50.4 years, a depreciation rate of 1.88%, and an annual accrual of $6 million.[26]

C. Account 354 – Towers and Fixtures

Q. DISCUSS THE COMPANY'S POSITION ON ACCOUNT 354.

A. Mr. Watson proposed an R3-60 curve for this account, which corresponds to a depreciation rate of 2.00% and an annual accrual of $5.4 million.[27] In his depreciation study, Mr.

[25] *See generally* depreciation studies *supra* n. 20; *see also* Exhibit DJG-10.

[26] *See* Exhibit DJG-4 for depreciation calculations; *see also* Exhibit DJG-9 for detailed remaining life calculations.

[27] Exhibit DAW-2 (Depreciation Study), pp. 55, 57.

Watson again acknowledged that with respect to Account 354, "[t]here was insufficient data to perform actuarial analysis for this account."[28]

Q. DO YOU AGREE WITH THE COMPANY'S RECOMMENDATION FOR THIS ACCOUNT?

A. No. An estimated average life of only 60 years is too short for this account. Because the actuarial data provided by the Company for this account is insufficient, I considered the average lives observed for other utilities with more reliable actuarial data. With respect to Account 354, I have observed depreciation studies proposing average lives of about 70 years, and as much as 75 years.[29]

Q. ARE YOU RECOMMENDING A 75-YEAR AVERAGE LIFE FOR THIS ACCOUNT?

A. No. In the interest of reasonableness, I am proposing an average life of only 67 years, which is considerably shorter than the depreciable lives I have observed for this account. In light of my observations, and because the Company did not provide sufficient actuarial data for this account, the Company has not made a convincing showing that its proposed rates are not excessive. I propose an R4-67 curve to describe the future mortality rate and average service life for this account, which equates to a remaining life of 64.4 years, a depreciation rate of 1.78%, and an annual accrual of $4.8 million.[30]

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[28] *Id*. at 20.

[29] *See generally* depreciation studies *supra* n. 20; *see also* Exhibit DJG-10.

[30] *See* Exhibit DJG-4 for depreciation calculations; *see also* Exhibit DJG-9 for detailed remaining life calculations.

D. Account 355 – Poles and Fixtures

Q. DISCUSS THE COMPANY'S POSITION ON ACCOUNT 355.

A. Mr. Watson proposed an R2.5-54 curve for this account, which corresponds to a depreciation rate of 2.77% and an annual accrual of $2.8 million.[31] In his depreciation study, Mr. Watson acknowledged that there was limited actuarial life analysis for this account.[32]

Q. DO YOU AGREE WITH THE COMPANY'S POSITION?

A. No. Because the actuarial data provided by the Company for this account is limited, the Company has not made a convincing showing that an average life of only 54 years is appropriate. With respect to Account 355, I have observed depreciation studies proposing average lives up to 65 years for this account.[33]

Q. ARE YOU RECOMMENDING A 65-YEAR AVERAGE LIFE FOR THIS ACCOUNT?

A. No. In the interest of reasonableness, I am proposing an average life of only 56 years, which is shorter than what other utility witnesses have proposed for this account. In light of these observations, along with the fact that the Company did not provide sufficient actuarial data for this account, I propose an R3-56 curve for this account, which results in a remaining life of 49.0 years, a depreciation rate of 2.62%, and an annual accrual of $2.6 million.[34]

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[31] Exhibit DAW-2 (Depreciation Study), pp. 55, 57.

[32] *Id*. at 21.

[33] *See generally* depreciation studies *supra* n. 20; *see also* Exhibit DJG-10.

[34] *See* Exhibit DJG-4 for depreciation calculations; *see also* Exhibit DJG-9 for detailed remaining life calculations.

E. Account 356 – Overhead Conductors and Devices

Q. DISCUSS THE COMPANY'S POSITION ON ACCOUNT 356.

A. Mr. Watson proposed an R3-55 curve for this account, which corresponds to a depreciation rate of 2.72% and an annual accrual of $5.4 million.[35] In his depreciation study, Mr. Watson acknowledged that there was limited actuarial life analysis for this account.[36]

Q. DO YOU AGREE WITH THE COMPANY'S POSITION?

A. No. Again, the Company's limited data does not support an estimated average life of only 55 years. For Account 356, it is more typical to see average life proposals closer to 65 years.[37]

Q. ARE YOU RECOMMENDING A 65-YEAR AVERAGE LIFE FOR THIS ACCOUNT?

A. No. In the interest of reasonableness, I am proposing an average life of only 57 years, which is shorter than what other utility witnesses have proposed for this account. In light of these observations, along with the fact that the Company did not provide sufficient actuarial data for this account, the Company has not made a convincing showing that its proposed rates are not excessive. Specifically, I propose an R3-57 curve for this account, which results in a remaining life of 52.9 years, a depreciation rate of 2.61%, and an annual accrual of $5.2 million.[38]

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[35] Exhibit DAW-2 (Depreciation Study), pp. 55, 57.

[36] *Id*. at 22.

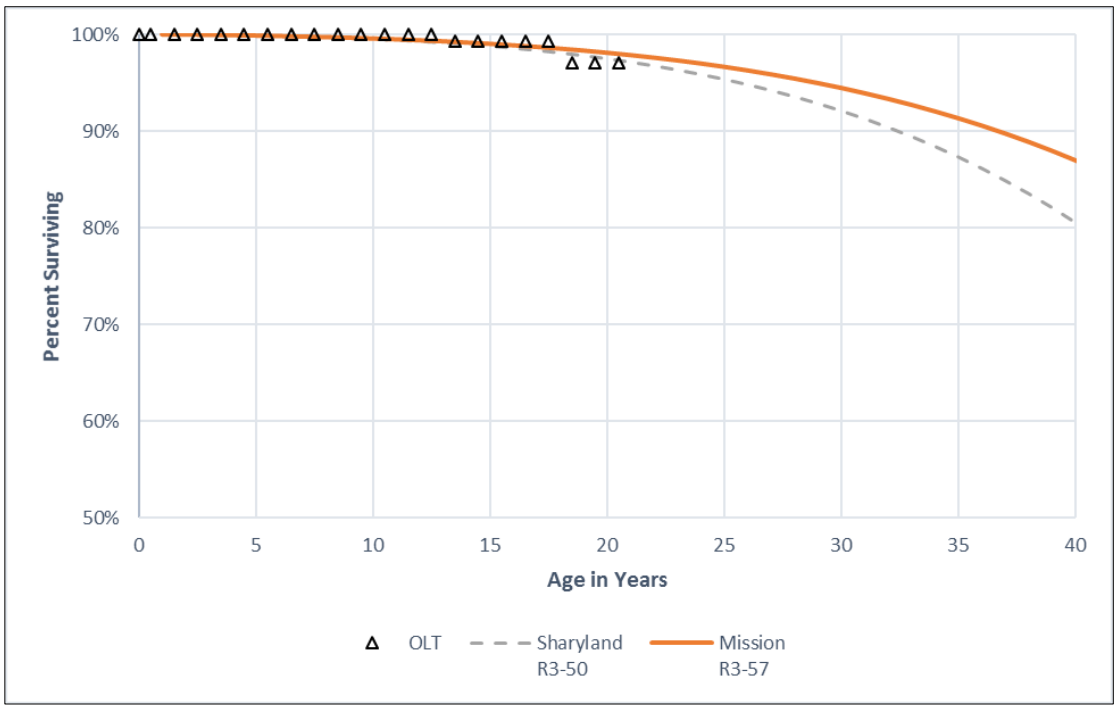
[37] *See generally* depreciation studies *supra* n. 20; *see also* Exhibit DJG-10.

[38] *See* Exhibit DJG-4 for depreciation calculations; *see also* Exhibit DJG-9 for detailed remaining life calculations.

Q. DESPITE THE FACT THAT THE ACTUARIAL DATA PROVIDED BY THE COMPANY FOR THIS ACCOUNT IS RELATIVELY LIMITED, ARE THERE STATISTICAL INDICATIONS THAT THE COMPANY'S PROPOSED SERVICE LIFE IS TOO SHORT FOR THIS ACCOUNT?

A. Yes. The graph below shows the OLT curve for this account, along with the proposed Iowa curves. As with the graph above, the OLT curve in this graph is represented by the black triangles. The graph also shows the R3-50 curve selected by Mr. Watson along with the R3-57 curve I selected.

Figure 5:
Account 356 – Overhead Conductors and Devices



Because there is limited retirement data available, the OLT curve is relatively flat, but has started to partially decline to form a typical upper portion of a survivor curve for this account. Since there is no way to visually determine which Iowa curve provides the better fit, mathematical curve-fitting techniques may be instructive

Q. IS YOUR SELECTED IOWA CURVE A BETTER MATHEMATICAL FIT TO THE OLT CURVE?

A. Yes. Although, as discussed above, the limited actuarial data provided by the Company is not ideal for conventional mathematical curve-fitting techniques, the R3-57 curve I selected nonetheless provides a better mathematical fit to the OLT curve than the Company's selected curve. Mathematical curve fitting essentially involves measuring the distance between the OLT curve and the selected Iowa curve. The best mathematically-fitted curve is the one that minimizes the distance between the OLT curve and the Iowa curve, thus providing the closest fit. The "distance" between the curves is calculated using the "sum-of-squared differences" ("SSD") technique. In Account 356, the total SSD, or "distance" between the Company's curve and the OLT curve is 0.0009, while the total SSD between R3-57 curve and the OLT curve is only 0.0006.[39] Thus, the R3-57 curve I selected provides a better mathematical fit. Regardless, in consideration of the limited data provided by the Company, along with the statistical analysis and industry observations regarding this account, it is clear that the Company has not made a convincing showing that the depreciation rate it proposed for this account is not excessive.

VI. SIMULATED PLANT RECORD ANALYSIS

Q. DESCRIBE THE SIMULATED PLANT RECORD METHOD.

A. As discussed above, when aged data is not available, we must "simulate" the actuarial data required for remaining life analysis. For many of the distribution accounts in this case, Mr. Watson conducted his analysis using the simulated plant record ("SPR") model, and I did

[39] Exhibit DJG-5.

the same. The SPR method involves analyzing the Company's unaged data by choosing an Iowa curve that best simulates that actual year-end account balances in the account.[40]

Q. DESCRIBE THE METRICS USED TO ASSESS THE FIT OF SELECTED IOWA CURVE IN THE SPR MODEL.

A. There are two primary metrics used to measure the fit of the Iowa curve selected to describe an SPR account. The first is the "conformance index" ("CI"). The CI is the average observed plant balance for the tested years, divided by the square root of the average sum of squared differences (the "SSD" discussed above) between the simulated and actual balances plant balances.[41] A higher CI indicates a better fit. Alex Bauhan, who developed the CI, also proposed a scale for measuring the value of the CI, as follows.

Figure 6:
Conformance Index Scale

CI	Value
> 75	Excellent
50 – 75	Good
25 – 50	Fair
< 25	Poor

The second metric used to assess the accuracy of an Iowa curve chosen for SPR analysis is called the "retirement experience index" ("REI") which was also proposed by Bauhan. The REI measures the length of retirement experience in an account. A greater

[40] A detailed discussion of the SPR method is included in Appendix D.

[41] Bauhan, A. E., "Life Analysis of Utility Plant for Depreciation Accounting Purposes by the Simulated Plant Record Method," 1947, Appendix of the EEl, 1952.

retirement experience indicates more reliability in the analytical results for an account. Bauhan proposed a similar scale for the REI, as follows.

Figure 7:
Retirement Experience Index Scale

REI	Value
> 75%	Excellent
50% – 75%	Good
33% – 50%	Fair
17% – 33%	Poor
0% – 17%	Valueless

According to Bauhan, "[i]n order for a life determination to be considered entirely satisfactory, it should be required that both the retirements experience index and the conformance index be "Good" or better."[42] I considered both of these scales in assessing my SPR analysis for each account, as further described below.

A. Account 362 – Station Equipment

Q. DESCRIBE THE COMPANY'S ESTIMATE FOR ACCOUNT 362.

A. Mr. Watson selected the R3-40 curve for this account, which results in a depreciation rate of 2.85% and an annual accrual of $2 million.[43] Under the testing band of 1963 – 2015, the R3-40 curve has a poor CI.[44]

[42] *Id*. (emphasis added).

[43] Exhibit DAW-2 (Depreciation Study), pp. 55, 57.

[44] *See* Exhibit DJG-7.

Q. DO YOU AGREE WITH THE COMPANY'S POSITION?

A. No. An estimated average life of only 40 years is far too short for this account. Because the Company's recommended Iowa curve results in a "poor" CI according to the metric table above, the statistical results should be considered with caution, if not disregarded entirely. I would note, however, that this is not a direct criticism of Mr. Watson's work, as all of the Iowa curves applied to the full test band period result in poor CI scores. Regardless, the Company has made a convincing showing that its proposed rates are not excessive. This is especially true in light of the average lives proposed by other electric utilities for this account. With respect to Account 362, I have observed depreciation studies proposing average lives in the range of 55 – 60 years, which is much longer than the 40-year average life proposed by Sharyland.[45]

Q. WHAT IS YOUR RECOMMENDATION FOR ACCOUNT 362?

A. I selected the R1.5-58 curve for this account, which has a higher CI score and a lower REI score than the Company's proposed curve. As discussed above, however, all of the CI scores for the entire testing period are poor, so it is instructive to consider other service life proposals for this account, which were based on more accurate actuarial data. This is not to suggest that the SPR method cannot be the basis for valuable statistical analysis; however, Iowa curve proposals based on the SPR method should have adequate CI and REI scores, and that is not the case here. An average life of 58 years is reasonable and conservative in light of the average lives proposed by other electric utilities for this account.

[45] *See generally* depreciation studies *supra* n. 20; *see also* Exhibit DJG-10.

Applying the R1.5-58 curve to this account results in a remaining life of 51.5 years, a depreciation rate of 1.82%, and an annual accrual of $1.3 million.[46]

B. Account 365 – Overhead Conductors and Devices

Q. DESCRIBE THE COMPANY'S ESTIMATE FOR ACCOUNT 365.

A. Mr. Watson selected the R3-43 curve for this account, which results in a depreciation rate of 3.26% and an annual accrual of $3 million.[47] Under the testing band of 1963 – 2015, the R3-43 curve has a "fair" CI, which would be considered unsatisfactory according to Bauhan, as discussed above.[48]

Q. DO YOU AGREE WITH THE COMPANY'S POSITION?

A. No. In my opinion, an estimated life of 43 years is too short for this account. Because the Company's recommended Iowa curve results in a "fair" CI according to the metric table above, the statistical results should be considered with caution.

Q. WHAT IS YOUR RECOMMENDATION FOR ACCOUNT 365?

A. I selected the R1.5-57 curve for this account, which has, relative to the Company's selected curve, a considerably higher and "good" CI score of 61, albeit a lower REI score. It is also sometimes helpful to consider multiple test band periods in SPR analysis in order to observe potential trends in the data. For account 365, the two most recent five-year test band periods of 2006 – 2010 and 2011 – 2015 produced average lives in excess of 57 years

[46] *See* Exhibit DJG-4 for depreciation calculations; *see also* Exhibit DJG-9 for detailed remaining life calculations.

[47] Exhibit DAW-2 (Depreciation Study), pp. 55, 57.

[48] *See* Exhibit DJG-7.

with excellent CI scores, albeit low REI scores.[49] Regardless, the Iowa curve proposed by the Company for this account should be considered relatively unreliable from a statistical standpoint. Under these circumstances, it is better for the Commission to lean towards lower, yet reasonable depreciation rates (i.e., longer service lives) until the Company has enough retirement experience to be able to produce more reliable data for statistical analysis. Doing so will not financially harm the Company, and will provide ratepayers with some financial relief by reducing the impact of potential rate increase. Applying the R1.5-57 curve to this account results in a remaining life of 45.1 years, a depreciation rate of 2.15%, and an annual accrual of $2 million.[50]

C. Account 367 – Underground Conductors and Devices

Q. DESCRIBE THE COMPANY'S ESTIMATE FOR ACCOUNT 367.

A. Mr. Watson selected the R4-39 curve for this account, which results in a depreciation rate of 2.96% and an annual accrual of $0.6 million.[51] Under the full testing band period, the R4-39 curve has a poor CI of only 20.[52]

Q. DO YOU AGREE WITH THE COMPANY'S POSITION?

A. No. The Company's proposed service life of only 39 years is far too short for this account. Because the Company's recommended Iowa curve results in a "poor" CI according to the metric table above, the statistical results should be considered with caution, if not

[49] *See* Exhibit DJG-7.

[50] *See* Exhibit DJG-4 for depreciation calculations; *see also* Exhibit DJG-9 for detailed remaining life calculations.

[51] Exhibit DAW-2 (Depreciation Study), pp. 55, 57.

[52] *See* Exhibit DJG-7.

disregarded entirely. The Company has not made a convincing showing that its proposed rates are not excessive for this account. This is especially true in light of the average lives proposed by other electric utilities. For Account 367, depreciation studies I have observed propose average lives of closer to 55 years, and even up to 65 years, which are much longer than the 39-year average life proposed by Sharyland.[53]

Q. WHAT IS YOUR RECOMMENDATION FOR ACCOUNT 367?

A. I selected the R2.5-47 curve for this account, which has a higher CI score and a lower REI score than the Company's proposed curve. However, nearly all of the CI scores for the entire testing period are poor, and no curve produced a "good" score on both the CI and REI scales. Therefore, it is appropriate to consider other service life proposals for this account, which were based on more accurate actuarial data. Although the SPR method can be valuable for statistical depreciation analysis, Iowa curve proposals based on the SPR method should have adequate CI and REI scores, and that is not the case here. An average life of 47 years is reasonable and very conservative in light of the average lives I have seen proposed by other electric utilities for this account, which are around 55 years. Applying the R2.5-47 curve to this account results in a remaining life of 38.8 years, a depreciation rate of 2.32%, and an annual accrual of $0.5 million.[54]

[53] *See generally* depreciation studies *supra* n. 20; *see also* Exhibit DJG-10.

[54] *See* Exhibit DJG-4 for depreciation calculations; *see also* Exhibit DJG-9 for detailed remaining life calculations.

D. Account 368 – Line Transformers

Q. DESCRIBE THE COMPANY'S ESTIMATE FOR ACCOUNT 368.

A. Mr. Watson selected the R4-44 curve for this account, which results in a depreciation rate of 2.75% and an annual accrual of $2.3 million.[55] Under the full testing band period, the R4-44 does not produce a "good" CI.[56]

Q. DO YOU AGREE WITH THE COMPANY'S POSITION?

A. No. For most of the accounts discussed in this section, the data provided by the Company did not produce any Iowa curves that could be considered "good" under both the CI and REI scales. For Account 368, however, there are a few Iowa curves that meet these requirements, although the Company's proposed curve was not among them. The longest average life with "good" CI and REI scores is 53 years.[57]

Q. DID YOU RECOMMEND A 53-YEAR AVERAGE LIFE FOR ACCOUNT 368?

A. No. Although the L2.5-53 curve qualifies as "good" under both the CI and REI scales, I propose using the L3-49 curve for this account, which also qualifies as "good" under both scales. Applying the L3-49 curve to this account is reasonable under the circumstances, and results in a remaining life of 39.4 years, a depreciation rate of 2.38%, and an annual accrual of $2 million.[58]

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[55] Exhibit DAW-2 (Depreciation Study), pp. 55, 57.

[56] *See* Exhibit DJG-7

[57] *See id.*

[58] *See* Exhibit DJG-4 for depreciation calculations; *see also* Exhibit DJG-9 for detailed remaining life calculations.

E. Account 369 – Services

Q. DESCRIBE THE COMPANY'S ESTIMATE FOR ACCOUNT 369.

A. Mr. Watson selected the R2.5-38 curve for this account, which results in a depreciation rate of 3.81% and an annual accrual of $1.4 million.[59] Under the full testing band period, this curve produces an extremely poor CI of only 7.74.[60]

Q. DO YOU AGREE WITH THE COMPANY'S POSITION?

A. No. An estimated average life of only 38 years is far too short for this account. Because the Company's recommended Iowa curve results in a very "poor" CI according to the metric table above, the statistical results should be disregarded. The Company has not made a convincing showing that its proposed rates are not excessive for this account. This is especially true in light of the average lives proposed by other electric utilities. For Account 369, the depreciation studies I have observed typically propose average lives in the range of 50 – 60 years.[61]

Q. WHAT IS YOUR RECOMMENDATION FOR ACCOUNT 369?

A. I selected the R0.5-50 curve for this account. A 50-year average life is toward the bottom end of the range of observed average life proposals for this account. Since all of the CI scores for the full testing period are poor, it is necessary in this case to consider other service life proposals for this account, which were based on more accurate actuarial data. An average life of 50 years is reasonable in light of the average lives I have seen proposed

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[59] Exhibit DAW-2 (Depreciation Study), pp. 55, 57.

[60] *See* Exhibit DJG-7.

[61] *See generally* depreciation studies *supra* n. 20; *see also* Exhibit DJG-10.

by other electric utilities for this account. Applying the R0.5-50 curve to this account results in a remaining life of 38.4 years, a depreciation rate of 2.28%, and an annual accrual of $0.8 million.[62]

VII. CONCLUSION AND RECOMMENDATION

Q. SUMMARIZE THE KEY POINTS OF YOUR TESTIMONY.

A. I employed a well-established depreciation system and used actuarial and simulated analysis to statistically analyze the Company's depreciable assets in order to develop reasonable depreciation rates in this case. When the actuarial and simulated data were either limited or insufficient, I considered the service lives proposed by other utilities based on more accurate actuarial data, and generally selected shorter average lives than what I had observed, which results in conservative and reasonable depreciation rate estimates.

Q. WHAT IS MISSION'S RECOMMENDATION TO THE COMMISSION REGARDING TO DEPRECIATION RATES?

A. Mission recommends that the Commission adopt the proposed Iowa curves and depreciation rates presented in Exhibit DJG-3.[63]

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, including any exhibits, appendices, and other items attached hereto. I reserve the right to supplement this testimony as needed with any additional information that has been requested from the Company but not yet provided.

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[62] *See* Exhibit DJG-4 for depreciation calculations; *see also* Exhibit DJG-9 for detailed remaining life calculations.

[63] These rates should be applied to updated plant balances in order to determine the final depreciation expense adjustment.

STATE OF OKLAHOMA §
§
COUNTY OF OKLAHOMA §

AFFIDAVIT OF DAVID GARRETT

BEFORE ME, the undersigned authority, on this day personally appeared David Garrett, who having been placed under oath by me did depose as follows:

1. "My name is David Garrett. I am of sound mind and capable of making this affidavit. The facts stated herein are true and correct based on my personal knowledge.

2. The foregoing Direct Testimony, Exhibits, and all Workpapers were prepared under my direct supervision and control. The information contained in these documents is true and correct to the best of my knowledge."

Further affiant sayeth not.

David Garrett

SUBSCRIBED AND SWORN TO BEFORE ME on this 26th day of February, 2017.

GARRY GARRETT NOTARY # 17000773 EXP. 01/25/21 PUBLIC STATE OF OKLAHOMA

Notary Public in and for the
State of Oklahoma

My commission expires: 2/26/17

APPENDIX A:

THE DEPRECIATION SYSTEM

A depreciation accounting system may be thought of as a dynamic system in which estimates of life and salvage are inputs to the system, and the accumulated depreciation account is a measure of the state of the system at any given time.[64] The primary objective of the depreciation system is the timely recovery of capital. The process for calculating the annual accruals is determined by the factors required to define the system. A depreciation system should be defined by four primary factors: 1) a method of allocation; 2) a procedure for applying the method of allocation to a group of property; 3) a technique for applying the depreciation rate; and 4) a model for analyzing the characteristics of vintage groups comprising a continuous property group.[65] The figure below illustrates the basic concept of a depreciation system and includes some of the available parameters.[66]

There are hundreds of potential combinations of methods, procedures, techniques, and models, but in practice, analysts use only a few combinations. Ultimately, the system selected must result in the systematic and rational allocation of capital recovery for the utility. Each of the four primary factors defining the parameters of a depreciation system is discussed further below.

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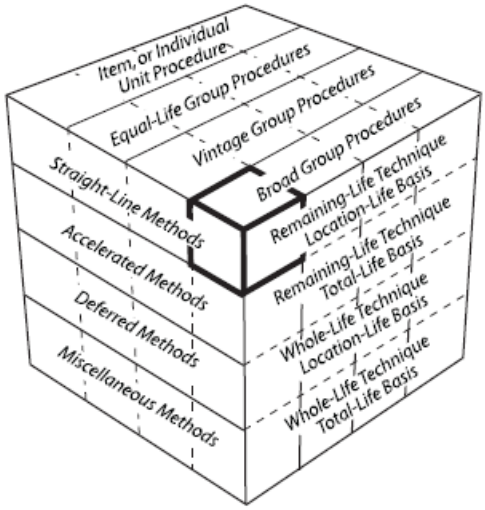
[64] Wolf *supra* n. 7, at 69-70.

[65] *Id.* at 70, 139-40.

[66] Edison Electric Institute, *Introduction to Depreciation* (inside cover) (EEI April 2013). Some definitions of the terms shown in this diagram are not consistent among depreciation practitioners and literature due to the fact that depreciation analysis is a relatively small and fragmented field. This diagram simply illustrates the some of the available parameters of a depreciation system.

Figure 8:
The Depreciation System Cube



1. Allocation Methods

The "method" refers to the pattern of depreciation in relation to the accounting periods. The method most commonly used in the regulatory context is the "straight-line method" – a type of age-life method in which the depreciable cost of plant is charged in equal amounts to each accounting period over the service life of plant.[67] Because group depreciation rates and plant balances often change, the amount of the annual accrual rarely remains the same, even when the straight-line method is employed.[68] The basic formula for the straight-line method is as follows:[69]

[67] NARUC *supra* n. 8, at 56.

[68] *Id*.

[69] *Id*.

Equation 1:
Straight-Line Accrual

$$Annual\ Accrual = \frac{Gross\ Plant - Net\ Salavage}{Service\ Life}$$

Gross plant is a known amount from the utility's records, while both net salvage and service life must be estimated in order to calculate the annual accrual. The straight-line method differs from accelerated methods of recovery, such as the "sum-of-the-years-digits" method and the "declining balance" method. Accelerated methods are primarily used for tax purposes and are rarely used in the regulatory context for determining annual accruals.[70] In practice, the annual accrual is expressed as a rate which is applied to the original cost of plant in order to determine the annual accrual in dollars. The formula for determining the straight-line rate is as follows:[71]

Equation 2:
Straight-Line Rate

$$Depreciation\ Rate\ \% = \frac{100 - Net\ Salvage\ \%}{Service\ Life}$$

2. Grouping Procedures

The "procedure" refers to the way the allocation method is applied through subdividing the total property into groups.[72] While single units may be analyzed for depreciation, a group plan of depreciation is particularly adaptable to utility property. Employing a grouping procedure allows for a composite application of depreciation rates to groups of similar property, rather than

[70] *Id*. at 57.

[71] *Id*. at 56.

[72] Wolf *supra* n. 7, at 74-75.

excessively conducting calculations for each unit. Whereas an individual unit of property has a single life, a group of property displays a dispersion of lives and the life characteristics of the group must be described statistically.[73] When analyzing mass property categories, it is important that each group contains homogenous units of plant that are used in the same general manner throughout the plant and operated under the same general conditions.[74]

The "average life" and "equal life" grouping procedures are the two most common. In the average life procedure, a constant annual accrual rate based on the average life of all property in the group is applied to the surviving property. While property having shorter lives than the group average will not be fully depreciated, and likewise, property having longer lives than the group average will be over-depreciated, the ultimate result is that the group will be fully depreciated by the time of the final retirement.[75] Thus, the average life procedure treats each unit as though its life is equal to the average life of the group. In contrast, the equal life procedure treats each unit in the group as though its life was known.[76] Under the equal life procedure the property is divided into subgroups that each has a common life.[77]

3. Application Techniques

The third factor of a depreciation system is the "technique" for applying the depreciation rate. There are two commonly used techniques: "whole life" and "remaining life." The whole life

[73] *Id*. at 74.

[74] NARUC *supra* n. 8, at 61-62.

[75] *See* Wolf *supr*a n. 7, at 74-75.

[76] *Id*. at 75.

[77] *Id*.

technique applies the depreciation rate on the estimated average service life of a group, while the remaining life technique seeks to recover undepreciated costs over the remaining life of the plant.[78]

In choosing the application technique, consideration should be given to the proper level of the accumulated depreciation account. Depreciation accrual rates are calculated using estimates of service life and salvage. Periodically these estimates must be revised due to changing conditions, which cause the accumulated depreciation account to be higher or lower than necessary. Unless some corrective action is taken, the annual accruals will not equal the original cost of the plant at the time of final retirement.[79] Analysts can calculate the level of imbalance in the accumulated depreciation account by determining the "calculated accumulated depreciation," (a.k.a. "theoretical reserve" and referred to in these appendices as "CAD"). The CAD is the calculated balance that would be in the accumulated depreciation account at a point in time using current depreciation parameters.[80] An imbalance exists when the actual accumulated depreciation account does not equal the CAD. The choice of application technique will affect how the imbalance is dealt with.

Use of the whole life technique requires that an adjustment be made to accumulated depreciation after calculation of the CAD. The adjustment can be made in a lump sum or over a period of time. With use of the remaining life technique, however, adjustments to accumulated depreciation are amortized over the remaining life of the property and are automatically included

[78] NARUC *supra* n. 8, at 63-64.

[79] Wolf *supra* n. 7, at 83.

[80] NARUC *supra* n. 8, at 325.

in the annual accrual.[81] This is one reason that the remaining life technique is popular among practitioners and regulators. The basic formula for the remaining life technique is as follows:[82]

Equation 3:
Remaining Life Accrual

$$Annual\ Accrual = \frac{Gross\ Plant - Accumulated\ Depreciation - Net\ Salvage}{Average\ Remaining\ Life}$$

The remaining life accrual formula is similar to the basic straight-line accrual formula above with two notable exceptions. First, the numerator has an additional factor in the remaining life formula: the accumulated depreciation. Second, the denominator is "average remaining life" instead of "average life." Essentially, the future accrual of plant (gross plant less accumulated depreciation) is allocated over the remaining life of plant. Thus, the adjustment to accumulated depreciation is "automatic" in the sense that it is built into the remaining life calculation.[83]

4. Analysis Model

The fourth parameter of a depreciation system, the "model," relates to the way of viewing the life and salvage characteristics of the vintage groups that have been combined to form a continuous property group for depreciation purposes.[84] A continuous property group is created when vintage groups are combined to form a common group. Over time, the characteristics of the property may change, but the continuous property group will continue. The two analysis models

[81] NARUC *supra* n. 8, at 65 ("The desirability of using the remaining life technique is that any necessary adjustments of [accumulated depreciation] . . . are accrued automatically over the remaining life of the property. Once commenced, adjustments to the depreciation reserve, outside of those inherent in the remaining life rate would require regulatory approval.").

[82] *Id*. at 64.

[83] Wolf *supra* n. 7, at 178.

[84] *See* Wolf *supra* n. 7, at 139 (I added the term "model" to distinguish this fourth depreciation system parameter from the other three parameters).

used among practitioners, the "broad group" and the "vintage group," are two ways of viewing the life and salvage characteristics of the vintage groups that have been combined to from a continuous property group.

The broad group model views the continuous property group as a collection of vintage groups that each has the same life and salvage characteristics. Thus, a single survivor curve and a single salvage schedule are chosen to describe all the vintages in the continuous property group. In contrast, the vintage group model views the continuous property group as a collection of vintage groups that may have different life and salvage characteristics. Typically, there is not a significant difference between vintage group and broad group results unless vintages within the applicable property group experienced dramatically different retirement levels than anticipated in the overall estimated life for the group. For this reason, many analysts utilize the broad group procedure because it is more efficient.

APPENDIX B:

IOWA CURVES

Early work in the analysis of the service life of industrial property was based on models that described the life characteristics of human populations.[85] This explains why the word "mortality" is often used in the context of depreciation analysis. In fact, a group of property installed during the same accounting period is analogous to a group of humans born during the same calendar year. Each period the group will incur a certain fraction of deaths / retirements until there are no survivors. Describing this pattern of mortality is part of actuarial analysis, and is regularly used by insurance companies to determine life insurance premiums. The pattern of mortality may be described by several mathematical functions, particularly the survivor curve and frequency curve. Each curve may be derived from the other so that if one curve is known, the other may be obtained. A survivor curve is a graph of the percent of units remaining in service expressed as a function of age.[86] A frequency curve is a graph of the frequency of retirements as a function of age. Several types of survivor and frequency curves are illustrated in the figures below.

1. Development

The survivor curves used by analysts today were developed over several decades from extensive analysis of utility and industrial property. In 1931 Edwin Kurtz and Robley Winfrey used extensive data from a range of 65 industrial property groups to create survivor curves representing the life characteristics of each group of property.[87] They generalized the 65 curves

[85] Wolf *supra* n. 7, at 276.

[86] *Id*. at 23.

[87] *Id*. at 34.

into 13 survivor curve types and published their results in *Bulletin 103: Life Characteristics of Physical Property*. The 13 type curves were designed to be used as valuable aids in forecasting probable future service lives of industrial property. Over the next few years, Winfrey continued gathering additional data, particularly from public utility property, and expanded the examined property groups from 65 to 176.[88] This resulted in 5 additional survivor curve types for a total of 18 curves. In 1935, Winfrey published *Bulletin 125: Statistical Analysis of Industrial Property Retirements*. According to Winfrey, "[t]he 18 type curves are expected to represent quite well all survivor curves commonly encountered in utility and industrial practices."[89] These curves are known as the "Iowa curves" and are used extensively in depreciation analysis in order to obtain the average service lives of property groups. (Use of Iowa curves in actuarial analysis is further discussed in Appendix C.)

In 1942, Winfrey published *Bulletin 155: Depreciation of Group Properties*. In Bulletin 155, Winfrey made some slight revisions to a few of the 18 curve types, and published the equations, tables of the percent surviving, and probable life of each curve at five-percent intervals.[90] Rather than using the original formulas, analysts typically rely on the published tables containing the percentages surviving. This is because absent knowledge of the integration technique applied to each age interval, it is not possible to recreate the exact original published table values. In the 1970s, John Russo collected data from over 2,000 property accounts reflecting

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[88] *Id*.

[89] Robley Winfrey, *Bulletin 125: Statistical Analyses of Industrial Property Retirements* 85, Vol. XXXIV, No. 23 (Iowa State College of Agriculture and Mechanic Arts 1935).

[90] Robley Winfrey, Bulletin 155: Depreciation of Group Properties 121-28, Vol XLI, No. 1 (The Iowa State College Bulletin 1942); see also Wolf supra n. 7, at 305-38 (publishing the percent surviving for each Iowa curve, including "O" type curve, at one percent intervals).

observations during the period 1965 – 1975 as part of his Ph.D. dissertation at Iowa State. Russo essentially repeated Winfrey's data collection, testing, and analysis methods used to develop the original Iowa curves, except that Russo studied industrial property in service several decades after Winfrey published the original Iowa curves. Russo drew three major conclusions from his research:[91]

1. No evidence was found to conclude that the Iowa curve set, as it stands, is not a valid system of standard curves;

2. No evidence was found to conclude that new curve shapes could be produced at this time that would add to the validity of the Iowa curve set; and

3. No evidence was found to suggest that the number of curves within the Iowa curve set should be reduced.

Prior to Russo's study, some had criticized the Iowa curves as being potentially obsolete because their development was rooted in the study of industrial property in existence during the early 1900s. Russo's research, however, negated this criticism by confirming that the Iowa curves represent a sufficiently wide range of life patterns, and that though technology will change over time, the underlying patterns of retirements remain constant and can be adequately described by the Iowa curves.[92]

Over the years, several more curve types have been added to Winfrey's 18 Iowa curves. In 1967, Harold Cowles added four origin-modal curves. In addition, a square curve is sometimes used to depict retirements which are all planned to occur at a given age. Finally, analysts

[91] *See* Wolf *supra* n. 7, at 37.

[92] *Id*.

commonly rely on several "half curves" derived from the original Iowa curves. Thus, the term "Iowa curves" could be said to describe up to 31 standardized survivor curves.

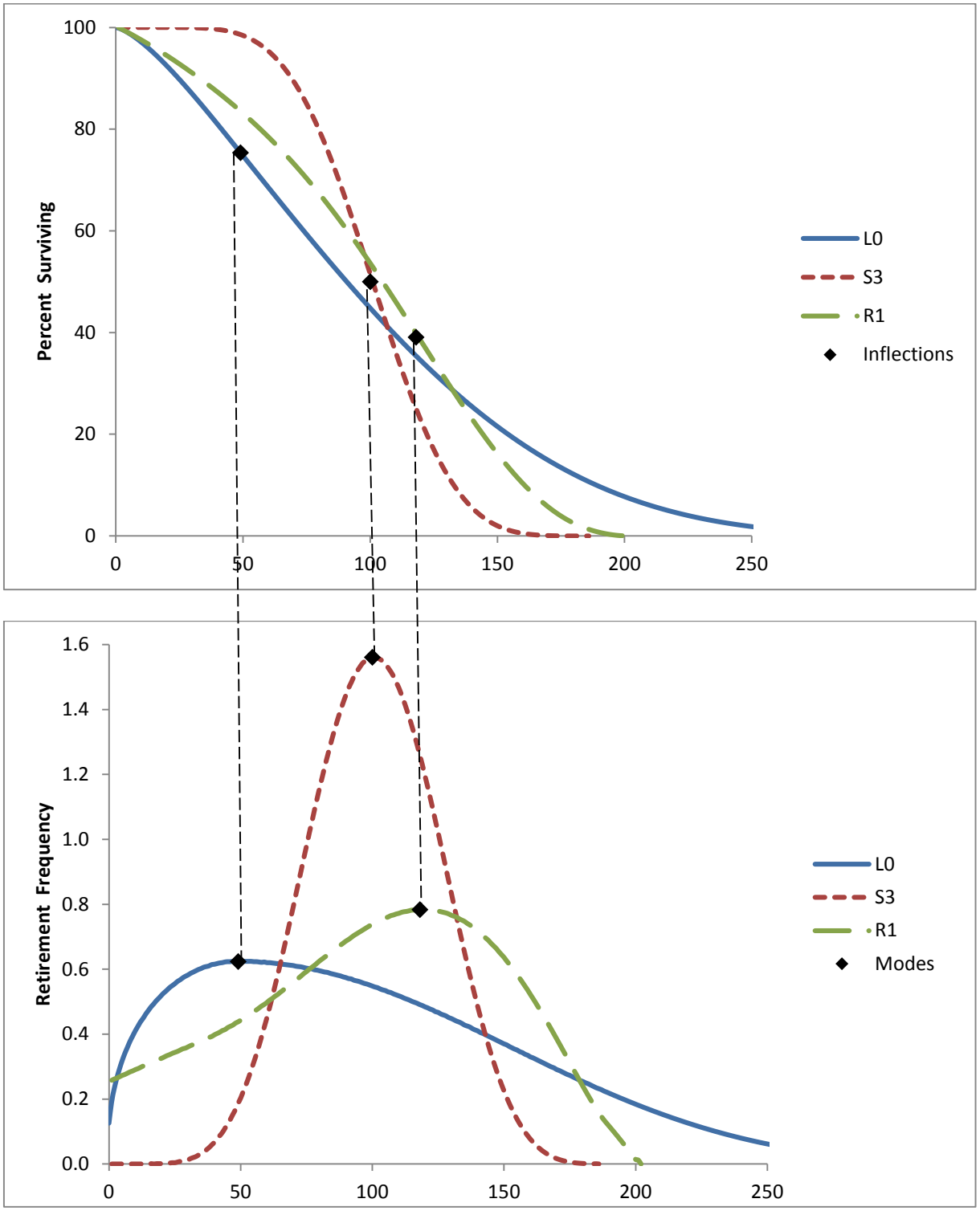
2. Classification

The Iowa curves are classified by three variables: modal location, average life, and variation of life. First, the mode is the percent life that results in the highest point of the frequency curve and the "inflection point" on the survivor curve. The modal age is the age at which the greatest rate of retirement occurs. As illustrated in the figure below, the modes appear at the steepest point of each survivor curve in the top graph, as well as the highest point of each corresponding frequency curve in the bottom graph.

The classification of the survivor curves was made according to whether the mode of the retirement frequency curves was to the left, to the right, or coincident with average service life. There are three modal "families" of curves: six left modal curves (L0, L1, L2, L3, L4, L5); five right modal curves (R1, R2, R3, R4, R5); and seven symmetrical curves (S0, S1, S2, S3, S4, S5, S6).[93] In the figure below, one curve from each family is shown: L0, S3 and R1, with average life at 100 on the x-axis. It is clear from the graphs that the modes for the L0 and R1 curves appear to the left and right of average life respectively, while the S3 mode is coincident with average life.

[93] In 1967, Harold A. Cowles added four origin-modal curves known as "O type" curves. There are also several "half" curves and a square curve, so the total amount of survivor curves commonly called "Iowa" curves is about 31 (see NARUC supra n. 8, at 68).

Figure 9:
Modal Age Illustration



The second Iowa curve classification variable is average life. The Iowa curves were designed using a single parameter of age expressed as a percent of average life instead of actual age. This was necessary in order for the curves to be of practical value. As Winfrey notes:

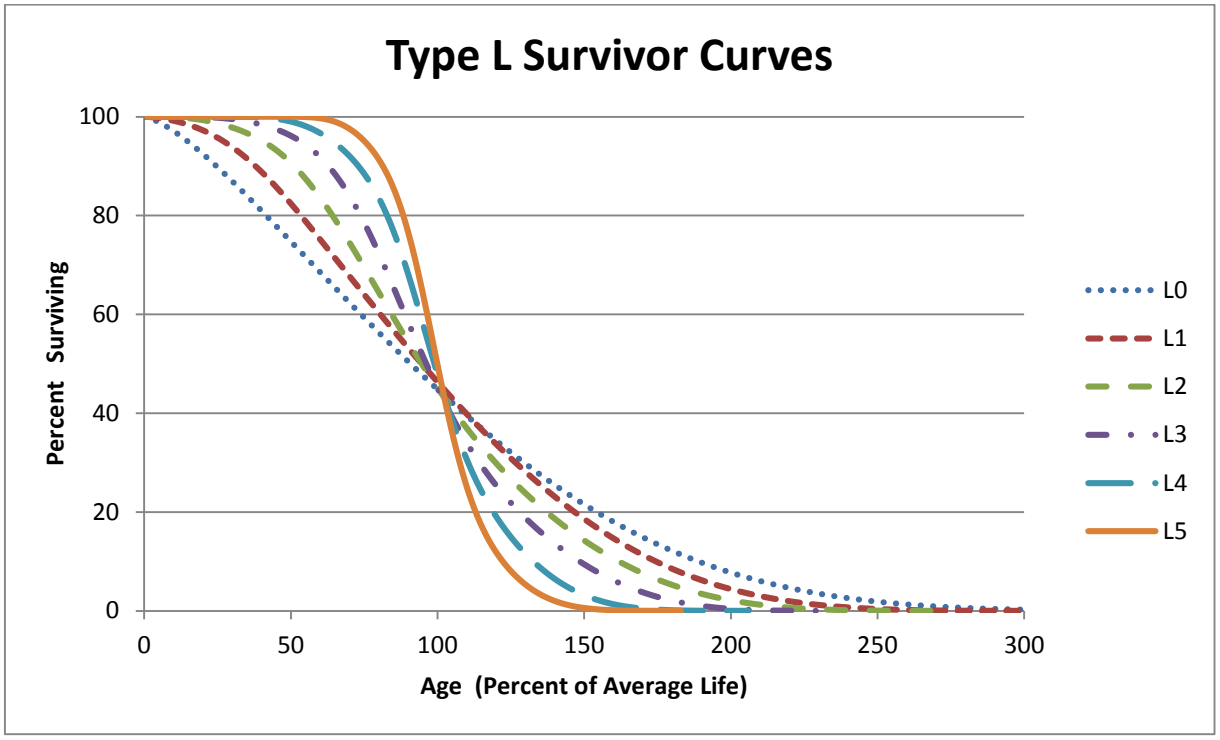
> Since the location of a particular survivor on a graph is affected by both its span in years and the shape of the curve, it is difficult to classify a group of curves unless one of these variables can be controlled. This is easily done by expressing the age in percent of average life."[94]

Because age is expressed in terms of percent of average life, any particular Iowa curve type can be modified to forecast property groups with various average lives.

The third variable, variation of life, is represented by the numbers next to each letter. A lower number (e.g., L1) indicates a relatively low mode, large variation, and large maximum life; a higher number (e.g., L5) indicates a relatively high mode, small variation, and small maximum life. All three classification variables – modal location, average life, and variation of life – are used to describe each Iowa curve. For example, a 13-L1 Iowa curve describes a group of property with a 13-year average life, with the greatest number of retirements occurring before (or to the left of) the average life, and a relatively low mode. The graphs below show these 18 survivor curves, organized by modal family.

[94] Winfrey *supra* n. 75, at 60.

Figure 10:
Type L Survivor and Frequency Curves



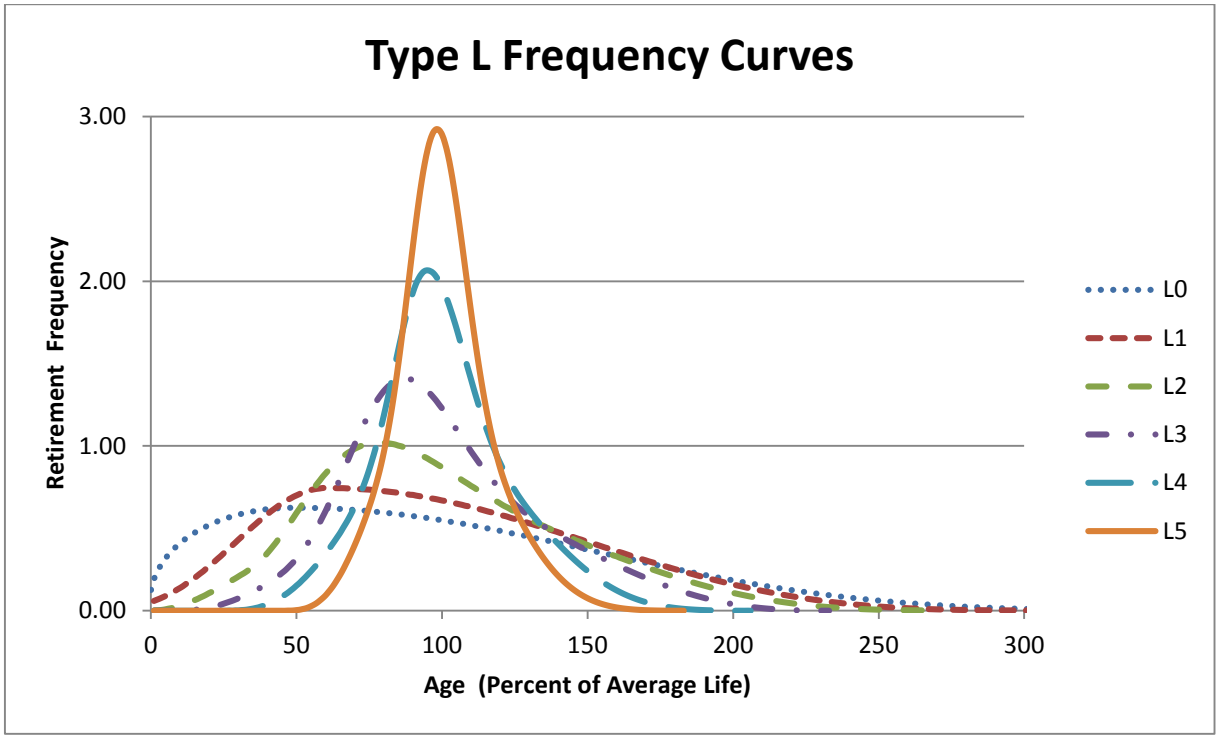
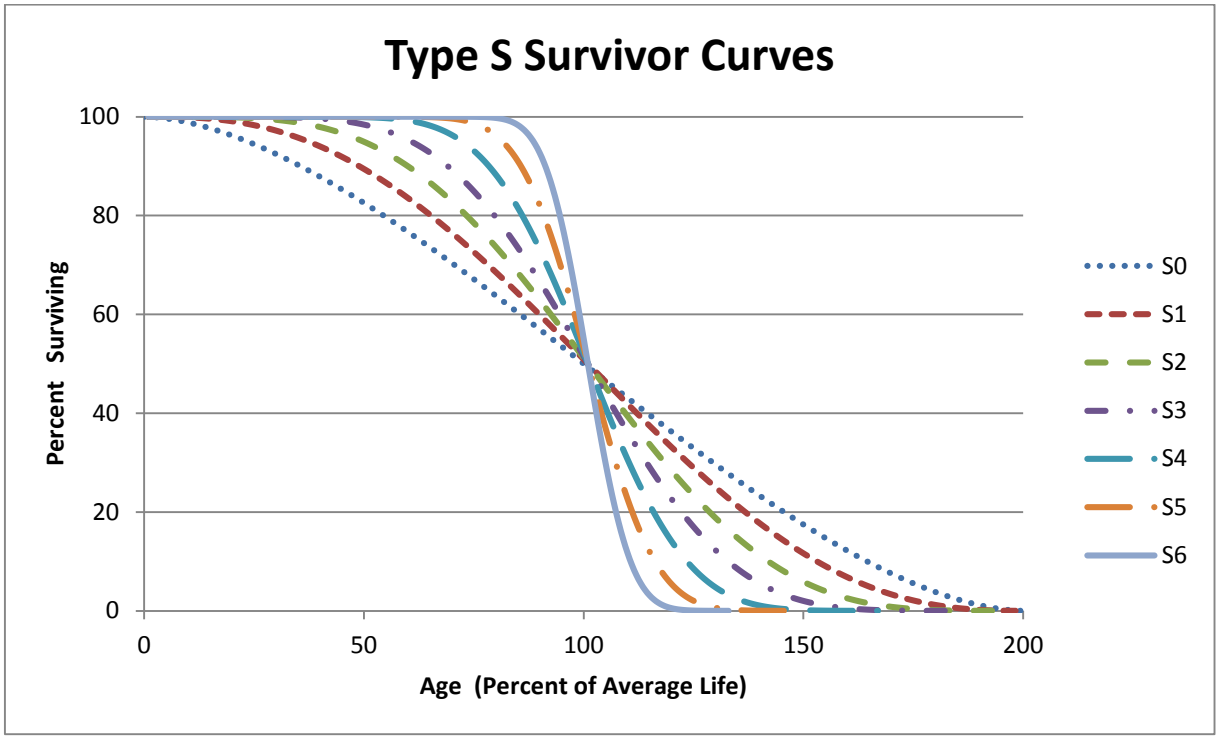


Figure 11:
Type S Survivor and Frequency Curves



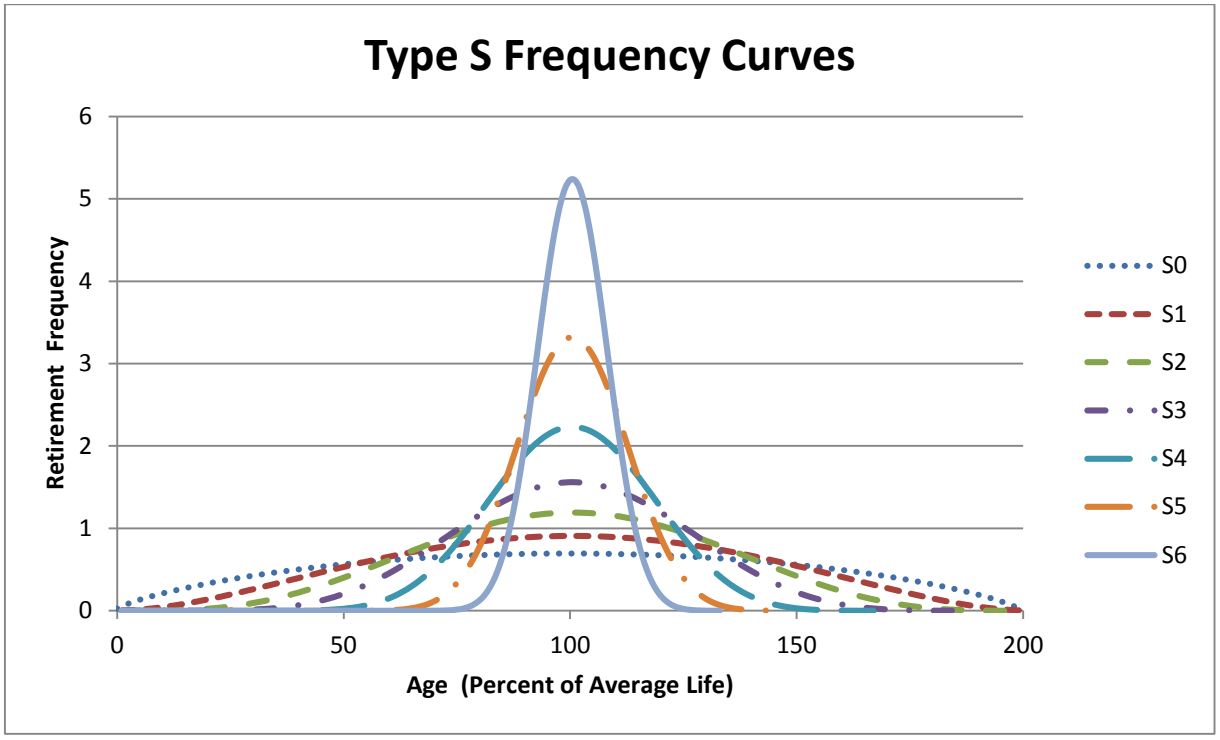
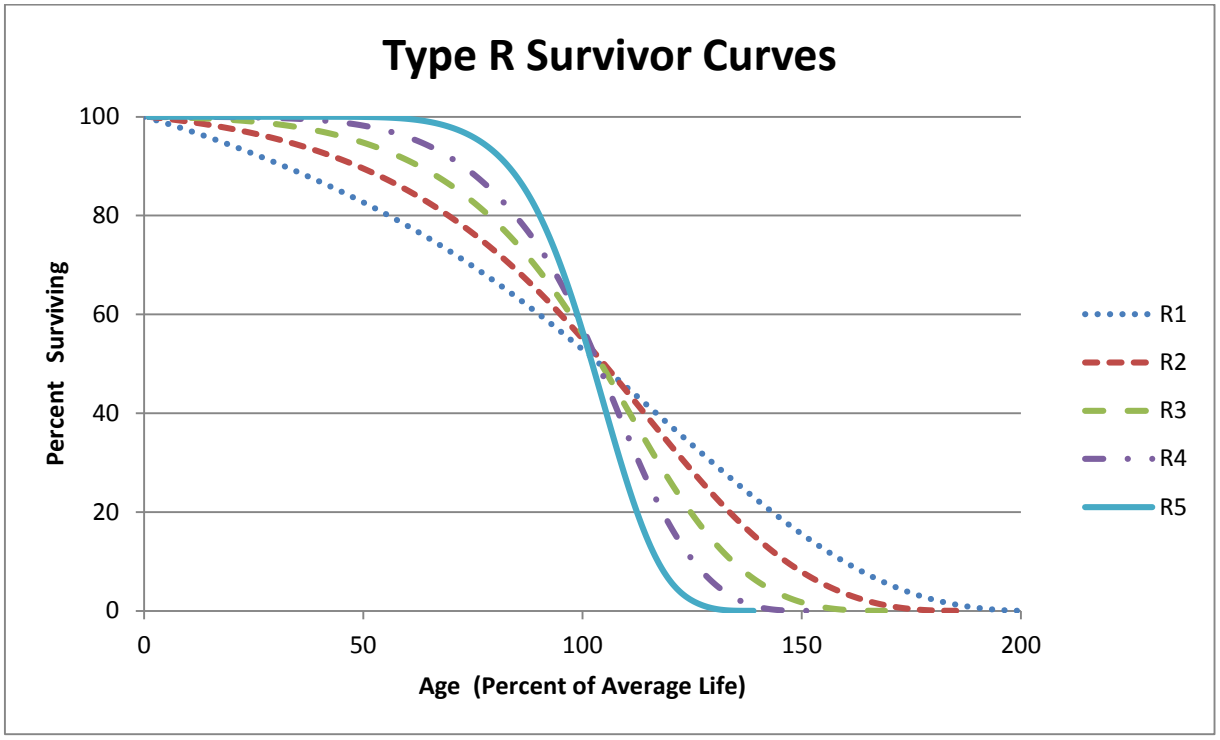
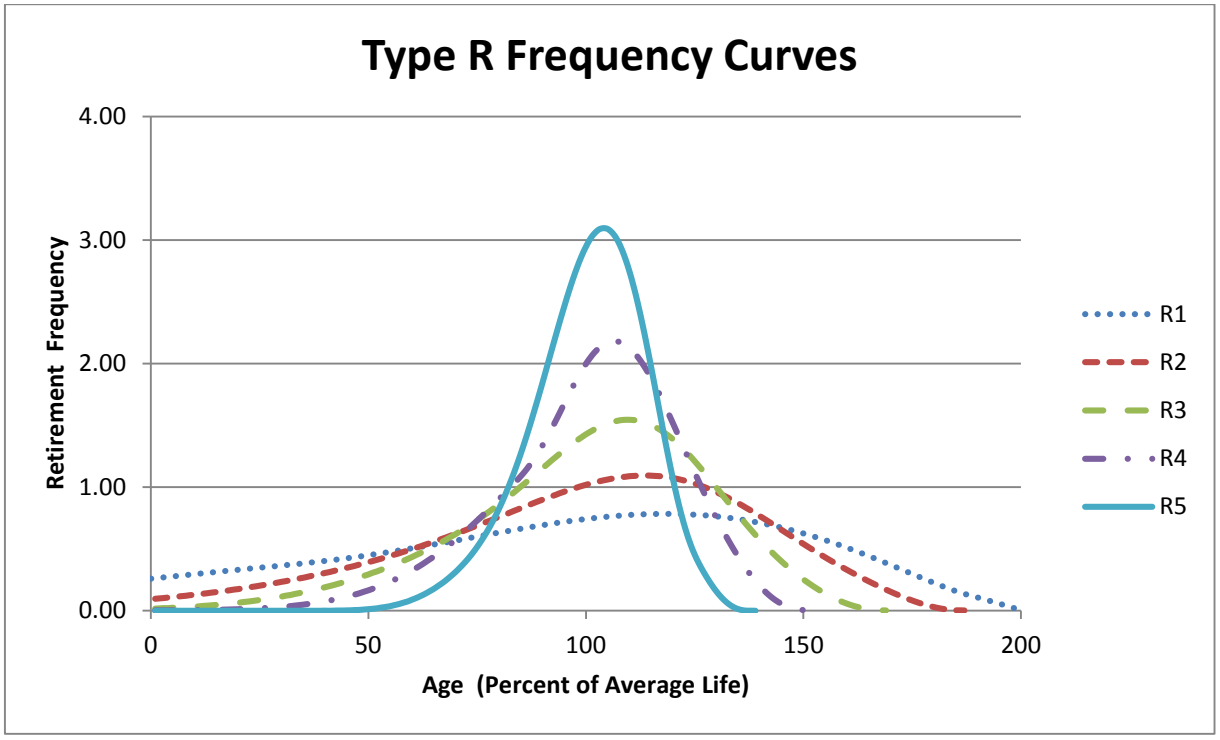


Figure 12:
Type R Survivor and Frequency Curves





As shown in the graphs above, the modes for the L family frequency curves occur to the left of average life (100% on the x-axis), while the S family modes occur at the average, and the R family modes occur after the average.

3. Types of Lives

Several other important statistical analyses and types of lives may be derived from an Iowa curve. These include: 1) average life; 2) realized life; 3) remaining life; and 4) probable life. The figure below illustrates these concepts. It shows the frequency curve, survivor curve, and probable life curve. Age M_x on the x-axis represents the modal age, while age AL_x represents the average age. Thus, this figure illustrates an "L type" Iowa curve since the mode occurs before the average.[95]

First, average life is the area under the survivor curve from age zero to maximum life. Because the survivor curve is measured in percent, the area under the curve must be divided by 100% to convert it from percent-years to years. The formula for average life is as follows:[96]

Equation 4:
Average Life

$$Average\ Life\ = \frac{Area\ Under\ Survivor\ Curve\ from\ Age\ 0\ to\ Max\ Life}{100\%}$$

Thus, average life may not be determined without a complete survivor curve. Many property groups being analyzed will not have experienced full retirement. This results in a "stub" survivor

[95] From age zero to age M_x on the survivor curve, it could be said that the percent surviving from this property group is decreasing at an increasing rate. Conversely, from point M_x to maximum on the survivor curve, the percent surviving is decreasing at a decreasing rate.

[96] *See* NARUC *supra* n. 8, at 71.

curve. Iowa curves are used to extend stub curves to maximum life in order for the average life calculation to be made (see Appendix C).

Realized life is similar to average life, except that realized life is the average years of service experienced to date from the vintage's original installations.[97] As shown in the figure below, realized life is the area under the survivor curve from zero to age RL_X. Likewise, unrealized life is the area under the survivor curve from age RL_X to maximum life. Thus, it could be said that average life equals realized life plus unrealized life.

Average remaining life represents the future years of service expected from the surviving property.[98] Remaining life is sometimes referred to as "average remaining life" and "life expectancy." To calculate average remaining life at age x, the area under the estimated future potion of the survivor curve is divided by the percent surviving at age x (denoted S_X). Thus, the average remaining life formula is:

Equation 5:
Average Remaining Life

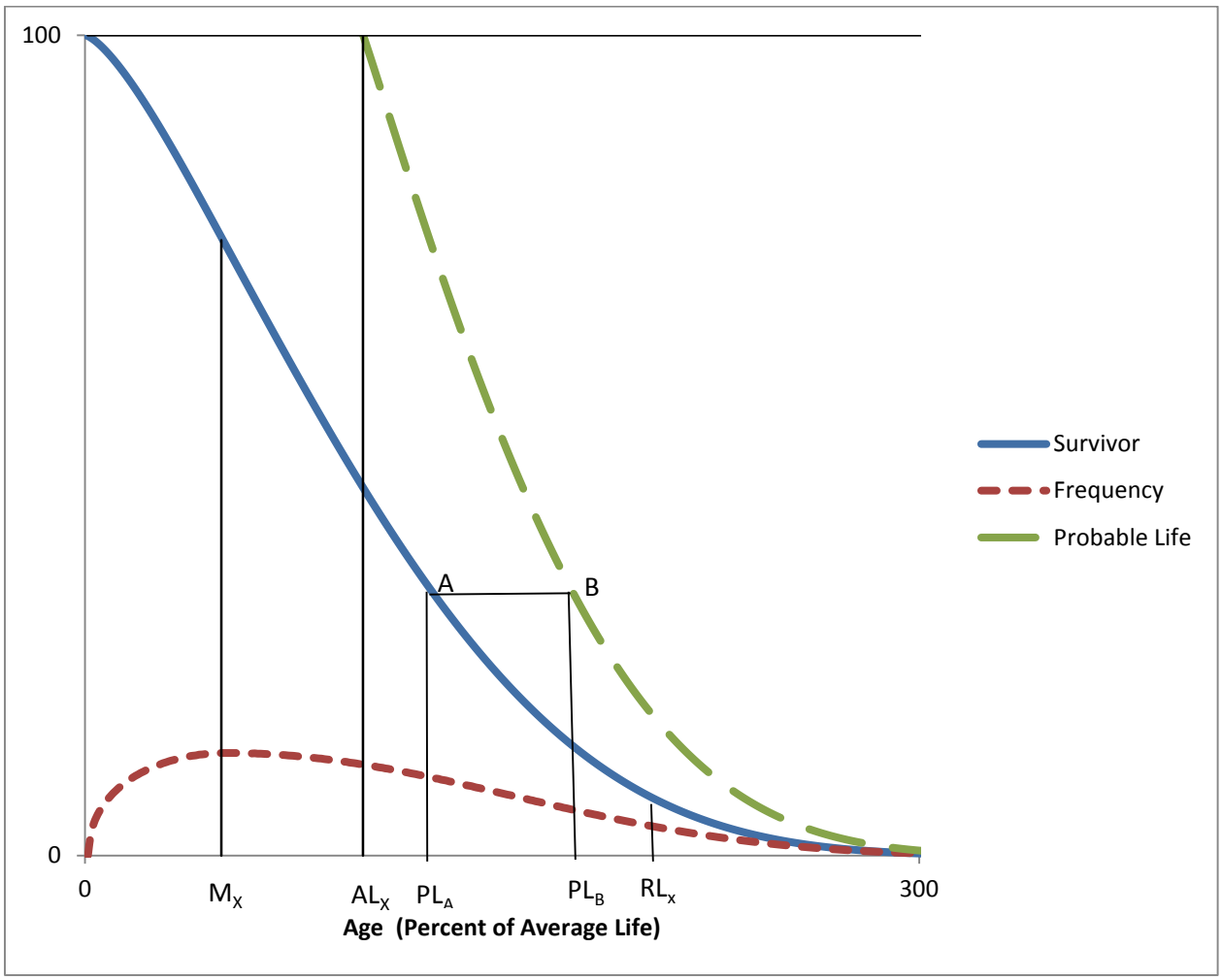
$$Average\ Remaining\ Life\ = \frac{Area\ Under\ Survivor\ Curve\ from\ Age\ x\ to\ Max\ Life}{S_X}$$

It is necessary to determine average remaining life in order to calculate the annual accrual under the remaining life technique.

[97] *Id*. at 73.

[98] *Id*. at 74.

Figure 13:
Iowa Curve Derivations



Finally, the probable life may also be determined from the Iowa curve. The probable life of a property group is the total life expectancy of the property surviving at any age and is equal to the remaining life plus the current age.[99] The probable life is also illustrated in this figure. The probable life at age PL_A is the age at point PL_B. Thus, to read the probable life at age PL_A, see the corresponding point on the survivor curve above at point "A," then horizontally to point "B" on

[99] Wolf *supra* n. 7, at 28.

the probable life curve, and back down to the age corresponding to point "B." It is no coincidence that the vertical line from AL_X connects at the top of the probable life curve. This is because at age zero, probable life equals average life.

APPENDIX C:

ACTUARIAL ANALYSIS

Actuarial science is a discipline that applies various statistical methods to assess risk probabilities and other related functions. Actuaries often study human mortality. The results from historical mortality data are used to predict how long similar groups of people who are alive will live today. Insurance companies rely of actuarial analysis in determining premiums for life insurance policies.

The study of human mortality is analogous to estimating service lives of industrial property groups. While some humans die solely from chance, most deaths are related to age; that is, death rates generally increase as age increases. Similarly, physical plant is also subject to forces of retirement. These forces include physical, functional, and contingent factors, as shown in the table below.[100]

Figure 14:
Forces of Retirement

Physical Factors	Functional Factors	Contingent Factors
Wear and tear Decay or deterioration Action of the elements	Inadequacy Obsolescence Changes in technology Regulations Managerial discretion	Casualties or disasters Extraordinary obsolescence

While actuaries study historical mortality data in order to predict how long a group of people will live, depreciation analysts must look at a utility's historical data in order to estimate the average lives of property groups. A utility's historical data is often contained in the Continuing Property Records ("CPR"). Generally, a CPR should contain 1) an inventory of property record

[100] NARUC *supra* n. 8, at 14-15.

units; 2) the association of costs with such units; and 3) the dates of installation and removal of plant. Since actuarial analysis includes the examination of historical data to forecast future retirements, the historical data used in the analysis should not contain events that are anomalous or unlikely to recur.[101] Historical data is used in the retirement rate actuarial method, which is discussed further below.

The Retirement Rate Method

There are several systematic actuarial methods that use historical data in order to calculating observed survivor curves for property groups. Of these methods, the retirement rate method is superior, and is widely employed by depreciation analysts.[102] The retirement rate method is ultimately used to develop an observed survivor curve, which can be fitted with an Iowa curve discussed in Appendix B in order to forecast average life. The observed survivor curve is calculated by using an observed life table ("OLT"). The figures below illustrate how the OLT is developed. First, historical property data are organized in a matrix format, with placement years on the left forming rows, and experience years on the top forming columns. The placement year (a.k.a. "vintage year" or "installation year") is the year of placement of a group of property. The experience year (a.k.a. "activity year") refers to the accounting data for a particular calendar year. The two matrices below use aged data – that is, data for which the dates of placements, retirements, transfers, and other transactions are known. Without aged data, the retirement rate actuarial method may not be employed. The first matrix is the exposure matrix, which shows the exposures

[101] *Id*. at 112-13.

[102] Anson Marston, Robley Winfrey & Jean C. Hempstead, *Engineering Valuation and Depreciation* 154 (2nd ed., McGraw-Hill Book Company, Inc. 1953).

at the beginning of each year.[103] An exposure is simply the depreciable property subject to retirement during a period. The second matrix is the retirement matrix, which shows the annual retirements during each year. Each matrix covers placement years 2003–2015, and experience years 2008-2015. In the exposure matrix, the number in the 2009 experience column and the 2003 placement row is $192,000. This means at the beginning of 2012, there was $192,000 still exposed to retirement from the vintage group placed in 2003. Likewise, in the retirement matrix, $19,000 of the dollars invested in 2003 was retired during 2012.

Figure 15:
Exposure Matrix

	Experience Years									
	Exposures at January 1 of Each Year (Dollars in 000's)									
Placement Years	2008	2009	2010	2011	2012	2013	2014	2015	Total at Start of Age Interval	Age Interval
2003	261	245	228	211	**192**	173	152	131	131	11.5 - 12.5
2004	267	252	236	220	202	**184**	165	145	297	10.5 - 11.5
2005	304	291	277	263	248	232	**216**	198	536	9.5 - 10.5
2006	345	334	322	310	298	284	270	**255**	**847**	8.5 - 9.5
2007	367	357	347	335	324	312	299	286	1,201	7.5 - 8.5
2008	375	366	357	347	336	325	314	302	1,581	6.5 - 7.5
2009		377	366	356	346	336	327	319	1,986	5.5 - 6.5
2010			381	369	358	347	336	327	2,404	4.5 - 5.5
2011				386	372	359	346	334	2,559	3.5 - 4.5
2012					395	380	366	352	2,722	2.5 - 3.5
2013						401	385	370	2,866	1.5 - 2.5
2014							410	393	2,998	0.5 - 1.5
2015								416	3,141	0.0 - 0.5
Total	1919	2222	2514	2796	3070	3333	3586	3827	23,268	

[103] Technically, the last numbers in each column are "gross additions" rather than exposures. Gross additions do not include adjustments and transfers applicable to plant placed in a previous year. Once retirements, adjustments, and transfers are factored in, the balance at the beginning of the next account period is called an "exposure" rather than an addition.

Figure 16:
Retirement Matrix

Placement Years	Experience Years: Retirments During the Year (Dollars in 000's) 2008	2009	2010	2011	2012	2013	2014	2015	Total During Age Interval	Age Interval
2003	16	17	18	19	**19**	20	21	23	23	11.5 - 12.5
2004	15	16	17	17	18	**19**	20	21	43	10.5 - 11.5
2005	13	14	14	15	16	17	**17**	18	59	9.5 - 10.5
2006	11	12	12	13	13	14	15	**15**	**71**	8.5 - 9.5
2007	10	11	11	12	12	13	13	14	82	7.5 - 8.5
2008	9	9	10	10	11	11	12	13	91	6.5 - 7.5
2009		11	10	10	9	9	9	8	95	5.5 - 6.5
2010			12	11	11	10	10	9	100	4.5 - 5.5
2011				14	13	13	12	11	93	3.5 - 4.5
2012					15	14	14	13	91	2.5 - 3.5
2013						16	15	14	93	1.5 - 2.5
2014							17	16	100	0.5 - 1.5
2015								18	112	0.0 - 0.5
Total	74	89	104	121	139	157	175	194	1,052	

These matrices help visualize how exposure and retirement data are calculated for each age interval. An age interval is typically one year. A common convention is to assume that any unit installed during the year is installed in the middle of the calendar year (i.e., July 1st). This convention is called the "half-year convention" and effectively assumes that all units are installed uniformly during the year.[104] Adoption of the half-year convention leads to age intervals of 0-0.5 years, 0.5-1.5 years, etc., as shown in the matrices.

The purpose of the matrices is to calculate the totals for each age interval, which are shown in the second column from the right in each matrix. This column is calculated by adding each number from the corresponding age interval in the matrix. For example, in the exposure matrix, the total amount of exposures at the beginning of the 8.5-9.5 age interval is $847,000. This number was calculated by adding the numbers shown on the "stairs" to the left (192+184+216+255=847).

[104] Wolf *supra* n. 7, at 22.

The same calculation is applied to each number in the column. The amounts retired during the year in the retirements matrix affect the exposures at the beginning of each year in the exposures matrix. For example, the amount exposed to retirement in 2008 from the 2003 vintage is $261,000. The amount retired during 2008 from the 2003 vintage is $16,000. Thus, the amount exposed to retirement in 2009 from the 2003 vintage is $245,000 ($261,000 - $16,000). The company's property records may contain other transactions which affect the property, including sales, transfers, and adjusting entries. Although these transactions are not shown in the matrices above, they would nonetheless affect the amount exposed to retirement at the beginning of each year.

The totaled amounts for each age interval in both matrices are used to form the exposure and retirement columns in the OLT, as shown in the chart below. This chart also shows the retirement ratio and the survivor ratio for each age interval. The retirement ratio for an age interval is the ratio of retirements during the interval to the property exposed to retirement at the beginning of the interval. The retirement ratio represents the probability that the property surviving at the beginning of an age interval will be retired during the interval. The survivor ratio is simply the complement to the retirement ratio (1 – retirement ratio). The survivor ratio represents the probability that the property surviving at the beginning of an age interval will survive to the next age interval.

Figure 17:
Observed Life Table

Age at Start of Interval	Exposures at Start of Age Interval	Retirements During Age Interval	Retirement Ratio	Survivor Ratio	Percent Surviving at Start of Age Interval
A	B	C	D = C / B	E = 1 - D	F
0.0	3,141	112	0.036	0.964	**100.00**
0.5	2,998	100	0.033	0.967	**96.43**
1.5	2,866	93	0.032	0.968	**93.21**
2.5	2,722	91	0.033	0.967	**90.19**
3.5	2,559	93	0.037	0.963	**87.19**
4.5	2,404	100	0.042	0.958	**84.01**
5.5	1,986	95	0.048	0.952	**80.50**
6.5	1,581	91	0.058	0.942	**76.67**
7.5	1,201	82	0.068	0.932	**72.26**
8.5	847	71	0.084	0.916	**67.31**
9.5	536	59	0.110	0.890	**61.63**
10.5	297	43	0.143	0.857	**54.87**
11.5	131	23	0.172	0.828	**47.01**
					38.91
Total	23,268	1,052			

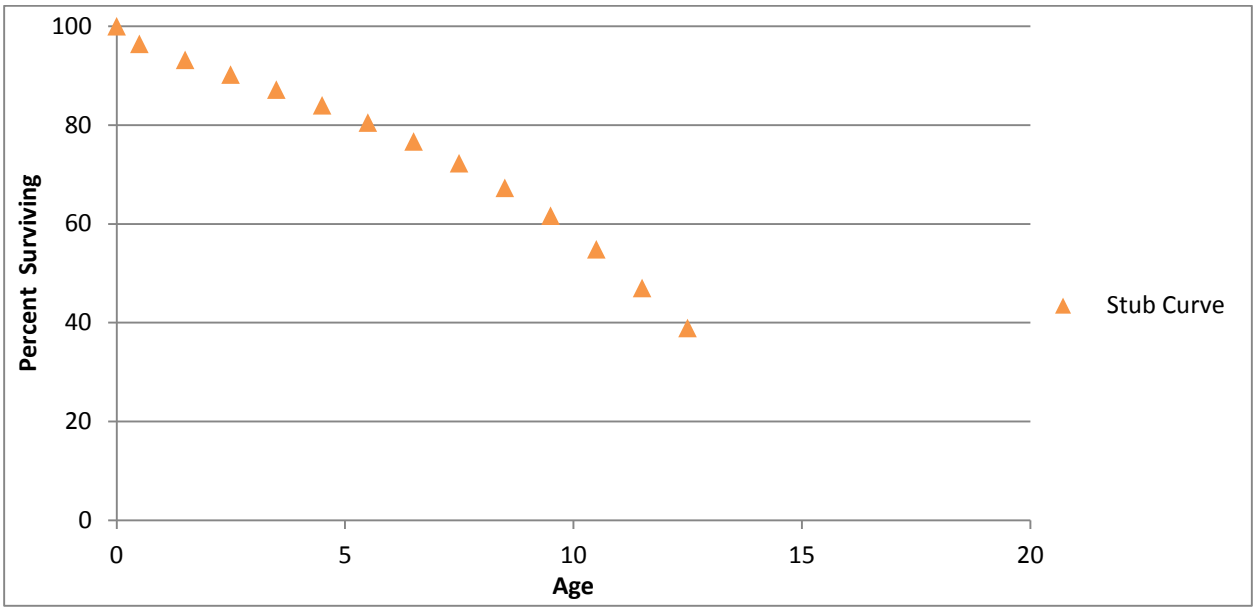
Column F on the right shows the percentages surviving at the beginning of each age interval. This column starts at 100% surviving. Each consecutive number below is calculated by multiplying the percent surviving from the previous age interval by the corresponding survivor ratio for that age interval. For example, the percent surviving at the start of age interval 1.5 is 93.21%, which was calculated by multiplying the percent surviving for age interval 0.5 (96.43%) by the survivor ratio for age interval 0.5 (0.967)[105].

The percentages surviving in Column F are the numbers that are used to form the original survivor curve. This particular curve starts at 100% surviving and ends at 38.91% surviving. An

[105] Multiplying 96.43 by 0.967 does not equal 93.21 exactly due to rounding.

observed survivor curve such as this that does not reach zero percent surviving is called a "stub" curve. The figure below illustrates the stub survivor curve derived from the OLT table above.

Figure 18:
Original "Stub" Survivor Curve



The matrices used to develop the basic OLT and stub survivor curve provide a basic illustration of the retirement rate method in that only a few placement and experience years were used. In reality, analysts may have several decades of aged property data to analyze. In that case, it may be useful to use a technique called "banding" in order to identify trends in the data.

Banding

The forces of retirement and characteristics of industrial property are constantly changing. A depreciation analyst may examine the magnitude of these changes. Analysts often use a technique called "banding" to assist with this process. Banding refers to the merging of several years of data into a single data set for further analysis, and it is a common technique associated

with the retirement rate method.[106] There are three primary benefits of using bands in depreciation analysis:

1. Increasing the sample size. In statistical analyses, the larger the sample size in relation to the body of total data, the greater the reliability of the result;

2. Smooth the observed data. Generally, the data obtained from a single activity or vintage year will not produce an observed life table that can be easily fit; and

3. Identify trends. By looking at successive bands, the analyst may identify broad trends in the data that may be useful in projecting the future life characteristics of the property.[107]

Two common types of banding methods are the "placement band" method and the "experience band" method." A placement band, as the name implies, isolates selected placement years for analysis.

Figure 19:
Placement Bands

	Experience Years									
	Exposures at January 1 of Each Year (Dollars in 000's)									
Placement Years	2008	2009	2010	2011	2012	2013	2014	2015	Total at Start of Age Interval	Age Interval
2003	261	245	228	211	192	173	152	131		11.5 - 12.5
2004	267	252	236	220	202	184	165	145		10.5 - 11.5
2005	304	291	277	263	248	232	216	198	198	9.5 - 10.5
2006	345	334	322	310	298	284	270	255	471	8.5 - 9.5
2007	367	357	347	335	324	312	299	286	788	7.5 - 8.5
2008	375	366	357	347	336	325	314	302	1,133	6.5 - 7.5
2009		377	366	356	346	336	327	319	1,186	5.5 - 6.5
2010			381	369	358	347	336	327	1,237	4.5 - 5.5
2011				386	372	359	346	334	1,285	3.5 - 4.5
2012					395	380	366	352	1,331	2.5 - 3.5
2013						401	385	370	1,059	1.5 - 2.5
2014							410	393	733	0.5 - 1.5
2015								416	375	0.0 - 0.5
Total	1919	2222	2514	2796	3070	3333	3586	3827	9,796	

[106] NARUC *supra* n. 8, at 113.

[107] *Id*.

The figure above illustrates the same exposure matrix shown above, except that only the placement years 2005-2008 are considered in calculating the total exposures at the beginning of each age interval. The shaded cells within the placement band equal the total exposures at the beginning of age interval 4.5–5.5 ($1,237). The same placement band would be used for the retirement matrix covering the same placement years of 2005 – 2008. This of course would result in a different OLT and original stub survivor curve than those that were calculated above without the restriction of a placement band.

Analysts often use placement bands for comparing the survivor characteristics of properties with different physical characteristics.[108] Placement bands allow analysts to isolate the effects of changes in technology and materials that occur in successive generations of plant. For example, if in 2005 an electric utility began placing transmission poles with a special chemical treatment that extended the service lives of the poles, an analyst could use placement bands to isolate and analyze the effect of that change in the property group's physical characteristics. While placement bands are very useful in depreciation analysis, they also possess an intrinsic dilemma. A fundamental characteristic of placement bands is that they yield fairly complete survivor curves for older vintages. However, with newer vintages, which are arguably more valuable for forecasting, placement bands yield shorter survivor curves. Longer "stub" curves are considered more valuable for forecasting average life. Thus, an analyst must select a band width broad enough to provide confidence in the reliability of the resulting curve fit, yet narrow enough so that an emerging trend may be observed.[109]

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[108] Wolf *supra* n. 7, at 182.

[109] NARUC *supra* n. 8, at 114.

Analysts also use "experience bands." Experience bands show the composite retirement history for all vintages during a select set of activity years. The figure below shows the same data presented in the previous exposure matrices, except that the experience band from 2011 – 2013 is isolated, resulting in different interval totals.

Figure 20:
Experience Bands

	Experience Years									
	Exposures at January 1 of Each Year (Dollars in 000's)									
Placement Years	2008	2009	2010	2011	2012	2013	2014	2015	Total at Start of Age Interval	Age Interval
2003	261	245	228	211	192	173	152	131		11.5 - 12.5
2004	267	252	236	220	202	184	165	145		10.5 - 11.5
2005	304	291	277	263	248	232	216	198	173	9.5 - 10.5
2006	345	334	322	310	298	284	270	255	376	8.5 - 9.5
2007	367	357	347	335	324	312	299	286	645	7.5 - 8.5
2008	375	366	357	347	336	325	314	302	752	6.5 - 7.5
2009		377	366	356	346	336	327	319	872	5.5 - 6.5
2010			381	369	358	347	336	327	959	4.5 - 5.5
2011				386	372	359	346	334	1,008	3.5 - 4.5
2012					395	380	366	352	1,039	2.5 - 3.5
2013						401	385	370	1,072	1.5 - 2.5
2014							410	393	1,121	0.5 - 1.5
2015								416	1,182	0.0 - 0.5
Total	1919	2222	2514	2796	3070	3333	3586	3827	9,199	

The shaded cells within the experience band equal the total exposures at the beginning of age interval 4.5–5.5 ($1,237). The same experience band would be used for the retirement matrix covering the same experience years of 2011 – 2013. This of course would result in a different OLT and original stub survivor than if the band had not been used. Analysts often use experience bands to isolate and analyze the effects of an operating environment over time.[110] Likewise, the use of experience bands allows analysis of the effects of an unusual environmental event. For example, if an unusually severe ice storm occurred in 2013, destruction from that storm would

[110] *Id.*

affect an electric utility's line transformers of all ages. That is, each of the line transformers from each placement year would be affected, including those recently installed in 2012, as well as those installed in 2003. Using experience bands, an analyst could isolate or even eliminate the 2013 experience year from the analysis. In contrast, a placement band would not effectively isolate the ice storm's effect on life characteristics. Rather, the placement band would show an unusually large rate of retirement during 2013, making it more difficult to accurately fit the data with a smooth Iowa curve. Experience bands tend to yield the most complete stub curves for recent bands because they have the greatest number of vintages included. Longer stub curves are better for forecasting. The experience bands, however, may also result in more erratic retirement dispersion making the curve fitting process more difficult.

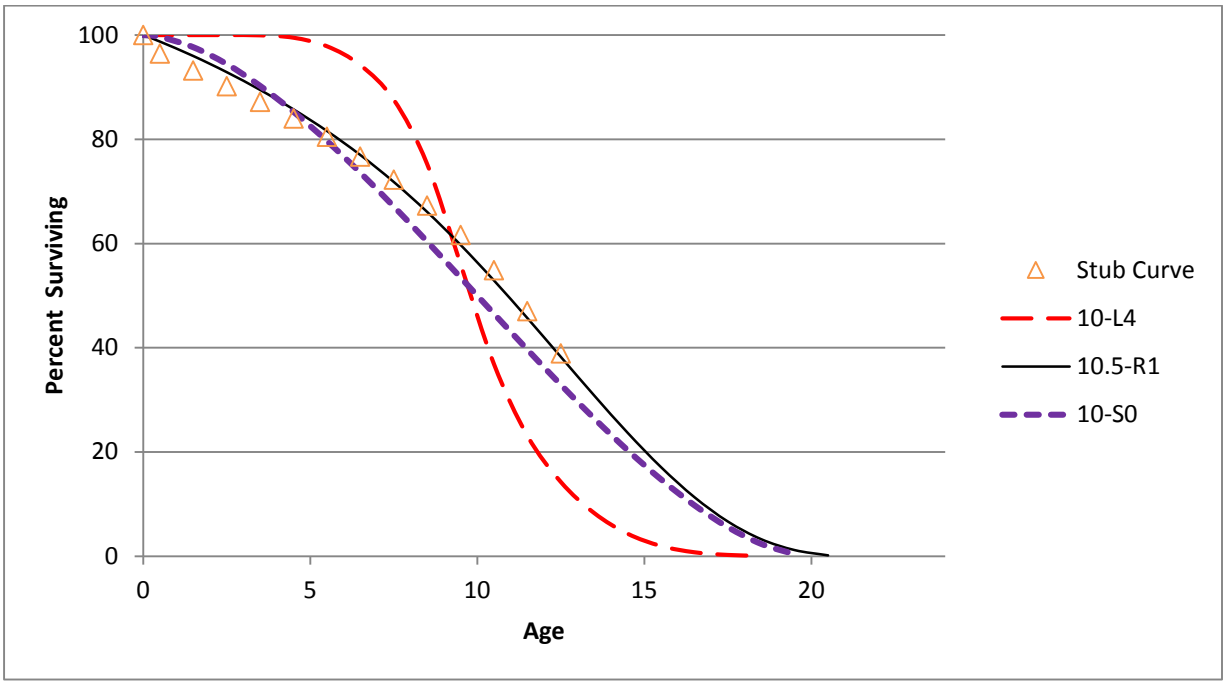
Depreciation analysts must use professional judgment in determining the types of bands to use and the band widths. In practice, analysts may use various combinations of placement and experience bands in order to increase the data sample size, identify trends and changes in life characteristics, and isolate unusual events. Regardless of which bands are used, observed survivor curves in depreciation analysis rarely reach zero percent. This is because, as seen in the OLT above, relatively newer vintage groups have not yet been fully retired at the time the property is studied. An analyst could confine the analysis to older, fully retired vintage groups in order to get complete survivor curves, but such analysis would ignore some the property currently in service and would arguably not provide an accurate description of life characteristics for current plant in service. Because a complete curve is necessary to calculate the average life of the property group, however, curve fitting techniques using Iowa curves or other standardized curves may be employed in order to complete the stub curve.

Curve Fitting

Depreciation analysts typically use the survivor curve rather than the frequency curve to fit the observed stub curves. The most commonly used generalized survivor curves used in the curve fitting process are the Iowa curves discussed above. As Wolf notes, if "the Iowa curves are adopted as a model, an underlying assumption is that the process describing the retirement pattern is one of the 22 [or more] processes described by the Iowa curves."[111]

Curve fitting may be done through visual matching or mathematical matching. In visual curve fitting, the analyst visually examines the plotted data to make an initial judgment about the Iowa curves that may be a good fit. The figure below illustrates the stub survivor curve shown above. It also shows three different Iowa curves: the 10-L4, the 10.5-R1, and the 10-S0. Visually, it is clear that the 10.5-R1 curve is a better fit than the other two curves.

Figure 21:
Visual Curve Fitting



[111] Wolf *supra* n. 7, at 46 (22 curves includes Winfrey's 18 original curves plus Cowles's four "O" type curves).

In mathematical fitting, the least squares method is used to calculate the best fit. This mathematical method would be excessively time consuming if done by hand. With the use of modern computer software however, mathematical fitting is an efficient and useful process. The typical logic for a computer program, as well as the software employed for the analysis in this testimony is as follows:

> First (an Iowa curve) curve is arbitrarily selected. . . . If the observed curve is a stub curve, . . . calculate the area under the curve and up to the age at final data point. Call this area the realized life. Then systematically vary the average life of the theoretical survivor curve and calculate its realized life at the age corresponding to the study date. This trial and error procedure ends when you find an average life such that the realized life of the theoretical curve equals the realized life of the observed curve. Call this the average life.
>
> Once the average life is found, calculate the difference between each percent surviving point on the observed survivor curve and the corresponding point on the Iowa curve. Square each difference and sum them. The sum of squares is used as a measure of goodness of fit for that particular Iowa type curve. This procedure is repeated for the remaining 21 Iowa type curves. The "best fit" is declared to be the type of curve that minimizes the sum of differences squared.[112]

Mathematical fitting requires less judgment from the analyst, and is thus less subjective. Blind reliance on mathematical fitting, however, may lead to poor estimates. Thus, analysts should employ both mathematical and visual curve fitting in reaching their final estimates. This way, analysts may utilize the objective nature of mathematical fitting while still employing professional judgment. As Wolf notes: "The results of mathematical curve fitting serve as a guide for the analyst and speed the visual fitting process. But the results of the mathematical fitting should be checked visually and the final determination of the best fit be made by the analyst."[113]

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[112] Wolf *supra* n. 7, at 47.

[113] *Id*. at 48.

In the graph above, visual fitting was sufficient to determine that the 10.5-R1 Iowa curve was a better fit than the 10-L4 and the 10-S0 curves. Using the sum of least squares method, mathematical fitting confirms the same result. In the chart below, the percentages surviving from the OLT that formed the original stub curve are shown in the left column, while the corresponding percentages surviving for each age interval are shown for the three Iowa curves. The right portion of the chart shows the differences between the points on each Iowa curve and the stub curve. These differences are summed at the bottom. Curve 10.5-R1 is the best fit because the sum of the squared differences for this curve is less than the same sum of the other two curves. Curve 10-L4 is the worst fit, which was also confirmed visually.

Figure 22:
Mathematical Fitting

Age	Stub	Iowa Curves			Squared Differences		
Interval	Curve	10-L4	10-S0	10.5-R1	10-L4	10-S0	10.5-R1
0.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0
0.5	96.4	100.0	99.7	98.7	12.7	10.3	5.3
1.5	93.2	100.0	97.7	96.0	46.1	19.8	7.6
2.5	90.2	100.0	94.4	92.9	96.2	18.0	7.2
3.5	87.2	100.0	90.2	89.5	162.9	9.3	5.2
4.5	84.0	99.5	85.3	85.7	239.9	1.6	2.9
5.5	80.5	97.9	79.7	81.6	301.1	0.7	1.2
6.5	76.7	94.2	73.6	77.0	308.5	9.5	0.1
7.5	72.3	87.6	67.1	71.8	235.2	26.5	0.2
8.5	67.3	75.2	60.4	66.1	62.7	48.2	1.6
9.5	61.6	56.0	53.5	59.7	31.4	66.6	3.6
10.5	54.9	36.8	46.5	52.9	325.4	69.6	3.9
11.5	47.0	23.1	39.6	45.7	572.6	54.4	1.8
12.5	38.9	14.2	32.9	38.2	609.6	36.2	0.4
SUM					**3004.2**	**371.0**	**41.0**

APPENDIX D:

SIMULATED LIFE ANALYSIS

Aged data is required to perform actuarial analysis. That is, the collection of property data must contain the dates of placements, retirements, transfers, and other actions. When a utility's property records do not contain aged data, however, analysts may use another analytical method to simulate the missing data. The contrast between aged and unaged data is illustrated in the matrices below.[114] The first matrix is similar to the matrices in Appendix C used to demonstrate actuarial analysis.

Figure 23:
Aged Data Matrix

End of Year Balances ($)										
Vintage	Installations	1997	1999	2001	2003	2005	2007	2009	2011	2013
1997	220	220	220	220	213	194	152	95	19	0
			250	250	248	235	198	143	31	4
1999	270		270	270	270	262	238	186	57	9
				285	285	282	268	225	91	26
2001	300			300	300	300	291	264	145	42
					320	320	317	301	241	103
2003	350				350	350	350	340	284	157
						375	375	371	325	219
2005	390					390	390	390	362	286
							405	405	392	344
2007	450						450	450	441	416
								480	480	478
2009	500							500	500	500
									580	580
2011	670								670	670
										790
2013	750									750
Balance		220	740	1325	1986	2708	3434	4150	4618	5374

[114] See SDP Fundamentals 2014 pdf. 152.

The aged data matrix contains installation or "vintage" years in the first column and experience years in the top row. (Only every other year is shown in order to save space). This matrix contains aged data, meaning that the utility kept track of the age of plant when it was retired. In 2007, for example, $291 were remaining in service from the 2001 installation of $300. Likewise, in 2011, it was known that $57 were remaining in service from the 1999 vintage installation of $270. The amounts in each experience year column are added to arrive the year-end balances. Now assume that the amount of installations and retirements are the same for each year, but that the utility did not keep track of the age of plant when it was retired. The data matrix below contains the same data, except it is not aged. Thus, while the year-end balances are the same, the amount retired from each vintage in a given year is unknown.

Figure 24:
Unaged Data Matrix

End of Year Balances ($)										
Vintage	Installations	1997	1999	2001	2003	2005	2007	2009	2011	2013
1997	220									
1999	270									
2001	300									
2003	350									
2005	390									
2007	450									
2009	500									
2011	670									
2013	750									
Balance		220	740	1325	1986	2708	3434	4150	4618	5374

Thus, in 2007 the company still had a year-end balance $3,434, but it is unknown how much of this amount surviving is attributable to each vintage group of property.

The method that depreciation analysts use to examine unaged data is called the "simulated plant record" method ("SPR").[115] The SPR method is used to simulate the retirement pattern for each vintage and to indicate the Iowa curve that best represent the life characteristics of the property being analyzed.[116] In other words, the SPR model may be used to "fill in" the unaged data matrix with simulated vintage balances for each experience year. The SPR model assumes that all vintages' additions retire in accordance with the same retirement pattern.[117]

Unlike with actuarial analysis, which indicates the best fitting Iowa curve type based on the input data, the SPR model requires the analyst or computer program to first choose an Iowa curve and test the results. This process is repeated until the analyst finds the curve that best matches the observed data is found.[118] Although the SPR method may be conducted manually, analysts typically rely on computer programs to make the process more efficient.

In the example presented below, the best fitting curve is the one that most closely simulates the actual balance of $4,150 for 2009. The chart below compares the actual and simulated vintage balances for the 2009 experience year using an Iowa 10-S3 curve. The 2009 simulated balances using the 10-S3 curve produce a year-end balance of $3,775. The actual balance, however, is

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[115] Wolf 220. Cyrus Hill is generally credited with developing the principles used in the SPR method. In 1947, Alex Bauhan expanded the SPR method and developed several criteria used to measure the accuracy of simulated data, which he called the SPR method (See Bauhan, A. E., "Life Analysis of Utility Plant for Depreciation Accounting Purposes by the Simulated Plant Record Method," 1947, Appendix of the EEl, 1952.)

[116] NARUC 106.

[117] NARUC 107.

[118] Wolf 222.

$4,150. Thus, the 10-S3 curve produces a simulated balance that is $375 short of the actual balance.

Figure 25:
SPR Calculation Using Iowa Curve 10-S3

Age Interval	Vintage Year	Installations	10-S3 % Surviving	Sim. Bal. 2009
12.5	1997	220	16	35
11.5	1998	250	28	69
10.5	1999	270	42	114
9.5	2000	285	58	165
8.5	2001	300	72	217
7.5	2002	320	84	269
6.5	2003	350	92	323
5.5	2004	375	97	363
4.5	2005	390	99	386
3.5	2006	405	100	404
2.5	2007	450	100	450
1.5	2008	480	100	480
0.5	2009	500	100	500
		Total Simulated Balance		3,775
		Total Actual Balance		4,150
		Difference		(375)

The process is repeated with another curve until the best fitting curve is found. Specifically, a curve with a longer average life should be chosen in order to increase the simulated balance. For this example, the 12-S3 curve produces a perfect fit for 2009, as shown in the figure below.

Figure 26:
SPR Calculation Using Iowa Curve 12-S3

Age Interval	Vintage Year	Installations	12-S3 % Surviving	Sim. Bal. 2009
12.5	1997	220	43	95
11.5	1998	250	57	143
10.5	1999	270	69	186
9.5	2000	285	79	225
8.5	2001	300	88	264
7.5	2002	320	94	301
6.5	2003	350	97	340
5.5	2004	375	99	371
4.5	2005	390	100	390
3.5	2006	405	100	405
2.5	2007	450	100	450
1.5	2008	480	100	480
0.5	2009	500	100	500
		Total Simulated Balance		4,150
		Total Actual Balance		4,150
		Difference		0

It is not a coincidence that there was an Iowa curve that produced a perfect fit. This is because when only one year is tested under the SPR model, there is always an Iowa curve that will produce a perfect simulation. Thus, it is important that more than one year is tested. The figures below will demonstrate that even though a particular curve may have fit perfectly for one test year, it may not necessarily be the best choice when multiple years are tested. The chart below shows the results of the Iowa 12-S3 curve when 2009, 2011, and 2013 are tested.

Figure 27:
SPR: Curve 12-S3: 2009, 2011, 2013

Vintage	Insts.	% Surv.	2009	% Surv.	2011	% Surv.	2013
1997	220	43	95	21	46	6	13
1998	250	57	143	31	78	12	30
1999	270	69	186	43	116	21	57
2000	285	79	225	57	162	31	88
2001	300	88	264	69	207	43	129
2002	320	94	301	79	253	57	182
2003	350	97	340	88	308	69	242
2004	375	99	371	94	353	79	296
2005	390	100	390	97	378	88	343
2006	405	100	405	99	401	94	381
2007	450	100	450	100	450	97	437
2008	480	100	480	100	480	99	475
2009	500	100	500	100	500	100	500
2010	580			100	580	100	580
2011	670			100	670	100	670
2012	790					100	790
2013	750					100	750
Simulated Balances			$ 4,150		$ 4,982		$ 5,963
Actual Balances			4,150		4,618		5,374
Difference			0		364		589
Difference Squared			0		132,496		346,921

SSD = 479,417 **MSD = 159,806** **√MSD = 400**

CI = Average Actual Bal = 4,714 = **12** **IV =** 1000 = **85**
√MSD 400 CI

While the 12-S3 curve provided a perfect simulation for 2009, it did not for years 2011 and 2013 because the life characteristics were different in these years. Since the 12-S3 curve produced simulated balances that were greater than the actual balances, a curve with a shorter average life should be analyzed. The figure below shows the SPR results from the same test years using an Iowa 10-S3 curve.

Figure 28:
SPR: Curve 10-S3: 2009, 2011, 2013

Vintage	Insts.	% Surv.	2009	% Surv.	2011	% Surv.	2013
1997	220	16	35	3	7	0	0
1998	250	28	70	8	20	1	3
1999	270	42	113	16	43	3	8
2000	285	58	165	28	80	8	23
2001	300	72	216	42	126	16	48
2002	320	84	269	58	186	28	90
2003	350	92	322	72	252	42	147
2004	375	97	364	84	315	58	218
2005	390	99	386	92	359	72	281
2006	405	100	405	97	393	84	340
2007	450	100	450	99	446	92	414
2008	480	100	480	100	480	97	466
2009	500	100	500	100	500	99	495
2010	580			100	580	100	580
2011	670			100	670	100	670
2012	790					100	790
2013	750					100	750
Simulated Balances			$ 3,775		$ 4,457		$ 5,323
Actual Balances			4,150		4,618		5,374
Difference			(375)		(161)		(51)
Difference Squared			140,625		25,921		2,601

SSD = 169,147 **MSD = 56,382** **√MSD = 237**

CI = Average Actual Bal = 4,714 = **20** **IV =** 1000 = **50**
√MSD 237 CI

The 10-S3 curve resulted in a better fit than the 12-S3 curve, despite the fact that the 12-S3 provided a perfect fit for one year. Several useful tools to measure the accuracy of SPR results in discussed below.

There are several indices used to measure the fit of the chosen curve. Alex Bauhan developed the conformance index ("CI") to rank the optimal curves.[119] The CI is the average observed plant balance for the tested years, divided by the square root of the average sum of squared differences between the simulated and actual balances. The formula for the CI is shown below.

Equation 6:
Conformance Index

$$Conformance\ Index\ = \frac{Average\ of\ Actual\ Balances}{\sqrt{Average\ of\ Sum\ of\ Squared\ Differences}}$$

The previous figure above demonstrates the CI calculation. The difference between the actual and simulated balances was $375 in 2009, $161 in 2011, and $51 in 2013. The sum of these differences squared ("SSD") is 169,147 and the average of the SSD is 56,382 ("MSD"). The square root of the MSD is 237. The CI is the average of the three actual balances ($4,714) divided by 237, which equals 20. Bauhan proposed a scaled for measuring the value of the CI, which is shown below.

Figure 29:
Conformance Index Scale

CI	Value
> 75	Excellent
50 – 75	Good
25 – 50	Fair
< 25	Poor

[119] Bauhan, A. E., "Life Analysis of Utility Plant for Depreciation Accounting Purposes by the Simulated Plant Record Method," 1947, Appendix of the EEl, 1952.

Thus, the CI of 20 calculated above indicates that the 12-S3 curve is a poor fit. According to Bauhan, any CI value less than 50 would be considered unsatisfactory.[120]

A related measure to the CI is the "index of variation" ("IV").[121] The IV is equal to 1,000 divided by the CI, as shown in the Figures above. Although the IV does not use a definite scale like the CI, it follows that the highest ranking curves are those with the lowest IVs. When divided by ten, the IV approximates the average difference between simulated and actual balances expressed as a percent of the average actual balance.[122] The IV resulting from the 12-S3 curve is 85, while the IV from the 10-S3 is 50, as shown above.

Another important statistical measure is the "retirements experience index" ("REI"), which measures the maturity of the account.[123] According to Bauhan, the CI alone cannot truly measure the validity of the chosen curve because the CI provides no indication of the sufficiency of the retirement experience.[124] A small REI implies that the history of the account may be too short to determine a best fitting Iowa curve. In other words, there may be many potential Iowa curves that could be fitted to a stub curve that is too short. This concept is illustrated in the graph below. This graph shows a stub survivor curve (the diamond-shaped points on the graph). The first seven data points of the stub survivor curve represent a small REI score. If an analyst was looking at only the first seven data points, it appears that several Iowa curves would provide a good fit, including the 10-S1, 8-L3, and 8-R3 (and several others not shown on the graph). These curves, however, have

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[120] SDP pdf. 210.

[121] White, R.E. and H. A. Cowles, "A Test Procedure for the Simulated Plant Record Method of Life Analysis," Journal of the American Statistical Association, vol. 70 (1970): 1204-1212.

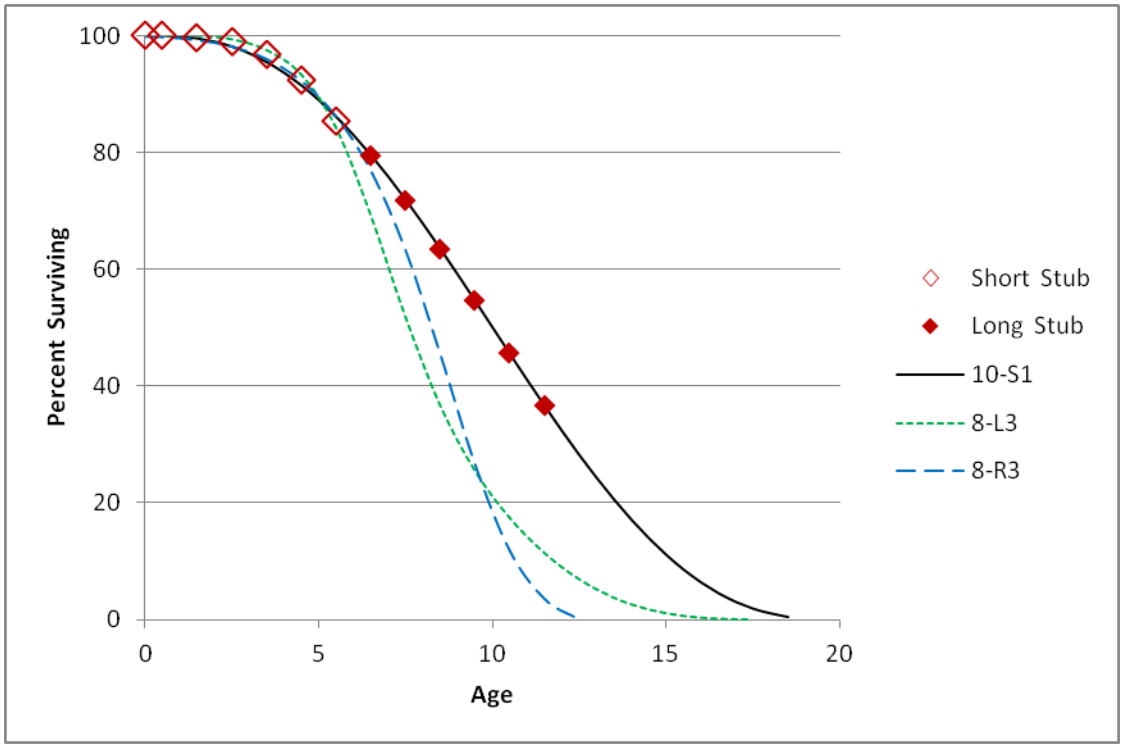
[122] NARUC 111.

[123] *See* SDP 210.

[124] SDP 210.

significantly different life characteristics and average lives. Once the longer stub curve is taken into account, it is obvious that the 10-S1 curve provides the best fit.

Figure 30:
REI Illustration



Although the REI only applies to simulated analysis, the concept that a longer stub curve provides for better-fitting Iowa curves also applies to actuarial analysis.

The REI is mathematically calculated by dividing the balance from the oldest vintage in the test year at the end of the year by the initial installation amount. Referring to the top row of the SPR figure above, there were $220 of installations in 1997, and only $13 remaining in 2013. The REI for this account using the 12-S3 curve would be 94% (1 – (13/220)). An REI of 100% indicates that a complete curve was used in the simulation.

As with the CI, Bauhan also proposed a scale for the REI, as shown in the figure below. Thus, the REI of 94% from the account above using the 12-S3 curve would be considered

excellent. This makes sense because the oldest vintage from that account had been nearly fully retired in the final test year.

Figure 31:
REI Scale

REI	Value
> 75%	Excellent
50% – 75%	Good
33% – 50%	Fair
17% – 33%	Poor
0% – 17%	Valueless

Both the REI and CI, however, must be considered when assessing the value of an Iowa curve under the SPR method. So while the REI of 94% is excellent, the same curve (12-S3) produced a CI of only 12, which is poor. According to Bauhan, in order for a curve to be considered entirely satisfactory, both the REI and CI should be "Good" or better (i.e., both above 50).

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Group Facilitator & Fundraiser — 2014 – Present
Facilitate group meetings designed to help children and families cope with divorce and tragic events. Assist in fundraising events.

St. Jude Children's Research Hospital — Oklahoma City, OK
Oklahoma Fundraising Committee — 2008 – 2010
Raised money for charity by organizing local fundraising events.

PROFESSIONAL ASSOCIATIONS

Oklahoma Bar Association 2007 – Present

Society of Depreciation Professionals 2014 – Present
Board Member – President 2017
Participate in management of operations, attend meetings, review performance, organize presentation agenda.

Society of Utility Regulatory Financial Analysts 2014 – Present

SELECTED CONTINUING PROFESSIONAL EDUCATION

Society of Depreciation Professionals — Austin, TX
"Life and Net Salvage Analysis" — 2015
Extensive instruction on utility depreciation, including actuarial and simulation life analysis modes, gross salvage, cost of removal, life cycle analysis, and technology forecasting.

Society of Depreciation Professionals — New Orleans, LA
"Introduction to Depreciation" and "Extended Training" — 2014
Extensive instruction on utility depreciation, including average lives and net salvage.

Society of Utility and Regulatory Financial Analysts — Indianapolis, IN
46th Financial Forum. "The Regulatory Compact: Is it Still Relevant?" — 2014
Forum discussions on current issues.

New Mexico State University, Center for Public Utilities — Santa Fe, NM
Current Issues 2012, "The Santa Fe Conference" — 2012
Forum discussions on various current issues in utility regulation.

Michigan State University, Institute of Public Utilities — Clearwater, FL
"39th Eastern NARUC Utility Rate School" — 2011
One-week, hands-on training emphasizing the fundamentals of the utility ratemaking process.

New Mexico State University, Center for Public Utilities — Albuquerque, NM
"The Basics: Practical Regulatory Training for the Changing Electric Industries" — 2010
One-week, hands-on training designed to provide a solid foundation in core areas of utility ratemaking.

The Mediation Institute — Oklahoma City, OK
"Civil / Commercial & Employment Mediation Training" — 2009
Extensive instruction and mock mediations designed to build foundations in conducting mediations in civil matters.

Utility Regulatory Proceedings

State	Regulatory Agency / Company-Applicant	Docket Number	Testimony / Analysis		
			Issues	Type	Date
TX	Railroad Commission of Texas CenterPoint Energy Texas Gas	GUD 10567	Depreciation rates, simulated and actuarial analysis	Prefiled	2/21/2017
AR	Arkansas Public Service Commission Oklahoma Gas & Electric Co.	160-159-GU	Cost of capital, depreciation rates, terminal salvage, lifespans	Prefiled	1/31/2017
FL	Florida Public Service Commission Peoples Gas	160-159-GU	Depreciation rates	Report	11/4/2016
AZ	Arizona Corporation Commission Arizona Public Service Co.	E-01345A-16-0036	Cost of capital, depreciation rates, terminal salvage, lifespans	Pre-filed	12/28/2016
NV	Nevada Public Utilities Commission Sierra Pacific Power Co.	16-06008	Depreciation rates, terminal salvage, lifespans, theoretical reserve	Pre-filed	9/23/2016
OK	Oklahoma Corporation Commission Oklahoma Gas & Electric Co.	PUD 201500273	Cost of capital, depreciation rates, terminal salvage, lifespans	Pre-filed Live	3/21/2016 5/3/2016
OK	Oklahoma Corporation Commission Public Service Co. of Oklahoma	PUD 201500208	Cost of capital, depreciation rates, terminal salvage, lifespans	Pre-filed Live	10/14/2015 12/8/2015
OK	Oklahoma Corporation Commission Oklahoma Natural Gas Co.	PUD 201500213	Cost of capital and depreciation rates	Pre-filed	10/19/2015
OK	Oklahoma Corporation Commission Oak Hills Water System	PUD 201500123	Cost of capital and depreciation rates	Pre-filed Live	7/8/2015 8/14/2015
OK	Oklahoma Corporation Commission CenterPoint Energy Oklahoma Gas	PUD 201400227	Fuel prudence review and fuel adjustment clause	Pre-filed Live	11/3/2014 2/10/2015
OK	Oklahoma Corporation Commission Public Service Co. of Oklahoma	PUD 201400233	Certificate of authority to issue new debt securities	Pre-filed Live	9/12/2014 9/25/2014

Utility Regulatory Proceedings

State	Regulatory Agency / Company-Applicant	Docket Number	Testimony / Analysis		
			Issues	Type	Date
OK	Oklahoma Corporation Commission Empire District Electric Co.	PUD 201400226	Fuel prudence review and fuel adjustment clause	Pre-filed Live	12/9/2014 1/22/2015
OK	Oklahoma Corporation Commission Fort Cobb Fuel Authority	PUD 201400219	Fuel prudence review and fuel adjustment clause	Pre-filed Live	 1/29/2015
OK	Oklahoma Corporation Commission Fort Cobb Fuel Authority	PUD 201400140	Outside services, legislative advocacy, payroll expense, and insurance expense	Pre-filed	12/16/2014
OK	Oklahoma Corporation Commission Public Service Co. of Oklahoma	PUD 201300201	Authorization of standby and supplemental tariff	Pre-filed Live	12/9/2013 12/19/2013
OK	Oklahoma Corporation Commission Fort Cobb Fuel Authority	PUD 201300134	Fuel prudence review and fuel adjustment clause	Pre-filed Live	10/23/2013 1/30/2014
OK	Oklahoma Corporation Commission Empire District Electric Co.	PUD 201300131	Fuel prudence review and fuel adjustment clause	Pre-filed Live	11/21/2013 12/19/2013
OK	Oklahoma Corporation Commission CenterPoint Energy Oklahoma Gas	PUD 201300127	Fuel prudence review and fuel adjustment clause	Pre-filed Live	10/21/2013 1/23/2014
OK	Oklahoma Corporation Commission Oklahoma Gas & Electric Co.	PUD 201200185	Gas transportation contract extension	Pre-filed Live	9/20/2012 10/9/2012
OK	Oklahoma Corporation Commission Empire District Electric Co.	PUD 201200170	Fuel prudence review and fuel adjustment clause	Pre-filed Live	10/31/2012 12/13/2012
OK	Oklahoma Corporation Commission Oklahoma Gas & Electric Co.	PUD 201200169	Fuel prudence review and fuel adjustment clause	Pre-filed Live	12/19/2012 4/4/2013

Summary Rate and Accrual Adjustment

Plant Function	Plant 12/31/2015	Company Proposal	Mission Proposal	Mission Adjustment
Transmission	$ 980,453,092	$ 23,653,060	$ 20,555,974	$ (3,097,086)
Distributrion	474,368,417	15,788,982	12,983,161	(2,805,821)
General	31,051,516	1,215,098	1,215,098	-
Total	$ 1,485,873,025	$ 40,657,139	$ 34,754,233	$ (5,902,906)

Detailed Rate and Accrual Adjustment

		[1]	[2]			[3]			[4]	
			Company Proposal			Mission Proposal			Difference	
Account No.	Description	Plant 12/31/2015	Iowa Curve Type	AL	Rate	Iowa Curve Type	AL	Rate	Rate	Annual Accrual
	Transmission Plant									
352.00	Structures & Improvements	69,543,101	R3	50	2.10%	R4	65	1.61%	-0.49%	(341,778)
353.00	Station Equipment	322,072,473	R5	45	2.43%	R5	54	1.88%	-0.56%	(1,790,089)
353.00	Transmission OCC Equipment	5,597,207	SQ	10	9.91%	SQ	10	9.91%	0.00%	-
354.00	Towers & Fixtures	268,343,979	R3	60	2.00%	R4	67	1.78%	-0.21%	(574,761)
355.00	Poles & Fixtures	101,015,686	R2.5	54	2.77%	R3	56	2.62%	-0.15%	(149,248)
356.00	Overhead Conductor & Devices	197,360,705	R3	55	2.72%	R3	57	2.61%	-0.11%	(215,183)
359.00	Roads and Trails	16,519,942	R3	60	1.66%	R4	66	1.51%	-0.16%	(26,027)
	Total Transmission Plant	980,453,092			2.41%			2.10%	-0.32%	(3,097,086)
	Distribution Plant									
361.00	Structures & Improvements	17,740,028	R3	50	2.13%	R4	59	1.79%	-0.34%	(60,311)
362.00	Station Equipment	69,846,531	R3	40	2.85%	R1.5	58	1.82%	-1.03%	(718,807)
364.00	Poles, Towers & Fixtures	127,000,769	R2.5	44	4.10%	R2.5	44	4.10%	0.00%	4,050
365.00	Overhead Conductor & Devices	92,129,361	R3	43	3.26%	R1.5	57	2.15%	-1.11%	(1,019,174)
366.00	Underground Conduit	6,998,061	R3	60	1.79%	R3	67	1.58%	-0.21%	(14,603)
367.00	Underground Conductor & Devices	20,915,131	R4	39	2.96%	R2.5	47	2.32%	-0.64%	(133,657)
368.00	Line Transformers	84,046,906	R4	44	2.75%	L3	49	2.38%	-0.37%	(309,037)
369.00	Services	36,246,062	R2.5	38	3.81%	R0.5	50	2.28%	-1.53%	(554,282)
370.00	Meters	15,170,515	R1.5	30	4.01%	R2.5	30	4.01%	0.00%	-
371.00	Installations On Customer Premises	1,032,599	R0.5	26	4.83%	R0.5	26	4.83%	0.00%	-
373.00	Street Light & Signal Systems	3,242,455	R2	30	3.89%	R2	30	3.89%	0.00%	-
	Total Distribution Plant	474,368,417			3.33%			2.74%	-0.59%	(2,805,821)
	General Plant									
390.00	Structures & Improvements	7,212,038	R2	45	1.80%	R2	45	1.80%	0.00%	-
391.00	Office Furniture & Equipment	7,135,859	L1	15	3.46%	L1	15	3.46%	0.00%	-
392.00	Transportation Equipment	8,309,220	L1.5	8	6.29%	L1.5	8	6.29%	0.00%	-
393.00	Stores Equipment	74,109	R2	30	1.31%	R2	30	1.31%	0.00%	-
394.00	Tools, Shop & Garage Equipment	1,365,901	R2	20	4.00%	R2	20	4.00%	0.00%	-
395.00	Laboratory Equipment	186,547	R2	20	0.00%	R2	20	0.00%	0.00%	-
396.00	Power Operated Equipment	5,502,237	R2.5	18	3.53%	R2.5	18	3.53%	0.00%	-
397.00	Comm Equip -Technology Based	708,292	R3	5	0.00%	R3	5	0.00%		
397.10	Comm Equip- Computer in Service	332,162	R3	40	18.29%	R3	40	18.29%		
397.20	Comm Equip -Towers and Fixtures	172,523	SQ	5	1.78%	SQ	5	1.78%		
398.00	Miscellaneous Equipment	52,629	R2	20	4.37%	R2	20	4.37%	0.00%	-

Detailed Rate and Accrual Adjustment

		[1]	[2]			[3]			[4]	
			Company Proposal			Mission Proposal			Difference	
Account No.	Description	Plant 12/31/2015	Iowa Curve Type	AL	Rate	Annual Accrual	Iowa Curve Type	AL	Rate	Annual Accrual	Rate	Annual Accrual
	Transmission Plant											
352.00	Structures & Improvements	69,543,101	R3	50	2.10%	1,458,787	R4	65	1.61%	1,117,009	-0.49%	(341,778)
353.00	Station Equipment	322,072,473	R5	45	2.43%	7,839,831	R5	54	1.88%	6,049,742	-0.56%	(1,790,089)
353.00	Transmission OCC Equipment	5,597,207	SQ	10	9.91%	554,733	SQ	10	9.91%	554,733	0.00%	-
354.00	Towers & Fixtures	268,343,979	R3	60	2.00%	5,360,629	R4	67	1.78%	4,785,868	-0.21%	(574,761)
355.00	Poles & Fixtures	101,015,686	R2.5	54	2.77%	2,793,672	R3	56	2.62%	2,644,424	-0.15%	(149,248)
356.00	Overhead Conductor & Devices	197,360,705	R3	55	2.72%	5,370,609	R3	57	2.61%	5,155,425	-0.11%	(215,183)
359.00	Roads and Trails	16,519,942	R3	60	1.66%	274,799	R4	66	1.51%	248,772	-0.16%	(26,027)
	Total Transmission Plant	980,453,092			2.41%	23,653,060			2.10%	20,555,974	-0.32%	(3,097,086)
	Total General Plant	31,051,516			3.91%	1,215,098			3.91%	1,215,098	0.00%	-
	TOTAL PLANT STUDIED	**1,485,873,025**			**2.74%**	**40,657,139**			**2.34%**	**34,754,233**	**-0.40%**	**(5,902,906)**

[1] From Company depreciation study; plant balances as of the study date
[2] From Company depreciation study
[3] Rates and Accruals from DJG-4 (some unadjusted accounts hard coded to match the Company's proposal due to rounding differences)
[4] = [3] - [2]

Depreciation Rate Development
(SL-AL-RL-BG System)

Account No.	Description	[1] Plant 12/31/2015	[2] Iowa Curve Type	[2] Iowa Curve AL	[3] Net Salvage	[4] Depreciable Base	[5] Book Reserve	[6] Future Accruals	[7] Remaining Life	[8] Service Life Accrual	[9] Service Life Rate	[10] Net Salvage Accrual	[11] Net Salvage Rate	[12] Total Accrual	[13] Total Rate
	Transmission Plant														
352.00	Structures & Improvements	69,543,101	R4	65	-5.0%	73,020,256	2,983,786	70,036,470	62.7	1,061,552	1.53%	55,457	0.08%	1,117,009	**1.61%**
353.00	Station Equipment	322,072,473	R5	54	-10.0%	354,279,720	49,372,743	304,906,977	50.4	5,410,709	1.68%	639,033	0.20%	6,049,742	**1.88%**
353.00	Transmission OCC Equipment	5,597,207	SQ	10	0.0%	5,597,207	1,436,708	4,160,499	7.5	554,733	9.91%	-	0.00%	554,733	**9.91%**
354.00	Towers & Fixtures	268,343,979	R4	67	-20.0%	322,012,774	13,802,856	308,209,919	64.4	3,952,502	1.47%	833,366	0.31%	4,785,868	**1.78%**
355.00	Poles & Fixtures	101,015,686	R3	56	-50.0%	151,523,529	21,946,747	129,576,781	49.0	1,613,652	1.60%	1,030,772	1.02%	2,644,424	**2.62%**
356.00	Overhead Conductor & Devices	197,360,705	R3	57	-50.0%	296,041,057	23,319,059	272,721,998	52.9	3,290,012	1.67%	1,865,413	0.95%	5,155,425	**2.61%**
359.00	Roads and Trails	16,519,942	R4	66	0.0%	16,519,942	1,145,813	15,374,130	61.8	248,772	1.51%	-	0.00%	248,772	**1.51%**
	Total Transmission Plant	980,453,092				1,218,994,485	114,007,711	1,104,986,774	53.8	16,131,932	1.65%	4,424,041	0.45%	20,555,974	**2.10%**
	Distribution Plant														
361.00	Structures & Improvements	17,740,028	R4	59	-5.0%	18,627,030	1,112,593	17,514,437	55.2	301,222	1.70%	16,069	0.09%	317,291	**1.79%**
362.00	Station Equipment	69,846,531	R1.5	58	-10.0%	76,831,184	11,224,783	65,606,402	51.5	1,138,286	1.63%	135,624	0.19%	1,273,911	**1.82%**
364.00	Poles, Towers & Fixtures	127,000,769	R2.5	44	-70.0%	215,901,307	45,683,336	170,217,971	32.7	2,486,772	1.96%	2,718,671	2.14%	5,205,443	**4.10%**
365.00	Overhead Conductor & Devices	92,129,361	R1.5	57	-30.0%	119,768,169	30,401,594	89,366,575	45.1	1,368,687	1.49%	612,834	0.67%	1,981,521	**2.15%**
366.00	Underground Conduit	6,998,061	R3	67	-5.0%	7,347,964	759,531	6,588,433	59.4	105,026	1.50%	5,891	0.08%	110,916	**1.58%**
367.00	Underground Conductor & Devices	20,915,131	R2.5	47	-10.0%	23,006,644	4,179,192	18,827,452	38.8	431,339	2.06%	53,905	0.26%	485,244	**2.32%**
368.00	Line Transformers	84,046,906	L3	49	-15.0%	96,653,942	17,915,966	78,737,975	39.4	1,678,450	2.00%	319,976	0.38%	1,998,426	**2.38%**
369.00	Services	36,246,062	R0.5	50	-30.0%	47,119,880	15,370,929	31,748,951	38.4	543,623	1.50%	283,172	0.78%	826,796	**2.28%**
370.00	Meters	15,170,515	R2.5	30	-15.0%	17,446,092	2,957,982	14,488,110	23.8	512,265	3.38%	95,451	0.63%	607,716	**4.01%**
371.00	Installations On Customer Premises	1,032,599	R0.5	26	-15.0%	1,187,489	336,416	851,073	17.1					49,829	**4.83%**
373.00	Street Light & Signal Systems	3,242,455	R2	30	-10.0%	3,566,700	758,156	2,808,545	22.3	111,516	3.44%	14,555	0.45%	126,071	**3.89%**
	Total Distribution Plant	474,368,417				627,456,401	130,700,478	496,755,923	38.3	8,677,185	1.83%	4,256,147	0.91%	12,983,161	**2.74%**
	General Plant														
390.00	Structures & Improvements	7,212,038	R2	45	-5.0%	7,572,640	3,151,102	4,421,538	34.0	119,265	1.65%	10,590	0.15%	129,856	**1.80%**
391.00	Office Furniture & Equipment	7,135,859	L1	15	0.0%	7,135,859	4,965,140	2,170,719	8.8	246,792	3.46%	-	0.00%	246,792	**3.46%**
392.00	Transportation Equipment	8,309,220	L1.5	8	15.0%	7,062,837	3,274,660	3,788,177	7.3	694,294	8.36%	(171,883)	-2.07%	522,411	**6.29%**
393.00	Stores Equipment	74,109	R2	30	0.0%	74,109	58,090	16,019	16.5	970	1.31%	-	0.00%	970	**1.31%**
394.00	Tools, Shop & Garage Equipment	1,365,901	R2	20	0.0%	1,365,901	512,397	853,505	15.6	54,575	4.00%	-	0.00%	54,575	**4.00%**
395.00	Laboratory Equipment	186,547	R2	20	0.0%	186,547	186,547	-	4.8	0	0.00%	-	0.00%	-	**0.00%**
396.00	Power Operated Equipment	5,502,237	R2.5	18	5.0%	5,227,125	2,669,915	2,557,210	13.2	215,282	3.91%	(20,911)	-0.38%	194,371	**3.53%**
397.00	Comm Equip -Technology Based	708,292	R3	5	0.0%	708,292	708,292	-	0.0	0	0.00%	-	0.00%	-	**0.00%**
397.10	Comm Equip- Computer in Service	332,162	R3	40	0.0%	332,162	179,679	152,482	2.5	60,746				60,746	**18.29%**
397.20	Comm Equip -Towers and Fixtures	172,523	SQ	5	0.0%	172,523	83,998	88,525	28.8	3,076				3,076	**1.78%**
398.00	Miscellaneous Equipment	52,629	R2	20	0.0%	52,629	13,297	39,332	17.1	2,302	4.37%	-	0.00%	2,302	**4.37%**
	Total General Plant	31,051,516				29,890,623	15,803,116	14,087,507	11.6	1,397,302	4.50%	(182,204)	-0.59%	1,215,098	**3.91%**
	TOTAL PLANT STUDIED	**1,485,873,025**				**1,876,341,510**	**260,511,305**	**1,615,830,205**	**46.5**	**26,206,419**	**1.76%**	**8,497,985**	**0.58%**	**34,754,233**	**2.34%**

[1] From Company depreciation study; plant balances as of the study date
[2] Selected Iowa curve type and average life through mathematical and visual curve fitting-techniques and professional judgement.
[3] For life span accounts, weighted net salvage considering interim and terminal retirements. For mass accounts, estimated net salvage through historical analysis.
[4] = [1]*(1-[3])
[5] From Company depreciation study
[6] = [4] - [5]
[7] Average remaining life based on Iowas Curve in Column [2]
[8] = ([1] - [5]) / [7]
[9] = [8] / [1]

Depreciation Rate Development
(SL-AL-RL-BG System)

Account No.	Description	[1] Plant 12/31/2015	[2] Iowa Curve Type	[2] Iowa Curve AL	[3] Net Salvage	[4] Depreciable Base	[5] Book Reserve	[6] Future Accruals	[7] Remaining Life	[8] Service Life Accrual	[9] Service Life Rate	[10] Net Salvage Accrual	[11] Net Salvage Rate	[12] Total Accrual	[13] Total Rate

[10] = [12] - [8]
[11] = [13] - [9]
[12] = [6] / [7]. Some unadjusted accruals may be hard coded to match the Company's proposed accrual.
[13] = [12] / [1]. Some unadjusted rates may be hard coded to match the Company's proposed rate.

Account 352 Detailed Curve Comparison

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	**Exposures (Dollars)**	**Observed Life Table (OLT)**	**Sharyland R3-50**	**Mission R4-65**	**Sharyland SSD**	**Mission SSD**
0.0	60,691,584	100.00%	100.00%	100.00%	0.0000	0.0000
0.5	59,729,600	100.00%	99.98%	100.00%	0.0000	0.0000
1.5	43,670,990	100.00%	99.95%	100.00%	0.0000	0.0000
2.5	1,153,242	99.97%	99.91%	99.99%	0.0000	0.0000
3.5	737,976	99.97%	99.86%	99.99%	0.0000	0.0000
4.5	347,326	99.97%	99.80%	99.99%	0.0000	0.0000
5.5	182,885	99.97%	99.74%	99.98%	0.0000	0.0000
6.5	38,747	99.97%	99.66%	99.98%	0.0000	0.0000
7.5	726	99.97%	99.57%	99.97%	0.0000	0.0000
8.5	726	99.97%	99.47%	99.96%	0.0000	0.0000
9.5	367,537	99.97%	99.36%	99.95%	0.0000	0.0000
10.5	632,785	99.97%	99.23%	99.94%	0.0001	0.0000
11.5	2,859,710	99.97%	99.09%	99.93%	0.0001	0.0000
12.5	2,859,710	99.97%	98.92%	99.91%	0.0001	0.0000
13.5	2,859,710	99.97%	98.73%	99.89%	0.0002	0.0000
14.5	2,859,710	99.97%	98.53%	99.87%	0.0002	0.0000
15.5	2,859,710	99.97%	98.29%	99.84%	0.0003	0.0000
16.5	2,859,710	99.97%	98.04%	99.81%	0.0004	0.0000
17.5	2,859,710	99.97%	97.75%	99.77%	0.0005	0.0000
18.5	2,859,710	99.97%	97.43%	99.73%	0.0006	0.0000
19.5	2,859,710	99.97%	97.08%	99.68%	0.0008	0.0000
20.5	2,492,173	99.97%	96.70%	99.62%	0.0011	0.0000
21.5	393,059	99.97%	96.28%	99.55%	0.0014	0.0000
22.5	0	94.10%	95.81%	99.47%	0.0003	0.0029
23.5			95.31%	99.38%		
24.5			94.76%	99.28%		
25.5			94.16%	99.16%		
26.5			93.51%	99.03%		
27.5			92.81%	98.87%		
28.5			92.05%	98.70%		
29.5			91.23%	98.51%		
30.5			90.35%	98.29%		
31.5			89.40%	98.04%		
32.5			88.38%	97.76%		
33.5			87.28%	97.46%		
34.5			86.11%	97.11%		
35.5			84.85%	96.73%		
36.5			83.51%	96.31%		
37.5			82.07%	95.84%		
38.5			80.53%	95.33%		
39.5			78.89%	94.77%		
40.5			77.14%	94.15%		
41.5			75.28%	93.47%		
42.5			73.30%	92.74%		
43.5			71.21%	91.94%		
44.5			68.99%	91.07%		
45.5			66.66%	90.13%		
46.5			64.20%	89.13%		

Account 352 Detailed Curve Comparison

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	**Exposures (Dollars)**	**Observed Life Table (OLT)**	**Sharyland R3-50**	**Mission R4-65**	**Sharyland SSD**	**Mission SSD**
47.5			61.63%	88.04%		
48.5			58.95%	86.87%		
49.5			56.17%	85.63%		
50.5			53.29%	84.30%		
51.5			50.34%	82.88%		
52.5						
	Sum of Squared Differences			[8]	0.0061	0.0029

[1] Age in years using half-year convention

[2] Dollars exposed to retirement at the beginning of each age interval

[3] Observed life table based on the Company's property records. These numbers form the original survivor curve.

[4] The Company's selected Iowa curve to be fitted to the OLT.

[5] My selected Iowa curve to be fitted to the OLT.

[6] = ([4] - [3])^2. This is the squared difference between each point on the Company's curve and the observed survivor curve.

[7] = ([5] - [3])^2. This is the squared difference between each point on my curve and the observed survivor curve.

[8] = Sum of squared differences.

*Below the bold horizontal line represents less than 1% of beginning exposures.

Account 356 Detailed Curve Comparison

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	**Exposures (Dollars)**	**Observed Life Table (OLT)**	**Sharyland R3-50**	**Mission R3-57**	**Sharyland SSD**	**Mission SSD**
0.0	180,377,651	100.00%	100.00%	100.00%	0.0000	0.0000
0.5	177,863,730	100.00%	99.98%	99.99%	0.0000	0.0000
1.5	173,684,193	99.97%	99.95%	99.96%	0.0000	0.0000
2.5	450,247	99.97%	99.91%	99.92%	0.0000	0.0000
3.5	450,247	99.97%	99.86%	99.88%	0.0000	0.0000
4.5	446,866	99.96%	99.80%	99.83%	0.0000	0.0000
5.5	445,205	99.96%	99.74%	99.78%	0.0000	0.0000
6.5	407,138	99.96%	99.66%	99.72%	0.0000	0.0000
7.5	407,138	99.96%	99.57%	99.66%	0.0000	0.0000
8.5	16,912,716	99.96%	99.47%	99.58%	0.0000	0.0000
9.5	18,641,371	99.96%	99.36%	99.49%	0.0000	0.0000
10.5	20,798,424	99.96%	99.23%	99.40%	0.0001	0.0000
11.5	20,411,363	99.96%	99.09%	99.29%	0.0001	0.0000
12.5	20,411,363	99.96%	98.92%	99.17%	0.0001	0.0001
13.5	20,269,886	99.27%	98.73%	99.03%	0.0000	0.0000
14.5	20,269,886	99.27%	98.53%	98.88%	0.0001	0.0000
15.5	20,269,886	99.27%	98.29%	98.72%	0.0001	0.0000
16.5	20,269,886	99.27%	98.04%	98.53%	0.0002	0.0001
17.5	20,269,886	99.27%	97.75%	98.33%	0.0002	0.0001
18.5	19,819,946	97.06%	97.43%	98.11%	0.0000	0.0001
19.5	3,905,785	97.06%	97.08%	97.87%	0.0000	0.0001
20.5	2,177,130	97.06%	96.70%	97.60%	0.0000	0.0000
21.5	0		96.28%	97.31%		
22.5			95.81%	96.99%		
23.5			95.31%	96.65%		
24.5			94.76%	96.28%		
25.5			94.16%	95.88%		
26.5			93.51%	95.44%		
27.5			92.81%	94.97%		
28.5			92.05%	94.47%		
29.5			91.23%	93.92%		
30.5			90.35%	93.34%		
31.5			89.40%	92.71%		
32.5			88.38%	92.04%		
33.5			87.28%	91.33%		
34.5			86.11%	90.56%		
35.5			84.85%	89.75%		
36.5			83.51%	88.88%		
37.5			82.07%	87.96%		
38.5			80.53%	86.97%		
39.5			78.89%	85.93%		
40.5			77.14%	84.82%		
41.5			75.28%	83.64%		
42.5			73.30%	82.39%		
43.5			71.21%	81.06%		
44.5			68.99%	79.66%		
45.5			66.66%	78.18%		
46.5			64.20%	76.61%		

Account 356 Detailed Curve Comparison

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	**Exposures (Dollars)**	**Observed Life Table (OLT)**	**Sharyland R3-50**	**Mission R3-57**	**Sharyland SSD**	**Mission SSD**
47.5			61.63%	74.95%		
48.5			58.95%	73.21%		
49.5			56.17%	71.38%		
50.5			53.29%	69.45%		
51.5			50.34%	67.43%		
52.5						
	Sum of Squared Differences			[8]	0.0009	0.0006

[1] Age in years using half-year convention

[2] Dollars exposed to retirement at the beginning of each age interval

[3] Observed life table based on the Company's property records. These numbers form the original survivor curve.

[4] The Company's selected Iowa curve to be fitted to the OLT.

[5] My selected Iowa curve to be fitted to the OLT.

[6] = ([4] - [3])^2. This is the squared difference between each point on the Company's curve and the observed survivor curve.

[7] = ([5] - [3])^2. This is the squared difference between each point on my curve and the observed survivor curve.

[8] = Sum of squared differences.

*Below the bold horizontal line represents less than 1% of beginning exposures.

Sharyland
Electric Division
362.00 Station Equipment
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	53
Interval Between Test Points -	1
First Test Point -	1963
Last Test Point -	2015

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O3	182.25 Yrs.	1.5508E+13	21.92	45.63	23.18
SC	111.06 Yrs.	1.5576E+13	21.87	45.73	23.64
O1	111.06 Yrs.	1.5576E+13	21.87	45.73	23.64
O2	124.78 Yrs.	1.5583E+13	21.86	45.74	23.65
R0.5	89.41 Yrs.	1.5940E+13	21.62	46.26	25.39
R1	70.59 Yrs.	1.6795E+13	21.06	47.48	29.91
S.5	82.28 Yrs.	1.7258E+13	20.78	48.13	28.79
R1.5	58.34 Yrs.	1.7997E+13	20.35	49.15	38.11
L0	89.83 Yrs.	1.8931E+13	19.84	50.41	30.52
O4	201.00 Yrs.	1.9624E+13	.00	.00	28.46
L0.5	74.38 Yrs.	2.0054E+13	19.27	51.88	35.74
R2	49.22 Yrs.	2.0660E+13	18.99	52.66	52.99
S0	63.16 Yrs.	2.1382E+13	18.67	53.58	38.35
L1	62.63 Yrs.	2.3033E+13	17.98	55.60	43.13
S0.5	55.09 Yrs.	2.3164E+13	17.93	55.76	46.23
R2.5	43.94 Yrs.	2.3208E+13	17.92	55.82	70.72
L1.5	54.72 Yrs.	2.4783E+13	17.34	57.68	51.87
S1	48.88 Yrs.	2.6702E+13	16.70	59.87	56.71
R3	40.03 Yrs.	2.7650E+13	16.41	60.92	88.16
S1.5	44.94 Yrs.	2.8500E+13	16.17	61.85	67.19
L2	48.50 Yrs.	2.8509E+13	16.16	61.86	62.47
S2	41.75 Yrs.	3.1936E+13	15.27	65.48	78.30
L3	41.31 Yrs.	3.3469E+13	14.92	67.03	80.10
R4	36.28 Yrs.	3.4724E+13	14.65	68.27	99.90
S3	37.91 Yrs.	3.6426E+13	14.30	69.93	94.15
L4	36.94 Yrs.	3.7915E+13	14.02	71.34	94.76
S4	35.19 Yrs.	4.0988E+13	13.48	74.18	99.87
R5	34.13 Yrs.	4.2010E+13	13.32	75.10	100.00
L5	34.72 Yrs.	4.2218E+13	13.28	75.28	99.57
S5	33.75 Yrs.	4.4140E+13	12.99	76.98	100.00
S6	33.06 Yrs.	4.6204E+13	12.70	78.75	100.00
SQ	32.00 Yrs.	4.7670E+13	12.50	79.99	100.00

Sharyland
Electric Division
362.00 Station Equipment
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2011
Last Test Point -	2015

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
R4	37.56 Yrs.	3.0102E+11	162.21	6.16	99.36
S3	39.38 Yrs.	3.0623E+11	160.83	6.22	91.03
L3	43.03 Yrs.	3.0851E+11	160.23	6.24	76.81
L4	38.13 Yrs.	3.2775E+11	155.46	6.43	93.01
S2	43.84 Yrs.	3.4239E+11	152.10	6.57	72.42
R3	41.91 Yrs.	3.6225E+11	147.87	6.76	81.98
L2	51.06 Yrs.	3.8400E+11	143.62	6.96	58.12
S1.5	47.44 Yrs.	4.0133E+11	140.49	7.12	61.08
S4	36.16 Yrs.	4.2402E+11	136.68	7.32	99.67
R2.5	46.31 Yrs.	4.2538E+11	136.46	7.33	62.91
L1.5	58.03 Yrs.	4.5536E+11	131.89	7.58	47.42
S1	51.91 Yrs.	4.5648E+11	131.73	7.59	51.04
R2	52.25 Yrs.	4.7558E+11	129.05	7.75	46.47
L1	66.81 Yrs.	4.9114E+11	126.99	7.87	39.33
R1.5	62.53 Yrs.	5.1629E+11	123.86	8.07	33.48
L5	35.56 Yrs.	5.1644E+11	123.84	8.07	99.30
R5	34.91 Yrs.	5.1722E+11	123.75	8.08	100.00
S0.5	58.81 Yrs.	5.1882E+11	123.56	8.09	41.44
R1	76.34 Yrs.	5.3705E+11	121.44	8.23	26.69
R0.5	97.31 Yrs.	5.4276E+11	120.80	8.28	23.06
SC	121.31 Yrs.	5.4510E+11	120.54	8.30	21.64
O1	121.31 Yrs.	5.4510E+11	120.54	8.30	21.64
O2	136.28 Yrs.	5.4519E+11	120.53	8.30	21.65
O3	199.25 Yrs.	5.4609E+11	120.44	8.30	21.28
S.5	89.03 Yrs.	5.4859E+11	120.16	8.32	26.09
L0.5	79.84 Yrs.	5.4881E+11	120.14	8.32	32.46
S0	67.78 Yrs.	5.6513E+11	118.39	8.45	34.53
L0	97.09 Yrs.	5.8390E+11	116.47	8.59	27.80
S5	34.47 Yrs.	6.8179E+11	107.79	9.28	100.00
S6	33.63 Yrs.	9.6791E+11	90.46	11.05	100.00
SQ	33.00 Yrs.	1.1845E+12	81.78	12.23	100.00
O4	201.00 Yrs.	4.1009E+12	.00	.00	28.46

Sharyland
Electric Division
362.00 Station Equipment
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2006
Last Test Point -	2010

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
L0.5	82.25 Yrs.	3.2027E+10	278.71	3.59	31.16
R2	52.41 Yrs.	3.2197E+10	277.97	3.60	46.16
R1.5	65.25 Yrs.	3.2225E+10	277.85	3.60	30.97
S0	69.41 Yrs.	3.2696E+10	275.84	3.63	33.32
L0	102.56 Yrs.	3.3221E+10	273.65	3.65	26.00
S.5	95.22 Yrs.	3.4212E+10	269.67	3.71	23.99
R1	81.91 Yrs.	3.4590E+10	268.18	3.73	24.17
S0.5	58.78 Yrs.	3.5813E+10	263.57	3.79	41.48
R0.5	106.63 Yrs.	3.6597E+10	260.73	3.84	20.81
L1	66.28 Yrs.	3.7188E+10	258.65	3.87	39.79
O2	150.88 Yrs.	3.7597E+10	257.24	3.89	19.55
O1	134.31 Yrs.	3.7609E+10	257.20	3.89	19.54
SC	134.31 Yrs.	3.7609E+10	257.20	3.89	19.54
R2.5	45.19 Yrs.	4.0238E+10	248.65	4.02	66.57
L1.5	56.69 Yrs.	4.4355E+10	236.83	4.22	49.19
S1	50.41 Yrs.	5.2553E+10	217.58	4.60	53.77
S1.5	45.28 Yrs.	7.2300E+10	185.50	5.39	66.33
R3	39.78 Yrs.	7.4303E+10	182.98	5.47	88.91
L2	48.56 Yrs.	7.5444E+10	181.59	5.51	62.37
S2	41.03 Yrs.	1.2568E+11	140.69	7.11	80.28
O3	201.00 Yrs.	1.5062E+11	.00	.00	21.10
L3	39.84 Yrs.	1.7339E+11	119.78	8.35	82.80
R4	34.53 Yrs.	2.1972E+11	106.41	9.40	100.00
S3	36.06 Yrs.	2.6250E+11	97.35	10.27	97.06
L4	34.72 Yrs.	3.3929E+11	85.63	11.68	97.34
S4	32.63 Yrs.	5.1350E+11	69.61	14.37	100.00
R5	31.44 Yrs.	6.1185E+11	63.77	15.68	100.00
L5	32.00 Yrs.	6.2615E+11	63.03	15.86	99.95
S5	30.94 Yrs.	8.1068E+11	55.40	18.05	100.00
S6	30.09 Yrs.	1.1176E+12	47.18	21.19	100.00
SQ	30.00 Yrs.	2.1762E+12	33.81	29.58	100.00
O4	201.00 Yrs.	3.1574E+12	.00	.00	28.46

Sharyland
Electric Division
362.00 Station Equipment
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2001
Last Test Point -	2005

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O3	183.63 Yrs.	5.6529E+10	165.62	6.04	23.02
O1	111.53 Yrs.	5.7366E+10	164.41	6.08	23.54
SC	111.53 Yrs.	5.7366E+10	164.41	6.08	23.54
O2	125.28 Yrs.	5.7435E+10	164.31	6.09	23.55
R0.5	88.53 Yrs.	6.1886E+10	158.29	6.32	25.68
R1	68.03 Yrs.	7.3293E+10	145.45	6.88	31.59
S.5	79.06 Yrs.	7.8782E+10	140.29	7.13	30.25
R1.5	54.25 Yrs.	9.2247E+10	129.65	7.71	43.73
L0	85.26 Yrs.	9.9077E+10	125.10	7.99	32.47
L0.5	68.34 Yrs.	1.2106E+11	113.17	8.84	39.92
S0	57.63 Yrs.	1.4046E+11	105.07	9.52	43.83
R2	43.59 Yrs.	1.4322E+11	104.05	9.61	67.95
S0.5	48.78 Yrs.	1.8105E+11	92.54	10.81	56.10
L1	54.94 Yrs.	1.8677E+11	91.12	10.98	51.35
R2.5	37.63 Yrs.	2.0575E+11	86.81	11.52	90.16
L1.5	47.03 Yrs.	2.3032E+11	82.05	12.19	63.43
S1	41.75 Yrs.	2.7053E+11	75.71	13.21	72.45
S1.5	37.56 Yrs.	3.3494E+11	68.04	14.70	86.00
R3	33.16 Yrs.	3.3517E+11	68.02	14.70	99.76
L2	40.34 Yrs.	3.4222E+11	67.31	14.86	76.82
S2	34.03 Yrs.	4.6586E+11	57.69	17.33	96.12
L3	33.19 Yrs.	5.5932E+11	52.65	18.99	93.61
R4	28.88 Yrs.	6.3812E+11	49.29	20.29	100.00
S3	30.03 Yrs.	7.0114E+11	47.03	21.26	99.98
O4	201.00 Yrs.	7.1500E+11	.00	.00	28.46
L4	29.03 Yrs.	8.2164E+11	43.44	23.02	99.91
S4	27.34 Yrs.	1.0368E+12	38.67	25.86	100.00
R5	26.44 Yrs.	1.1663E+12	36.46	27.43	100.00
L5	26.91 Yrs.	1.1888E+12	36.12	27.69	100.00
S5	26.03 Yrs.	1.3784E+12	33.54	29.82	100.00
S6	25.41 Yrs.	1.7486E+12	29.78	33.58	100.00
SQ	25.00 Yrs.	2.6778E+12	24.06	41.56	100.00

Sharyland
Electric Division
362.00 Station Equipment
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1996
Last Test Point -	2000

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	180.91 Yrs.	1.2683E+11	103.55	9.66	31.26
O3	129.81 Yrs.	1.2762E+11	103.22	9.69	31.84
O1	78.94 Yrs.	1.2933E+11	102.54	9.75	33.25
SC	78.94 Yrs.	1.2933E+11	102.54	9.75	33.25
O2	88.69 Yrs.	1.2946E+11	102.49	9.76	33.27
R0.5	62.94 Yrs.	1.3816E+11	99.21	10.08	38.62
R1	48.78 Yrs.	1.6009E+11	92.16	10.85	52.86
S.5	56.72 Yrs.	1.6994E+11	89.45	11.18	45.56
R1.5	39.41 Yrs.	1.9557E+11	83.39	11.99	76.69
L0	61.39 Yrs.	2.0832E+11	80.79	12.38	46.96
L0.5	49.75 Yrs.	2.4468E+11	74.55	13.41	58.08
S0	42.03 Yrs.	2.7871E+11	69.85	14.32	67.05
R2	32.28 Yrs.	2.8155E+11	69.50	14.39	97.67
S0.5	35.97 Yrs.	3.4044E+11	63.20	15.82	83.44
L1	40.59 Yrs.	3.4048E+11	63.20	15.82	72.05
R2.5	28.31 Yrs.	3.7831E+11	59.95	16.68	100.00
L1.5	35.09 Yrs.	4.0763E+11	57.76	17.31	83.83
S1	31.19 Yrs.	4.6415E+11	54.13	18.48	96.48
S1.5	28.34 Yrs.	5.4604E+11	49.90	20.04	99.75
R3	25.31 Yrs.	5.5664E+11	49.43	20.23	100.00
L2	30.53 Yrs.	5.5832E+11	49.35	20.26	93.15
S2	25.97 Yrs.	6.9239E+11	44.32	22.57	100.00
L3	25.59 Yrs.	8.0560E+11	41.08	24.34	99.80
R4	22.50 Yrs.	9.0499E+11	38.76	25.80	100.00
S3	23.31 Yrs.	9.3947E+11	38.05	26.28	100.00
L4	22.72 Yrs.	1.0812E+12	35.46	28.20	100.00
S4	21.56 Yrs.	1.2733E+12	32.68	30.60	100.00
R5	20.97 Yrs.	1.4348E+12	30.79	32.48	100.00
L5	21.31 Yrs.	1.4448E+12	30.68	32.60	100.00
S5	20.72 Yrs.	1.5985E+12	29.17	34.29	100.00
S6	20.31 Yrs.	1.9941E+12	26.11	38.29	100.00
SQ	20.00 Yrs.	2.7480E+12	22.24	44.95	100.00

Sharyland
Electric Division
362.00 Station Equipment
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1991
Last Test Point -	1995

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	106.84 Yrs.	3.4450E+11	59.48	16.81	47.72
O3	76.81 Yrs.	3.4607E+11	59.35	16.85	49.70
SC	46.84 Yrs.	3.4950E+11	59.06	16.93	56.04
O1	46.84 Yrs.	3.4950E+11	59.06	16.93	56.04
O2	52.66 Yrs.	3.4965E+11	59.04	16.94	55.93
R0.5	37.84 Yrs.	3.6440E+11	57.84	17.29	73.07
R1	30.13 Yrs.	3.9996E+11	55.20	18.11	96.16
S.5	34.97 Yrs.	4.0518E+11	54.85	18.23	78.84
L0	38.23 Yrs.	4.4388E+11	52.40	19.08	73.44
R1.5	25.22 Yrs.	4.5766E+11	51.61	19.38	100.00
L0.5	31.84 Yrs.	4.9348E+11	49.70	20.12	85.47
S0	27.09 Yrs.	5.2469E+11	48.20	20.75	99.49
R2	21.56 Yrs.	5.7015E+11	46.24	21.63	100.00
L1	26.84 Yrs.	5.9010E+11	45.45	22.00	95.05
S0.5	23.78 Yrs.	5.9672E+11	45.20	22.13	100.00
L1.5	23.69 Yrs.	6.6807E+11	42.71	23.41	98.87
R2.5	19.47 Yrs.	6.8770E+11	42.10	23.75	100.00
S1	21.19 Yrs.	7.1430E+11	41.31	24.21	100.00
S1.5	19.66 Yrs.	8.0992E+11	38.79	25.78	100.00
L2	21.16 Yrs.	8.1538E+11	38.66	25.86	99.96
R3	17.88 Yrs.	8.7124E+11	37.40	26.74	100.00
S2	18.34 Yrs.	9.5231E+11	35.78	27.95	100.00
L3	18.28 Yrs.	1.0620E+12	33.88	29.52	100.00
S3	16.88 Yrs.	1.2022E+12	31.84	31.41	100.00
R4	16.41 Yrs.	1.2229E+12	31.57	31.67	100.00
L4	16.59 Yrs.	1.3696E+12	29.83	33.52	100.00
S4	15.91 Yrs.	1.5034E+12	28.47	35.12	100.00
L5	15.78 Yrs.	1.6693E+12	27.02	37.01	100.00
R5	15.59 Yrs.	1.7143E+12	26.66	37.50	100.00
S5	15.44 Yrs.	1.8408E+12	25.73	38.86	100.00
S6	15.22 Yrs.	2.2219E+12	23.42	42.70	100.00
SQ	15.00 Yrs.	2.7480E+12	21.06	47.48	100.00

Sharyland
Electric Division
362.00 Station Equipment
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1986
Last Test Point -	1990

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	47.06 Yrs.	5.5748E+11	25.90	38.61	72.62
O3	34.06 Yrs.	5.6297E+11	25.77	38.80	78.61
O1	21.09 Yrs.	5.7575E+11	25.49	39.24	100.00
SC	21.09 Yrs.	5.7575E+11	25.49	39.24	100.00
O2	23.72 Yrs.	5.7596E+11	25.48	39.25	92.76
R0.5	17.84 Yrs.	6.1752E+11	24.61	40.64	100.00
S.5	17.34 Yrs.	6.8079E+11	23.44	42.67	100.00
R1	15.28 Yrs.	6.9928E+11	23.12	43.24	100.00
L0	19.36 Yrs.	7.1891E+11	22.81	43.85	99.15
L0.5	17.00 Yrs.	7.9966E+11	21.62	46.24	99.92
R1.5	13.72 Yrs.	8.0358E+11	21.57	46.36	100.00
S0	14.81 Yrs.	8.5197E+11	20.95	47.73	100.00
L1	15.13 Yrs.	9.2023E+11	20.16	49.61	100.00
S0.5	13.59 Yrs.	9.5277E+11	19.81	50.48	100.00
R2	12.53 Yrs.	9.5632E+11	19.77	50.57	100.00
L1.5	13.84 Yrs.	1.0229E+12	19.12	52.30	100.00
S1	12.63 Yrs.	1.0895E+12	18.53	53.98	100.00
R2.5	11.81 Yrs.	1.1029E+12	18.41	54.31	100.00
L2	12.81 Yrs.	1.1578E+12	17.97	55.64	100.00
S1.5	12.00 Yrs.	1.1853E+12	17.76	56.30	100.00
R3	11.25 Yrs.	1.2988E+12	16.97	58.93	100.00
S2	11.47 Yrs.	1.3046E+12	16.93	59.06	100.00
L3	11.53 Yrs.	1.3955E+12	16.37	61.09	100.00
S3	10.84 Yrs.	1.5110E+12	15.73	63.57	100.00
R4	10.69 Yrs.	1.6393E+12	15.10	66.21	100.00
L4	10.75 Yrs.	1.6658E+12	14.98	66.74	100.00
S4	10.44 Yrs.	1.8216E+12	14.33	69.79	100.00
L5	10.38 Yrs.	1.9520E+12	13.84	72.25	100.00
R5	10.34 Yrs.	2.0522E+12	13.50	74.08	100.00
S5	10.28 Yrs.	2.1617E+12	13.15	76.03	100.00
S6	10.16 Yrs.	2.4270E+12	12.41	80.56	100.00
SQ	10.00 Yrs.	2.7254E+12	11.71	85.37	100.00

Sharyland
Electric Division
362.00 Station Equipment
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1981
Last Test Point -	1985

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
L3	6.50 Yrs.	4.5078E+11	12.86	77.79	100.00
L2	7.00 Yrs.	4.5534E+11	12.79	78.18	100.00
S2	6.44 Yrs.	4.6662E+11	12.64	79.14	100.00
S1.5	6.63 Yrs.	4.7057E+11	12.58	79.48	100.00
L1.5	7.38 Yrs.	4.7346E+11	12.54	79.72	100.00
S1	6.84 Yrs.	4.7516E+11	12.52	79.87	100.00
S3	6.19 Yrs.	4.7793E+11	12.48	80.10	100.00
L4	6.16 Yrs.	4.7830E+11	12.48	80.13	100.00
L1	7.84 Yrs.	4.8850E+11	12.35	80.98	100.00
S0.5	7.19 Yrs.	4.9148E+11	12.31	81.23	100.00
R3	6.28 Yrs.	5.0187E+11	12.18	82.08	100.00
R2.5	6.50 Yrs.	5.0447E+11	12.15	82.29	100.00
S4	6.03 Yrs.	5.0657E+11	12.13	82.46	100.00
S0	7.59 Yrs.	5.0694E+11	12.12	82.49	100.00
R2	6.75 Yrs.	5.0831E+11	12.11	82.60	100.00
L5	6.00 Yrs.	5.0845E+11	12.10	82.62	100.00
L0.5	8.47 Yrs.	5.1244E+11	12.06	82.94	100.00
R4	6.09 Yrs.	5.1692E+11	12.00	83.30	100.00
R1.5	7.13 Yrs.	5.2409E+11	11.92	83.88	100.00
L0	9.28 Yrs.	5.3328E+11	11.82	84.61	100.00
S5	5.91 Yrs.	5.3448E+11	11.81	84.70	100.00
R5	5.94 Yrs.	5.3469E+11	11.80	84.72	100.00
R1	7.63 Yrs.	5.3918E+11	11.75	85.08	100.00
S.5	8.38 Yrs.	5.4041E+11	11.74	85.17	100.00
S6	5.84 Yrs.	5.5564E+11	11.58	86.36	100.00
R0.5	8.44 Yrs.	5.5655E+11	11.57	86.44	100.00
SC	9.50 Yrs.	5.6900E+11	11.44	87.40	100.00
O1	9.50 Yrs.	5.6900E+11	11.44	87.40	100.00
O2	10.63 Yrs.	5.6943E+11	11.44	87.43	100.00
O3	14.78 Yrs.	5.7542E+11	11.38	87.89	98.21
O4	20.19 Yrs.	5.7826E+11	11.35	88.11	90.24
SQ	6.00 Yrs.	6.0644E+11	11.08	90.23	100.00

Sharyland
Electric Division
362.00 Station Equipment
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1976
Last Test Point -	1980

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S3	129.28 Yrs.	1.2536E-04	)460157.66	.00	.49
L3	166.72 Yrs.	3.1900E-04	843490.77	.00	.68
S4	50.34 Yrs.	3.4216E-04	889466.25	.00	59.48
R5	43.63 Yrs.	5.0821E-04	962318.03	.00	95.35
S5	32.69 Yrs.	5.3495E-04	077609.54	.00	100.00
L4	63.75 Yrs.	5.4106E-04	)448309.04	.00	20.75
S6	25.25 Yrs.	6.4098E-04	475541.27	.00	100.00
L5	37.00 Yrs.	6.6842E-04	)370790.69	.00	98.57
SQ	18.00 Yrs.	1.1000E-03	'461582.65	.00	100.00
S2	201.00 Yrs.	5.8031E-01	.00	.00	.39
R4	201.00 Yrs.	1.2035E+03	.00	.00	.17
S1.5	201.00 Yrs.	1.3280E+03	.00	.00	1.26
L2	201.00 Yrs.	1.9465E+03	.00	.00	1.64
S1	201.00 Yrs.	5.1747E+03	.00	.00	2.13
R3	201.00 Yrs.	3.6600E+05	.00	.00	1.18
S0.5	201.00 Yrs.	6.3936E+05	.00	.00	4.06
L1.5	201.00 Yrs.	1.3993E+06	.00	.00	3.32
S0	201.00 Yrs.	2.3313E+06	.00	.00	5.98
R2.5	201.00 Yrs.	4.2938E+06	.00	.00	2.49
L1	201.00 Yrs.	5.3897E+06	.00	.00	5.00
R2	201.00 Yrs.	1.2524E+07	.00	.00	3.81
L0.5	201.00 Yrs.	1.7708E+07	.00	.00	7.92
L0	206.00 Yrs.	3.4846E+07	.00	.00	10.49
R1.5	201.00 Yrs.	4.2271E+07	.00	.00	5.87
R1	201.00 Yrs.	8.9566E+07	.00	.00	7.92
S.5	201.00 Yrs.	9.6497E+07	.00	.00	9.52
R0.5	201.00 Yrs.	1.9024E+08	.00	.00	10.49
O1	201.00 Yrs.	3.2838E+08	.00	.00	13.06
SC	201.00 Yrs.	3.2838E+08	.00	.00	13.06
O2	201.00 Yrs.	4.1357E+08	.00	.00	14.68
O3	201.00 Yrs.	9.0053E+08	.00	.00	21.10
O4	201.00 Yrs.	1.7560E+09	.00	.00	28.46

Sharyland
Electric Division
362.00 Station Equipment
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1971
Last Test Point -	1975

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S3	90.66 Yrs.	2.1382E-04	418003.28	.00	4.20
L3	123.31 Yrs.	3.2523E-04	798917.18	.00	2.24
S4	36.78 Yrs.	3.3069E-04	634889.44	.00	99.46
R5	31.88 Yrs.	3.7199E-04	512706.67	.00	100.00
S5	23.91 Yrs.	3.7369E-04	470699.58	.00	100.00
L4	46.59 Yrs.	3.8363E-04	229692.46	.00	74.26
S6	18.31 Yrs.	3.9602E-04	942337.26	.00	100.00
L5	26.84 Yrs.	3.9655E-04	930398.19	.00	100.00
SQ	16.00 Yrs.	5.0000E-04	968072.44	.00	100.00
S2	201.00 Yrs.	4.2044E-03	.00	.00	.39
S1.5	201.00 Yrs.	2.7493E+01	.00	.00	1.26
R4	201.00 Yrs.	3.0614E+01	.00	.00	.17
L2	201.00 Yrs.	3.8540E+01	.00	.00	1.64
S1	201.00 Yrs.	1.0818E+02	.00	.00	2.13
R3	201.00 Yrs.	9.4319E+03	.00	.00	1.18
S0.5	201.00 Yrs.	1.6713E+04	.00	.00	4.06
L1.5	201.00 Yrs.	3.5856E+04	.00	.00	3.32
S0	201.00 Yrs.	6.1562E+04	.00	.00	5.98
R2.5	201.00 Yrs.	1.1098E+05	.00	.00	2.49
L1	201.00 Yrs.	1.3876E+05	.00	.00	5.00
R2	201.00 Yrs.	3.2387E+05	.00	.00	3.81
L0.5	201.00 Yrs.	4.6502E+05	.00	.00	7.92
L0	206.00 Yrs.	9.2109E+05	.00	.00	10.49
R1.5	201.00 Yrs.	1.0937E+06	.00	.00	5.87
R1	201.00 Yrs.	2.3180E+06	.00	.00	7.92
S.5	201.00 Yrs.	2.5020E+06	.00	.00	9.52
R0.5	201.00 Yrs.	4.9241E+06	.00	.00	10.49
SC	201.00 Yrs.	8.5006E+06	.00	.00	13.06
O1	201.00 Yrs.	8.5006E+06	.00	.00	13.06
O2	201.00 Yrs.	1.0706E+07	.00	.00	14.68
O3	201.00 Yrs.	2.3313E+07	.00	.00	21.10
O4	201.00 Yrs.	4.5465E+07	.00	.00	28.46

Sharyland
Electric Division
362.00 Station Equipment
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1966
Last Test Point -	1970

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
L5	18.00 Yrs.	2.2830E-22	174790.00	.00	100.00
L4	33.00 Yrs.	2.2830E-22	174790.00	.00	98.67
L3	108.00 Yrs.	2.2830E-22	174790.00	.00	3.73
S5	18.00 Yrs.	2.2830E-22	174790.00	.00	100.00
R5	24.00 Yrs.	2.2830E-22	174790.00	.00	100.00
SQ	16.00 Yrs.	2.2830E-22	174790.00	.00	100.00
S3	125.00 Yrs.	2.2830E-22	174790.00	.00	.61
S6	16.00 Yrs.	2.2830E-22	174790.00	.00	100.00
S4	29.00 Yrs.	4.3638E-08	143935.81	.00	100.00
S2	201.00 Yrs.	1.8831E-05	.00	.00	.39
S1.5	201.00 Yrs.	2.1080E-01	.00	.00	1.26
L2	201.00 Yrs.	2.6513E-01	.00	.00	1.64
R4	201.00 Yrs.	5.8245E-01	.00	.00	.17
S1	201.00 Yrs.	8.2796E-01	.00	.00	2.13
R3	201.00 Yrs.	1.8715E+02	.00	.00	1.18
S0.5	201.00 Yrs.	2.3780E+02	.00	.00	4.06
L1.5	201.00 Yrs.	6.9004E+02	.00	.00	3.32
S0	201.00 Yrs.	8.9550E+02	.00	.00	5.98
R2.5	201.00 Yrs.	2.2649E+03	.00	.00	2.49
L1	201.00 Yrs.	2.7065E+03	.00	.00	5.00
R2	201.00 Yrs.	6.6413E+03	.00	.00	3.81
L0.5	201.00 Yrs.	8.4816E+03	.00	.00	7.92
L0	206.00 Yrs.	1.6397E+04	.00	.00	10.49
R1.5	201.00 Yrs.	2.2633E+04	.00	.00	5.87
R1	201.00 Yrs.	4.8129E+04	.00	.00	7.92
S.5	201.00 Yrs.	5.1019E+04	.00	.00	9.52
R0.5	201.00 Yrs.	1.0281E+05	.00	.00	10.49
O1	201.00 Yrs.	1.7799E+05	.00	.00	13.06
SC	201.00 Yrs.	1.7799E+05	.00	.00	13.06
O2	201.00 Yrs.	2.2413E+05	.00	.00	14.68
O3	201.00 Yrs.	4.8854E+05	.00	.00	21.10
O4	201.00 Yrs.	9.5367E+05	.00	.00	28.46

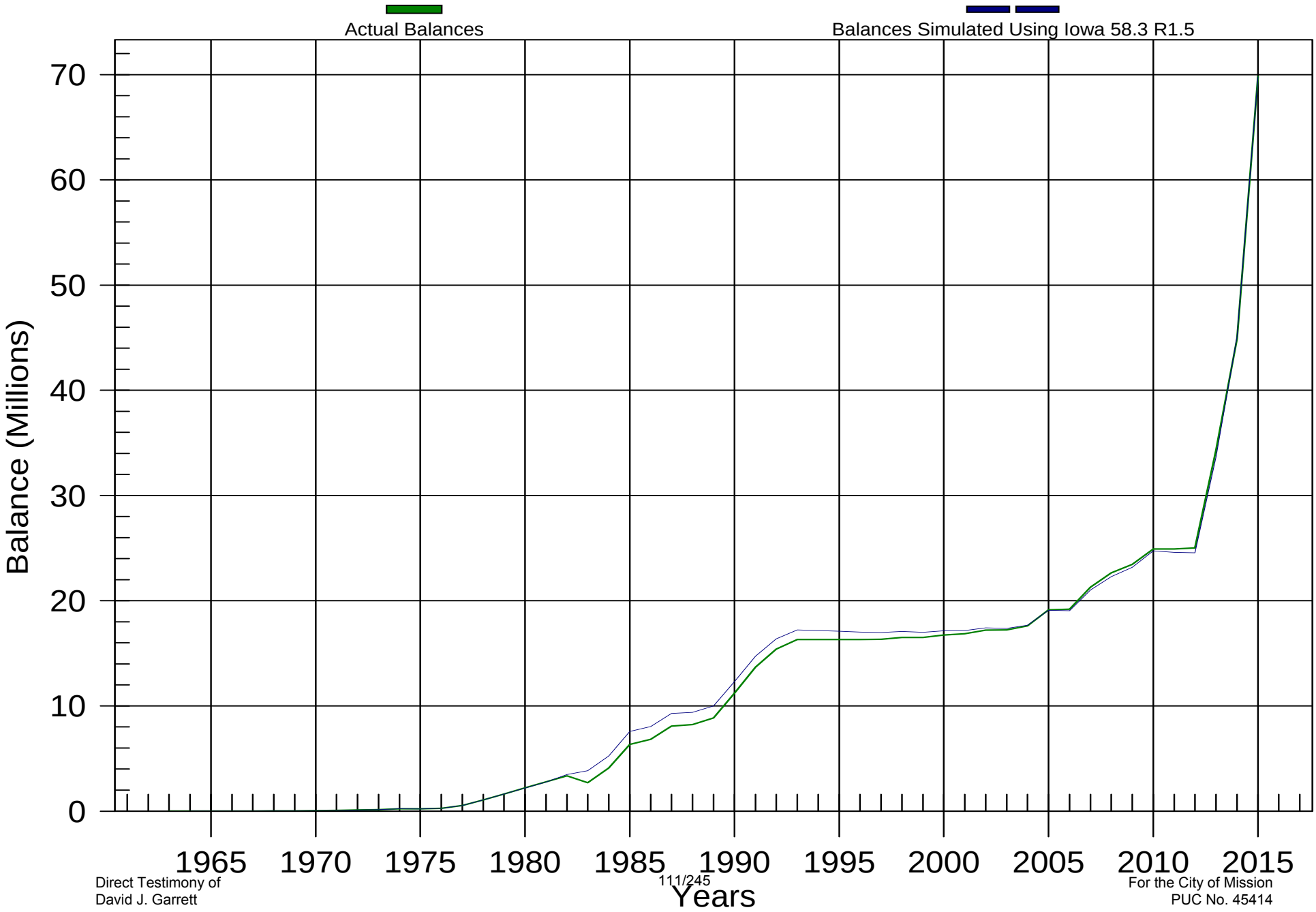
Sharyland
Electric Division
362.00 Station Equipment
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	3
Interval Between Test Points -	1
First Test Point -	1963
Last Test Point -	1965

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
SQ	16.00 Yrs.	8.2718E-25	²510670.00	.00	100.00
L5	16.00 Yrs.	8.2718E-25	²510670.00	.00	100.00
L4	16.00 Yrs.	8.2718E-25	²510670.00	.00	100.00
S4	16.00 Yrs.	8.2718E-25	²510670.00	.00	100.00
R5	16.00 Yrs.	8.2718E-25	²510670.00	.00	100.00
S6	16.00 Yrs.	8.2718E-25	²510670.00	.00	100.00
L3	36.00 Yrs.	8.2718E-25	²510670.00	.00	89.38
S5	16.00 Yrs.	8.2718E-25	²510670.00	.00	100.00
S2	201.00 Yrs.	2.5934E-09	.00	.00	.39
S3	28.00 Yrs.	4.3638E-08	¡989816.18	.00	100.00
L2	201.00 Yrs.	8.1874E-05	.00	.00	1.64
S1.5	201.00 Yrs.	8.6394E-05	.00	.00	1.26
S1	201.00 Yrs.	3.2576E-04	.00	.00	2.13
R4	201.00 Yrs.	1.8937E-03	.00	.00	.17
S0.5	201.00 Yrs.	3.7097E-01	.00	.00	4.06
R3	201.00 Yrs.	6.5266E-01	.00	.00	1.18
S0	201.00 Yrs.	1.4377E+00	.00	.00	5.98
L1.5	201.00 Yrs.	2.3133E+00	.00	.00	3.32
R2.5	201.00 Yrs.	8.2331E+00	.00	.00	2.49
L1	201.00 Yrs.	9.1953E+00	.00	.00	5.00
L0.5	201.00 Yrs.	2.4114E+01	.00	.00	7.92
R2	201.00 Yrs.	2.4305E+01	.00	.00	3.81
L0	206.00 Yrs.	4.3546E+01	.00	.00	10.49
R1.5	201.00 Yrs.	8.3954E+01	.00	.00	5.87
R1	201.00 Yrs.	1.7941E+02	.00	.00	7.92
S.5	201.00 Yrs.	1.8389E+02	.00	.00	9.52
R0.5	201.00 Yrs.	3.8647E+02	.00	.00	10.49
O1	201.00 Yrs.	6.7200E+02	.00	.00	13.06
SC	201.00 Yrs.	6.7200E+02	.00	.00	13.06
O2	201.00 Yrs.	8.4600E+02	.00	.00	14.68
O3	201.00 Yrs.	1.8467E+03	.00	.00	21.10
O4	201.00 Yrs.	3.6098E+03	.00	.00	28.46

Sharyland
Electric Division
362.00 Station Equipment
Actual And Simulated Balances 1963-2015



Sharyland
Electric Division
364.00 Poles, Towers, and Fixtures
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	53
Interval Between Test Points -	1
First Test Point -	1963
Last Test Point -	2015

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
SC	143.94 Yrs.	7.6427E+12	98.51	10.15	18.24
O1	143.94 Yrs.	7.6427E+12	98.51	10.15	18.24
O2	161.69 Yrs.	7.6496E+12	98.46	10.16	18.25
R0.5	115.22 Yrs.	8.1967E+12	95.12	10.51	19.09
R1	90.16 Yrs.	9.7265E+12	87.32	11.45	21.19
S.5	104.75 Yrs.	1.0328E+13	84.74	11.80	21.29
R1.5	73.91 Yrs.	1.2707E+13	76.39	13.09	24.81
L0	113.58 Yrs.	1.3058E+13	75.36	13.27	22.90
L0.5	93.44 Yrs.	1.6598E+13	66.84	14.96	25.94
S0	79.03 Yrs.	1.9473E+13	61.71	16.20	27.32
R2	61.88 Yrs.	2.0965E+13	59.48	16.81	31.82
O3	201.00 Yrs.	2.1985E+13	.00	.00	21.10
S0.5	68.72 Yrs.	2.6069E+13	53.34	18.75	31.55
L1	77.88 Yrs.	2.6364E+13	53.04	18.85	31.12
R2.5	55.22 Yrs.	3.1524E+13	48.50	20.62	39.76
L1.5	68.13 Yrs.	3.3949E+13	46.74	21.40	35.91
S1	60.66 Yrs.	3.9814E+13	43.16	23.17	37.92
S1.5	55.91 Yrs.	5.0158E+13	38.45	26.01	43.63
L2	60.41 Yrs.	5.1747E+13	37.86	26.42	43.54
R3	50.38 Yrs.	5.2459E+13	37.60	26.60	51.50
S2	52.00 Yrs.	6.8719E+13	32.85	30.44	51.15
L3	51.91 Yrs.	8.3329E+13	29.83	33.52	57.56
R4	46.09 Yrs.	9.7458E+13	27.58	36.25	73.92
S3	47.69 Yrs.	1.0120E+14	27.07	36.94	65.39
L4	46.91 Yrs.	1.1800E+14	25.07	39.89	73.32
S4	44.94 Yrs.	1.4300E+14	22.77	43.91	82.91
L5	44.63 Yrs.	1.5821E+14	21.65	46.19	86.88
R5	44.00 Yrs.	1.5972E+14	21.55	46.41	94.31
S5	43.69 Yrs.	1.7925E+14	20.34	49.16	95.60
O4	201.00 Yrs.	1.8981E+14	.00	.00	28.46
S6	43.16 Yrs.	2.0641E+14	18.95	52.76	99.83
SQ	43.00 Yrs.	2.3324E+14	17.83	56.08	100.00

Sharyland
Electric Division
364.00 Poles, Towers, and Fixtures
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2011
Last Test Point -	2015

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S2	55.16 Yrs.	8.5660E+10	716.41	1.40	44.28
R3	53.00 Yrs.	8.6984E+10	710.93	1.41	43.91
L3	54.81 Yrs.	1.0333E+11	652.28	1.53	50.86
L2	64.19 Yrs.	1.3229E+11	576.49	1.73	38.40
S1.5	59.41 Yrs.	1.4194E+11	556.54	1.80	37.96
S3	50.25 Yrs.	1.7812E+11	496.82	2.01	56.96
R2.5	58.22 Yrs.	1.7984E+11	494.43	2.02	34.41
S1	64.63 Yrs.	2.2656E+11	440.51	2.27	33.33
L1.5	72.44 Yrs.	2.3917E+11	428.74	2.33	31.90
R4	48.19 Yrs.	2.4494E+11	423.66	2.36	63.79
R2	65.28 Yrs.	2.9159E+11	388.30	2.58	28.27
L1	82.91 Yrs.	3.2078E+11	370.21	2.70	28.07
S0.5	73.06 Yrs.	3.5651E+11	351.17	2.85	28.24
L4	49.16 Yrs.	3.8438E+11	338.20	2.96	66.11
R1.5	77.66 Yrs.	4.0777E+11	328.35	3.05	22.79
L0.5	98.94 Yrs.	4.5282E+11	311.59	3.21	23.82
S0	83.94 Yrs.	4.6466E+11	307.60	3.25	24.88
R1	94.31 Yrs.	4.7570E+11	304.01	3.29	19.94
S.5	109.88 Yrs.	4.9588E+11	297.75	3.36	20.06
R0.5	119.91 Yrs.	5.0752E+11	294.32	3.40	18.27
SC	149.28 Yrs.	5.2064E+11	290.59	3.44	17.58
O1	149.28 Yrs.	5.2064E+11	290.59	3.44	17.58
O2	167.72 Yrs.	5.2073E+11	290.56	3.44	17.59
L0	119.91 Yrs.	5.4280E+11	284.60	3.51	21.38
S4	46.97 Yrs.	7.1091E+11	248.68	4.02	74.61
L5	46.53 Yrs.	1.0679E+12	202.90	4.93	81.19
R5	45.69 Yrs.	1.2792E+12	185.39	5.39	87.75
S5	45.41 Yrs.	1.6201E+12	164.73	6.07	90.59
S6	44.75 Yrs.	2.4611E+12	133.65	7.48	98.95
SQ	44.00 Yrs.	3.6836E+12	109.25	9.15	100.00
O3	201.00 Yrs.	9.2063E+12	.00	.00	21.10
O4	201.00 Yrs.	8.4548E+13	.00	.00	28.46

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Electric Division
364.00 Poles, Towers, and Fixtures
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2006
Last Test Point -	2010

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O1	154.69 Yrs.	5.4207E+10	599.49	1.67	16.97
SC	154.69 Yrs.	5.4207E+10	599.49	1.67	16.97
O2	173.78 Yrs.	5.4307E+10	598.94	1.67	16.98
R0.5	123.44 Yrs.	6.2488E+10	558.36	1.79	17.70
R1	95.88 Yrs.	8.4478E+10	480.22	2.08	19.51
S.5	111.53 Yrs.	9.1673E+10	460.99	2.17	19.69
L0	120.77 Yrs.	1.2429E+11	395.90	2.53	21.19
R1.5	77.63 Yrs.	1.2741E+11	391.02	2.56	22.80
L0.5	98.28 Yrs.	1.7241E+11	336.15	2.97	24.06
S0	83.06 Yrs.	2.0479E+11	308.43	3.24	25.29
R2	63.84 Yrs.	2.4566E+11	281.61	3.55	29.69
S0.5	71.34 Yrs.	2.9343E+11	257.67	3.88	29.49
L1	80.78 Yrs.	2.9977E+11	254.93	3.92	29.31
R2.5	56.09 Yrs.	4.1111E+11	217.69	4.59	38.09
L1.5	69.94 Yrs.	4.1219E+11	217.40	4.60	34.16
S1	62.19 Yrs.	4.7725E+11	202.04	4.95	36.06
S1.5	56.69 Yrs.	6.4766E+11	173.44	5.77	42.29
L2	61.19 Yrs.	6.8832E+11	168.23	5.94	42.44
R3	50.34 Yrs.	7.6683E+11	159.39	6.27	51.60
S2	52.16 Yrs.	9.5622E+11	142.73	7.01	50.79
L3	51.50 Yrs.	1.3188E+12	121.54	8.23	58.50
S3	47.03 Yrs.	1.6810E+12	107.65	9.29	67.61
R4	45.03 Yrs.	1.8037E+12	103.93	9.62	78.86
L4	45.78 Yrs.	2.2942E+12	92.15	10.85	76.58
S4	43.59 Yrs.	3.0065E+12	80.50	12.42	87.66
L5	43.09 Yrs.	3.7493E+12	72.08	13.87	90.44
R5	42.31 Yrs.	4.0037E+12	69.76	14.34	97.96
S5	41.94 Yrs.	4.6651E+12	64.62	15.47	98.43
S6	41.22 Yrs.	6.2521E+12	55.82	17.91	99.99
SQ	41.00 Yrs.	7.2583E+12	51.81	19.30	100.00
O3	201.00 Yrs.	7.3848E+12	.00	.00	21.10
O4	201.00 Yrs.	5.8433E+13	.00	.00	28.46

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364.00 Poles, Towers, and Fixtures
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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2001
Last Test Point -	2005

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O1	137.94 Yrs.	1.6185E+11	312.28	3.20	19.03
SC	137.94 Yrs.	1.6185E+11	312.28	3.20	19.03
O2	154.94 Yrs.	1.6201E+11	312.13	3.20	19.04
R0.5	110.03 Yrs.	1.7518E+11	300.17	3.33	20.09
R1	85.41 Yrs.	2.0889E+11	274.88	3.64	22.81
S.5	99.31 Yrs.	2.1944E+11	268.19	3.73	22.76
L0	107.37 Yrs.	2.6630E+11	243.46	4.11	24.57
R1.5	69.16 Yrs.	2.7046E+11	241.58	4.14	27.88
L0.5	87.41 Yrs.	3.3089E+11	218.41	4.58	28.59
S0	73.81 Yrs.	3.7211E+11	205.95	4.86	30.35
R2	56.84 Yrs.	4.2494E+11	192.73	5.19	38.47
S0.5	63.44 Yrs.	4.8198E+11	180.96	5.53	36.36
L1	71.84 Yrs.	4.8880E+11	179.69	5.57	35.30
L1.5	62.19 Yrs.	6.2250E+11	159.23	6.28	42.30
R2.5	49.94 Yrs.	6.2558E+11	158.84	6.30	52.12
S1	55.28 Yrs.	6.9648E+11	150.54	6.64	45.44
S1.5	50.44 Yrs.	8.9149E+11	133.06	7.52	54.28
L2	54.41 Yrs.	9.3461E+11	129.95	7.70	52.63
R3	44.84 Yrs.	1.0300E+12	123.79	8.08	71.08
S2	46.41 Yrs.	1.2321E+12	113.18	8.84	65.31
O3	201.00 Yrs.	1.4735E+12	.00	.00	21.10
L3	45.88 Yrs.	1.6162E+12	98.82	10.12	71.03
S3	41.88 Yrs.	2.0016E+12	88.80	11.26	84.36
R4	40.16 Yrs.	2.1387E+12	85.91	11.64	95.71
L4	40.81 Yrs.	2.6387E+12	77.34	12.93	88.22
S4	38.88 Yrs.	3.3405E+12	68.74	14.55	97.95
L5	38.44 Yrs.	4.0872E+12	62.14	16.09	97.43
R5	37.75 Yrs.	4.3475E+12	60.25	16.60	100.00
S5	37.44 Yrs.	4.9790E+12	56.30	17.76	99.98
S6	36.78 Yrs.	6.5792E+12	48.98	20.42	100.00
SQ	36.00 Yrs.	8.4514E+12	43.22	23.14	100.00
O4	201.00 Yrs.	2.5444E+13	.00	.00	28.46

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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1996
Last Test Point -	2000

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
SC	124.13 Yrs.	1.2328E+10	981.85	1.02	21.15
O1	124.13 Yrs.	1.2328E+10	981.85	1.02	21.15
O2	139.44 Yrs.	1.2364E+10	980.42	1.02	21.16
R0.5	98.91 Yrs.	1.5455E+10	876.92	1.14	22.64
R1	76.56 Yrs.	2.4601E+10	695.05	1.44	26.58
O3	201.00 Yrs.	2.5431E+10	.00	.00	21.10
S.5	88.97 Yrs.	2.7800E+10	653.84	1.53	26.11
L0	95.96 Yrs.	4.3114E+10	525.03	1.90	28.20
R1.5	61.78 Yrs.	4.4919E+10	514.38	1.94	34.24
L0.5	77.94 Yrs.	6.8299E+10	417.15	2.40	33.56
S0	65.72 Yrs.	8.5543E+10	372.74	2.68	36.16
R2	50.59 Yrs.	1.0971E+11	329.13	3.04	49.90
S0.5	56.38 Yrs.	1.3724E+11	294.27	3.40	44.50
L1	63.84 Yrs.	1.4182E+11	289.48	3.45	41.98
R2.5	44.31 Yrs.	2.1074E+11	237.48	4.21	69.47
L1.5	55.19 Yrs.	2.1086E+11	237.41	4.21	51.22
S1	49.03 Yrs.	2.5214E+11	217.11	4.61	56.40
S1.5	44.66 Yrs.	3.6529E+11	180.37	5.54	67.90
L2	48.19 Yrs.	3.8992E+11	174.58	5.73	63.01
R3	39.72 Yrs.	4.4578E+11	163.28	6.12	89.09
S2	41.06 Yrs.	5.7851E+11	143.33	6.98	80.20
L3	40.56 Yrs.	8.2771E+11	119.83	8.35	81.49
S3	37.00 Yrs.	1.0890E+12	104.47	9.57	95.72
R4	35.50 Yrs.	1.1772E+12	100.48	9.95	99.99
L4	36.06 Yrs.	1.5410E+12	87.82	11.39	95.89
S4	34.34 Yrs.	2.0363E+12	76.40	13.09	99.95
L5	33.97 Yrs.	2.6046E+12	67.55	14.80	99.75
R5	33.34 Yrs.	2.7880E+12	65.29	15.32	100.00
S5	33.09 Yrs.	3.2845E+12	60.15	16.62	100.00
S6	32.50 Yrs.	4.6124E+12	50.76	19.70	100.00
SQ	32.00 Yrs.	5.7227E+12	45.57	21.94	100.00
O4	201.00 Yrs.	9.2852E+12	.00	.00	28.46

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364.00 Poles, Towers, and Fixtures
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1991
Last Test Point -	1995

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
R1	76.03 Yrs.	5.1703E+09	1260.49	.79	26.85
R0.5	99.69 Yrs.	5.3217E+09	1242.43	.80	22.44
S.5	87.91 Yrs.	5.5785E+09	1213.49	.82	26.50
O2	141.59 Yrs.	5.7427E+09	1196.02	.84	20.84
O1	126.06 Yrs.	5.7505E+09	1195.21	.84	20.82
SC	126.06 Yrs.	5.7505E+09	1195.21	.84	20.82
R1.5	60.16 Yrs.	7.4982E+09	1046.69	.96	35.98
L0	93.38 Yrs.	9.0381E+09	953.36	1.05	29.14
L0.5	74.75 Yrs.	1.5581E+10	726.10	1.38	35.50
S0	62.56 Yrs.	2.3016E+10	597.43	1.67	38.89
R2	47.88 Yrs.	2.5675E+10	565.64	1.77	56.23
O3	201.00 Yrs.	3.6025E+10	.00	.00	21.10
S0.5	52.91 Yrs.	4.3641E+10	433.86	2.30	49.38
L1	59.88 Yrs.	4.5671E+10	424.11	2.36	45.87
R2.5	41.19 Yrs.	6.4745E+10	356.20	2.81	79.83
L1.5	51.22 Yrs.	7.6713E+10	327.24	3.06	56.93
S1	45.28 Yrs.	1.0163E+11	284.31	3.52	64.25
S1.5	40.88 Yrs.	1.5864E+11	227.56	4.39	77.64
L2	44.06 Yrs.	1.7318E+11	217.80	4.59	70.23
R3	36.22 Yrs.	1.8036E+11	213.42	4.69	96.98
S2	37.22 Yrs.	2.8115E+11	170.93	5.85	90.03
L3	36.56 Yrs.	4.2870E+11	138.43	7.22	88.47
R4	31.81 Yrs.	5.8658E+11	118.34	8.45	100.00
S3	33.19 Yrs.	5.8746E+11	118.25	8.46	99.41
L4	32.22 Yrs.	8.7135E+11	97.10	10.30	99.10
S4	30.56 Yrs.	1.2119E+12	82.33	12.15	100.00
L5	30.16 Yrs.	1.6316E+12	70.96	14.09	100.00
R5	29.63 Yrs.	1.6848E+12	69.83	14.32	100.00
S5	29.34 Yrs.	2.1384E+12	61.98	16.13	100.00
S6	28.75 Yrs.	3.3095E+12	49.82	20.07	100.00
SQ	28.00 Yrs.	5.2070E+12	39.72	25.18	100.00
O4	201.00 Yrs.	5.2220E+12	.00	.00	28.46

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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1986
Last Test Point -	1990

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O3	189.63 Yrs.	1.5478E+11	188.63	5.30	22.32
SC	115.03 Yrs.	1.5589E+11	187.96	5.32	22.82
O1	115.03 Yrs.	1.5589E+11	187.96	5.32	22.82
O2	129.22 Yrs.	1.5599E+11	187.90	5.32	22.83
R0.5	90.72 Yrs.	1.6205E+11	184.35	5.42	24.97
R1	68.72 Yrs.	1.7779E+11	176.00	5.68	31.13
S.5	79.22 Yrs.	1.8639E+11	171.89	5.82	30.18
R1.5	53.97 Yrs.	2.0414E+11	164.25	6.09	44.17
L0	83.30 Yrs.	2.1832E+11	158.83	6.30	33.36
L0.5	66.34 Yrs.	2.4829E+11	148.93	6.71	41.46
S0	55.25 Yrs.	2.7663E+11	141.10	7.09	46.54
R2	42.38 Yrs.	2.7704E+11	140.99	7.09	71.60
S0.5	46.47 Yrs.	3.3232E+11	128.73	7.77	60.33
L1	52.59 Yrs.	3.3577E+11	128.07	7.81	54.23
R2.5	36.13 Yrs.	3.6900E+11	122.17	8.19	93.53
L1.5	44.78 Yrs.	4.0173E+11	117.09	8.54	67.10
S1	39.47 Yrs.	4.5177E+11	110.41	9.06	78.04
S1.5	35.53 Yrs.	5.4637E+11	100.40	9.96	90.63
R3	31.50 Yrs.	5.6682E+11	98.57	10.15	100.00
L2	38.28 Yrs.	5.7076E+11	98.23	10.18	80.47
S2	32.22 Yrs.	7.2785E+11	86.99	11.50	98.31
L3	31.59 Yrs.	9.2243E+11	77.27	12.94	95.65
R4	27.47 Yrs.	1.0804E+12	71.40	14.01	100.00
S3	28.63 Yrs.	1.1169E+12	70.22	14.24	100.00
L4	27.75 Yrs.	1.4291E+12	62.08	16.11	99.98
O4	201.00 Yrs.	1.6326E+12	.00	.00	28.46
S4	26.31 Yrs.	1.8259E+12	54.92	18.21	100.00
L5	25.94 Yrs.	2.2662E+12	49.30	20.29	100.00
R5	25.47 Yrs.	2.2742E+12	49.21	20.32	100.00
S5	25.19 Yrs.	2.8099E+12	44.27	22.59	100.00
S6	24.69 Yrs.	4.0406E+12	36.92	27.09	100.00
SQ	24.00 Yrs.	6.6813E+12	28.71	34.83	100.00

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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1981
Last Test Point -	1985

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S4	21.47 Yrs.	8.0068E+11	63.53	15.74	100.00
L4	22.66 Yrs.	8.2595E+11	62.55	15.99	100.00
S3	23.41 Yrs.	8.4589E+11	61.81	16.18	100.00
L5	21.16 Yrs.	8.5480E+11	61.49	16.26	100.00
R5	20.75 Yrs.	8.8382E+11	60.47	16.54	100.00
R4	22.41 Yrs.	8.8426E+11	60.46	16.54	100.00
L3	25.81 Yrs.	9.0026E+11	59.92	16.69	99.75
S5	20.56 Yrs.	9.3542E+11	58.78	17.01	100.00
S2	26.41 Yrs.	9.7229E+11	57.65	17.34	100.00
L2	31.41 Yrs.	1.0599E+12	55.22	18.11	91.89
R3	25.78 Yrs.	1.0759E+12	54.81	18.25	100.00
S1.5	29.19 Yrs.	1.0773E+12	54.77	18.26	99.40
S1	32.50 Yrs.	1.1474E+12	53.07	18.84	94.22
L1.5	36.94 Yrs.	1.1958E+12	51.99	19.24	80.61
R2.5	29.75 Yrs.	1.2358E+12	51.14	19.55	99.91
S6	20.13 Yrs.	1.2415E+12	51.02	19.60	100.00
L1	43.56 Yrs.	1.2627E+12	50.59	19.77	67.16
S0.5	38.53 Yrs.	1.2653E+12	50.54	19.79	77.37
S0	46.06 Yrs.	1.3324E+12	49.25	20.30	59.67
R2	35.13 Yrs.	1.3409E+12	49.09	20.37	92.38
L0.5	55.44 Yrs.	1.3746E+12	48.49	20.62	51.50
L0	70.10 Yrs.	1.4183E+12	47.74	20.95	40.63
R1.5	45.34 Yrs.	1.4484E+12	47.24	21.17	61.06
S.5	67.09 Yrs.	1.4764E+12	46.79	21.37	37.09
R1	58.34 Yrs.	1.4934E+12	46.52	21.50	39.93
R0.5	77.59 Yrs.	1.5233E+12	46.06	21.71	29.96
O2	110.94 Yrs.	1.5352E+12	45.88	21.79	26.60
SC	98.78 Yrs.	1.5354E+12	45.88	21.80	26.57
O1	98.78 Yrs.	1.5354E+12	45.88	21.80	26.57
O3	162.94 Yrs.	1.5376E+12	45.85	21.81	25.78
O4	201.00 Yrs.	1.6703E+12	.00	.00	28.46
SQ	20.00 Yrs.	1.9311E+12	40.91	24.44	100.00

Sharyland
Electric Division
364.00 Poles, Towers, and Fixtures
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1976
Last Test Point -	1980

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S6	30.00 Yrs.	1.0000E-04	)913498.83	.00	100.00
S5	42.00 Yrs.	1.0000E-04	)913498.83	.00	98.36
S4	77.00 Yrs.	1.0000E-04	)913498.83	.00	3.29
L5	42.00 Yrs.	1.0000E-04	)913498.83	.00	92.55
L4	77.00 Yrs.	1.0000E-04	)913498.83	.00	7.48
SQ	18.00 Yrs.	1.0000E-04	)913498.83	.00	100.00
R5	52.00 Yrs.	8.8572E-03	182830.37	.00	49.27
L3	201.00 Yrs.	4.8056E-01	.00	.00	.30
S3	201.00 Yrs.	5.4192E-01	.00	.00	.03
S2	201.00 Yrs.	1.9777E+04	.00	.00	.39
R4	201.00 Yrs.	3.0349E+06	.00	.00	.17
S1.5	201.00 Yrs.	1.7071E+07	.00	.00	1.26
L2	201.00 Yrs.	2.7801E+07	.00	.00	1.64
S1	201.00 Yrs.	6.5953E+07	.00	.00	2.13
R3	201.00 Yrs.	7.6590E+08	.00	.00	1.18
S0.5	201.00 Yrs.	3.1730E+09	.00	.00	4.06
L1.5	201.00 Yrs.	3.2905E+09	.00	.00	3.32
R2.5	201.00 Yrs.	8.0407E+09	.00	.00	2.49
S0	201.00 Yrs.	1.0932E+10	.00	.00	5.98
L1	201.00 Yrs.	1.1987E+10	.00	.00	5.00
R2	201.00 Yrs.	2.3000E+10	.00	.00	3.81
L0.5	201.00 Yrs.	4.7435E+10	.00	.00	7.92
R1.5	201.00 Yrs.	7.4820E+10	.00	.00	5.87
L0	206.00 Yrs.	9.9373E+10	.00	.00	10.49
R1	201.00 Yrs.	1.5635E+11	.00	.00	7.92
S.5	201.00 Yrs.	1.8008E+11	.00	.00	9.52
R0.5	201.00 Yrs.	3.2473E+11	.00	.00	10.49
SC	201.00 Yrs.	5.5397E+11	.00	.00	13.06
O1	201.00 Yrs.	5.5397E+11	.00	.00	13.06
O2	201.00 Yrs.	6.9811E+11	.00	.00	14.68
O3	201.00 Yrs.	1.5139E+12	.00	.00	21.10
O4	201.00 Yrs.	2.9397E+12	.00	.00	28.46

Sharyland
Electric Division
364.00 Poles, Towers, and Fixtures
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1971
Last Test Point -	1975

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
SQ	16.00 Yrs.	4.0000E-04	027693.40	.00	100.00
S6	21.00 Yrs.	4.0000E-04	027693.40	.00	100.00
L3	179.00 Yrs.	4.0000E-04	027693.40	.00	.50
L4	55.00 Yrs.	4.0000E-04	027693.40	.00	44.91
L5	30.00 Yrs.	4.0000E-04	027693.40	.00	100.00
R5	40.00 Yrs.	4.0000E-04	027693.40	.00	99.84
S3	201.00 Yrs.	8.1964E-04	.00	.00	.03
S5	28.00 Yrs.	9.1572E-03	093262.48	.00	100.00
S4	50.00 Yrs.	9.1572E-03	093262.48	.00	61.03
S2	201.00 Yrs.	4.1921E+02	.00	.00	.39
R4	201.00 Yrs.	4.7223E+05	.00	.00	.17
S1.5	201.00 Yrs.	1.0867E+06	.00	.00	1.26
L2	201.00 Yrs.	1.6288E+06	.00	.00	1.64
S1	201.00 Yrs.	4.2554E+06	.00	.00	2.13
R3	201.00 Yrs.	1.3334E+08	.00	.00	1.18
S0.5	201.00 Yrs.	3.7959E+08	.00	.00	4.06
L1.5	201.00 Yrs.	5.3320E+08	.00	.00	3.32
S0	201.00 Yrs.	1.3623E+09	.00	.00	5.98
R2.5	201.00 Yrs.	1.4927E+09	.00	.00	2.49
L1	201.00 Yrs.	2.0179E+09	.00	.00	5.00
R2	201.00 Yrs.	4.3190E+09	.00	.00	3.81
L0.5	201.00 Yrs.	7.5498E+09	.00	.00	7.92
R1.5	201.00 Yrs.	1.4348E+10	.00	.00	5.87
L0	206.00 Yrs.	1.5528E+10	.00	.00	10.49
R1	201.00 Yrs.	3.0223E+10	.00	.00	7.92
S.5	201.00 Yrs.	3.3706E+10	.00	.00	9.52
R0.5	201.00 Yrs.	6.3558E+10	.00	.00	10.49
O1	201.00 Yrs.	1.0914E+11	.00	.00	13.06
SC	201.00 Yrs.	1.0914E+11	.00	.00	13.06
O2	201.00 Yrs.	1.3750E+11	.00	.00	14.68
O3	201.00 Yrs.	2.9888E+11	.00	.00	21.10
O4	201.00 Yrs.	5.8183E+11	.00	.00	28.46

Sharyland
Electric Division
364.00 Poles, Towers, and Fixtures
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1966
Last Test Point -	1970

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S5	18.00 Yrs.	2.0000E-04	'179185.96	.00	100.00
R5	24.00 Yrs.	2.0000E-04	'179185.96	.00	100.00
SQ	16.00 Yrs.	2.0000E-04	'179185.96	.00	100.00
S3	125.00 Yrs.	2.0000E-04	'179185.96	.00	.61
S6	16.00 Yrs.	2.0000E-04	'179185.96	.00	100.00
L5	18.00 Yrs.	2.0000E-04	'179185.96	.00	100.00
L4	33.00 Yrs.	2.0000E-04	'179185.96	.00	98.67
L3	108.00 Yrs.	2.0000E-04	'179185.96	.00	3.73
S4	29.00 Yrs.	8.9572E-03	'338534.15	.00	100.00
S2	201.00 Yrs.	1.7828E+00	.00	.00	.39
S1.5	201.00 Yrs.	1.9739E+04	.00	.00	1.26
L2	201.00 Yrs.	2.5766E+04	.00	.00	1.64
R4	201.00 Yrs.	3.4586E+04	.00	.00	.17
S1	201.00 Yrs.	7.7727E+04	.00	.00	2.13
R3	201.00 Yrs.	1.0845E+07	.00	.00	1.18
S0.5	201.00 Yrs.	1.7202E+07	.00	.00	4.06
L1.5	201.00 Yrs.	4.0575E+07	.00	.00	3.32
S0	201.00 Yrs.	6.4266E+07	.00	.00	5.98
R2.5	201.00 Yrs.	1.2927E+08	.00	.00	2.49
L1	201.00 Yrs.	1.5831E+08	.00	.00	5.00
R2	201.00 Yrs.	3.7811E+08	.00	.00	3.81
L0.5	201.00 Yrs.	5.2398E+08	.00	.00	7.92
L0	206.00 Yrs.	1.0331E+09	.00	.00	10.49
R1.5	201.00 Yrs.	1.2821E+09	.00	.00	5.87
R1	201.00 Yrs.	2.7214E+09	.00	.00	7.92
S.5	201.00 Yrs.	2.9193E+09	.00	.00	9.52
R0.5	201.00 Yrs.	5.7950E+09	.00	.00	10.49
O1	201.00 Yrs.	1.0017E+10	.00	.00	13.06
SC	201.00 Yrs.	1.0017E+10	.00	.00	13.06
O2	201.00 Yrs.	1.2615E+10	.00	.00	14.68
O3	201.00 Yrs.	2.7481E+10	.00	.00	21.10
O4	201.00 Yrs.	5.3618E+10	.00	.00	28.46

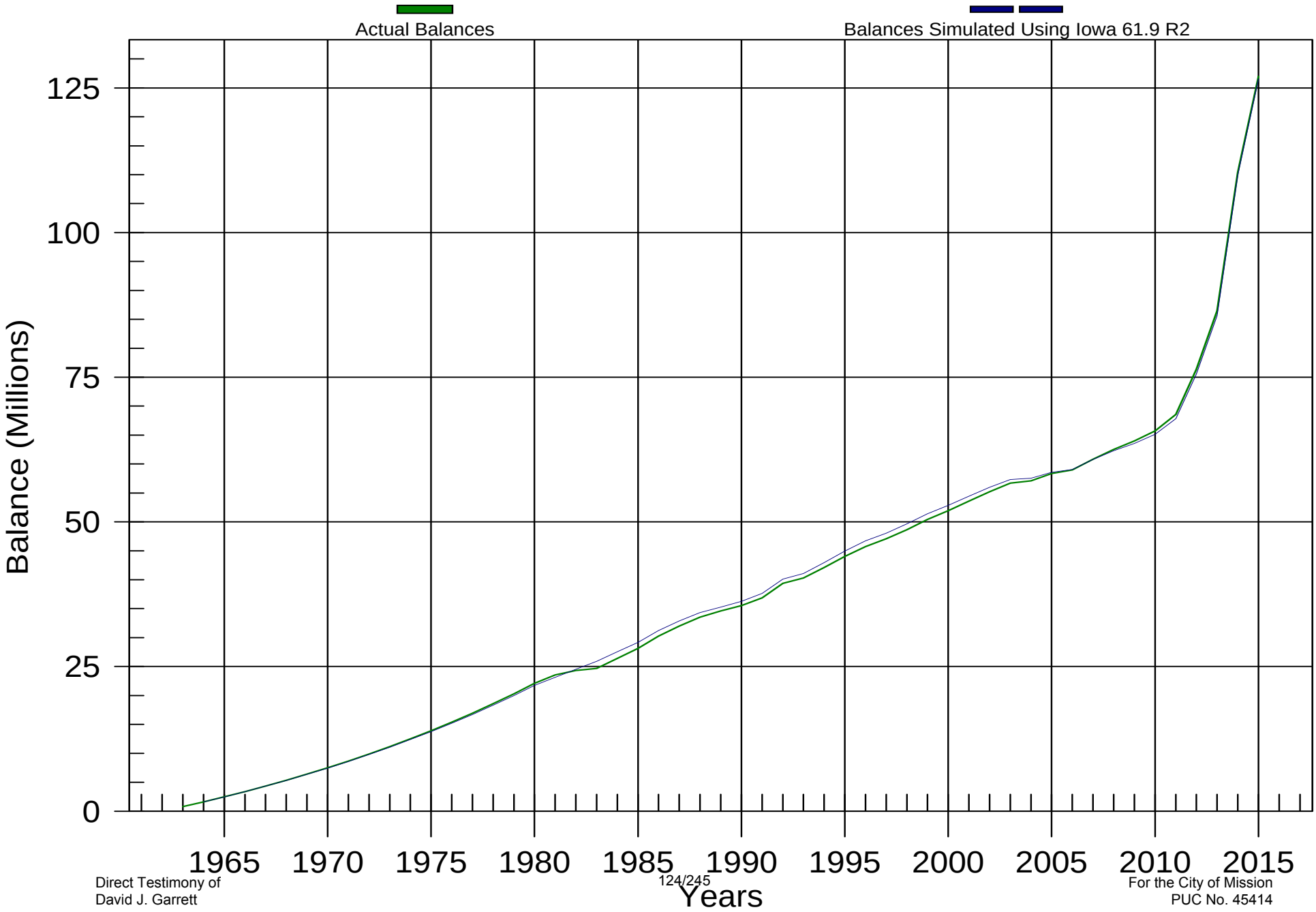
Sharyland
Electric Division
364.00 Poles, Towers, and Fixtures
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	3
Interval Between Test Points -	1
First Test Point -	1963
Last Test Point -	1965

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S5	16.00 Yrs.	2.1684E-19	3214860.00	.00	100.00
R5	16.00 Yrs.	2.1684E-19	3214860.00	.00	100.00
S6	16.00 Yrs.	2.1684E-19	3214860.00	.00	100.00
S4	16.00 Yrs.	2.1684E-19	3214860.00	.00	100.00
L5	16.00 Yrs.	2.1684E-19	3214860.00	.00	100.00
L4	16.00 Yrs.	2.1684E-19	3214860.00	.00	100.00
L3	36.00 Yrs.	2.1684E-19	3214860.00	.00	89.38
SQ	16.00 Yrs.	2.1684E-19	3214860.00	.00	100.00
S2	201.00 Yrs.	5.2043E-04	.00	.00	.39
S3	28.00 Yrs.	8.7572E-03	0039731.37	.00	100.00
L2	201.00 Yrs.	1.3272E+01	.00	.00	1.64
S1.5	201.00 Yrs.	1.3783E+01	.00	.00	1.26
S1	201.00 Yrs.	5.2182E+01	.00	.00	2.13
R4	201.00 Yrs.	2.7790E+02	.00	.00	.17
S0.5	201.00 Yrs.	5.5965E+04	.00	.00	4.06
R3	201.00 Yrs.	9.5581E+04	.00	.00	1.18
S0	201.00 Yrs.	2.1671E+05	.00	.00	5.98
L1.5	201.00 Yrs.	3.3911E+05	.00	.00	3.32
R2.5	201.00 Yrs.	1.2044E+06	.00	.00	2.49
L1	201.00 Yrs.	1.3476E+06	.00	.00	5.00
R2	201.00 Yrs.	3.5548E+06	.00	.00	3.81
L0.5	201.00 Yrs.	3.5560E+06	.00	.00	7.92
L0	206.00 Yrs.	6.4320E+06	.00	.00	10.49
R1.5	201.00 Yrs.	1.2275E+07	.00	.00	5.87
R1	201.00 Yrs.	2.6228E+07	.00	.00	7.92
S.5	201.00 Yrs.	2.6909E+07	.00	.00	9.52
R0.5	201.00 Yrs.	5.6485E+07	.00	.00	10.49
SC	201.00 Yrs.	9.8205E+07	.00	.00	13.06
O1	201.00 Yrs.	9.8205E+07	.00	.00	13.06
O2	201.00 Yrs.	1.2364E+08	.00	.00	14.68
O3	201.00 Yrs.	2.6986E+08	.00	.00	21.10
O4	201.00 Yrs.	5.2749E+08	.00	.00	28.46

Sharyland
Electric Division
364.00 Poles, Towers, and Fixtures
Actual And Simulated Balances 1963-2015



Sharyland
Electric Division
365.00 Overhead Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	53
Interval Between Test Points -	1
First Test Point -	1963
Last Test Point -	2015

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S0	62.25 Yrs.	1.1407E+13	67.01	14.92	39.18
L1	62.47 Yrs.	1.1724E+13	66.10	15.13	43.28
L0.5	72.78 Yrs.	1.1829E+13	65.81	15.20	36.78
S0.5	55.38 Yrs.	1.2230E+13	64.72	15.45	45.84
L0	86.31 Yrs.	1.2913E+13	62.99	15.88	32.00
R1.5	57.19 Yrs.	1.3607E+13	61.36	16.30	39.57
R2	50.03 Yrs.	1.3901E+13	60.71	16.47	51.14
L1.5	55.75 Yrs.	1.4083E+13	60.31	16.58	50.45
S.5	78.16 Yrs.	1.4836E+13	58.76	17.02	30.69
R1	67.25 Yrs.	1.5328E+13	57.81	17.30	32.14
S1	50.09 Yrs.	1.5846E+13	56.86	17.59	54.36
R0.5	83.44 Yrs.	1.7484E+13	54.13	18.47	27.51
R2.5	46.03 Yrs.	1.8549E+13	52.55	19.03	63.81
O2	115.44 Yrs.	1.8675E+13	52.38	19.09	25.56
O1	102.75 Yrs.	1.8689E+13	52.36	19.10	25.55
SC	102.75 Yrs.	1.8689E+13	52.36	19.10	25.55
O3	168.19 Yrs.	1.8992E+13	51.94	19.25	25.02
L2	50.50 Yrs.	2.0066E+13	50.53	19.79	59.06
S1.5	46.88 Yrs.	2.0986E+13	49.41	20.24	62.42
R3	43.09 Yrs.	2.9535E+13	41.65	24.01	77.68
S2	44.25 Yrs.	2.9662E+13	41.56	24.06	71.29
O4	201.00 Yrs.	3.5277E+13	.00	.00	28.46
L3	44.44 Yrs.	3.6556E+13	37.44	26.71	74.01
S3	41.34 Yrs.	4.8859E+13	32.38	30.88	85.90
R4	40.38 Yrs.	5.8116E+13	29.69	33.68	95.21
L4	40.81 Yrs.	5.9600E+13	29.32	34.11	88.22
S4	39.44 Yrs.	7.5324E+13	26.08	38.34	97.27
L5	39.19 Yrs.	8.3309E+13	24.80	40.33	96.65
R5	38.81 Yrs.	9.1986E+13	23.60	42.37	100.00
S5	38.50 Yrs.	9.8271E+13	22.83	43.80	99.93
S6	38.03 Yrs.	1.1449E+14	21.15	47.27	100.00
SQ	38.00 Yrs.	1.2973E+14	19.87	50.32	100.00

Sharyland
Electric Division
365.00 Overhead Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2011
Last Test Point -	2015

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O3	166.53 Yrs.	2.1247E+11	352.83	2.83	25.25
SC	102.03 Yrs.	2.2083E+11	346.08	2.89	25.73
O1	102.03 Yrs.	2.2083E+11	346.08	2.89	25.73
O2	114.66 Yrs.	2.2092E+11	346.01	2.89	25.73
R0.5	83.72 Yrs.	2.5141E+11	324.35	3.08	27.40
S.5	79.63 Yrs.	3.0046E+11	296.70	3.37	29.99
L0	88.66 Yrs.	3.0568E+11	294.15	3.40	31.00
R1	68.56 Yrs.	3.2827E+11	283.85	3.52	31.23
L0.5	75.56 Yrs.	4.1701E+11	251.85	3.97	34.99
S0	64.91 Yrs.	4.5504E+11	241.09	4.15	36.83
R1.5	59.16 Yrs.	4.7158E+11	236.82	4.22	37.13
L1	65.63 Yrs.	6.1390E+11	207.57	4.82	40.37
S0.5	58.16 Yrs.	6.3404E+11	204.24	4.90	42.24
R2	52.34 Yrs.	7.4936E+11	187.87	5.32	46.28
L1.5	58.84 Yrs.	8.1817E+11	179.80	5.56	46.38
S1	52.94 Yrs.	9.2409E+11	169.18	5.91	49.25
R2.5	48.38 Yrs.	1.1276E+12	153.16	6.53	56.55
L2	53.56 Yrs.	1.1527E+12	151.47	6.60	53.99
S1.5	49.63 Yrs.	1.2108E+12	147.80	6.77	56.06
S2	46.94 Yrs.	1.6136E+12	128.03	7.81	63.87
R3	45.44 Yrs.	1.7019E+12	124.66	8.02	68.84
L3	47.28 Yrs.	1.8393E+12	119.92	8.34	68.02
S3	43.88 Yrs.	2.3767E+12	105.49	9.48	78.15
L4	43.47 Yrs.	2.6410E+12	100.07	9.99	82.49
R4	42.72 Yrs.	2.9011E+12	95.48	10.47	88.29
S4	41.97 Yrs.	3.2141E+12	90.72	11.02	92.41
L5	41.84 Yrs.	3.2606E+12	90.07	11.10	92.82
S5	41.19 Yrs.	3.6474E+12	85.16	11.74	99.08
R5	41.38 Yrs.	3.7490E+12	83.99	11.91	99.05
S6	40.94 Yrs.	3.7512E+12	83.97	11.91	99.99
SQ	41.00 Yrs.	3.9312E+12	82.03	12.19	100.00
O4	201.00 Yrs.	6.2454E+12	.00	.00	28.46

Sharyland
Electric Division
365.00 Overhead Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2006
Last Test Point -	2010

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O3	152.44 Yrs.	1.0678E+11	384.62	2.60	27.44
O1	93.34 Yrs.	1.1207E+11	375.43	2.66	28.12
SC	93.34 Yrs.	1.1207E+11	375.43	2.66	28.12
O2	104.91 Yrs.	1.1221E+11	375.19	2.67	28.13
R0.5	76.50 Yrs.	1.3371E+11	343.71	2.91	30.46
S.5	72.66 Yrs.	1.8351E+11	293.39	3.41	33.61
R1	62.53 Yrs.	1.9213E+11	286.73	3.49	35.88
L0	80.80 Yrs.	2.2165E+11	266.96	3.75	34.57
R1.5	53.84 Yrs.	3.0307E+11	228.30	4.38	44.36
L0.5	68.75 Yrs.	3.0529E+11	227.47	4.40	39.62
S0	59.03 Yrs.	3.5837E+11	209.95	4.76	42.33
L1	59.59 Yrs.	4.6035E+11	185.24	5.40	46.16
S0.5	52.81 Yrs.	5.0071E+11	177.62	5.63	49.53
R2	47.59 Yrs.	5.3744E+11	171.44	5.83	56.94
L1.5	53.41 Yrs.	6.2916E+11	158.45	6.31	53.73
O4	201.00 Yrs.	6.5449E+11	.00	.00	28.46
S1	48.00 Yrs.	7.3566E+11	146.53	6.82	58.47
R2.5	43.94 Yrs.	8.5439E+11	135.97	7.35	70.72
L2	48.59 Yrs.	9.0453E+11	132.15	7.57	62.31
S1.5	45.03 Yrs.	9.5966E+11	128.30	7.79	66.96
S2	42.56 Yrs.	1.2710E+12	111.48	8.97	76.02
R3	41.25 Yrs.	1.3517E+12	108.10	9.25	84.25
L3	42.91 Yrs.	1.4387E+12	104.78	9.54	77.05
S3	39.84 Yrs.	1.8746E+12	91.79	10.89	89.91
L4	39.50 Yrs.	2.1207E+12	86.30	11.59	90.69
R4	38.78 Yrs.	2.3564E+12	81.88	12.21	98.12
S4	38.16 Yrs.	2.5812E+12	78.23	12.78	98.64
L5	38.06 Yrs.	2.6557E+12	77.12	12.97	97.76
S5	37.50 Yrs.	3.0743E+12	71.68	13.95	99.98
R5	37.63 Yrs.	3.1206E+12	71.15	14.06	100.00
S6	37.25 Yrs.	3.2521E+12	69.69	14.35	100.00
SQ	37.00 Yrs.	3.3236E+12	68.94	14.51	100.00

Sharyland
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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2001
Last Test Point -	2005

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S1	45.28 Yrs.	1.6155E+11	283.08	3.53	64.25
L1.5	50.56 Yrs.	1.6464E+11	280.42	3.57	57.92
R2.5	41.31 Yrs.	1.6608E+11	279.20	3.58	79.43
L2	45.63 Yrs.	1.6622E+11	279.08	3.58	67.48
S1.5	42.22 Yrs.	1.7069E+11	275.40	3.63	74.15
R2	45.25 Yrs.	1.7873E+11	269.14	3.72	63.19
S0.5	50.31 Yrs.	1.8050E+11	267.81	3.73	53.48
L1	56.88 Yrs.	1.8519E+11	264.40	3.78	49.11
S2	39.72 Yrs.	2.1229E+11	246.95	4.05	83.83
S0	56.78 Yrs.	2.1327E+11	246.38	4.06	44.77
R3	38.44 Yrs.	2.2569E+11	239.50	4.18	92.56
L0.5	66.53 Yrs.	2.2993E+11	237.29	4.21	41.31
R1.5	52.16 Yrs.	2.3707E+11	233.69	4.28	47.12
L3	39.97 Yrs.	2.5623E+11	224.78	4.45	82.57
L0	79.13 Yrs.	2.7014E+11	218.91	4.57	35.42
R1	61.63 Yrs.	2.9240E+11	210.42	4.75	36.70
S.5	71.69 Yrs.	2.9490E+11	209.52	4.77	34.17
R0.5	76.63 Yrs.	3.3624E+11	196.22	5.10	30.40
O2	106.03 Yrs.	3.5692E+11	190.45	5.25	27.83
O1	94.34 Yrs.	3.5709E+11	190.41	5.25	27.82
SC	94.34 Yrs.	3.5709E+11	190.41	5.25	27.82
O3	154.47 Yrs.	3.6257E+11	188.96	5.29	27.11
S3	36.94 Yrs.	3.6354E+11	188.71	5.30	95.82
L4	36.59 Yrs.	4.8357E+11	163.62	6.11	95.22
R4	35.84 Yrs.	5.3379E+11	155.73	6.42	99.96
S4	35.28 Yrs.	6.6861E+11	139.15	7.19	99.85
L5	35.16 Yrs.	7.6242E+11	130.31	7.67	99.44
O4	201.00 Yrs.	8.7902E+11	.00	.00	28.46
R5	34.69 Yrs.	9.9568E+11	114.03	8.77	100.00
S5	34.59 Yrs.	1.0287E+12	112.18	8.91	100.00
S6	34.34 Yrs.	1.2405E+12	102.16	9.79	100.00
SQ	34.00 Yrs.	1.4098E+12	95.83	10.44	100.00

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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1996
Last Test Point -	2000

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
R3	37.81 Yrs.	3.8089E+10	492.36	2.03	94.00
S2	39.03 Yrs.	4.1287E+10	472.91	2.11	85.63
L2	45.63 Yrs.	4.4581E+10	455.10	2.20	67.48
S1.5	42.19 Yrs.	4.4948E+10	453.24	2.21	74.23
S1	46.00 Yrs.	6.1376E+10	387.87	2.58	62.68
L3	38.88 Yrs.	6.1733E+10	386.75	2.59	84.53
R2.5	41.84 Yrs.	6.4631E+10	377.98	2.65	77.70
L1.5	51.81 Yrs.	7.1749E+10	358.74	2.79	56.05
S3	35.63 Yrs.	9.5277E+10	311.31	3.21	97.57
S0.5	52.56 Yrs.	9.7854E+10	307.18	3.26	49.90
L1	59.59 Yrs.	9.9505E+10	304.62	3.28	46.16
R2	47.38 Yrs.	1.0892E+11	291.16	3.43	57.50
S0	60.94 Yrs.	1.2965E+11	266.87	3.75	40.42
R4	34.25 Yrs.	1.3809E+11	258.59	3.87	100.00
L0.5	72.28 Yrs.	1.4525E+11	252.13	3.97	37.12
R1.5	57.38 Yrs.	1.6870E+11	233.95	4.27	39.33
L0	88.54 Yrs.	1.7381E+11	230.49	4.34	31.05
L4	34.94 Yrs.	1.9213E+11	219.23	4.56	97.12
S.5	82.13 Yrs.	1.9904E+11	215.38	4.64	28.85
R1	70.75 Yrs.	2.0454E+11	212.47	4.71	29.81
R0.5	91.09 Yrs.	2.2823E+11	201.14	4.97	24.85
O2	128.28 Yrs.	2.3835E+11	196.82	5.08	23.00
O1	114.19 Yrs.	2.3848E+11	196.77	5.08	22.99
SC	114.19 Yrs.	2.3848E+11	196.77	5.08	22.99
O3	187.75 Yrs.	2.4073E+11	195.85	5.11	22.53
S4	33.47 Yrs.	3.1161E+11	172.14	5.81	99.98
L5	33.22 Yrs.	4.7573E+11	139.32	7.18	99.86
R5	32.63 Yrs.	5.7163E+11	127.10	7.87	100.00
S5	32.47 Yrs.	7.0864E+11	114.15	8.76	100.00
S6	32.06 Yrs.	1.1735E+12	88.70	11.27	100.00
SQ	32.00 Yrs.	1.5513E+12	77.15	12.96	100.00
O4	201.00 Yrs.	3.8340E+12	.00	.00	28.46

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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1991
Last Test Point -	1995

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S4	32.56 Yrs.	3.7344E+09	1274.23	.78	100.00
R5	31.28 Yrs.	9.8586E+09	784.24	1.28	100.00
L5	31.94 Yrs.	1.2324E+10	701.44	1.43	99.96
L4	34.59 Yrs.	2.2118E+10	523.59	1.91	97.45
S3	36.06 Yrs.	5.3689E+10	336.06	2.98	97.06
S5	30.88 Yrs.	5.9272E+10	319.84	3.13	100.00
R4	34.53 Yrs.	6.7361E+10	300.02	3.33	100.00
L3	40.06 Yrs.	8.7528E+10	263.20	3.80	82.41
S2	41.44 Yrs.	1.3140E+11	214.81	4.66	79.16
L2	50.03 Yrs.	1.7716E+11	185.00	5.41	59.86
S1.5	46.59 Yrs.	1.8647E+11	180.33	5.55	63.10
R3	41.25 Yrs.	1.9040E+11	178.45	5.60	84.25
S1	52.63 Yrs.	2.1958E+11	166.17	6.02	49.78
L1.5	60.63 Yrs.	2.4601E+11	156.99	6.37	44.16
S6	30.06 Yrs.	2.6993E+11	149.88	6.67	100.00
R2.5	49.63 Yrs.	2.7154E+11	149.43	6.69	52.97
S0.5	64.34 Yrs.	2.7391E+11	148.78	6.72	35.47
L1	72.91 Yrs.	2.7544E+11	148.37	6.74	34.52
S0	78.69 Yrs.	3.0099E+11	141.93	7.05	27.51
R2	60.88 Yrs.	3.1625E+11	138.47	7.22	33.00
L0.5	96.75 Yrs.	3.2198E+11	137.23	7.29	24.63
L0	124.63 Yrs.	3.3655E+11	134.22	7.45	20.36
R1.5	82.84 Yrs.	3.5678E+11	130.36	7.67	20.45
S.5	124.16 Yrs.	3.6361E+11	129.13	7.74	17.22
R1	109.50 Yrs.	3.7117E+11	127.81	7.82	16.43
R0.5	148.81 Yrs.	3.8096E+11	126.16	7.93	14.46
O1	191.16 Yrs.	3.8467E+11	125.55	7.97	13.73
SC	191.16 Yrs.	3.8467E+11	125.55	7.97	13.73
O2	201.00 Yrs.	4.1681E+11	.00	.00	14.68
SQ	30.00 Yrs.	1.3325E+12	67.46	14.82	100.00
O3	201.00 Yrs.	2.6298E+12	.00	.00	21.10
O4	201.00 Yrs.	1.0009E+13	.00	.00	28.46

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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1986
Last Test Point -	1990

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
R1.5	164.59 Yrs.	6.9569E+09	730.97	1.37	7.56
R2	104.50 Yrs.	7.1358E+09	721.75	1.39	10.97
L0.5	161.41 Yrs.	7.3117E+09	713.02	1.40	11.13
R2.5	75.13 Yrs.	7.4884E+09	704.55	1.42	17.67
S0	119.88 Yrs.	7.8089E+09	689.94	1.45	14.09
L1	106.44 Yrs.	7.8844E+09	686.63	1.46	17.81
S0.5	91.88 Yrs.	8.2640E+09	670.68	1.49	18.42
L1.5	82.69 Yrs.	8.6617E+09	655.10	1.53	24.24
R3	52.03 Yrs.	9.6845E+09	619.54	1.61	46.56
L0	206.00 Yrs.	9.7208E+09	.00	.00	10.49
S1	66.53 Yrs.	1.0638E+10	591.12	1.69	31.36
L2	60.72 Yrs.	1.1155E+10	577.26	1.73	43.09
S1.5	56.44 Yrs.	1.1988E+10	556.84	1.80	42.71
S2	46.56 Yrs.	1.7898E+10	455.72	2.19	64.89
L3	43.75 Yrs.	1.9110E+10	441.04	2.27	75.39
R1	201.00 Yrs.	2.0657E+10	.00	.00	7.92
R4	37.06 Yrs.	2.2133E+10	409.82	2.44	99.65
S3	37.63 Yrs.	3.2401E+10	338.71	2.95	94.68
L4	35.41 Yrs.	3.5395E+10	324.07	3.09	96.64
S.5	201.00 Yrs.	4.9683E+10	.00	.00	9.52
S4	32.00 Yrs.	6.8285E+10	233.32	4.29	100.00
R5	30.34 Yrs.	7.1925E+10	227.34	4.40	100.00
L5	30.91 Yrs.	7.6918E+10	219.83	4.55	99.99
S5	29.28 Yrs.	1.2738E+11	170.83	5.85	100.00
S6	27.94 Yrs.	2.0713E+11	133.96	7.46	100.00
R0.5	201.00 Yrs.	2.4664E+11	.00	.00	10.49
SQ	27.00 Yrs.	4.2787E+11	93.21	10.73	100.00
O1	201.00 Yrs.	7.5008E+11	.00	.00	13.06
SC	201.00 Yrs.	7.5008E+11	.00	.00	13.06
O2	201.00 Yrs.	1.1342E+12	.00	.00	14.68
O3	201.00 Yrs.	3.6827E+12	.00	.00	21.10
O4	201.00 Yrs.	8.7730E+12	.00	.00	28.46

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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1981
Last Test Point -	1985

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S2	38.38 Yrs.	3.4117E+10	224.39	4.46	87.28
L3	36.03 Yrs.	3.4692E+10	222.52	4.49	89.33
R4	30.47 Yrs.	3.5110E+10	221.19	4.52	100.00
S1.5	46.63 Yrs.	3.5617E+10	219.61	4.55	63.03
L2	50.19 Yrs.	3.6232E+10	217.74	4.59	59.59
S1	55.06 Yrs.	3.6435E+10	217.13	4.61	45.78
S3	30.94 Yrs.	3.7081E+10	215.23	4.65	99.93
R3	42.88 Yrs.	3.7819E+10	213.12	4.69	78.48
L4	29.13 Yrs.	3.8208E+10	212.04	4.72	99.90
L1.5	68.38 Yrs.	3.9101E+10	209.60	4.77	35.66
S0.5	76.22 Yrs.	3.9701E+10	208.01	4.81	26.13
S0	99.63 Yrs.	4.0800E+10	205.19	4.87	18.98
L1	87.94 Yrs.	4.0837E+10	205.10	4.88	25.38
R2.5	62.00 Yrs.	4.2137E+10	201.91	4.95	29.02
L0.5	133.91 Yrs.	4.2708E+10	200.56	4.99	14.92
L0	179.13 Yrs.	4.2942E+10	200.01	5.00	12.65
R2	86.38 Yrs.	4.3749E+10	198.15	5.05	15.75
R1.5	136.22 Yrs.	4.5038E+10	195.30	5.12	9.73
S.5	201.00 Yrs.	4.5270E+10	.00	.00	9.52
R1	190.69 Yrs.	4.5400E+10	194.52	5.14	8.42
S4	26.28 Yrs.	5.4668E+10	177.26	5.64	100.00
R5	24.94 Yrs.	5.7887E+10	172.26	5.81	100.00
L5	25.41 Yrs.	6.0383E+10	168.67	5.93	100.00
R0.5	201.00 Yrs.	8.4890E+10	.00	.00	10.49
S5	24.06 Yrs.	9.2457E+10	136.31	7.34	100.00
S6	23.00 Yrs.	1.4824E+11	107.65	9.29	100.00
O1	201.00 Yrs.	2.2699E+11	.00	.00	13.06
SC	201.00 Yrs.	2.2699E+11	.00	.00	13.06
O2	201.00 Yrs.	3.4423E+11	.00	.00	14.68
SQ	23.00 Yrs.	3.5601E+11	69.46	14.40	100.00
O3	201.00 Yrs.	1.1812E+12	.00	.00	21.10
O4	201.00 Yrs.	2.9374E+12	.00	.00	28.46

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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1976
Last Test Point -	1980

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
L4	75.66 Yrs.	2.0000E-04	'162581.48	.00	8.21
S4	75.66 Yrs.	2.0000E-04	'162581.48	.00	3.87
S6	30.00 Yrs.	3.0000E-04	501128.67	.00	100.00
S5	42.00 Yrs.	3.0000E-04	501128.67	.00	98.36
L5	42.00 Yrs.	3.0000E-04	501128.67	.00	92.55
SQ	18.00 Yrs.	3.0000E-04	501128.67	.00	100.00
R5	52.00 Yrs.	4.6082E-03	;480545.97	.00	49.27
L3	201.00 Yrs.	2.9913E-01	.00	.00	.30
S3	201.00 Yrs.	3.2549E-01	.00	.00	.03
S2	201.00 Yrs.	1.2022E+04	.00	.00	.39
R4	201.00 Yrs.	1.6655E+06	.00	.00	.17
S1.5	201.00 Yrs.	9.9811E+06	.00	.00	1.26
L2	201.00 Yrs.	1.6320E+07	.00	.00	1.64
S1	201.00 Yrs.	3.8538E+07	.00	.00	2.13
R3	201.00 Yrs.	4.1597E+08	.00	.00	1.18
S0.5	201.00 Yrs.	1.7846E+09	.00	.00	4.06
L1.5	201.00 Yrs.	1.7991E+09	.00	.00	3.32
R2.5	201.00 Yrs.	4.3393E+09	.00	.00	2.49
S0	201.00 Yrs.	6.1301E+09	.00	.00	5.98
L1	201.00 Yrs.	6.5318E+09	.00	.00	5.00
R2	201.00 Yrs.	1.2398E+10	.00	.00	3.81
L0.5	201.00 Yrs.	2.6016E+10	.00	.00	7.92
R1.5	201.00 Yrs.	4.0244E+10	.00	.00	5.87
L0	206.00 Yrs.	5.4616E+10	.00	.00	10.49
R1	201.00 Yrs.	8.4026E+10	.00	.00	7.92
S.5	201.00 Yrs.	9.7118E+10	.00	.00	9.52
R0.5	201.00 Yrs.	1.7429E+11	.00	.00	10.49
SC	201.00 Yrs.	2.9713E+11	.00	.00	13.06
O1	201.00 Yrs.	2.9713E+11	.00	.00	13.06
O2	201.00 Yrs.	3.7445E+11	.00	.00	14.68
O3	201.00 Yrs.	8.1180E+11	.00	.00	21.10
O4	201.00 Yrs.	1.5760E+12	.00	.00	28.46

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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1971
Last Test Point -	1975

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
SQ	16.00 Yrs.	1.0000E-04	100256.54	.00	100.00
S6	21.00 Yrs.	1.0000E-04	100256.54	.00	100.00
L3	179.00 Yrs.	1.0000E-04	100256.54	.00	.50
L4	55.00 Yrs.	1.0000E-04	100256.54	.00	44.91
L5	30.00 Yrs.	1.0000E-04	100256.54	.00	100.00
R5	40.00 Yrs.	1.0000E-04	100256.54	.00	99.84
S3	201.00 Yrs.	3.7967E-04	.00	.00	.03
S5	28.00 Yrs.	5.9361E-03	960034.68	.00	100.00
S4	50.00 Yrs.	5.9361E-03	960034.68	.00	61.03
S2	201.00 Yrs.	2.6281E+02	.00	.00	.39
R4	201.00 Yrs.	2.7554E+05	.00	.00	.17
S1.5	201.00 Yrs.	6.6358E+05	.00	.00	1.26
L2	201.00 Yrs.	9.9767E+05	.00	.00	1.64
S1	201.00 Yrs.	2.5982E+06	.00	.00	2.13
R3	201.00 Yrs.	7.7425E+07	.00	.00	1.18
S0.5	201.00 Yrs.	2.2583E+08	.00	.00	4.06
L1.5	201.00 Yrs.	3.1056E+08	.00	.00	3.32
S0	201.00 Yrs.	8.0931E+08	.00	.00	5.98
R2.5	201.00 Yrs.	8.6414E+08	.00	.00	2.49
L1	201.00 Yrs.	1.1737E+09	.00	.00	5.00
R2	201.00 Yrs.	2.4991E+09	.00	.00	3.81
L0.5	201.00 Yrs.	4.4162E+09	.00	.00	7.92
R1.5	201.00 Yrs.	8.2937E+09	.00	.00	5.87
L0	206.00 Yrs.	9.0999E+09	.00	.00	10.49
R1	201.00 Yrs.	1.7463E+10	.00	.00	7.92
S.5	201.00 Yrs.	1.9514E+10	.00	.00	9.52
R0.5	201.00 Yrs.	3.6703E+10	.00	.00	10.49
O1	201.00 Yrs.	6.3006E+10	.00	.00	13.06
SC	201.00 Yrs.	6.3006E+10	.00	.00	13.06
O2	201.00 Yrs.	7.9377E+10	.00	.00	14.68
O3	201.00 Yrs.	1.7252E+11	.00	.00	21.10
O4	201.00 Yrs.	3.3580E+11	.00	.00	28.46

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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1966
Last Test Point -	1970

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S3	122.34 Yrs.	4.0000E-04	943546.64	.00	.70
L3	105.19 Yrs.	4.0000E-04	942861.50	.00	4.14
R5	24.00 Yrs.	5.0000E-04	753790.15	.00	100.00
SQ	16.00 Yrs.	5.0000E-04	753790.15	.00	100.00
S5	18.00 Yrs.	5.0000E-04	753790.15	.00	100.00
S6	16.00 Yrs.	5.0000E-04	753790.15	.00	100.00
L5	18.00 Yrs.	5.0000E-04	753790.15	.00	100.00
L4	33.00 Yrs.	5.0000E-04	753790.15	.00	98.67
S4	29.00 Yrs.	4.8082E-03	391273.04	.00	100.00
S2	201.00 Yrs.	1.1037E+00	.00	.00	.39
S1.5	201.00 Yrs.	1.2534E+04	.00	.00	1.26
L2	201.00 Yrs.	1.6395E+04	.00	.00	1.64
R4	201.00 Yrs.	2.1400E+04	.00	.00	.17
S1	201.00 Yrs.	4.9368E+04	.00	.00	2.13
R3	201.00 Yrs.	6.7017E+06	.00	.00	1.18
S0.5	201.00 Yrs.	1.0768E+07	.00	.00	4.06
L1.5	201.00 Yrs.	2.5095E+07	.00	.00	3.32
S0	201.00 Yrs.	4.0210E+07	.00	.00	5.98
R2.5	201.00 Yrs.	7.9808E+07	.00	.00	2.49
L1	201.00 Yrs.	9.7883E+07	.00	.00	5.00
R2	201.00 Yrs.	2.3339E+08	.00	.00	3.81
L0.5	201.00 Yrs.	3.2503E+08	.00	.00	7.92
L0	206.00 Yrs.	6.4154E+08	.00	.00	10.49
R1.5	201.00 Yrs.	7.9114E+08	.00	.00	5.87
R1	201.00 Yrs.	1.6791E+09	.00	.00	7.92
S.5	201.00 Yrs.	1.8025E+09	.00	.00	9.52
R0.5	201.00 Yrs.	3.5748E+09	.00	.00	10.49
SC	201.00 Yrs.	6.1783E+09	.00	.00	13.06
O1	201.00 Yrs.	6.1783E+09	.00	.00	13.06
O2	201.00 Yrs.	7.7810E+09	.00	.00	14.68
O3	201.00 Yrs.	1.6950E+10	.00	.00	21.10
O4	201.00 Yrs.	3.3070E+10	.00	.00	28.46

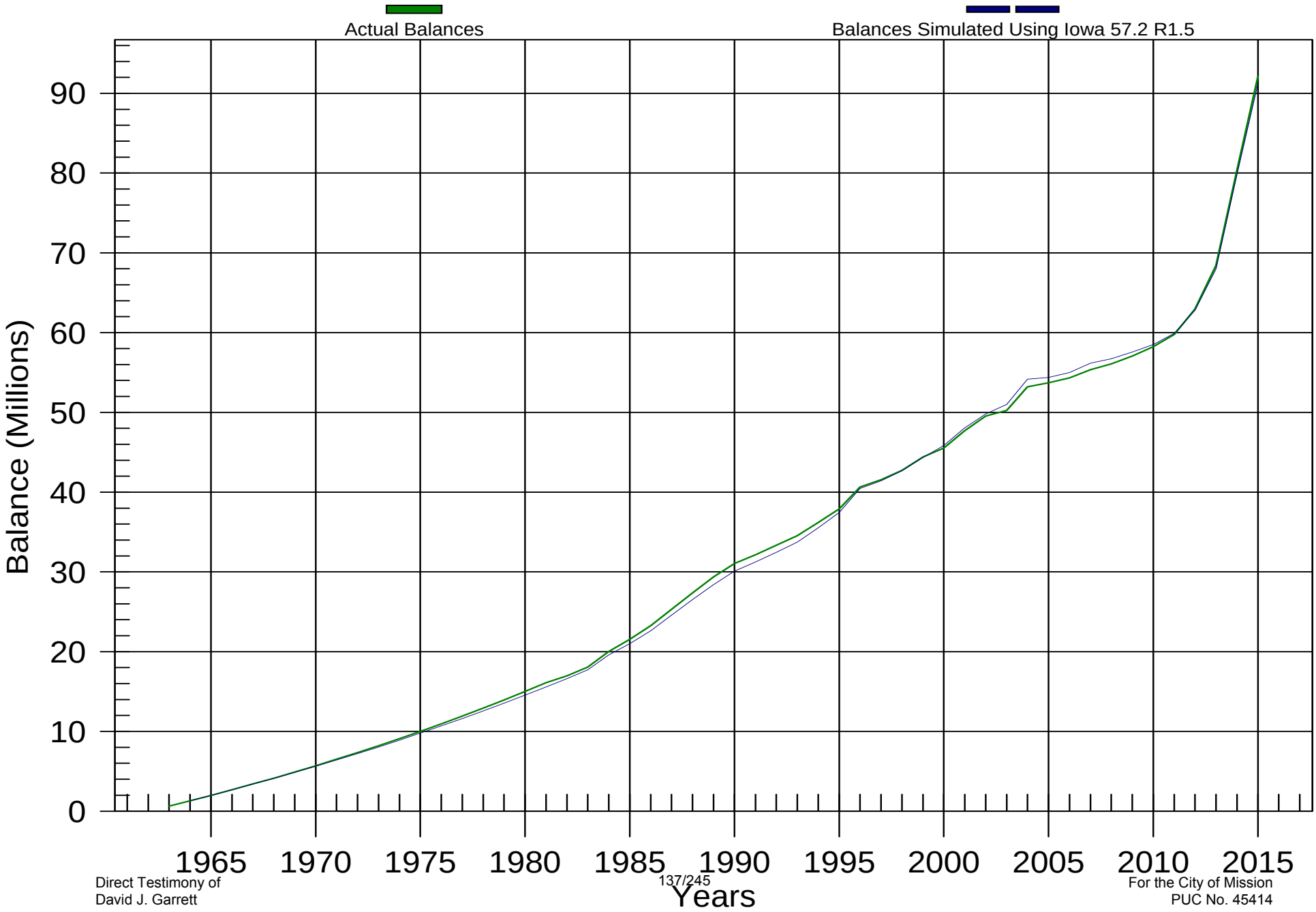
Sharyland
Electric Division
365.00 Overhead Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	3
Interval Between Test Points -	1
First Test Point -	1963
Last Test Point -	1965

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
L3	35.06 Yrs.	2.0000E-04	)135896.83	.00	90.86
S2	201.00 Yrs.	2.7437E-04	.00	.00	.39
L5	16.00 Yrs.	3.0000E-04	)751556.91	.00	100.00
S6	16.00 Yrs.	3.0000E-04	)751556.91	.00	100.00
S4	16.00 Yrs.	3.0000E-04	)751556.91	.00	100.00
S5	16.00 Yrs.	3.0000E-04	)751556.91	.00	100.00
R5	16.00 Yrs.	3.0000E-04	)751556.91	.00	100.00
SQ	16.00 Yrs.	3.0000E-04	)751556.91	.00	100.00
L4	16.00 Yrs.	3.0000E-04	)751556.91	.00	100.00
S3	28.00 Yrs.	4.6082E-03	361034.04	.00	100.00
L2	201.00 Yrs.	8.6529E+00	.00	.00	1.64
S1.5	201.00 Yrs.	8.9771E+00	.00	.00	1.26
S1	201.00 Yrs.	3.4141E+01	.00	.00	2.13
R4	201.00 Yrs.	1.8122E+02	.00	.00	.17
S0.5	201.00 Yrs.	3.6632E+04	.00	.00	4.06
R3	201.00 Yrs.	6.2445E+04	.00	.00	1.18
S0	201.00 Yrs.	1.4185E+05	.00	.00	5.98
L1.5	201.00 Yrs.	2.2157E+05	.00	.00	3.32
R2.5	201.00 Yrs.	7.8685E+05	.00	.00	2.49
L1	201.00 Yrs.	8.8052E+05	.00	.00	5.00
R2	201.00 Yrs.	2.3224E+06	.00	.00	3.81
L0.5	201.00 Yrs.	2.3244E+06	.00	.00	7.92
L0	206.00 Yrs.	4.2049E+06	.00	.00	10.49
R1.5	201.00 Yrs.	8.0193E+06	.00	.00	5.87
R1	201.00 Yrs.	1.7135E+07	.00	.00	7.92
S.5	201.00 Yrs.	1.7581E+07	.00	.00	9.52
R0.5	201.00 Yrs.	3.6902E+07	.00	.00	10.49
SC	201.00 Yrs.	6.4157E+07	.00	.00	13.06
O1	201.00 Yrs.	6.4157E+07	.00	.00	13.06
O2	201.00 Yrs.	8.0770E+07	.00	.00	14.68
O3	201.00 Yrs.	1.7630E+08	.00	.00	21.10
O4	201.00 Yrs.	3.4461E+08	.00	.00	28.46

Sharyland
Electric Division
365.00 Overhead Conductors and Devices
Actual And Simulated Balances 1963-2015



Sharyland
Electric Division
367.00 Underground Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	53
Interval Between Test Points -	1
First Test Point -	1963
Last Test Point -	2015

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
SC	131.34 Yrs.	1.0863E+12	27.93	35.81	19.99
O1	131.34 Yrs.	1.0863E+12	27.93	35.81	19.99
O2	147.53 Yrs.	1.0865E+12	27.92	35.81	20.00
R0.5	104.56 Yrs.	1.1027E+12	27.72	36.08	21.27
O3	201.00 Yrs.	1.1061E+12	.00	.00	21.10
R1	80.84 Yrs.	1.1425E+12	27.23	36.72	24.61
S.5	93.13 Yrs.	1.1564E+12	27.07	36.95	24.66
R1.5	65.47 Yrs.	1.2082E+12	26.48	37.76	30.78
L0	98.46 Yrs.	1.2109E+12	26.45	37.81	27.33
L0.5	80.59 Yrs.	1.2798E+12	25.73	38.87	32.05
S0	67.28 Yrs.	1.3268E+12	25.27	39.58	34.91
R2	53.75 Yrs.	1.3569E+12	24.99	40.02	43.62
S0.5	58.19 Yrs.	1.4329E+12	24.31	41.13	42.20
L1	66.16 Yrs.	1.4386E+12	24.27	41.21	39.90
R2.5	47.47 Yrs.	1.5161E+12	23.64	42.31	59.28
L1.5	57.63 Yrs.	1.5474E+12	23.40	42.74	47.94
S1	50.84 Yrs.	1.6244E+12	22.84	43.79	52.96
S1.5	46.91 Yrs.	1.7569E+12	21.96	45.54	62.35
L2	50.72 Yrs.	1.7723E+12	21.86	45.74	58.70
R3	42.78 Yrs.	1.7893E+12	21.76	45.96	78.84
S2	43.59 Yrs.	1.9725E+12	20.72	48.25	73.12
O4	201.00 Yrs.	2.0778E+12	.00	.00	28.46
L3	43.63 Yrs.	2.1266E+12	19.96	50.10	75.64
R4	39.03 Yrs.	2.2831E+12	19.26	51.91	97.78
S3	40.13 Yrs.	2.3099E+12	19.15	52.22	89.20
L4	39.59 Yrs.	2.4721E+12	18.51	54.02	90.52
S4	38.03 Yrs.	2.6940E+12	17.73	56.39	98.73
L5	37.81 Yrs.	2.8220E+12	17.33	57.72	97.97
R5	37.34 Yrs.	2.8440E+12	17.26	57.94	100.00
S5	37.09 Yrs.	2.9977E+12	16.81	59.49	99.99
S6	36.69 Yrs.	3.2065E+12	16.25	61.52	100.00
SQ	36.00 Yrs.	3.4043E+12	15.77	63.39	100.00

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2011
Last Test Point -	2015

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
R2.5	52.72 Yrs.	1.4825E+09	907.93	1.10	45.10
SC	168.53 Yrs.	1.5817E+09	879.01	1.14	15.58
O1	168.53 Yrs.	1.5817E+09	879.01	1.14	15.58
O2	189.28 Yrs.	1.5825E+09	878.78	1.14	15.59
R2	61.47 Yrs.	1.5859E+09	877.84	1.14	32.29
R3	46.34 Yrs.	1.5927E+09	875.94	1.14	65.43
R0.5	132.63 Yrs.	1.5969E+09	874.81	1.14	16.37
R1.5	78.34 Yrs.	1.6244E+09	867.37	1.15	22.45
R1	100.00 Yrs.	1.6326E+09	865.18	1.16	18.46
L2	55.72 Yrs.	1.6646E+09	856.82	1.17	50.55
S1.5	51.56 Yrs.	1.6683E+09	855.87	1.17	51.91
S.5	114.53 Yrs.	1.7205E+09	842.78	1.19	19.04
L1.5	64.59 Yrs.	1.7445E+09	836.98	1.19	39.58
S2	47.34 Yrs.	1.7612E+09	833.00	1.20	62.79
L1	75.53 Yrs.	1.8417E+09	814.59	1.23	32.67
S1	56.66 Yrs.	1.8525E+09	812.22	1.23	43.36
L0.5	94.69 Yrs.	1.9579E+09	790.05	1.27	25.44
S0.5	66.22 Yrs.	2.0178E+09	778.23	1.28	33.71
L0	118.30 Yrs.	2.0800E+09	766.51	1.30	21.75
S0	78.19 Yrs.	2.1865E+09	747.61	1.34	27.78
L3	46.94 Yrs.	2.3176E+09	726.16	1.38	68.76
S3	42.88 Yrs.	3.2249E+09	615.58	1.62	81.32
R4	41.28 Yrs.	4.1372E+09	543.49	1.84	92.89
L4	41.97 Yrs.	5.3766E+09	476.75	2.10	85.84
S4	40.06 Yrs.	8.2636E+09	384.56	2.60	96.35
L5	39.72 Yrs.	1.1271E+10	329.28	3.04	96.01
R5	39.06 Yrs.	1.3582E+10	299.96	3.33	99.99
S5	38.81 Yrs.	1.6234E+10	274.37	3.64	99.90
S6	38.28 Yrs.	2.2773E+10	231.65	4.32	100.00
SQ	38.00 Yrs.	2.4462E+10	223.51	4.47	100.00
O3	201.00 Yrs.	2.0824E+11	.00	.00	21.10
O4	201.00 Yrs.	1.1876E+12	.00	.00	28.46

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2006
Last Test Point -	2010

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O1	137.47 Yrs.	9.9006E+09	201.72	4.96	19.10
SC	137.47 Yrs.	9.9006E+09	201.72	4.96	19.10
O2	154.41 Yrs.	9.9017E+09	201.71	4.96	19.11
R0.5	108.91 Yrs.	1.0063E+10	200.08	5.00	20.32
R1	83.34 Yrs.	1.0475E+10	196.11	5.10	23.59
S.5	96.19 Yrs.	1.0499E+10	195.88	5.11	23.68
L0	101.70 Yrs.	1.0684E+10	194.18	5.15	26.27
R1.5	66.44 Yrs.	1.1321E+10	188.64	5.30	29.97
L0.5	82.16 Yrs.	1.1644E+10	186.00	5.38	31.21
S0	68.63 Yrs.	1.1886E+10	184.10	5.43	33.89
R2	53.47 Yrs.	1.3409E+10	173.33	5.77	44.14
S0.5	58.63 Yrs.	1.3414E+10	173.30	5.77	41.67
L1	66.59 Yrs.	1.3711E+10	171.41	5.83	39.52
L1.5	57.38 Yrs.	1.5502E+10	161.20	6.20	48.28
S1	50.69 Yrs.	1.6149E+10	157.94	6.33	53.24
R2.5	46.53 Yrs.	1.6225E+10	157.57	6.35	62.21
S1.5	46.22 Yrs.	1.8893E+10	146.02	6.85	64.02
L2	49.94 Yrs.	1.9354E+10	144.27	6.93	60.01
R3	41.44 Yrs.	2.1668E+10	136.35	7.33	83.62
S2	42.53 Yrs.	2.3293E+10	131.51	7.60	76.11
O3	201.00 Yrs.	2.4618E+10	.00	.00	21.10
L3	42.19 Yrs.	2.8267E+10	119.38	8.38	78.44
S3	38.53 Yrs.	3.3037E+10	110.43	9.06	92.91
R4	37.13 Yrs.	3.6447E+10	105.13	9.51	99.61
L4	37.69 Yrs.	4.0837E+10	99.32	10.07	93.68
S4	36.00 Yrs.	4.9166E+10	90.52	11.05	99.71
L5	35.66 Yrs.	5.6865E+10	84.17	11.88	99.26
R5	35.06 Yrs.	6.1532E+10	80.91	12.36	100.00
S5	34.81 Yrs.	6.7233E+10	77.41	12.92	100.00
S6	34.28 Yrs.	8.1144E+10	70.46	14.19	100.00
SQ	34.00 Yrs.	8.6673E+10	68.18	14.67	100.00
O4	201.00 Yrs.	3.0367E+11	.00	.00	28.46

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2001
Last Test Point -	2005

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O3	166.25 Yrs.	3.2110E+09	234.75	4.26	25.29
O1	101.16 Yrs.	3.2467E+09	233.46	4.28	25.95
SC	101.16 Yrs.	3.2467E+09	233.46	4.28	25.95
O2	113.66 Yrs.	3.2481E+09	233.41	4.28	25.96
R0.5	80.97 Yrs.	3.4054E+09	227.95	4.39	28.49
R1	63.25 Yrs.	3.8105E+09	215.50	4.64	35.26
S.5	73.44 Yrs.	3.8612E+09	214.08	4.67	33.16
L0	79.44 Yrs.	4.2415E+09	204.25	4.90	35.26
R1.5	51.69 Yrs.	4.5802E+09	196.56	5.09	47.93
L0.5	65.22 Yrs.	4.9831E+09	188.44	5.31	42.36
S0	55.09 Yrs.	5.3364E+09	182.10	5.49	46.73
R2	43.09 Yrs.	6.3769E+09	166.58	6.00	69.43
L1	54.19 Yrs.	6.5276E+09	164.65	6.07	52.25
S0.5	47.78 Yrs.	6.5380E+09	164.52	6.08	57.88
L1.5	47.28 Yrs.	8.0241E+09	148.50	6.73	63.03
S1	42.03 Yrs.	8.6861E+09	142.73	7.01	71.77
R2.5	38.28 Yrs.	8.7719E+09	142.03	7.04	88.47
S1.5	38.69 Yrs.	1.0811E+10	127.94	7.82	83.24
L2	41.81 Yrs.	1.1063E+10	126.47	7.91	74.22
R3	34.78 Yrs.	1.3300E+10	115.35	8.67	98.75
S2	35.91 Yrs.	1.4171E+10	111.75	8.95	92.84
L3	35.81 Yrs.	1.7925E+10	99.36	10.06	89.69
O4	201.00 Yrs.	2.0967E+10	.00	.00	28.46
S3	32.88 Yrs.	2.1789E+10	90.12	11.10	99.53
R4	31.69 Yrs.	2.5320E+10	83.60	11.96	100.00
L4	32.25 Yrs.	2.7740E+10	79.87	12.52	99.08
S4	30.91 Yrs.	3.4543E+10	71.57	13.97	100.00
L5	30.66 Yrs.	4.0263E+10	66.29	15.08	99.99
R5	30.19 Yrs.	4.4694E+10	62.92	15.89	100.00
S5	30.00 Yrs.	4.8296E+10	60.53	16.52	100.00
S6	29.59 Yrs.	5.8759E+10	54.88	18.22	100.00
SQ	29.00 Yrs.	6.9173E+10	50.58	19.77	100.00

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1996
Last Test Point -	2000

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	163.88 Yrs.	8.7474E+09	99.45	10.05	34.06
O3	117.81 Yrs.	8.7989E+09	99.16	10.08	34.76
SC	71.94 Yrs.	8.9127E+09	98.53	10.15	36.49
O1	71.94 Yrs.	8.9127E+09	98.53	10.15	36.49
O2	80.81 Yrs.	8.9167E+09	98.51	10.15	36.51
R0.5	58.25 Yrs.	9.3787E+09	96.05	10.41	42.55
S.5	54.22 Yrs.	1.0515E+10	90.71	11.02	48.11
R1	46.63 Yrs.	1.0518E+10	90.70	11.03	56.71
L0	59.63 Yrs.	1.1394E+10	87.14	11.48	48.42
R1.5	39.22 Yrs.	1.2463E+10	83.32	12.00	77.21
L0.5	49.91 Yrs.	1.2979E+10	81.65	12.25	57.88
S0	42.53 Yrs.	1.3798E+10	79.19	12.63	66.07
L1	42.50 Yrs.	1.5728E+10	74.17	13.48	68.88
S0.5	37.53 Yrs.	1.6119E+10	73.26	13.65	79.73
R2	33.78 Yrs.	1.6254E+10	72.96	13.71	95.21
L1.5	37.63 Yrs.	1.8532E+10	68.33	14.64	79.40
S1	33.66 Yrs.	1.9781E+10	66.14	15.12	91.89
R2.5	30.66 Yrs.	2.0838E+10	64.44	15.52	99.67
S1.5	31.28 Yrs.	2.3274E+10	60.97	16.40	97.70
L2	33.81 Yrs.	2.3346E+10	60.88	16.43	88.12
S2	29.38 Yrs.	2.8193E+10	55.40	18.05	99.84
R3	28.38 Yrs.	2.8194E+10	55.40	18.05	100.00
L3	29.44 Yrs.	3.3049E+10	51.17	19.54	97.85
S3	27.19 Yrs.	3.8890E+10	47.17	21.20	100.00
R4	26.31 Yrs.	4.4946E+10	43.88	22.79	100.00
L4	26.81 Yrs.	4.6124E+10	43.31	23.09	99.99
S4	25.78 Yrs.	5.4576E+10	39.82	25.12	100.00
L5	25.59 Yrs.	6.0304E+10	37.88	26.40	100.00
R5	25.25 Yrs.	6.6789E+10	35.99	27.78	100.00
S5	25.13 Yrs.	6.9558E+10	35.27	28.35	100.00
S6	24.81 Yrs.	7.9650E+10	32.96	30.34	100.00
SQ	25.00 Yrs.	8.8167E+10	31.33	31.92	100.00

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1991
Last Test Point -	1995

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	115.22 Yrs.	1.1409E+10	64.59	15.48	45.19
O3	83.00 Yrs.	1.1484E+10	64.38	15.53	46.79
SC	50.84 Yrs.	1.1654E+10	63.91	15.65	51.63
O1	50.84 Yrs.	1.1654E+10	63.91	15.65	51.63
O2	57.16 Yrs.	1.1657E+10	63.90	15.65	51.59
R0.5	41.72 Yrs.	1.2264E+10	62.30	16.05	64.99
S.5	39.66 Yrs.	1.3287E+10	59.85	16.71	69.06
L0	44.05 Yrs.	1.3653E+10	59.04	16.94	65.17
R1	34.19 Yrs.	1.3709E+10	58.92	16.97	86.63
L0.5	37.59 Yrs.	1.5509E+10	55.40	18.05	75.82
R1.5	29.53 Yrs.	1.6132E+10	54.32	18.41	98.53
S0	32.28 Yrs.	1.6165E+10	54.26	18.43	89.14
L1	32.69 Yrs.	1.8324E+10	50.97	19.62	85.93
S0.5	28.97 Yrs.	1.8820E+10	50.29	19.88	97.85
R2	26.13 Yrs.	2.0347E+10	48.37	20.68	100.00
L1.5	29.31 Yrs.	2.1404E+10	47.16	21.21	93.15
S1	26.38 Yrs.	2.2683E+10	45.81	21.83	100.00
R2.5	24.16 Yrs.	2.5541E+10	43.17	23.16	100.00
L2	26.72 Yrs.	2.6147E+10	42.67	23.44	97.57
S1.5	24.75 Yrs.	2.6643E+10	42.27	23.66	100.00
S2	23.44 Yrs.	3.1928E+10	38.61	25.90	100.00
R3	22.69 Yrs.	3.3113E+10	37.91	26.38	100.00
L3	23.59 Yrs.	3.6242E+10	36.24	27.59	99.99
S3	21.94 Yrs.	4.2727E+10	33.38	29.96	100.00
L4	21.69 Yrs.	4.9309E+10	31.07	32.19	100.00
R4	21.31 Yrs.	4.9791E+10	30.92	32.34	100.00
S4	20.94 Yrs.	5.7480E+10	28.78	34.75	100.00
L5	20.81 Yrs.	6.2132E+10	27.68	36.13	100.00
R5	20.56 Yrs.	6.9084E+10	26.25	38.10	100.00
S5	20.47 Yrs.	7.1203E+10	25.85	38.68	100.00
S6	20.22 Yrs.	7.9757E+10	24.43	40.93	100.00
SQ	20.00 Yrs.	8.2534E+10	24.01	41.64	100.00

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1986
Last Test Point -	1990

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	68.84 Yrs.	1.1670E+10	41.44	24.13	62.13
O3	49.81 Yrs.	1.1833E+10	41.15	24.30	66.14
SC	30.81 Yrs.	1.2213E+10	40.51	24.69	85.19
O1	30.81 Yrs.	1.2213E+10	40.51	24.69	85.19
O2	34.63 Yrs.	1.2218E+10	40.50	24.69	79.65
R0.5	25.97 Yrs.	1.3444E+10	38.61	25.90	100.00
S.5	25.41 Yrs.	1.4877E+10	36.70	27.25	100.00
L0	28.54 Yrs.	1.5346E+10	36.14	27.67	88.85
R1	22.22 Yrs.	1.6027E+10	35.36	28.28	100.00
L0.5	25.09 Yrs.	1.7726E+10	33.62	29.74	95.45
S0	21.84 Yrs.	1.9118E+10	32.38	30.89	100.00
R1.5	20.00 Yrs.	1.9781E+10	31.83	31.42	100.00
L1	22.47 Yrs.	2.0981E+10	30.91	32.36	99.07
S0.5	20.09 Yrs.	2.2519E+10	29.83	33.52	100.00
L1.5	20.63 Yrs.	2.4764E+10	28.45	35.15	99.87
R2	18.38 Yrs.	2.5399E+10	28.09	35.60	100.00
S1	18.72 Yrs.	2.7012E+10	27.24	36.71	100.00
L2	19.16 Yrs.	2.9580E+10	26.03	38.42	100.00
S1.5	17.84 Yrs.	3.1398E+10	25.26	39.58	100.00
R2.5	17.41 Yrs.	3.1974E+10	25.04	39.94	100.00
S2	17.13 Yrs.	3.6647E+10	23.39	42.76	100.00
L3	17.34 Yrs.	3.9410E+10	22.55	44.35	100.00
R3	16.69 Yrs.	4.0225E+10	22.32	44.80	100.00
S3	16.31 Yrs.	4.7006E+10	20.65	48.43	100.00
L4	16.19 Yrs.	5.1500E+10	19.73	50.69	100.00
R4	15.94 Yrs.	5.5607E+10	18.98	52.68	100.00
S4	15.75 Yrs.	6.0086E+10	18.26	54.76	100.00
L5	15.69 Yrs.	6.2378E+10	17.92	55.79	100.00
R5	15.50 Yrs.	6.9321E+10	17.00	58.81	100.00
S5	15.47 Yrs.	7.0238E+10	16.89	59.20	100.00
S6	15.31 Yrs.	7.4896E+10	16.36	61.13	100.00
SQ	15.00 Yrs.	7.8125E+10	16.02	62.44	100.00

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1981
Last Test Point -	1985

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S6	11.63 Yrs.	3.4348E+10	16.52	60.53	100.00
S5	11.69 Yrs.	3.6974E+10	15.92	62.80	100.00
R5	11.69 Yrs.	3.7819E+10	15.74	63.51	100.00
L5	11.84 Yrs.	3.9110E+10	15.48	64.59	100.00
S4	11.84 Yrs.	4.0907E+10	15.14	66.06	100.00
L4	12.16 Yrs.	4.3217E+10	14.73	67.90	100.00
R4	11.91 Yrs.	4.3463E+10	14.69	68.09	100.00
S3	12.19 Yrs.	4.5941E+10	14.29	70.00	100.00
L3	13.00 Yrs.	4.8711E+10	13.87	72.08	100.00
R3	12.34 Yrs.	4.9696E+10	13.73	72.81	100.00
S2	12.78 Yrs.	5.0977E+10	13.56	73.74	100.00
R2.5	12.84 Yrs.	5.3885E+10	13.19	75.81	100.00
S1.5	13.28 Yrs.	5.4066E+10	13.17	75.94	100.00
L2	14.31 Yrs.	5.4825E+10	13.08	76.47	100.00
S1	13.91 Yrs.	5.7079E+10	12.82	78.03	100.00
R2	13.50 Yrs.	5.8082E+10	12.70	78.71	100.00
L1.5	15.34 Yrs.	5.8494E+10	12.66	78.99	100.00
S0.5	14.88 Yrs.	6.0506E+10	12.45	80.34	100.00
L1	16.72 Yrs.	6.1805E+10	12.32	81.20	100.00
R1.5	14.63 Yrs.	6.2606E+10	12.24	81.72	100.00
S0	16.16 Yrs.	6.3578E+10	12.14	82.35	100.00
L0.5	18.63 Yrs.	6.4852E+10	12.02	83.17	99.72
R1	16.28 Yrs.	6.6394E+10	11.88	84.16	100.00
L0	21.16 Yrs.	6.7470E+10	11.79	84.83	98.03
S.5	18.75 Yrs.	6.7837E+10	11.76	85.07	100.00
R0.5	19.09 Yrs.	6.9462E+10	11.62	86.08	100.00
O2	25.63 Yrs.	7.1080E+10	11.48	87.07	90.75
SC	22.81 Yrs.	7.1085E+10	11.48	87.08	100.00
O1	22.81 Yrs.	7.1085E+10	11.48	87.08	100.00
O3	36.97 Yrs.	7.1617E+10	11.44	87.40	76.17
O4	51.19 Yrs.	7.1847E+10	11.42	87.54	70.51
SQ	16.00 Yrs.	3.0440E+11	5.55	180.20	100.00

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1976
Last Test Point -	1980

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S3	175.00 Yrs.	1.0000E-04	)498561.71	.00	.07
R5	33.00 Yrs.	1.0000E-04	)498561.71	.00	100.00
SQ	16.00 Yrs.	1.0000E-04	)498561.71	.00	100.00
L3	150.00 Yrs.	1.0000E-04	)498561.71	.00	1.05
L4	46.00 Yrs.	1.0000E-04	)498561.71	.00	75.95
L5	25.00 Yrs.	1.0000E-04	)498561.71	.00	100.00
S6	18.00 Yrs.	1.0000E-04	)498561.71	.00	100.00
S4	42.00 Yrs.	1.8370E-04	)550170.12	.00	92.33
S5	23.00 Yrs.	1.8370E-04	)550170.12	.00	100.00
S2	201.00 Yrs.	5.7193E-01	.00	.00	.39
R4	201.00 Yrs.	1.8044E+03	.00	.00	.17
S1.5	201.00 Yrs.	2.5718E+03	.00	.00	1.26
L2	201.00 Yrs.	3.6803E+03	.00	.00	1.64
S1	201.00 Yrs.	1.0106E+04	.00	.00	2.13
R3	201.00 Yrs.	5.3179E+05	.00	.00	1.18
S0.5	201.00 Yrs.	1.2377E+06	.00	.00	4.06
L1.5	201.00 Yrs.	2.0684E+06	.00	.00	3.32
S0	201.00 Yrs.	4.5148E+06	.00	.00	5.98
R2.5	201.00 Yrs.	6.1071E+06	.00	.00	2.49
L1	201.00 Yrs.	7.9337E+06	.00	.00	5.00
R2	201.00 Yrs.	1.7750E+07	.00	.00	3.81
L0.5	201.00 Yrs.	2.8545E+07	.00	.00	7.92
L0	206.00 Yrs.	5.7939E+07	.00	.00	10.49
R1.5	201.00 Yrs.	5.9459E+07	.00	.00	5.87
R1	201.00 Yrs.	1.2564E+08	.00	.00	7.92
S.5	201.00 Yrs.	1.3807E+08	.00	.00	9.52
R0.5	201.00 Yrs.	2.6555E+08	.00	.00	10.49
O1	201.00 Yrs.	4.5722E+08	.00	.00	13.06
SC	201.00 Yrs.	4.5722E+08	.00	.00	13.06
O2	201.00 Yrs.	5.7594E+08	.00	.00	14.68
O3	201.00 Yrs.	1.2530E+09	.00	.00	21.10
O4	201.00 Yrs.	2.4416E+09	.00	.00	28.46

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1971
Last Test Point -	1975

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
L3	79.00 Yrs.	2.0000E-04	3005536.95	.00	13.65
R5	18.00 Yrs.	2.0000E-04	3005536.95	.00	100.00
S5	16.00 Yrs.	2.0000E-04	3005536.95	.00	100.00
L4	24.00 Yrs.	2.0000E-04	3005536.95	.00	100.00
SQ	16.00 Yrs.	2.0000E-04	3005536.95	.00	100.00
L5	16.00 Yrs.	2.0000E-04	3005536.95	.00	100.00
S6	16.00 Yrs.	2.0000E-04	3005536.95	.00	100.00
S4	21.00 Yrs.	2.8370E-04	1504388.92	.00	100.00
S3	62.00 Yrs.	8.1846E-04	202260.40	.00	27.31
S2	201.00 Yrs.	2.3709E-03	.00	.00	.39
S1.5	201.00 Yrs.	1.9299E+01	.00	.00	1.26
L2	201.00 Yrs.	2.3136E+01	.00	.00	1.64
R4	201.00 Yrs.	7.5381E+01	.00	.00	.17
S1	201.00 Yrs.	7.5796E+01	.00	.00	2.13
R3	201.00 Yrs.	2.4506E+04	.00	.00	1.18
S0.5	201.00 Yrs.	2.7944E+04	.00	.00	4.06
L1.5	201.00 Yrs.	8.9561E+04	.00	.00	3.32
S0	201.00 Yrs.	1.0599E+05	.00	.00	5.98
R2.5	201.00 Yrs.	2.9901E+05	.00	.00	2.49
L1	201.00 Yrs.	3.5258E+05	.00	.00	5.00
R2	201.00 Yrs.	8.7796E+05	.00	.00	3.81
L0.5	201.00 Yrs.	1.0818E+06	.00	.00	7.92
L0	206.00 Yrs.	2.0747E+06	.00	.00	10.49
R1.5	201.00 Yrs.	2.9999E+06	.00	.00	5.87
R1	201.00 Yrs.	6.3856E+06	.00	.00	7.92
S.5	201.00 Yrs.	6.7328E+06	.00	.00	9.52
R0.5	201.00 Yrs.	1.3662E+07	.00	.00	10.49
SC	201.00 Yrs.	2.3673E+07	.00	.00	13.06
O1	201.00 Yrs.	2.3673E+07	.00	.00	13.06
O2	201.00 Yrs.	2.9809E+07	.00	.00	14.68
O3	201.00 Yrs.	6.4993E+07	.00	.00	21.10
O4	201.00 Yrs.	1.2691E+08	.00	.00	28.46

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1966
Last Test Point -	1970

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S2	50.00 Yrs.	0.0000E+00	.00	.00	55.94
L5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S6	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S3	16.00 Yrs.	0.0000E+00	.00	.00	100.00
R5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
SQ	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S4	16.00 Yrs.	0.0000E+00	.00	.00	100.00
L4	16.00 Yrs.	0.0000E+00	.00	.00	100.00
L3	16.00 Yrs.	0.0000E+00	.00	.00	100.00
L2	201.00 Yrs.	5.1796E-04	.00	.00	1.64
S1.5	201.00 Yrs.	6.2674E-04	.00	.00	1.26
S1	201.00 Yrs.	2.2842E-03	.00	.00	2.13
R4	201.00 Yrs.	2.5019E-02	.00	.00	.17
S0.5	201.00 Yrs.	4.0890E+00	.00	.00	4.06
R3	201.00 Yrs.	8.7334E+00	.00	.00	1.18
S0	201.00 Yrs.	1.5935E+01	.00	.00	5.98
L1.5	201.00 Yrs.	3.0762E+01	.00	.00	3.32
R2.5	201.00 Yrs.	1.1094E+02	.00	.00	2.49
L1	201.00 Yrs.	1.2249E+02	.00	.00	5.00
L0.5	201.00 Yrs.	3.0882E+02	.00	.00	7.92
R2	201.00 Yrs.	3.2786E+02	.00	.00	3.81
L0	206.00 Yrs.	5.5193E+02	.00	.00	10.49
R1.5	201.00 Yrs.	1.1351E+03	.00	.00	5.87
R1	201.00 Yrs.	2.4277E+03	.00	.00	7.92
S.5	201.00 Yrs.	2.4726E+03	.00	.00	9.52
R0.5	201.00 Yrs.	5.2369E+03	.00	.00	10.49
O1	201.00 Yrs.	9.1125E+03	.00	.00	13.06
SC	201.00 Yrs.	9.1125E+03	.00	.00	13.06
O2	201.00 Yrs.	1.1472E+04	.00	.00	14.68
O3	201.00 Yrs.	2.5046E+04	.00	.00	21.10
O4	201.00 Yrs.	4.8970E+04	.00	.00	28.46

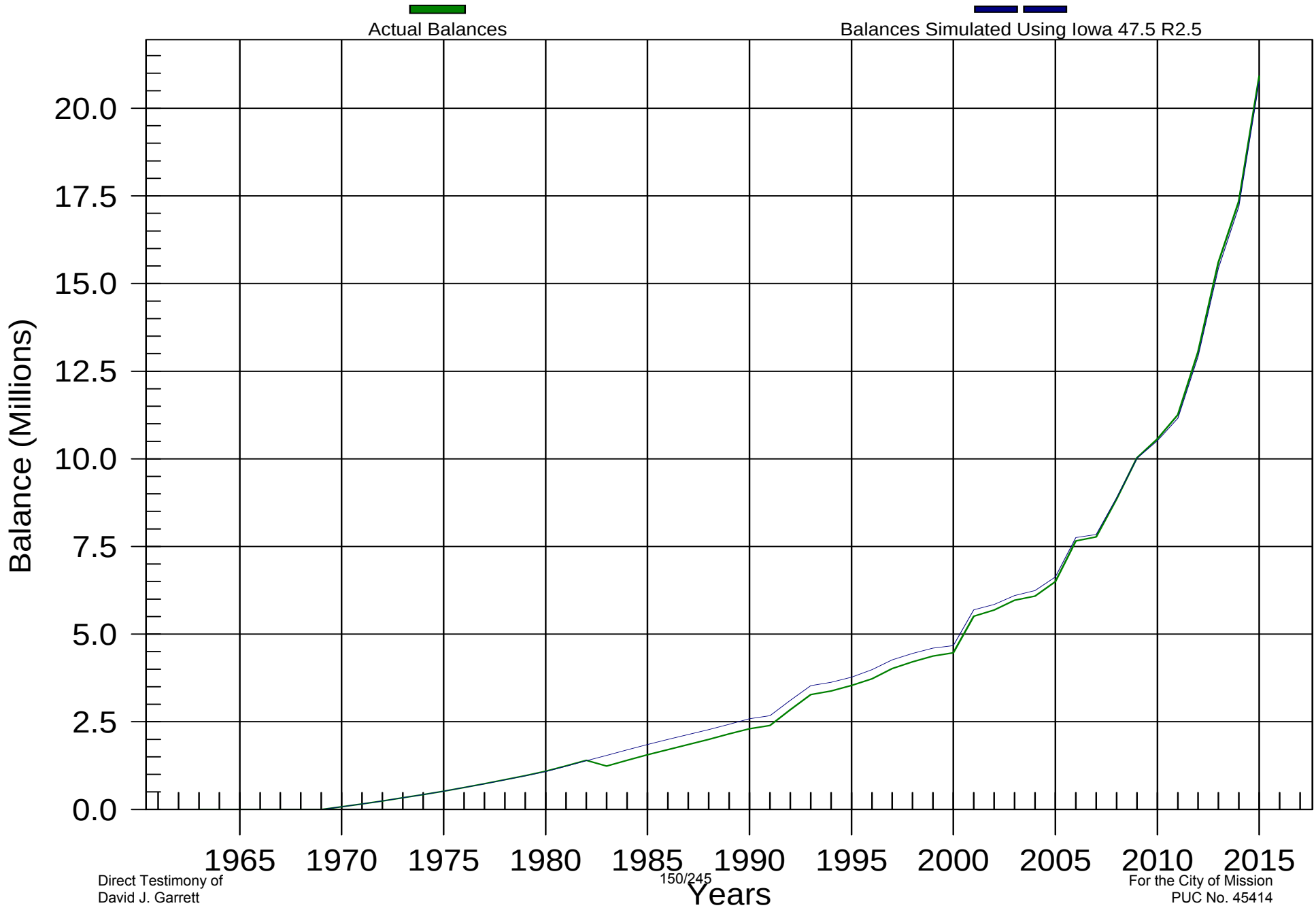
Sharyland
Electric Division
367.00 Underground Conductors and Devices
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	3
Interval Between Test Points -	1
First Test Point -	1963
Last Test Point -	1965

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S1	16.00 Yrs.	0.0000E+00	.00	.00	100.00
R5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S.5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S0	16.00 Yrs.	0.0000E+00	.00	.00	100.00
R3	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S0.5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
R4	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S1.5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S2	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S3	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S6	16.00 Yrs.	0.0000E+00	.00	.00	100.00
SC	16.00 Yrs.	0.0000E+00	.00	.00	100.00
R2.5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
L1	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S4	16.00 Yrs.	0.0000E+00	.00	.00	100.00
O1	16.00 Yrs.	0.0000E+00	.00	.00	100.00
SQ	16.00 Yrs.	0.0000E+00	.00	.00	100.00
L0	16.00 Yrs.	0.0000E+00	.00	.00	99.95
L0.5	16.00 Yrs.	0.0000E+00	.00	.00	99.98
L1.5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
L3	16.00 Yrs.	0.0000E+00	.00	.00	100.00
L2	16.00 Yrs.	0.0000E+00	.00	.00	100.00
L5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
R2	16.00 Yrs.	0.0000E+00	.00	.00	100.00
O2	16.00 Yrs.	0.0000E+00	.00	.00	100.00
O3	16.00 Yrs.	0.0000E+00	.00	.00	96.52
O4	16.00 Yrs.	0.0000E+00	.00	.00	95.26
R0.5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
R1	16.00 Yrs.	0.0000E+00	.00	.00	100.00
R1.5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
L4	16.00 Yrs.	0.0000E+00	.00	.00	100.00

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Actual And Simulated Balances 1963-2015



Sharyland
Electric Division
368.00 Line Transformers
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	53
Interval Between Test Points -	1
First Test Point -	1963
Last Test Point -	2015

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
R2	57.91 Yrs.	2.5433E+12	93.75	10.67	36.90
R2.5	51.94 Yrs.	2.7203E+12	90.65	11.03	46.96
R1.5	68.75 Yrs.	2.9502E+12	87.04	11.49	28.18
L1	73.09 Yrs.	3.1614E+12	84.08	11.89	34.38
L0.5	87.13 Yrs.	3.1832E+12	83.80	11.93	28.72
S0.5	64.38 Yrs.	3.2107E+12	83.44	11.99	35.44
S0	73.75 Yrs.	3.3135E+12	82.13	12.18	30.39
L1.5	64.09 Yrs.	3.3485E+12	81.70	12.24	40.13
R1	83.66 Yrs.	3.4761E+12	80.19	12.47	23.47
S.5	97.31 Yrs.	3.5310E+12	79.56	12.57	23.34
L0	105.57 Yrs.	3.5734E+12	79.09	12.64	25.09
R0.5	106.84 Yrs.	3.8501E+12	76.19	13.12	20.76
S1	57.16 Yrs.	3.8677E+12	76.02	13.15	42.63
O2	149.84 Yrs.	4.0282E+12	74.49	13.42	19.69
O1	133.38 Yrs.	4.0293E+12	74.48	13.43	19.68
SC	133.38 Yrs.	4.0293E+12	74.48	13.43	19.68
R3	47.72 Yrs.	4.3425E+12	71.74	13.94	60.41
S1.5	52.88 Yrs.	4.5173E+12	70.34	14.22	49.26
L2	57.16 Yrs.	4.6272E+12	69.50	14.39	48.33
O3	201.00 Yrs.	5.2136E+12	.00	.00	21.10
S2	49.44 Yrs.	6.3865E+12	59.16	16.90	57.34
L3	49.44 Yrs.	8.0098E+12	52.83	18.93	63.22
R4	44.03 Yrs.	9.9600E+12	47.37	21.11	83.18
S3	45.59 Yrs.	1.0503E+13	46.13	21.68	72.45
L4	44.88 Yrs.	1.2914E+13	41.60	24.04	79.00
S4	43.09 Yrs.	1.6870E+13	36.40	27.47	89.26
L5	42.81 Yrs.	1.9304E+13	34.03	29.39	91.02
R5	42.22 Yrs.	1.9792E+13	33.61	29.76	98.08
S5	41.97 Yrs.	2.2888E+13	31.25	32.00	98.40
S6	41.44 Yrs.	2.7495E+13	28.51	35.07	99.99
SQ	41.00 Yrs.	3.2017E+13	26.42	37.85	100.00
O4	201.00 Yrs.	4.0316E+13	.00	.00	28.46

Sharyland
Electric Division
368.00 Line Transformers
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2011
Last Test Point -	2015

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
R4	44.66 Yrs.	9.0949E+10	463.60	2.16	80.53
S4	44.00 Yrs.	9.2108E+10	460.68	2.17	86.30
L4	45.69 Yrs.	9.4435E+10	454.97	2.20	76.83
L5	43.78 Yrs.	1.0747E+11	426.48	2.34	88.93
S3	46.28 Yrs.	1.2135E+11	401.35	2.49	70.13
R5	43.13 Yrs.	1.3402E+11	381.91	2.62	96.56
S5	42.91 Yrs.	1.5197E+11	358.65	2.79	97.12
L3	49.97 Yrs.	1.7356E+11	335.60	2.98	62.02
S6	42.47 Yrs.	1.9597E+11	315.83	3.17	99.93
R3	47.78 Yrs.	1.9951E+11	313.01	3.19	60.19
S2	49.69 Yrs.	2.4063E+11	285.02	3.51	56.72
R2.5	51.25 Yrs.	2.7579E+11	266.23	3.76	48.67
SQ	42.00 Yrs.	2.9156E+11	258.93	3.86	100.00
L2	56.91 Yrs.	3.2282E+11	246.07	4.06	48.71
S1.5	52.59 Yrs.	3.2409E+11	245.59	4.07	49.81
R2	56.06 Yrs.	3.4322E+11	238.65	4.19	39.68
R1.5	64.41 Yrs.	3.8013E+11	226.77	4.41	31.71
L1.5	62.78 Yrs.	3.9587E+11	222.22	4.50	41.62
SC	116.22 Yrs.	4.0134E+11	220.69	4.53	22.59
O1	116.22 Yrs.	4.0134E+11	220.69	4.53	22.59
O2	130.56 Yrs.	4.0159E+11	220.63	4.53	22.60
O3	190.19 Yrs.	4.0212E+11	220.48	4.54	22.26
R1	75.97 Yrs.	4.0219E+11	220.46	4.54	26.88
R0.5	94.41 Yrs.	4.0299E+11	220.24	4.54	23.86
S1	56.22 Yrs.	4.0668E+11	219.24	4.56	44.01
S.5	88.19 Yrs.	4.3361E+11	212.32	4.71	26.40
L1	70.50 Yrs.	4.4915E+11	208.62	4.79	36.33
S0.5	62.06 Yrs.	4.6113E+11	205.89	4.86	37.78
L0.5	81.81 Yrs.	4.7536E+11	202.78	4.93	31.39
L0	96.66 Yrs.	5.0615E+11	196.52	5.09	27.95
S0	69.66 Yrs.	5.0897E+11	195.98	5.10	33.14
O4	201.00 Yrs.	8.3201E+12	.00	.00	28.46

Sharyland
Electric Division
368.00 Line Transformers
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2006
Last Test Point -	2010

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
R2.5	54.34 Yrs.	1.6433E+09	2017.48	.50	41.53
S1	60.25 Yrs.	1.9961E+09	1830.53	.55	38.44
L1.5	67.66 Yrs.	2.8015E+09	1545.14	.65	36.37
S1.5	55.13 Yrs.	3.1838E+09	1449.43	.69	45.01
L2	59.50 Yrs.	4.3208E+09	1244.18	.80	44.84
L1	77.88 Yrs.	7.9095E+09	919.59	1.09	31.12
R2	61.47 Yrs.	9.0228E+09	860.99	1.16	32.29
S0.5	68.66 Yrs.	9.1796E+09	853.60	1.17	31.61
R3	49.06 Yrs.	9.5603E+09	836.43	1.20	55.76
S0	79.47 Yrs.	1.8347E+10	603.79	1.66	27.09
S2	50.97 Yrs.	1.8358E+10	603.61	1.66	53.57
L0.5	93.97 Yrs.	2.0427E+10	572.22	1.75	25.72
R1.5	74.13 Yrs.	2.3310E+10	535.67	1.87	24.68
L0	114.79 Yrs.	2.9658E+10	474.89	2.11	22.60
S.5	105.91 Yrs.	3.2640E+10	452.68	2.21	21.00
R1	91.03 Yrs.	3.2888E+10	450.97	2.22	20.91
R0.5	116.72 Yrs.	3.8809E+10	415.15	2.41	18.82
O2	163.97 Yrs.	4.1414E+10	401.88	2.49	17.99
SC	145.97 Yrs.	4.1432E+10	401.79	2.49	17.98
O1	145.97 Yrs.	4.1432E+10	401.79	2.49	17.98
L3	50.44 Yrs.	4.7871E+10	373.79	2.68	60.94
S3	46.13 Yrs.	8.9319E+10	273.65	3.65	70.66
R4	44.22 Yrs.	1.0933E+11	247.34	4.04	82.41
L4	45.03 Yrs.	1.6564E+11	200.95	4.98	78.60
S4	42.91 Yrs.	2.6476E+11	158.94	6.29	89.82
L5	42.47 Yrs.	3.6983E+11	134.48	7.44	91.69
R5	41.69 Yrs.	4.2093E+11	126.06	7.93	98.74
S5	41.38 Yrs.	5.0743E+11	114.81	8.71	98.95
S6	40.75 Yrs.	7.4442E+11	94.79	10.55	100.00
SQ	40.00 Yrs.	1.0803E+12	78.69	12.71	100.00
O3	201.00 Yrs.	1.1290E+12	.00	.00	21.10
O4	201.00 Yrs.	1.2314E+13	.00	.00	28.46

Sharyland
Electric Division
368.00 Line Transformers
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2001
Last Test Point -	2005

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
L1	79.19 Yrs.	8.9950E+09	659.88	1.52	30.29
S0.5	70.03 Yrs.	9.0009E+09	659.66	1.52	30.50
R2	63.19 Yrs.	9.3463E+09	647.36	1.54	30.37
R2.5	54.31 Yrs.	9.7274E+09	634.55	1.58	41.60
S0	82.81 Yrs.	1.0113E+10	622.35	1.61	25.41
L1.5	67.69 Yrs.	1.0681E+10	605.57	1.65	36.34
L0.5	98.81 Yrs.	1.1249E+10	590.08	1.69	23.87
S1	59.91 Yrs.	1.3164E+10	545.47	1.83	38.88
L0	123.46 Yrs.	1.3926E+10	530.34	1.89	20.60
R1.5	79.38 Yrs.	1.4179E+10	525.59	1.90	21.96
S.5	116.00 Yrs.	1.6806E+10	482.76	2.07	18.75
R1	100.25 Yrs.	1.7751E+10	469.74	2.13	18.41
R0.5	131.34 Yrs.	2.0374E+10	438.45	2.28	16.54
S1.5	54.00 Yrs.	2.1110E+10	430.75	2.32	47.09
O2	186.47 Yrs.	2.1542E+10	426.40	2.35	15.82
O1	166.00 Yrs.	2.1559E+10	426.23	2.35	15.81
SC	166.00 Yrs.	2.1559E+10	426.23	2.35	15.81
L2	58.16 Yrs.	2.3240E+10	410.53	2.44	46.82
R3	47.75 Yrs.	2.4461E+10	400.16	2.50	60.30
S2	49.13 Yrs.	4.3771E+10	299.14	3.34	58.14
L3	48.09 Yrs.	7.3460E+10	230.91	4.33	66.23
R4	41.78 Yrs.	1.0936E+11	189.25	5.28	91.44
S3	43.66 Yrs.	1.1169E+11	187.26	5.34	78.84
L4	42.28 Yrs.	1.7816E+11	148.27	6.74	85.17
S4	40.06 Yrs.	2.6242E+11	122.17	8.19	96.35
L5	39.50 Yrs.	3.6640E+11	103.39	9.67	96.28
R5	38.75 Yrs.	3.8323E+11	101.10	9.89	100.00
S5	38.34 Yrs.	4.9246E+11	89.18	11.21	99.94
S6	37.59 Yrs.	7.8078E+11	70.83	14.12	100.00
SQ	37.00 Yrs.	1.0900E+12	59.94	16.68	100.00
O3	201.00 Yrs.	1.7207E+12	.00	.00	21.10
O4	201.00 Yrs.	1.0226E+13	.00	.00	28.46

Sharyland
Electric Division
368.00 Line Transformers
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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1996
Last Test Point -	2000

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O1	152.94 Yrs.	4.9518E+09	740.05	1.35	17.16
SC	152.94 Yrs.	4.9518E+09	740.05	1.35	17.16
O2	171.78 Yrs.	4.9592E+09	739.49	1.35	17.17
R0.5	120.78 Yrs.	5.4482E+09	705.53	1.42	18.13
R1	91.78 Yrs.	6.8843E+09	627.64	1.59	20.68
S.5	106.03 Yrs.	7.6850E+09	594.04	1.68	20.97
R1.5	72.28 Yrs.	9.8021E+09	525.99	1.90	25.79
L0	112.25 Yrs.	1.1052E+10	495.36	2.02	23.24
L0.5	89.47 Yrs.	1.5183E+10	422.63	2.37	27.64
S0	74.78 Yrs.	1.9179E+10	376.04	2.66	29.75
R2	57.06 Yrs.	2.0020E+10	368.05	2.72	38.14
S0.5	62.97 Yrs.	2.8526E+10	308.33	3.24	36.84
L1	71.19 Yrs.	2.9514E+10	303.13	3.30	35.80
R2.5	48.78 Yrs.	3.6020E+10	274.39	3.64	55.36
L1.5	60.69 Yrs.	4.1652E+10	255.17	3.92	44.09
S1	53.56 Yrs.	5.1623E+10	229.20	4.36	48.20
S1.5	48.19 Yrs.	7.1666E+10	194.53	5.14	59.32
L2	51.91 Yrs.	7.6030E+10	188.86	5.29	56.71
R3	42.63 Yrs.	7.6789E+10	187.93	5.32	79.40
S2	43.69 Yrs.	1.1344E+11	154.62	6.47	72.86
L3	42.78 Yrs.	1.5852E+11	130.80	7.65	77.30
R4	37.16 Yrs.	2.0403E+11	115.29	8.67	99.60
S3	38.75 Yrs.	2.0844E+11	114.06	8.77	92.44
L4	37.53 Yrs.	2.9166E+11	96.43	10.37	93.91
S4	35.53 Yrs.	3.9007E+11	83.38	11.99	99.81
L5	35.03 Yrs.	5.0965E+11	72.95	13.71	99.49
R5	34.38 Yrs.	5.2428E+11	71.92	13.90	100.00
O3	201.00 Yrs.	5.6865E+11	.00	.00	21.10
S5	34.03 Yrs.	6.5197E+11	64.49	15.51	100.00
S6	33.31 Yrs.	9.7605E+11	52.71	18.97	100.00
SQ	33.00 Yrs.	1.3907E+12	44.16	22.64	100.00
O4	201.00 Yrs.	4.7850E+12	.00	.00	28.46

Sharyland
Electric Division
368.00 Line Transformers
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1991
Last Test Point -	1995

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O1	148.16 Yrs.	1.0419E+09	1380.19	.72	17.72
SC	148.16 Yrs.	1.0419E+09	1380.19	.72	17.72
O2	166.41 Yrs.	1.0453E+09	1377.97	.73	17.73
R0.5	116.44 Yrs.	1.2434E+09	1263.43	.79	18.87
R1	87.53 Yrs.	1.8903E+09	1024.67	.98	22.05
S.5	100.59 Yrs.	2.3769E+09	913.79	1.09	22.39
R1.5	68.03 Yrs.	3.2703E+09	779.03	1.28	28.71
L0	104.95 Yrs.	4.6656E+09	652.23	1.53	25.27
L0.5	82.91 Yrs.	6.9249E+09	535.36	1.87	30.81
R2	52.53 Yrs.	8.9138E+09	471.87	2.12	45.91
S0	68.75 Yrs.	9.9105E+09	447.51	2.23	33.80
S0.5	57.34 Yrs.	1.5744E+10	355.05	2.82	43.25
L1	64.81 Yrs.	1.5854E+10	353.82	2.83	41.09
R2.5	44.28 Yrs.	1.8466E+10	327.84	3.05	69.58
L1.5	54.84 Yrs.	2.3758E+10	289.03	3.46	51.70
S1	48.16 Yrs.	3.1330E+10	251.69	3.97	58.15
S1.5	43.13 Yrs.	4.4361E+10	211.52	4.73	71.81
R3	38.16 Yrs.	4.5236E+10	209.47	4.77	93.23
L2	46.41 Yrs.	4.7626E+10	204.14	4.90	66.11
S2	38.84 Yrs.	7.2893E+10	165.01	6.06	86.10
L3	37.91 Yrs.	1.0476E+11	137.64	7.27	86.21
R4	32.88 Yrs.	1.3118E+11	123.00	8.13	100.00
S3	34.28 Yrs.	1.3962E+11	119.23	8.39	98.79
L4	33.13 Yrs.	1.9789E+11	100.15	9.99	98.59
O3	201.00 Yrs.	2.2874E+11	.00	.00	21.10
S4	31.31 Yrs.	2.7559E+11	84.86	11.78	100.00
L5	30.81 Yrs.	3.6745E+11	73.49	13.61	99.99
R5	30.25 Yrs.	3.6985E+11	73.26	13.65	100.00
S5	29.91 Yrs.	4.8252E+11	64.14	15.59	100.00
S6	29.25 Yrs.	7.5810E+11	51.17	19.54	100.00
SQ	29.00 Yrs.	1.3844E+12	37.86	26.41	100.00
O4	201.00 Yrs.	2.3235E+12	.00	.00	28.46

Sharyland
Electric Division
368.00 Line Transformers
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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1986
Last Test Point -	1990

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
SC	136.44 Yrs.	2.6441E+10	231.99	4.31	19.24
O1	136.44 Yrs.	2.6441E+10	231.99	4.31	19.24
O2	153.22 Yrs.	2.6458E+10	231.91	4.31	19.26
R0.5	106.88 Yrs.	2.7323E+10	228.21	4.38	20.75
R1	79.78 Yrs.	2.9656E+10	219.05	4.57	25.07
S.5	91.28 Yrs.	3.1280E+10	213.29	4.69	25.28
R1.5	61.50 Yrs.	3.3372E+10	206.49	4.84	34.53
L0	94.01 Yrs.	3.7400E+10	195.06	5.13	28.91
L0.5	73.88 Yrs.	4.1776E+10	184.56	5.42	36.06
R2	46.75 Yrs.	4.4548E+10	178.72	5.60	59.12
S0	60.88 Yrs.	4.7448E+10	173.18	5.77	40.48
L1	57.09 Yrs.	5.6457E+10	158.76	6.30	48.87
S0.5	50.47 Yrs.	5.6524E+10	158.66	6.30	53.22
R2.5	39.03 Yrs.	5.8992E+10	155.31	6.44	86.42
O3	201.00 Yrs.	6.4142E+10	.00	.00	21.10
L1.5	48.09 Yrs.	6.7351E+10	145.35	6.88	61.74
S1	42.03 Yrs.	7.7705E+10	135.32	7.39	71.77
R3	33.25 Yrs.	9.2516E+10	124.02	8.06	99.73
S1.5	37.53 Yrs.	9.3410E+10	123.42	8.10	86.08
L2	40.38 Yrs.	9.7624E+10	120.73	8.28	76.77
S2	33.69 Yrs.	1.2590E+11	106.31	9.41	96.62
L3	32.81 Yrs.	1.5950E+11	94.45	10.59	94.12
R4	28.41 Yrs.	1.8140E+11	88.57	11.29	100.00
S3	29.59 Yrs.	1.9615E+11	85.17	11.74	99.99
L4	28.56 Yrs.	2.4830E+11	75.70	13.21	99.94
S4	26.97 Yrs.	3.2970E+11	65.70	15.22	100.00
R5	26.03 Yrs.	4.0519E+11	59.26	16.87	100.00
L5	26.53 Yrs.	4.1062E+11	58.87	16.99	100.00
S5	25.72 Yrs.	5.2097E+11	52.26	19.13	100.00
S6	25.16 Yrs.	7.6967E+11	43.00	23.26	100.00
O4	201.00 Yrs.	8.4486E+11	.00	.00	28.46
SQ	25.00 Yrs.	1.3062E+12	33.01	30.30	100.00

Sharyland
Electric Division
368.00 Line Transformers
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Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1981
Last Test Point -	1985

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S5	21.16 Yrs.	2.2011E+11	62.02	16.12	100.00
L5	21.84 Yrs.	2.2183E+11	61.78	16.19	100.00
S4	22.28 Yrs.	2.2362E+11	61.53	16.25	100.00
R5	21.41 Yrs.	2.2512E+11	61.33	16.31	100.00
L4	23.63 Yrs.	2.4629E+11	58.63	17.06	100.00
S6	20.59 Yrs.	2.5513E+11	57.61	17.36	100.00
S3	24.63 Yrs.	2.5934E+11	57.14	17.50	100.00
R4	23.59 Yrs.	2.7153E+11	55.84	17.91	100.00
L3	27.34 Yrs.	2.8017E+11	54.97	18.19	99.23
S2	28.28 Yrs.	3.0039E+11	53.09	18.84	99.97
L2	34.09 Yrs.	3.2585E+11	50.97	19.62	87.66
S1.5	31.78 Yrs.	3.2941E+11	50.70	19.72	97.10
R3	28.03 Yrs.	3.3297E+11	50.43	19.83	100.00
S1	35.91 Yrs.	3.4591E+11	49.47	20.21	86.79
SQ	20.00 Yrs.	3.5036E+11	49.16	20.34	100.00
L1.5	41.22 Yrs.	3.5945E+11	48.53	20.60	73.13
R2.5	33.53 Yrs.	3.7194E+11	47.71	20.96	97.65
L1	49.47 Yrs.	3.7346E+11	47.61	21.00	58.37
S0.5	43.78 Yrs.	3.7356E+11	47.61	21.00	65.68
S0	53.47 Yrs.	3.8712E+11	46.77	21.38	48.74
R2	41.03 Yrs.	3.9331E+11	46.40	21.55	75.70
L0.5	65.47 Yrs.	3.9685E+11	46.19	21.65	42.16
L0	84.36 Yrs.	4.0421E+11	45.77	21.85	32.87
R1.5	55.66 Yrs.	4.1272E+11	45.29	22.08	41.66
S.5	83.50 Yrs.	4.1623E+11	45.10	22.17	28.26
R1	73.50 Yrs.	4.1965E+11	44.92	22.26	28.20
R0.5	99.75 Yrs.	4.2433E+11	44.67	22.39	22.42
O2	143.84 Yrs.	4.2608E+11	44.58	22.43	20.51
SC	128.09 Yrs.	4.2611E+11	44.58	22.43	20.49
O1	128.09 Yrs.	4.2611E+11	44.58	22.43	20.49
O3	201.00 Yrs.	4.2950E+11	.00	.00	21.10
O4	201.00 Yrs.	6.6711E+11	.00	.00	28.46

Sharyland
Electric Division
368.00 Line Transformers
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1976
Last Test Point -	1980

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S6	30.00 Yrs.	2.0000E-03	)259699.41	.00	100.00
S5	42.00 Yrs.	2.0000E-03	)259699.41	.00	98.36
S4	77.00 Yrs.	2.0000E-03	)259699.41	.00	3.29
L5	42.00 Yrs.	2.0000E-03	)259699.41	.00	92.55
L4	77.00 Yrs.	2.0000E-03	)259699.41	.00	7.48
SQ	18.00 Yrs.	2.0000E-03	)259699.41	.00	100.00
R5	52.00 Yrs.	5.8710E-03	'213814.34	.00	49.27
L3	201.00 Yrs.	1.3445E-01	.00	.00	.30
S3	201.00 Yrs.	1.5870E-01	.00	.00	.03
S2	201.00 Yrs.	4.6492E+03	.00	.00	.39
R4	201.00 Yrs.	7.0956E+05	.00	.00	.17
S1.5	201.00 Yrs.	4.0048E+06	.00	.00	1.26
L2	201.00 Yrs.	6.5229E+06	.00	.00	1.64
S1	201.00 Yrs.	1.5472E+07	.00	.00	2.13
R3	201.00 Yrs.	1.7894E+08	.00	.00	1.18
S0.5	201.00 Yrs.	7.4302E+08	.00	.00	4.06
L1.5	201.00 Yrs.	7.6908E+08	.00	.00	3.32
R2.5	201.00 Yrs.	1.8779E+09	.00	.00	2.49
S0	201.00 Yrs.	2.5595E+09	.00	.00	5.98
L1	201.00 Yrs.	2.8013E+09	.00	.00	5.00
R2	201.00 Yrs.	5.3713E+09	.00	.00	3.81
L0.5	201.00 Yrs.	1.1091E+10	.00	.00	7.92
R1.5	201.00 Yrs.	1.7471E+10	.00	.00	5.87
L0	206.00 Yrs.	2.3238E+10	.00	.00	10.49
R1	201.00 Yrs.	3.6506E+10	.00	.00	7.92
S.5	201.00 Yrs.	4.2057E+10	.00	.00	9.52
R0.5	201.00 Yrs.	7.5816E+10	.00	.00	10.49
SC	201.00 Yrs.	1.2933E+11	.00	.00	13.06
O1	201.00 Yrs.	1.2933E+11	.00	.00	13.06
O2	201.00 Yrs.	1.6298E+11	.00	.00	14.68
O3	201.00 Yrs.	3.5343E+11	.00	.00	21.10
O4	201.00 Yrs.	6.8630E+11	.00	.00	28.46

Sharyland
Electric Division
368.00 Line Transformers
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1971
Last Test Point -	1975

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
SQ	16.00 Yrs.	2.0000E-03	397666.89	.00	100.00
S6	21.00 Yrs.	2.0000E-03	397666.89	.00	100.00
L3	179.00 Yrs.	2.0000E-03	397666.89	.00	.50
L4	55.00 Yrs.	2.0000E-03	397666.89	.00	44.91
L5	30.00 Yrs.	2.0000E-03	397666.89	.00	100.00
R5	40.00 Yrs.	2.0000E-03	397666.89	.00	99.84
S3	201.00 Yrs.	2.4957E-03	.00	.00	.03
S5	28.00 Yrs.	5.8710E-03	403295.21	.00	100.00
S4	50.00 Yrs.	5.8710E-03	403295.21	.00	61.03
S2	201.00 Yrs.	9.9314E+01	.00	.00	.39
R4	201.00 Yrs.	1.1090E+05	.00	.00	.17
S1.5	201.00 Yrs.	2.5527E+05	.00	.00	1.26
L2	201.00 Yrs.	3.8262E+05	.00	.00	1.64
S1	201.00 Yrs.	9.9955E+05	.00	.00	2.13
R3	201.00 Yrs.	3.1302E+07	.00	.00	1.18
S0.5	201.00 Yrs.	8.9138E+07	.00	.00	4.06
L1.5	201.00 Yrs.	1.2518E+08	.00	.00	3.32
S0	201.00 Yrs.	3.1989E+08	.00	.00	5.98
R2.5	201.00 Yrs.	3.5040E+08	.00	.00	2.49
L1	201.00 Yrs.	4.7373E+08	.00	.00	5.00
R2	201.00 Yrs.	1.0139E+09	.00	.00	3.81
L0.5	201.00 Yrs.	1.7725E+09	.00	.00	7.92
R1.5	201.00 Yrs.	3.3681E+09	.00	.00	5.87
L0	206.00 Yrs.	3.6457E+09	.00	.00	10.49
R1	201.00 Yrs.	7.0945E+09	.00	.00	7.92
S.5	201.00 Yrs.	7.9125E+09	.00	.00	9.52
R0.5	201.00 Yrs.	1.4920E+10	.00	.00	10.49
O1	201.00 Yrs.	2.5620E+10	.00	.00	13.06
SC	201.00 Yrs.	2.5620E+10	.00	.00	13.06
O2	201.00 Yrs.	3.2277E+10	.00	.00	14.68
O3	201.00 Yrs.	7.0158E+10	.00	.00	21.10
O4	201.00 Yrs.	1.3658E+11	.00	.00	28.46

Sharyland
Electric Division
368.00 Line Transformers
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1966
Last Test Point -	1970

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S5	18.00 Yrs.	5.0000E-04	207105.19	.00	100.00
R5	24.00 Yrs.	5.0000E-04	207105.19	.00	100.00
SQ	16.00 Yrs.	5.0000E-04	207105.19	.00	100.00
S3	125.00 Yrs.	5.0000E-04	207105.19	.00	.61
S6	16.00 Yrs.	5.0000E-04	207105.19	.00	100.00
L5	18.00 Yrs.	5.0000E-04	207105.19	.00	100.00
L4	33.00 Yrs.	5.0000E-04	207105.19	.00	98.67
L3	108.00 Yrs.	5.0000E-04	207105.19	.00	3.73
S4	29.00 Yrs.	3.4640E-03	239242.52	.00	100.00
S2	201.00 Yrs.	4.4418E-01	.00	.00	.39
S1.5	201.00 Yrs.	4.6389E+03	.00	.00	1.26
L2	201.00 Yrs.	6.0550E+03	.00	.00	1.64
R4	201.00 Yrs.	8.1276E+03	.00	.00	.17
S1	201.00 Yrs.	1.8262E+04	.00	.00	2.13
R3	201.00 Yrs.	2.5475E+06	.00	.00	1.18
S0.5	201.00 Yrs.	4.0406E+06	.00	.00	4.06
L1.5	201.00 Yrs.	9.5303E+06	.00	.00	3.32
S0	201.00 Yrs.	1.5095E+07	.00	.00	5.98
R2.5	201.00 Yrs.	3.0364E+07	.00	.00	2.49
L1	201.00 Yrs.	3.7185E+07	.00	.00	5.00
R2	201.00 Yrs.	8.8811E+07	.00	.00	3.81
L0.5	201.00 Yrs.	1.2307E+08	.00	.00	7.92
L0	206.00 Yrs.	2.4265E+08	.00	.00	10.49
R1.5	201.00 Yrs.	3.0114E+08	.00	.00	5.87
R1	201.00 Yrs.	6.3921E+08	.00	.00	7.92
S.5	201.00 Yrs.	6.8570E+08	.00	.00	9.52
R0.5	201.00 Yrs.	1.3611E+09	.00	.00	10.49
O1	201.00 Yrs.	2.3527E+09	.00	.00	13.06
SC	201.00 Yrs.	2.3527E+09	.00	.00	13.06
O2	201.00 Yrs.	2.9629E+09	.00	.00	14.68
O3	201.00 Yrs.	6.4548E+09	.00	.00	21.10
O4	201.00 Yrs.	1.2594E+10	.00	.00	28.46

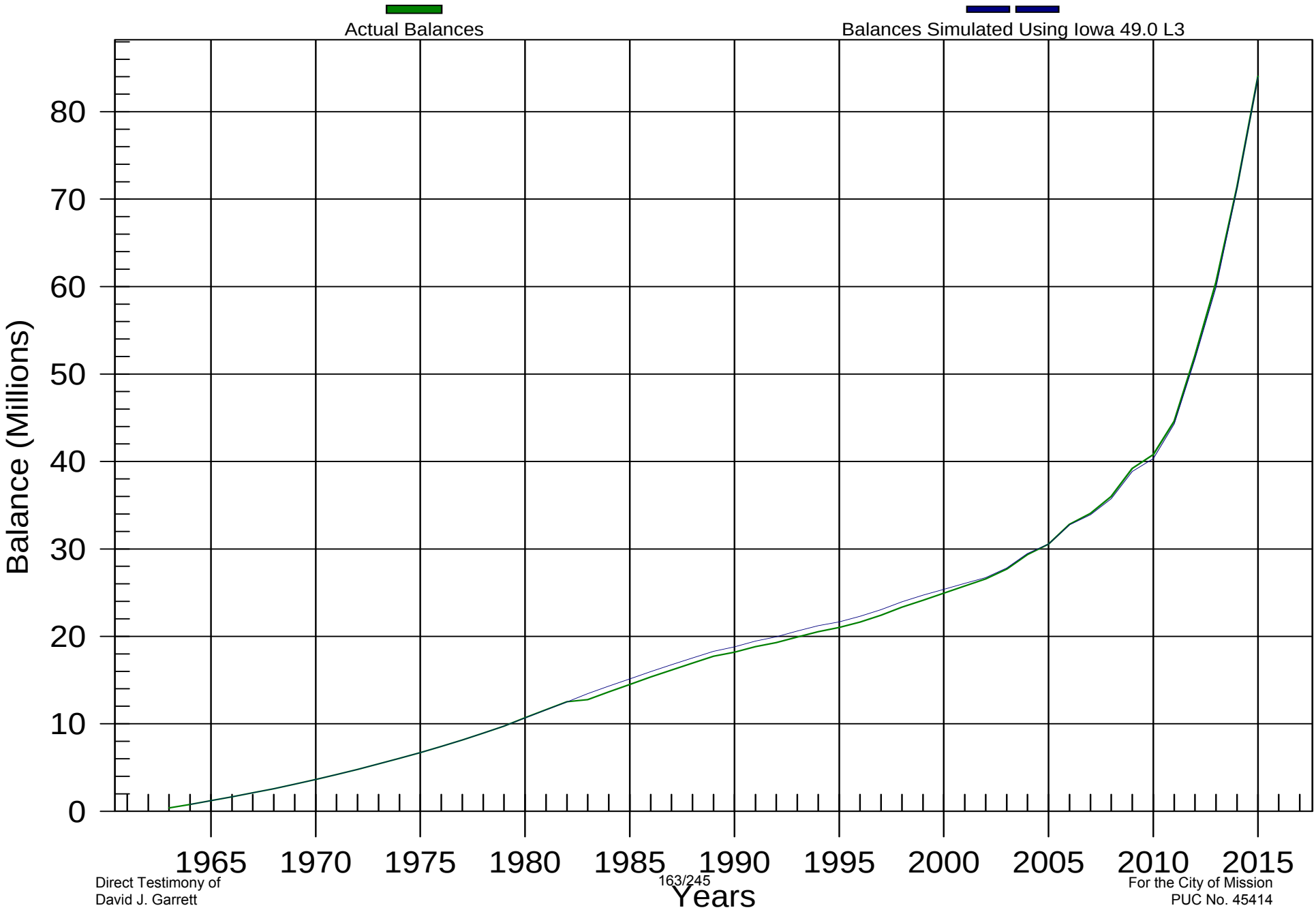
Sharyland
Electric Division
368.00 Line Transformers
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	3
Interval Between Test Points -	1
First Test Point -	1963
Last Test Point -	1965

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S5	16.00 Yrs.	1.3553E-20	'745900.00	.00	100.00
R5	16.00 Yrs.	1.3553E-20	'745900.00	.00	100.00
S6	16.00 Yrs.	1.3553E-20	'745900.00	.00	100.00
S4	16.00 Yrs.	1.3553E-20	'745900.00	.00	100.00
L5	16.00 Yrs.	1.3553E-20	'745900.00	.00	100.00
L4	16.00 Yrs.	1.3553E-20	'745900.00	.00	100.00
L3	36.00 Yrs.	1.3553E-20	'745900.00	.00	89.38
SQ	16.00 Yrs.	1.3553E-20	'745900.00	.00	100.00
S2	201.00 Yrs.	1.2224E-04	.00	.00	.39
S3	28.00 Yrs.	2.0569E-03	)039731.33	.00	100.00
L2	201.00 Yrs.	3.1173E+00	.00	.00	1.64
S1.5	201.00 Yrs.	3.2373E+00	.00	.00	1.26
S1	201.00 Yrs.	1.2256E+01	.00	.00	2.13
R4	201.00 Yrs.	6.5274E+01	.00	.00	.17
S0.5	201.00 Yrs.	1.3145E+04	.00	.00	4.06
R3	201.00 Yrs.	2.2450E+04	.00	.00	1.18
S0	201.00 Yrs.	5.0902E+04	.00	.00	5.98
L1.5	201.00 Yrs.	7.9652E+04	.00	.00	3.32
R2.5	201.00 Yrs.	2.8289E+05	.00	.00	2.49
L1	201.00 Yrs.	3.1653E+05	.00	.00	5.00
R2	201.00 Yrs.	8.3496E+05	.00	.00	3.81
L0.5	201.00 Yrs.	8.3523E+05	.00	.00	7.92
L0	206.00 Yrs.	1.5108E+06	.00	.00	10.49
R1.5	201.00 Yrs.	2.8831E+06	.00	.00	5.87
R1	201.00 Yrs.	6.1605E+06	.00	.00	7.92
S.5	201.00 Yrs.	6.3205E+06	.00	.00	9.52
R0.5	201.00 Yrs.	1.3267E+07	.00	.00	10.49
SC	201.00 Yrs.	2.3067E+07	.00	.00	13.06
O1	201.00 Yrs.	2.3067E+07	.00	.00	13.06
O2	201.00 Yrs.	2.9040E+07	.00	.00	14.68
O3	201.00 Yrs.	6.3386E+07	.00	.00	21.10
O4	201.00 Yrs.	1.2390E+08	.00	.00	28.46

Sharyland
Electric Division
368.00 Line Transformers
Actual And Simulated Balances 1963-2015



Sharyland
Electric Division
369.00 Services

Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	53
Interval Between Test Points -	1
First Test Point -	1963
Last Test Point -	2015

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	122.91 Yrs.	8.9603E+13	11.52	86.78	43.05
O3	89.56 Yrs.	9.0967E+13	11.44	87.43	44.01
SC	56.41 Yrs.	9.4199E+13	11.24	88.97	46.54
O1	56.41 Yrs.	9.4199E+13	11.24	88.97	46.54
O2	63.38 Yrs.	9.4229E+13	11.24	88.99	46.55
R0.5	49.38 Yrs.	1.0334E+14	10.73	93.19	52.52
S.5	49.09 Yrs.	1.1226E+14	10.30	97.13	54.14
L0	54.95 Yrs.	1.1494E+14	10.17	98.28	52.71
R1	44.22 Yrs.	1.1993E+14	9.96	100.39	61.50
L0.5	49.75 Yrs.	1.3050E+14	9.55	104.72	58.08
S0	44.09 Yrs.	1.3929E+14	9.24	108.19	63.13
R1.5	41.25 Yrs.	1.4121E+14	9.18	108.94	71.60
L1	45.69 Yrs.	1.5173E+14	8.86	112.92	63.85
S0.5	41.59 Yrs.	1.5922E+14	8.65	115.67	70.37
R2	39.00 Yrs.	1.7010E+14	8.36	119.56	81.89
L1.5	42.88 Yrs.	1.7250E+14	8.31	120.40	70.30
S1	39.56 Yrs.	1.8472E+14	8.03	124.59	77.81
R2.5	37.66 Yrs.	1.9852E+14	7.74	129.16	90.07
L2	40.53 Yrs.	1.9978E+14	7.72	129.57	76.49
S1.5	38.25 Yrs.	2.0598E+14	7.60	131.57	84.32
S2	37.13 Yrs.	2.3137E+14	7.17	139.44	90.24
R3	36.53 Yrs.	2.3248E+14	7.15	139.77	96.48
L3	37.47 Yrs.	2.4458E+14	6.98	143.37	86.96
S3	35.78 Yrs.	2.7178E+14	6.62	151.13	97.40
R4	35.31 Yrs.	2.8441E+14	6.47	154.60	99.99
L4	35.56 Yrs.	2.8686E+14	6.44	155.26	96.47
S4	34.81 Yrs.	3.1142E+14	6.18	161.78	99.91
L5	34.69 Yrs.	3.2048E+14	6.09	164.11	99.58
R5	34.47 Yrs.	3.2834E+14	6.02	166.11	100.00
S5	34.31 Yrs.	3.3732E+14	5.94	168.37	100.00
S6	34.13 Yrs.	3.5252E+14	5.81	172.12	100.00
SQ	34.00 Yrs.	3.6461E+14	5.71	175.05	100.00

Sharyland
Electric Division
369.00 Services

Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2011
Last Test Point -	2015

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	153.94 Yrs.	2.0370E+11	157.23	6.36	35.92
O3	111.66 Yrs.	2.1080E+11	154.56	6.47	36.45
SC	69.47 Yrs.	2.2835E+11	148.50	6.73	37.79
O1	69.47 Yrs.	2.2835E+11	148.50	6.73	37.79
O2	78.06 Yrs.	2.2841E+11	148.48	6.73	37.80
R0.5	59.47 Yrs.	2.8041E+11	134.01	7.46	41.45
L0	66.78 Yrs.	3.0196E+11	129.14	7.74	42.87
S.5	59.09 Yrs.	3.1514E+11	126.41	7.91	43.34
R1	51.94 Yrs.	3.8731E+11	114.02	8.77	47.91
L0.5	59.66 Yrs.	4.0045E+11	112.14	8.92	47.25
S0	52.22 Yrs.	4.4759E+11	106.07	9.43	50.37
L1	54.25 Yrs.	5.3762E+11	96.78	10.33	52.18
R1.5	47.53 Yrs.	5.5129E+11	95.57	10.46	56.07
S0.5	48.56 Yrs.	5.9961E+11	91.64	10.91	56.48
L1.5	50.19 Yrs.	7.0299E+11	84.64	11.82	58.49
R2	44.38 Yrs.	7.9242E+11	79.72	12.54	65.67
S1	45.78 Yrs.	8.0402E+11	79.14	12.64	63.15
L2	47.06 Yrs.	9.2643E+11	73.73	13.56	64.97
S1.5	43.84 Yrs.	1.0217E+12	70.20	14.24	69.97
R2.5	42.44 Yrs.	1.0888E+12	68.01	14.70	75.75
S2	42.25 Yrs.	1.2898E+12	62.48	16.00	76.89
L3	42.88 Yrs.	1.3800E+12	60.41	16.55	77.12
R3	40.94 Yrs.	1.4468E+12	59.00	16.95	85.29
S3	40.34 Yrs.	1.7735E+12	53.29	18.77	88.63
L4	40.16 Yrs.	1.9092E+12	51.36	19.47	89.48
R4	39.50 Yrs.	2.0605E+12	49.44	20.23	97.00
S4	39.13 Yrs.	2.2433E+12	47.38	21.11	97.66
L5	39.03 Yrs.	2.2928E+12	46.86	21.34	96.83
R5	38.69 Yrs.	2.4565E+12	45.28	22.09	100.00
S5	38.56 Yrs.	2.5127E+12	44.77	22.34	99.93
S6	38.31 Yrs.	2.6467E+12	43.62	22.93	100.00
SQ	38.00 Yrs.	2.6861E+12	43.30	23.10	100.00

Sharyland
Electric Division
369.00 Services

Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2006
Last Test Point -	2010

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	135.97 Yrs.	1.9706E+11	130.79	7.65	39.78
O3	98.63 Yrs.	2.0511E+11	128.20	7.80	40.60
SC	61.41 Yrs.	2.2488E+11	122.43	8.17	42.75
O1	61.41 Yrs.	2.2488E+11	122.43	8.17	42.75
O2	69.00 Yrs.	2.2505E+11	122.39	8.17	42.76
R0.5	52.63 Yrs.	2.8591E+11	108.58	9.21	48.40
S.5	52.31 Yrs.	3.4173E+11	99.32	10.07	50.21
L0	59.16 Yrs.	3.5164E+11	97.91	10.21	48.83
R1	46.06 Yrs.	4.1094E+11	90.57	11.04	57.78
L0.5	52.81 Yrs.	4.6310E+11	85.32	11.72	54.40
S0	46.28 Yrs.	5.3242E+11	79.57	12.57	59.30
R1.5	42.22 Yrs.	5.9528E+11	75.25	13.29	68.98
L1	48.00 Yrs.	6.2249E+11	73.59	13.59	60.43
S0.5	43.09 Yrs.	7.0003E+11	69.39	14.41	67.12
L1.5	44.47 Yrs.	7.9640E+11	65.06	15.37	67.62
R2	39.44 Yrs.	8.6587E+11	62.40	16.03	80.57
S1	40.59 Yrs.	9.2392E+11	60.40	16.56	75.27
L2	41.75 Yrs.	1.0214E+12	57.45	17.41	74.33
S1.5	38.91 Yrs.	1.1350E+12	54.50	18.35	82.69
R2.5	37.75 Yrs.	1.1751E+12	53.56	18.67	89.84
S2	37.53 Yrs.	1.3864E+12	49.31	20.28	89.31
L3	38.09 Yrs.	1.4456E+12	48.29	20.71	85.89
R3	36.47 Yrs.	1.5399E+12	46.79	21.37	96.58
S3	35.91 Yrs.	1.8138E+12	43.11	23.20	97.25
L4	35.78 Yrs.	1.9185E+12	41.92	23.86	96.22
R4	35.22 Yrs.	2.0879E+12	40.18	24.89	100.00
S4	34.88 Yrs.	2.2288E+12	38.89	25.71	99.91
L5	34.81 Yrs.	2.2520E+12	38.69	25.85	99.55
R5	34.53 Yrs.	2.3967E+12	37.50	26.66	100.00
S5	34.44 Yrs.	2.4573E+12	37.04	27.00	100.00
SQ	34.00 Yrs.	2.5213E+12	36.57	27.35	100.00
S6	34.22 Yrs.	2.5223E+12	36.56	27.35	100.00

Sharyland
Electric Division
369.00 Services

Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	2001
Last Test Point -	2005

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	120.88 Yrs.	1.2347E+11	152.78	6.55	43.60
O3	87.66 Yrs.	1.2853E+11	149.74	6.68	44.78
O1	54.53 Yrs.	1.4121E+11	142.86	7.00	48.14
SC	54.53 Yrs.	1.4121E+11	142.86	7.00	48.14
O2	61.28 Yrs.	1.4134E+11	142.79	7.00	48.14
R0.5	46.69 Yrs.	1.8202E+11	125.83	7.95	56.41
S.5	46.28 Yrs.	2.2242E+11	113.83	8.79	58.01
L0	52.17 Yrs.	2.3484E+11	110.78	9.03	55.53
R1	40.78 Yrs.	2.6985E+11	103.34	9.68	69.30
L0.5	46.53 Yrs.	3.0926E+11	96.53	10.36	62.28
S0	40.75 Yrs.	3.6563E+11	88.78	11.26	69.63
R1.5	37.34 Yrs.	4.0334E+11	84.53	11.83	82.41
L1	42.22 Yrs.	4.1678E+11	83.15	12.03	69.34
S0.5	37.94 Yrs.	4.8380E+11	77.18	12.96	78.77
L1.5	39.13 Yrs.	5.4039E+11	73.03	13.69	76.77
R2	34.88 Yrs.	6.0454E+11	69.04	14.48	92.96
S1	35.72 Yrs.	6.4211E+11	66.99	14.93	87.24
L2	36.75 Yrs.	6.9527E+11	64.38	15.53	83.15
S1.5	34.28 Yrs.	7.9173E+11	60.33	16.58	93.14
R2.5	33.38 Yrs.	8.3576E+11	58.72	17.03	97.81
S2	33.09 Yrs.	9.6646E+11	54.61	18.31	97.39
L3	33.63 Yrs.	1.0008E+12	53.66	18.64	93.00
R3	32.25 Yrs.	1.1063E+12	51.04	19.59	99.96
S3	31.75 Yrs.	1.2788E+12	47.47	21.07	99.83
L4	31.63 Yrs.	1.3407E+12	46.36	21.57	99.35
R4	31.16 Yrs.	1.4964E+12	43.88	22.79	100.00
S4	30.91 Yrs.	1.5953E+12	42.50	23.53	100.00
L5	30.81 Yrs.	1.5981E+12	42.46	23.55	99.99
R5	30.59 Yrs.	1.7020E+12	41.15	24.30	100.00
S5	30.50 Yrs.	1.7377E+12	40.72	24.56	100.00
S6	30.31 Yrs.	1.7526E+12	40.55	24.66	100.00
SQ	30.00 Yrs.	1.8056E+12	39.95	25.03	100.00

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Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1996
Last Test Point -	2000

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	96.19 Yrs.	6.2836E+11	61.57	16.24	51.27
O3	69.91 Yrs.	6.4248E+11	60.89	16.42	53.30
O1	43.75 Yrs.	6.7846E+11	59.25	16.88	60.00
SC	43.75 Yrs.	6.7846E+11	59.25	16.88	60.00
O2	49.16 Yrs.	6.7866E+11	59.24	16.88	59.78
R0.5	37.88 Yrs.	7.7696E+11	55.37	18.06	73.00
L0	42.33 Yrs.	8.3034E+11	53.56	18.67	67.49
S.5	37.66 Yrs.	8.3351E+11	53.46	18.71	73.02
L0.5	38.13 Yrs.	9.5190E+11	50.02	19.99	74.95
R1	33.56 Yrs.	9.5305E+11	49.99	20.00	88.27
S0	33.56 Yrs.	1.0502E+12	47.62	21.00	86.03
L1	34.88 Yrs.	1.1009E+12	46.51	21.50	82.07
R1.5	31.06 Yrs.	1.1824E+12	44.88	22.28	96.66
S0.5	31.50 Yrs.	1.2286E+12	44.03	22.71	93.50
L1.5	32.59 Yrs.	1.2813E+12	43.11	23.19	88.08
S1	29.91 Yrs.	1.4390E+12	40.68	24.58	98.22
R2	29.28 Yrs.	1.4717E+12	40.23	24.86	99.93
L2	30.78 Yrs.	1.4805E+12	40.11	24.93	92.80
S1.5	28.84 Yrs.	1.6424E+12	38.08	26.26	99.57
R2.5	28.22 Yrs.	1.7732E+12	36.65	27.29	100.00
S2	28.00 Yrs.	1.8602E+12	35.78	27.95	99.98
L3	28.44 Yrs.	1.8695E+12	35.69	28.02	98.61
R3	27.38 Yrs.	2.0831E+12	33.81	29.57	100.00
S3	27.00 Yrs.	2.2388E+12	32.62	30.66	100.00
L4	26.94 Yrs.	2.2730E+12	32.37	30.89	99.99
R4	26.56 Yrs.	2.4785E+12	31.00	32.26	100.00
L5	26.31 Yrs.	2.5553E+12	30.53	32.75	100.00
S4	26.38 Yrs.	2.5688E+12	30.45	32.84	100.00
R5	26.13 Yrs.	2.6442E+12	30.01	33.32	100.00
S5	26.06 Yrs.	2.6626E+12	29.91	33.44	100.00
S6	25.94 Yrs.	2.6639E+12	29.90	33.44	100.00
SQ	26.00 Yrs.	2.7066E+12	29.66	33.71	100.00

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Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1991
Last Test Point -	1995

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	70.72 Yrs.	6.8663E+11	46.88	21.33	61.30
O3	51.66 Yrs.	7.0605E+11	46.23	21.63	64.81
O2	36.75 Yrs.	7.5899E+11	44.59	22.43	76.62
SC	32.69 Yrs.	7.5905E+11	44.59	22.43	80.31
O1	32.69 Yrs.	7.5905E+11	44.59	22.43	80.31
R0.5	28.94 Yrs.	8.8352E+11	41.33	24.20	94.38
L0	32.41 Yrs.	8.9363E+11	41.09	24.34	82.65
S.5	28.94 Yrs.	9.1907E+11	40.52	24.68	93.67
L0.5	29.66 Yrs.	1.0077E+12	38.70	25.84	89.04
R1	26.22 Yrs.	1.0797E+12	37.38	26.75	100.00
S0	26.38 Yrs.	1.1238E+12	36.64	27.29	99.98
L1	27.50 Yrs.	1.1367E+12	36.43	27.45	94.18
S0.5	25.09 Yrs.	1.2940E+12	34.15	29.28	100.00
L1.5	26.00 Yrs.	1.3040E+12	34.02	29.40	97.11
R1.5	24.72 Yrs.	1.3133E+12	33.90	29.50	100.00
S1	24.06 Yrs.	1.4811E+12	31.92	31.33	100.00
L2	24.78 Yrs.	1.4818E+12	31.91	31.34	98.96
R2	23.59 Yrs.	1.5782E+12	30.92	32.34	100.00
S1.5	23.38 Yrs.	1.6681E+12	30.08	33.25	100.00
L3	23.16 Yrs.	1.8123E+12	28.86	34.66	100.00
R2.5	22.94 Yrs.	1.8280E+12	28.73	34.81	100.00
S2	22.81 Yrs.	1.8592E+12	28.49	35.10	100.00
R3	22.41 Yrs.	2.0658E+12	27.03	37.00	100.00
L4	22.13 Yrs.	2.1617E+12	26.42	37.85	100.00
S3	22.19 Yrs.	2.1678E+12	26.38	37.90	100.00
R4	21.88 Yrs.	2.3192E+12	25.51	39.20	100.00
L5	21.72 Yrs.	2.3447E+12	25.37	39.42	100.00
S4	21.75 Yrs.	2.3637E+12	25.27	39.58	100.00
R5	21.59 Yrs.	2.3901E+12	25.13	39.80	100.00
S6	21.44 Yrs.	2.3911E+12	25.12	39.81	100.00
S5	21.53 Yrs.	2.3917E+12	25.12	39.81	100.00
SQ	21.00 Yrs.	2.6076E+12	24.06	41.57	100.00

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Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1986
Last Test Point -	1990

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
O4	46.91 Yrs.	1.0483E+12	26.60	37.60	72.70
O3	34.63 Yrs.	1.0872E+12	26.12	38.29	78.13
O2	25.25 Yrs.	1.2023E+12	24.83	40.27	91.15
SC	22.47 Yrs.	1.2059E+12	24.80	40.33	100.00
O1	22.47 Yrs.	1.2059E+12	24.80	40.33	100.00
L0	22.99 Yrs.	1.3357E+12	23.56	42.44	96.35
R0.5	20.59 Yrs.	1.4132E+12	22.91	43.65	100.00
S.5	20.72 Yrs.	1.4211E+12	22.84	43.78	100.00
L0.5	21.50 Yrs.	1.4894E+12	22.31	44.82	98.63
L1	20.28 Yrs.	1.6587E+12	21.14	47.29	99.82
S0	19.44 Yrs.	1.6667E+12	21.09	47.41	100.00
R1	19.25 Yrs.	1.6822E+12	21.00	47.63	100.00
L1.5	19.44 Yrs.	1.8355E+12	20.10	49.75	99.97
S0.5	18.78 Yrs.	1.8749E+12	19.89	50.28	100.00
R1.5	18.56 Yrs.	1.9481E+12	19.51	51.26	100.00
L2	18.75 Yrs.	2.0158E+12	19.18	52.14	100.00
S1	18.25 Yrs.	2.0909E+12	18.83	53.10	100.00
R2	17.97 Yrs.	2.2140E+12	18.30	54.64	100.00
S1.5	17.91 Yrs.	2.2704E+12	18.07	55.33	100.00
L3	17.78 Yrs.	2.3230E+12	17.87	55.97	100.00
R2.5	17.63 Yrs.	2.4085E+12	17.55	56.99	100.00
S2	17.56 Yrs.	2.4438E+12	17.42	57.41	100.00
R3	17.34 Yrs.	2.5809E+12	16.95	58.99	100.00
L4	17.19 Yrs.	2.6073E+12	16.86	59.30	100.00
S3	17.22 Yrs.	2.6372E+12	16.77	59.64	100.00
R4	17.03 Yrs.	2.6931E+12	16.59	60.26	100.00
L5	16.94 Yrs.	2.6939E+12	16.59	60.27	100.00
S4	16.94 Yrs.	2.7051E+12	16.56	60.40	100.00
S6	16.78 Yrs.	2.7073E+12	16.55	60.42	100.00
S5	16.84 Yrs.	2.7075E+12	16.55	60.42	100.00
R5	16.88 Yrs.	2.7085E+12	16.55	60.44	100.00
SQ	17.00 Yrs.	2.8073E+12	16.25	61.53	100.00

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Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1981
Last Test Point -	1985

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S6	14.81 Yrs.	1.0630E+13	6.64	150.54	100.00
R5	14.88 Yrs.	1.0632E+13	6.64	150.55	100.00
S5	14.84 Yrs.	1.0634E+13	6.64	150.57	100.00
SQ	15.00 Yrs.	1.0688E+13	6.62	150.95	100.00
S4	14.88 Yrs.	1.0709E+13	6.62	151.10	100.00
R4	14.94 Yrs.	1.0715E+13	6.62	151.14	100.00
L5	14.88 Yrs.	1.0748E+13	6.61	151.37	100.00
S3	15.03 Yrs.	1.0994E+13	6.53	153.09	100.00
L4	15.03 Yrs.	1.1018E+13	6.52	153.26	100.00
R3	15.13 Yrs.	1.1066E+13	6.51	153.60	100.00
S2	15.31 Yrs.	1.1404E+13	6.41	155.92	100.00
R2.5	15.34 Yrs.	1.1410E+13	6.41	155.97	100.00
L3	15.63 Yrs.	1.1533E+13	6.38	156.81	100.00
S1.5	15.59 Yrs.	1.1685E+13	6.34	157.84	100.00
R2	15.63 Yrs.	1.1799E+13	6.31	158.60	100.00
S1	15.94 Yrs.	1.1986E+13	6.26	159.85	100.00
L2	16.53 Yrs.	1.2052E+13	6.24	160.29	100.00
R1.5	16.19 Yrs.	1.2265E+13	6.18	161.71	100.00
S0.5	16.53 Yrs.	1.2334E+13	6.17	162.15	100.00
L1.5	17.22 Yrs.	1.2352E+13	6.16	162.28	100.00
L1	18.06 Yrs.	1.2673E+13	6.08	164.37	100.00
S0	17.25 Yrs.	1.2686E+13	6.08	164.46	100.00
R1	17.00 Yrs.	1.2747E+13	6.07	164.85	100.00
L0.5	19.34 Yrs.	1.2971E+13	6.01	166.29	99.55
S.5	18.69 Yrs.	1.3165E+13	5.97	167.53	100.00
R0.5	18.53 Yrs.	1.3234E+13	5.95	167.97	100.00
L0	20.96 Yrs.	1.3256E+13	5.95	168.11	98.18
O1	20.81 Yrs.	1.3607E+13	5.87	170.32	100.00
SC	20.81 Yrs.	1.3607E+13	5.87	170.32	100.00
O2	23.38 Yrs.	1.3608E+13	5.87	170.32	93.12
O3	32.91 Yrs.	1.3792E+13	5.83	171.47	79.60
O4	45.00 Yrs.	1.3859E+13	5.82	171.89	73.70

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Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1976
Last Test Point -	1980

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
S5	42.00 Yrs.	4.0000E-04	;516453.85	.00	98.36
S6	30.00 Yrs.	4.0000E-04	;516453.85	.00	100.00
S4	77.00 Yrs.	4.0000E-04	;516453.85	.00	3.29
SQ	18.00 Yrs.	4.0000E-04	;516453.85	.00	100.00
L5	42.00 Yrs.	4.0000E-04	;516453.85	.00	92.55
L4	77.00 Yrs.	4.0000E-04	;516453.85	.00	7.48
R5	52.00 Yrs.	2.9445E-03	119181.84	.00	49.27
L3	201.00 Yrs.	1.0354E-01	.00	.00	.30
S3	201.00 Yrs.	1.1956E-01	.00	.00	.03
S2	201.00 Yrs.	3.8778E+03	.00	.00	.39
R4	201.00 Yrs.	5.9494E+05	.00	.00	.17
S1.5	201.00 Yrs.	3.3453E+06	.00	.00	1.26
L2	201.00 Yrs.	5.4479E+06	.00	.00	1.64
S1	201.00 Yrs.	1.2924E+07	.00	.00	2.13
R3	201.00 Yrs.	1.5014E+08	.00	.00	1.18
S0.5	201.00 Yrs.	6.2186E+08	.00	.00	4.06
L1.5	201.00 Yrs.	6.4502E+08	.00	.00	3.32
R2.5	201.00 Yrs.	1.5763E+09	.00	.00	2.49
S0	201.00 Yrs.	2.1424E+09	.00	.00	5.98
L1	201.00 Yrs.	2.3499E+09	.00	.00	5.00
R2	201.00 Yrs.	4.5089E+09	.00	.00	3.81
L0.5	201.00 Yrs.	9.2980E+09	.00	.00	7.92
R1.5	201.00 Yrs.	1.4668E+10	.00	.00	5.87
L0	206.00 Yrs.	1.9478E+10	.00	.00	10.49
R1	201.00 Yrs.	3.0651E+10	.00	.00	7.92
S.5	201.00 Yrs.	3.5302E+10	.00	.00	9.52
R0.5	201.00 Yrs.	6.3661E+10	.00	.00	10.49
O1	201.00 Yrs.	1.0860E+11	.00	.00	13.06
SC	201.00 Yrs.	1.0860E+11	.00	.00	13.06
O2	201.00 Yrs.	1.3686E+11	.00	.00	14.68
O3	201.00 Yrs.	2.9679E+11	.00	.00	21.10
O4	201.00 Yrs.	5.7631E+11	.00	.00	28.46

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Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1971
Last Test Point -	1975

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
L3	179.00 Yrs.	1.0000E-04	)240699.51	.00	.50
R5	40.00 Yrs.	1.0000E-04	)240699.51	.00	99.84
L5	30.00 Yrs.	1.0000E-04	)240699.51	.00	100.00
L4	55.00 Yrs.	1.0000E-04	)240699.51	.00	44.91
SQ	16.00 Yrs.	1.0000E-04	)240699.51	.00	100.00
S6	21.00 Yrs.	1.0000E-04	)240699.51	.00	100.00
S3	201.00 Yrs.	1.8223E-04	.00	.00	.03
S5	28.00 Yrs.	1.8160E-03	)528659.55	.00	100.00
S4	50.00 Yrs.	1.8160E-03	)528659.55	.00	61.03
S2	201.00 Yrs.	8.2266E+01	.00	.00	.39
R4	201.00 Yrs.	9.2542E+04	.00	.00	.17
S1.5	201.00 Yrs.	2.1295E+05	.00	.00	1.26
L2	201.00 Yrs.	3.1918E+05	.00	.00	1.64
S1	201.00 Yrs.	8.3389E+05	.00	.00	2.13
R3	201.00 Yrs.	2.6129E+07	.00	.00	1.18
S0.5	201.00 Yrs.	7.4382E+07	.00	.00	4.06
L1.5	201.00 Yrs.	1.0448E+08	.00	.00	3.32
S0	201.00 Yrs.	2.6694E+08	.00	.00	5.98
R2.5	201.00 Yrs.	2.9250E+08	.00	.00	2.49
L1	201.00 Yrs.	3.9543E+08	.00	.00	5.00
R2	201.00 Yrs.	8.4634E+08	.00	.00	3.81
L0.5	201.00 Yrs.	1.4794E+09	.00	.00	7.92
R1.5	201.00 Yrs.	2.8116E+09	.00	.00	5.87
L0	206.00 Yrs.	3.0428E+09	.00	.00	10.49
R1	201.00 Yrs.	5.9223E+09	.00	.00	7.92
S.5	201.00 Yrs.	6.6050E+09	.00	.00	9.52
R0.5	201.00 Yrs.	1.2455E+10	.00	.00	10.49
SC	201.00 Yrs.	2.1388E+10	.00	.00	13.06
O1	201.00 Yrs.	2.1388E+10	.00	.00	13.06
O2	201.00 Yrs.	2.6944E+10	.00	.00	14.68
O3	201.00 Yrs.	5.8567E+10	.00	.00	21.10
O4	201.00 Yrs.	1.1401E+11	.00	.00	28.46

Sharyland
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369.00 Services

Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	5
Interval Between Test Points -	1
First Test Point -	1966
Last Test Point -	1970

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
L5	18.00 Yrs.	2.0000E-04	'234068.67	.00	100.00
L4	33.00 Yrs.	2.0000E-04	'234068.67	.00	98.67
L3	108.00 Yrs.	2.0000E-04	'234068.67	.00	3.73
S5	18.00 Yrs.	2.0000E-04	'234068.67	.00	100.00
R5	24.00 Yrs.	2.0000E-04	'234068.67	.00	100.00
SQ	16.00 Yrs.	2.0000E-04	'234068.67	.00	100.00
S3	125.00 Yrs.	2.0000E-04	'234068.67	.00	.61
S6	16.00 Yrs.	2.0000E-04	'234068.67	.00	100.00
S4	29.00 Yrs.	1.9160E-03	877811.84	.00	100.00
S2	201.00 Yrs.	3.5384E-01	.00	.00	.39
S1.5	201.00 Yrs.	3.8684E+03	.00	.00	1.26
L2	201.00 Yrs.	5.0496E+03	.00	.00	1.64
R4	201.00 Yrs.	6.7784E+03	.00	.00	.17
S1	201.00 Yrs.	1.5232E+04	.00	.00	2.13
R3	201.00 Yrs.	2.1253E+06	.00	.00	1.18
S0.5	201.00 Yrs.	3.3710E+06	.00	.00	4.06
L1.5	201.00 Yrs.	7.9509E+06	.00	.00	3.32
S0	201.00 Yrs.	1.2593E+07	.00	.00	5.98
R2.5	201.00 Yrs.	2.5332E+07	.00	.00	2.49
L1	201.00 Yrs.	3.1022E+07	.00	.00	5.00
R2	201.00 Yrs.	7.4093E+07	.00	.00	3.81
L0.5	201.00 Yrs.	1.0268E+08	.00	.00	7.92
L0	206.00 Yrs.	2.0244E+08	.00	.00	10.49
R1.5	201.00 Yrs.	2.5124E+08	.00	.00	5.87
R1	201.00 Yrs.	5.3328E+08	.00	.00	7.92
S.5	201.00 Yrs.	5.7206E+08	.00	.00	9.52
R0.5	201.00 Yrs.	1.1356E+09	.00	.00	10.49
O1	201.00 Yrs.	1.9628E+09	.00	.00	13.06
SC	201.00 Yrs.	1.9628E+09	.00	.00	13.06
O2	201.00 Yrs.	2.4719E+09	.00	.00	14.68
O3	201.00 Yrs.	5.3851E+09	.00	.00	21.10
O4	201.00 Yrs.	1.0507E+10	.00	.00	28.46

Sharyland
Electric Division
369.00 Services

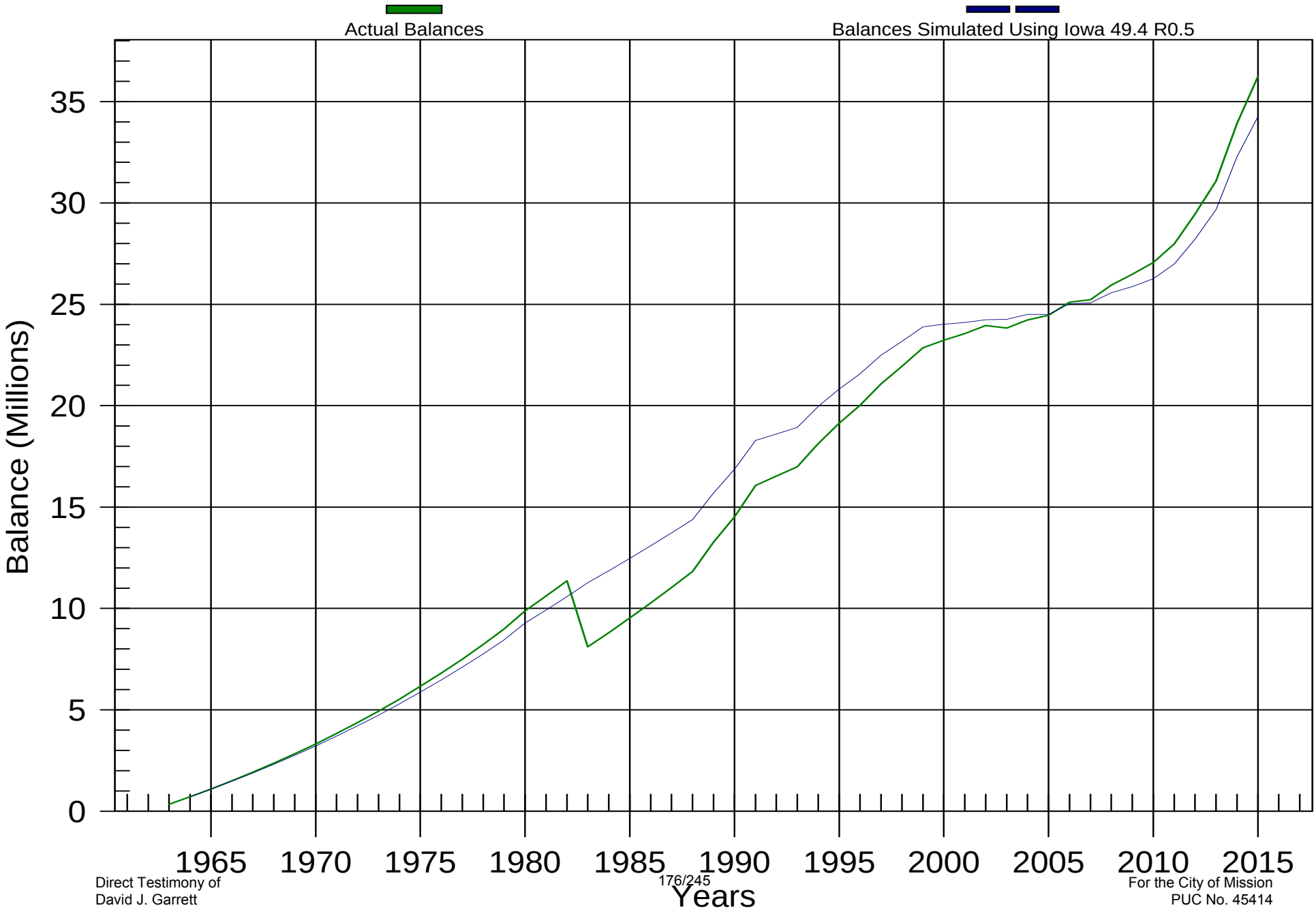
Simulated Plant Record Analysis Calculated As Of 12/31/2015

Simulated Balances Method

No. Of Test Points -	3
Interval Between Test Points -	1
First Test Point -	1963
Last Test Point -	1965

Curve Type	*Average Service Life*	*Sum Of Squares Difference*	*Conformance Index*	*Index Of Variation*	*Ret Exp Index*
SQ	16.00 Yrs.	0.0000E+00	.00	.00	100.00
L5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
L4	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S4	16.00 Yrs.	0.0000E+00	.00	.00	100.00
R5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S6	16.00 Yrs.	0.0000E+00	.00	.00	100.00
L3	36.00 Yrs.	0.0000E+00	.00	.00	89.38
S5	16.00 Yrs.	0.0000E+00	.00	.00	100.00
S2	201.00 Yrs.	1.0198E-04	.00	.00	.39
S3	28.00 Yrs.	1.7160E-03	)039731.51	.00	100.00
L2	201.00 Yrs.	2.6007E+00	.00	.00	1.64
S1.5	201.00 Yrs.	2.7008E+00	.00	.00	1.26
S1	201.00 Yrs.	1.0225E+01	.00	.00	2.13
R4	201.00 Yrs.	5.4456E+01	.00	.00	.17
S0.5	201.00 Yrs.	1.0967E+04	.00	.00	4.06
R3	201.00 Yrs.	1.8730E+04	.00	.00	1.18
S0	201.00 Yrs.	4.2466E+04	.00	.00	5.98
L1.5	201.00 Yrs.	6.6452E+04	.00	.00	3.32
R2.5	201.00 Yrs.	2.3601E+05	.00	.00	2.49
L1	201.00 Yrs.	2.6407E+05	.00	.00	5.00
R2	201.00 Yrs.	6.9659E+05	.00	.00	3.81
L0.5	201.00 Yrs.	6.9681E+05	.00	.00	7.92
L0	206.00 Yrs.	1.2604E+06	.00	.00	10.49
R1.5	201.00 Yrs.	2.4053E+06	.00	.00	5.87
R1	201.00 Yrs.	5.1396E+06	.00	.00	7.92
S.5	201.00 Yrs.	5.2731E+06	.00	.00	9.52
R0.5	201.00 Yrs.	1.1069E+07	.00	.00	10.49
O1	201.00 Yrs.	1.9244E+07	.00	.00	13.06
SC	201.00 Yrs.	1.9244E+07	.00	.00	13.06
O2	201.00 Yrs.	2.4227E+07	.00	.00	14.68
O3	201.00 Yrs.	5.2881E+07	.00	.00	21.10
O4	201.00 Yrs.	1.0337E+08	.00	.00	28.46

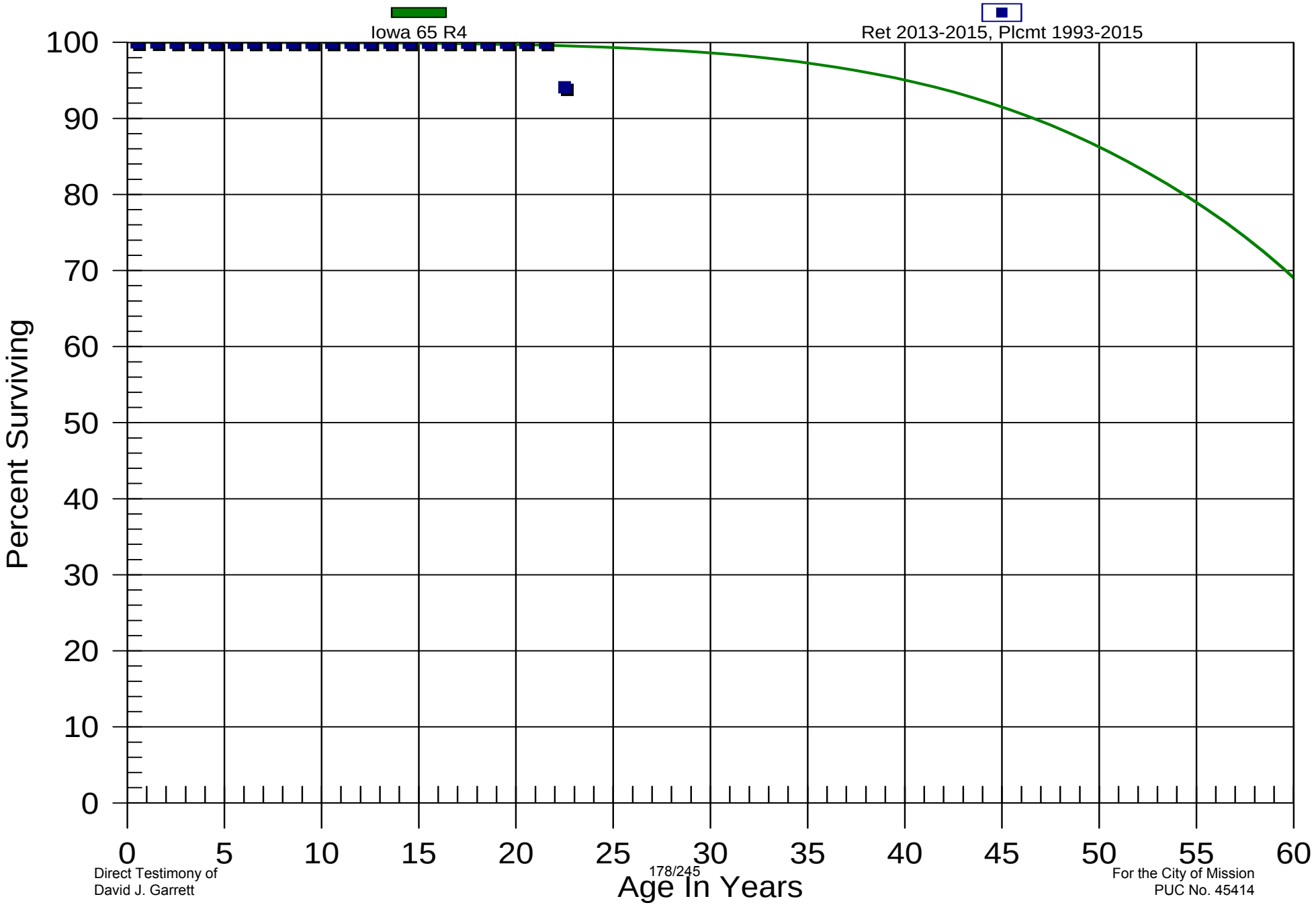
Sharyland
Electric Division
369.00 Services
Actual And Simulated Balances 1963-2015



Sharyland
Electric Division
352.00 Structures and Improvements
Observed Life Table
Retirement Expr. 2013 TO 2015
Placement Years 1993 TO 2015

Age Interval	*$ Surviving At Beginning of Age Interval*	*$ Retired During The Age Interval*	*Retirement Ratio*	*% Surviving At Beginning of Age Interval*
0.0 - 0.5	$59,373,100.05	$0.00	0.00000	100.00
0.5 - 1.5	$50,368,870.30	$0.00	0.00000	100.00
1.5 - 2.5	$43,323,664.62	$15,239.85	0.00035	100.00
2.5 - 3.5	$579,707.12	$0.00	0.00000	99.96
3.5 - 4.5	$238,511.09	$0.00	0.00000	99.96
4.5 - 5.5	$144,455.86	$0.00	0.00000	99.96
5.5 - 6.5	$50,082.57	$0.00	0.00000	99.96
6.5 - 7.5	$38,747.37	$0.00	0.00000	99.96
7.5 - 8.5	$0.00	$0.00	0.00000	99.96
8.5 - 9.5	$0.00	$0.00	0.00000	99.96
9.5 - 10.5	$0.00	$0.00	0.00000	99.96
10.5 - 11.5	$0.00	$0.00	0.00000	99.96
11.5 - 12.5	$0.00	$0.00	0.00000	99.96
12.5 - 13.5	$0.00	$0.00	0.00000	99.96
13.5 - 14.5	$0.00	$0.00	0.00000	99.96
14.5 - 15.5	$0.00	$0.00	0.00000	99.96
15.5 - 16.5	$0.00	$0.00	0.00000	99.96
16.5 - 17.5	$0.00	$0.00	0.00000	99.96
17.5 - 18.5	$367,537.15	$0.00	0.00000	99.96
18.5 - 19.5	$2,466,651.02	$0.00	0.00000	99.96
19.5 - 20.5	$1,025,843.47	$0.00	0.00000	99.96
20.5 - 21.5	$658,306.32	$0.00	0.00000	99.96
21.5 - 22.5	$393,058.85	$23,079.01	0.05872	99.96

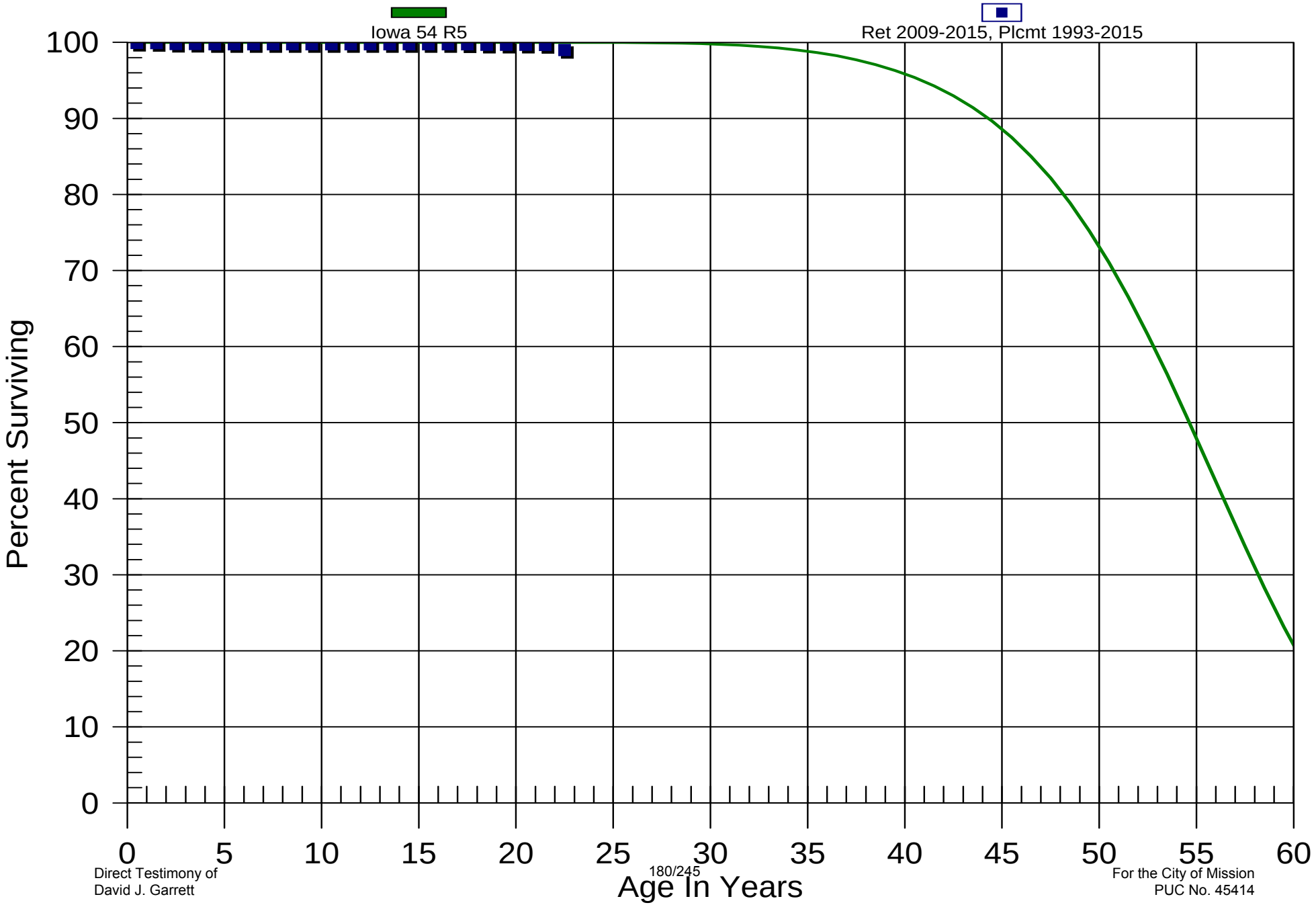
Sharyland
Electric Division
352.00 Structures and Improvements
Original And Smooth Survivor Curves



Sharyland
Electric Division
353.00 Station Equipment
Observed Life Table
Retirement Expr. 2009 TO 2015
Placement Years 1993 TO 2015

Age Interval	*$ Surviving At Beginning of Age Interval*	*$ Retired During The Age Interval*	*Retirement Ratio*	*% Surviving At Beginning of Age Interval*
0.0 - 0.5	$261,224,870.85	$172,222.59	0.00066	100.00
0.5 - 1.5	$209,176,171.09	$80,657.35	0.00039	99.93
1.5 - 2.5	$177,713,176.18	$169,130.51	0.00095	99.90
2.5 - 3.5	$57,090,213.44	$5,535.61	0.00010	99.80
3.5 - 4.5	$61,496,149.25	$11,860.76	0.00019	99.79
4.5 - 5.5	$60,340,327.43	$0.70	0.00000	99.77
5.5 - 6.5	$56,697,803.53	$253.13	0.00000	99.77
6.5 - 7.5	$56,239,198.19	$0.00	0.00000	99.77
7.5 - 8.5	$55,585,800.66	$0.00	0.00000	99.77
8.5 - 9.5	$10,280,439.30	$0.00	0.00000	99.77
9.5 - 10.5	$9,817,031.95	$0.00	0.00000	99.77
10.5 - 11.5	$1,838,106.76	$0.00	0.00000	99.77
11.5 - 12.5	$1,418,026.19	$0.00	0.00000	99.77
12.5 - 13.5	$1,418,026.19	$0.00	0.00000	99.77
13.5 - 14.5	$2,319,078.02	$0.00	0.00000	99.77
14.5 - 15.5	$15,054,016.13	$0.00	0.00000	99.77
15.5 - 16.5	$20,121,216.73	$2,493.17	0.00012	99.77
16.5 - 17.5	$19,769,582.04	$3,666.70	0.00019	99.76
17.5 - 18.5	$19,765,915.34	$12,507.03	0.00063	99.74
18.5 - 19.5	$19,753,408.31	$0.00	0.00000	99.68
19.5 - 20.5	$7,182,478.02	$0.00	0.00000	99.68
20.5 - 21.5	$6,237,409.49	$2,120.80	0.00034	99.68
21.5 - 22.5	$5,087,047.56	$33,222.80	0.00653	99.64

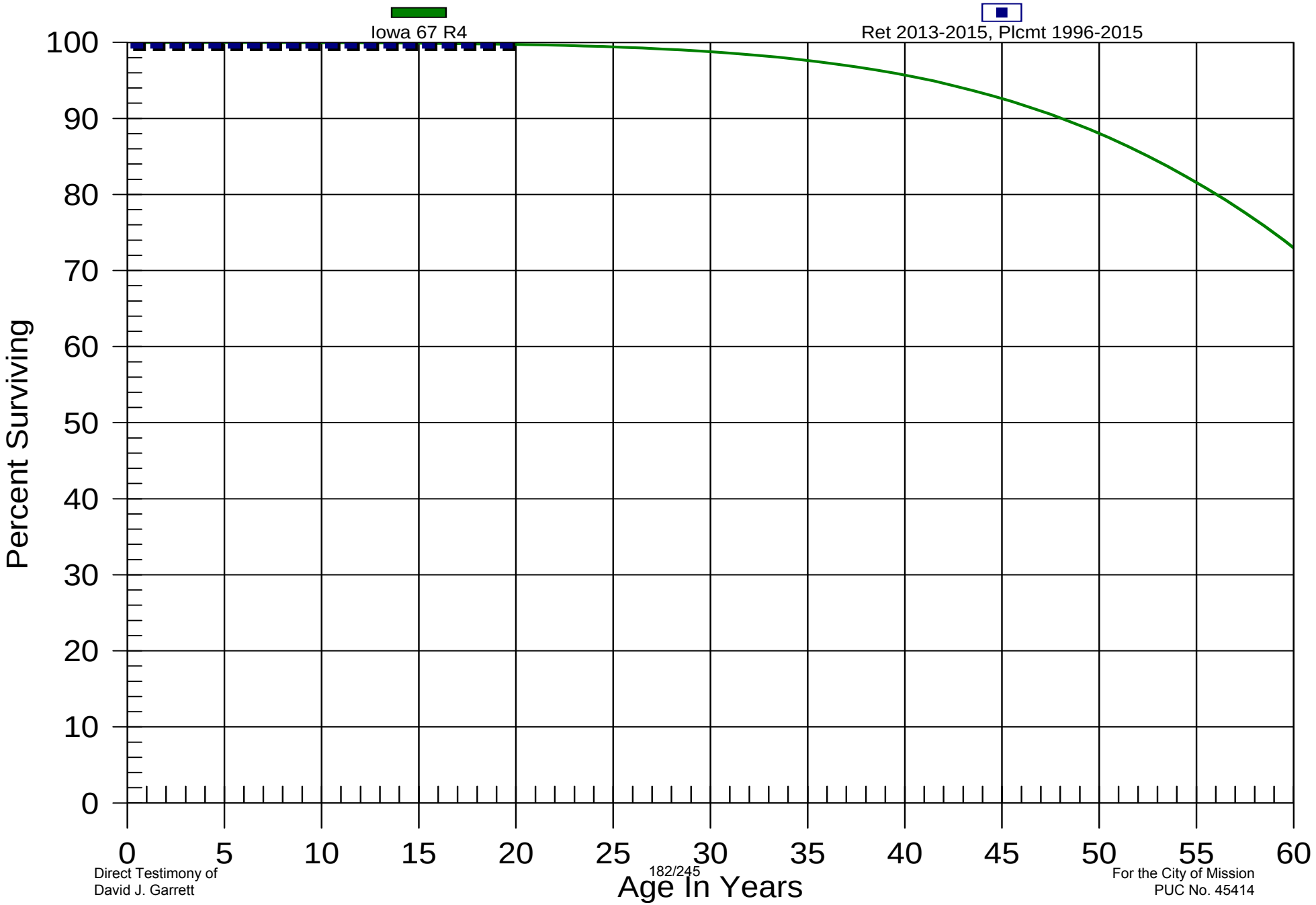
Sharyland
Electric Division
353.00 Station Equipment
Original And Smooth Survivor Curves



Sharyland
Electric Division
354.00 Towers and Fixtures
Observed Life Table
Retirement Expr. 2013 TO 2015
Placement Years 1996 TO 2015

Age Interval	*$ Surviving At Beginning of Age Interval*	*$ Retired During The Age Interval*	*Retirement Ratio*	*% Surviving At Beginning of Age Interval*
0.0 - 0.5	$266,979,334.70	$0.00	0.00000	100.00
0.5 - 1.5	$265,046,529.91	$59,608.89	0.00022	100.00
1.5 - 2.5	$260,606,664.63	$0.00	0.00000	99.98
2.5 - 3.5	$27,995.92	$0.00	0.00000	99.98
3.5 - 4.5	$0.00	$0.00	0.00000	99.98
4.5 - 5.5	$0.00	$0.00	0.00000	99.98
5.5 - 6.5	$0.00	$0.00	0.00000	99.98
6.5 - 7.5	$0.00	$0.00	0.00000	99.98
7.5 - 8.5	$0.00	$0.00	0.00000	99.98
8.5 - 9.5	$0.00	$0.00	0.00000	99.98
9.5 - 10.5	$0.00	$0.00	0.00000	99.98
10.5 - 11.5	$0.00	$0.00	0.00000	99.98
11.5 - 12.5	$0.00	$0.00	0.00000	99.98
12.5 - 13.5	$0.00	$0.00	0.00000	99.98
13.5 - 14.5	$0.00	$0.00	0.00000	99.98
14.5 - 15.5	$0.00	$0.00	0.00000	99.98
15.5 - 16.5	$0.00	$0.00	0.00000	99.98
16.5 - 17.5	$1,282,780.33	$0.00	0.00000	99.98
17.5 - 18.5	$1,282,780.33	$0.00	0.00000	99.98
18.5 - 19.5	$1,282,780.33	$0.00	0.00000	99.98

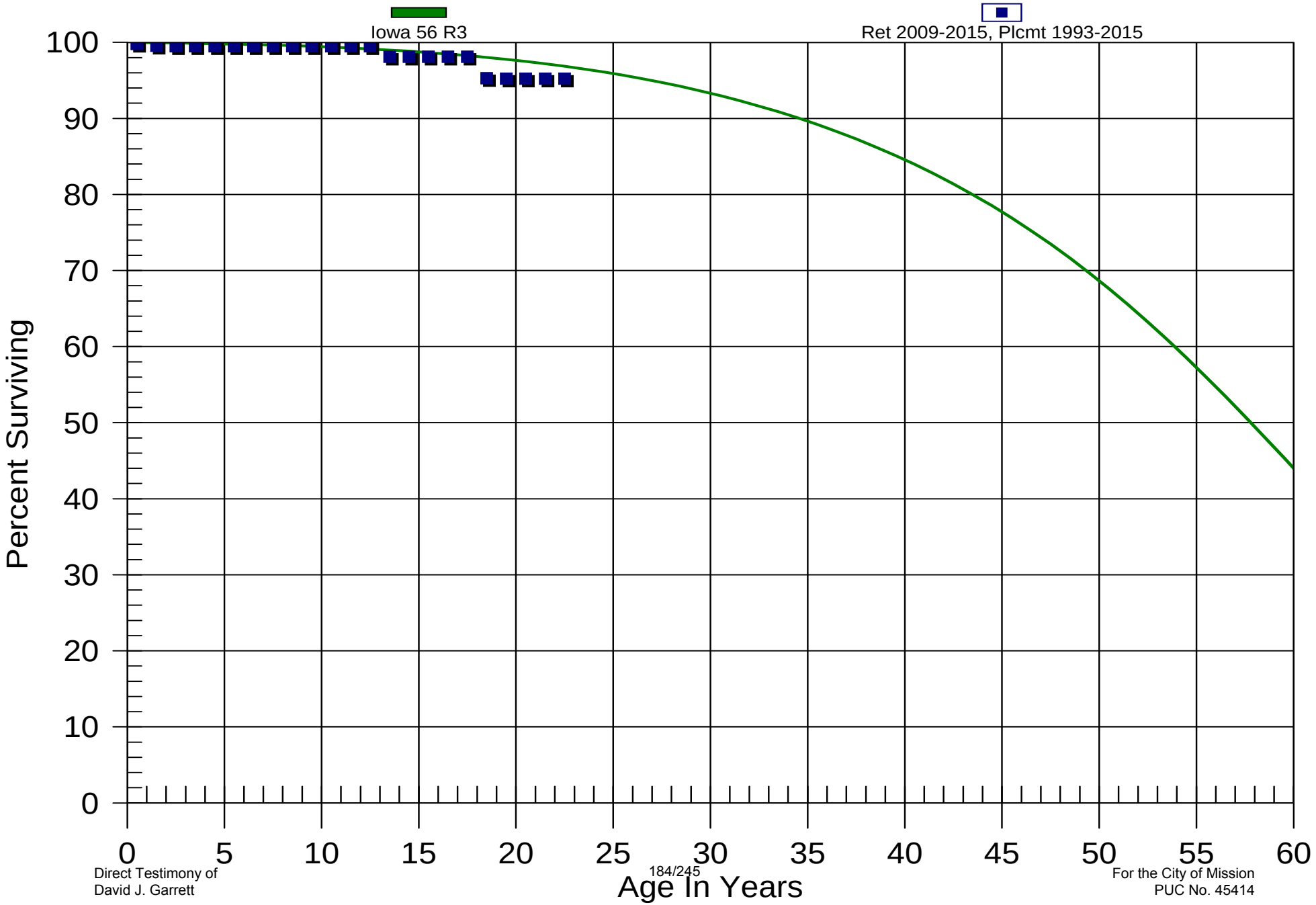
Sharyland
Electric Division
354.00 Towers and Fixtures
Original And Smooth Survivor Curves



Sharyland
Electric Division
355.00 Poles and Fixtures
Observed Life Table
Retirement Expr. 2009 TO 2015
Placement Years 1993 TO 2015

Age Interval	*$ Surviving At Beginning of Age Interval*	*$ Retired During The Age Interval*	*Retirement Ratio*	*% Surviving At Beginning of Age Interval*
0.0 - 0.5	$71,899,873.07	$152,799.09	0.00213	100.00
0.5 - 1.5	$66,311,937.24	$165,423.52	0.00249	99.79
1.5 - 2.5	$64,727,458.75	$36,961.99	0.00057	99.54
2.5 - 3.5	$2,219,721.78	$0.00	0.00000	99.48
3.5 - 4.5	$2,235,131.44	$0.00	0.00000	99.48
4.5 - 5.5	$2,151,092.70	$0.00	0.00000	99.48
5.5 - 6.5	$2,135,403.05	$0.00	0.00000	99.48
6.5 - 7.5	$1,712,762.21	$0.00	0.00000	99.48
7.5 - 8.5	$1,645,718.25	$0.00	0.00000	99.48
8.5 - 9.5	$1,628,355.38	$0.00	0.00000	99.48
9.5 - 10.5	$429,624.43	$0.00	0.00000	99.48
10.5 - 11.5	$411,880.99	$0.00	0.00000	99.48
11.5 - 12.5	$110,868.35	$0.00	0.00000	99.48
12.5 - 13.5	$24,288,326.21	$335,237.24	0.01380	99.48
13.5 - 14.5	$26,273,671.71	$0.00	0.00000	98.11
14.5 - 15.5	$28,536,315.51	$3,092.20	0.00011	98.11
15.5 - 16.5	$28,589,652.16	$0.00	0.00000	98.10
16.5 - 17.5	$28,495,730.56	$0.00	0.00000	98.10
17.5 - 18.5	$28,495,730.56	$818,863.74	0.02874	98.10
18.5 - 19.5	$27,676,866.82	$17,487.48	0.00063	95.28
19.5 - 20.5	$4,656,602.14	$0.00	0.00000	95.22
20.5 - 21.5	$2,324,006.70	$0.00	0.00000	95.22
21.5 - 22.5	$61,362.90	$0.00	0.00000	95.22

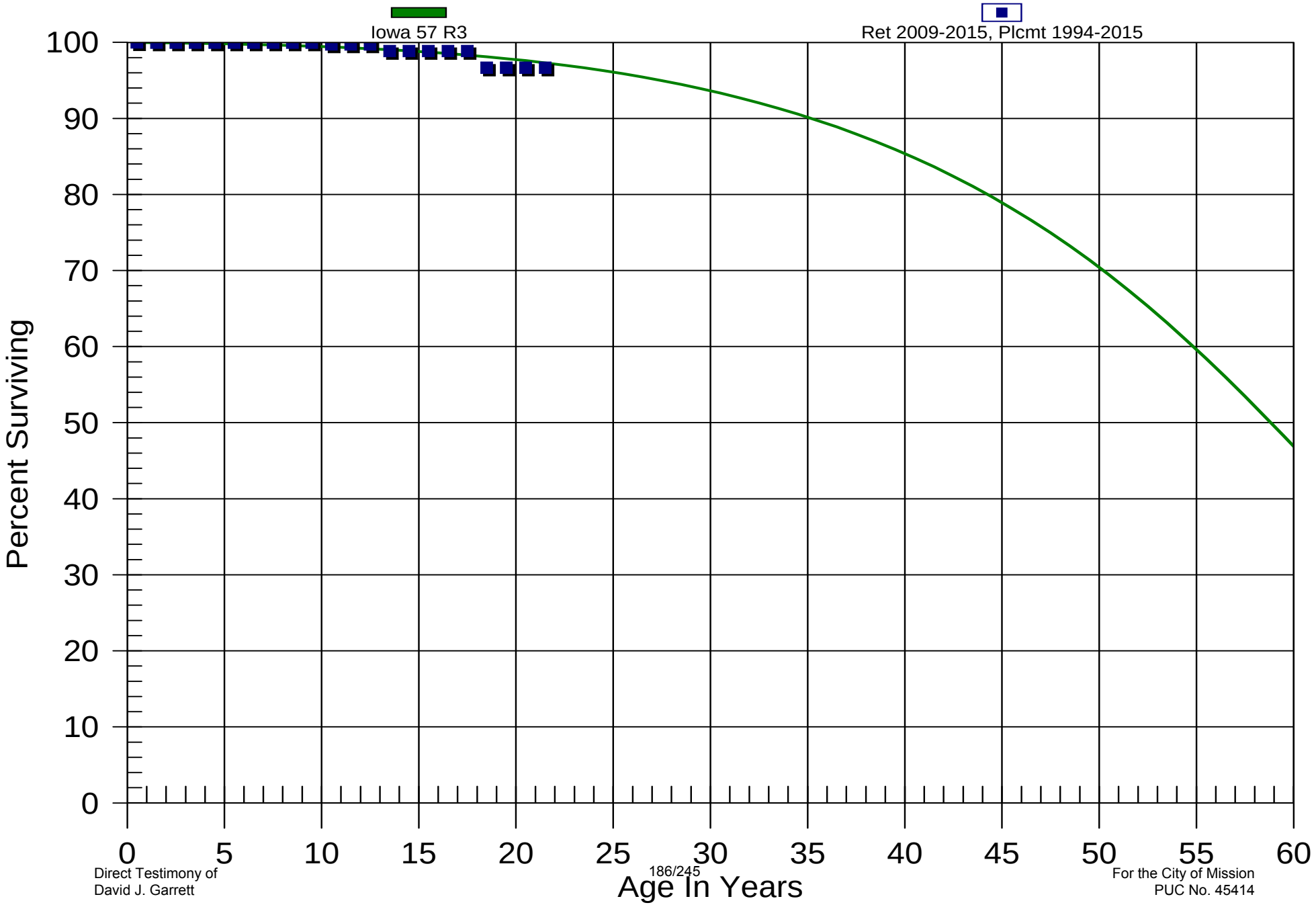
Sharyland
Electric Division
355.00 Poles and Fixtures
Original And Smooth Survivor Curves



Sharyland
Electric Division
356.00 Overhead Conductors and Devices
Observed Life Table
Retirement Expr. 2009 TO 2015
Placement Years 1994 TO 2015

Age Interval	*$ Surviving At Beginning of Age Interval*	*$ Retired During The Age Interval*	*Retirement Ratio*	*% Surviving At Beginning of Age Interval*
0.0 - 0.5	$177,752,345.73	$2,892.13	0.00002	100.00
0.5 - 1.5	$174,869,428.54	$58,521.62	0.00033	100.00
1.5 - 2.5	$173,277,055.65	$0.00	0.00000	99.96
2.5 - 3.5	$39,734.35	$0.00	0.00000	99.96
3.5 - 4.5	$58,828.74	$5.88	0.00010	99.96
4.5 - 5.5	$442,673.58	$0.00	0.00000	99.95
5.5 - 6.5	$441,012.24	$0.00	0.00000	99.95
6.5 - 7.5	$407,137.66	$0.00	0.00000	99.95
7.5 - 8.5	$407,137.66	$0.00	0.00000	99.95
8.5 - 9.5	$400,891.93	$0.00	0.00000	99.95
9.5 - 10.5	$400,891.93	$982.27	0.00245	99.95
10.5 - 11.5	$387,061.00	$0.00	0.00000	99.71
11.5 - 12.5	$0.00	$0.00	0.00000	99.71
12.5 - 13.5	$16,505,577.90	$141,476.90	0.00857	99.71
13.5 - 14.5	$18,092,755.95	$0.00	0.00000	98.86
14.5 - 15.5	$20,269,885.91	$0.00	0.00000	98.86
15.5 - 16.5	$20,269,885.91	$0.00	0.00000	98.86
16.5 - 17.5	$20,269,885.91	$0.00	0.00000	98.86
17.5 - 18.5	$20,269,885.91	$449,940.30	0.02220	98.86
18.5 - 19.5	$19,819,945.61	$0.00	0.00000	96.66
19.5 - 20.5	$3,905,784.91	$0.00	0.00000	96.66
20.5 - 21.5	$2,177,129.96	$0.00	0.00000	96.66

Sharyland
Electric Division
356.00 Overhead Conductors and Devices
Original And Smooth Survivor Curves



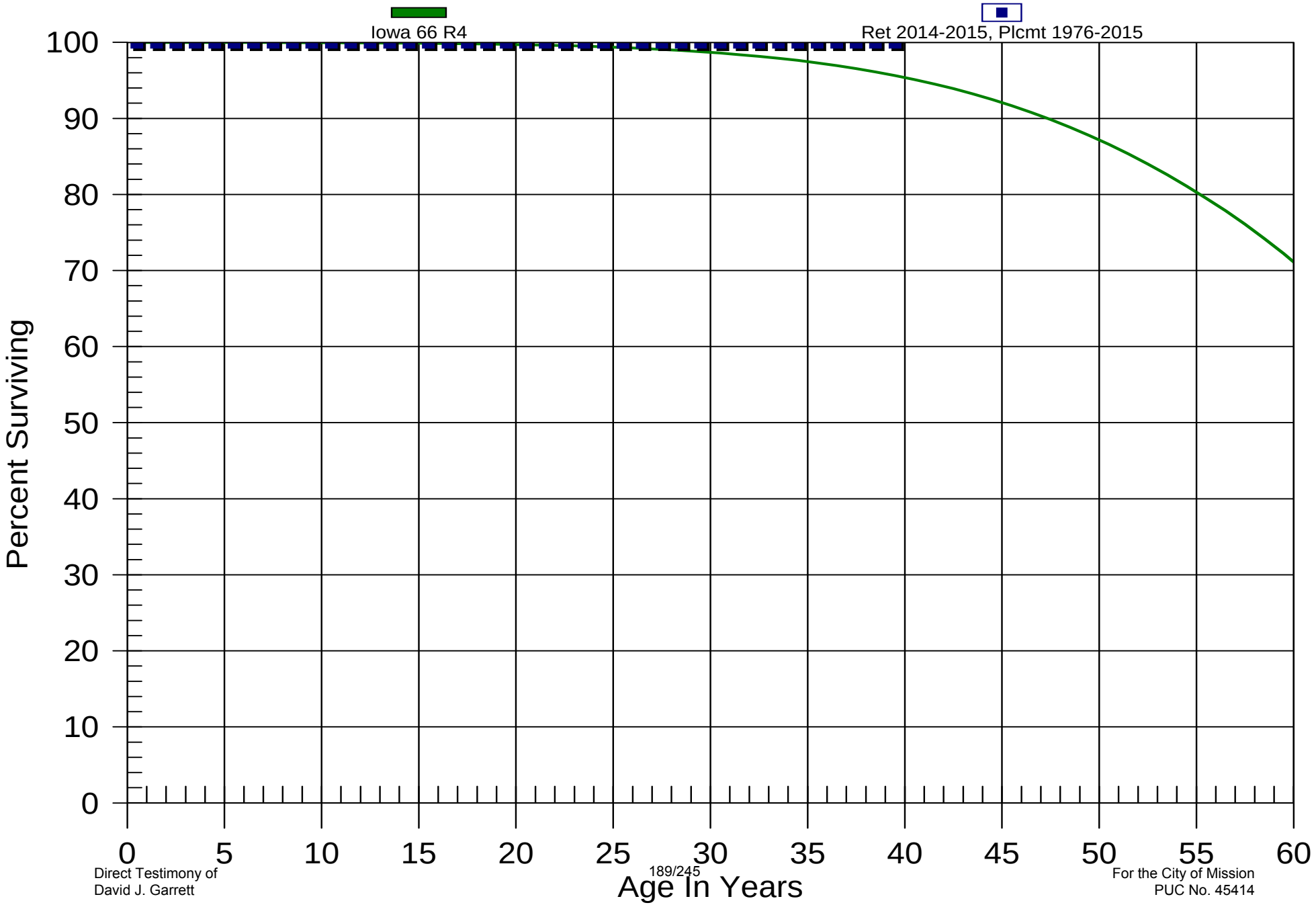
Sharyland
Electric Division
359.00 Roads and Trails
Observed Life Table
Retirement Expr. 2014 TO 2015
Placement Years 1976 TO 2015

Age Interval	*$ Surviving At Beginning of Age Interval*	*$ Retired During The Age Interval*	*Retirement Ratio*	*% Surviving At Beginning of Age Interval*
0.0 - 0.5	$1,448,484.17	$0.00	0.00000	100.00
0.5 - 1.5	$14,743,292.47	$0.00	0.00000	100.00
1.5 - 2.5	$13,472,600.56	$0.00	0.00000	100.00
2.5 - 3.5	$0.00	$0.00	0.00000	100.00
3.5 - 4.5	$0.00	$0.00	0.00000	100.00
4.5 - 5.5	$0.00	$0.00	0.00000	100.00
5.5 - 6.5	$7,858.04	$0.00	0.00000	100.00
6.5 - 7.5	$7,858.04	$0.00	0.00000	100.00
7.5 - 8.5	$0.00	$0.00	0.00000	100.00
8.5 - 9.5	$0.00	$0.00	0.00000	100.00
9.5 - 10.5	$0.00	$0.00	0.00000	100.00
10.5 - 11.5	$0.00	$0.00	0.00000	100.00
11.5 - 12.5	$0.00	$0.00	0.00000	100.00
12.5 - 13.5	$0.00	$0.00	0.00000	100.00
13.5 - 14.5	$0.00	$0.00	0.00000	100.00
14.5 - 15.5	$0.00	$0.00	0.00000	100.00
15.5 - 16.5	$0.00	$0.00	0.00000	100.00
16.5 - 17.5	$0.00	$0.00	0.00000	100.00
17.5 - 18.5	$0.00	$0.00	0.00000	100.00
18.5 - 19.5	$702,048.65	$0.00	0.00000	100.00
19.5 - 20.5	$1,588,881.28	$0.00	0.00000	100.00
20.5 - 21.5	$886,832.63	$0.00	0.00000	100.00
21.5 - 22.5	$0.00	$0.00	0.00000	100.00
22.5 - 23.5	$0.00	$0.00	0.00000	100.00
23.5 - 24.5	$0.00	$0.00	0.00000	100.00
24.5 - 25.5	$0.00	$0.00	0.00000	100.00
25.5 - 26.5	$0.00	$0.00	0.00000	100.00
26.5 - 27.5	$0.00	$0.00	0.00000	100.00
27.5 - 28.5	$0.00	$0.00	0.00000	100.00
28.5 - 29.5	$0.00	$0.00	0.00000	100.00
29.5 - 30.5	$0.00	$0.00	0.00000	100.00
30.5 - 31.5	$0.00	$0.00	0.00000	100.00
31.5 - 32.5	$0.00	$0.00	0.00000	100.00
32.5 - 33.5	$0.00	$0.00	0.00000	100.00
33.5 - 34.5	$0.00	$0.00	0.00000	100.00
34.5 - 35.5	$0.00	$0.00	0.00000	100.00
35.5 - 36.5	$0.00	$0.00	0.00000	100.00

Sharyland
Electric Division
359.00 Roads and Trails
Observed Life Table
Retirement Expr. 2014 TO 2015
Placement Years 1976 TO 2015

Age Interval	*$ Surviving At Beginning of Age Interval*	*$ Retired During The Age Interval*	*Retirement Ratio*	*% Surviving At Beginning of Age Interval*
36.5 - 37.5	$0.00	$0.00	0.00000	100.00
37.5 - 38.5	$2,118.44	$0.00	0.00000	100.00
38.5 - 39.5	$2,118.44	$0.00	0.00000	100.00

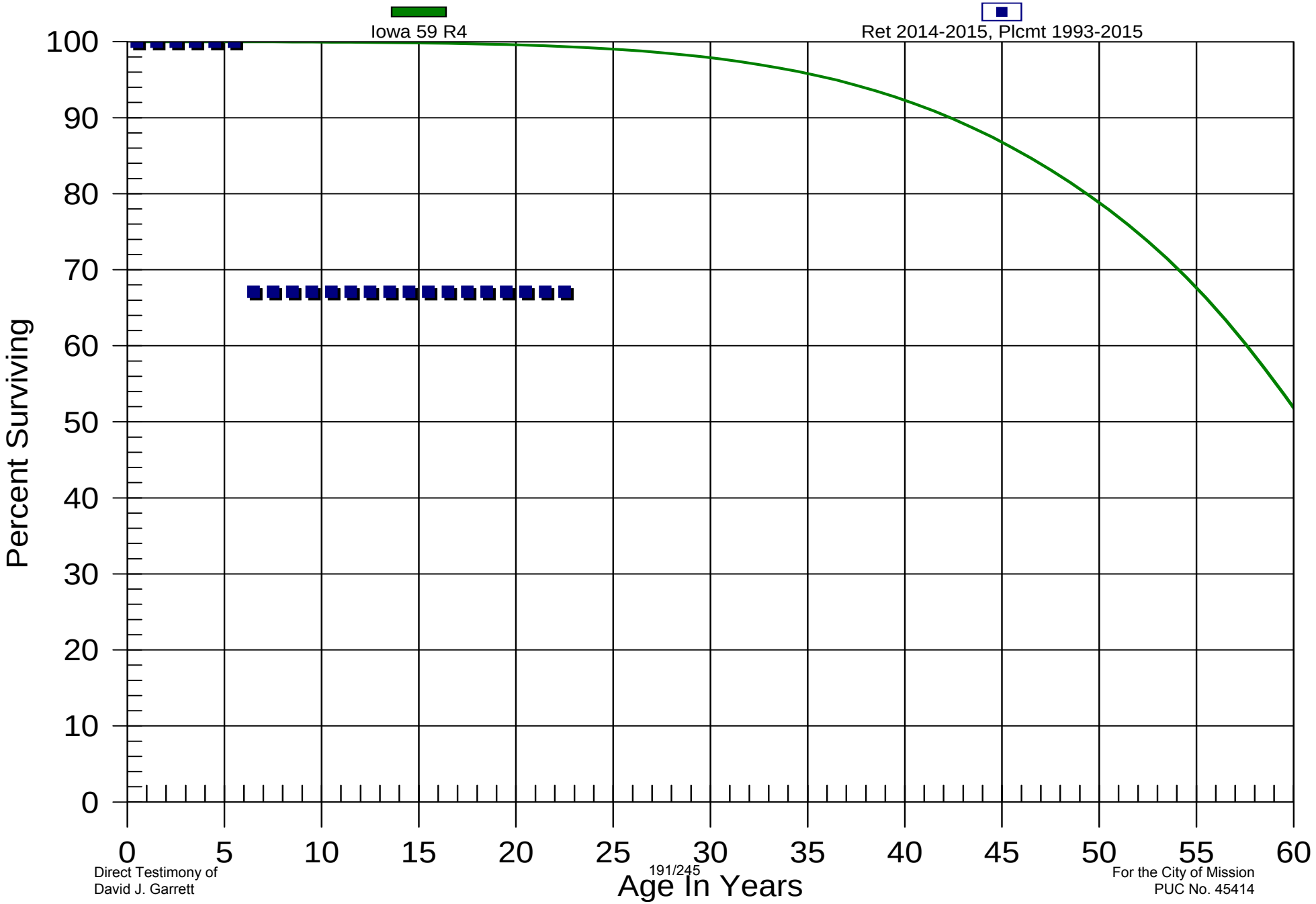
Sharyland
Electric Division
359.00 Roads and Trails
Original And Smooth Survivor Curves



Sharyland
Electric Division
361.00 Structures and Improvements
Observed Life Table
Retirement Expr. 2014 TO 2015
Placement Years 1993 TO 2015

Age Interval	*$ Surviving At Beginning of Age Interval*	*$ Retired During The Age Interval*	*Retirement Ratio*	*% Surviving At Beginning of Age Interval*
0.0 - 0.5	$10,576,104.79	$0.00	0.00000	100.00
0.5 - 1.5	$8,306,955.61	$0.00	0.00000	100.00
1.5 - 2.5	$4,521,386.13	$0.00	0.00000	100.00
2.5 - 3.5	$11,536.25	$0.00	0.00000	100.00
3.5 - 4.5	$398,760.65	$0.00	0.00000	100.00
4.5 - 5.5	$460,717.38	$0.00	0.00000	100.00
5.5 - 6.5	$202,144.35	$66,489.85	0.32892	100.00
6.5 - 7.5	$65,587.21	$0.00	0.00000	67.11
7.5 - 8.5	$271,182.55	$0.00	0.00000	67.11
8.5 - 9.5	$271,908.09	$0.00	0.00000	67.11
9.5 - 10.5	$725.54	$0.00	0.00000	67.11
10.5 - 11.5	$0.00	$0.00	0.00000	67.11
11.5 - 12.5	$0.00	$0.00	0.00000	67.11
12.5 - 13.5	$0.00	$0.00	0.00000	67.11
13.5 - 14.5	$0.00	$0.00	0.00000	67.11
14.5 - 15.5	$0.00	$0.00	0.00000	67.11
15.5 - 16.5	$0.00	$0.00	0.00000	67.11
16.5 - 17.5	$0.00	$0.00	0.00000	67.11
17.5 - 18.5	$0.00	$0.00	0.00000	67.11
18.5 - 19.5	$0.00	$0.00	0.00000	67.11
19.5 - 20.5	$0.00	$0.00	0.00000	67.11
20.5 - 21.5	$1,836,214.21	$0.00	0.00000	67.11
21.5 - 22.5	$1,836,214.21	$0.00	0.00000	67.11

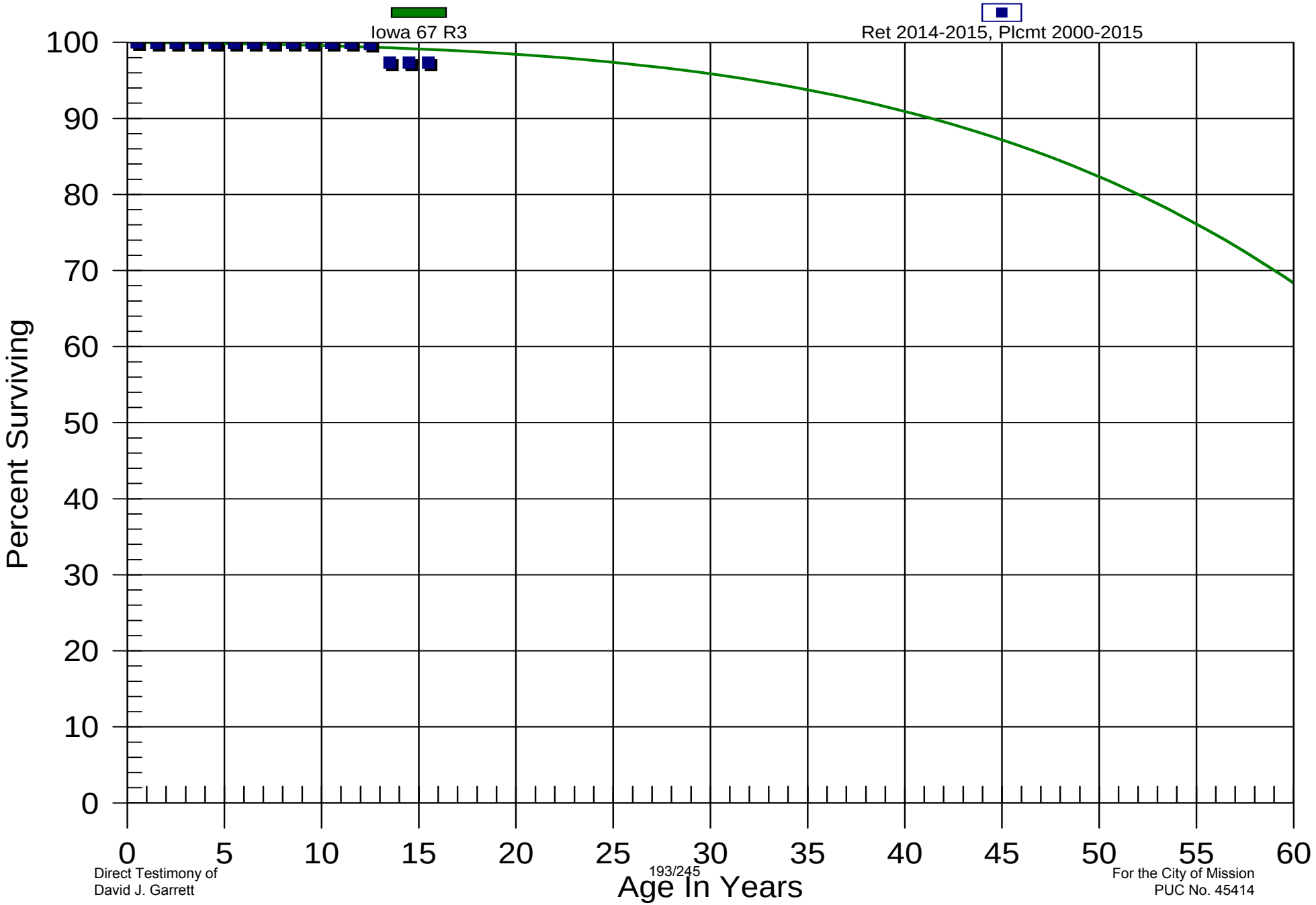
Sharyland
Electric Division
361.00 Structures and Improvements
Original And Smooth Survivor Curves



Sharyland
Electric Division
366.00 Underground Conduit
Observed Life Table
Retirement Expr. 2014 TO 2015
Placement Years 2000 TO 2015

Age Interval	*$ Surviving At Beginning of Age Interval*	*$ Retired During The Age Interval*	*Retirement Ratio*	*% Surviving At Beginning of Age Interval*
0.0 - 0.5	$571,086.22	$0.00	0.00000	100.00
0.5 - 1.5	$643,958.56	$472.77	0.00073	100.00
1.5 - 2.5	$749,109.64	$0.00	0.00000	99.93
2.5 - 3.5	$827,873.86	$0.00	0.00000	99.93
3.5 - 4.5	$664,102.63	$0.00	0.00000	99.93
4.5 - 5.5	$1,297,611.00	$0.00	0.00000	99.93
5.5 - 6.5	$2,396,390.00	$0.00	0.00000	99.93
6.5 - 7.5	$1,509,570.01	$0.00	0.00000	99.93
7.5 - 8.5	$1,237,995.01	$0.00	0.00000	99.93
8.5 - 9.5	$1,343,169.00	$0.00	0.00000	99.93
9.5 - 10.5	$226,014.00	$0.00	0.00000	99.93
10.5 - 11.5	$83,226.00	$0.00	0.00000	99.93
11.5 - 12.5	$167,863.00	$218.42	0.00130	99.93
12.5 - 13.5	$1,024,274.58	$25,301.62	0.02470	99.80
13.5 - 14.5	$985,718.84	$0.00	0.00000	97.33
14.5 - 15.5	$106,810.46	$0.00	0.00000	97.33

Sharyland
Electric Division
366.00 Underground Conduit
Original And Smooth Survivor Curves



Sharyland
Electric Division
352.00 Structures and Improvements
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: ***65*** ***Survivor Curve:*** ***R4***

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1993	369,979.84	65.00	5,691.97	42.72	243,135.21
1994	265,247.47	65.00	4,080.71	43.69	178,272.03
1995	367,537.15	65.00	5,654.39	44.66	252,523.86
2008	38,021.83	65.00	584.95	57.51	33,642.60
2009	12,060.74	65.00	185.55	58.51	10,856.61
2010	94,373.29	65.00	1,451.89	59.51	86,399.38
2012	415,266.54	65.00	6,388.68	61.50	392,931.73
2013	42,502,508.14	65.00	653,881.24	62.50	40,869,461.53
2014	16,058,609.37	65.00	247,054.20	63.50	15,688,367.74
2015	9,419,496.29	65.00	144,914.55	64.50	9,347,095.72
Total	69,543,100.66	65.00	1,069,888.12	62.72	67,102,686.41

Composite Average Remaining Life ... 62.7 Years

Sharyland
Electric Division
353.00 Station Equipment
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *54* ***Survivor Curve:*** *R5*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1993	5,053,824.76	54.00	93,589.39	31.50	2,948,123.74
1994	1,148,241.13	54.00	21,263.73	32.50	691,076.13
1995	945,068.53	54.00	17,501.28	33.50	586,293.74
1999	349,141.52	54.00	6,465.59	37.50	242,459.34
2000	40,634.66	54.00	752.49	38.50	28,971.00
2001	984,233.31	54.00	18,226.55	39.50	719,948.32
2002	44,016.70	54.00	815.12	40.50	33,012.52
2004	420,080.57	54.00	7,779.27	42.50	330,618.93
2005	7,978,925.19	54.00	147,757.94	43.50	6,427,466.81
2006	812,548.87	54.00	15,047.21	44.50	669,600.39
2007	45,345,996.02	54.00	839,741.05	45.50	38,208,197.11
2008	1,221,818.23	54.00	22,626.27	46.50	1,052,121.18
2009	454,999.21	54.00	8,425.92	47.50	400,230.76
2010	3,523,798.06	54.00	65,255.55	48.50	3,164,892.54
2011	319,283.13	54.00	5,912.65	49.50	292,676.19
2012	2,555,123.44	54.00	47,317.12	50.50	2,389,513.51
2013	119,992,106.41	54.00	2,222,077.05	51.50	114,436,913.78
2014	78,808,680.32	54.00	1,459,420.67	52.50	76,619,549.32
2015	52,073,952.47	54.00	964,332.89	53.50	51,591,786.02
Total	322,072,472.53	54.00	5,964,307.76	50.44	300,833,451.32

Composite Average Remaining Life ... 50.4 Years

Sharyland
Electric Division
354.00 Towers and Fixtures
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *67* ***Survivor Curve:*** *R4*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1996	1,282,780.33	67.00	19,146.28	47.63	911,894.32
2012	27,995.92	67.00	417.86	63.50	26,535.07
2013	260,578,668.71	67.00	3,889,296.11	64.50	250,865,156.16
2014	3,961,888.39	67.00	59,133.61	65.50	3,873,268.82
2015	1,960,800.71	67.00	29,266.15	66.50	1,946,179.00
Total	267,812,134.06	67.00	3,997,260.00	64.45	257,623,033.38

Composite Average Remaining Life ... 64.4 Years

Sharyland
Electric Division
355.00 Poles and Fixtures
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *56* ***Survivor Curve:*** *R3*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1993	61,362.90	56.00	1,095.77	34.82	38,150.12
1994	2,262,643.80	56.00	40,404.34	35.70	1,442,246.19
1995	2,332,595.44	56.00	41,653.48	36.58	1,523,722.44
1996	23,002,777.20	56.00	410,763.74	37.48	15,393,618.84
1999	93,921.60	56.00	1,677.17	40.20	67,422.55
2000	4,934.05	56.00	88.11	41.12	3,623.03
2002	12,012.70	56.00	214.51	42.98	9,219.92
2004	301,012.64	56.00	5,375.22	44.86	241,143.26
2005	17,743.44	56.00	316.85	45.81	14,515.05
2006	1,292,652.55	56.00	23,083.07	46.76	1,079,464.41
2007	22,296.92	56.00	398.16	47.72	19,000.96
2008	67,043.96	56.00	1,197.21	48.68	58,284.80
2009	434,653.54	56.00	7,761.67	49.65	385,356.52
2010	15,689.65	56.00	280.17	50.62	14,181.74
2011	385,051.38	56.00	6,875.92	51.59	354,731.40
2012	2,333.78	56.00	41.67	52.57	2,190.66
2013	63,763,427.53	56.00	1,138,632.25	53.54	60,966,974.24
2014	1,441,351.89	56.00	25,738.42	54.52	1,403,373.31
2015	5,502,180.70	56.00	98,253.19	55.51	5,453,803.28
Total	101,015,685.67	56.00	1,803,850.91	49.05	88,471,022.74

Composite Average Remaining Life ... 49.0 Years

Sharyland
Electric Division
356.00 Overhead Conductors and Devices
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *57* ***Survivor Curve:*** *R3*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1994	2,177,129.96	57.00	38,195.04	36.67	1,400,677.30
1995	1,728,654.95	57.00	30,327.10	37.56	1,139,139.79
1996	15,914,160.70	57.00	279,194.15	38.46	10,737,449.37
2004	387,061.00	57.00	6,790.50	45.86	311,403.19
2005	12,848.66	57.00	225.41	46.81	10,551.20
2009	33,874.58	57.00	594.29	50.65	30,099.71
2010	1,661.34	57.00	29.15	51.62	1,504.45
2013	173,233,946.31	57.00	3,039,174.06	54.54	165,769,399.36
2014	991,342.30	57.00	17,391.87	55.52	965,678.13
2015	2,880,025.06	57.00	50,526.46	56.51	2,855,146.44
Total	197,360,704.86	57.00	3,462,448.02	52.92	183,221,048.94

Composite Average Remaining Life ... 52.9 Years

Sharyland
Electric Division
359.00 Roads and Trails

Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: ***66*** ***Survivor Curve:*** ***R4***

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1976	2,118.44	66.00	32.10	28.05	900.31
1994	886,832.63	66.00	13,436.75	44.68	600,353.57
1995	702,048.65	66.00	10,637.02	45.66	485,637.83
2008	7,858.04	66.00	119.06	58.51	6,966.69
2013	13,472,600.56	66.00	204,128.71	63.50	12,962,792.64
2014	1,270,691.91	66.00	19,252.76	64.50	1,241,839.17
2015	177,792.26	66.00	2,693.80	65.50	176,446.41
Total	16,519,942.49	66.00	250,300.19	61.83	15,474,936.61

Composite Average Remaining Life ... 61.8 Years

Sharyland
Electric Division
361.00 Structures and Improvements
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *59* ***Survivor Curve:*** *R4*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1993	1,836,214.21	59.00	31,122.04	36.77	1,144,392.92
2005	725.54	59.00	12.30	48.53	596.79
2006	271,182.55	59.00	4,596.28	49.52	227,629.67
2008	65,587.21	59.00	1,111.64	51.52	57,266.35
2009	70,067.29	59.00	1,187.57	52.51	62,361.50
2010	390,650.09	59.00	6,621.14	53.51	354,289.67
2011	8,110.56	59.00	137.47	54.51	7,492.79
2012	3,425.69	59.00	58.06	55.50	3,222.71
2013	4,517,960.44	59.00	76,575.02	56.50	4,326,724.10
2014	3,788,995.17	59.00	64,219.77	57.50	3,692,752.03
2015	6,787,109.62	59.00	115,034.89	58.50	6,729,638.15
Total	17,740,028.37	59.00	300,676.18	55.23	16,606,366.68

Composite Average Remaining Life ... 55.2 Years

Sharyland
Electric Division
362.00 Station Equipment
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: ***58*** ***Survivor Curve:*** ***R1.5***

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1963	1,571.20	58.00	27.09	21.36	578.74
1964	2,393.21	58.00	41.26	21.89	903.16
1965	2,175.65	58.00	37.51	22.42	841.05
1966	2,610.78	58.00	45.01	22.96	1,033.64
1967	8,191.61	58.00	141.23	23.51	3,320.63
1968	7,781.76	58.00	134.17	24.07	3,229.53
1969	8,601.44	58.00	148.30	24.64	3,653.87
1970	6,962.09	58.00	120.03	25.21	3,026.57
1971	31,127.05	58.00	536.67	25.80	13,844.30
1972	34,405.77	58.00	593.20	26.39	15,654.08
1973	27,848.33	58.00	480.14	26.99	12,958.78
1974	68,811.54	58.00	1,186.39	27.60	32,739.69
1976	41,456.88	58.00	714.77	28.84	20,611.22
1977	237,763.23	58.00	4,099.32	29.47	120,796.14
1978	473,767.41	58.00	8,168.31	30.10	245,900.95
1979	514,736.30	58.00	8,874.66	30.75	272,898.83
1980	529,305.95	58.00	9,125.86	31.40	286,580.92
1981	500,166.65	58.00	8,623.46	32.06	276,490.83
1982	650,067.99	58.00	11,207.94	32.73	366,810.76
1983	349,546.34	58.00	6,026.59	33.40	201,294.16
1984	1,256,886.43	58.00	21,670.20	34.08	738,528.79
1985	2,122,932.86	58.00	36,601.86	34.76	1,272,444.30
1986	437,807.59	58.00	7,548.32	35.46	267,638.09
1987	1,136,075.52	58.00	19,587.28	36.15	708,168.30
1988	134,121.85	58.00	2,312.42	36.86	85,230.82
1989	568,852.93	58.00	9,807.70	37.57	368,432.96
1990	2,111,490.45	58.00	36,404.58	38.28	1,393,586.23

Sharyland
Electric Division
362.00 Station Equipment
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: ***58*** ***Survivor Curve:*** ***R1.5***

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1991	2,223,148.14	58.00	38,329.69	39.00	1,494,871.75
1992	1,519,078.76	58.00	26,190.71	39.72	1,040,393.74
1993	829,376.03	58.00	14,299.42	40.45	578,469.77
1997	18,376.98	58.00	316.84	43.42	13,757.07
1998	161,855.23	58.00	2,790.57	44.17	123,265.69
1999	2,926.09	58.00	50.45	44.93	2,266.62
2000	193,007.28	58.00	3,327.67	45.69	152,037.53
2001	104,681.34	58.00	1,804.83	46.45	83,841.75
2002	314,121.12	58.00	5,415.82	47.22	255,752.85
2003	22,559.83	58.00	388.96	48.00	18,668.21
2004	363,454.73	58.00	6,266.39	48.77	305,631.27
2005	1,372,345.53	58.00	23,660.85	49.55	1,172,506.34
2006	54,071.59	58.00	932.26	50.34	46,930.01
2007	1,867,359.63	58.00	32,195.48	51.13	1,646,115.27
2008	1,234,408.37	58.00	21,282.66	51.92	1,105,050.73
2009	912,487.47	58.00	15,732.36	52.72	829,414.52
2010	1,520,330.33	58.00	26,212.29	53.52	1,402,929.20
2012	101,604.33	58.00	1,751.78	55.14	96,586.89
2013	9,217,542.89	58.00	158,921.30	55.95	8,891,657.66
2014	11,615,399.05	58.00	200,263.17	56.77	11,368,263.50
2015	24,930,937.50	58.00	429,838.75	57.59	24,753,721.65
Total	69,846,531.03	58.00	1,204,236.52	51.57	62,099,329.34

Composite Average Remaining Life ... 51.5 Years

Sharyland
Electric Division
364.00 Poles, Towers, and Fixtures
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: ***44*** ***Survivor Curve:*** ***R2.5***

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1963	279,056.52	44.00	6,342.18	7.31	46,331.66
1964	321,294.83	44.00	7,302.14	7.62	55,628.95
1965	367,817.46	44.00	8,359.46	7.95	66,427.65
1966	418,704.23	44.00	9,515.98	8.29	78,896.65
1967	474,036.17	44.00	10,773.52	8.65	93,217.56
1968	533,875.78	44.00	12,133.51	9.03	109,600.87
1969	598,245.97	44.00	13,596.46	9.43	128,243.69
1970	667,180.65	44.00	15,163.15	9.85	149,382.64
1971	740,706.93	44.00	16,834.20	10.29	173,229.53
1972	818,818.44	44.00	18,609.46	10.75	200,025.89
1973	901,532.07	44.00	20,489.31	11.23	230,022.33
1974	988,920.99	44.00	22,475.42	11.73	263,550.71
1975	1,081,046.59	44.00	24,569.17	12.24	300,812.43
1976	1,177,899.95	44.00	26,770.38	12.78	342,112.46
1977	1,279,641.13	44.00	29,082.67	13.34	387,841.80
1978	1,386,411.98	44.00	31,509.28	13.91	438,256.93
1979	1,498,341.13	44.00	34,053.11	14.50	493,732.27
1980	1,615,516.09	44.00	36,716.17	15.11	554,613.73
1981	1,337,779.06	44.00	30,403.99	15.73	478,263.64
1982	1,379,049.87	44.00	31,341.96	16.37	513,034.73
1983	1,359,406.60	44.00	30,895.52	17.02	525,910.36
1984	1,691,295.56	44.00	38,438.43	17.69	679,959.90
1985	1,719,196.97	44.00	39,072.55	18.37	717,883.20
1986	2,101,842.59	44.00	47,769.02	19.07	910,856.35
1987	1,752,259.71	44.00	39,823.97	19.78	787,533.56
1988	1,543,635.71	44.00	35,082.53	20.49	719,016.08
1989	1,066,029.55	44.00	24,227.88	21.23	514,334.83

Sharyland
Electric Division
364.00 Poles, Towers, and Fixtures
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: ***44*** ***Survivor Curve:*** ***R2.5***

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1990	1,081,230.22	44.00	24,573.35	21.97	539,943.79
1991	1,497,560.71	44.00	34,035.38	22.73	773,541.55
1992	2,602,420.33	44.00	59,145.75	23.50	1,389,634.93
1993	1,074,591.90	44.00	24,422.48	24.27	592,784.81
1994	2,028,515.55	44.00	46,102.50	25.06	1,155,301.27
1995	2,153,671.68	44.00	48,946.95	25.86	1,265,609.81
1996	1,948,719.89	44.00	44,288.97	26.67	1,181,000.67
1997	1,495,697.09	44.00	33,993.02	27.48	934,235.41
1998	1,797,277.23	44.00	40,847.10	28.31	1,156,372.59
1999	1,944,244.96	44.00	44,187.26	29.15	1,287,910.65
2000	1,639,679.07	44.00	37,265.33	29.99	1,117,647.73
2001	1,815,472.20	44.00	41,260.62	30.85	1,272,685.35
2002	1,769,346.10	44.00	40,212.30	31.71	1,274,996.05
2003	1,563,486.96	44.00	35,533.70	32.58	1,157,592.10
2004	505,848.20	44.00	11,496.52	33.45	384,614.15
2005	1,298,349.01	44.00	29,507.85	34.34	1,013,288.62
2006	756,116.45	44.00	17,184.42	35.23	605,430.80
2007	2,039,448.90	44.00	46,350.98	36.13	1,674,705.01
2008	1,823,471.87	44.00	41,442.43	37.04	1,534,866.14
2009	1,583,495.83	44.00	35,988.44	37.95	1,365,663.72
2010	1,901,070.60	44.00	43,206.03	38.86	1,679,167.84
2011	3,073,334.01	44.00	69,848.31	39.79	2,779,096.77
2012	8,086,566.33	44.00	183,785.09	40.72	7,482,883.97
2013	10,495,392.69	44.00	238,530.99	41.65	9,934,350.74
2014	24,789,749.09	44.00	563,401.83	42.59	23,992,986.09
2015	17,136,469.66	44.00	389,464.15	43.53	16,952,480.18

Sharyland
Electric Division
364.00 Poles, Towers, and Fixtures
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *44* ***Survivor Curve:*** *R2.5*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Total	127,000,769.06	44.00	2,886,373.15	32.73	94,457,511.12

Composite Average Remaining Life ... 32.7 Years

Sharyland
Electric Division
365.00 Overhead Conductors and Devices
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *57* ***Survivor Curve:*** *R1.5*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1963	390,769.39	57.00	6,855.52	20.53	140,749.97
1964	411,979.85	57.00	7,227.63	21.05	152,116.88
1965	433,913.66	57.00	7,612.43	21.57	164,198.87
1966	456,584.34	57.00	8,010.16	22.10	177,056.84
1967	479,999.13	57.00	8,420.94	22.65	190,708.79
1968	504,166.72	57.00	8,844.93	23.20	205,189.30
1969	529,113.76	57.00	9,282.59	23.76	220,527.76
1970	554,856.73	57.00	9,734.21	24.33	236,799.87
1971	581,406.95	57.00	10,200.00	24.90	254,023.46
1972	608,772.85	57.00	10,680.10	25.49	272,237.22
1973	636,988.30	57.00	11,175.10	26.08	291,474.62
1974	666,073.36	57.00	11,685.36	26.69	311,827.44
1975	696,044.29	57.00	12,211.16	27.30	333,314.38
1976	726,910.07	57.00	12,752.66	27.91	355,978.89
1977	758,711.32	57.00	13,310.57	28.54	379,859.84
1978	791,472.64	57.00	13,885.32	29.17	405,065.83
1979	825,215.95	57.00	14,477.30	29.81	431,618.22
1980	859,950.96	57.00	15,086.68	30.46	459,565.92
1981	895,725.67	57.00	15,714.30	31.12	488,954.72
1982	932,569.42	57.00	16,360.68	31.78	519,910.80
1983	970,510.62	57.00	17,026.30	32.45	552,460.12
1984	1,650,851.96	57.00	28,961.98	33.12	959,314.30
1985	1,299,155.87	57.00	22,791.94	33.80	770,452.74
1986	1,477,601.26	57.00	25,922.52	34.49	894,138.72
1987	1,777,067.04	57.00	31,176.25	35.19	1,097,018.37
1988	1,826,785.87	57.00	32,048.50	35.89	1,150,165.40
1989	1,767,696.10	57.00	31,011.85	36.59	1,134,863.59

Sharyland
Electric Division
365.00 Overhead Conductors and Devices
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *57* ***Survivor Curve:*** *R1.5*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1990	1,627,896.17	57.00	28,559.25	37.31	1,065,416.15
1991	1,164,530.64	57.00	20,430.12	38.02	776,817.86
1992	1,220,340.37	57.00	21,409.23	38.75	829,520.62
1993	1,335,760.79	57.00	23,434.12	39.47	925,030.65
1994	1,800,103.12	57.00	31,580.39	40.21	1,269,703.80
1995	1,956,424.61	57.00	34,322.84	40.94	1,405,289.50
1996	2,952,431.84	57.00	51,796.44	41.69	2,159,165.07
1997	1,099,903.43	57.00	19,296.32	42.43	818,786.67
1998	1,405,375.39	57.00	24,655.42	43.18	1,064,682.82
1999	1,785,117.20	57.00	31,317.48	43.94	1,376,034.13
2000	1,669,148.29	57.00	29,282.96	44.70	1,308,890.10
2001	2,372,057.73	57.00	41,614.56	45.46	1,891,875.79
2002	1,927,291.34	57.00	33,811.73	46.23	1,563,085.49
2003	1,452,657.87	57.00	25,484.93	47.00	1,197,832.82
2004	3,354,707.89	57.00	58,853.83	47.78	2,811,928.57
2005	539,548.78	57.00	9,465.66	48.56	459,640.31
2006	934,114.57	57.00	16,387.78	49.34	808,615.63
2007	1,496,111.24	57.00	26,247.26	50.13	1,315,819.77
2008	886,617.62	57.00	15,554.51	50.92	792,110.14
2009	1,212,482.50	57.00	21,271.37	51.72	1,100,194.36
2010	1,343,194.93	57.00	23,564.55	52.52	1,237,659.71
2011	1,787,671.65	57.00	31,362.29	53.33	1,672,475.55
2012	3,331,623.66	57.00	58,448.85	54.14	3,164,244.71
2013	5,658,126.96	57.00	99,264.22	54.95	5,454,598.63
2014	12,359,991.56	57.00	216,839.41	55.77	12,092,436.94
2015	11,945,236.66	57.00	209,563.10	56.59	11,858,843.34

Sharyland
Electric Division
365.00 Overhead Conductors and Devices
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *57* ***Survivor Curve:*** *R1.5*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Total	92,129,360.89	57.00	1,616,285.61	45.15	72,970,291.97

Composite Average Remaining Life ... 45.1 Years

Sharyland
Electric Division
366.00 Underground Conduit
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *67* ***Survivor Curve:*** *R3*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
2000	106,810.46	67.00	1,594.21	52.03	82,951.99
2001	878,908.38	67.00	13,118.20	52.97	694,916.92
2002	120,064.58	67.00	1,792.03	53.92	96,625.09
2003	47,580.00	67.00	710.16	54.87	38,964.84
2004	35,646.00	67.00	532.04	55.82	29,699.09
2005	190,368.00	67.00	2,841.35	56.78	161,325.28
2006	1,152,801.00	67.00	17,206.20	57.74	993,459.91
2007	85,194.01	67.00	1,271.57	58.70	74,643.01
2008	1,424,376.00	67.00	21,259.61	59.67	1,268,531.73
2009	972,014.00	67.00	14,507.85	60.64	879,723.86
2010	325,597.00	67.00	4,859.72	61.61	299,409.40
2011	338,505.63	67.00	5,052.39	62.58	316,203.36
2012	489,368.23	67.00	7,304.09	63.56	464,266.70
2013	259,741.41	67.00	3,876.79	64.54	250,214.28
2014	383,744.38	67.00	5,727.60	65.52	375,292.19
2015	187,341.84	67.00	2,796.18	66.51	185,964.67
Total	6,998,060.92	67.00	104,449.97	59.48	6,212,192.31

Composite Average Remaining Life ... 59.4 Years

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *47* ***Survivor Curve:*** *R2.5*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1970	45,360.88	47.00	965.12	11.94	11,525.63
1971	49,639.91	47.00	1,056.16	12.44	13,136.13
1972	54,155.80	47.00	1,152.25	12.95	14,922.92
1973	58,913.63	47.00	1,253.48	13.49	16,903.15
1974	63,919.41	47.00	1,359.98	14.03	19,086.37
1975	69,180.14	47.00	1,471.91	14.60	21,490.64
1976	74,703.83	47.00	1,589.44	15.18	24,132.64
1977	80,497.58	47.00	1,712.71	15.78	27,029.44
1978	86,572.39	47.00	1,841.96	16.40	30,200.06
1979	92,940.44	47.00	1,977.45	17.02	33,664.81
1980	99,613.91	47.00	2,119.44	17.67	37,444.95
1981	124,896.51	47.00	2,657.36	18.33	48,700.71
1982	132,206.73	47.00	2,812.90	19.00	53,437.02
1983	130,014.90	47.00	2,766.26	19.68	54,440.99
1984	137,286.74	47.00	2,920.98	20.38	59,517.58
1985	134,701.79	47.00	2,865.98	21.08	60,424.58
1986	132,031.93	47.00	2,809.18	21.80	61,246.94
1987	126,247.67	47.00	2,686.11	22.53	60,525.48
1988	132,786.99	47.00	2,825.24	23.27	65,754.84
1989	142,105.92	47.00	3,023.52	24.03	72,649.39
1990	149,234.33	47.00	3,175.19	24.79	78,715.19
1991	86,561.38	47.00	1,841.72	25.56	47,080.90
1992	419,489.60	47.00	8,925.27	26.35	235,146.63
1993	402,030.65	47.00	8,553.81	27.14	232,137.27
1994	102,270.18	47.00	2,175.95	27.94	60,796.60
1995	148,147.47	47.00	3,152.06	28.75	90,625.52
1996	217,103.38	47.00	4,619.20	29.57	136,601.68

Sharyland
Electric Division
367.00 Underground Conductors and Devices
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *47* ***Survivor Curve:*** *R2.5*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1997	282,778.44	47.00	6,016.54	30.40	182,912.03
1998	192,924.05	47.00	4,104.75	31.24	128,228.31
1999	159,893.57	47.00	3,401.98	32.08	109,151.45
2000	91,126.93	47.00	1,938.86	32.94	63,863.10
2001	1,023,641.78	47.00	21,779.52	33.80	736,145.59
2002	173,395.31	47.00	3,689.25	34.67	127,901.95
2003	277,105.05	47.00	5,895.83	35.55	209,567.43
2004	166,868.38	47.00	3,550.38	36.43	129,337.60
2005	411,715.38	47.00	8,759.87	37.32	326,911.79
2006	1,158,267.56	47.00	24,643.89	38.22	941,782.63
2007	118,551.39	47.00	2,522.36	39.12	98,670.14
2008	1,084,935.91	47.00	23,083.65	40.03	923,958.89
2009	1,172,303.69	47.00	24,942.53	40.94	1,021,159.56
2010	545,357.15	47.00	11,603.30	41.86	485,711.14
2011	696,777.28	47.00	14,824.99	42.78	634,273.13
2012	1,810,699.40	47.00	38,525.36	43.71	1,684,093.14
2013	2,581,806.27	47.00	54,931.83	44.65	2,452,575.43
2014	1,827,197.24	47.00	38,876.38	45.59	1,772,204.78
2015	3,647,171.74	47.00	77,599.09	46.53	3,610,507.98
Total	20,915,130.61	47.00	445,000.99	38.89	17,306,294.17

Composite Average Remaining Life ... 38.8 Years

Sharyland
Electric Division
368.00 Line Transformers
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *49* ***Survivor Curve:*** *L3*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1963	136,592.01	49.00	2,787.64	14.13	39,389.54
1964	152,050.42	49.00	3,103.13	14.30	44,374.09
1965	169,180.20	49.00	3,452.72	14.47	49,948.29
1966	188,126.91	49.00	3,839.39	14.63	56,178.08
1967	209,038.07	49.00	4,266.16	14.80	63,136.41
1968	232,054.51	49.00	4,735.89	14.97	70,902.07
1969	257,306.99	49.00	5,251.26	15.15	79,559.93
1970	284,916.79	49.00	5,814.73	15.34	89,202.42
1971	314,989.17	49.00	6,428.47	15.54	99,929.02
1972	347,609.83	49.00	7,094.21	15.77	111,846.14
1973	382,841.84	49.00	7,813.24	16.01	125,067.10
1974	412,236.40	49.00	8,413.14	16.27	136,893.90
1975	451,959.65	49.00	9,223.83	16.56	152,762.63
1976	494,274.42	49.00	10,087.42	16.88	170,280.96
1977	539,141.59	49.00	11,003.09	17.23	189,585.31
1978	586,501.27	49.00	11,969.63	17.61	210,817.85
1979	636,277.60	49.00	12,985.49	18.03	234,174.52
1980	762,830.92	49.00	15,568.26	18.49	287,813.10
1981	773,942.96	49.00	15,795.04	18.98	299,752.05
1982	771,094.78	49.00	15,736.91	19.51	306,953.52
1983	833,377.57	49.00	17,008.01	20.07	341,356.26
1984	757,759.93	49.00	15,464.77	20.67	319,689.48
1985	778,327.13	49.00	15,884.52	21.31	338,494.76
1986	775,243.58	49.00	15,821.58	21.98	347,785.66
1987	723,325.58	49.00	14,762.01	22.69	334,894.01
1988	763,977.52	49.00	15,591.66	23.42	365,171.14
1989	744,266.41	49.00	15,189.39	24.18	367,330.87

Sharyland
Electric Division
368.00 Line Transformers
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *49* ***Survivor Curve:*** *L3*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1990	519,722.89	49.00	10,606.78	24.97	264,861.26
1991	671,896.58	49.00	13,712.42	25.78	353,518.34
1992	512,569.20	49.00	10,460.79	26.61	278,368.31
1993	699,919.94	49.00	14,284.34	27.46	392,217.83
1994	651,863.87	49.00	13,303.59	28.32	376,765.12
1995	505,036.95	49.00	10,307.06	29.20	300,935.50
1996	700,436.84	49.00	14,294.89	30.09	430,074.91
1997	833,743.48	49.00	17,015.48	30.99	527,247.33
1998	1,001,759.50	49.00	20,444.44	31.90	652,128.06
1999	864,788.60	49.00	17,649.07	32.82	579,227.63
2000	804,814.04	49.00	16,425.07	33.75	554,358.44
2001	827,699.97	49.00	16,892.14	34.69	586,021.61
2002	817,859.33	49.00	16,691.31	35.64	594,918.94
2003	1,276,386.00	49.00	26,049.17	36.60	953,444.31
2004	1,865,046.02	49.00	38,062.85	37.57	1,430,031.65
2005	1,287,725.98	49.00	26,280.60	38.55	1,012,990.66
2006	2,442,366.06	49.00	49,845.11	39.53	1,970,215.82
2007	1,403,880.96	49.00	28,651.15	40.51	1,160,774.56
2008	2,107,118.33	49.00	43,003.20	41.51	1,784,892.74
2009	3,446,239.28	49.00	70,332.69	42.50	2,989,254.72
2010	1,783,855.67	49.00	36,405.88	43.50	1,583,644.64
2011	4,308,845.38	49.00	87,937.22	44.50	3,913,132.17
2012	7,758,815.45	49.00	158,346.05	45.50	7,204,604.41
2013	8,609,867.14	49.00	175,714.76	46.50	8,170,580.23
2014	11,756,815.40	49.00	239,939.36	47.50	11,396,906.35
2015	13,108,588.99	49.00	267,527.08	48.50	12,974,825.45

Sharyland
Electric Division
368.00 Line Transformers
Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *49* ***Survivor Curve:*** *L3*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Total	84,046,905.90	49.00	1,715,274.12	39.45	67,669,230.09

Composite Average Remaining Life ... 39.4 Years

Sharyland
Electric Division
369.00 Services

Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *50* ***Survivor Curve:*** *R0.5*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1963	179,749.76	50.00	3,594.91	20.41	73,354.91
1964	193,642.78	50.00	3,872.76	20.88	80,846.36
1965	208,444.79	50.00	4,168.79	21.35	89,006.27
1966	224,207.38	50.00	4,484.04	21.83	97,887.23
1967	240,984.63	50.00	4,819.58	22.31	107,545.49
1968	258,833.59	50.00	5,176.55	22.80	118,041.32
1969	277,814.32	50.00	5,556.15	23.30	129,439.15
1970	297,989.92	50.00	5,959.65	23.79	141,807.92
1971	319,427.34	50.00	6,388.39	24.30	155,221.32
1972	342,196.64	50.00	6,843.77	24.80	169,758.18
1973	366,371.89	50.00	7,327.26	25.32	185,502.70
1974	392,031.28	50.00	7,840.44	25.83	202,544.86
1975	419,257.06	50.00	8,384.94	26.35	220,980.80
1976	448,136.21	50.00	8,962.51	26.88	240,913.19
1977	478,760.47	50.00	9,574.98	27.41	262,451.65
1978	511,226.58	50.00	10,224.28	27.94	285,713.24
1979	545,636.89	50.00	10,912.47	28.48	310,822.88
1980	658,838.34	50.00	13,176.45	29.03	382,461.59
1981	543,788.67	50.00	10,875.51	29.57	321,623.04
1982	568,591.83	50.00	11,371.56	30.12	342,558.39
1983	594,288.16	50.00	11,885.48	30.68	364,634.24
1984	541,022.26	50.00	10,820.18	31.24	337,996.35
1985	565,047.08	50.00	11,300.67	31.80	359,358.97
1986	589,930.90	50.00	11,798.33	32.37	381,858.75
1987	615,703.01	50.00	12,313.76	32.93	405,547.54
1988	642,394.07	50.00	12,847.57	33.51	430,479.33
1989	1,204,618.53	50.00	24,091.79	34.08	821,092.76

Sharyland
Electric Division
369.00 Services

Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *50* ***Survivor Curve:*** *R0.5*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
1990	1,104,880.81	50.00	22,097.08	34.66	765,882.16
1991	1,350,220.03	50.00	27,003.75	35.24	951,627.25
1992	419,447.70	50.00	8,388.75	35.82	300,516.52
1993	448,304.34	50.00	8,965.87	36.41	326,440.64
1994	1,065,504.77	50.00	21,309.58	37.00	788,388.67
1995	950,972.27	50.00	19,018.98	37.59	714,858.24
1996	861,995.68	50.00	17,239.50	38.18	658,169.92
1997	1,022,437.74	50.00	20,448.26	38.77	792,803.05
1998	838,327.98	50.00	16,766.15	39.37	660,013.96
1999	892,590.18	50.00	17,851.37	39.96	713,375.66
2000	342,554.50	50.00	6,850.92	40.56	277,869.19
2001	317,732.66	50.00	6,354.50	41.16	261,538.83
2002	377,766.86	50.00	7,555.15	41.76	315,487.92
2003	266,374.55	50.00	5,327.36	42.36	225,662.60
2004	501,003.80	50.00	10,019.83	42.96	430,468.88
2005	269,790.11	50.00	5,395.67	43.57	235,065.58
2006	791,534.33	50.00	15,830.30	44.17	699,239.08
2007	333,706.56	50.00	6,673.97	44.78	298,845.21
2008	785,604.98	50.00	15,711.72	45.39	713,093.41
2009	611,683.84	50.00	12,233.38	46.00	562,686.63
2010	695,322.62	50.00	13,906.12	46.61	648,129.79
2011	1,046,133.70	50.00	20,922.17	47.22	987,959.60
2012	1,557,666.00	50.00	31,152.57	47.84	1,490,200.61
2013	1,810,051.78	50.00	36,200.16	48.45	1,753,974.77
2014	2,981,325.71	50.00	59,625.07	49.07	2,925,828.51
2015	2,374,193.72	50.00	47,482.72	49.69	2,359,440.81

Sharyland
Electric Division
369.00 Services

Original Cost Of Utility Plant In Service
And Development Of Composite Remaining Life as of December 31, 2015
Based Upon Broad Group/Remaining Life Procedure and Technique

Average Service Life: *50* ***Survivor Curve:*** *R0.5*

Year	*Original Cost*	*Avg. Service Life*	*Avg. Annual Accrual*	*Avg. Remaining Life*	*Future Annual Accruals*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Total	36,246,061.60	50.00	724,903.66	38.46	27,877,015.91

Composite Average Remaining Life ... 38.4 Years

2014 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2014

Prepared by:

Gannett Fleming

Excellence Delivered ***As Promised***

EL PASO ELECTRIC COMPANY

TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2014

	DEPRECIABLE GROUP	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AT DECEMBER 31, 2014	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
345.00	ACCESSORY ELECTRIC EQUIPMENT								
	COPPER POWER STATION	45-S1.5 *	0	987,809.00	451,417	536,392	35,596	3.60	15.1
	RIO GRANDE UNIT 9	45-S1.5 *	0	4,765,573.00	331,751	4,433,822	118,883	2.49	37.3
	SOLAR FACILITIES	40-R2.5 *	0	167,360.00	16,736	150,624	7,856	4.69	19.2
	TOTAL ACCOUNT 345			5,920,742.00	799,904	5,120,838	162,335	2.74	31.5
346.00	MISCELLANEOUS POWER PLANT EQUIPMENT								
	COPPER POWER STATION	45-S3 *	0	4,033,083.38	4,033,082	1	0	-	-
	RIO GRANDE UNIT 9	45-S3 *	0	347,016.00	18,060	328,956	8,370	2.41	39.3
	TOTAL ACCOUNT 346			4,380,099.38	4,051,142	328,957	8,370	0.19	39.3
TOTAL GAS TURBINE PLANT				**111,624,197.31**	**14,408,297**	**97,215,900**	**2,884,737**	**2.58**	**33.7**
TRANSMISSION PLANT									
350.10	LAND RIGHTS	75-R3	0	12,194,085.41	5,294,165	6,899,920	120,741	0.99	57.1
352.00	STRUCTURES AND IMPROVEMENTS	65-R4	(5)	8,542,216.53	3,399,933	5,569,394	113,756	1.33	49.0
353.00	STATION EQUIPMENT	48-R4	(2)	140,109,294.83	78,932,091	63,979,390	1,714,655	1.22	37.3
354.00	STEEL TOWERS AND FIXTURES	70-R4	(10)	25,606,948.66	12,899,841	15,267,803	330,965	1.29	46.1
355.00	WOOD AND STEEL POLES	50-S3	(25)	111,507,247.39	52,598,405	86,785,654	2,459,095	2.21	35.3
356.00	OVERHEAD CONDUCTORS AND DEVICES	60-R5	(10)	83,521,066.81	48,519,972	43,353,201	1,132,598	1.36	38.3
359.00	ROADS AND TRAILS	65-R3	0	1,095,500.33	534,335	561,165	11,466	1.05	48.9
TOTAL TRANSMISSION PLANT				**382,576,359.96**	**202,178,742**	**222,416,527**	**5,883,276**	**1.54**	**37.8**
DISTRIBUTION PLANT									
360.10	LAND RIGHTS	70-R4	0	2,262,348.63	485,688	1,776,661	29,143	1.29	61.0
361.00	STRUCTURES AND IMPROVEMENTS	65-R3	(5)	8,179,960.81	1,831,952	6,757,007	126,903	1.55	53.2
362.00	STATION EQUIPMENT	60-R2	(2)	185,030,141.79	58,836,385	129,894,360	2,533,853	1.37	51.3
364.00	POLES, TOWERS AND FIXTURES	45-R3	(20)	145,055,947.57	53,149,009	120,918,128	3,667,600	2.53	33.0
365.00	OVERHEAD CONDUCTORS AND DEVICES	48-R2.5	(15)	83,721,622.23	30,638,965	65,640,901	1,788,645	2.14	36.7
366.00	UNDERGROUND CONDUIT	57-R4	(10)	113,500,223.70	30,446,447	94,403,799	2,131,441	1.88	44.3
367.00	UNDERGROUND CONDUCTORS AND DEVICES	40-R3	(15)	128,058,660.56	36,856,203	110,411,257	3,638,498	2.84	30.3
368.00	LINE TRANSFORMERS	55-R3	(5)	218,096,569.80	54,046,615	174,954,783	3,992,358	1.83	43.8
369.00	SERVICES	60-S3	(15)	41,731,507.16	22,776,683	25,214,550	596,764	1.43	42.3
370.00	METERS	31-R2	(10)	46,278,741.81	20,768,378	30,138,238	1,274,036	2.75	23.7
371.00	INSTALLATIONS ON CUSTOMERS' PREMISES	36-R2	(15)	12,369,883.38	4,672,569	9,552,797	368,800	2.98	25.9
373.00	STREET LIGHTING AND SIGNAL SYSTEMS	50-R3	(15)	10,244,760.35	4,973,372	6,808,102	240,038	2.34	28.4
TOTAL DISTRIBUTION PLANT				**994,530,367.79**	**319,482,266**	**776,470,583**	**20,388,079**	**2.05**	**38.1**
GENERAL PLANT									
390.00	STRUCTURES AND IMPROVEMENTS								
	SYSTEMS OPERATIONS BUILDING	80-R2.5 *	0	7,434,501.03	2,270,300	5,164,201	200,123	2.69	25.8
	STANTON TOWER	80-R2.5 *	0	27,742,668.25	2,845,519	24,897,149	598,018	2.16	41.6
	OTHER STRUCTURES	40-S0.5	0	15,695,846.77	7,699,732	7,996,115	246,508	1.57	32.4
	TOTAL ACCOUNT 390			50,873,016.05	12,815,551	38,057,465	1,044,649	2.05	36.4

EL PASO ELECTRIC COMPANY

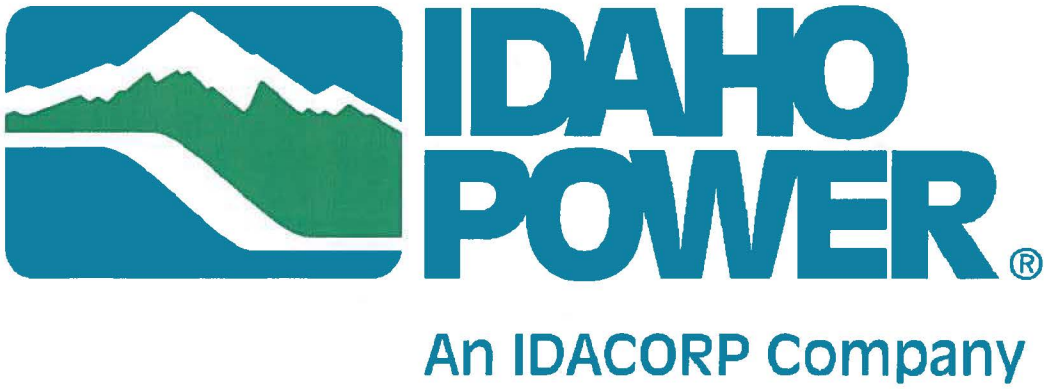
TABLE 1. ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2014

	DEPRECIABLE GROUP	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AT DECEMBER 31, 2014	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
391.00	OFFICE FURNITURE AND EQUIPMENT	20-SQ	0	8,676,307.71	6,889,299	1,787,009	148,652	1.71	12.0
393.00	STORES EQUIPMENT	25-SQ	0	53,347.62	36,375	16,973	2,113	3.96	8.0
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	25-SQ	0	3,245,058.32	1,333,849	1,911,209	124,216	3.83	15.4
395.00	LABORATORY EQUIPMENT	15-SQ	0	2,645,425.48	932,019	1,713,406	171,087	6.47	10.0
396.00	POWER OPERATED EQUIPMENT	22-R2.5	5	1,584,718.33	442,897	1,062,585	72,614	4.58	14.6
397.00	COMMUNICATION EQUIPMENT	15-SQ	0	21,778,493.31	8,795,932	12,982,561	1,411,769	6.48	9.2
398.00	MISCELLANEOUS EQUIPMENT	15-SQ	0	3,100,153.51	811,670	2,288,484	206,131	6.65	11.1
	TOTAL GENERAL PLANT			**91,956,520.33**	**32,057,592**	**59,819,692**	**3,181,231**	**3.46**	**18.8**
	TOTAL DEPRECIABLE PLANT			**2,057,353,781.67**	**771,029,251**	**1,459,794,742**	**43,054,788**		
	NONDEPRECIABLE PLANT								
310.00	ORGANIZATION			282,846.00					
340.00	LAND			10,000.00					
350.00	LAND			1,788,962.00					
360.00	LAND			4,432,099.00					
389.00	LAND			899,211.00					
	TOTAL NONDEPRECIABLE PLANT			**7,413,118.00**					
	NOT STUDIED								
344.00	GENERATORS								
	HUECO WIND TURBINES			1,974,387.63	1,307,731	666,656	83,332	4.22	8.0
	TOTAL ELECTRIC PLANT			**2,066,741,287.30**	**772,336,982**	**1,460,461,398**	**43,138,120**		

* INTERIM SURVIVOR CURVES USED. EACH LOCATION HAS A UNIQUE PROBABLE RETIREMENT DATE.

NOTE: THE FOLLOWING ANNUAL ACCRUAL RATES WILL BE USED FOR NEW FACILITIES TO BE ADDED AFTER JANUARY 1, 2015. THESE ASSETS WERE PLACED IN SERVICE AFTER THE STUDY DATE. THE RATES FOR MONTANA POWER STATION ARE BASED ON A 45 YEAR LIFE SPAN AND INTERIM SURVIVOR CURVE. THE RATES FOR EASTSIDE OPERATIONS CENTER ARE BASED ON A 50 YEAR LIFE SPAN AND INTERIM SURVIVOR CURVE.

		RATE
	MONTANA POWER STATION	
341.00	STRUCTURES AND IMPROVEMENTS	2.28
342.00	FUEL HOLDERS	2.40
343.00	PRIME MOVERS	2.78
344.00	GENERATORS	2.63
345.00	ACCESSORY ELECTRIC EQUIPMENT	2.57
346.00	MISCELLANEOUS POWER PLANT EQUIPMENT	2.45
	COMPOSITE MONTANA POWER STATION RATE	**2.39**
	EASTSIDE OPERATIONS CENTER	
390.00	STRUCTURES AND IMPROVEMENTS	2.07



2015 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2015

Prepared by:

Gannett Fleming

Excellence Delivered ***As Promised***

IDAHO POWER COMPANY

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2015

	ACCOUNT	SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)
	ELECTRIC PLANT									
	STEAM PRODUCTION PLANT									
	JIM BRIDGER									
310.20	LAND AND WATER RIGHTS	75-R4	*	0	226,377.42	161,621	64,756	3,624	1.60	17.9
311.00	STRUCTURES AND IMPROVEMENTS	100-S0.5	*	(10)	70,396,751.49	55,512,712	21,923,715	1,227,470	1.74	17.9
312.10	BOILER PLANT EQUIPMENT - SCRUBBERS	60-S1	*	(10)	111,739,501.89	48,862,705	74,050,747	4,134,761	3.70	17.9
312.20	BOILER PLANT EQUIPMENT - OTHER	53-R1.5	*	(10)	295,175,654.09	128,837,700	195,855,519	11,537,349	3.91	17.0
312.30	BOILER PLANT EQUIPMENT - RAILCARS	30-R3		0	2,484,314.64	1,839,895	644,420	70,278	2.83	9.2
314.00	TURBOGENERATOR UNITS	45-S0.5	*	(7)	98,081,079.63	33,187,247	71,759,508	4,340,843	4.43	16.5
315.00	ACCESSORY ELECTRIC EQUIPMENT	60-S1.5	*	(5)	29,674,461.30	22,715,343	8,442,841	505,358	1.70	16.7
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	35-S0	*	(2)	4,770,781.58	1,987,046	2,879,151	197,859	4.15	14.6
316.10	MISCELLANEOUS POWER PLANT EQUIPMENT - AUTOMOBILES	13-L2		15	50,741.14	31,412	11,718	2,158	4.25	5.4
316.40	MISCELLANEOUS POWER PLANT EQUIPMENT - SMALL TRUCKS	13-L2		15	200,237.63	170,202	0	0	-	-
316.50	MISCELLANEOUS POWER PLANT EQUIPMENT - MISCELLANEOUS	13-L2		15	125,728.59	20,470	86,399	7,315	5.82	11.8
316.70	MISCELLANEOUS POWER PLANT EQUIP - LARGE TRUCKS	21-S1		15	80,464.12	65,007	3,388	278	0.35	12.2
316.80	MISCELLANEOUS POWER PLANT EQUIP - POWER OPERATED EQUIPMENT	20-O1		25	3,784,706.18	52,961	2,785,569	156,807	4.14	17.8
316.90	MISCELLANEOUS POWER PLANT EQUIP - TRAILERS	35-S1		15	13,977.04	1,482	10,398	340	2.43	30.6
	TOTAL JIM BRIDGER PLANT				**616,804,776.74**	**293,445,803**	**378,518,129**	**22,184,440**	**3.60**	
	HYDRAULIC PRODUCTION PLANT									
331.00	STRUCTURES AND IMPROVEMENTS									
	HAGERMAN MAINTENANCE SHOP	115-R2.5	*	(25)	1,661,380.96	1,157,383	919,343	37,379	2.25	24.6
	MILNER DAM	115-R2.5	*	(25)	814,224.25	356,057	661,723	13,542	1.66	48.9
	NIAGARA SPRINGS HATCHERY	115-R2.5	*	(25)	18,927,457.39	3,167,029	20,492,293	385,558	2.04	53.1
	HELLS CANYON MAINTENANCE SHOP	115-R2.5	*	(25)	2,409,584.37	1,172,594	1,839,386	35,112	1.46	52.4
	RAPID RIVER HATCHERY	115-R2.5	*	(25)	2,608,829.77	1,512,555	1,748,482	33,404	1.28	52.3
	AMERICAN FALLS	115-R2.5	*	(25)	11,986,636.45	7,690,938	7,292,358	195,949	1.63	37.2
	BROWNLEE	115-R2.5	*	(25)	32,471,129.08	22,800,206	17,788,705	347,433	1.07	51.2
	BLISS	115-R2.5	*	(25)	1,098,134.70	616,898	755,770	41,278	3.76	18.3
	CASCADE	115-R2.5	*	(25)	7,380,842.41	4,141,393	5,084,660	119,252	1.62	42.6
	CLEAR LAKE	115-R2.5	*	(25)	193,278.70	210,529	31,069	2,725	1.41	11.4
	HELLS CANYON	115-R2.5	*	(25)	2,931,900.29	1,400,177	2,264,698	43,780	1.49	51.7
	LOWER MALAD	115-R2.5	*	(25)	799,097.82	479,503	519,369	27,700	3.47	18.7
	LOWER SALMON	115-R2.5	*	(25)	2,869,695.46	1,198,295	2,388,824	129,863	4.53	18.4
	MILNER	115-R2.5	*	(25)	9,617,360.14	4,099,283	7,922,417	158,084	1.64	50.1
	OXBOW HATCHERY	115-R2.5	*	(25)	2,390,848.81	977,972	2,010,589	38,164	1.60	52.7
	OXBOW	115-R2.5	*	(25)	10,878,166.95	6,672,441	6,925,268	138,204	1.27	50.1
	OXBOW COMMON	115-R2.5	*	(25)	111,952.27	114,279	25,661	533	0.48	48.1
	PAHSIMEROI ACCUMULATING PONDS	115-R2.5	*	(25)	13,382,523.15	3,349,325	13,378,829	252,035	1.88	53.1
	PAHSIMEROI TRAPPING	115-R2.5	*	(25)	1,267,081.16	1,446,556	137,295	2,585	0.20	53.1
	SHOSHONE FALLS	115-R2.5	*	(25)	1,253,635.42	935,134	631,910	34,735	2.77	18.2
	STRIKE	115-R2.5	*	(25)	9,780,012.86	4,146,390	8,078,626	439,321	4.49	18.4
	SWAN FALLS	115-R2.5	*	(25)	27,334,903.99	13,419,604	20,749,026	791,819	2.90	26.2
	TWIN FALLS	115-R2.5	*	(25)	759,842.69	449,262	500,541	20,575	2.71	24.3
	TWIN FALLS (NEW)	115-R2.5	*	(25)	10,261,704.36	5,335,698	7,491,432	304,609	2.97	24.6
	THOUSAND SPRINGS	115-R2.5	*	(25)	360,487.88	403,761	46,849	3,045	0.84	15.4
	UPPER MALAD	115-R2.5	*	(25)	363,647.08	320,477	134,082	7,270	2.00	18.4
	UPPER SALMON A	115-R2.5	*	(25)	917,541.40	742,370	404,557	22,450	2.45	18.0
	UPPER SALMON B	115-R2.5	*	(25)	773,060.93	371,100	595,226	32,360	4.19	18.4
	UPPER SALMON COMMON	115-R2.5	*	(25)	389,664.01	261,898	225,182	12,282	3.15	18.3
	TOTAL ACCOUNT 331				175,994,624.75	88,949,107	131,044,170	3,671,046	2.09	35.7

IDAHO POWER COMPANY

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2015

	ACCOUNT	SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)
332.10	RESERVOIRS, DAMS AND WATERWAYS - RELOCATION									
	BROWNLEE	100-S4	*	(20)	8,639,663.66	6,137,138	4,230,458	101,304	1.17	41.8
	HELLS CANYON	100-S4	*	(20)	940,788.93	640,803	488,144	11,689	1.24	41.8
	OXBOW	100-S4	*	(20)	56,309.00	39,328	28,243	676	1.20	41.8
	OXBOW COMMON	100-S4	*	(20)	1,927,919.83	1,509,918	803,586	18,685	0.97	43.0
	BROWNLEE COMMON	100-S4	*	(20)	7,695,824.78	6,203,405	3,271,585	78,343	0.99	41.8
	TOTAL ACCOUNT 332.1				19,460,506.20	14,530,592	8,822,016	210,697	1.08	41.9
332.20	RESERVOIRS, DAMS AND WATERWAYS									
	MILNER DAM	100-S4	*	(20)	809,584.42	259,119	712,382	13,938	1.72	51.1
	AMERICAN FALLS	100-S4	*	(20)	4,293,075.10	2,925,319	2,226,371	57,841	1.35	38.5
	BROWNLEE	100-S4	*	(20)	53,506,997.92	39,815,109	24,393,289	539,008	1.01	45.3
	BLISS	100-S4	*	(20)	8,963,581.90	7,220,255	3,536,043	197,241	2.20	17.9
	CASCADE	100-S4	*	(20)	3,145,630.46	1,747,653	2,027,104	45,758	1.45	44.3
	CLEAR LAKE	100-S4	*	(20)	2,344,260.16	805,741	2,007,371	174,933	7.46	11.5
	HELLS CANYON	100-S4	*	(20)	51,932,133.73	34,516,737	27,801,823	599,977	1.16	46.3
	LOWER MALAD	100-S4	*	(20)	4,920,879.40	2,600,146	3,304,909	173,654	3.53	19.0
	LOWER SALMON	100-S4	*	(20)	6,920,148.41	5,913,124	2,391,054	134,707	1.95	17.8
	MILNER	100-S4	*	(20)	16,621,594.69	6,809,520	13,136,394	251,416	1.51	52.2
	OXBOW	100-S4	*	(20)	30,376,665.85	21,574,227	14,877,772	343,287	1.13	43.3
	OXBOW COMMON	100-S4	*	(20)	9,871.65	6,041	5,805	108	1.09	53.8
	SHOSHONE FALLS	100-S4	*	(20)	10,108,900.81	616,823	11,513,658	626,763	6.20	18.4
	STRIKE	100-S4	*	(20)	10,807,310.35	9,164,247	3,804,525	213,027	1.97	17.9
	SWAN FALLS	100-S4	*	(20)	15,989,465.08	8,369,326	10,818,032	407,135	2.55	26.6
	TWIN FALLS	100-S4	*	(20)	1,354,482.35	244,306	1,381,073	56,336	4.16	24.5
	TWIN FALLS (NEW)	100-S4	*	(20)	7,645,780.81	3,558,327	5,616,610	224,664	2.94	25.0
	THOUSAND SPRINGS	100-S4	*	(20)	4,060,448.55	2,554,243	2,318,295	149,569	3.68	15.5
	UPPER MALAD	100-S4	*	(20)	1,362,526.74	1,221,544	413,488	22,863	1.68	18.1
	UPPER SALMON A	100-S4	*	(20)	1,343,320.64	691,336	920,649	51,015	3.80	18.0
	UPPER SALMON B	100-S4	*	(20)	3,611,192.40	2,575,092	1,758,339	97,196	2.69	18.1
	UPPER SALMON COMMON	100-S4	*	(20)	1,175,917.13	624,626	786,475	43,518	3.70	18.1
	HELLS CANYON COMMON	100-S4	*	(20)	3,723,168.70	3,060,813	1,406,989	27,438	0.74	51.3
	TOTAL ACCOUNT 332.2				245,026,937.25	156,873,674	137,158,650	4,451,392	1.82	30.8
332.30	RESERVOIRS, DAMS AND WATERWAYS - NEZ PERCE	SQUARE	*	0	5,472,398.44	2,018,617	3,453,781	62,705	1.15	55.1
333.00	WATER WHEELS, TURBINES AND GENERATORS									
	MILNER DAM	90-S2	*	(10)	1,274,307.36	350,540	1,051,198	21,982	1.73	47.8
	AMERICAN FALLS	90-S2	*	(10)	26,350,936.61	15,574,505	13,411,525	387,827	1.47	34.6
	BROWNLEE	90-S2	*	(10)	44,771,999.78	30,017,687	19,231,513	420,082	0.94	45.8
	BLISS	90-S2	*	(10)	4,708,361.07	3,427,511	1,751,686	100,560	2.14	17.4
	CASCADE	90-S2	*	(10)	10,099,741.28	4,511,489	6,598,226	163,395	1.62	40.4
	CLEAR LAKE	90-S2	*	(10)	742,451.41	609,478	207,219	18,052	2.43	11.5
	HELLS CANYON	90-S2	*	(10)	12,182,846.73	6,150,322	7,250,809	166,459	1.37	43.6
	LOWER MALAD	90-S2	*	(10)	4,745,707.96	400,118	4,820,161	252,483	5.32	19.1
	LOWER SALMON	90-S2	*	(10)	4,879,605.36	3,797,399	1,570,167	90,955	1.86	17.3
	MILNER	90-S2	*	(10)	24,279,625.56	8,473,925	18,233,663	383,468	1.58	47.5
	OXBOW	90-S2	*	(10)	11,546,959.20	7,255,041	5,446,614	131,576	1.14	41.4
	SHOSHONE FALLS	90-S2	*	(10)	2,667,635.23	1,266,625	1,667,774	91,207	3.42	18.3
	STRIKE	90-S2	*	(10)	9,114,673.65	4,202,657	5,823,484	321,060	3.52	18.1
	SWAN FALLS	90-S2	*	(10)	26,099,474.53	11,774,575	16,934,847	649,625	2.49	26.1
	TWIN FALLS	90-S2	*	(10)	1,430,443.99	594,845	978,643	40,459	2.83	24.2
	TWIN FALLS (NEW)	90-S2	*	(10)	15,978,442.99	7,010,702	10,565,585	430,326	2.69	24.6
	THOUSAND SPRINGS	90-S2	*	(10)	2,480,242.34	755,295	1,972,972	127,997	5.16	15.4
	UPPER MALAD	90-S2	*	(10)	2,199,747.28	402,306	2,017,416	106,246	4.83	19.0
	UPPER SALMON A	90-S2	*	(10)	2,421,216.32	876,313	1,787,025	98,374	4.06	18.2
	UPPER SALMON B	90-S2	*	(10)	3,704,936.46	1,197,208	2,878,222	157,352	4.25	18.3
	TOTAL ACCOUNT 333				211,679,355.31	108,648,541	124,198,749	4,159,485	1.96	29.9

IDAHO POWER COMPANY

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	ACCOUNT	SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)
334.00	ACCESSORY ELECTRIC EQUIPMENT									
	HAGERMAN MAINTENANCE SHOP	54-R1.5	*	(15)	57,474.41	26,201	39,895	1,750	3.04	22.8
	MILNER DAM	54-R1.5	*	(15)	581,471.90	148,592	520,101	13,428	2.31	38.7
	HELLS CANYON MAINTENANCE SHOP	54-R1.5	*	(15)	55,797.91	2,544	61,624	1,428	2.56	43.2
	AMERICAN FALLS	54-R1.5	*	(15)	3,810,069.14	1,779,303	2,602,277	89,069	2.34	29.2
	BROWNLEE	54-R1.5	*	(15)	11,387,436.15	3,911,488	9,184,064	240,766	2.11	38.1
	BLISS	54-R1.5	*	(15)	3,939,988.72	849,288	3,681,699	209,189	5.31	17.6
	CASCADE	54-R1.5	*	(15)	2,608,877.41	504,488	2,495,721	78,360	3.00	31.8
	CLEAR LAKE	54-R1.5	*	(15)	159,065.24	68,841	114,084	10,438	6.56	10.9
	HELLS CANYON	54-R1.5	*	(15)	6,407,040.59	1,485,180	5,882,917	149,340	2.33	39.4
	LOWER MALAD	54-R1.5	*	(15)	1,791,677.47	(42,050)	2,102,479	116,392	6.50	18.1
	LOWER SALMON	54-R1.5	*	(15)	2,765,626.33	772,635	2,407,835	139,833	5.06	17.2
	MILNER	54-R1.5	*	(15)	2,351,780.42	949,892	1,754,655	49,729	2.11	35.3
	OXBOW	54-R1.5	*	(15)	6,910,717.86	1,671,818	6,275,508	157,018	2.27	40.0
	SHOSHONE FALLS	54-R1.5	*	(15)	1,651,826.01	529,837	1,369,763	79,930	4.84	17.1
	STRIKE	54-R1.5	*	(15)	3,960,072.29	1,269,823	3,284,250	188,742	4.77	17.4
	SWAN FALLS	54-R1.5	*	(15)	3,179,688.98	1,440,168	2,216,474	95,040	2.99	23.3
	TWIN FALLS	54-R1.5	*	(15)	663,558.29	177,617	585,475	26,344	3.97	22.2
	TWIN FALLS (NEW)	54-R1.5	*	(15)	2,421,707.15	1,022,363	1,762,600	79,068	3.26	22.3
	THOUSAND SPRINGS	54-R1.5	*	(15)	876,825.63	795,387	212,962	14,323	1.63	14.9
	UPPER MALAD	54-R1.5	*	(15)	627,447.28	216,925	504,639	28,427	4.53	17.8
	UPPER SALMON A	54-R1.5	*	(15)	1,208,094.46	537,022	852,287	50,819	4.21	16.8
	UPPER SALMON B	54-R1.5	*	(15)	1,063,846.38	324,101	899,322	52,780	4.96	17.0
	TOTAL ACCOUNT 334				58,480,090.02	18,441,463	48,810,641	1,872,213	3.20	26.1
335.00	MISCELLANEOUS POWER PLANT EQUIPMENT									
	HAGERMAN MAINTENANCE SHOP	90-R2	*	(5)	1,875,509.37	655,906	1,313,379	53,990	2.88	24.3
	MILNER DAM	90-R2	*	(5)	48,226.36	15,518	35,120	758	1.57	46.3
	NIAGARA SPRINGS HATCHERY	90-R2	*	(5)	74,548.65	30,261	48,015	967	1.30	49.7
	HELLS CANYON MAINTENANCE SHOP	90-R2	*	(5)	1,874,693.00	340,018	1,628,410	32,179	1.72	50.6
	RAPID RIVER HATCHERY	90-R2	*	(5)	49,608.49	11,258	40,831	828	1.67	49.3
	AMERICAN FALLS	90-R2	*	(5)	2,134,733.50	867,192	1,374,278	38,284	1.79	35.9
	BROWNLEE	90-R2	*	(5)	5,041,457.14	2,477,639	2,815,891	57,165	1.13	49.3
	BLISS	90-R2	*	(5)	802,580.06	339,498	503,211	27,892	3.48	18.0
	CASCADE	90-R2	*	(5)	1,155,545.04	503,663	709,659	17,631	1.53	40.3
	CLEAR LAKE	90-R2	*	(5)	47,241.09	21,471	28,132	2,464	5.22	11.4
	HELLS CANYON	90-R2	*	(5)	1,324,683.39	248,210	1,142,708	23,651	1.79	48.3
	LOWER MALAD	90-R2	*	(5)	349,152.66	113,964	252,646	13,484	3.86	18.7
	LOWER SALMON	90-R2	*	(5)	517,026.38	206,677	336,201	18,714	3.62	18.0
	MILNER	90-R2	*	(5)	696,451.60	195,938	535,336	11,301	1.62	47.4
	OXBOW HATCHERY	90-R2	*	(5)	22,871.58	4,154	19,861	398	1.74	49.9
	OXBOW	90-R2	*	(5)	984,605.66	336,200	697,636	14,807	1.50	47.1
	PAHSIMEROI ACCUMULATING PONDS	90-R2	*	(5)	54,702.79	1,928	55,510	1,078	1.97	51.5
	PAHSIMEROI TRAPPING	90-R2	*	(5)	15,368.52	7,365	8,772	178	1.16	49.3
	SHOSHONE FALLS	90-R2	*	(5)	376,849.14	127,866	267,826	14,738	3.91	18.2
	STRIKE	90-R2	*	(5)	956,851.39	379,020	625,674	34,541	3.61	18.1
	SWAN FALLS	90-R2	*	(5)	1,734,720.66	552,630	1,268,827	49,276	2.84	25.7
	TWIN FALLS	90-R2	*	(5)	341,854.79	55,777	303,171	12,536	3.67	24.2
	TWIN FALLS (NEW)	90-R2	*	(5)	472,529.12	190,055	306,101	12,665	2.68	24.2
	THOUSAND SPRINGS	90-R2	*	(5)	365,400.24	179,086	204,584	13,357	3.66	15.3
	UPPER MALAD	90-R2	*	(5)	219,159.81	41,468	188,650	10,119	4.62	18.6
	UPPER SALMON A	90-R2	*	(5)	269,272.25	84,401	198,335	10,947	4.07	18.1
	UPPER SALMON B	90-R2	*	(5)	242,429.35	120,668	133,883	7,473	3.08	17.9
	UPPER SALMON COMMON	90-R2	*	(5)	1,930.37	310	1,717	95	4.92	18.1
	TOTAL ACCOUNT 335				22,050,002.40	8,108,141	15,044,364	481,516	2.18	31.2
335.10	MISCELLANEOUS POWER PLANT EQUIPMENT - EQUIPMENT	15-SQ		0	87,737.57	33,094	54,644	6,948	7.92	7.9
335.20	MISCELLANEOUS POWER PLANT EQUIPMENT - FURNITURE	20-SQ		0	366,344.20	339,577	26,767	2,915	0.80	9.2
335.30	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTER	5-SQ		0	288,155.41	184,608	103,547	41,550	14.42	2.5

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	ACCOUNT	SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)
336.00	ROADS, RAILROADS AND BRIDGES									
	MILNER DAM	85-R4	*	0	12,737.21	4,274	8,463	176	1.38	48.1
	NIAGARA SPRINGS HATCHERY	85-R4	*	0	46,667.72	46,668	0	0	-	-
	RAPID RIVER HATCHERY	85-R4	*	0	7,197.39	7,197	0	0	-	-
	AMERICAN FALLS	85-R4	*	0	839,275.87	533,241	306,035	8,462	1.01	36.2
	BROWNLEE	85-R4	*	0	529,364.27	332,756	196,608	4,948	0.93	39.7
	BLISS	85-R4	*	0	486,476.64	293,586	192,891	10,481	2.15	18.4
	CASCADE	85-R4	*	0	122,668.04	57,663	65,005	1,577	1.29	41.2
	CLEAR LAKE	85-R4	*	0	11,097.30	11,033	64	6	0.05	10.7
	HELLS CANYON	85-R4	*	0	922,781.27	595,036	327,745	8,020	0.87	40.9
	LOWER MALAD	85-R4	*	0	244,565.45	163,638	80,927	4,293	1.76	18.9
	LOWER SALMON	85-R4	*	0	88,693.04	62,378	26,315	1,441	1.62	18.3
	MILNER	85-R4	*	0	489,139.50	163,136	326,004	6,627	1.35	49.2
	OXBOW HATCHERY	85-R4	*	0	3,070.44	3,070	0	0	-	-
	OXBOW	85-R4	*	0	585,875.67	347,897	237,979	7,008	1.20	34.0
	PAHSIMEROI ACCUMULATING PONDS	85-R4	*	0	26,502.74	17,203	9,300	215	0.81	43.3
	PAHSIMEROI TRAPPING	85-R4	*	0	15,612.35	15,612	0	0	-	-
	SHOSHONE FALLS	85-R4	*	0	51,383.40	43,592	7,791	456	0.89	17.1
	STRIKE	85-R4	*	0	1,602,868.07	15,625	1,587,243	86,596	5.40	18.3
	SWAN FALLS	85-R4	*	0	835,946.15	457,737	378,209	14,559	1.74	26.0
	TWIN FALLS	85-R4	*	0	893,773.50	477,057	416,716	17,075	1.91	24.4
	TWIN FALLS (NEW)	85-R4	*	0	1,023,829.64	432,124	591,706	23,859	2.33	24.8
	THOUSAND SPRINGS	85-R4	*	0	713,311.18	349,352	363,959	23,495	3.29	15.5
	UPPER MALAD	85-R4	*	0	1,298,305.78	43,310	1,254,996	65,326	5.03	19.2
	UPPER SALMON A	85-R4	*	0	1,650.89	1,004	647	35	2.12	18.5
	UPPER SALMON COMMON	85-R4	*	0	27,708.47	27,708	0	0	-	-
	TOTAL ACCOUNT 336				10,880,501.98	4,501,897	6,378,603	284,655	2.62	22.4
	TOTAL HYDRAULIC PRODUCTION PLANT				**749,786,653.53**	**402,629,311**	**475,095,932**	**15,245,122**	**2.03**	
	OTHER PRODUCTION PLANT									
341.00	STRUCTURES AND IMPROVEMENTS									
	SALMON DIESEL	SQUARE	*	0	11,959.08	11,959	0	0	-	-
	EVANDER ANDREWS/DANSKIN #2	SQUARE	*	0	4,693,564.37	1,531,407	3,162,157	154,250	3.29	20.5
	BENNETT MOUNTAIN	SQUARE	*	0	1,688,441.68	435,017	1,253,425	49,154	2.91	25.5
	EVANDER ANDREWS/DANSKIN #1	SQUARE	*	0	1,394,160.15	401,289	992,871	36,104	2.59	27.5
	LANGLEY GULCH	SQUARE	*	0	134,922,939.78	13,013,705	121,909,235	3,639,082	2.70	33.5
	TOTAL ACCOUNT 341				142,711,065.06	15,393,377	127,317,688	3,878,590	2.72	32.8
342.00	FUEL HOLDERS									
	SALMON DIESEL	50-S2.5	*	0	61,306.39	61,306	0	0	-	-
	EVANDER ANDREWS/DANSKIN #2	50-S2.5	*	0	1,441,348.20	665,214	776,134	39,646	2.75	19.6
	BENNETT MOUNTAIN	50-S2.5	*	0	2,290,713.40	679,434	1,611,279	66,011	2.88	24.4
	EVANDER ANDREWS/DANSKIN #1	50-S2.5	*	0	680,176.64	170,873	509,304	19,212	2.82	26.5
	LANGLEY GULCH	55-S2.5	*	0	5,979,001.97	441,735	5,537,267	169,317	2.83	32.7
	TOTAL ACCOUNT 342				10,452,546.60	2,018,562	8,433,984	294,186	2.81	28.7
343.00	PRIME MOVERS									
	EVANDER ANDREWS/DANSKIN #2	40-R2	*	0	33,711,094.20	10,641,204	23,069,890	1,260,584	3.74	18.3
	BENNETT MOUNTAIN	40-R2	*	0	29,465,966.15	7,782,323	21,683,643	948,685	3.22	22.9
	EVANDER ANDREWS/DANSKIN #1	40-R2	*	0	25,207,239.22	5,323,273	19,883,966	820,829	3.26	24.2
	LANGLEY GULCH	40-R2	*	0	130,576,591.92	13,846,720	116,729,872	3,940,999	3.02	29.6
	TOTAL ACCOUNT 343				218,960,891.49	37,593,520	181,367,371	6,971,097	3.18	26.0

IDAHO POWER COMPANY

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	ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)
344.00	GENERATORS								
	SALMON DIESEL	45-S2 *	0	541,644.95	541,645	0	0	-	-
	EVANDER ANDREWS/DANSKIN #2	45-S2 *	0	13,166,034.86	8,364,617	4,801,418	256,486	1.95	18.7
	BENNETT MOUNTAIN	45-S2 *	0	8,139,999.35	4,740,270	3,399,729	144,362	1.77	23.6
	EVANDER ANDREWS/DANSKIN #1	45-S2 *	0	9,834,220.56	2,375,835	7,458,386	292,142	2.97	25.5
	LANGLEY GULCH	45-S2 *	0	34,849,976.83	4,280,213	30,569,764	970,120	2.78	31.5
	TOTAL ACCOUNT 344			66,531,876.55	20,302,580	46,229,297	1,663,110	2.50	27.8
345.00	ACCESSORY ELECTRIC EQUIPMENT								
	SALMON DIESEL	50-R2 *	0	293,344.56	293,345	0	0	-	-
	EVANDER ANDREWS/DANSKIN #2	50-R2 *	0	2,471,052.82	633,147	1,837,906	95,992	3.88	19.1
	BENNETT MOUNTAIN	50-R2 *	0	11,156,584.49	2,964,322	8,192,262	346,152	3.10	23.7
	EVANDER ANDREWS/DANSKIN #1	50-R2 *	0	11,234,250.81	2,297,640	8,936,611	350,445	3.12	25.5
	LANGLEY GULCH	50-R2 *	0	65,943,755.01	7,356,629	58,587,126	1,890,163	2.87	31.0
	TOTAL ACCOUNT 345			91,098,987.69	13,545,083	77,553,905	2,682,752	2.94	28.9
346.00	MISCELLANEOUS POWER PLANT EQUIPMENT								
	SALMON DIESEL	35-R2.5 *	0	1,004.50	1,004	0	0	-	-
	EVANDER ANDREWS/DANSKIN #2	35-R2.5 *	0	1,467,330.67	540,515	926,816	52,136	3.55	17.8
	BENNETT MOUNTAIN	35-R2.5 *	0	938,055.58	239,716	698,340	31,685	3.38	22.0
	EVANDER ANDREWS/DANSKIN #1	35-R2.5 *	0	940,462.99	240,854	699,609	29,841	3.17	23.4
	LANGLEY GULCH	35-R2.5 *	0	2,663,621.41	319,727	2,343,894	80,814	3.03	29.0
	TOTAL ACCOUNT 346			6,010,475.15	1,341,816	4,668,659	194,476	3.24	24.0
	TOTAL OTHER PRODUCTION PLANT			**535,765,842.54**	**90,194,938**	**445,570,904**	**15,684,211**	**2.93**	
	TRANSMISSION PLANT								
350.20	LAND RIGHTS AND EASEMENTS	80-R4	0	31,780,356.20	7,648,562	24,131,794	373,399	1.17	64.6
352.00	STRUCTURES AND IMPROVEMENTS	65-R3	(35)	77,780,245.72	25,617,486	79,385,846	1,496,605	1.92	53.0
353.00	STATION EQUIPMENT	50-S0.5	(10)	407,602,629.96	110,697,686	337,665,207	8,460,997	2.08	39.9
354.00	TOWERS AND FIXTURES	75-R4	(10)	184,628,054.44	62,693,181	140,397,679	2,127,183	1.15	66.0
355.00	POLES AND FIXTURES	65-R1.5	(80)	157,531,056.10	59,619,325	223,936,576	4,156,741	2.64	53.9
356.00	OVERHEAD CONDUCTORS AND DEVICES	65-R2	(50)	211,904,657.93	71,085,486	246,771,501	4,812,176	2.27	51.3
359.00	ROADS AND TRAILS	65-R2.5	0	390,266.18	272,716	117,550	3,534	0.91	33.3
	TOTAL TRANSMISSION PLANT			**1,071,617,266.53**	**337,634,442**	**1,052,406,153**	**21,430,635**	**2.00**	
	DISTRIBUTION PLANT								
361.00	STRUCTURES AND IMPROVEMENTS	70-R2.5	(50)	34,175,351.84	11,003,028	40,260,000	726,515	2.13	55.4
362.00	STATION EQUIPMENT	55-R1.5	(10)	216,853,728.15	57,414,677	181,124,424	4,239,837	1.96	42.7
364.00	POLES, TOWERS AND FIXTURES	55-R1.5	(50)	244,791,142.55	133,061,778	234,124,936	5,707,762	2.33	41.0
365.00	OVERHEAD CONDUCTORS AND DEVICES	49-R1	(30)	129,331,468.81	50,331,824	117,799,085	3,422,093	2.65	34.4
366.00	UNDERGROUND CONDUIT	60-R2.5	(25)	48,322,608.41	15,591,137	44,812,124	1,018,825	2.11	44.0
367.00	UNDERGROUND CONDUCTORS AND DEVICES	50-R1.5	(15)	230,143,166.97	83,994,552	180,670,090	4,604,826	2.00	39.2
368.00	LINE TRANSFORMERS	42-R0.5	(10)	515,652,279.89	162,696,157	404,521,351	11,683,753	2.27	34.6
369.00	SERVICES	50-R1.5	(40)	58,770,766.63	41,924,159	40,354,914	1,053,206	1.79	38.3
370.00	METERS	27-O1	(5)	16,978,858.07	8,859,773	8,968,028	395,340	2.33	22.7
370.10	METERS - AMI	16-S1.5	(10)	68,268,600.99	20,068,629	55,026,832	4,924,990	7.21	11.2
371.20	INSTALLATION ON CUSTOMER PREMISES	21-R1	(5)	2,954,459.08	1,853,745	1,248,437	84,987	2.88	14.7
373.20	STREET LIGHTING AND SIGNAL SYSTEMS	35-R1	(30)	4,543,249.72	3,623,106	2,283,119	95,785	2.11	23.8
	TOTAL DISTRIBUTION PLANT			**1,570,785,681.11**	**590,422,565**	**1,311,193,340**	**37,957,919**	**2.42**	

IDAHO POWER COMPANY

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2015

	ACCOUNT (1)	SURVIVOR CURVE (2)		NET SALVAGE PERCENT (3)	ORIGINAL COST (4)	BOOK DEPRECIATION RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL AMOUNT (7)	CALCULATED ANNUAL ACCRUAL RATE (8)=(7)/(4)	COMPOSITE REMAINING LIFE (9)=(6)/(7)
	GENERAL PLANT									
390.11	STRUCTURES AND IMPROVEMENTS - CHQ BUILDING	90-S1	*	(10)	29,421,031.19	9,982,240	22,380,894	674,767	2.29	33.2
390.12	STRUCTURES AND IMPROVEMENTS - EXCLUDING CHQ BUILDING									
	BOISE CENTER WEST	55-R2	*	(10)	14,333,320.59	909,201	14,857,452	364,080	2.54	40.8
	BOISE OPERATIONS CENTER	55-R2	*	(10)	8,967,111.22	2,175,771	7,688,051	256,083	2.86	30.0
	BOISE MECHANICAL AND ENVIRONMENTAL CENTER	55-R2	*	(10)	7,961,286.18	1,950,401	6,807,014	228,815	2.87	29.7
	OTHER STRUCTURES	55-R2		(10)	50,241,905.47	12,208,359	43,057,737	1,024,561	2.04	42.0
	TOTAL STRUCTURES AND IMPROVEMENTS - EXCLUDING CHQ BUILDING				81,503,623.46	17,243,732	72,410,254	1,873,539	2.30	
391.10	OFFICE FURNITURE AND EQUIPMENT - FURNITURE									
	FULLY ACCRUED				975,827.32	975,827	0	0	-	-
	AMORTIZED	20-SQ		0	13,178,862.18	6,720,977	6,457,885	526,880	4.00	12.3
	TOTAL OFFICE FURNITURE AND EQUIPMENT - FURNITURE				14,154,689.50	7,696,804	6,457,885	526,880	3.72	
391.20	OFFICE FURNITURE AND EQUIPMENT - EDP EQUIPMENT	5-SQ		0	24,593,646.25	11,496,999	13,096,647	4,918,771	20.00	2.7
391.21	OFFICE FURNITURE AND EQUIPMENT - SERVERS	8-SQ		0	7,943,745.34	4,507,863	3,435,882	992,705	12.50	3.5
392.10	TRANSPORTATION EQUIPMENT - AUTOMOBILES	13-L2		15	821,825.59	160,306	538,246	58,071	7.07	9.3
392.30	TRANSPORTATION EQUIPMENT - AIRCRAFT	15-S2.5		40	4,563,105.82	915,829	1,822,034	188,298	4.13	9.7
392.40	TRANSPORTATION EQUIPMENT - SMALL TRUCKS	13-L2		15	23,289,948.88	7,544,511	12,251,946	1,444,990	6.20	8.5
392.50	TRANSPORTATION EQUIPMENT - MISC.	13-L2		15	1,126,911.92	320,976	636,899	71,460	6.34	8.9
392.60	TRANSPORTATION EQUIPMENT - LARGE TRUCKS (HYD)	21-S1		15	34,102,925.23	10,170,540	18,816,946	1,345,554	3.95	14.0
392.70	TRANSPORTATION EQUIP. - LARGE TRUCKS (NON-HYD)	21-S1		15	6,943,612.35	2,346,463	3,555,607	288,508	4.16	12.3
392.90	TRANSPORTATION EQUIPMENT - TRAILERS	35-S1		15	5,030,534.81	1,530,136	2,745,819	112,811	2.24	24.3
393.00	STORES EQUIPMENT	25-SQ		0	2,255,402.62	680,821	1,574,582	90,266	4.00	17.4
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	20-SQ		0	8,021,555.24	3,056,225	4,965,330	401,051	5.00	12.4
395.00	LABORATORY EQUIPMENT	20-SQ		0	12,703,817.61	5,973,013	6,730,805	635,421	5.00	10.6
396.00	POWER OPERATED EQUIPMENT	20-O1		25	15,082,035.78	3,842,840	7,468,687	448,522	2.97	16.7
397.10	COMMUNICATION EQUIPMENT - TELEPHONES	15-SQ		0	4,672,412.11	3,193,934	1,478,478	311,607	6.67	4.7
397.20	COMMUNICATION EQUIPMENT - MICROWAVE	15-SQ		0	30,516,919.94	13,969,200	16,547,720	2,034,297	6.67	8.1
397.30	COMMUNICATION EQUIPMENT - RADIO	15-SQ		0	3,471,603.00	1,226,579	2,245,024	231,637	6.67	9.7
397.40	COMMUNICATION EQUIPMENT - FIBER OPTIC									
	FULLY ACCRUED				110,869.72	110,870	0	0	-	-
	AMORTIZED	10-SQ		0	16,643,395.08	3,539,011	13,104,384	1,664,310	10.00	7.9
	TOTAL COMMUNICATION EQUIPMENT - FIBER OPTIC				16,754,264.80	3,649,881	13,104,384	1,664,310	9.93	
398.00	MISCELLANEOUS EQUIPMENT	15-SQ		0	5,967,704.79	2,525,370	3,442,335	398,122	6.67	8.6
	TOTAL GENERAL PLANT				**332,941,316.23**	**112,034,262**	**215,706,404**	**18,711,587**	**5.62**	
	TOTAL DEPRECIABLE PLANT				**4,877,701,536.68**	**1,826,361,321**	**3,878,490,862**	**131,213,914**	**2.69**	

IDAHO POWER COMPANY

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2015

	ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)
	NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED								
301.00	ORGANIZATION COSTS			5,703.01					
302.00	FRANCHISES AND CONSENTS			29,759,682.21	10,345,749				
303.00	MISCELLANEOUS INTANGIBLE PLANT			28,493,796.88	15,301,985				
310.10	LAND			291,342.96					
330.00	LAND			31,223,913.79					
340.00	LAND			2,690,006.46					
350.00	LAND			4,427,749.32					
350.22	RIGHTS OF WAY STUDIES			170,972.48	7,676				
355.10	POLES AND FIXTURES - TREATMENT			849,140.54	33,036				
360.00	LAND			4,824,614.41					
360.22	RIGHTS OF WAY STUDIES			475,910.39	35,240				
364.10	POLES, TOWERS AND FIXTURES - TREATMENT			2,194,523.69	88,221				
389.00	LAND			16,578,583.20					
	TOTAL NONDEPRECIABLE PLANT			**121,985,939.34**	**25,811,907**				
	TOTAL ELECTRIC PLANT			**4,999,687,476.02**	**1,852,173,228**	**3,878,490,862**	**131,213,914**		

* LIFE SPAN PROCEDURE IS USED. CURVE SHOWN IS INTERIM SURVIVOR CURVE.

OKLAHOMA GAS AND ELECTRIC COMPANY

Oklahoma City, Oklahoma

2014 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2014

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

Camp Hill, Pennsylvania

OKLAHOMA GAS AND ELECTRIC COMPANY

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2014

	ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK RESERVE	FUTURE ACCRUALS	TOTAL ANNUAL ACCRUAL AMOUNT	TOTAL ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
	INTANGIBLE PLANT								
301.0	ORGANIZATION	NONDEPRECIABLE		80,900.00					
302.0	FRANCHISES AND CONSENTS	25-SQ	0	2,592,570.79	1,493,905	1,098,666	109,494	4.22	10.0
303.2	MISCELLANEOUS INTANGIBLE PLANT - SOFTWARE	10-SQ	0	63,248,130.27	29,598,260	33,649,870	3,948,825	6.24	8.5
	TOTAL INTANGIBLE PLANT			**65,921,601.06**	**31,092,165**	**34,748,536**	**4,058,319**		
	STEAM PRODUCTION PLANT								
310.1	LAND								
	HORSESHOE LAKE 6	NONDEPRECIABLE		116,198.62					
	MUSTANG 1	NONDEPRECIABLE		101,936.34					
	SEMINOLE 1	NONDEPRECIABLE		1,239,444.37					
	MUSKOGEE 3	NONDEPRECIABLE		54,996.00					
	MUSKOGEE 4	NONDEPRECIABLE		1,825,435.93					
	SOONER 1	NONDEPRECIABLE		7,006,282.38					
	TOTAL LAND			10,344,293.64					
310.2	RIGHTS OF WAY								
	HORSESHOE LAKE 6	100-S4 *	0	28,509.08	24,856	3,653	406	1.42	9.0
	MUSTANG 1	100-S4 *	0	27,941.18	27,652	289	289	1.03	1.0
	SEMINOLE 1	100-S4 *	0	78,916.24	52,835	26,081	1,633	2.07	16.0
	MUSKOGEE 4	100-S4 *	0	18,934.31	5,296	13,638	489	2.58	27.9
	SOONER 1	100-S4 *	0	813,703.89	66,925	746,779	24,898	3.06	30.0
	TOTAL RIGHTS OF WAY			968,004.70	177,564	790,440	27,715	2.86	28.5
311.0	STRUCTURES AND IMPROVEMENTS								
	HORSESHOE LAKE 6	100-R1.5 *	(19)	11,211,174.99	8,935,191	4,406,107	496,615	4.43	8.9
	HORSESHOE LAKE 7	100-R1.5 *	(28)	2,780,823.84	2,545,547	1,013,908	75,144	2.70	13.5
	HORSESHOE LAKE 8	100-R1.5 *	(37)	4,909,589.80	4,318,958	2,407,180	165,966	3.38	14.5
	MUSTANG 1	100-R1.5 *	(11)	7,416,271.48	6,531,580	1,700,481	1,700,482	22.93	1.0
	MUSTANG 2	100-R1.5 *	(23)	195,298.24	207,944	32,273	10,821	5.54	3.0
	MUSTANG 3	100-R1.5 *	(25)	1,628,466.84	1,669,747	365,837	122,953	7.55	3.0
	MUSTANG 4	100-R1.5 *	(28)	3,270,373.42	3,071,969	1,114,109	373,357	11.42	3.0
	SEMINOLE 1	100-R1.5 *	(24)	18,980,574.80	12,384,985	11,150,928	714,177	3.76	15.6
	SEMINOLE 2	100-R1.5 *	(35)	2,515,482.74	1,584,797	1,811,105	116,924	4.65	15.5
	SEMINOLE 3	100-R1.5 *	(25)	7,102,748.69	5,259,703	3,618,733	233,578	3.29	15.5
	MUSKOGEE 4	100-R1.5 *	(11)	41,211,521.49	18,852,812	26,891,977	998,317	2.42	26.9
	MUSKOGEE 5	100-R1.5 *	(14)	7,042,386.74	3,571,723	4,456,598	161,285	2.29	27.6
	MUSKOGEE 6	100-R1.5 *	(9)	51,625,591.50	32,936,867	23,335,028	713,600	1.38	32.7
	SOONER 1	100-R1.5 *	(9)	90,538,993.19	64,392,717	34,294,786	1,204,794	1.33	28.5
	SOONER 2	100-R1.5 *	(13)	12,443,473.66	8,459,021	5,602,104	192,929	1.55	29.0
	TOTAL STRUCTURES AND IMPROVEMENTS			262,872,771.42	174,723,561	122,201,154	7,280,942	2.77	16.8

OKLAHOMA GAS AND ELECTRIC COMPANY

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2014

	ACCOUNT	SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST	BOOK RESERVE	FUTURE ACCRUALS	TOTAL ANNUAL ACCRUAL AMOUNT	TOTAL ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
312.0	BOILER PLANT EQUIPMENT									
	HORSESHOE LAKE 6	85-R0.5	*	(19)	16,714,252.90	13,870,655	6,019,306	686,081	4.10	8.8
	HORSESHOE LAKE 7	85-R0.5	*	(28)	14,425,659.59	12,666,821	5,798,023	431,637	2.99	13.4
	HORSESHOE LAKE 8	85-R0.5	*	(37)	16,592,079.98	14,335,897	8,395,253	587,749	3.54	14.3
	MUSTANG 1	85-R0.5	*	(11)	5,543,334.04	5,477,375	675,726	675,725	12.19	1.0
	MUSTANG 2	85-R0.5	*	(23)	3,597,629.65	3,597,640	827,444	278,296	7.74	3.0
	MUSTANG 3	85-R0.5	*	(25)	6,594,440.65	5,962,648	2,280,403	768,608	11.66	3.0
	MUSTANG 4	85-R0.5	*	(28)	16,899,943.34	16,741,430	4,890,497	1,647,826	9.75	3.0
	SEMINOLE 1	85-R0.5	*	(24)	31,309,355.47	21,817,445	17,006,156	1,113,684	3.56	15.3
	SEMINOLE 2	85-R0.5	*	(35)	26,377,010.37	18,599,822	17,009,142	1,118,745	4.24	15.2
	SEMINOLE 3	85-R0.5	*	(25)	48,103,100.69	32,157,938	27,970,938	1,837,606	3.82	15.2
	MUSKOGEE 4	85-R0.5	*	(11)	133,639,978.32	69,378,210	78,962,166	3,062,780	2.29	25.8
	MUSKOGEE 5	85-R0.5	*	(14)	123,366,915.14	58,954,161	81,684,122	3,057,785	2.48	26.7
	MUSKOGEE 6	85-R0.5	*	(9)	241,126,821.52	140,815,975	122,012,260	3,883,994	1.61	31.4
	SOONER 1	85-R0.5	*	(9)	215,877,477.20	125,357,245	109,949,205	3,994,353	1.85	27.5
	SOONER 2	85-R0.5	*	(13)	153,267,555.72	91,313,208	81,879,130	2,903,827	1.89	28.2
	TOTAL BOILER PLANT EQUIPMENT				1,053,435,554.58	631,046,470	565,359,771	26,048,696	2.47	21.7
314.0	TURBOGENERATOR UNITS									
	HORSESHOE LAKE 6	60-R1	*	(19)	7,851,909.01	5,580,473	3,763,299	443,617	5.65	8.5
	HORSESHOE LAKE 7	60-R1	*	(28)	16,203,243.77	14,063,445	6,676,707	524,264	3.24	12.7
	HORSESHOE LAKE 8	60-R1	*	(37)	17,870,801.31	13,955,695	10,527,303	754,047	4.22	14.0
	MUSTANG 1	60-R1	*	(11)	5,045,332.09	5,183,122	417,197	417,197	8.27	1.0
	MUSTANG 2	60-R1	*	(23)	4,630,127.96	4,429,346	1,265,711	429,268	9.27	2.9
	MUSTANG 3	60-R1	*	(25)	9,011,273.41	8,826,320	2,437,772	829,449	9.20	2.9
	MUSTANG 4	60-R1	*	(28)	14,753,734.53	12,653,222	6,231,558	2,114,546	14.33	2.9
	SEMINOLE GT	60-R1	*	(12)	1,588,884.45	1,667,982	111,569	45,538	2.87	2.5
	SEMINOLE 1	60-R1	*	(24)	25,900,404.18	16,747,769	15,368,732	1,030,169	3.98	14.9
	SEMINOLE 2	60-R1	*	(35)	30,298,116.13	18,890,591	22,011,866	1,480,754	4.89	14.9
	SEMINOLE 3	60-R1	*	(25)	30,307,045.02	17,497,773	20,386,033	1,346,705	4.44	15.1
	MUSKOGEE 4	60-R1	*	(11)	55,774,533.66	23,182,156	38,747,576	1,512,076	2.71	25.6
	MUSKOGEE 5	60-R1	*	(14)	50,930,321.41	26,290,494	31,770,072	1,219,799	2.40	26.0
	MUSKOGEE 6	60-R1	*	(9)	78,214,073.97	43,820,305	41,433,036	1,395,057	1.78	29.7
	SOONER 1	60-R1	*	(9)	36,739,503.08	25,196,967	14,849,091	555,598	1.51	26.7
	SOONER 2	60-R1	*	(13)	41,163,301.21	27,482,811	19,031,719	693,628	1.69	27.4
	TOTAL TURBOGENERATOR UNITS				426,282,605.19	265,448,471	235,029,241	14,791,712	3.47	15.9

OKLAHOMA GAS AND ELECTRIC COMPANY

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2014

	ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK RESERVE	FUTURE ACCRUALS	TOTAL ANNUAL ACCRUAL AMOUNT	TOTAL ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
315.0	ACCESSORY ELECTRIC EQUIPMENT								
	HORSESHOE LAKE 6	70-R2.5 *	(19)	2,312,662.30	1,828,204	923,864	104,129	4.50	8.9
	HORSESHOE LAKE 7	70-R2.5 *	(28)	2,057,255.60	1,668,038	965,249	72,629	3.53	13.3
	HORSESHOE LAKE 8	70-R2.5 *	(37)	2,556,413.99	1,928,315	1,573,972	108,949	4.26	14.4
	MUSTANG 1	70-R2.5 *	(11)	1,420,869.30	1,267,576	309,589	309,588	21.79	1.0
	MUSTANG 2	70-R2.5 *	(23)	600,475.05	531,618	206,966	69,302	11.54	3.0
	MUSTANG 3	70-R2.5 *	(25)	1,134,098.23	1,074,926	342,697	116,543	10.28	2.9
	MUSTANG 4	70-R2.5 *	(28)	1,734,241.93	1,499,172	720,658	243,934	14.07	3.0
	SEMINOLE 1	70-R2.5 *	(24)	3,853,227.71	2,240,476	2,537,526	164,204	4.26	15.5
	SEMINOLE 2	70-R2.5 *	(35)	2,035,787.93	1,387,807	1,360,507	89,195	4.38	15.3
	SEMINOLE 3	70-R2.5 *	(25)	5,142,313.68	3,683,160	2,744,732	176,700	3.44	15.5
	MUSKOGEE 4	70-R2.5 *	(11)	21,997,601.56	13,586,527	10,830,811	426,256	1.94	25.4
	MUSKOGEE 5	70-R2.5 *	(14)	11,579,335.55	6,953,037	6,247,406	240,249	2.07	26.0
	MUSKOGEE 6	70-R2.5 *	(9)	41,899,913.64	27,213,984	18,456,922	593,067	1.42	31.1
	SOONER 1	70-R2.5 *	(9)	23,826,731.67	17,290,856	8,680,282	327,076	1.37	26.5
	SOONER 2	70-R2.5 *	(13)	12,733,338.05	8,452,513	5,936,159	216,687	1.70	27.4
	TOTAL ACCESSORY ELECTRIC EQUIPMENT			134,884,266.19	90,606,209	61,837,340	3,258,508	2.42	19.0
316.0	MISCELLANEOUS POWER PLANT EQUIPMENT								
	HORSESHOE LAKE 6	45-R0.5 *	(19)	1,733,788.76	1,131,907	931,302	108,736	6.27	8.6
	HORSESHOE LAKE 7	45-R0.5 *	(28)	1,039,113.77	941,915	388,151	31,215	3.00	12.4
	HORSESHOE LAKE 8	45-R0.5 *	(37)	2,128,869.78	1,826,132	1,090,420	81,800	3.84	13.3
	MUSTANG 1	45-R0.5 *	(11)	626,438.19	524,629	170,717	170,718	27.25	1.0
	MUSTANG 2	45-R0.5 *	(23)	28,574.62	11,226	23,921	8,081	28.28	3.0
	MUSTANG 3	45-R0.5 *	(25)	453,217.60	439,427	127,095	45,154	9.96	2.8
	MUSTANG 4	45-R0.5 *	(28)	1,283,307.91	1,235,083	407,551	141,502	11.03	2.9
	SEMINOLE 1	45-R0.5 *	(24)	3,768,642.28	2,415,910	2,257,206	159,778	4.24	14.1
	SEMINOLE 2	45-R0.5 *	(35)	39,168.48	7,482	45,395	3,345	8.54	13.6
	SEMINOLE 3	45-R0.5 *	(25)	401,384.18	252,095	249,635	17,171	4.28	14.5
	MUSKOGEE 4	45-R0.5 *	(11)	5,261,603.69	2,984,229	2,856,151	120,335	2.29	23.7
	MUSKOGEE 5	45-R0.5 *	(14)	843,110.45	558,231	402,915	17,581	2.09	22.9
	MUSKOGEE 6	45-R0.5 *	(9)	4,454,520.43	2,506,506	2,348,921	91,797	2.06	25.6
	SOONER 1	45-R0.5 *	(9)	4,328,583.40	2,617,582	2,100,574	83,886	1.94	25.0
	SOONER 2	45-R0.5 *	(13)	2,013,055.60	1,159,033	1,115,720	49,791	2.47	22.4
	POWER SUPPLY SERVICES	45-R0.5	(2)	1,448,197.57	349,832	1,127,330	27,056	1.87	41.7
	TOTAL MISCELLANEOUS POWER PLANT EQUIPMENT			29,851,576.71	18,961,219	15,643,004	1,157,946	3.88	13.5
	TOTAL STEAM PRODUCTION PLANT			**1,918,639,072.43**	**1,180,963,494**	**1,000,860,950**	**52,565,519**	**2.74**	**19.0**
	OTHER PRODUCTION PLANT								
340.0	LAND								
	REDBUD 1	NONDEPRECIABLE		326,889.60					
	MCCLAIN GAS 1	NONDEPRECIABLE		489,856.10					
	TOTAL LAND			816,745.70					

OKLAHOMA GAS AND ELECTRIC COMPANY

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2014

	ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK RESERVE	FUTURE ACCRUALS	TOTAL ANNUAL ACCRUAL AMOUNT	TOTAL ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
341.0	STRUCTURES AND IMPROVEMENTS								
	REDBUD 1	45-S4 *	(5)	32,409,693.55	11,181,974	22,848,204	720,064	2.22	31.7
	REDBUD 2	45-S4 *	(6)	82,391.69	8,487	78,848	2,312	2.81	34.1
	REDBUD 3	45-S4 *	(6)	78,179.98	7,813	75,058	2,200	2.81	34.1
	REDBUD 4	45-S4 *	(6)	103,476.21	13,148	96,537	2,828	2.73	34.1
	HORSESHOE LAKE 9 AND 10	45-S4 *	(3)	987,208.14	430,842	585,982	28,473	2.88	20.6
	TINKER	45-S4 *	(8)	972,163.95	873,812	176,125	16,011	1.65	11.0
	MCCLAIN GAS 1	45-S4 *	(6)	5,791,481.26	1,683,819	4,455,151	145,593	2.51	30.6
	MCCLAIN GAS 2	45-S4 *	(6)	959,632.02	358,180	659,030	22,804	2.38	28.9
	MCCLAIN STEAM 1	45-S4 *	(9)	528,863.87	192,150	384,312	13,158	2.49	29.2
	CENTENNIAL WIND FARM	45-S3 *	(1)	2,332,086.60	712,342	1,643,065	97,395	4.18	16.9
	OU SPIRIT WIND FARM	45-S3 *	(1)	5,209,833.16	1,093,680	4,168,251	209,852	4.03	19.9
	CROSSROADS WIND FARM	45-S3 *	(1)	11,586,653.31	1,493,255	10,209,265	447,377	3.86	22.8
	TOTAL STRUCTURES AND IMPROVEMENTS			61,041,663.74	18,049,502	45,379,828	1,708,067	2.80	26.6
342.0	FUEL HOLDERS, PRODUCERS AND ACCESSORIES								
	REDBUD 1	55-R4 *	(5)	11,904,643.22	4,211,845	8,288,030	267,592	2.25	31.0
	REDBUD 2	55-R4 *	(6)	690,650.06	246,827	485,262	15,668	2.27	31.0
	REDBUD 3	55-R4 *	(6)	691,291.31	246,876	485,893	15,689	2.27	31.0
	REDBUD 4	55-R4 *	(6)	688,211.21	247,539	481,965	15,563	2.26	31.0
	TINKER	55-R4 *	(8)	167,149.95	104,016	76,506	6,962	4.17	11.0
	MCCLAIN GAS 1	55-R4 *	(6)	246,887.65	88,246	173,455	5,609	2.27	30.9
	MCCLAIN GAS 2	55-R4 *	(6)	162,705.56	63,673	108,795	3,549	2.18	30.7
	TOTAL FUEL HOLDERS, PRODUCERS AND ACCESSORIES			14,551,538.96	5,209,022	10,099,906	330,632	2.27	30.5
343.0	PRIME MOVERS								
	REDBUD 1	35-R2 *	(5)	86,059,676.78	21,374,840	68,987,821	2,673,538	3.11	25.8
	REDBUD 2	35-R2 *	(6)	65,494,633.05	13,442,833	55,981,478	2,174,732	3.32	25.7
	REDBUD 3	35-R2 *	(6)	65,549,317.40	18,063,792	51,418,484	1,974,020	3.01	26.0
	REDBUD 4	35-R2 *	(6)	60,410,045.55	14,670,842	49,363,806	1,912,669	3.17	25.8
	HORSESHOE LAKE 9 AND 10	35-R2 *	(3)	5,417,003.15	1,861,263	3,718,250	205,745	3.80	18.1
	TINKER	35-R2 *	(8)	3,910,681.03	3,294,691	928,845	88,457	2.26	10.5
	MCCLAIN GAS 1	35-R2 *	(6)	65,049,598.14	7,766,380	61,186,194	2,523,719	3.88	24.2
	MCCLAIN GAS 2	35-R2 *	(6)	68,969,030.47	13,223,312	59,883,860	2,462,819	3.57	24.3
	MCCLAIN STEAM 1	35-R2 *	(9)	31,891,451.73	10,822,794	23,938,888	1,057,394	3.32	22.6
	TOTAL PRIME MOVERS			452,751,437.30	104,520,747	375,407,626	15,073,093	3.33	24.9

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	ACCOUNT	SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST	BOOK RESERVE	FUTURE ACCRUALS	TOTAL ANNUAL ACCRUAL AMOUNT	TOTAL ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
	LTSA									
343.1	5-YEAR									
	REDBUD 1	5-SQ		0	2,129,243.69	228,688	1,900,556	422,346	19.84	4.5
	REDBUD 2	5-SQ		0	1,895,119.60	164,263	1,730,857	384,635	20.30	4.5
	REDBUD 3	5-SQ		0	1,908,402.25	231,144	1,677,258	372,724	19.53	4.5
	REDBUD 4	5-SQ		0	2,141,158.66	220,449	1,920,710	426,824	19.93	4.5
	MCCLAIN GAS 1	5-SQ		0	8,442,766.96	3,828,520	4,614,247	1,728,487	20.47	2.7
	MCCLAIN GAS 2	5-SQ		0	7,981,329.82	3,587,215	4,394,115	1,623,610	20.34	2.7
	MCCLAIN STEAM 1	5-SQ		0	8,624.01	8,624	0	0	-	-
343.2	20-YEAR									
	REDBUD 1	20-SQ		0	1,490,677.83	840,547	650,131	68,435	4.59	9.5
	REDBUD 2	20-SQ		0	1,490,677.83	780,635	710,043	74,741	5.01	9.5
	REDBUD 3	20-SQ		0	1,490,677.83	813,380	677,298	71,295	4.78	9.5
	REDBUD 4	20-SQ		0	1,490,677.83	805,755	684,923	72,097	4.84	9.5
	TOTAL LTSA				30,469,356.31	11,509,220	18,960,138	5,245,194		
	TOTAL ACCOUNT 343				483,220,793.61	116,029,967	394,367,764	20,318,287	4.20	19.4
344.0	GENERATORS									
	REDBUD 1	45-R2.5	*	(5)	717,739.32	56,945	696,681	22,097	3.08	31.5
	REDBUD 3	45-R2.5	*	(6)	23,198.65	2,099	22,492	703	3.03	32.0
	REDBUD 4	45-R2.5	*	(6)	23,034.59	2,119	22,298	697	3.03	32.0
	HORSESHOE LAKE 9 AND 10	45-R2.5	*	(3)	34,372,147.40	11,223,803	24,179,509	1,239,847	3.61	19.5
	TINKER	45-R2.5	*	(8)	3,314,013.04	2,313,143	1,265,991	117,104	3.53	10.8
	CENTENNIAL WIND FARM	40-R3	*	(1)	187,491,332.12	61,075,976	128,290,269	7,800,983	4.16	16.4
	OU SPIRIT WIND FARM	40-R3	*	(1)	245,143,282.08	49,131,117	198,463,598	10,276,697	4.19	19.3
	CROSSROADS WIND FARM	40-R3	*	(1)	359,760,960.19	48,350,952	315,007,618	14,208,271	3.95	22.2
	TOTAL GENERATORS				830,845,707.39	172,156,154	667,948,456	33,666,399	4.05	19.8
345.0	ACCESSORY ELECTRIC EQUIPMENT									
	REDBUD 1	45-R2.5	*	(5)	12,892,721.56	4,988,779	8,548,579	288,185	2.24	29.7
	REDBUD 2	45-R2.5	*	(6)	9,282,942.54	3,531,922	6,307,997	212,152	2.29	29.7
	REDBUD 3	45-R2.5	*	(6)	9,119,140.00	3,516,577	6,149,711	207,297	2.27	29.7
	REDBUD 4	45-R2.5	*	(6)	9,353,445.36	3,549,956	6,364,696	205,325	2.20	31.0
	HORSESHOE LAKE 9 AND 10	45-R2.5	*	(3)	4,298,290.11	1,736,116	2,691,123	139,241	3.24	19.3
	TINKER	45-R2.5	*	(8)	3,023,750.52	2,591,418	674,233	64,679	2.14	10.4
	MCCLAIN GAS 1	45-R2.5	*	(6)	3,534,608.08	1,186,684	2,560,001	93,412	2.64	27.4
	MCCLAIN GAS 2	45-R2.5	*	(6)	3,477,788.00	1,210,095	2,476,360	90,662	2.61	27.3
	MCCLAIN STEAM 1	45-R2.5	*	(9)	2,217,820.99	809,173	1,608,252	59,318	2.67	27.1
	CENTENNIAL WIND FARM	35-R3	*	(1)	911,783.39	241,070	679,831	41,041	4.50	16.6
	OU SPIRIT WIND FARM	35-R3	*	(1)	788,993.43	28,399	768,484	39,486	5.00	19.5
	CROSSROADS WIND FARM	35-R3	*	(1)	44,050,761.62	5,664,347	38,826,922	1,781,015	4.04	21.8
	TOTAL ACCESSORY ELECTRIC EQUIPMENT				102,952,045.60	29,054,536	77,656,189	3,221,813	3.13	24.1

OKLAHOMA GAS AND ELECTRIC COMPANY

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	ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK RESERVE	FUTURE ACCRUALS	TOTAL ANNUAL ACCRUAL AMOUNT	TOTAL ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
346.0	MISCELLANEOUS POWER PLANT EQUIPMENT								
	REDBUD 1	40-R2 *	(5)	2,010,341.97	612,573	1,498,286	53,390	2.66	28.1
	REDBUD 2	40-R2 *	(6)	15,295.20	1,633	14,580	483	3.16	30.2
	REDBUD 3	40-R2 *	(6)	4,236.28	152	4,338	142	3.35	30.5
	REDBUD 4	40-R2 *	(6)	4,236.27	158	4,332	142	3.35	30.5
	HORSESHOE LAKE 9 AND 10	40-R2 *	(3)	941,452.30	413,037	556,659	30,179	3.21	18.4
	TINKER	40-R2 *	(8)	8,664.46	6,849	2,509	240	2.77	10.5
	MCCLAIN GAS 1	40-R2 *	(6)	4,078,113.35	1,329,063	2,993,737	118,464	2.90	25.3
	CENTENNIAL WIND FARM	35-R2.5 *	(1)	417,174.39	71,147	350,199	21,470	5.15	16.3
	OU SPIRIT WIND FARM	35-R2.5 *	(1)	83,464.93	9,270	75,030	3,958	4.74	19.0
	CROSSROADS WIND FARM	35-R2.5 *	(1)	58,088.06	8,910	49,759	2,308	3.97	21.6
	TOTAL MISCELLANEOUS POWER PLANT EQUIPMENT			7,621,067.23	2,452,792	5,549,429	230,776	3.03	24.0
	TOTAL OTHER PRODUCTION PLANT			**1,501,049,562.23**	**342,951,973**	**1,201,001,572**	**59,475,974**	**3.96**	**20.2**
	TRANSMISSION PLANT								
350.1	LAND	NONDEPRECIABLE		3,541,128.38					
350.2	LAND RIGHTS	75-R4	0	108,362,302.27	15,594,976	92,767,326	1,464,896	1.35	63.3
352.0	STRUCTURES AND IMPROVEMENTS	65-R4	(5)	6,242,912.00	1,055,765	5,499,293	104,499	1.67	52.6
	STATION EQUIPMENT								
353.0	STATION EQUIPMENT	60-R2	(30)	605,259,533.59	123,074,387	663,763,007	13,297,119	2.20	49.9
353.1	STATION EQUIPMENT - STEP UP TRANSFORMERS	45-R2	(10)	53,127,938.31	12,988,096	45,452,636	1,328,567	2.50	34.2
	TOTAL STATION EQUIPMENT			658,387,471.90	136,062,483	709,215,643	14,625,686		
354.0	TOWERS AND FIXTURES	75-R4	(15)	161,001,201.55	44,399,061	140,752,321	2,260,703	1.40	62.3
355.0	POLES AND FIXTURES	55-R1	(60)	828,826,933.27	135,274,530	1,190,848,563	24,001,988	2.90	49.6
356.0	OVERHEAD CONDUCTORS AND DEVICES	60-R3	(50)	566,280,790.11	129,845,858	719,575,327	14,358,944	2.54	50.1
358.0	UNDERGROUND CONDUCTORS AND DEVICES	40-S2.5	0	110,494.18	108,170	2,324	297	0.27	7.8
	TOTAL TRANSMISSION PLANT			**2,332,753,233.66**	**462,340,843**	**2,858,660,797**	**56,817,013**	**2.44**	**50.3**
	DISTRIBUTION PLANT								
360.1	LAND	NONDEPRECIABLE		7,788,308.26					
360.2	LAND RIGHTS	65-S4	0	4,906,915.26	1,348,042	3,558,873	74,987	1.53	47.5
361.0	STRUCTURES AND IMPROVEMENTS	60-R2.5	(10)	6,789,469.60	1,768,895	5,699,522	116,125	1.71	49.1
362.0	STATION EQUIPMENT	60-R2.5	(30)	587,980,205.03	163,001,153	601,373,114	12,678,412	2.16	47.4
364.0	POLES, TOWERS AND FIXTURES	52-R1	(60)	560,493,939.83	223,521,850	673,268,454	16,172,820	2.89	41.6
365.0	OVERHEAD CONDUCTORS AND DEVICES	53-R0.5	(50)	436,100,315.65	149,289,112	504,861,361	11,716,941	2.69	43.1
366.0	UNDERGROUND CONDUIT	55-R2.5	(25)	190,859,208.41	54,717,057	183,856,954	4,199,472	2.20	43.8
367.0	UNDERGROUND CONDUCTORS AND DEVICES	60-R2.5	(25)	689,744,665.35	203,791,638	658,389,194	13,460,359	1.95	48.9
368.0	LINE TRANSFORMERS	40-O1	(25)	413,056,822.37	82,305,752	434,015,276	14,189,491	3.44	30.6
369.0	SERVICES	50-R4	(20)	238,422,852.68	116,568,538	169,538,885	4,783,747	2.01	35.4

OKLAHOMA GAS AND ELECTRIC COMPANY

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2014

	ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK RESERVE	FUTURE ACCRUALS	TOTAL ANNUAL ACCRUAL AMOUNT	TOTAL ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
	METERS								
370.0	METERS - SMART METERS	15-S2.5	(5)	127,156,384.70	31,230,993	102,283,211	8,496,662	6.68	12.0
370.1	METERS - METERING EQUIPMENT	14-L0.5	(5)	35,422,586.87	16,464,184	20,729,532	2,072,755	5.85	10.0
	TOTAL METERS			162,578,971.57	47,695,177	123,012,743	10,569,417		
371.0	INSTALLATIONS ON CUSTOMERS' PREMISES	5-L3	0	39,213,363.38	12,321,349	26,892,014	8,551,973	21.81	3.1
373.0	STREET LIGHTING AND SIGNAL SYSTEMS	25-L1	(30)	219,537,742.84	97,449,160	187,949,906	11,371,043	5.18	16.5
	TOTAL DISTRIBUTION PLANT			**3,557,472,780.23**	**1,153,777,723**	**3,572,416,296**	**107,884,787**	**3.03**	**33.1**
	GENERAL PLANT								
389.1	LAND	NONDEPRECIABLE		2,866,064.39					
389.2	LAND RIGHTS	45-R4	0	147,844.49	82,176	65,668	4,058	2.74	16.2
390.0	STRUCTURES AND IMPROVEMENTS	40-R2.5	0	164,117,131.34	65,810,486	98,306,645	3,329,857	2.03	29.5
	OFFICE FURNITURE AND EQUIPMENT								
391.0	OFFICE FURNITURE AND EQUIPMENT	15-SQ	0	12,773,167.26	3,465,050	9,308,117	851,517	6.67	10.9
391.1	COMPUTER EQUIPMENT	5-SQ	0	726,800.86	403,920	322,881	145,355	20.00	2.2
	TOTAL OFFICE AND FURNITURE EQUIPMENT			13,499,968.12	3,868,970	9,630,998	996,872		
	TRANSPORTATION EQUIPMENT								
392.1	CARS AND TRUCKS	9.5-S2.5	10	18,189,605.87	9,027,433	7,343,212	1,347,380	7.41	5.4
392.5	HEAVY TRUCKS	13-L2.5	10	52,763,702.68	23,493,088	23,994,244	3,055,061	5.79	7.9
392.6	TRAILERS	23-S0.5	10	4,712,698.91	1,132,187	3,109,242	165,857	3.52	18.7
	TOTAL TRANSPORTATION EQUIPMENT			75,666,007.46	33,652,708	34,446,698	4,568,298		
393.0	STORES EQUIPMENT	25-SQ	0	740,515.71	391,985	348,531	29,603	4.00	11.8
394.0	TOOLS, SHOP AND GARAGE EQUIPMENT	25-SQ	0	9,861,716.62	4,234,400	5,627,317	394,750	4.00	14.3
395.0	LABORATORY EQUIPMENT	20-SQ	0	11,618,007.96	5,020,220	6,597,788	581,408	5.00	11.3
396.0	POWER OPERATED EQUIPMENT	18-L2	15	9,218,432.91	3,002,848	4,832,820	448,177	4.86	10.8
397.0	COMMUNICATION EQUIPMENT	10-SQ	0	22,056,606.36	6,565,140	15,491,466	2,206,107	10.00	7.0
398.0	MISCELLANEOUS EQUIPMENT	20-SQ	0	5,833,192.57	2,285,735	3,547,458	291,909	5.00	12.2
	TOTAL GENERAL PLANT			**315,625,487.93**	**124,914,668**	**178,895,389**	**12,851,039**	**4.07**	**13.9**
	UNRECOVERED RESERVE FOR AMORTIZATION								
391.0	OFFICE FURNITURE AND EQUIPMENT				(4,250,950)		850,190		
393.0	STORES EQUIPMENT				(42,195)		8,439		
394.0	TOOLS, SHOP AND GARAGE EQUIPMENT				(617,132)		123,426		
395.0	LABORATORY EQUIPMENT				(1,756,957)		351,391		
397.0	COMMUNICATION EQUIPMENT				(500,249)		100,050		
398.0	MISCELLANEOUS EQUIPMENT				1,275,084		(255,017)		
	TOTAL UNRECOVERED RESERVE FOR AMORTIZATION				**(5,892,399)**		**1,178,479**		

OKLAHOMA GAS AND ELECTRIC COMPANY

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2014

	ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK RESERVE	FUTURE ACCRUALS	TOTAL ANNUAL ACCRUAL AMOUNT	TOTAL ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
	ACCOUNTS NOT STUDIED								
	MUSKOGEE 3								
311.0	STRUCTURES AND IMPROVEMENTS				430,499				
312.0	BOILER PLANT EQUIPMENT				2,047,264				
314.0	TURBOGENERATOR UNITS				934,359				
315.0	ACCESSORY ELECTRIC EQUIPMENT				223,239				
316.0	MISCELLANEOUS POWER PLANT EQUIPMENT				25,344				
	ENID								
342.0	FUEL HOLDERS, PRODUCERS AND ACCESSORIES				144				
344.0	GENERATORS				(324,548)				
	WOODWARD								
342.0	FUEL HOLDERS, PRODUCERS AND ACCESSORIES				247				
344.0	GENERATORS				(216,010)				
	ARO								
317.0	ARO FOR STEAM PRODUCTION			3,497,862.71	(4,826,990)				
347.0	ARO FOR OTHER PRODUCTION			43,620,335.30	(6,832,335)				
359.0	ARO FOR TRANSMISSION			585,056.78	(95,275)				
	TOTAL ACCOUNTS NOT STUDIED			47,703,254.79	(8,634,062)				
	TOTAL ELECTRIC PLANT			9,739,164,992.33	3,281,514,405	8,846,583,540	294,831,130	3.03	30.0

* INDICATES LIFE SPAN PROCEDURE WAS USED. CURVE SHOWN IS INTERIM SURVIVOR CURVE

NOTE: ACCRUAL RATES FOR NEW FACILITIES TO BE PLACED INTO SERVICE AFTER DECEMBER 31, 2014 ARE LISTED BELOW

	ACCOUNT	RATE
MUSTANG SOLAR FACILITY	341	4.04
	344	4.47
	345	4.05
	346	4.26
MUSTANG CTs	341	2.89
	342	3.18
	343	3.56
	344	3.24
	345	3.09
	346	3.24

	ACCOUNT	RATE
SOONER SCRUBBER UNIT 1	311	4.48
	312	4.63
	316	4.93
SOONER SCRUBBER UNIT 2	311	4.64
	312	4.80
	316	5.11
ACI ASSETS	312	33.33

PUBLIC SERVICE COMPANY OF OKLAHOMA

TULSA, OKLAHOMA

2014 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION
ACCRUALS RELATED TO ELECTRIC PLANT
AS OF DECEMBER 31, 2014

Prepared by:

Excellence Delivered ***As Promised***

PUBLIC SERVICE COMPANY OF OKLAHOMA

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2014

	ACCOUNT	PROBABLE RETIREMENT DATE	SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)		(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
	STEAM PRODUCTION PLANT										
310.10	LAND AND LAND RIGHTS - COAL										
	NORTHEAST RAIL SPUR	06-2026	SQUARE	*	(5)	206,090.95	89,320	127,075	11,050	5.36	11.5
310.31	LAND AND LAND RIGHTS - OIL/GAS										
	NORTHEAST GENERATING PLANT - UNITS 1 AND 2	06-2036	SQUARE	*	(8)	1.00	0	1	0	-	-
311.00	STRUCTURES AND IMPROVEMENTS - COAL										
	NORTHEAST GENERATING PLANT - UNITS 3 AND 4	12-2026	100-R1.5	*	(5)	19,246,965.59	9,987,904	10,221,410	868,077	4.51 **	11.80
	OKLAUNION GENERATING PLANT	06-2046	100-R1.5	*	(21)	16,498,411.09	10,483,261	9,479,816	318,371	1.93	29.8
	TOTAL STRUCTURES AND IMPROVEMENTS - COAL					35,745,376.68	20,471,165	19,701,226	1,186,448	3.32	16.6
311.30	STRUCTURES AND IMPROVEMENTS - OIL/GAS										
	COMANCHE GENERATING PLANT	06-2035	100-R1.5	*	(9)	4,320,337.99	3,086,996	1,622,173	82,285	1.90	19.7
	NORTHEAST GENERATING PLANT - UNITS 1 AND 2	06-2036	100-R1.5	*	(8)	10,699,257.83	5,484,894	6,070,305	294,363	2.75	20.6
	RIVERSIDE GENERATING PLANT - UNITS 1 AND 2	06-2041	100-R1.5	*	(33)	9,274,689.15	4,091,588	8,243,749	326,001	3.51	25.3
	SOUTHWESTERN GENERATING PLANT - UNITS 1, 2 AND 3	06-2037	100-R1.5	*	(17)	8,417,896.73	4,111,634	5,737,305	266,970	3.17	21.5
	TULSA GENERATING PLANT - UNITS 2 AND 4	06-2034	100-R1.5	*	(18)	6,777,614.10	3,410,291	4,587,293	246,569	3.64	18.6
	TOTAL STRUCTURES AND IMPROVEMENTS - OIL/GAS					39,489,795.80	20,185,402	26,260,825	1,216,188	3.08	21.6
312.00	BOILER PLANT EQUIPMENT - COAL										
	NORTHEAST GENERATING PLANT - UNITS 3 AND 4	12-2026	65-R1.5	*	(5)	294,722,614.13	171,570,365	137,888,379	11,958,844	4.06 ** / ***	11.50
	OKLAUNION GENERATING PLANT	06-2046	65-R1.5	*	(21)	48,702,262.20	28,326,629	30,603,108	1,097,949	2.25	27.9
	TOTAL BOILER PLANT EQUIPMENT - COAL					343,424,876.33	199,896,994	168,491,487	13,056,793	3.80	12.9
312.11	COAL TRANSPORTATION EQUIPMENT										
	NORTHEAST GENERATING PLANT - UNITS 3 AND 4	12-2026	35-S3	*	(5)	5,157,617.42	5,214,481	201,018	17,818	0.35	11.30
312.12	BOILER PLANT EQUIPMENT - RAIL SPUR										
	NORTHEAST RAIL SPUR	12-2026	55-R3	*	(5)	22,359,915.26	16,108,672	7,369,240	629,048	2.81	11.7
312.30	BOILER PLANT EQUIPMENT - OIL/GAS										
	COMANCHE GENERATING PLANT	06-2035	65-R1.5	*	(9)	24,536,015.98	12,397,277	14,346,980	735,617	3.00	19.5
	NORTHEAST GENERATING PLANT - UNITS 1 AND 2	06-2036	65-R1.5	*	(8)	92,871,894.42	45,932,398	54,369,248	2,662,543	2.87	20.4
	RIVERSIDE GENERATING PLANT - UNITS 1 AND 2	06-2041	65-R1.5	*	(33)	74,237,740.94	48,146,667	50,589,528	2,167,189	2.92	23.3
	RIVERSIDE GENERATING PLANT - UNITS 3 AND 4	06-2056	65-R1.5	*	(35)	61,638.38	4,614	78,598	2,084	3.38	37.7
	SOUTHWESTERN GENERATING PLANT - UNITS 1, 2 AND 3	06-2037	65-R1.5	*	(17)	35,226,572.23	13,850,080	27,365,009	1,305,682	3.71	21.0
	TULSA GENERATING PLANT - UNITS 2 AND 4	06-2034	65-R1.5	*	(18)	23,011,031.74	13,937,958	13,215,060	751,609	3.27	17.6
	TOTAL BOILER PLANT EQUIPMENT - OIL/GAS					249,944,893.69	134,268,994	159,964,423	7,624,724	3.05	21.0

PUBLIC SERVICE COMPANY OF OKLAHOMA

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2014

	ACCOUNT	PROBABLE RETIREMENT DATE	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
314.00	TURBOGENERATOR UNITS - COAL									
	NORTHEAST GENERATING PLANT - UNITS 3 AND 4	12-2026	55-R1.5 *	(5)	94,927,093.07	47,331,137	52,342,310	4,615,481	4.86 **	11.3
	OKLAUNION GENERATING PLANT	06-2046	55-R1.5 *	(21)	15,515,078.62	10,094,317	8,678,928	332,538	2.14	26.1
	TOTAL TURBOGENERATOR UNITS - COAL				110,442,171.69	57,425,454	61,021,238	4,948,019	4.48	12.3
314.30	TURBOGENERATOR UNITS - OIL/GAS									
	COMANCHE GENERATING PLANT	06-2035	55-R1.5 *	(9)	52,387,346.64	30,773,716	26,328,492	1,370,149	2.62	19.2
	NORTHEAST GENERATING PLANT - UNITS 1 AND 2	06-2036	55-R1.5 *	(8)	130,955,305.84	76,108,066	65,323,664	3,239,235	2.47	20.2
	RIVERSIDE GENERATING PLANT - UNITS 1 AND 2	06-2041	55-R1.5 *	(33)	69,903,486.75	35,122,827	57,848,810	2,570,518	3.68	22.5
	SOUTHWESTERN GENERATING PLANT - UNITS 1, 2 AND 3	06-2037	55-R1.5 *	(17)	29,583,637.77	12,682,277	21,930,579	1,140,852	3.86	19.2
	TULSA GENERATING PLANT - UNITS 2 AND 4	06-2034	55-R1.5 *	(18)	28,246,353.45	15,253,930	18,076,767	1,071,160	3.79	16.9
	TOTAL TURBOGENERATOR UNITS - OIL/GAS				311,076,130.45	169,940,816	189,508,312	9,391,914	3.02	20.2
315.00	ACCESSORY ELECTRIC EQUIPMENT - COAL									
	NORTHEAST GENERATING PLANT - UNITS 3 AND 4	12-2026	70-R2.5 *	(5)	31,266,409.37	20,622,749	12,206,981	1,041,851	3.33 **	11.7
	OKLAUNION GENERATING PLANT	06-2046	70-R2.5 *	(21)	6,401,055.69	4,610,990	3,134,287	109,721	1.71	28.6
	TOTAL ACCESSORY ELECTRIC EQUIPMENT - COAL				37,667,465.06	25,233,739	15,341,268	1,151,572	3.06	13.3
315.30	ACCESSORY ELECTRIC EQUIPMENT - OIL/GAS									
	COMANCHE GENERATING PLANT	06-2035	70-R2.5 *	(9)	6,171,525.82	4,316,094	2,410,870	122,796	1.99	19.6
	NORTHEAST GENERATING PLANT - UNITS 1 AND 2	06-2036	70-R2.5 *	(8)	12,474,042.98	7,977,258	5,494,709	262,192	2.10	21.0
	RIVERSIDE GENERATING PLANT - UNITS 1 AND 2	06-2041	70-R2.5 *	(33)	9,727,194.43	6,853,646	6,083,523	256,153	2.63	23.7
	SOUTHWESTERN GENERATING PLANT - UNITS 1, 2 AND 3	06-2037	70-R2.5 *	(17)	9,512,915.63	3,735,689	7,394,422	342,799	3.60	21.6
	TULSA GENERATING PLANT - UNITS 2 AND 4	06-2034	70-R2.5 *	(18)	7,642,161.25	3,266,155	5,751,596	323,714	4.24	17.8
	TOTAL ACCESSORY ELECTRIC EQUIPMENT - OIL/GAS				45,527,840.11	26,148,841	27,135,120	1,307,654	2.87	20.8
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT - COAL									
	NORTHEAST GENERATING PLANT - UNITS 3 AND 4	12-2026	45-R1.5 *	(5)	21,442,631.23	10,695,874	11,818,889	1,052,476	4.91 **	11.2
	OKLAUNION GENERATING PLANT	06-2046	45-R1.5 *	(21)	5,556,650.21	3,971,773	2,751,774	113,925	2.05	24.2
	TOTAL MISCELLANEOUS POWER PLANT EQUIPMENT - COAL				26,999,281.44	14,667,647	14,570,663	1,166,401	4.32	12.5
316.30	MISCELLANEOUS POWER PLANT EQUIPMENT - OIL/GAS									
	COMANCHE GENERATING PLANT	06-2035	45-R1.5 *	(9)	2,037,775.61	1,535,474	685,701	36,994	1.82	18.5
	NORTHEAST GENERATING PLANT - UNITS 1 AND 2	06-2036	45-R1.5 *	(8)	7,467,190.13	4,313,392	3,751,173	190,739	2.55	19.7
	RIVERSIDE GENERATING PLANT - UNITS 1 AND 2	06-2041	45-R1.5 *	(33)	6,150,918.68	1,888,335	6,292,387	281,221	4.57	22.4
	SOUTHWESTERN GENERATING PLANT - UNITS 1, 2 AND 3	06-2037	45-R1.5 *	(17)	1,365,268.71	817,636	779,728	39,081	2.86	20.0
	TULSA GENERATING PLANT - UNITS 2 AND 4	06-2034	45-R1.5 *	(18)	2,898,622.01	943,973	2,476,401	137,291	4.74	18.0
	TOTAL MISCELLANEOUS POWER PLANT EQUIPMENT - OIL/GAS				19,919,775.14	9,498,811	13,985,390	685,326	3.44	20.4
	TOTAL STEAM PRODUCTION PLANT				**1,247,961,231.02**	**699,150,337**	**703,677,286**	**42,392,955**	**3.40**	

PUBLIC SERVICE COMPANY OF OKLAHOMA

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2014

	ACCOUNT	PROBABLE RETIREMENT DATE	SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)		(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
	OTHER PRODUCTION PLANT										
341.00	STRUCTURES AND IMPROVEMENTS										
	SOUTHWESTERN GENERATING UNIT - UNITS 4 AND 5	06-2056	55-R2	*	(11)	5,375,687.04	66,940	5,900,073	161,145	3.00	36.6
	WELEETKA GENERATING PLANT	06-2022	55-R2	*	(7)	769,476.66	260,840	562,500	77,100	10.02	7.3
	TOTAL STRUCTURES AND IMPROVEMENTS					6,145,163.70	327,780	6,462,573	238,245	3.88	27.1
342.00	FUEL HOLDERS, PRODUCERS AND ACCESSORIES										
	COMANCHE GENERATING PLANT - DIESEL UNIT	06-2035	55-R4	*	(4)	2,994.30	1,550	1,564	77	2.57	20.3
	NORTHEAST GENERATING PLANT - DIESEL UNITS 1 AND 2	06-2036	55-R4	*	(5)	63,289.00	53,439	13,015	836	1.32	15.6
	RIVERSIDE GENERATING PLANT - DIESEL UNIT	06-2041	55-R4	*	(5)	24,392.00	4,582	21,030	1,175	4.82	17.9
	RIVERSIDE GENERATING PLANT - UNITS 3 AND 4	06-2056	55-R4	*	(27)	9,797,993.47	1,355,237	11,088,215	281,467	2.87	39.4
	SOUTHWESTERN GENERATING PLANT - DIESEL UNIT	06-2037	55-R4	*	(5)	67,052.12	30,001	40,404	2,423	3.61	16.7
	TULSA GENERATING PLANT - DIESEL UNIT	06-2034	55-R4	*	(6)	70,372.00	58,408	16,186	1,091	1.55	14.8
	WELEETKA GENERATING PLANT - DIESEL UNIT	06-2022	55-R4	*	(10)	10,290.82	5,352	5,968	808	7.85	7.4
	WELEETKA GENERATING PLANT	06-2022	55-R4	*	(7)	2,134,695.06	1,750,243	533,881	71,861	3.37	7.4
	TOTAL FUEL HOLDERS, PRODUCERS AND ACCESSORIES					12,171,078.77	3,258,812	11,720,263	359,738	2.96	32.6
344.00	GENERATORS										
	COMANCHE GENERATING PLANT - DIESEL UNIT	06-2035	55-R2	*	(4)	754,469.27	644,381	140,267	8,242	1.09	17.0
	NORTHEAST GENERATING PLANT - DIESEL UNITS 1 AND 2	06-2036	55-R2	*	(5)	241,260.00	193,101	60,222	3,885	1.61	15.5
	NORTHEAST GENERATING PLANT - DIESEL UNITS 3 AND 4	06-2026	55-R2	*	(1)	437,949.89	356,363	85,966	8,080	1.84	10.6
	RIVERSIDE GENERATING PLANT - DIESEL UNIT	06-2041	55-R2	*	(5)	470,174.71	393,597	100,087	5,077	1.08	19.7
	RIVERSIDE GENERATING PLANT - UNITS 3 AND 4	06-2056	55-R2	*	(27)	48,138,853.05	6,516,916	54,619,427	1,492,272	3.10	36.6
	SOUTHWESTERN GENERATING PLANT - DIESEL UNIT	06-2037	55-R2	*	(5)	212,483.51	183,193	39,915	2,024	0.95	19.7
	SOUTHWESTERN GENERATING UNIT - UNITS 4 AND 5	06-2056	55-R2	*	(11)	44,412,407.08	6,136,854	43,160,918	1,177,884	2.65	36.6
	TULSA GENERATING PLANT - DIESEL UNIT	06-2034	55-R2	*	(6)	608,404.00	511,343	133,566	9,275	1.52	14.4
	WELEETKA GENERATING PLANT - DIESEL UNIT	06-2022	55-R2	*	(10)	666,380.18	352,414	380,604	54,620	8.20	7.0
	WELEETKA GENERATING PLANT	06-2022	55-R2	*	(7)	23,599,603.68	19,722,699	5,528,877	759,728	3.22	7.3
	TOTAL GENERATORS					119,541,985.37	35,010,859	104,249,849	3,521,087	2.95	29.6
345.00	ACCESSORY ELECTRIC EQUIPMENT										
	NORTHEAST GENERATING PLANT - DIESEL UNITS 1 AND 2	06-2036	25-L2	*	(5)	83,558.10	38,494	49,242	3,366	4.03	14.6
	RIVERSIDE GENERATING PLANT - DIESEL UNIT	06-2041	25-L2	*	(5)	28,635.45	25,131	4,936	548	1.91	9.0
	RIVERSIDE GENERATING PLANT - UNITS 3 AND 4	06-2056	25-L2	*	(27)	4,047,010.59	524,795	4,614,909	242,884	6.00	19.0
	SOUTHWESTERN GENERATING UNIT - UNITS 4 AND 5	06-2056	25-L2	*	(11)	10,102,576.64	1,331,578	9,882,282	521,537	5.16	18.9
	WELEETKA GENERATING PLANT - DIESEL UNIT	06-2022	25-L2	*	(10)	36,296.17	20,289	19,637	3,989	10.99	4.9
	WELEETKA GENERATING PLANT	06-2022	25-L2	*	(7)	339,619.09	231,499	131,893	18,868	5.56	7.0
	TOTAL ACCESSORY ELECTRIC EQUIPMENT					14,637,696.04	2,171,785	14,702,899	791,192	5.41	18.6
346.00	MISCELLANEOUS POWER PLANT EQUIPMENT										
	COMANCHE GENERATING PLANT - DIESEL UNIT	06-2035	30-R2.5	*	(4)	25,779.46	13,043	13,767	770	2.99	17.9
	NORTHEAST GENERATING PLANT - DIESEL UNITS 1 AND 2	06-2036	30-R2.5	*	(5)	3,019.00	2,510	660	70	2.32	9.4
	RIVERSIDE GENERATING PLANT - UNITS 3 AND 4	06-2056	30-R2.5	*	(27)	51,139.31	5,212	59,735	2,402	4.70	24.9
	SOUTHWESTERN GENERATING UNIT - UNITS 4 AND 5	06-2056	30-R2.5	*	(11)	6,188.14	102	6,767	232	3.75	29.2
	WELEETKA GENERATING PLANT - DIESEL UNIT	06-2022	30-R2.5	*	(10)	910.50	933	69	34	3.73	2.0
	WELEETKA GENERATING PLANT	06-2022	30-R2.5	*	(7)	2,081,765.96	1,088,518	1,138,972	158,443	7.61	7.2
	TOTAL MISCELLANEOUS POWER PLANT EQUIPMENT					2,168,802.37	1,110,318	1,219,970	161,951	7.47	7.5
	TOTAL OTHER PRODUCTION PLANT					**154,664,726.25**	**41,879,555**	**138,355,554**	**5,072,213**	**3.28**	

PUBLIC SERVICE COMPANY OF OKLAHOMA

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2014

	ACCOUNT	PROBABLE RETIREMENT DATE	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
	TRANSMISSION PLANT									
350.10	LAND AND LAND RIGHTS		75-R4	0	38,255,177.73	15,759,963	22,495,215	407,599	1.07	55.2
352.00	STRUCTURES AND IMPROVEMENTS		60-R3	(5)	4,611,552.39	1,107,107	3,735,023	80,702	1.75	46.3
353.00	STATION EQUIPMENT		55-R1.5	(10)	346,843,671.88	66,900,311	314,627,728	7,071,774	2.04	44.5
354.00	TOWERS AND FIXTURES		75-R3	(50)	17,788,368.30	7,538,278	19,144,274	434,248	2.44	44.1
355.00	POLES AND FIXTURES		52-S0.5	(80)	213,845,300.55	54,117,824	330,803,717	8,204,905	3.84	40.3
356.00	OVERHEAD CONDUCTORS AND DEVICES		65-R3	(75)	164,344,391.83	60,351,091	227,251,595	5,249,636	3.19	43.3
358.00	UNDERGROUND CONDUCTORS AND DEVICES		45-R4	0	71,915.00	42,482	29,433	1,656	2.30	17.8
	TOTAL TRANSMISSION PLANT				**785,760,377.68**	**205,817,055**	**918,086,985**	**21,450,520**	**2.73**	
	DISTRIBUTION PLANT									
360.10	LAND AND LAND RIGHTS		70-R4	0	2,498,985.51	1,005,413	1,493,573	25,385	1.02	58.8
361.00	STRUCTURES AND IMPROVEMENTS		42-S0	(5)	5,046,532.22	1,132,658	4,166,200	133,217	2.64	31.3
362.00	STATION EQUIPMENT		60-R1.5	(10)	277,152,259.06	73,339,157	231,528,328	4,756,729	1.72	48.7
364.00	POLES, TOWERS AND FIXTURES		53-R1	(100)	350,321,127.59	98,202,957	602,439,298	14,295,656	4.08	42.1
365.00	OVERHEAD CONDUCTORS AND DEVICES		46-R1	(50)	353,199,210.80	67,196,039	462,602,777	12,719,420	3.60	36.4
366.00	UNDERGROUND CONDUIT		65-R2.5	(60)	65,589,368.07	10,293,557	94,649,432	1,674,412	2.55	56.5
367.00	UNDERGROUND CONDUCTORS AND DEVICES		65-R1.5	(25)	289,000,609.23	58,178,267	303,072,495	5,481,117	1.90	55.3
368.00	LINE TRANSFORMERS		37-R1	(10)	312,553,713.45	109,409,688	234,399,397	8,448,560	2.70	27.7
369.00	SERVICES		60-R1.5	(70)	235,390,272.41	71,066,509	329,096,954	6,707,811	2.85	49.1
370.00	METERS	12-2027	28-R0.5	(30)	75,148,135.39	(2,348,370)	100,040,946	7,199,191	9.58 ****	10.7
370.16	AMI METERS		15-S2.5	0	19,989,060.50	8,845,290	11,143,770	1,367,252	6.84 ****	14.1
371.00	INSTALLATIONS ON CUSTOMER PREMISES		30-O1	(30)	43,164,899.01	16,218,664	39,895,705	1,644,652	3.81	24.3
373.00	STREET LIGHTING AND SIGNAL SYSTEMS		36-R0.5	(35)	55,963,644.29	28,616,768	46,934,152	1,644,726	2.94	28.5
	TOTAL DISTRIBUTION PLANT				**2,085,017,817.53**	**541,156,597**	**2,461,463,027**	**66,098,128**	**3.17**	
	GENERAL PLANT									
390.00	STRUCTURES AND IMPROVEMENTS		55-S0.5	(10)	53,200,467.12	12,234,055	46,286,459	1,080,551	2.03	42.8
391.00	OFFICE FURNITURE AND EQUIPMENT									
	FULLY ACCRUED		FULLY ACCRUED		7,394,362.82	7,394,363	0	0	-	-
	AMORTIZED		20-SQ	0	2,345,764.87	1,607,975	737,790	117,397	5.00	6.3
	TOTAL OFFICE FURNITURE AND EQUIPMENT				9,740,127.69	9,002,338	737,790	117,397	1.21	
391.11	OFFICE FURNITURE AND EQUIPMENT - COMPUTERS		5-SQ	0	98,720.53	44,000	54,721	19,744	20.00	2.8
392.00	TRANSPORTATION EQUIPMENT		15-SQ	0	377,991.46	223,100	154,891	25,210	6.67	6.1
393.00	STORES EQUIPMENT		30-SQ	0	2,092,704.95	1,486,000	606,705	69,691	3.33	8.7
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT		25-SQ	0	19,602,169.90	5,503,000	14,099,170	784,359	4.00	18.0
395.00	LABORATORY EQUIPMENT									
	FULLY ACCRUED		FULLY ACCRUED		2,001,114.14	2,001,114	0	0	-	-
	AMORTIZED		20-SQ	0	1,935,363.58	1,313,000	622,364	96,792	5.00	6.4
	TOTAL LABORATORY EQUIPMENT				3,936,477.72	3,314,114	622,364	96,792	2.46	

PUBLIC SERVICE COMPANY OF OKLAHOMA

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2014

	ACCOUNT	PROBABLE RETIREMENT DATE	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
396.00	POWER OPERATED EQUIPMENT									
	FULLY ACCRUED		FULLY ACCRUED		287,251.00	287,251	0	0	-	-
	AMORTIZED		18-SQ	0	989,820.73	538,800	451,021	55,032	5.56	8.2
	TOTAL POWER OPERATED EQUIPMENT				1,277,071.73	826,051	451,021	55,032	4.31	
397.00	COMMUNICATION EQUIPMENT									
	FULLY ACCRUED		FULLY ACCRUED		32,578,762.22	32,578,762	0	0	-	-
	AMORTIZED		15-SQ	0	25,380,993.65	13,530,000	11,850,994	1,691,968	6.67	7.0
	TOTAL COMMUNICATION EQUIPMENT				57,959,755.87	46,108,762	11,850,994	1,691,968	2.92	
397.16	COMMUNICATION EQUIPMENT - AMI		15-SQ	0	2,670,468.27	13,157	2,657,311	178,120	6.67 ****	14.5
398.00	MISCELLANEOUS EQUIPMENT		20-SQ	0	5,200,680.69	2,173,000	3,027,681	260,241	5.00	11.6
399.30	OTHER TANGIBLE PROPERTY		40-SQ	0	529,811.29	434,800	95,011	13,243	2.50	7.2
	TOTAL GENERAL PLANT				**156,686,447.22**	**81,362,377**	**80,644,118**	**4,392,348**	**2.80**	
	TOTAL DEPRECIABLE PLANT				**4,430,090,599.70**	**1,569,365,922**	**4,302,226,970**	**139,406,164**	**3.15**	
	UNRECOVERED RESERVE FOR AMORTIZATION									
391.00	OFFICE FURNITURE					(1,749,205)		349,841 *****		
391.11	OFFICE FURNITURE AND EQUIPMENT - COMPUTERS					(66,103)		13,221		
392.00	TRANSPORTATION EQUIPMENT					(1,086,231)		217,246 *****		
393.00	STORES EQUIPMENT					63,877		(12,775) *****		
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT					573,918		(114,784) *****		
395.00	LABORATORY EQUIPMENT					(685,301)		137,060 *****		
396.00	POWER OPERATED EQUIPMENT					(258,463)		51,693 *****		
397.00	COMMUNICATION EQUIPMENT					927,292		(185,458) *****		
398.00	MISCELLANEOUS EQUIPMENT					32,290		(6,458) *****		
399.30	OTHER TANGIBLE PROPERTY					(109,116)		21,823 *****		
	TOTAL UNRECOVERED RESERVE FOR AMORTIZATION					**(2,357,042)**		**471,408**		
	NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED									
303.00	MISCELLANEOUS INTANGIBLE PLANT				50,053,125.83					
310.00	LAND AND LAND RIGHTS				7,134,369.25					
317.00	ARO - STEAM				27,361,812.63	3,706,674				
340.00	LAND AND LAND RIGHTS				62,660.00					
347.00	ARO - OTHER PRODUCTION				23,811.71	12,327				
350.00	LAND AND LAND RIGHTS				3,150,433.43					
360.00	LAND AND LAND RIGHTS				7,524,337.87	(12,830)				
389.00	LAND AND LAND RIGHTS				7,032,663.20	6,591				
399.19	ARO - GENERAL				553,653.00	370,722				
	TOTAL NONDEPRECIABLE AND ACCOUNTS NOT STUDIED				**102,896,866.92**	**4,083,484**				
	TOTAL ELECTRIC PLANT				**4,532,987,466.62**	**1,571,092,364**	**4,302,226,970**	**139,877,572**		

* LIFE SPAN PROCEDURE USED. CURVE SHOWN IS INTERIM SURVIVOR CURVE.

** DEPRECIATION RATES SHOWN HERE FOR NORTHEAST 3 AND 4 ARE EFFECTIVE THROUGH APRIL 2016 AND ARE BASED ON THE PLANT BALANCES AS OF DECEMBER 31, 2014. UPON RETIREMENT OF NORTHEAST UNIT 4 THE DEPRECIATION RATES SI CHANGED TO REFLECT THE NEW PLANT BALANCES WHILE KEEPING THE ANNUAL ACCRUAL AMOUNTS THE SAME. THE DEPRECIATION RATES TO BE USED SUBSEQUENT TO THE RETIREMENT OF NORTHEAST UNIT 4 ARE AS FOLLOWS:

ACCOUNT 311 4.88 %
ACCOUNT 312 6.89 %
ACCOUNT 314 10.09 %
ACCOUNT 315 5.16 %
ACCOUNT 316 6.13%

*** ENVIRONMENTAL COSTS FOR NORTHEAST UNIT 3 TO BE INSTALLED BY FEBRUARY 29, 2016 SHOULD HAVE A DEPRECIATION RATE OF 9.38%

**** DEPRECIATION RATES FOR ACCOUNTS 370.00, 370.16 AND 397.16 ARE THE APPROVED RATES FROM CAUSE NO. PUD 201300217, ORDER NO. 639314

***** 5-YEAR AMORTIZATION OF UNRECOVERED RESERVE RELATED TO UTILIZATION OF AMORTIZATION ACCOUNTING.

SOUTHWESTERN ELECTRIC POWER COMPANY

DEPRECIATION STUDY REPORT

OF

ELECTRIC PLANT IN SERVICE

AT DECEMBER 31, 2015

SOUTHWESTERN ELECTRIC POWER COMPANY
SCHEDULE III - COMPARISON OF MORTALITY CHARACTERISTICS
DEPRECIATION STUDY AS OF DECEMBER 31, 2015

(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Existing Rates					Current Study Rates				
		Average Service Life (Years)	Iowa Curve	Salvage Factor	Cost of Removal Factor	Net Salvage Factor	Average Service Life (Years)	Iowa Curve	Salvage Factor	Cost of Removal Factor	Net Salvage Factor
TRANSMISSION PLANT											
350.1	Rights of Way	70	R5.0	0%	0%	0%	70	R5.0	0%	0%	0%
352.0	Structures & Improvements	60	S5.0	2%	7%	-5%	65	S5.0	3%	8%	-5%
353.0	Station Equipment	60	R2.5	3%	16%	-13%	60	R2.5	8%	18%	-10%
354.0	Towers & Fixtures	55	L4.0	2%	15%	-13%	60	L3.0	1%	15%	-14%
355.0	Poles & Fixtures	50	S0.0	1%	68%	-67%	50	S0.5	1%	66%	-65%
356.0	Overhead Conductor & Devices	60	R2.5	2%	42%	-40%	65	R3.0	13%	55%	-42%
357.0	Underground Conduit	50	R1.5	0%	0%	0%	50	R1.5	0%	0%	0%
358.0	Underground Conductor and Devices	50	R1.5	0%	0%	0%	50	R1.5	0%	0%	0%
359.0	Roads and Trails	65	R4.0	0%	0%	0%	65	R4.0	0%	0%	0%
DISTRIBUTION PLANT											
360.1	Rights of Way	60	R4.0	0%	0%	0%	60	R4.0	0%	0%	0%
361.0	Structures & Improvements	60	R3.0	0%	11%	-11%	65	R3.0	0%	11%	-11%
362.0	Station Equipment	55	S0.0	5%	21%	-16%	55	S0.5	5%	21%	-16%
364.0	Poles, Towers, & Fixtures	54	L0.0	16%	60%	-44%	55	R0.5	15%	69%	-54%
365.0	Overhead Conductor & Devices	45	R0.5	7%	41%	-34%	44	R1.0	6%	44%	-38%
366.0	Underground Conduit	65	R3.0	0%	0%	0%	70	R4.0	0%	0%	0%
367.0	Underground Conductor	50	R1.5	6%	22%	-16%	45	R2.5	6%	22%	-16%
368.0	Line Transformers	50	L0.0	9%	15%	-6%	50	L0.0	9%	15%	-6%
369.0	Services	55	R1.5	0%	61%	-61%	55	R2.5	0%	74%	-74%
370.0	Meters	30	R1.0	12%	59%	-47%	30	R1.0	9%	44%	-35%
371.0	Installations on Custs. Prem.	25	L0.0	8%	41%	-33%	25	L0.0	8%	41%	-33%
373.0	Street Lighting & Signal Sys.	35	L0.0	10%	42%	-32%	37	L0.0	10%	42%	-32%
GENERAL PLANT											
390.0	Structures & Improvements	51	L0.5	9%	12%	-3%	55	L0.5	9%	12%	-3%
391.0	Office Furniture & Equipment	30	SQ	2%	1%	1%	30	SQ	2%	1%	1%
391.1	Computers	7	SQ	0%	0%	0%	7	SQ	0%	0%	0%
392.0	Transportation Equipment	20	SQ	8%	0%	8%	20	SQ	8%	0%	8%
393.0	Stores Equipment	30	SQ	2%	4%	-2%	30	SQ	2%	4%	-2%
394.0	Tools Shop & Garage Equipment	35	SQ	0%	1%	-1%	35	SQ	0%	1%	-1%
395.0	Laboratory Equipment	35	SQ	0%	2%	-2%	35	SQ	0%	2%	-2%
396.0	Power Operated Equipment	20	SQ	4%	0%	4%	20	SQ	2%	0%	2%
397.0	Communication Equipment	20	SQ	3%	0%	3%	20	SQ	2%	0%	2%
398.0	Miscellaneous Equipment	20	SQ	2%	1%	1%	20	SQ	1%	0%	1%