Direct Testimony and Exhibits
John J. Spanos

Before the South Dakota Public Utilities Commission
of the State of South Dakota

In the Matter of the Application of
Black Hills Power, Inc., a South Dakota Corporation

For Authority to Increase Rates
in South Dakota

Docket No. EL14-___

March 31, 2014

Q. Please state your name and address.

A. My name is John J. Spanos. My business address is 207 Senate Avenue, Camp Hill, Pennsylvania, 17011.

Q. Are you associated with any firm?

A. Yes. I am associated with the firm of Gannett Fleming, Inc.

Q. How long have you been associated with Gannett Fleming, Inc.?

A. I have been associated with the firm since college graduation in June 1986.

Q. What is your position with the firm?

A. I am a Senior Vice President.

Q. On whose behalf are you testifying in this case?

A. I am testifying on behalf of Black Hills Power, Inc. ("BHP" or the "Company").

Qualifications

Q. Please state your qualifications.

A. I have over 27 years of depreciation experience which includes expert testimony in over 160 cases before 38 regulatory commissions, including this Commission. Please refer to Exhibit JJS-1 for my qualifications.

Purpose of Testimony

Q. What is the purpose of your testimony?

A. I sponsor the Depreciation Study performed for Black Hills Power attached hereto as Exhibit JJS-2 ("Depreciation Study"). The Depreciation Study sets forth the calculated annual depreciation accrual rates by account as of December 31, 2012. Based on the Depreciation Study, I recommend depreciation rates using the December 31, 2012, plant and reserve balances for approval. The proposed rates appropriately reflect the rates at which the Company's assets should be depreciated over their useful lives and are based on the most commonly used methods and procedures for determining depreciation rates.

Depreciation Study

Q. Please define the concept of depreciation.

A. Depreciation refers to the loss in service value not restored by current maintenance incurred in connection with the consumption or prospective retirement of utility plant in the course of service from causes which can be reasonably anticipated or contemplated, against which the Company is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and the requirements of public authorities.

Q. Did you prepare the Depreciation Study filed by BHP in this proceeding?

A. Yes. I prepared the Depreciation Study attached as Exhibit JJS-2. My report is entitled: "Depreciation Study - Calculated Annual Depreciation Accruals Related to Electric Plant as of December 31, 2012." This report sets forth the results of my Depreciation Study for BHP.

Q. In preparing the Depreciation Study, did you follow generally accepted practices in the field of depreciation valuation?

A. Yes.

Q. Are the methods and procedures of this Depreciation Study consistent with past practices?

A. The methods and procedures of this study are the same as those utilized in the past by this Company as well as others before this Commission. Depreciation rates are determined based on the average service life procedure and the remaining life method.

Q. Please describe the contents of the Depreciation Study.

A. The Depreciation Study is presented in three parts: Part I, Introduction, presents the scope and basis for the Depreciation Study; Part II, Methods Used in Study, includes descriptions of the basis of the study, the estimation of survivor curves and net salvage and the calculation of annual and accrued depreciation; and Part III, Results of Study, presents a description of the results, a summary of the depreciation calculations, graphs and tables that relate to the service life and net salvage analyses, and the detailed depreciation calculations.

The table on pages III-4 through III-8 of the Depreciation Study presents the estimated survivor curve, the net salvage percent, the original cost as of December 31, 2012, the book depreciation reserve and the calculated annual depreciation accrual and rate for each account or subaccount. The section beginning on page III-9 presents the results of the retirement rate analyses prepared as the historical bases for the service life estimates. The section beginning on page III-118 presents the results of the salvage analysis. The section beginning on page III-141 presents the depreciation calculations related to surviving original cost as of December 31, 2012.

Q. Please explain how you performed your Depreciation Study.

A. I used the straight line remaining life method of depreciation, with the average service life procedure. The annual depreciation is based on a method of depreciation accounting that seeks to distribute the unrecovered cost of fixed capital assets over the estimated remaining useful life of each unit, or group of assets, in a systematic and reasonable manner.

For General Plant Accounts 391.01, 391.03, 391.05, 393.0, 394.0, 395.0, 397.0 and 398.0; I used the straight line remaining life method of amortization. The account numbers identified throughout my testimony represent those in effect as of December 31, 2012. The annual amortization is based on amortization accounting that distributes the unrecovered cost of fixed capital assets over the remaining amortization period selected for each account and vintage.

Q. How did you determine the recommended annual depreciation accrual rates?

A. I did this in two phases. In the first phase, I estimated the service life and net salvage characteristics for each depreciable group, that is, each plant account or subaccount identified as having similar characteristics. In the second phase, I calculated the composite remaining lives and annual depreciation accrual rates based on the service life and net salvage estimates determined in the first phase.

Q. Please describe the first phase of the Depreciation Study, in which you estimated the service life and net salvage characteristics for each depreciable group.

A. The service life and net salvage study consisted of compiling historical data from records related to BHP's plant; analyzing these data to obtain historical trends of survivor characteristics; obtaining supplementary information from management and operating personnel concerning practices and plans as they relate to plant operations; and interpreting the above data and the estimates used by other electric utilities to form judgments of average service life and net salvage characteristics.

Q. What historical data did you analyze for the purpose of estimating service life characteristics?

A. Where available, I analyzed the Company's accounting entries that record plant transactions during the period 1950 through 2012, however, the earliest year of data varied by account. The transactions included additions, retirements, transfers, sales, and the related balances.

Q. What method did you use to analyze these service life data?

A. I used the retirement rate method for most plant accounts. This is the most appropriate method when retirement data covering a long period of time is available because this method determines the average rates of retirement actually experienced by the Company during the period of time covered by the Depreciation Study.

Q. Please describe how you used the retirement rate method to analyze BHP's service life data.

A. I applied the retirement rate analysis to each different group of property in the study. For each property group, I used the retirement rate data to form a life table which, when plotted, shows an original survivor curve for that property group. Each original survivor curve represents the average survivor pattern experienced by the several vintage groups during the experience band studied. The survivor patterns do not necessarily describe the life characteristics of the property group; therefore, interpretation of the original survivor curves is required in order to use them as valid considerations in estimating service life. The Iowa-type survivor curves were used to perform these interpretations.

Q. What is an "Iowa-type survivor curve" and how did you use such curves to estimate the service life characteristics for each property group?

A. Iowa-type curves are a widely-used group of survivor curves that contain the range of survivor characteristics usually experienced by utilities and other industrial companies. The Iowa curves were developed at the Iowa State College Engineering Experiment

Station through an extensive process of observing and classifying the ages at which various types of property used by utilities and other industrial companies had been retired.

Iowa-type curves are used to smooth and extrapolate original survivor curves determined by the retirement rate method. The Iowa curves and truncated Iowa curves were used in this study to describe the forecasted rates of retirement based on the observed rates of retirement and the outlook for future retirements. The estimated survivor curve designations for each depreciable property group indicate the average service life, the family within the Iowa system to which the property group belongs, and the relative height of the mode. For example, the Iowa 45-R2 indicates an average service life of 45 years; a right-moded, or R, type curve (the mode occurs after average life for right-moded curves); and a moderate height, 2, for the mode (possible modes for R type curves range from 1 to 5).

Q. What approach did you use to estimate the lives of significant facilities such as production plants?

A. I used the life span technique to estimate the lives of significant facilities for which concurrent retirement of the entire facility is anticipated. In this technique, the survivor characteristics of such facilities are described by the use of interim survivor curves and estimated probable retirement dates. The interim survivor curves describe the rate of retirement related to the replacement of elements of the facility, such as, for a building, the retirements of plumbing, heating, doors, windows, roofs, etc., that occurs during the life of the facility. The probable retirement date provides the rate of final retirement for each year of installation for the facility by truncating the interim survivor curve for each installation year at its attained age at the date of probable retirement. The use of interim survivor curves truncated at the date of probable retirement provides a consistent method for estimating the lives of the several years of installation for a particular facility inasmuch as a single concurrent retirement for all years of installation will occur when it is retired.

Q. Has Gannett Fleming used this approach in other proceedings?

A. Yes, we have used the life span technique in performing depreciation studies presented to and accepted by many public utility commissions across the United States and Canada. This technique is currently being utilized by BHP in the same manner recommended in this case.

Q. What are the bases for the probable retirement years that you have estimated for each facility?

A. The bases for the probable retirement years are life spans for each facility that are based on judgment, the life assessment study and incorporate consideration of the age, use, size, nature of construction, management outlook and typical life spans experienced and used by other electric utilities for similar facilities. Most of the life spans result in probable retirement years that are many years in the future. As a result, the retirements of these facilities are not yet subject to specific management plans. Such plans would be premature. At the appropriate time, detailed studies of the economics of rehabilitation and continued use or retirement of the structure will be performed and the results incorporated in the estimation of the facility's life span, such as the process conducted for the soon to be retired Ben French, Neil Simpson 1 and Osage plants.

Q. Did you physically observe BHP's plant and equipment as part of your Depreciation

Study?

A. Yes. I made a field review of BHP's property as part of this study during August 2013 to observe representative portions of plant. Field reviews are conducted to become familiar with Company operations and obtain an understanding of the function of the plant and information with respect to the reasons for past retirements and the expected future causes of retirements. This knowledge as well as information from other discussions with management was incorporated in the interpretation and extrapolation of the statistical analyses.

Q. Please describe how you estimated net salvage percentages.

A. I estimated the net salvage percentages by incorporating the historical data for the period 1997 through 2012 and considered estimates for other electric companies. The net salvage percentages are based on a combination of statistical analyses and informed judgment. The statistical analyses consider the cost of removal and gross salvage ratios to the associated retirements during the 16-year period. Trends of these data are also measured based on three-year moving averages and the most recent five-year indications.

Q. Were the net salvage percentages for generating facilities based on the same analyses?

A. Yes, for the interim analyses. The net salvage percentages for generating facilities were based on two components, the interim net salvage percentage and the final net salvage percentage. The interim net salvage percentage is determined based on the historical indications from the period, 1997-2012, of the cost of removal and gross salvage amounts as a percentage of the associated plant retired. The final net salvage or dismantlement component was determined based on the assets anticipated to be retired at the concurrent date of final retirement.

Q. Have you included a dismantlement component into the overall recovery of generating facilities?

A. Yes. A dismantlement component has been included to the net salvage percentage for steam and other production facilities.

Q. Can you explain how the dismantlement component is included in the Depreciation Study?

A. Yes. The dismantlement component is part of the overall net salvage for each location within the production assets. Based on studies for other utilities and the cost estimates of BHP, it was determined that the dismantlement or decommissioning costs for steam and other production facilities is best calculated on a $/KW factor based on surviving plant at final retirement. These amounts at a location basis are added to the interim net salvage percentage of the assets anticipated to be retired on an interim basis to produce the weighted net salvage percentage for each location. The detailed calculation for each location is set forth on pages III-119 and III-120 of Exhibit JJS-2.

Q. How is the dismantlement component calculated for generating facilities?

A. For Ben French, Neil Simpson I and Osage, the Company has specific cost estimates for decommissioning each plant after retirement in October 2014. The costs approximated $130/kw for the three facilities. The $130/kw cost was utilized for the remaining steam facilities in order to determine the dismantlement component for each facility. There were no company specific costs established for combustion turbine facilities, therefore the most common industry standard of $20/kw was utilized for a dismantlement component.

Q. Can you give an example as to how the dismantlement costs are utilized for a net salvage percent?

A. Yes. I will use Ben French as an example. As of December 31, 2012, the plant in service is $14,267,643 for steam generating assets. The cost to dismantle this facility has been determined to be $3,959,606. Based on the life analyses and Company plans it has been estimated that 1.24% or $177,375 will be retired prior to October 2014. This will be the interim retirement amount, so the remaining amount of $14,090,268 or 98.76% will be the terminal retirements. Therefore, the total dismantlement cost is 28% of the plant in service at final retirement. For interim retirements, the net salvage percent for all steam facilities is 20%; therefore, 20% times the 1.24% of plant to be retired on an interim basis is less than 1%. Consequently, when adding together the two percentages it is determined that the net salvage percent to be applied to Ben French in order to get full recovery of the service value is 28%. A similar calculation is done for each generating facility and set forth on pages III-119 and III-120 of the Depreciation Study.

Q. Please describe the second phase of the process that you used in the Depreciation Study in which you calculated composite remaining lives and annual depreciation accrual rates.

A. After I estimated the service life and net salvage characteristics for each depreciable property group, I calculated the annual depreciation accrual rates for each group, using the straight line remaining life method, and using remaining lives weighted consistent with the average service life procedure.

Q. Please describe the straight line remaining life method of depreciation.

A. The straight line remaining life method of depreciation allocates the original cost of the property, less accumulated depreciation, less future net salvage, in equal amounts to each year of remaining service life.

Q. Please describe amortization accounting.

A. In amortization accounting, units of property are capitalized in the same manner as they are in depreciation accounting. Amortization accounting is used for accounts with a large number of units, but small asset values, therefore, depreciation accounting is difficult for these assets because periodic inventories are required to properly reflect plant in service. Consequently, retirements are recorded when a vintage is fully amortized rather than as the units are removed from service. That is, there is no dispersion of retirement. All units are retired when the age of the vintage reaches the amortization period. Each plant account or group of assets is assigned a fixed period which represents an anticipated life during which the asset will render full benefit. For example, in amortization accounting, assets that have a 20-year amortization period will be fully recovered after 20 years of service and taken off the Company's books, but not necessarily removed from service. In contrast, assets that are taken out of service before 20 years remain on the books until the amortization period for that vintage has expired.

Q. Amortization accounting is being utilized for which plant accounts?

A. Amortization accounting is only appropriate for certain General Plant accounts. These accounts are 391.01, 391.03, 391.05, 393.0, 394.0, 395.0, 397.0 and 398.0 which represent slightly more than 1 percent of depreciable plant.

Q. Have you made additional recommendations for the amortization accounts?

A. Yes. In order to achieve a more stable rate for these accounts in the future, I have recommended new additions for all vintages 2013 and subsequent should be amortized consistent with the amortization period.

Q. Please use an example to illustrate how the annual depreciation accrual rate for a particular group of property is presented in your Depreciation Study.

A. I will use Account 365, Overhead Conductors and Devices as an example because it is one of the largest depreciable mass accounts and represents approximately four percent of depreciable plant.

The retirement rate method was used to analyze the survivor characteristics of this property group. Aged plant accounting data was compiled from 1950 through 2012 and analyzed in periods that best represent the overall service life of this property. The life table for the 1950-2012 experience band is presented on pages III-74 and III-75 of the report. The life table displays the retirement and surviving ratios of the aged plant data exposed to retirement by age interval. For example, page III-74 shows $188,892 retired at age 0.5 with $35,272,731 exposed to retirement. Consequently, the retirement ratio is 0.0054 and the surviving ratio is 0.9946. This life table, or original survivor curve, is plotted along with the estimated smooth survivor curve, the 50-R1.5 on page III-73. The net salvage percent is presented on page III-138. The percentage is based on the result of annual gross salvage minus the cost to remove plant assets as compared to the original cost of plant retired during the period 1997 through 2012. The 16-year period experienced $589,748 (($212,499+1,036,750) - $1,838,998) in net salvage for $2,935,389 plant retired. The result is negative net salvage of 20 percent ($589,748/$2,935,389). Based on the overall negative 20 percent net salvage and the most recent five years of negative 24 percent as well as industry ranges and Company expectations, it was determined that negative 20 percent was the most appropriate estimate.

My calculation of the annual depreciation related to the original cost at December 31, 2012, of electric plant is presented on pages III-193 and III-194. The calculation is based on the 50-R1.5 survivor curve, 20 percent negative net salvage, the attained age, and the allocated book reserve. The tabulation sets forth the installation year, the original cost, calculated accrued depreciation, allocated book reserve, future accruals, remaining life and annual accrual. These totals are brought forward to the table on page III-6.

Q. Have you developed proposed depreciation accrual rates for the Cheyenne Prairie Generating Station?

A. Yes, I have. The depreciation accrual rates are recommended for the Cheyenne Prairie Generating Station when the facility is placed in service during 2014. The Cheyenne Prairie facility relating to the Combined Cycle unit is new construction for BHP. The calculated depreciation accrual rates are determined based on the average service life procedure and the remaining life method. The rates for each account are based on the most appropriate interim survivor curve and net salvage percent for other production plants and a life span. The life span for the Cheyenne Prairie Combined Cycle is 35 years. The life span is within the industry range for the type of facility. The proposed rates for each account utilizing these proposed parameters are set forth on page III-8 of the Depreciation Study.

Conclusion

Q. Was the Depreciation Study filed by BHP in this proceeding prepared by you or under your direction and control?

A. Yes.

Q. Can you summarize the results of your Depreciation Study?

A. Yes. The depreciation rates as of December 31, 2012 appropriately reflect the rates at which the value of BHP's assets have been consumed over their useful lives to date. These rates are based on the most commonly used methods and procedures for determining depreciation rates. The life and salvage parameters are based on widely used techniques and the depreciation rates are based on the average service life procedure and remaining life method. Therefore, the depreciation rates set forth on pages III-4 through III-8 of Exhibit JJS-2 represent the calculated rates as of December 31, 2012.

Q. Does this conclude your direct testimony?

A. Yes.

Exhibit JJS-1

Q. Please state your name.

A. My name is John J. Spanos.

Q. What is your educational background?

A. I have Bachelor of Science degrees in Industrial Management and Mathematics from Carnegie-Mellon University and a Master of Business Administration from York College.

Q. Do you belong to any professional societies?

A. Yes. I am a member and current President of the Society of Depreciation Professionals and a member of the American Gas Association/Edison Electric Institute Industry Accounting Committee.

Q. Do you hold any special certification as a depreciation expert?

A. Yes. The Society of Depreciation Professionals has established national standards for depreciation professionals. The Society administers an examination to become certified in this field. I passed the certification exam in September 1997 and was recertified in August 2003, February 2008 and January 2013.

Q. Please outline your experience in the field of depreciation.

A. In June, 1986, I was employed by Gannett Fleming Valuation and Rate Consultants, Inc. as a Depreciation Analyst. During the period from June, 1986 through December, 1995, I helped prepare numerous depreciation and original cost studies for utility companies in various industries. I helped perform depreciation studies for the following telephone companies: United Telephone of Pennsylvania, United Telephone of New Jersey, and Anchorage Telephone Utility. I helped perform depreciation studies for the following companies in the railroad industry: Union Pacific Railroad, Burlington Northern Railroad, and Wisconsin Central Transportation Corporation.

I helped perform depreciation studies for the following organizations in the electric utility industry: Chugach Electric Association, The Cincinnati Gas and Electric Company (CG&E), The Union Light, Heat and Power Company (ULH&P), Northwest Territories Power Corporation, and the City of Calgary - Electric System.

I helped perform depreciation studies for the following pipeline companies: TransCanada Pipelines Limited, Trans Mountain Pipe Line Company Ltd., Interprovincial Pipe Line Inc., Nova Gas Transmission Limited and Lakehead Pipeline Company.

I helped perform depreciation studies for the following gas utility companies: Columbia Gas of Pennsylvania, Columbia Gas of Maryland, The Peoples Natural Gas Company, T. W. Phillips Gas & Oil Company, CG&E, ULH&P, Lawrenceburg Gas Company and Penn Fuel Gas, Inc.

I helped perform depreciation studies for the following water utility companies: Indiana-American Water Company, Consumers Pennsylvania Water Company and The York Water Company; and depreciation and original cost studies for Philadelphia Suburban Water Company and Pennsylvania-American Water Company.

In each of the above studies, I assembled and analyzed historical and simulated data, performed field reviews, developed preliminary estimates of service life and net salvage, calculated annual depreciation, and prepared reports for submission to state public utility commissions or federal regulatory agencies. I performed these studies under the general direction of William M. Stout, P.E.

In January, 1996, I was assigned to the position of Supervisor of Depreciation Studies. In July, 1999, I was promoted to the position of Manager, Depreciation and

Valuation Studies. In December, 2000, I was promoted to the position as Vice-President of Gannett Fleming Valuation and Rate Consultants, Inc. and in April 2012, I was promoted to my present position as Senior Vice President of the Valuation and Rate Division of Gannett Fleming Inc. In my current position I am responsible for conducting all depreciation, valuation and original cost studies, including the preparation of final exhibits and responses to data requests for submission to the appropriate regulatory bodies.

Since January 1996, I have conducted depreciation studies similar to those previously listed including assignments for Pennsylvania-American Water Company; Aqua Pennsylvania; Kentucky-American Water Company; Virginia-American Water Company; Indiana-American Water Company; Hampton Water Works Company; Omaha Public Power District; Enbridge Pipe Line Company; Inc.; Columbia Gas of Virginia, Inc.; Virginia Natural Gas Company National Fuel Gas Distribution Corporation - New York and Pennsylvania Divisions; The City of Bethlehem - Bureau of Water; The City of Coatesville Authority; The City of Lancaster - Bureau of Water; Peoples Energy Corporation; The York Water Company; Public Service Company of Colorado; Enbridge Pipelines; Enbridge Gas Distribution, Inc.; Reliant Energy-HLP; Massachusetts-American Water Company; St. Louis County Water Company; Missouri-American Water Company; Chugach Electric Association; Alliant Energy; Oklahoma Gas & Electric Company; Nevada Power Company; Dominion Virginia Power; NUI-Virginia Gas Companies; Pacific Gas & Electric Company; PSI Energy; NUI - Elizabethtown Gas Company; Cinergy Corporation – CG&E; Cinergy Corporation – ULH&P; Columbia Gas of Kentucky; South Carolina Electric & Gas Company; Idaho Power Company; El Paso

Electric Company; Central Hudson Gas & Electric; Centennial Pipeline Company; CenterPoint Energy-Arkansas; CenterPoint Energy – Oklahoma; CenterPoint Energy – Entex; CenterPoint Energy - Louisiana; NSTAR – Boston Edison Company; Westar Energy, Inc.; United Water Pennsylvania; PPL Electric Utilities; PPL Gas Utilities; Wisconsin Power & Light Company; TransAlaska Pipeline; Avista Corporation; Northwest Natural Gas; Allegheny Energy Supply, Inc.; Public Service Company of North Carolina; South Jersey Gas Company; Duquesne Light Company; MidAmerican Energy Company; Laclede Gas; Duke Energy Company; E.ON U.S. Services Inc.; Elkton Gas Services; Anchorage Water and Wastewater Utility; Kansas City Power and Light; Duke Energy North Carolina; Duke Energy South Carolina; Duke Energy Ohio Gas; Duke Energy Kentucky; Duke Energy Indiana; Northern Indiana Public Service Company; Tennessee-American Water Company; Columbia Gas of Maryland; Bonneville Power Administration; NSTAR Electric and Gas Company; EPCOR Distribution, Inc.; B. C. Gas Utility, Ltd; Entergy Arkansas; Entergy Texas; Entergy Mississippi; Entergy Louisiana; Entergy Gulf States Louisiana; the Borough of Hanover; Madison Gas and Electric; Central Maine Power; PEPCO; PacifiCorp; Minnesota Energy Resource Group; Jersey Central Power & Light Company; Cheyenne Light, Fuel and Power Company; Central Vermont Public Service Corporation; Green Mountain Power; Portland General Electric Company; Atlantic City Electric; Nicor Gas Company; Black Hills Power; Black Hills Colorado Gas; Public Service Company of Oklahoma; Peoples Gas Light and Coke Company; North Shore Gas Company; and Greater Missouri Operations. My additional duties include determining final life and salvage estimates, conducting field reviews, presenting recommended depreciation rates to management for its consideration and supporting such rates before regulatory bodies.

Q. Have you submitted testimony to any state utility commission on the subject of utility plant depreciation?

A. Yes. I have submitted testimony to the Pennsylvania Public Utility Commission; the Commonwealth of Kentucky Public Service Commission; the Public Utilities Commission of Ohio; the Nevada Public Utility Commission; the Public Utilities Board of New Jersey; the Missouri Public Service Commission; the Massachusetts Department of Telecommunications and Energy; the Alberta Energy & Utility Board; the Idaho Public Utility Commission; the Louisiana Public Service Commission; the State Corporation Commission of Kansas; the Oklahoma Corporate Commission; the Public Service Commission of South Carolina; Railroad Commission of Texas – Gas Services Division; the New York Public Service Commission; Illinois Commerce Commission; the Indiana Utility Regulatory Commission; the California Public Utilities Commission; the Federal Energy Regulatory Commission ("FERC"); the Arkansas Public Service Commission; the Public Utility Commission of Texas; Maryland Public Service Commission; Washington Utilities and Transportation Commission; The Tennessee Regulatory Commission; the Regulatory Commission of Alaska; Minnesota Public Utility Commission; Utah Public Service Commission; District of Columbia Public Service Commission; the Mississippi Public Service Commission; Delaware Public Service Commission; Virginia State Corporation Commission; Colorado Public Utility Commission; Oregon Public Utility Commission; Wisconsin Public Service Commission;

Wyoming Public Service Commission; Maine Public Utility Commission; Iowa Utility Board; and the North Carolina Utilities Commission.

Q. Have you had any additional education relating to utility plant depreciation?

A. Yes. I have completed the following courses conducted by Depreciation Programs, Inc.: “Techniques of Life Analysis,” “Techniques of Salvage and Depreciation Analysis,” “Forecasting Life and Salvage,” “Modeling and Life Analysis Using Simulation,” and “Managing a Depreciation Study.” I have also completed the “Introduction to Public Utility Accounting” program conducted by the American Gas Association.

Q. Does this conclude your qualification statement?

A. Yes.

LIST OF CASES IN WHICH JOHN J. SPANOS SUBMITTED TESTIMONY

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
1.	1998	PA PUC	R-00984375	City of Bethlehem-Bureau of Water	Original Cost and Depreciation
2.	1998	PA PUC	R-00984567	City of Lancaster	Original Cost and Depreciation
3.	1999	PA PUC	R-00994605	The York Water Company	Depreciation
4.	2000	D.T.&E.	DTE 00-105	Massachusetts-American Water Company	Depreciation
5.	2001	PA PUC	R-00016114	City of Lancaster	Original Cost and Depreciation
6.	2001	PA PUC	R-00016236	The York Water Company	Depreciation
7.	2001	PA PUC	R-00016339	Pennsylvania-American Water Company	Depreciation
8.	2001	PUC of Ohio	01-1228-GA-AIR	Cinergy Corp. - Cincinnati Gas and Electric Company	Depreciation
9.	2001	KY PSC	2001-092	Cinergy Corp. - Union Light, Heat and Power Company	Depreciation
10.	2002	PA PUC	R-00016750	Philadelphia Suburban Water Co.	Depreciation
11.	2002	KY PSC	2002-00145	Columbia Gas of Kentucky	Depreciation
12.	2002	NJ BPU	GR02040245	NUI Corporation/Elizabethtown Gas Co.	Depreciation
13.	2002	ID PUC	IPC-E-03-7	Idaho Power Company	Depreciation
14.	2003	PA PUC	R-0027975	The York Water Company	Depreciation
15.	2003	IN URC	Cause 42359	Cinergy Corp. - PSI Energy, Inc.	Depreciation
16.	2003	PA PUC	R-00038304	Pennsylvania-American Water Co.	Depreciation
17.	2003	MO PSC	WR-2003-0500	Missouri-American Water Co.	Depreciation
18.	2003	FERC	ER-03-1274-000	NSTAR - Boston Edison Company	Depreciation
19.	2003	NJ BPU	BPU 03080683	South Jersey Gas Company	Depreciation
20.	2003	NV PUC	Doc. 03-10001	Nevada Power Company	Depreciation
21.	2003	LA PSC	U-27676	CenterPoint Energy - Arkla	Depreciation
22.	2003	PA PUC	R-00038805	Pennsylvania Suburban Water Co.	Depreciation
23.	2004	Alberta Energy & Util. Board	1306821	EPCOR Distribution, Inc.	Depreciation
24.	2004	PA PUC	R-00038168	National Fuel Gas Distribution Corp. (Pa.)	Depreciation
25.	2004	PA PUC	R-00049255	PPL Electric Utilities	Depreciation
26.	2004	PA PUC	R-00049165	The York Water Company	Depreciation
27.	2004	OK. Corp.Cm.	PUD 200400187	CenterPoint Energy - Arkla	Depreciation
28.	2004	OH PUC	04-680-El-AIR	Cinergy Corp. - Cincinnati Gas and Electric Company	Depreciation

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
29.	2004	RR Comm of Tx.	GUD#	CenterPoint Energy – Entex Gas Svcs. Div.	Depreciation
30.	2004	NY PUC	04-G-1047	National Fuel Gas Distribution Corp. (NY)	Depreciation
31.	2004	AR PSC	04-121-U	CenterPoint Energy - Arkla	Depreciation
32.	2005	IL Comm Cm	05-	North Shore Gas Company	Depreciation
33.	2005	IL Comm. Cm.	05-	Peoples Gas Light and Coke Company	Depreciation
34.	2005	KY PSC	2005-00042	Union Light Heat & Power	Depreciation
35.	2005	IL Comm Cm.	05-0308	MidAmerican Energy Company	Depreciation
36.	2005	MO PSC	GR-2005	Laclede Gas Company	Depreciation
37.	2005	KS Corp.Cm.	05-WSEE-981-RTS	Westar Energy	Depreciation
38.	2005	RR Comm of Tx	GUD #	CenterPoint Energy – Entex Gas Svcs. Div.	Depreciation
39.	2005	FERC		Cinergy Corporation	Accounting
40.	2005	OK Corp.Cm.	PUD 200500151	Oklahoma Gas and Electric Co.	Depreciation
41.	2005	MA Dept Telcom & Energy	DTE 05-85	NSTAR	Depreciation
42.	2005	NY PUC	05-E-0934/05-G-0935	Central Hudson Gas & Electric Co.	Depreciation
43.	2005	AK Reg Cm	U-04-102	Chugach Electric Association	Depreciation
44.	2005	CA PUC	A.05-12-002	Pacific Gas & Electric	Depreciation
45.	2006	PA PUC	R-00051030	Aqua Pennsylvania, Inc.	Depreciation
46.	2006	PA PUC	R-00051178	T.W. Phillips Gas and Oil Co.	Depreciation
47.	2006	NC Util Cm.		Pub. Service Co. of North Carolina	Depreciation
48.	2006	PA PUC	R-00051167	City of Lancaster	Depreciation
49.	2006	PA PUC		Duquesne Light Company	Depreciation
50.	2006	PA PUC	R-00061322	The York Water Company	Depreciation
51.	2006	PA PUC	R-00051298	PPL Gas Utilities	Depreciation
52.	2006	PUC of Tx.	32093	CenterPoint Energy - Houston Electric	Depreciation
53.	2006	PSC of SC		Duke Energy Kentucky	Depreciation
				SCANA	Depreciation
54.	2006	AK Reg Cm	U-06-6	Municipal Light and Power	Depreciation
55.	2006	DE PSC		Delmarva Power and Light	Depreciation
56.	2006	IN URC	IURC43081	Indiana American Water Co.	Depreciation
57.	2006	AK Reg Cm	U-06-134	Chugach Electric Association	Depreciation
58.	2006	MO PSC	WR-2007-0216	Missouri American Water Company	Depreciation
59.	2006	FERC	ISO5-82, et.al	TransAlaska Pipeline	Depreciation

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
60.	2006	PA PUC	R-00061493	National Fuel Gas Distribution Corp. (PA)	Depreciation
61.	2007	NC Util Cm	E-7	Duke Energy Carolinas, LLC	Depreciation
62.	2007	OH PSC	08-709-EL-AIR	Duke Energy Ohio Gas	Depreciation
63.	2007	PA PUC	R-00072155	PPL Electric Utilities Corp.	Depreciation
64.	2007	KY PSC	2007-00143	Kentucky American Water Company	Depreciation
65.	2007	PA PUC	R-00072229	Pennsylvania American Water Co.	Depreciation
66.	2007	KY PSC	2007-00008	NiSource - Columbia Gas of Kentucky	Depreciation
67.	2007	NY PSC	07-G-0141	National Fuel Gas Distribution Corp. (NY)	Depreciation
68.	2008	AK PSC	U-08-004	Anchorage Water & Wastewater Utility	Depreciation
69.	2008	TN Reg Ath	08-00039	Tennessee American Water Company	Depreciation
70.	2008	DE PSC	08-96	Artesian Water Company	Depreciation
71.	2008	PA PUC	R-2008-2023067	The York Water Company	Depreciation
72.	2008	KS CC	08-WSEE1-RTS	Westar Energy	Depreciation
73.	2008	IN URC	43526	Northern Indiana Public Service Co.	Depreciation
74.	2008	IN URC	43501	Duke Energy Indiana	Depreciation
75.	2008	MD PSC	9159	NiSource - Columbia Gas of Maryland	Depreciation
76.	2008	KY PSC	2008-000251	Kentucky Utilities	Depreciation
77.	2008	KY PSC	2008-000252	Louisville Gas & Electric	Depreciation
78.	2008	PA PUC	2008-2032689	Pennsylvania American Water Co.	Depreciation
79.	2008	NY PSC	08-E887/08-G0888	Central Hudson	Depreciation
80.	2008	WV TC	VE-080416/VG-8080417	Avista Corporation	Depreciation
81.	2009	IL CC	09-	Peoples Gas, Light and Coke Co.	Depreciation
82.	2009	IL CC	09-	North Shore Gas Company	Depreciation
83.	2009	DC PSC	1076	Potomac Electric Power Company	Depreciation
84.	2009	KY PSC	2009-00141	NiSource – Columbia Gas of Kentucky	Depreciation
85.	2009	FERC	ER08-1056-002	Entergy Services	Depreciation
86.	2009	PA PUC	R-2009-2097323	Pennsylvania American Water Co.	Depreciation
87.	2009	NC Util Cm	E-7, Sub 909	Duke Energy Carolinas, LLC	Depreciation
88.	2009	KY PSC	2009-00202	Duke Energy Kentucky	Depreciation
89.	2009	VA	St CCPUE-2009-00059	Aqua Virginia, Inc.	Depreciation
90.	2009	PA PUC	2009-2132019	Aqua Pennsylvania, Inc.	Depreciation

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
91.	2009	MS PSC	09-	Entergy Mississippi	Depreciation
92.	2009	AK PSC	09-084-U	Entergy Arkansas	Depreciation
93.	2009	TX PUC	37744	Entergy Texas	Depreciation
94.	2009	TX PUC	37690	El Paso Electric Co.	Depreciation
95.	2009	PA PUC	R-2009-2106908	The Borough of Hanover	Depreciation
96.	2009	KS Corp Cm	10-KCPE-415-RTS	Kansas City Power & Light	Depreciation
97.	2009	PA PUC	R-2009-	United Water Pennsylvania	Depreciation
98.	2009	OH PUC		Aqua Ohio Water Company.	Depreciation
99.	2009	PSC of WI	3270-DU-103	Madison Gas & Electric Co.	Depreciation
100.	2009	MO PSC	WR-2010	Missouri American Water Co.	Depreciation
101.	2009	AK Reg Cm.	U-09-097	Chugach Electric Association	Depreciation
102.	2010	IN URC		Northern Indiana Public Service Co.	Depreciation
103.	2010	PSC of WI	6690-DU-104	Wisconsin Public Service Corp.	Depreciation
104.	2010	PA PUC	R-2010-2161694	PPL Electric Utilities Corp.	Depreciation
105.	2010	KY PSC	2010-00036	Kentucky American Water Co.	Depreciation
106.	2010	PA PUC	R-2009-2149262	Columbia Gas of Pennsylvania	Depreciation
107.	2010	MO PSC	GR-2010-0171	Laclede Gas Company	Depreciation
108.	2010	PSC of SC	2009-489-E	South Carolina Electric & Gas Co.	Depreciation
109.	2010	NJ Bd of PU	ER09080664	Atlantic City Electric	Depreciation
110.	2010	VA St. CC	PUE-2010-00001	Virginia American Water Company	Depreciation
111.	2010	PA PUC	R-2010-2157140	The York Water Company	Depreciation
112.	2010	MO PSC	ER-2010-0356	Greater Missouri Operations Co.	Depreciation
113.	2010	PA PUC	R-2010-2167797	T. W. Phillips Gas and Oil Co.	Depreciation
114.	2010	PSC SC	2009-489-E	SCANA - Electric	Depreciation
115.	2010	PA PUC	R-2010-2201702	Peoples Natural Gas, LLC	Depreciation
116.	2010	AK PSC		Oklahoma Gas and Electric Co.	Depreciation
117.	2010	IN URC		Northern Indiana Public Serv. Co. – NIFL	Depreciation
118.	2010	IN URC		Northern Indiana Public Serv. Co. – Kokomo	Depreciation
119.	2010	PA PUC	R-2010-2166212	Pennsylvania American Water Co. – WW	Depreciation
120.	2010	NC Util Cm.		Aqua North Carolina, Inc.	Depreciation
121.	2011	OH PUC	11-4161-WS-AIR	Ohio American Water Company	Depreciation

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
122.	2011	MS PSC	EC-123-0082-00	Entergy Mississippi	Depreciation
	Year	Jurisdiction	Docket No.	Client/Utility	Subject
123.	2011	CO PUC	11AL-387E	Black Hills Colorado	Depreciation
124.	2011	PA PUC	R-2010-2215623	Columbia Gas of Pennsylvania	Depreciation
125.	2011	IN URC	43114 IGCC 4S	Duke Energy Indiana	Depreciation
126.	2011	FERC	IS11-146-000	Enbridge Pipelines (Southern Lights)	Depreciation
127.	2011	Il CC	11-0217	MidAmerican Energy Corporation	Depreciation
128.	2011	OK CC	201100087	Oklahoma Gas & Electric Co.	Depreciation
129.	2011	PA PUC	2011-2232243	Pennsylvania American Water Company	Depreciation
130.	2011	FERC		Carolina Gas Transmission	Depreciation
131.	2012	WA UTC		Avista Corporation	Depreciation
132.	2012	AK Reg Cm	U-12-009	Chugach Electric Association	Depreciation
133.	2012	MA PUC	DPU 12-25	Columbia Gas of Massachusetts	Depreciation
134.	2012	TX PUC	40094	El Paso Electric Company	Depreciation
135.	2012	ID PUC	IPC-E-12	Idaho Power Company	Depreciation
136.	2012	PA PUC	R-2012-2290597	PPL Electric Utilities	Depreciation
137.	2012	PA PUC	R-2012-2311725	Hanover, Borough of – Bureau of Water	Depreciation
138.	2012	KY PSC	2012-00222	Louisville Gas and Electric Company	Depreciation
139.	2012	KY PSC	2012-00221	Kentucky Utilities Company	Depreciation
140.	2012	PA PUC	R-2012-2285985	Peoples Natural Gas Company	Depreciation
141.	2012	D.C. PSC	Case 1087	Potomac Electric Power Company	Depreciation
142.	2012	OH PSC	12-1682-EL-AIR	Duke Energy Ohio (Electric)	Depreciation
143.	2012	OH PSC	12-1685-GA-AIR	Duke Energy Ohio (Gas)	Depreciation
144.	2012	PA PUC	R-2012-	Lancaster, City of – Bureau of Water	Depreciation
145.	2012	PA PUC	R-2012-2310366	Lancaster, City of – Sewer Fund	Depreciation
146.	2012	PA PUC	R-2012-2321748	Columbia Gas of Pennsylvania	Depreciation
147.	2012	FERC		ITC Holdings	Depreciation
148.	2012	MO PSC	ER-2012-0174	Kansas City Power and Light	Depreciation
149.	2012	MO PSC	ER-2012-0174	KCPL Greater Missouri Operations Co.	Depreciation
150.	2012	MO PSC	GO-2012-0363	Laclede Gas Company	Depreciation
151.	2012	MN PUC	G007,001/D-12-533	Integrys – MN Energy Resource Group	Depreciation
152.	2012	TX PUC		Aqua Texas	Depreciation
153.	2012	PA PUC	2012-2336379	York Water Company	Depreciation
154.	2013	NJ BPU	ER12121071	PHI Service Co.– Atlantic City Electric	Depreciation

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
155.	2013	KY PSC	2013-00167	Columbia Gas of Kentucky	Depreciation
156.	2013	VA St CC	2013-00020	Virginia Electric and Power Co.	Depreciation
157.	2013	IA Util Bd	2013-0004	MidAmerican Energy Corporation	Depreciation
158.	2013	PA PUC	2013-2355276	Pennsylvania American Water Co.	Depreciation
159.	2013	PA PUC	2013-2355886	Peoples TWP LLC	Depreciation
160.	2013	ME PUC	2013-168	Central Maine Power Company	Depreciation
161.	2013	DC PSC	Case 1103	PHI Service Co. – PEPCO	Depreciation
162.	2013	WY PSC	2003-ER-13	Cheyenne Light, Fuel and Power Co.	Depreciation
163.	2013	FERC	ER13- -0000	Kentucky Utilities	Depreciation
164.	2013	FERC	ER13- -0000	MidAmerican Energy Company	Depreciation
165.	2013	FERC	ER13- -0000	PPL Utilities	Depreciation
166.	2013	PA PUC	R-2013-2372129	Duquesne Light Company	Depreciation
167.	2013	NJ BPU	ER12111052	Jersey Central Power and Light Co.	Depreciation
168.	2013	PA PUC	R-2013-2390244	Bethlehem, City of – Bureau of Water	Depreciation
169.	2013	OK CC	UM 1679	Oklahoma, Public Service Company of	Depreciation
170.	2013	IL CC		Nicor Gas Company	Depreciation
171.	2013	WY PSC	20000-427-EA-13	PacifiCorp	Depreciation
172.	2013	UT PSC	13-035-02	PacifiCorp	Depreciation
173.	2013	OR PUC		PacifiCorp	Depreciation
174.	2014	IL CC		Peoples Gas Light and Coke Company	Depreciation
175.	2014	IL CC		North Shore Gas Company	Depreciation
176.	2014	FERC		Duquesne Light Company	Depreciation
177.	2014	WY PSC		Black Hills Power Company	Depreciation

EXHIBIT JJS-2
(Abbreviated)

BLACK HILLS POWER

Rapid City, South Dakota

DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS

RELATED TO ELECTRIC PLANT

AS OF DECEMBER 31, 2012

GANNETT FLEMING, INC. - VALUATION AND RATE DIVISION

Harrisburg, Pennsylvania

Gannett Fleming

Excellence Delivered **As Promised**

November 27, 2013

Black Hills Power
625 Ninth Street
Rapid City, SD 57701

ii

Attention Mr. Chris Kilpatrick
Director of Rates

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the electric plant of Black Hills Power. The study results include annual depreciation rates as of December 31, 2012. The attached report presents a description of the methods used in the estimation of depreciation, summaries of annual and accrued depreciation, the statistical support for the life and net salvage estimates and the detailed tabulations of annual and accrued depreciation.

Respectfully submitted,

GANNETT FLEMING, INC.

John J. Spanos

JOHN J. SPANOS
Sr. Vice President
Valuation and Rate Division

JJS/krm

057073

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I-1 PART I. INTRODUCTION

BLACK HILLS POWER

DEPRECIATION STUDY

PART I. INTRODUCTION

SCOPE

This report presents the results of the depreciation study prepared for Black Hills Power (the Company) as applied to electric plant in service as of December 31, 2012. The report relates to the concepts, methods and basic judgments which underlie recommended annual depreciation accrual rates and amounts related to current electric plant in service.

The service life and net salvage estimates resulting from the study were based on informed judgment which incorporated analyses of historical plant retirement data as recorded through 2012; a review of Company practice and outlook as they relate to plant operation and retirement; and consideration of current practice in the electric industry, including knowledge of service life and salvage estimates used for other electric properties.

PLAN OF REPORT

Part I, Introduction, includes brief statements of the scope and basis of the study. Part II presents descriptions of the methods used in the service life and net salvage studies and the methods and procedures used in the calculation of depreciation. Part III presents the results of the study, including a summary table, survivor curve charts and life tables resulting from the retirement rate method of analysis, tabular results of the historical net salvage analyses, and detailed tabulations of the calculated remaining lives and annual accruals.

BASIS OF STUDY

Depreciation

For all accounts, the annual depreciation was calculated by the straight line method using the average service life procedure and the remaining life basis. For certain general and common plant accounts, the annual depreciation was based on amortization accounting. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group.

Service Life Estimates

The average service life estimates were based on informed judgment which incorporated analyses of available historical service life data related to the property, a review of management's current plans and operating policies, and a general knowledge of service lives experienced and estimated in the electric industry. The use of survivor curves to reflect the expected dispersion of retirements provides a consistent method of estimating depreciation for utility property. Iowa type survivor curves were used to depict the estimated survivor curves for the plant account property groups.

The procedure for estimating service lives consisted of compiling historical data for the plant accounts or depreciable groups, analyzing this history through the use of widely accepted techniques, and forecasting the survivor characteristics for each depreciable group on the basis of interpretations of the historical data analyses and the probable future. The combination of the historical experience and the estimated future yielded estimated survivor curves from which the average service lives were derived.

The Company's service life estimates used in the depreciation calculation incorporated historical data compiled through 2012 from the property records of the

Company. Such data included plant additions, retirements, transfers and other activity. Generally, retirement data for the years 1950 through 2012 were used in the actuarial life table computations which were the primary statistical support of the service life estimates.

A general understanding of the function of the plant and information with respect to the reasons for past retirements and the expected future causes of retirement was obtained through discussions with operating and management personnel conducted during the course of the service life study. Information regarding plans for the future was incorporated in the interpretation and extrapolation of the statistical analyses.

Net Salvage Estimates

The estimates of net salvage were based in part on historical data compiled for the years 1997 through 2012. Gross salvage and cost of removal as recorded to the depreciation reserve account and related to experienced retirements were used. Percentages of the cost of plant retired were calculated for each component of net salvage, on both annual and three-year moving average bases. The most recent five-year average also was calculated for consideration. The estimates of net salvage are expressed as percentages of the cost of plant retired.

II-1

PART II. METHODS USED IN THE ESTIMATION OF DEPRECIATION

PART II. METHODS USED IN THE ESTIMATION OF DEPRECIATION

DEPRECIATION

Depreciation, in public utility regulation, is the loss in service value not restored by current repairs or covered by insurance.

Depreciation, as used in accounting, is a method of distributing fixed capital costs, less net salvage, over a period of time by allocating annual amounts to expense. Each annual amount of such depreciation expense is part of that year's total cost of providing utility service. Normally, the period of time over which the fixed capital cost is allocated to the cost of service is equal to the period of time over which an item renders service, that is, the item's service life. The most prevalent method of allocation is to distribute an equal amount of cost to each year of service life. This method is known as the straight line method of depreciation.

The calculation of annual depreciation based on the straight line method requires the estimation of average life and net salvage. These subjects are discussed in the sections which follow.

SERVICE LIFE AND NET SALVAGE ESTIMATION

Average Service Life

The use of an average service life for a property group implies that the various units in the group have different lives. Thus, the average life may be obtained by determining the separate lives of each of the units, or by constructing a survivor curve by plotting the number of units which survive at successive ages. A discussion of the general concept of survivor curves is presented. Also, the Iowa type survivor curves are reviewed.

Survivor Curves

The survivor curve graphically depicts the amount of property existing at each age throughout the life of an original group. From the survivor curve, the average life of the group, the remaining life expectancy, the probable life, and the frequency curve can be calculated. In Figure 1, a typical smooth survivor curve and the derived curves are illustrated. The average life is obtained by calculating the area under the survivor curve, from age zero to the maximum age, and dividing this area by the ordinate at age zero. The remaining life expectancy at any age can be calculated by obtaining the area under the curve, from the observation age to the maximum age, and dividing this area by the percent surviving at the observation age. For example, in Figure 1 the remaining life at age 30 years is equal to the crosshatched area under the survivor curve divided by 29.5 percent surviving at age 30. The probable life at any age is developed by adding the age and remaining life. If the probable life of the property is calculated for each year of age, the probable life curve shown in the chart can be developed. The frequency curve presents the number of units retired in each age interval and is derived by obtaining the differences between the amount of property surviving at the beginning and at the end of each interval.

Iowa Type Curves. The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized survivor curves known as the Iowa type curves. There are four families in the Iowa system, labeled in accordance with the location of the modes of the retirements in relationship to the average life and the relative height of the modes. The left moded curves, presented in Figure 2, are those in which the greatest frequency of retirement occurs to the left of, or prior to, average service life. The symmetrical moded curves, presented in Figure 3, are those in which the

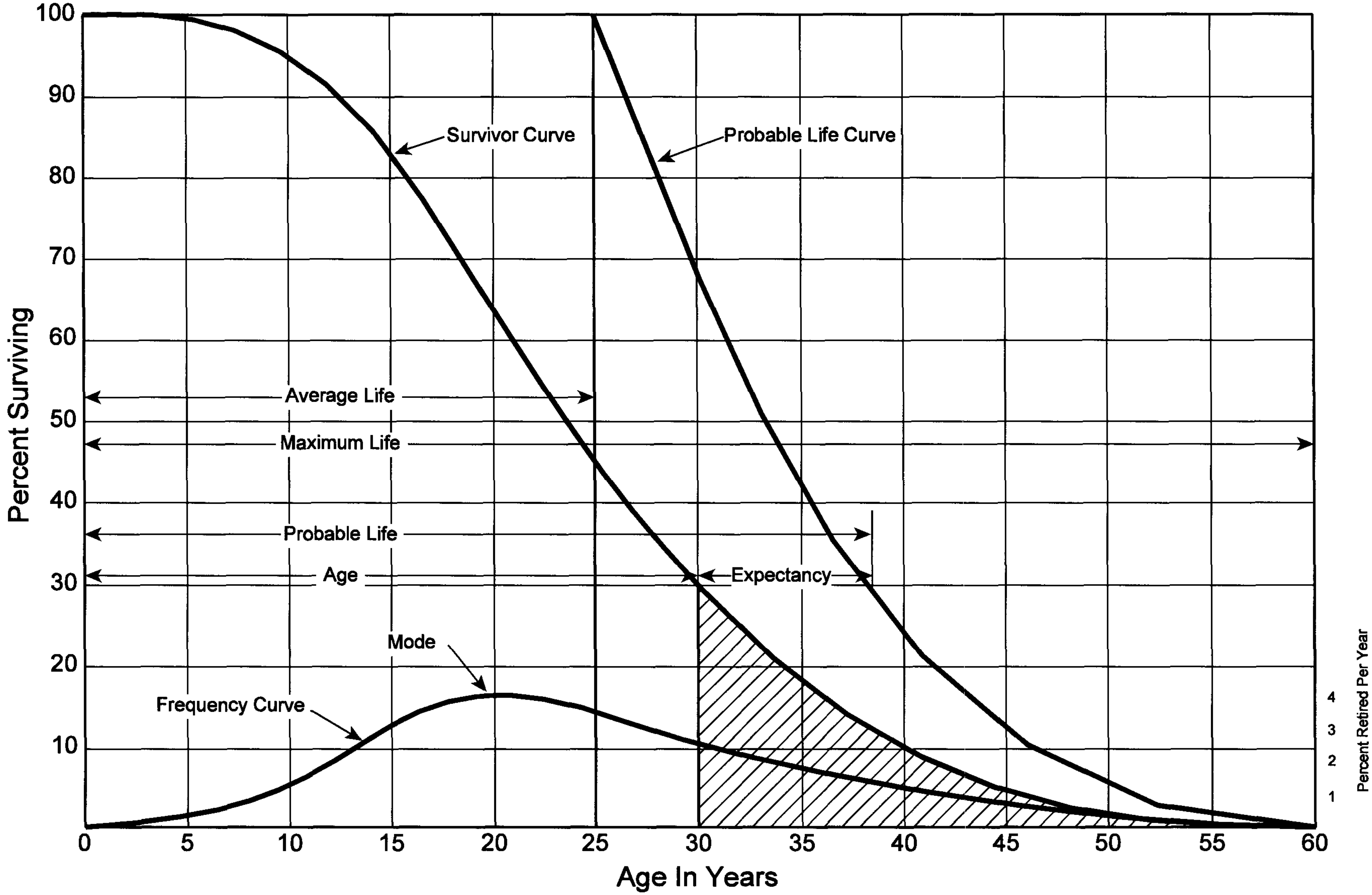

Figure 1. A Typical Survivor Curve and Derived Curves

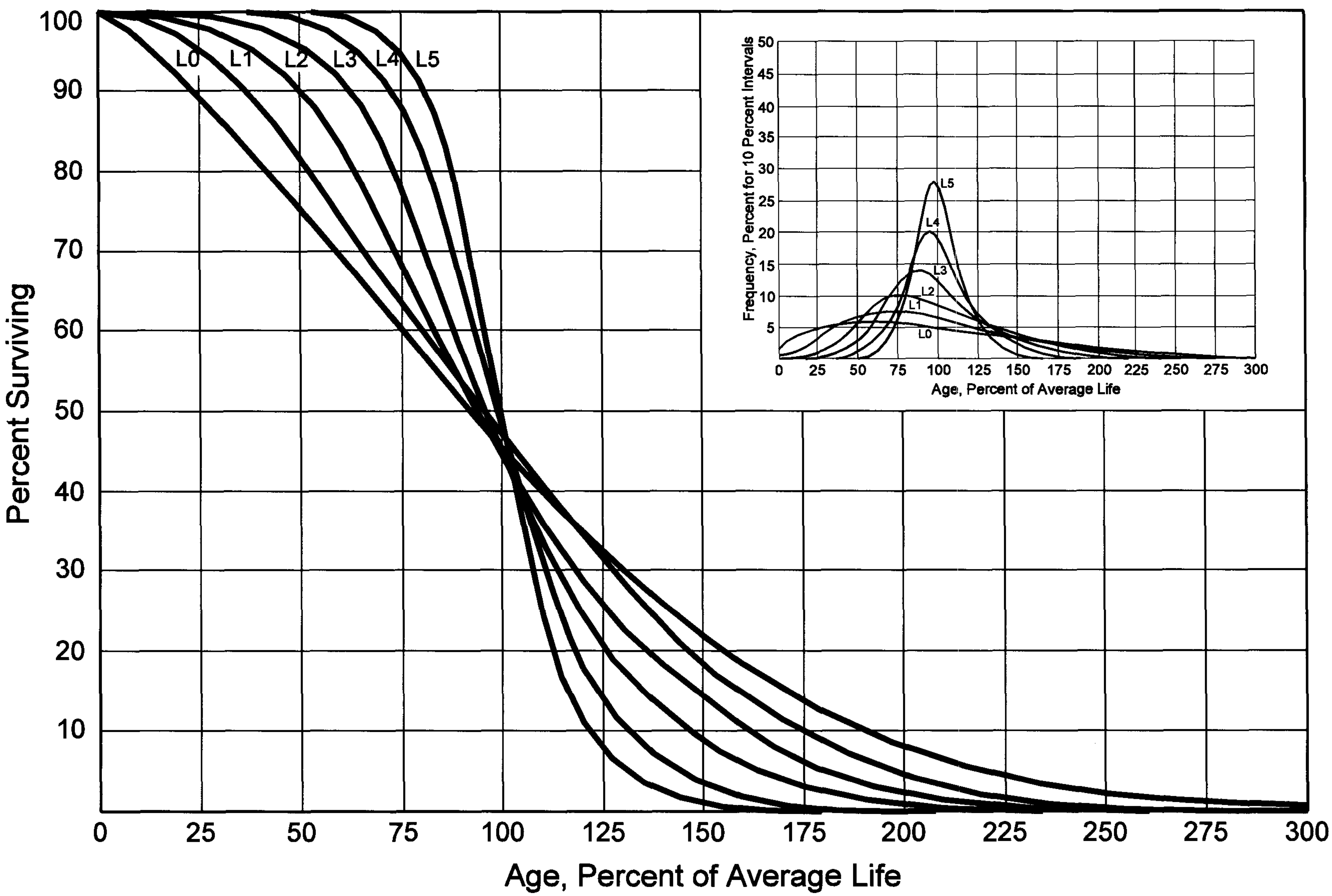

Figure 2. Left Modal or "L" Iowa Type Survivor Curves

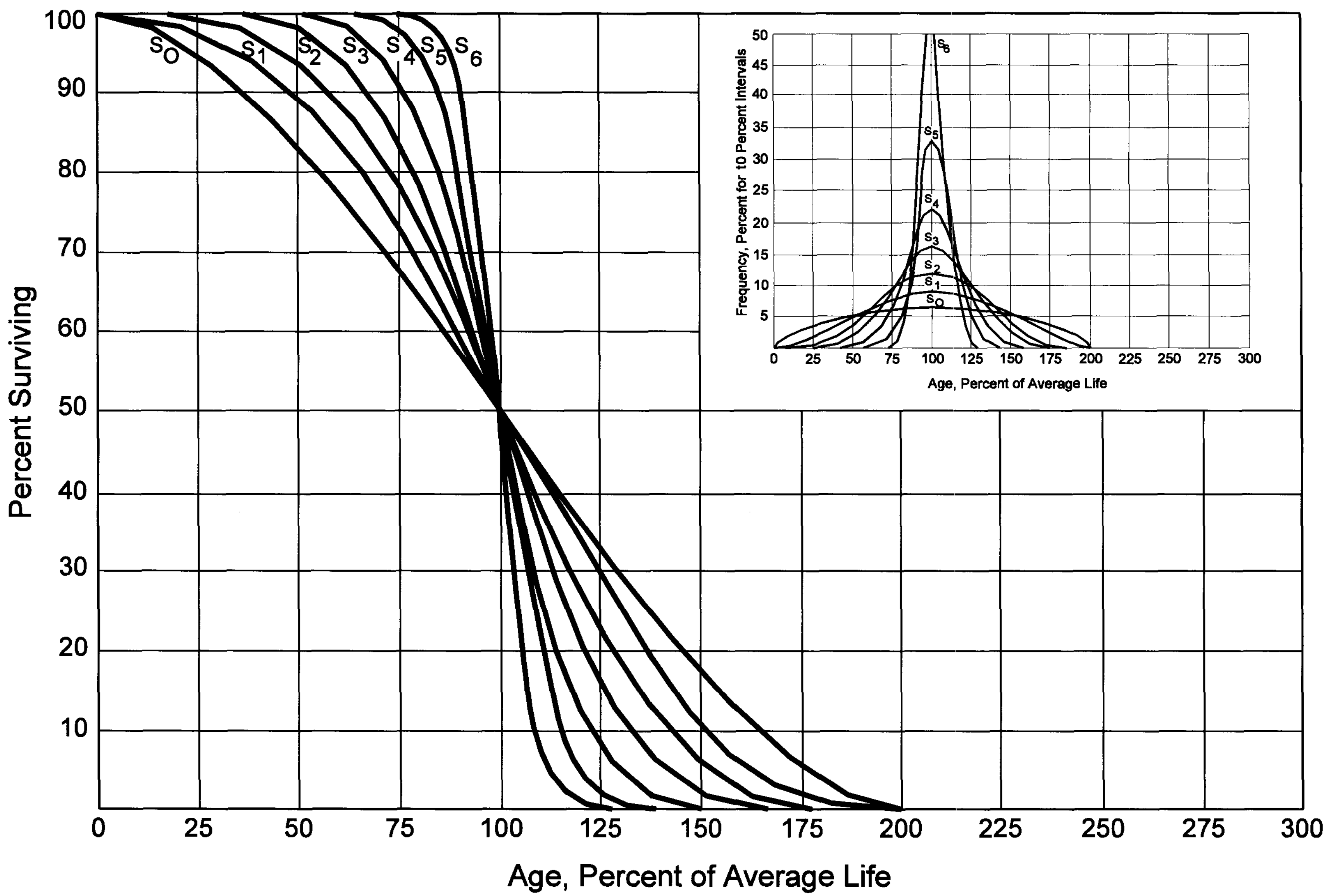

Figure 3. Symmetrical or "S" Iowa Type Survivor Curves

greatest frequency of retirement occurs at average service life. The right moded curves, presented in Figure 4, are those in which the greatest frequency occurs to the right of, or after, average service life. The origin moded curves, presented in Figure 5, are those in which the greatest frequency of retirement occurs at the origin, or immediately after age zero. The letter designation of each family of curves (L, S, R or O) represents the location of the mode of the associated frequency curve with respect to the average service life. The numerical subscripts represent the relative heights of the modes of the frequency curves within each family.

The Iowa curves were developed at the Iowa State College Engineering Experiment Station through an extensive process of observation and classification of the ages at which industrial property had been retired. A report of the study which resulted in the classification of property survivor characteristics into 18 type curves, which constitute three of the four families, was published in 1935 in the form of the Experiment Station's Bulletin 125.[1] These type curves have also been presented in subsequent Experiment Station bulletins and in the text, "Engineering Valuation and Depreciation."[2] In 1957, Frank V. B. Couch, Jr., an Iowa State College graduate student, submitted a thesis[3] presenting his development of the fourth family consisting of the four O type survivor curves.

---

[1]Winfrey, Robley. Statistical Analyses of Industrial Property Retirements. Iowa State College, Engineering Experiment Station, Bulletin 125. 1935.

[2]Marston, Anson, Robley Winfrey and Jean C. Hempstead. Engineering Valuation and Depreciation, 2nd Edition. New York, McGraw-Hill Book Company. 1953.

[3]Couch, Frank V. B., Jr. "Classification of Type O Retirement Characteristics of Industrial Property." Unpublished M.S. thesis (Engineering Valuation). Library, Iowa State College, Ames, Iowa. 1957.

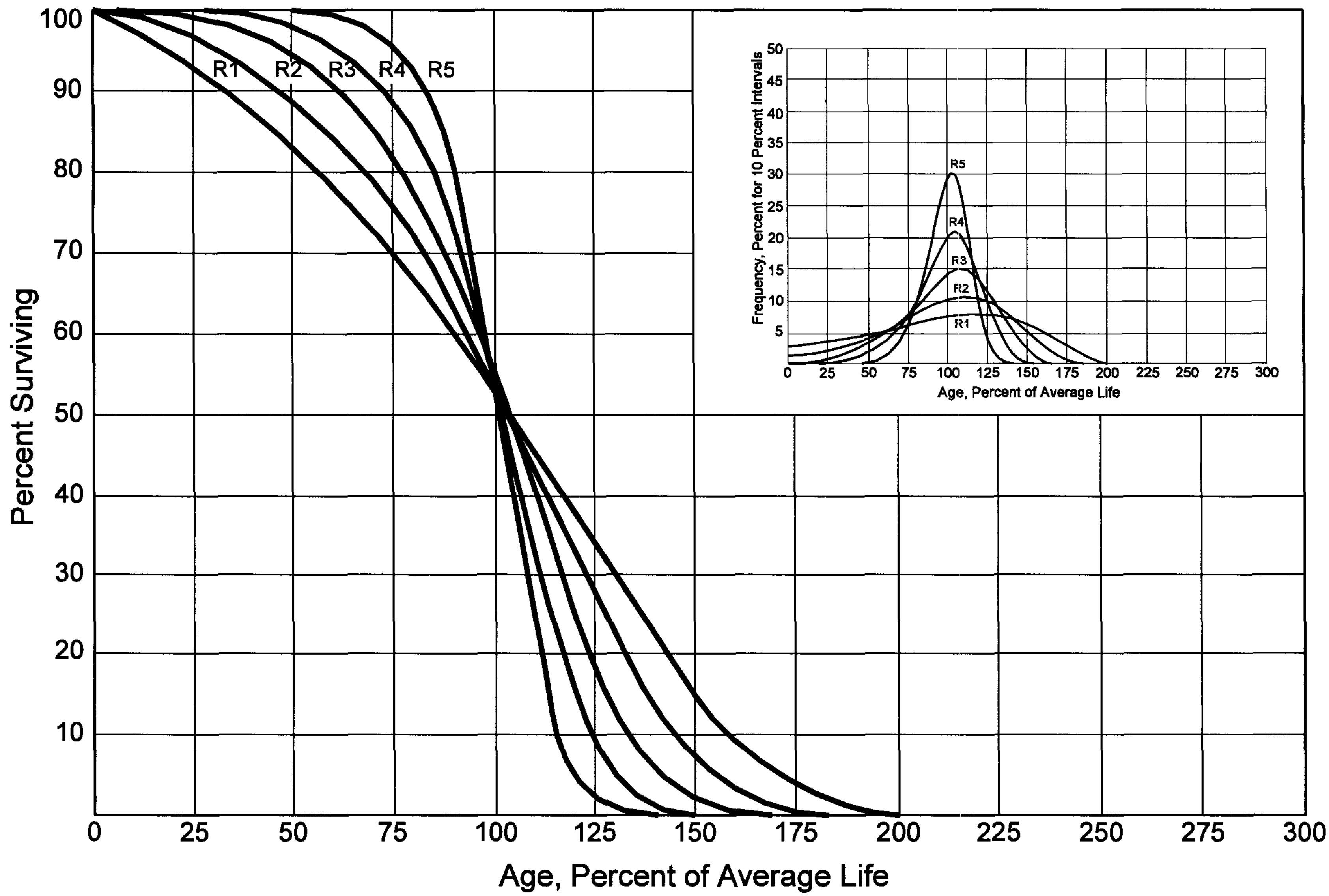

Figure 4. Right Modal or "R" Iowa Type Survivor Curves

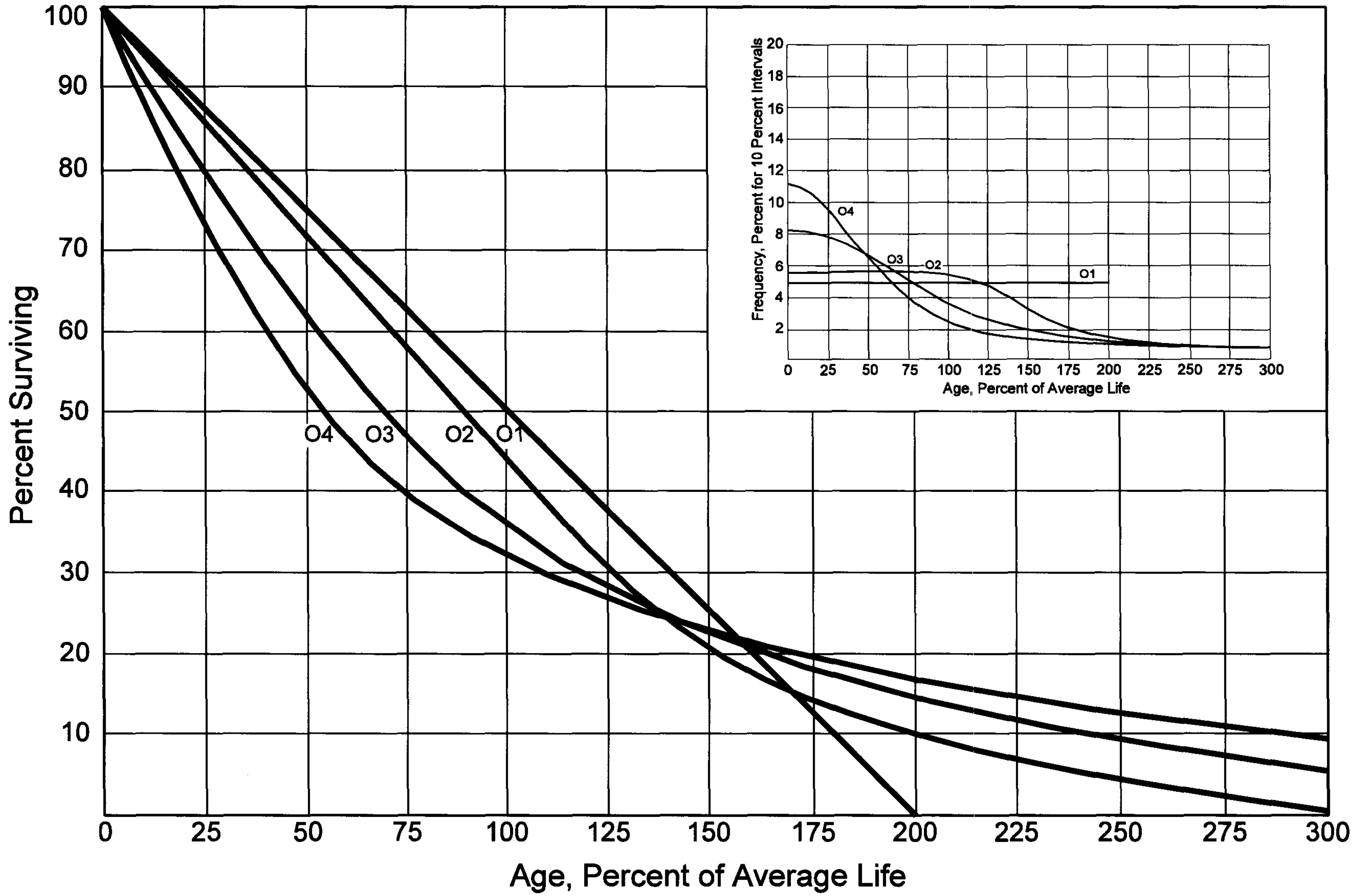

Figure 5. Origin Modal or "O" Iowa Type Survivor Curves

Retirement Rate Method of Analysis

The retirement rate method is an actuarial method of deriving survivor curves using the average rates at which property of each age group is retired. The method relates to property groups for which aged accounting experience is available or for which aged accounting experience is developed by statistically aging unaged amounts and is the method used to develop the original stub survivor curves in this study. The method (also known as the annual rate method) is illustrated through the use of an example in the following text, and is also explained in several publications, including "Statistical Analyses of Industrial Property Retirements,"[4] "Engineering Valuation and Depreciation,"[5] and "Depreciation Systems."[6]

The average rate of retirement used in the calculation of the percent surviving for the survivor curve (life table) requires two sets of data: first, the property retired during a period of observation, identified by the property's age at retirement; and second, the property exposed to retirement at the beginnings of the age intervals during the same period. The period of observation is referred to as the experience band, and the band of years which represent the installation dates of the property exposed to retirement during the experience band is referred to as the placement band. An example of the calculations used in the development of a life table follows. The example includes schedules of annual aged property transactions, a schedule of plant exposed to retirement, a life table, and illustrations of smoothing the stub survivor curve.

---

[4]Winfrey, Robley, Supra Note 1.

[5]Marston, Anson, Robley Winfrey, and Jean C. Hempstead, Supra Note 2.

[6]Wolf, Frank K. and W. Chester Fitch. Depreciation Systems. Iowa State University Press. 1994

Schedules of Annual Transactions in Plant Records. The property group used to illustrate the retirement rate method is observed for the experience band 2003-2012 during which there were placements during the years 1998-2012. In order to illustrate the summation of the aged data by age interval, the data were compiled in the manner presented in Schedules 1 and 2 on pages II-12 and II-13. In Schedule 1, the year of installation (year placed) and the year of retirement are shown. The age interval during which a retirement occurred is determined from this information. In the example which follows, \$10,000 of the dollars invested in 1998 were retired in 2003. The \$10,000 retirement occurred during the age interval between 4½ and 5½ years on the basis that approximately one-half of the amount of property was installed prior to and subsequent to July 1 of each year. That is, on the average, property installed during a year is placed in service at the midpoint of the year for the purpose of the analysis. All retirements also are stated as occurring at the midpoint of a one-year age interval of time, except the first age interval which encompasses only one-half year.

The total retirements occurring in each age interval in a band are determined by summing the amounts for each transaction year-installation year combination for that age interval. For example, the total of \$143,000 retired for age interval 4½-5½ is the sum of the retirements entered on Schedule 1 immediately above the stairstep line drawn on the table beginning with the 2003 retirements of 1998 installations and ending with the 2012 retirements of the 2007 installations. Thus, the total amount of 143 for age interval 4½-5½ equals the sum of:

$$10 + 12 + 13 + 11 + 13 + 13 + 15 + 17 + 19 + 20.$$

In Schedule 2, other transactions which affect the group are recorded in a similar manner. The entries illustrated include transfers and sales. The entries which are credits to the plant account are shown in parentheses. The items recorded on this schedule

SCHEDULE 1. RETIREMENTS FOR EACH YEAR 2003-2012
SUMMARIZED BY AGE INTERVAL

Experience Band 2003-2012

Placement Band 1998-2012

Year Placed (1)	Retirements, Thousands of Dollars During Year 2003 (2)	2004 (3)	2005 (4)	2006 (5)	2007 (6)	2008 (7)	2009 (8)	2010 (9)	2011 (10)	2012 (11)	Total During Age Interval (12)	Age Interval (13)
1998	10	11	12	13	14	16	23	24	25	26	26	13½-14½
1999	11	12	13	15	16	18	20	21	22	19	44	12½-13½
2000	11	12	13	14	16	17	19	21	22	18	64	11½-12½
2001	8	9	10	11	11	13	14	15	16	17	83	10½-11½
2002	9	10	11	12	13	14	16	17	19	20	93	9½-10½
2003	4	9	10	11	12	13	14	15	16	20	105	8½-9½
2004		5	11	12	13	14	15	16	18	20	113	7½-8½
2005			6	12	13	15	16	17	19	19	124	6½-7½
2006				6	13	15	16	17	19	19	131	5½-6½
2007					7	14	16	17	19	20	143	4½-5½
2008						8	18	20	22	23	146	3½-4½
2009							9	20	22	25	150	2½-3½
2010								11	23	25	151	1½-2½
2011									11	24	153	½-1½
2012										13	80	0-½
Total	53	68	86	106	128	157	196	231	273	308	1,606	

SCHEDULE 2. OTHER TRANSACTIONS FOR EACH YEAR 2003-2012
SUMMARIZED BY AGE INTERVAL

Experience Band 2003-2012 | Placement Band 1998-2012

	Acquisitions, Transfers and Sales, Thousands of Dollars											
	During Year											
Year Placed	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total During Age Interval	Age Interval
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1998	-	-	-	-	-	-	60[a]	-	-	-	-	13½-14½
1999	-	-	-	-	-	-	-	-	-	-	-	12½-13½
2000	-	-	-	-	-	-	-	-	-	-	-	11½-12½
2001	-	-	-	-	-	-	-	(5)[b]	-	-	60	10½-11½
2002	-	-	-	-	-	-	-	6[a]	-	-	-	9½-10½
2003		-	-	-	-	-	-	-	-	-	(5)	8½-9½
2004		-	-	-	-	-	-	-	-	-	6	7½-8½
2005			-	-	-	-	-	-	-	-	-	6½-7½
2006				-	-	-	-	(12)[b]	-	-	-	5½-6½
2007					-	-	-	-	22[a]	-	-	4½-5½
2008						-	-	(19)[b]	-	-	10	3½-4½
2009							-	-	-	-	-	2½-3½
2010								-	-	(102)[c]	(121)	1½-2½
2011									-	-	-	½-1½
2012											-	0-½
Total	-	-	-	-	-	-	60	(30)	22	(102)	(50)	

[a] Transfer Affecting Exposures at Beginning of Year
[b] Transfer Affecting Exposures at End of Year
[c] Sale with Continued Use
Parentheses denote Credit amount.

are not totaled with the retirements but are used in developing the exposures at the beginning of each age interval.

Schedule of Plant Exposed to Retirement. The development of the amount of plant exposed to retirement at the beginning of each age interval is illustrated in Schedule 3 on page II-15.

The surviving plant at the beginning of each year from 2003 through 2012 is recorded by year in the portion of the table headed "Annual Survivors at the Beginning of the Year." The last amount entered in each column is the amount of new plant added to the group during the year. The amounts entered in Schedule 3 for each successive year following the beginning balance or addition are obtained by adding or subtracting the net entries shown on Schedules 1 and 2. For the purpose of determining the plant exposed to retirement, transfers-in are considered as being exposed to retirement in this group at the beginning of the year in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the beginning of the following year. Thus, the amounts of plant shown at the beginning of each year are the amounts of plant from each placement year considered to be exposed to retirement at the beginning of each successive transaction year. For example, the exposures for the installation year 2008 are calculated in the following manner:

Exposures at age 0 = amount of addition	= $750,000
Exposures at age ½ = $750,000 - $ 8,000	= $742,000
Exposures at age 1½ = $742,000 - $18,000	= $724,000
Exposures at age 2½ = $724,000 - $20,000 - $19,000	= $685,000
Exposures at age 3½ = $685,000 - $22,000	= $663,000

For the entire experience band 2003-2012, the total exposures at the beginning of an age interval are obtained by summing diagonally in a manner similar to the summing

SCHEDULE 3. PLANT EXPOSED TO RETIREMENT
JANUARY 1 OF EACH YEAR 2003-2012
SUMMARIZED BY AGE INTERVAL

Experience Band 2003-2012 | Placement Band 1998-2012

Year Placed	Exposures, Thousands of Dollars — Annual Survivors at the Beginning of the Year										Total at Beginning of Age Interval	Age Interval
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1998	255	245	234	222	209	195	239	216	192	167	167	13½-14½
1999	279	268	256	243	228	212	194	174	153	131	323	12½-13½
2000	307	296	284	271	257	241	224	205	184	162	531	11½-12½
2001	338	330	321	311	300	289	276	262	242	226	823	10½-11½
2002	376	367	357	346	334	321	307	297	280	261	1,097	9½-10½
2003	420[a]	416	407	397	386	374	361	347	332	316	1,503	8½-9½
2004		460[a]	455	444	432	419	405	390	374	356	1,952	7½-8½
2005			510[a]	504	492	479	464	448	431	412	2,463	6½-7½
2006				580[a]	574	561	546	530	501	482	3,057	5½-6½
2007					660[a]	653	639	623	628	609	3,789	4½-5½
2008						750[a]	742	724	685	663	4,332	3½-4½
2009							850[a]	841	821	799	4,955	2½-3½
2010								960[a]	949	926	5,719	1½-2½
2011									1,080[a]	1,069	6,579	½-1½
2012										1,220[a]	7,490	0-½
Total	1,975	2,382	2,824	3,318	3,872	4,494	5,247	6,017	6,852	7,799	44,780	

[a] Additions during the year.

of the retirements during an age interval (Schedule 1). For example, the figure of 3,789, shown as the total exposures at the beginning of age interval 4½-5½, is obtained by summing:

255 + 268 + 284 + 311 + 334 + 374 + 405 + 448 + 501 + 609.

Original Life Table. The original life table, illustrated in Schedule 4 on page II-17, is developed from the totals shown on the schedules of retirements and exposures, Schedules 1 and 3, respectively. The exposures at the beginning of the age interval are obtained from the corresponding age interval of the exposure schedule, and the retirements during the age interval are obtained from the corresponding age interval of the retirement schedule. The retirement ratio is the result of dividing the retirements during the age interval by the exposures at the beginning of the age interval. The percent surviving at the beginning of each age interval is derived from survivor ratios, each of which equals one minus the retirement ratio. The percent surviving is developed by starting with 100% at age zero and successively multiplying the percent surviving at the beginning of each interval by the survivor ratio, i.e., one minus the retirement ratio for that age interval. The calculations necessary to determine the percent surviving at age 5½ are as follows:

Percent surviving at age 4½	=	88.15				
Exposures at age 4½	=	3,789,000				
Retirements from age 4½ to 5½	=	143,000				
Retirement Ratio	=	143,000	÷	3,789,000	=	0.0377
Survivor Ratio	=	1.000	-	0.0377	=	0.9623
Percent surviving at age 5½	=	(88.15)	x	(0.9623)	=	84.83

The totals of the exposures and retirements (columns 2 and 3) are shown for the purpose of checking with the respective totals in Schedules 1 and 3. The ratio of the total retirements to the total exposures, other than for each age interval, is meaningless.

SCHEDULE 4. ORIGINAL LIFE TABLE
CALCULATED BY THE RETIREMENT RATE METHOD

Experience Band 2003-2012 Placement Band 1998-2012

(Exposure and Retirement Amounts are in Thousands of Dollars)

Age at Beginning of Interval (1)	Exposures at Beginning of Age Interval (2)	Retirements During Age Interval (3)	Retirement Ratio (4)	Survivor Ratio (5)	Percent Surviving at Beginning of Age Interval (6)
0.0	7,490	80	0.0107	0.9893	100.00
0.5	6,579	153	0.0233	0.9767	98.93
1.5	5,719	151	0.0264	0.9736	96.62
2.5	4,955	150	0.0303	0.9697	94.07
3.5	4,332	146	0.0337	0.9663	91.22
4.5	3,789	143	0.0377	0.9623	88.15
5.5	3,057	131	0.0429	0.9571	84.83
6.5	2,463	124	0.0503	0.9497	81.19
7.5	1,952	113	0.0579	0.9421	77.11
8.5	1,503	105	0.0699	0.9301	72.65
9.5	1,097	93	0.0848	0.9152	67.57
10.5	823	83	0.1009	0.8991	61.84
11.5	531	64	0.1205	0.8795	55.60
12.5	323	44	0.1362	0.8638	48.90
13.5	167	26	0.1557	0.8443	42.24
					35.66
Total	44,780	1,606			

Column 2 from Schedule 3, Column 12, Plant Exposed to Retirement.
Column 3 from Schedule 1, Column 12, Retirements for Each Year.
Column 4 = Column 3 Divided by Column 2.
Column 5 = 1.0000 Minus Column 4.
Column 6 = Column 5 Multiplied by Column 6 as of the Preceding Age Interval.

The original survivor curve is plotted from the original life table (column 6, Schedule 4). When the curve terminates at a percent surviving greater than zero, it is called a stub survivor curve. Survivor curves developed from retirement rate studies generally are stub curves.

Smoothing the Original Survivor Curve. The smoothing of the original survivor curve eliminates any irregularities and serves as the basis for the preliminary extrapolation to zero percent surviving of the original stub curve. Even if the original survivor curve is complete from 100 percent to zero percent, it is desirable to eliminate any irregularities, as there is still an extrapolation for the vintages which have not yet lived to the age at which the curve reaches zero percent. In this study, the smoothing of the original curve with established type curves was used to eliminate irregularities in the original curve.

The Iowa type curves are used in this study to smooth those original stub curves which are expressed as percents surviving at ages in years. Each original survivor curve was compared to the Iowa curves using visual and mathematical matching in order to determine the better fitting smooth curves. In Figures 6, 7, and 8, the original curve developed in Schedule 4 is compared with the L, S, and R Iowa type curves which most nearly fit the original survivor curve. In Figure 6, the L1 curve with an average life between 12 and 13 years appears to be the best fit. In Figure 7, the S0 type curve with a 12-year average life appears to be the best fit and appears to be better than the L1 fitting. In Figure 8, the R1 type curve with a 12-year average life appears to be the best fit and appears to be better than either the L1 or the S0. In Figure 9, the three fittings, 12-L1, 12-S0 and 12-R1 are drawn for comparison purposes. It is probable that the 12-R1 Iowa curve would be selected as the most representative of the plotted survivor characteristics of the group, assuming no contrary relevant factors external to the analysis of historical data.

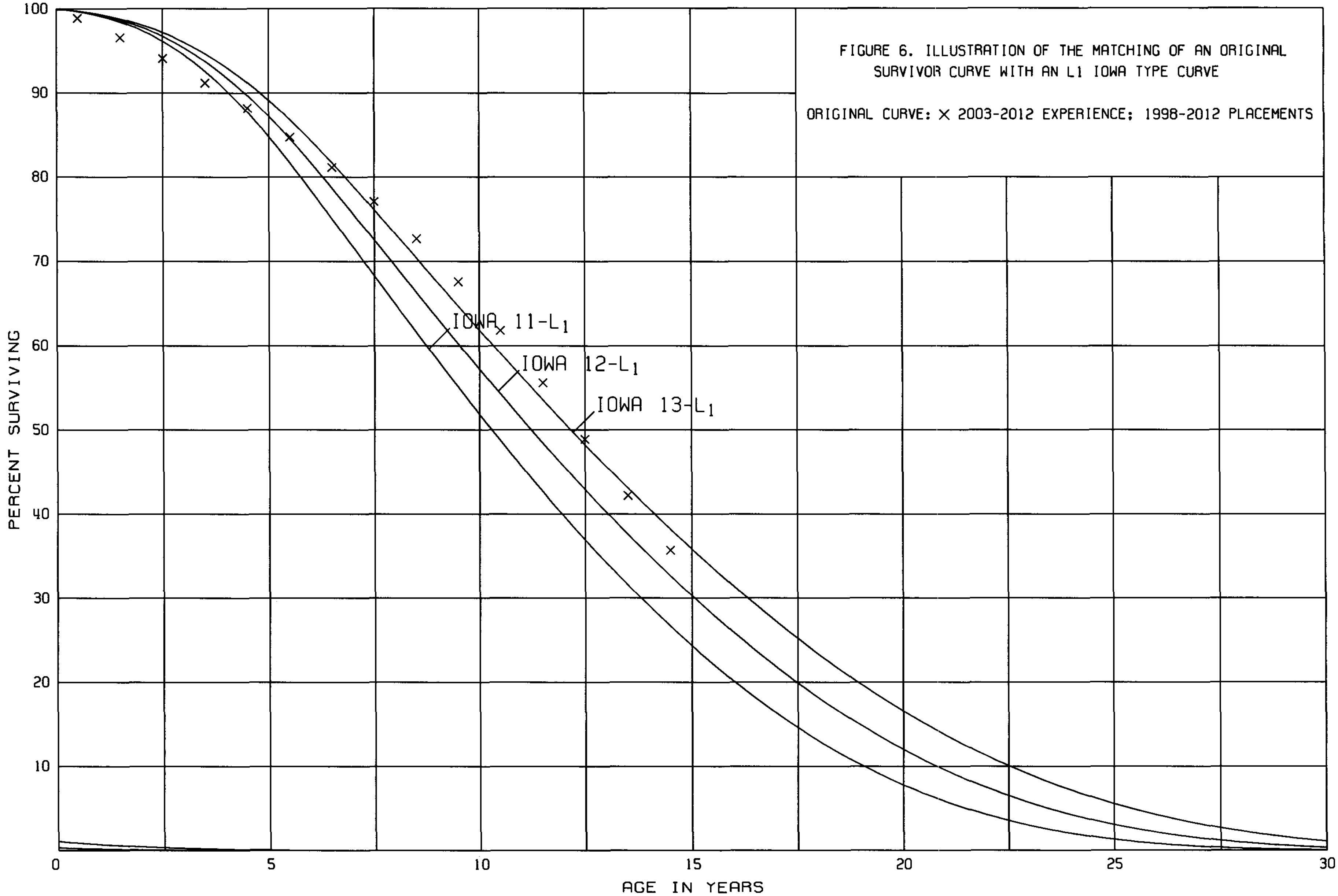

FIGURE 6. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1 IOWA TYPE CURVE

ORIGINAL CURVE: × 2003-2012 EXPERIENCE; 1998-2012 PLACEMENTS

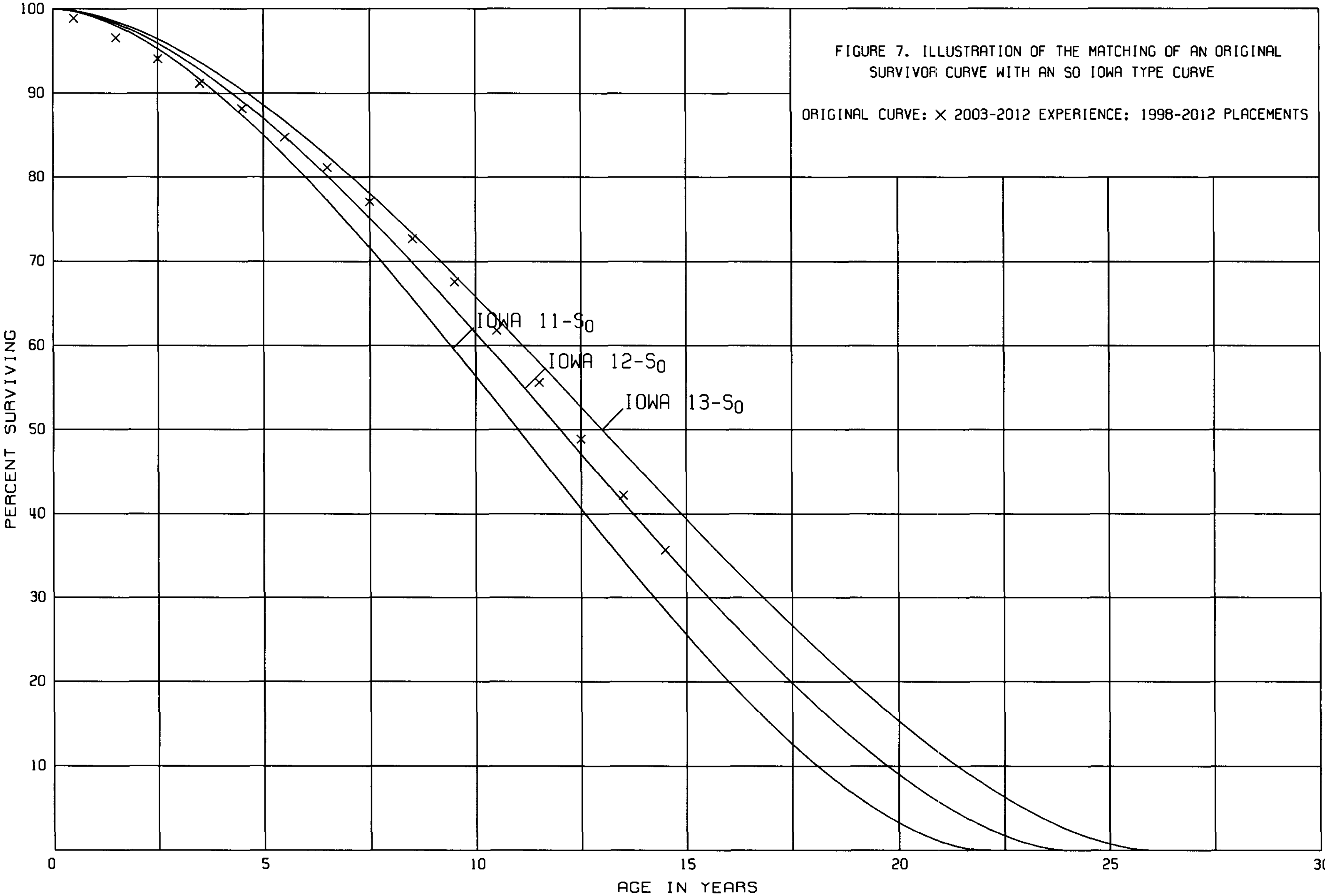

FIGURE 7. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN SO IOWA TYPE CURVE

ORIGINAL CURVE: × 2003-2012 EXPERIENCE: 1998-2012 PLACEMENTS

001318

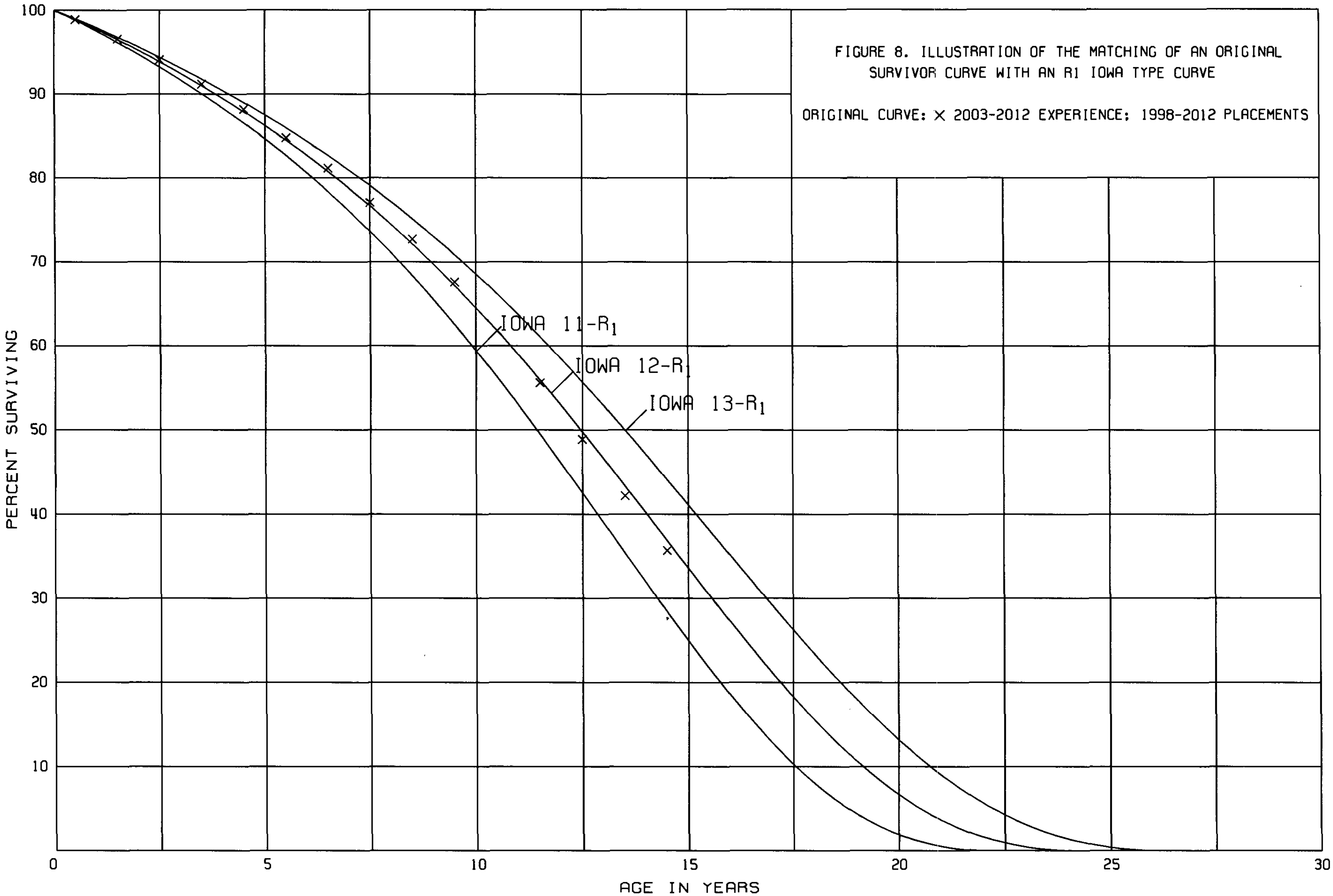

FIGURE 8. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN R1 IOWA TYPE CURVE

ORIGINAL CURVE: × 2003-2012 EXPERIENCE; 1998-2012 PLACEMENTS

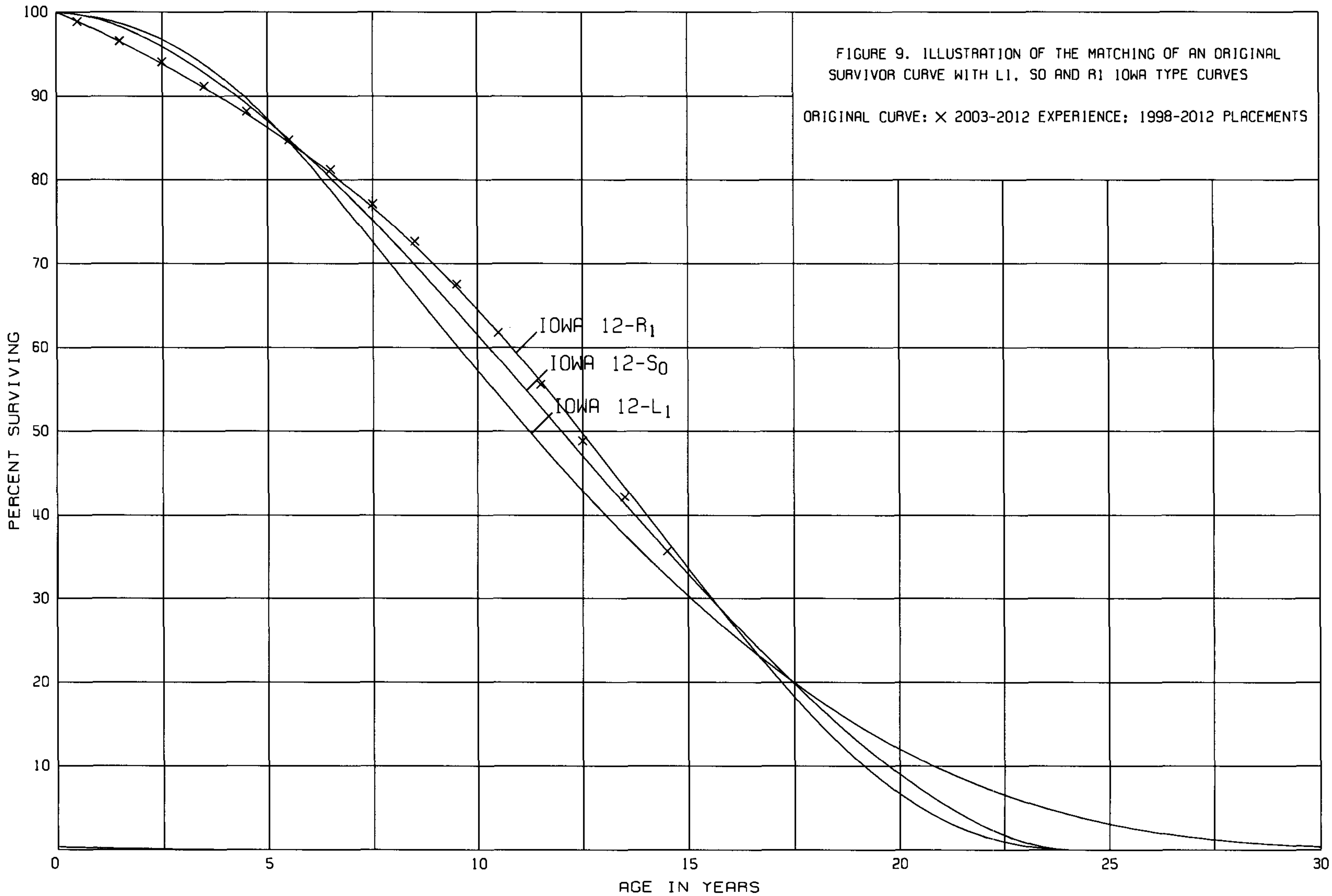
FIGURE 9. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH L1, S0 AND R1 IOWA TYPE CURVES
ORIGINAL CURVE: × 2003-2012 EXPERIENCE: 1998-2012 PLACEMENTS
IOWA 12-R1
IOWA 12-S0
IOWA 12-L1
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

Service Life Considerations

The service life estimates were based on judgment which considered a number of factors. The primary factors were the statistical analyses of data; current Company policies and outlook as determined during conversations with management; and the survivor curve estimates from previous studies of this company and other electric companies.

For 30 of the plant accounts and subaccounts for which survivor curves were estimated, the statistical analyses using the retirement rate method resulted in good to excellent indications of the survivor patterns experienced. These accounts represent 51 percent of depreciable plant. Generally, the information external to the statistics led to no significant departure from the indicated survivor curves for the accounts listed below. The statistical support for the service life estimates is presented in the section beginning on page III-9.

ELECTRIC PLANT

Steam Plant

311.00	Structures and Improvements
315.00	Accessory Electric Equipment
316.00	Miscellaneous Power Plant Equipment

Transmission Plant

352.00	Structures and Improvements
353.00	Station Equipment
355.00	Poles and Fixtures
356.00	Overhead Conductors and Devices

Distribution Plant

361.00	Structures and Improvements
361.05	Land Improvements
362.00	Station Equipment
364.00	Poles, Towers and Fixtures
365.00	Overhead Conductors and Devices
366.00	Underground Conduit
367.00	Underground Conductors and Devices
368.01	Line Transformers - Other Equipment
368.02	Line Transformers - Conventional
368.03	Line Transformers - Padmount
369.01	Services - Overhead
369.02	Services - Underground

370.01	Meters
371.00	Installations on Customer Premises
373.00	Street Lighting and Signal Systems

General Plant

390.01	Structures and Improvements
392.01	Transportation Equipment - Subunit
392.02	Transportation Equipment - Cars
392.03	Transportation Equipment - Light Trucks
392.04	Transportation Equipment - Medium Trucks
392.05	Transportation Equipment - Heavy Trucks
392.06	Transportation Equipment - Trailers
397.01	Communication Equipment - Towers

Electric Plant Account 362.00 Station Equipment, is used to illustrate the manner in which the study was conducted for the groups in the preceding list. Aged plant accounting data for the distribution plant have been compiled for the years 1946 through 2012. These data have been coded in the course of the Company's normal record keeping according to account or property group, type of transaction, year in which the transaction took place, and year in which the electric plant was placed in service. The retirements, other plant transactions, and plant additions were analyzed by the retirement rate method.

The survivor curve estimate is based on the statistical indications for the period 1946 through 2012. The Iowa 45-R2 is a reasonable fit of the stub original survivor of station equipment. The 45-year service life is within the typical service life range of 35 to 55 years for station equipment. The 45-year life reflects the Company's plans to continue to upgrade equipment when necessary with expectations that some assets based on demand could be in service well beyond the average life.

Account 364.00, Poles, Towers and Fixtures, is another large account for which the statistical analyses was a strong indicator of life characteristics. Aged plant accounting data have been compiled for the years 1950 through 2012. The Iowa 50-R2 is a good fit of the stub original curve of poles. The 50-year service life reflects the statistical indications, Company plans to replace poles primarily due to wear and tear as well as load upgrades, and the range of estimates of other electric utilities for poles.

Inasmuch as production plant consists of large generating units, the life span technique was employed in conjunction with the use of interim survivor curves which reflect interim retirements that occur prior to the ultimate retirement of the major unit. An interim survivor curve was estimated for each plant account, inasmuch as the rate of interim retirements differ from account to account. The interim survivor curves estimated for steam and other production plant related to Black Hills Power stations were based on the retirement rate method.

The life span estimates for power generating stations were the result of considering experienced life spans of similar generating units, the age of surviving units, general operating characteristics of the units, major refurbishing, and discussions with management personnel concerning the probable long-term outlook for the units. Final decisions as to date of retirement will be determined by management on a unit by unit basis.

The life span estimates for the steam, base-load units is 45-61 years, which is within the typical range of life spans for such units. The life span estimates for other production units is 45-54 years which is slightly long for combustion turbines and diesel units.

A summary of the year in service, life span and probable retirement year for each power production unit follows:

Depreciable Group	Year in Service	Probable Retirement Year	Life Span
Steam Production Plant			
Ben French	1962	2014	52
Neil Simpson I	1969	2014	45
Neil Simpson II	1998	2045	47

Depreciable Group	Year in Service	Probable Retirement Year	Life Span
Osage	1953	2014	61
Wygen 3	2010	2060	50
Wyodak	1991	2039	48
Other Production Plant			
Ben French CT	1977	2030	53
Lange CT	2003	2048	45
Neil Simpson CT	2001	2046	45
Ben French Diesel	1966	2020	54

The survivor curve estimates for the remaining accounts were based on judgment incorporating the statistical analyses and previous studies for this and other electric and gas utilities.

Salvage Analysis

The estimates of net salvage by account were based in part on historical data compiled through 2012. Cost of removal and salvage were expressed as percents of the original cost of plant retired, both on annual and three-year moving average bases. The most recent five-year average also was calculated for consideration. The net salvage estimates by account are expressed as a percent of the original cost of plant retired.

Net Salvage Considerations

The estimates of future net salvage are expressed as percentages of surviving plant in service, i.e., all future retirements. In cases in which removal costs are expected to exceed salvage receipts, a negative net salvage percentage is estimated. The net salvage estimates were based on judgment which incorporated analyses of historical cost of removal and salvage data, expectations with respect to future removal requirements and markets for retired equipment and materials.

The analyses of historical cost of removal and salvage data are presented in the section titled "Net Salvage Statistics" for the plant accounts for which the net salvage estimate relied partially on those analyses.

Statistical analyses of historical data for the period 1997 through 2012 contributed significantly toward the net salvage estimates for 20 plant accounts, representing 83 percent of the depreciable plant, as follows:

ELECTRIC PLANT

Steam Production Plant

312.01	Boiler Plant Equipment
314.00	Turbogenerators
316.00	Miscellaneous Power Plant Equipment

Other Production Plant

342.00	Fuel Holders and Accessories
344.01	Generators

Transmission Plant

352.00	Structures and Improvements
353.00	Station Equipment
355.00	Poles and Fixtures

Distribution Plant

362.00	Station Equipment
364.00	Poles, Towers and Fixtures
365.00	Overhead Conductors and Devices
366.00	Underground Conduit
367.00	Underground Conductors and Devices
369.01	Services - Overhead
369.02	Services - Underground
370.01	Meters
370.04	Meters - AMI
371.00	Installations on Customer Premises
373.00	Street Lighting and Signal Systems

General Plant

390.01	Structures and Improvements

The Electric Plant analyses for Account 365.00, Overhead Conductors and Devices, is used to illustrate the manner in which the study was conducted for the groups in the preceding list. Net salvage data for the period 1997 through 2012 were analyzed for this account. The data include cost of removal, gross salvage and net salvage amounts and each of these amounts is expressed as a percent of the original cost of regular retirements.

Three-year moving averages for the 1997-1999 through 2010-2012 periods were computed to smooth the annual amounts.

Cost of removal fluctuated during the 16-year period. The primary cause of cost of removal was the effort needed to replace overhead conductor. Cost of removal for the most recent five years averaged 47 percent.

Gross salvage has fluctuated throughout the period. The years 2007 and 2008 had high reuse salvage which is not expected to occur annually. The most recent five-year average of 24 percent gross salvage reflects some of the reuse salvage for early retirements.

The net salvage percent based on the overall period 1997 through 2012 is 20 percent negative net salvage and based on the most recent five-year period is negative 24 percent. The range of estimates made by other electric companies for overhead conductors is negative 15 to negative 75 percent. The net salvage estimate for overhead conductor is negative 20 percent, is within the range of other estimates and reflects expectations of the future for negative net salvage.

The net salvage percents for the remaining accounts were based on judgment incorporating estimates of previous studies of this and other electric and gas utilities.

CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

After the survivor curve and salvage are estimated, the annual depreciation accrual rate can be calculated. In the average service life procedure, the annual accrual rate is computed by the following equation:

$$\textit{Annual Accrual Rate, Percent} = \frac{(100\% \quad \textit{Net Salvage, Percent})}{\textit{Average Service Life}}.$$

The calculated accrued depreciation for each depreciable property group represents that portion of the depreciable cost of the group which will not be allocated to expense through future depreciation accruals if current forecasts of life characteristics are used as a basis for straight line depreciation accounting.

The accrued depreciation calculation consists of applying an appropriate ratio to the surviving original cost of each vintage of each account, based upon the attained age and the estimated survivor curve. The accrued depreciation ratios are calculated as follows:

$$Ratio = \left(1 - \frac{Average\ Remaining\ Life\ Expectancy}{Average\ Service\ Life}\right)(1 - Net\ Salvage,\ Percent).$$

The application of these procedures is described for a single unit of property and a group of property units. Salvage is omitted from the description for ease of application.

Single Unit of Property

The calculation of straight line depreciation for a single unit of property is straightforward. For example, if a \$1,000 unit of property attains an age of four years and has a life expectancy of six years, the annual accrual over the total life is:

$$\frac{\$1{,}000}{(4 + 6)} = \$100\ per\ year.$$

The accrued depreciation is:

$$\$1{,}000\ (1 - \frac{6}{10}) = \$400.$$

Group Depreciation Procedures

When more than a single item of property is under consideration, a group procedure for depreciation is appropriate because normally all of the items within a group do not have identical service lives, but have lives that are dispersed over a range of time. There are two primary group procedures, namely, average service life and equal life group.

Remaining Life Annual Accruals. For the purpose of calculating remaining life accruals as of December 31, 2012 the depreciation reserve for each plant account is allocated among vintages in proportion to the calculated accrued depreciation for the account. Explanations of remaining life accruals and calculated accrued depreciation follow. The detailed calculations as of December 31, 2012 are set forth in the Results of Study section of the report.

Average Service Life Procedure. In the average service life procedure, the remaining life annual accrual for each vintage is determined by dividing future book accruals (original cost less book reserve) by the average remaining life of the vintage. The average remaining life is a directly weighted average derived from the estimated future survivor curve in accordance with the average service life procedure.

The calculated accrued depreciation for each depreciable property group represents that portion of the depreciable cost of the group which would not be allocated to expense through future depreciation accruals, if current forecasts of life characteristics are used as the basis for such accruals. The accrued depreciation calculation consists of applying an appropriate ratio to the surviving original cost of each vintage of each account, based upon the attained age and service life. The straight line accrued depreciation ratios are calculated as follows for the average service life procedure:

$$Ratio = 1 - \frac{Average\ Remaining\ Life}{Average\ Service\ Life}.$$

CALCULATION OF ANNUAL AND ACCRUED AMORTIZATION

Amortization, as defined in the Uniform System of Accounts, is the gradual extinguishment of an amount in an account by distributing such amount over a fixed period, over the life of the asset or liability to which it applies, or over the period during which it is anticipated the benefit will be realized. Normally, the distribution of the amount is in equal amounts to each year of the amortization period.

The calculation of annual and accrued amortization requires the selection of an amortization period. The amortization periods used in this report were based on judgment which incorporated a consideration of the period during which the assets will render most of their service, the amortization periods and service lives used by other utilities, and the service life estimates previously used for the asset under depreciation accounting.

Amortization accounting is appropriate for certain General Plant accounts that represent numerous units of property, but a very small portion of depreciable electric and gas plant in service. The accounts and their amortization periods are as follows:

	Account	Amortization Period, Years
GENERAL PLANT		
391.01	Office Furniture and Equipment	20
391.03	Computer Hardware	5
391.05	System Development	5
393.00	Stores Equipment	20
394.00	Tools, Shop and Garage Equipment	25
395.00	Laboratory Equipment	25
397.00	Communication Equipment	20
398.00	Miscellaneous Equipment	20

For the purpose of calculating annual amortization amounts as of December 31, 2012, the book or ratemaking book depreciation reserve for each plant account or subaccount is assigned or allocated to vintages. The reserve assigned to vintages with an age greater than the amortization period is equal to the vintage's original cost. The remaining reserve is allocated among vintages with an age less than the amortization period in proportion to the calculated accrued amortization. The calculated accrued amortization is equal to the original cost multiplied by the ratio of the vintage's age to its amortization period. The annual amortization amount is determined by dividing the future amortizations (original cost less allocated book reserve) by the remaining period of amortization for the vintage.

PART III. RESULTS OF STUDY

PART III. RESULTS OF STUDY

QUALIFICATION OF RESULTS

The calculated annual depreciation accrual amounts and rates are the principal results of the study. Continued surveillance and periodic revisions are normally required to maintain continued use of appropriate annual depreciation accrual rates. An assumption that accrual rates can remain unchanged over a long period of time implies a disregard for the inherent variability in service lives and salvage and for the change of the composition of property in service. The annual accrual rates were calculated in accordance with the straight line remaining life method of depreciation using the average service life procedure based on estimates which reflect considerations of current historical evidence and expected future conditions.

The annual depreciation accrual rates are applicable specifically to the electric, gas and common plant in service as of December 31, 2012. For most plant accounts, the application of such rates to future balances that reflect additions subsequent to December 31, 2012, is reasonable for a period of three to five years.

DESCRIPTION OF STATISTICAL SUPPORT

The service life and salvage estimates were based on judgment which incorporated statistical analyses of retirement data, discussions with management and consideration of estimates made for other electric utility companies. The results of the statistical analyses of service life are presented in the section titled "Service Life Statistics".

The estimated survivor curves for each account are presented in graphical form. The charts depict the estimated smooth survivor curve and original survivor curve(s), when applicable, related to each specific group. For groups where the original survivor curve was plotted, the calculation of the original life table is also presented.

The analyses of salvage data are presented in the section titled, "Net Salvage Statistics". The tabulations present annual cost of removal and salvage data, three-year moving averages and the most recent five-year average. Data are shown in dollars and as percentages of the original cost retired.

DESCRIPTION OF DEPRECIATION TABULATIONS

Summaries of the results of the study, as applied to the original cost of electric plant as of December 31, 2012, are presented on pages III-4 through III-8 of this report. The schedule sets forth the original cost, the book depreciation reserve, future accruals, the calculated annual depreciation rate and amount, and the composite remaining life related to electric plant.

The tables of the calculated annual depreciation accruals are presented in account sequence in the section titled "Depreciation Calculations." The tables indicate the estimated survivor curve and salvage percent for the account and set forth, for each installation year, the original cost, the calculated accrued depreciation, the allocated book reserve, future accruals, the remaining life and the calculated annual accrual amount.

BLACK HILLS POWER

SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE
AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2012

	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)
	STEAM PRODUCTION PLANT									
	BEN FRENCH STATION									
311.00	STRUCTURES AND IMPROVEMENTS	80-R1.5	*	(28)	2,251,067.03	2,470,217	411,149	225,045	10.00	1.8
312.01	BOILER PLANT EQUIPMENT	55-S0.5	*	(28)	6,842,535.53	6,971,855	1,786,590	985,304	14.40	1.8
314.00	TURBOGENERATOR UNITS	55-S0.5	*	(28)	3,956,115.75	3,267,891	1,795,937	987,811	24.97	1.8
315.00	ACCESSORY ELECTRIC EQUIPMENT	65-R2.5	*	(28)	756,487.01	817,196	151,107	83,050	10.98	1.8
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(28)	461,437.84	529,424	61,216	33,837	7.33	1.8
	TOTAL BEN FRENCH STATION				14,267,643.16	14,056,583	4,205,999	2,315,047	16.23	1.8
	NEIL SIMPSON I									
311.00	STRUCTURES AND IMPROVEMENTS	80-R1.5	*	(13)	2,263,790.00	2,055,490	502,593	275,250	12.16	1.8
312.01	BOILER PLANT EQUIPMENT	55-S0.5	*	(13)	14,327,824.99	10,348,851	5,841,591	3,210,557	22.41	1.8
314.00	TURBOGENERATOR UNITS	55-S0.5	*	(13)	3,916,967.11	2,797,900	1,628,273	896,130	22.88	1.8
315.00	ACCESSORY ELECTRIC EQUIPMENT	65-R2.5	*	(13)	1,334,432.06	622,246	885,662	484,612	36.32	1.8
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(13)	424,995.16	434,602	45,643	25,339	5.96	1.8
	TOTAL NEIL SIMPSON I				22,268,009.32	16,259,089	8,903,762	4,891,888	21.97	1.8
	NEIL SIMPSON II									
311.00	STRUCTURES AND IMPROVEMENTS	80-R1.5	*	(14)	15,863,029.45	5,523,394	12,560,460	412,027	2.60	30.5
312.01	BOILER PLANT EQUIPMENT	55-S0.5	*	(14)	76,897,107.11	26,330,450	61,332,252	2,211,622	2.88	27.7
314.00	TURBOGENERATOR UNITS	55-S0.5	*	(14)	41,534,097.95	11,029,471	36,319,401	1,278,221	3.08	28.4
315.00	ACCESSORY ELECTRIC EQUIPMENT	65-R2.5	*	(14)	8,429,093.00	2,511,631	7,097,535	230,583	2.74	30.8
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(14)	875,989.44	165,386	833,242	31,072	3.55	26.8
	TOTAL NEIL SIMPSON II				143,599,316.95	45,560,332	118,142,890	4,163,525	2.90	28.4
	OSAGE PLANT									
311.00	STRUCTURES AND IMPROVEMENTS	80-R1.5	*	(22)	4,233,377.67	4,422,755	741,966	406,009	9.59	1.8
312.01	BOILER PLANT EQUIPMENT	55-S0.5	*	(22)	7,454,702.13	7,272,558	1,822,179	1,005,395	13.49	1.8
314.00	TURBOGENERATOR UNITS	55-S0.5	*	(22)	4,780,167.64	4,641,657	1,190,148	656,960	13.74	1.8
315.00	ACCESSORY ELECTRIC EQUIPMENT	65-R2.5	*	(22)	1,054,887.74	1,198,790	88,173	48,528	4.60	1.8
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(22)	455,950.73	459,478	96,782	53,529	11.74	1.8
	TOTAL OSAGE PLANT				17,979,085.91	17,995,238	3,939,248	2,170,421	12.07	1.8
	WY GEN 3									
311.00	STRUCTURES AND IMPROVEMENTS	80-R1.5	*	(13)	6,799,493.56	417,254	7,266,174	166,503	2.45	43.6
312.01	BOILER PLANT EQUIPMENT	55-S0.5	*	(13)	57,567,754.14	4,343,796	60,707,766	1,517,622	2.64	40.0
314.00	TURBOGENERATOR UNITS	55-S0.5	*	(13)	58,398,596.28	3,202,879	62,787,535	1,569,482	2.69	40.0
315.00	ACCESSORY ELECTRIC EQUIPMENT	65-R2.5	*	(13)	6,737,220.28	377,879	7,235,180	163,953	2.43	44.1
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(13)	709,079.57	28,882	772,378	21,429	3.02	36.0
	TOTAL WY GEN 3				130,212,143.83	8,370,690	138,769,033	3,438,989	2.64	40.4

BLACK HILLS POWER

SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2012

	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)
	WYODAK PLANT									
311.00	STRUCTURES AND IMPROVEMENTS	80-R1.5	*	(13)	9,164,989.89	7,214,391	3,142,048	125,770	1.37	25.0
312.01	BOILER PLANT EQUIPMENT	55-S0.5	*	(13)	76,887,888.24	29,347,729	57,535,585	2,378,850	3.09	24.2
313.00	ENGINES AND GENERATORS	50-S1.5	*	(13)	341,748.14	216,828	169,347	6,793	1.99	24.9
314.00	TURBOGENERATOR UNITS	55-S0.5	*	(13)	15,192,790.87	5,557,047	11,610,807	482,632	3.18	24.1
315.00	ACCESSORY ELECTRIC EQUIPMENT	65-R2.5	*	(13)	6,616,782.96	5,008,048	2,468,917	99,004	1.50	24.9
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(13)	1,007,314.51	427,522	710,743	31,411	3.12	22.6
	TOTAL WYODAK PLANT				109,211,514.61	47,771,565	75,637,447	3,124,460	2.86	24.2
	TOTAL STEAM PRODUCTION PLANT				**437,537,713.78**	**150,013,497**	**349,598,379**	**20,104,330**	**4.59**	**17.4**
	OTHER PRODUCTION PLANT									
	BEN FRENCH CT									
341.00	STRUCTURES AND IMPROVEMENTS	55-R3	*	(13)	22,448.14	18,574	6,792	437	1.95	15.5
342.00	FUEL HOLDERS AND ACCESSORIES	50-S0.5	*	(13)	1,375,821.53	903,454	651,224	40,929	2.97	15.9
344.10	GENERATORS	45-R2	*	(13)	16,549,367.07	12,793,447	5,907,338	415,401	2.51	14.2
345.00	ACCESSORY ELECTRIC EQUIPMENT	40-S2	*	(13)	672,968.54	427,262	333,192	29,853	4.44	11.2
346.00	MISCELLANEOUS POWER PLANT EQUIPMENT	30-S1.5	*	(13)	14,717.62	12,177	4,454	569	3.87	7.8
	TOTAL BEN FRENCH CT				18,635,322.90	14,154,914	6,903,000	487,189	2.61	14.2
	BEN FRENCH DIESEL									
342.00	FUEL HOLDERS AND ACCESSORIES	50-S0.5	*	(22)	51,864.25	47,265	16,009	2,215	4.27	7.2
344.10	GENERATORS	45-R2	*	(22)	828,868.97	774,635	236,585	36,709	4.43	6.4
345.00	ACCESSORY ELECTRIC EQUIPMENT	40-S2	*	(22)	110,823.34	60,434	74,770	11,226	10.13	6.7
	TOTAL BEN FRENCH DIESEL				991,556.56	882,334	327,364	50,150	5.06	6.5
	LANGE CT									
341.00	STRUCTURES AND IMPROVEMENTS	55-R3	*	(5)	324,886.40	102,053	239,078	7,174	2.21	33.3
342.00	FUEL HOLDERS AND ACCESSORIES	50-S0.5	*	(5)	1,722,516.16	526,052	1,282,590	43,258	2.51	29.6
344.10	GENERATORS	45-R2	*	(5)	26,182,995.19	9,824,794	17,667,351	593,903	2.27	29.7
345.00	ACCESSORY ELECTRIC EQUIPMENT	40-S2	*	(5)	2,095,868.47	792,608	1,408,054	50,943	2.43	27.6
346.00	MISCELLANEOUS POWER PLANT EQUIPMENT	30-S1.5	*	(5)	16,611.59	6,306	11,136	527	3.17	21.1
	TOTAL LANGE CT				30,342,877.81	11,251,813	20,608,209	695,805	2.29	29.6
	NEIL SIMPSON CT									
341.00	STRUCTURES AND IMPROVEMENTS	55-R3	*	(5)	176,358.69	78,850	106,327	3,405	1.93	31.2
342.00	FUEL HOLDERS AND ACCESSORIES	50-S0.5	*	(5)	2,116,073.40	616,956	1,604,921	56,038	2.65	28.6
344.10	GENERATORS	45-R2	*	(5)	25,644,954.15	8,133,641	18,793,561	660,704	2.58	28.4
345.00	ACCESSORY ELECTRIC EQUIPMENT	40-S2	*	(5)	1,987,599.72	927,847	1,159,133	45,006	2.26	25.8
346.00	MISCELLANEOUS POWER PLANT EQUIPMENT	30-S1.5	*	(5)	51,538.76	24,278	29,838	1,316	2.55	22.7
	TOTAL NEIL SIMPSON CT				29,976,524.72	9,781,572	21,693,780	766,469	2.56	28.3
	TOTAL OTHER PRODUCTION PLANT				**79,946,281.99**	**36,070,633**	**49,532,353**	**1,999,613**	**2.50**	**24.8**

BLACK HILLS POWER

SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE
AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2012

	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)
	TRANSMISSION PLANT								
352.00	STRUCTURES AND IMPROVEMENTS	50-S4	(10)	1,782,604.36	663,629	1,297,236	32,627	1.83	39.8
353.00	STATION EQUIPMENT	42-S0	(5)	49,207,432.58	14,189,839	37,477,965	1,045,761	2.13	35.8
354.00	TOWERS AND FIXTURES	60-R2	(20)	864,826.03	201,748	836,043	15,029	1.74	55.6
355.00	POLES AND FIXTURES	55-R3	(30)	28,042,178.61	7,653,538	28,801,294	768,083	2.74	37.5
356.00	OVERHEAD CONDUCTORS AND DEVICES	60-R2.5	(20)	29,442,220.30	8,331,379	26,999,285	604,638	2.05	44.7
359.00	ROADS AND TRAILS	60-S4	0	6,920.28	3,176	3,744	119	1.72	31.5
	TOTAL TRANSMISSION PLANT			**109,346,182.16**	**31,043,309**	**95,415,567**	**2,466,257**	**2.26**	**38.7**
	DISTRIBUTION PLANT								
361.00	STRUCTURES AND IMPROVEMENTS	40-S1	(5)	659,707.01	153,649	539,043	16,194	2.45	33.3
361.05	LAND IMPROVEMENTS	40-S1	(5)	47,783.26	657	49,515	1,286	2.69	38.5
362.00	STATION EQUIPMENT	45-R2	(10)	72,055,912.50	23,390,537	55,870,967	1,638,639	2.27	34.1
364.00	POLES, TOWERS AND FIXTURES	50-R2	(70)	68,260,183.69	24,123,729	91,918,583	2,486,400	3.64	37.0
365.00	OVERHEAD CONDUCTORS AND DEVICES	50-R1.5	(20)	42,228,224.86	13,891,548	36,782,322	954,411	2.26	38.5
366.00	UNDERGROUND CONDUIT	37-R1	(5)	4,085,013.44	494,158	3,795,106	114,803	2.81	33.1
367.00	UNDERGROUND CONDUCTORS AND DEVICES	40-R2	(5)	39,568,735.94	13,938,668	27,608,505	917,643	2.32	30.1
368.01	LINE TRANSFORMERS - OTHER EQUIPMENT	36-R1.5	0	2,254,569.34	381,303	1,873,266	61,742	2.74	30.3
368.02	LINE TRANSFORMERS - CONVENTIONAL	36-R1.5	0	13,091,278.10	5,064,696	8,026,582	320,622	2.45	25.0
368.03	LINE TRANSFORMERS - PADMOUNT	36-R1.5	0	19,896,434.33	6,765,246	13,131,188	468,469	2.35	28.0
	TOTAL LINE TRANSFORMERS			35,242,281.77	12,211,245	23,031,036	850,833	2.41	27.1
369.01	SERVICES - OVERHEAD	62-R2.5	(50)	8,107,256.27	2,533,355	9,627,529	196,837	2.43	48.9
369.02	SERVICES - UNDERGROUND	62-R2.5	(50)	20,822,507.10	6,780,554	24,453,207	467,045	2.24	52.4
	TOTAL SERVICES			28,929,763.37	9,313,909	34,080,736	663,882	2.29	51.3
370.01	METERS	21-L0	0	1,026,068.51	301,036	725,033	56,414	5.50	12.9
370.04	METERS - AMI	21-L0	0	6,018,676.65	203,672	5,815,005	301,309	5.01	19.3
371.00	INSTALLATIONS ON CUSTOMER PREMISES	30-R1	(10)	2,174,339.20	840,423	1,551,350	69,981	3.22	22.2
373.00	STREET LIGHTING AND SIGNAL SYSTEMS	25-L0.5	(15)	1,721,562.86	813,101	1,166,696	68,224	3.96	17.1
	TOTAL DISTRIBUTION PLANT			**302,018,253.06**	**99,676,332**	**282,933,897**	**8,140,019**	**2.70**	**34.8**
	GENERAL PLANT								
390.01	STRUCTURES AND IMPROVEMENTS - OWNED	40-R1	(10)	12,789,236.43	7,132,242	6,935,918	214,020	1.67	32.4
391.01	OFFICE FURNITURE AND EQUIPMENT								
	FULLY ACCRUED	Fully Accrued	0	439,368.05	439,368	0	0	-	-
	AMORTIZED	20-SQ	0	2,833,405.36	1,230,525	1,602,880	133,570	4.71 **	12.0
	TOTAL OFFICE FURNITURE AND EQUIPMENT			3,272,773.41	1,669,893	1,602,880	133,570	4.08	12.0
391.03	COMPUTER HARDWARE								
	FULLY ACCRUED	Fully Accrued	0	17,662.46	17,662	0	0	-	-
	AMORTIZED	5-SQ	0	1,656,308.57	329,591	1,326,718	402,931	24.33 **	3.3
	TOTAL COMPUTER HARDWARE			1,673,971.03	347,253	1,326,718	402,931	24.07	3.3

BLACK HILLS POWER

SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2012

	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)
391.04	COMPUTER SOFTWARE	9-S2.5	0	3,651,575.26	1,690,032	1,961,543	288,228	7.89	6.8
391.05	SYSTEM DEVELOPMENT	5-SQ	0	59,725.18	32,332	27,393	10,957	18.35 **	2.5
392.01	TRANSPORTATION EQUIPMENT - SUBUNIT	13-S0	10	131,626.96	96,167	22,297	2,033	1.54	11.0
392.02	TRANSPORTATION EQUIPMENT - CARS	13-S0	10	215,057.80	40,669	152,883	14,960	6.96	10.2
392.03	TRANSPORTATION EQUIPMENT - LIGHT TRUCKS	13-S0	10	2,871,325.77	1,448,754	1,135,439	108,226	3.77	10.5
392.04	TRANSPORTATION EQUIPMENT - MEDIUM TRUCKS	13-S0	10	803,668.92	362,133	361,169	35,265	4.39	10.2
392.05	TRANSPORTATION EQUIPMENT - HEAVY TRUCKS	13-S0	10	2,853,372.77	1,705,290	862,745	81,089	2.84	10.6
392.06	TRANSPORTATION EQUIPMENT - TRAILERS	13-S0	10	628,623.37	383,415	182,346	17,587	2.80	10.4
	TOTAL TRANSPORTATION EQUIPMENT			7,503,675.59	4,036,428	2,716,879	259,160	3.45	10.5
393.00	STORES EQUIPMENT								
	FULLY ACCRUED	Fully Accrued	0	186,168.41	186,168	0	0	-	-
	AMORTIZED	20-SQ	0	136,266.21	1,886	134,380	30,063	22.06 **	4.5
	TOTAL STORES EQUIPMENT			322,434.62	188,054	134,380	30,063	9.32	4.5
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT								
	FULLY ACCRUED	Fully Accrued	0	197,599.87	197,600	0	0	-	-
	AMORTIZED	25-SQ	0	4,109,027.80	1,675,628	2,433,400	143,467	3.49 **	17.0
	TOTAL TOOLS, SHOP AND GARAGE EQUIPMENT			4,306,627.67	1,873,228	2,433,400	143,467	3.33	17.0
395.00	LABORATORY EQUIPMENT	25-SQ	0	318,024.39	5,569	312,455	23,721	7.46 **	13.2
396.01	POWER OPERATED EQUIPMENT - SHORT LIFE	30-S1.5	20	52,741.62	37,100	5,093	233	0.44	21.9
396.02	POWER OPERATED EQUIPMENT - LONG LIFE	30-S1.5	20	792,630.34	185,556	448,548	16,731	2.11	26.8
397.00	COMMUNICATION EQUIPMENT								
	FULLY ACCRUED	Fully Accrued	0	139,781.98	139,782	0	0	-	-
	AMORTIZED	20-SQ	0	3,666,737.20	880,781	2,785,956	229,558	6.26 **	12.1
	TOTAL COMMUNICATION EQUIPMENT			3,806,519.18	1,020,563	2,785,956	229,558	6.03	12.1
397.10	COMMUNICATION EQUIPMENT - TOWERS	20-L1.5	0	4,403,055.70	890,216	3,512,840	229,649	5.22	15.3
398.00	MISCELLANEOUS EQUIPMENT								
	FULLY ACCRUED	Fully Accrued	0	13,139.05	13,139	0	0	-	-
	AMORTIZED	20-SQ	0	184,159.00	33,461	150,698	11,438	6.21 **	13.2
	TOTAL MISCELLANEOUS EQUIPMENT			197,298.05	46,600	150,698	11,438	5.80	13.2
	TOTAL GENERAL PLANT			**43,150,288.47**	**19,155,066**	**24,354,701**	**1,993,726**	**4.62**	**12.2**
	TOTAL DEPRECIABLE PLANT			**971,998,719.46**	**335,958,837**	**801,834,897**	**34,703,945**	**3.57**	**23.1**

BLACK HILLS POWER

SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE
AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2012

	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)
	NONDEPRECIABLE PLANT								
310.01	LAND			333,639.32	31,963				
340.01	LAND			2,705.00					
350.01	LAND			1,053,181.88					
350.02	LAND RIGHTS/RIGHTS OF WAY - NONDEPRECIABLE			4,692,747.84					
360.01	LAND			956,864.59	(21,473)				
360.02	LAND RIGHTS/RIGHTS OF WAY - NONDEPRECIABLE			1,138,377.52	(21,552)				
389.01	LAND			856,913.03					
	TOTAL NONDEPRECIABLE PLANT			**9,034,429.18**	**(11,062)**				
	TOTAL ELECTRIC PLANT			**981,033,148.64**	**335,947,775**	**801,834,897**	**34,703,945**		

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

** ADDITIONS AS OF JANUARY 1, 2013 WILL UTILIZE THE STANDARD AMORTIZATION RATE

NOTE: RATES FOR THE CHEYENNE PRAIRIE COMBINED CYCLE UNIT ARE AS FOLLOWS:

ACCOUNT	RATE
341.00	3.08
342.00	3.30
344.00	3.29
345.00	3.27
346.00	3.80
COMPOSITE	3.29

Exhibit JJS-2

(FULL)

BLACK HILLS POWER

Rapid City, South Dakota

DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS

RELATED TO ELECTRIC PLANT

AS OF DECEMBER 31, 2012

GANNETT FLEMING, INC. - VALUATION AND RATE DIVISION

Harrisburg, Pennsylvania

Gannett Fleming

Excellence Delivered ***As Promised***

November 27, 2013

Black Hills Power
625 Ninth Street
Rapid City, SD 57701

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Attention Mr. Chris Kilpatrick
Director of Rates

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the electric plant of Black Hills Power. The study results include annual depreciation rates as of December 31, 2012. The attached report presents a description of the methods used in the estimation of depreciation, summaries of annual and accrued depreciation, the statistical support for the life and net salvage estimates and the detailed tabulations of annual and accrued depreciation.

Respectfully submitted,

GANNETT FLEMING, INC.

John J. Spanos

JOHN J. SPANOS
Sr. Vice President
Valuation and Rate Division

JJS/krm

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PART I. INTRODUCTION

BLACK HILLS POWER

DEPRECIATION STUDY

PART I. INTRODUCTION

SCOPE

This report presents the results of the depreciation study prepared for Black Hills Power (the Company) as applied to electric plant in service as of December 31, 2012. The report relates to the concepts, methods and basic judgments which underlie recommended annual depreciation accrual rates and amounts related to current electric plant in service.

The service life and net salvage estimates resulting from the study were based on informed judgment which incorporated analyses of historical plant retirement data as recorded through 2012; a review of Company practice and outlook as they relate to plant operation and retirement; and consideration of current practice in the electric industry, including knowledge of service life and salvage estimates used for other electric properties.

PLAN OF REPORT

Part I, Introduction, includes brief statements of the scope and basis of the study. Part II presents descriptions of the methods used in the service life and net salvage studies and the methods and procedures used in the calculation of depreciation. Part III presents the results of the study, including a summary table, survivor curve charts and life tables resulting from the retirement rate method of analysis, tabular results of the historical net salvage analyses, and detailed tabulations of the calculated remaining lives and annual accruals.

BASIS OF STUDY

Depreciation

For all accounts, the annual depreciation was calculated by the straight line method using the average service life procedure and the remaining life basis. For certain general and common plant accounts, the annual depreciation was based on amortization accounting. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group.

Service Life Estimates

The average service life estimates were based on informed judgment which incorporated analyses of available historical service life data related to the property, a review of management's current plans and operating policies, and a general knowledge of service lives experienced and estimated in the electric industry. The use of survivor curves to reflect the expected dispersion of retirements provides a consistent method of estimating depreciation for utility property. Iowa type survivor curves were used to depict the estimated survivor curves for the plant account property groups.

The procedure for estimating service lives consisted of compiling historical data for the plant accounts or depreciable groups, analyzing this history through the use of widely accepted techniques, and forecasting the survivor characteristics for each depreciable group on the basis of interpretations of the historical data analyses and the probable future. The combination of the historical experience and the estimated future yielded estimated survivor curves from which the average service lives were derived.

The Company's service life estimates used in the depreciation calculation incorporated historical data compiled through 2012 from the property records of the

Company. Such data included plant additions, retirements, transfers and other activity. Generally, retirement data for the years 1950 through 2012 were used in the actuarial life table computations which were the primary statistical support of the service life estimates.

A general understanding of the function of the plant and information with respect to the reasons for past retirements and the expected future causes of retirement was obtained through discussions with operating and management personnel conducted during the course of the service life study. Information regarding plans for the future was incorporated in the interpretation and extrapolation of the statistical analyses.

Net Salvage Estimates

The estimates of net salvage were based in part on historical data compiled for the years 1997 through 2012. Gross salvage and cost of removal as recorded to the depreciation reserve account and related to experienced retirements were used. Percentages of the cost of plant retired were calculated for each component of net salvage, on both annual and three-year moving average bases. The most recent five-year average also was calculated for consideration. The estimates of net salvage are expressed as percentages of the cost of plant retired.

II-1

PART II. METHODS USED IN THE ESTIMATION OF DEPRECIATION

PART II. METHODS USED IN THE ESTIMATION OF DEPRECIATION

DEPRECIATION

Depreciation, in public utility regulation, is the loss in service value not restored by current repairs or covered by insurance.

Depreciation, as used in accounting, is a method of distributing fixed capital costs, less net salvage, over a period of time by allocating annual amounts to expense. Each annual amount of such depreciation expense is part of that year's total cost of providing utility service. Normally, the period of time over which the fixed capital cost is allocated to the cost of service is equal to the period of time over which an item renders service, that is, the item's service life. The most prevalent method of allocation is to distribute an equal amount of cost to each year of service life. This method is known as the straight line method of depreciation.

The calculation of annual depreciation based on the straight line method requires the estimation of average life and net salvage. These subjects are discussed in the sections which follow.

SERVICE LIFE AND NET SALVAGE ESTIMATION

Average Service Life

The use of an average service life for a property group implies that the various units in the group have different lives. Thus, the average life may be obtained by determining the separate lives of each of the units, or by constructing a survivor curve by plotting the number of units which survive at successive ages. A discussion of the general concept of survivor curves is presented. Also, the Iowa type survivor curves are reviewed.

Survivor Curves

The survivor curve graphically depicts the amount of property existing at each age throughout the life of an original group. From the survivor curve, the average life of the group, the remaining life expectancy, the probable life, and the frequency curve can be calculated. In Figure 1, a typical smooth survivor curve and the derived curves are illustrated. The average life is obtained by calculating the area under the survivor curve, from age zero to the maximum age, and dividing this area by the ordinate at age zero. The remaining life expectancy at any age can be calculated by obtaining the area under the curve, from the observation age to the maximum age, and dividing this area by the percent surviving at the observation age. For example, in Figure 1 the remaining life at age 30 years is equal to the crosshatched area under the survivor curve divided by 29.5 percent surviving at age 30. The probable life at any age is developed by adding the age and remaining life. If the probable life of the property is calculated for each year of age, the probable life curve shown in the chart can be developed. The frequency curve presents the number of units retired in each age interval and is derived by obtaining the differences between the amount of property surviving at the beginning and at the end of each interval.

Iowa Type Curves. The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized survivor curves known as the Iowa type curves. There are four families in the Iowa system, labeled in accordance with the location of the modes of the retirements in relationship to the average life and the relative height of the modes. The left moded curves, presented in Figure 2, are those in which the greatest frequency of retirement occurs to the left of, or prior to, average service life. The symmetrical moded curves, presented in Figure 3, are those in which the

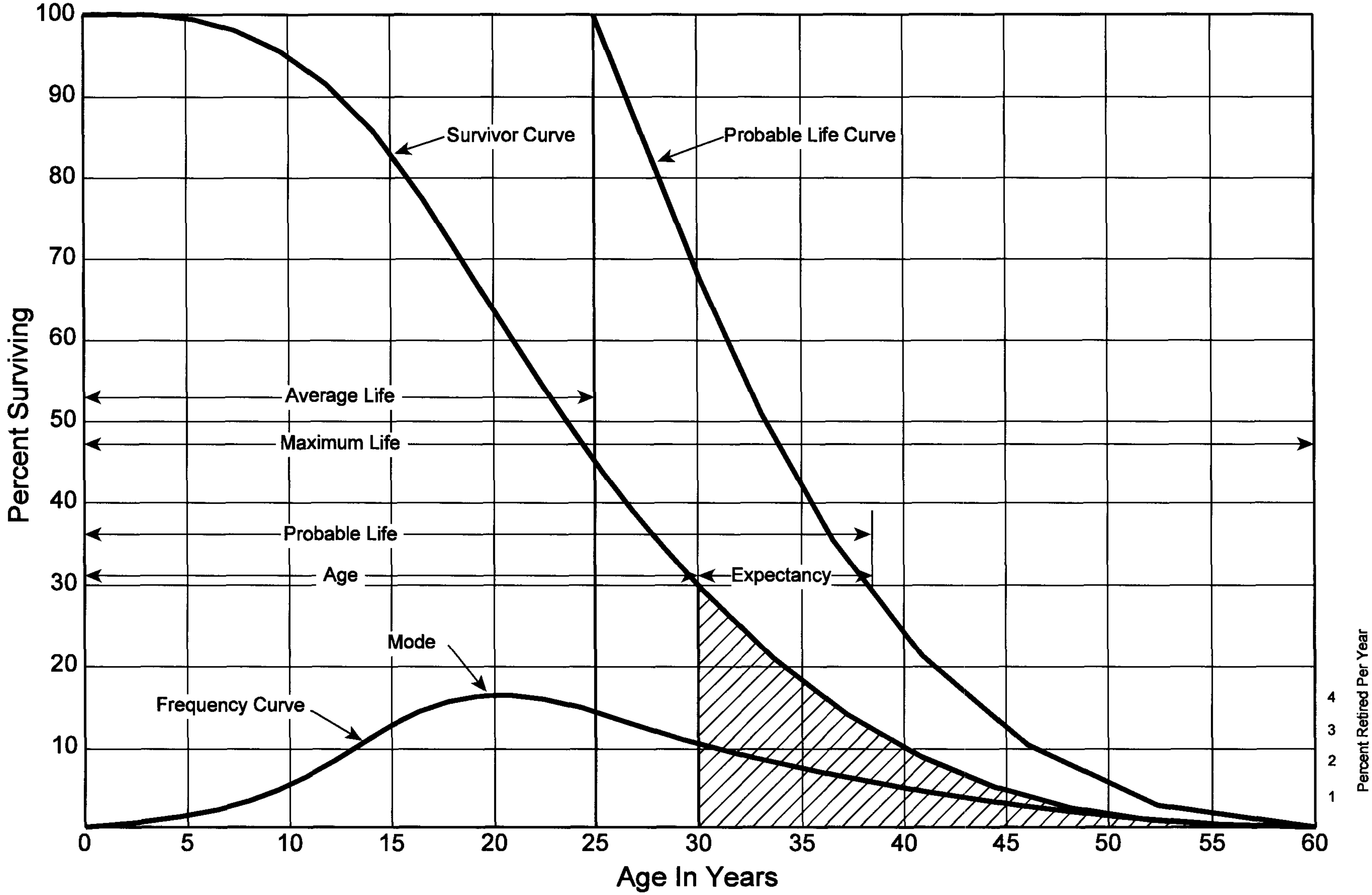

Figure 1. A Typical Survivor Curve and Derived Curves

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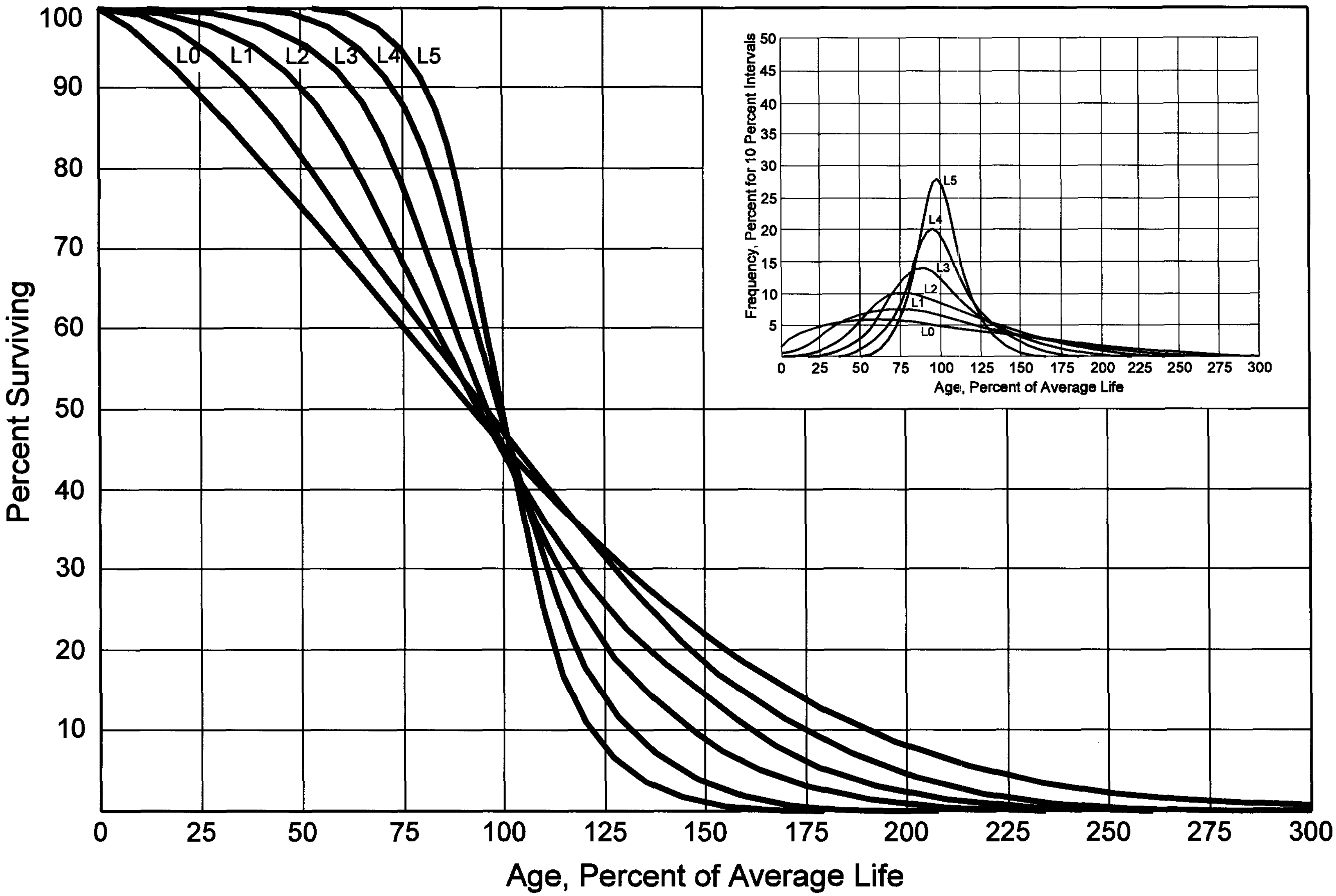

Figure 2. Left Modal or "L" Iowa Type Survivor Curves

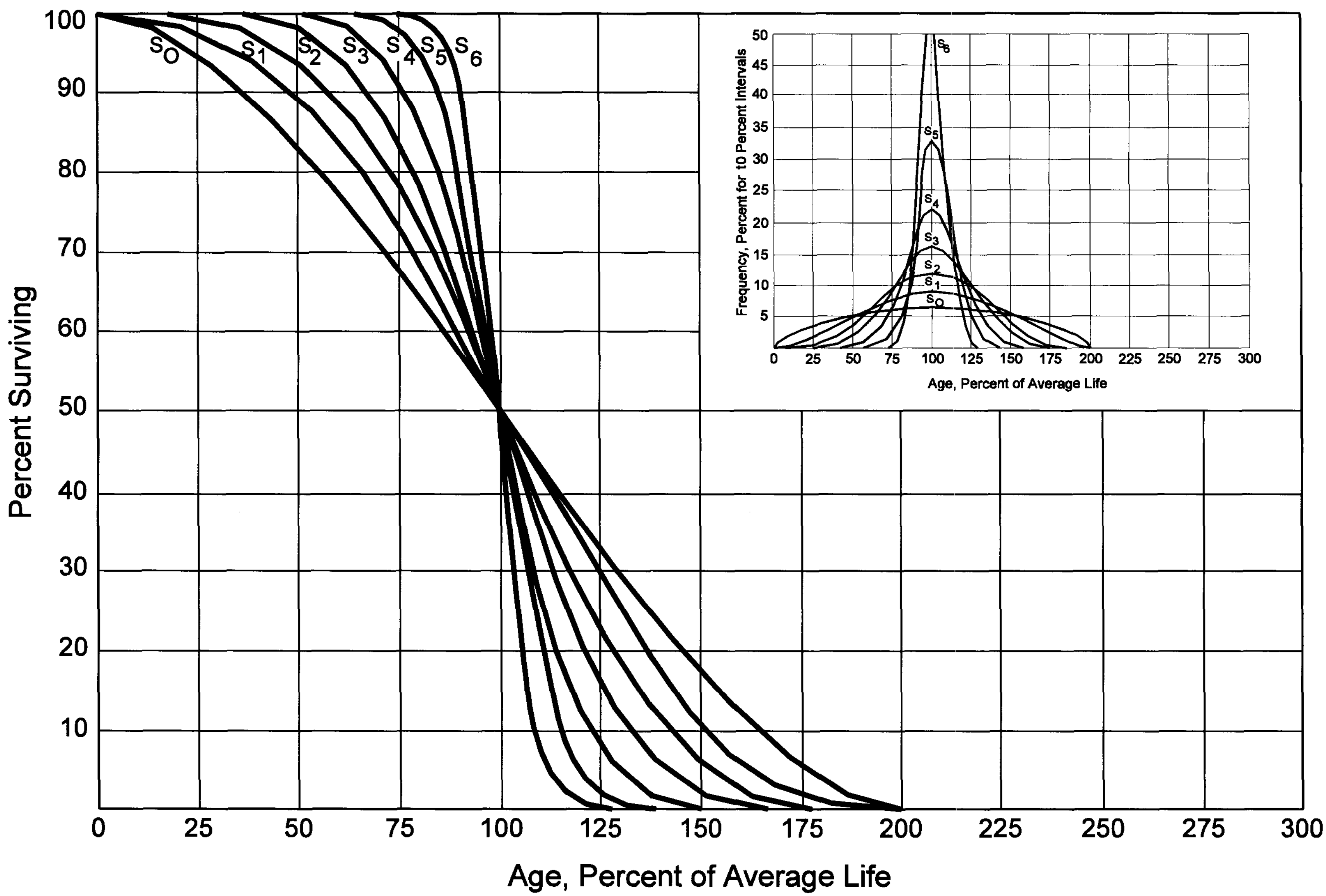

Figure 3. Symmetrical or "S" Iowa Type Survivor Curves

greatest frequency of retirement occurs at average service life. The right moded curves, presented in Figure 4, are those in which the greatest frequency occurs to the right of, or after, average service life. The origin moded curves, presented in Figure 5, are those in which the greatest frequency of retirement occurs at the origin, or immediately after age zero. The letter designation of each family of curves (L, S, R or O) represents the location of the mode of the associated frequency curve with respect to the average service life. The numerical subscripts represent the relative heights of the modes of the frequency curves within each family.

The Iowa curves were developed at the Iowa State College Engineering Experiment Station through an extensive process of observation and classification of the ages at which industrial property had been retired. A report of the study which resulted in the classification of property survivor characteristics into 18 type curves, which constitute three of the four families, was published in 1935 in the form of the Experiment Station's Bulletin 125.[1] These type curves have also been presented in subsequent Experiment Station bulletins and in the text, "Engineering Valuation and Depreciation."[2] In 1957, Frank V. B. Couch, Jr., an Iowa State College graduate student, submitted a thesis[3] presenting his development of the fourth family consisting of the four O type survivor curves.

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[1]Winfrey, Robley. Statistical Analyses of Industrial Property Retirements. Iowa State College, Engineering Experiment Station, Bulletin 125. 1935.

[2]Marston, Anson, Robley Winfrey and Jean C. Hempstead. Engineering Valuation and Depreciation, 2nd Edition. New York, McGraw-Hill Book Company. 1953.

[3]Couch, Frank V. B., Jr. "Classification of Type O Retirement Characteristics of Industrial Property." Unpublished M.S. thesis (Engineering Valuation). Library, Iowa State College, Ames, Iowa. 1957.

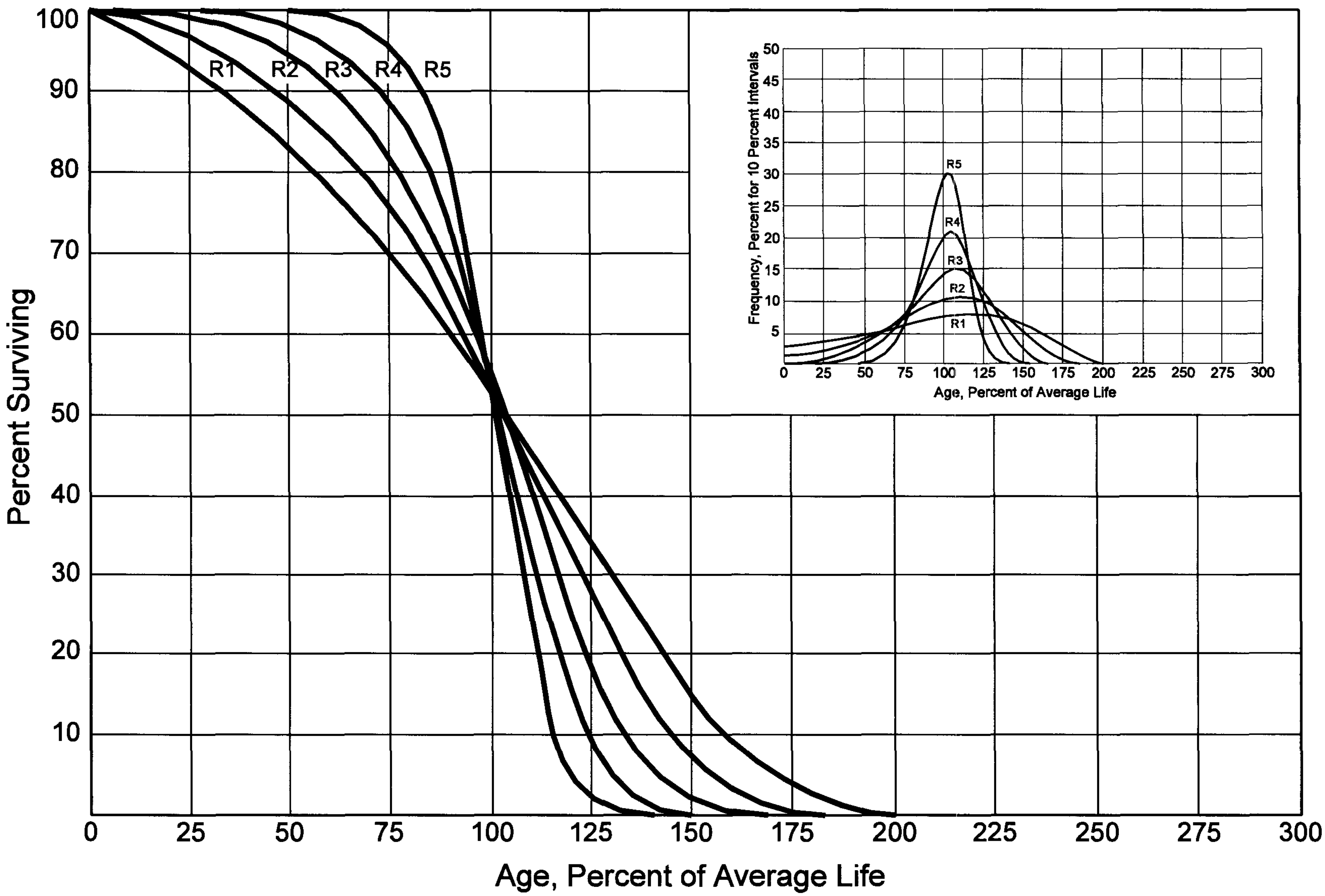


Figure 4. Right Modal or "R" Iowa Type Survivor Curves

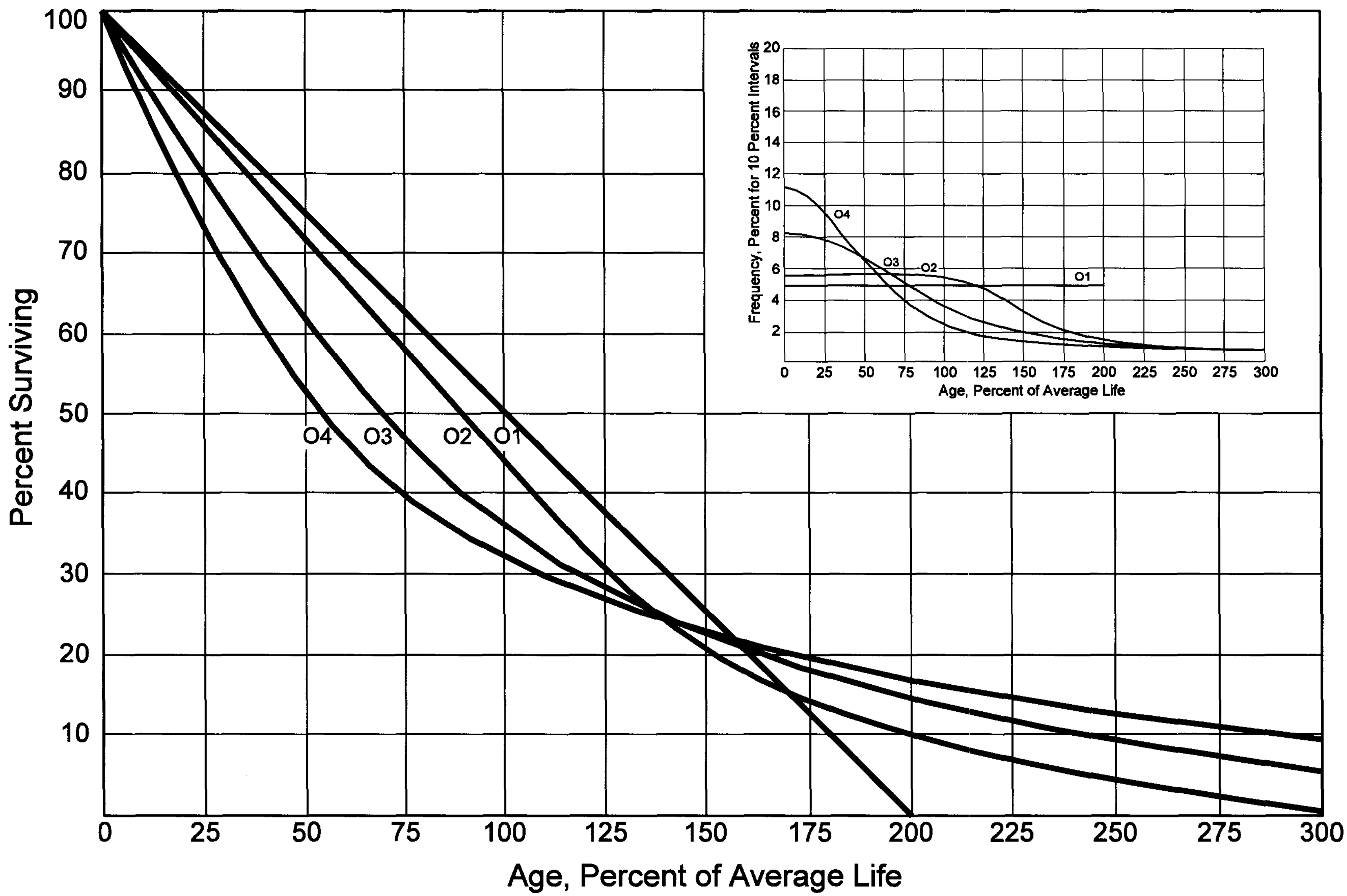


Figure 5. Origin Modal or "O" Iowa Type Survivor Curves

Retirement Rate Method of Analysis

The retirement rate method is an actuarial method of deriving survivor curves using the average rates at which property of each age group is retired. The method relates to property groups for which aged accounting experience is available or for which aged accounting experience is developed by statistically aging unaged amounts and is the method used to develop the original stub survivor curves in this study. The method (also known as the annual rate method) is illustrated through the use of an example in the following text, and is also explained in several publications, including "Statistical Analyses of Industrial Property Retirements,"[4] "Engineering Valuation and Depreciation,"[5] and "Depreciation Systems."[6]

The average rate of retirement used in the calculation of the percent surviving for the survivor curve (life table) requires two sets of data: first, the property retired during a period of observation, identified by the property's age at retirement; and second, the property exposed to retirement at the beginnings of the age intervals during the same period. The period of observation is referred to as the experience band, and the band of years which represent the installation dates of the property exposed to retirement during the experience band is referred to as the placement band. An example of the calculations used in the development of a life table follows. The example includes schedules of annual aged property transactions, a schedule of plant exposed to retirement, a life table, and illustrations of smoothing the stub survivor curve.

---

[4]Winfrey, Robley, Supra Note 1.

[5]Marston, Anson, Robley Winfrey, and Jean C. Hempstead, Supra Note 2.

[6]Wolf, Frank K. and W. Chester Fitch. Depreciation Systems. Iowa State University Press. 1994

Schedules of Annual Transactions in Plant Records. The property group used to illustrate the retirement rate method is observed for the experience band 2003-2012 during which there were placements during the years 1998-2012. In order to illustrate the summation of the aged data by age interval, the data were compiled in the manner presented in Schedules 1 and 2 on pages II-12 and II-13. In Schedule 1, the year of installation (year placed) and the year of retirement are shown. The age interval during which a retirement occurred is determined from this information. In the example which follows, $10,000 of the dollars invested in 1998 were retired in 2003. The $10,000 retirement occurred during the age interval between 4½ and 5½ years on the basis that approximately one-half of the amount of property was installed prior to and subsequent to July 1 of each year. That is, on the average, property installed during a year is placed in service at the midpoint of the year for the purpose of the analysis. All retirements also are stated as occurring at the midpoint of a one-year age interval of time, except the first age interval which encompasses only one-half year.

The total retirements occurring in each age interval in a band are determined by summing the amounts for each transaction year-installation year combination for that age interval. For example, the total of $143,000 retired for age interval 4½-5½ is the sum of the retirements entered on Schedule 1 immediately above the stairstep line drawn on the table beginning with the 2003 retirements of 1998 installations and ending with the 2012 retirements of the 2007 installations. Thus, the total amount of 143 for age interval 4½-5½ equals the sum of:

$$10 + 12 + 13 + 11 + 13 + 13 + 15 + 17 + 19 + 20.$$

In Schedule 2, other transactions which affect the group are recorded in a similar manner. The entries illustrated include transfers and sales. The entries which are credits to the plant account are shown in parentheses. The items recorded on this schedule

SCHEDULE 1. RETIREMENTS FOR EACH YEAR 2003-2012
SUMMARIZED BY AGE INTERVAL

Experience Band 2003-2012

Placement Band 1998-2012

Year Placed (1)	Retirements, Thousands of Dollars During Year 2003 (2)	2004 (3)	2005 (4)	2006 (5)	2007 (6)	2008 (7)	2009 (8)	2010 (9)	2011 (10)	2012 (11)	Total During Age Interval (12)	Age Interval (13)
1998	10	11	12	13	14	16	23	24	25	26	26	13½-14½
1999	11	12	13	15	16	18	20	21	22	19	44	12½-13½
2000	11	12	13	14	16	17	19	21	22	18	64	11½-12½
2001	8	9	10	11	11	13	14	15	16	17	83	10½-11½
2002	9	10	11	12	13	14	16	17	19	20	93	9½-10½
2003	4	9	10	11	12	13	14	15	16	20	105	8½-9½
2004		5	11	12	13	14	15	16	18	20	113	7½-8½
2005			6	12	13	15	16	17	19	19	124	6½-7½
2006				6	13	15	16	17	19	19	131	5½-6½
2007					7	14	16	17	19	20	143	4½-5½
2008						8	18	20	22	23	146	3½-4½
2009							9	20	22	25	150	2½-3½
2010								11	23	25	151	1½-2½
2011									11	24	153	½-1½
2012										13	80	0-½
Total	53	68	86	106	128	157	196	231	273	308	1,606	

SCHEDULE 2. OTHER TRANSACTIONS FOR EACH YEAR 2003-2012
SUMMARIZED BY AGE INTERVAL

Experience Band 2003-2012 — Placement Band 1998-2012

Year Placed (1)	Acquisitions, Transfers and Sales, Thousands of Dollars — During Year: 2003 (2)	2004 (3)	2005 (4)	2006 (5)	2007 (6)	2008 (7)	2009 (8)	2010 (9)	2011 (10)	2012 (11)	Total During Age Interval (12)	Age Interval (13)
1998	-	-	-	-	-	-	60[a]	-	-	-	-	13½-14½
1999	-	-	-	-	-	-	-	-	-	-	-	12½-13½
2000	-	-	-	-	-	-	-	-	-	-	-	11½-12½
2001	-	-	-	-	-	-	-	(5)[b]	-	-	60	10½-11½
2002	-	-	-	-	-	-	-	6[a]	-	-	-	9½-10½
2003		-	-	-	-	-	-	-	-	-	(5)	8½-9½
2004		-	-	-	-	-	-	-	-	-	6	7½-8½
2005			-	-	-	-	-	-	-	-	-	6½-7½
2006				-	-	-	-	(12)[b]	-	-	-	5½-6½
2007					-	-	-	-	22[a]	-	-	4½-5½
2008						-	-	(19)[b]	-	-	10	3½-4½
2009							-	-	-	-	-	2½-3½
2010								-	-	(102)[c]	(121)	1½-2½
2011									-	-	-	½-1½
2012											-	0-½
Total	-	-	-	-	-	-	60	(30)	22	(102)	(50)	

[a] Transfer Affecting Exposures at Beginning of Year
[b] Transfer Affecting Exposures at End of Year
[c] Sale with Continued Use
Parentheses denote Credit amount.

are not totaled with the retirements but are used in developing the exposures at the beginning of each age interval.

Schedule of Plant Exposed to Retirement. The development of the amount of plant exposed to retirement at the beginning of each age interval is illustrated in Schedule 3 on page II-15.

The surviving plant at the beginning of each year from 2003 through 2012 is recorded by year in the portion of the table headed "Annual Survivors at the Beginning of the Year." The last amount entered in each column is the amount of new plant added to the group during the year. The amounts entered in Schedule 3 for each successive year following the beginning balance or addition are obtained by adding or subtracting the net entries shown on Schedules 1 and 2. For the purpose of determining the plant exposed to retirement, transfers-in are considered as being exposed to retirement in this group at the beginning of the year in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the beginning of the following year. Thus, the amounts of plant shown at the beginning of each year are the amounts of plant from each placement year considered to be exposed to retirement at the beginning of each successive transaction year. For example, the exposures for the installation year 2008 are calculated in the following manner:

Exposures at age 0 = amount of addition	= $750,000
Exposures at age ½ = $750,000 - $ 8,000	= $742,000
Exposures at age 1½ = $742,000 - $18,000	= $724,000
Exposures at age 2½ = $724,000 - $20,000 - $19,000	= $685,000
Exposures at age 3½ = $685,000 - $22,000	= $663,000

For the entire experience band 2003-2012, the total exposures at the beginning of an age interval are obtained by summing diagonally in a manner similar to the summing

SCHEDULE 3. PLANT EXPOSED TO RETIREMENT
JANUARY 1 OF EACH YEAR 2003-2012
SUMMARIZED BY AGE INTERVAL

Experience Band 2003-2012

Placement Band 1998-2012

	Exposures, Thousands of Dollars										Total at	
Year	Annual Survivors at the Beginning of the Year										Beginning of	Age
Placed	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Age Interval	Interval
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1998	255	245	234	222	209	195	239	216	192	167	167	13½-14½
1999	279	268	256	243	228	212	194	174	153	131	323	12½-13½
2000	307	296	284	271	257	241	224	205	184	162	531	11½-12½
2001	338	330	321	311	300	289	276	262	242	226	823	10½-11½
2002	376	367	357	346	334	321	307	297	280	261	1,097	9½-10½
2003	420[a]	416	407	397	386	374	361	347	332	316	1,503	8½-9½
2004		460[a]	455	444	432	419	405	390	374	356	1,952	7½-8½
2005			510[a]	504	492	479	464	448	431	412	2,463	6½-7½
2006				580[a]	574	561	546	530	501	482	3,057	5½-6½
2007					660[a]	653	639	623	628	609	3,789	4½-5½
2008						750[a]	742	724	685	663	4,332	3½-4½
2009							850[a]	841	821	799	4,955	2½-3½
2010								960[a]	949	926	5,719	1½-2½
2011									1,080[a]	1,069	6,579	½-1½
2012										1,220[a]	7,490	0-½
Total	1,975	2,382	2,824	3,318	3,872	4,494	5,247	6,017	6,852	7,799	44,780	

[a] Additions during the year.

of the retirements during an age interval (Schedule 1). For example, the figure of 3,789, shown as the total exposures at the beginning of age interval 4½-5½, is obtained by summing:

255 + 268 + 284 + 311 + 334 + 374 + 405 + 448 + 501 + 609.

Original Life Table. The original life table, illustrated in Schedule 4 on page II-17, is developed from the totals shown on the schedules of retirements and exposures, Schedules 1 and 3, respectively. The exposures at the beginning of the age interval are obtained from the corresponding age interval of the exposure schedule, and the retirements during the age interval are obtained from the corresponding age interval of the retirement schedule. The retirement ratio is the result of dividing the retirements during the age interval by the exposures at the beginning of the age interval. The percent surviving at the beginning of each age interval is derived from survivor ratios, each of which equals one minus the retirement ratio. The percent surviving is developed by starting with 100% at age zero and successively multiplying the percent surviving at the beginning of each interval by the survivor ratio, i.e., one minus the retirement ratio for that age interval. The calculations necessary to determine the percent surviving at age 5½ are as follows:

Percent surviving at age 4½	=	88.15				
Exposures at age 4½	=	3,789,000				
Retirements from age 4½ to 5½	=	143,000				
Retirement Ratio	=	143,000	÷	3,789,000	=	0.0377
Survivor Ratio	=	1.000	-	0.0377	=	0.9623
Percent surviving at age 5½	=	(88.15)	x	(0.9623)	=	84.83

The totals of the exposures and retirements (columns 2 and 3) are shown for the purpose of checking with the respective totals in Schedules 1 and 3. The ratio of the total retirements to the total exposures, other than for each age interval, is meaningless.

SCHEDULE 4. ORIGINAL LIFE TABLE
CALCULATED BY THE RETIREMENT RATE METHOD

Experience Band 2003-2012 Placement Band 1998-2012

(Exposure and Retirement Amounts are in Thousands of Dollars)

Age at Beginning of Interval (1)	Exposures at Beginning of Age Interval (2)	Retirements During Age Interval (3)	Retirement Ratio (4)	Survivor Ratio (5)	Percent Surviving at Beginning of Age Interval (6)
0.0	7,490	80	0.0107	0.9893	100.00
0.5	6,579	153	0.0233	0.9767	98.93
1.5	5,719	151	0.0264	0.9736	96.62
2.5	4,955	150	0.0303	0.9697	94.07
3.5	4,332	146	0.0337	0.9663	91.22
4.5	3,789	143	0.0377	0.9623	88.15
5.5	3,057	131	0.0429	0.9571	84.83
6.5	2,463	124	0.0503	0.9497	81.19
7.5	1,952	113	0.0579	0.9421	77.11
8.5	1,503	105	0.0699	0.9301	72.65
9.5	1,097	93	0.0848	0.9152	67.57
10.5	823	83	0.1009	0.8991	61.84
11.5	531	64	0.1205	0.8795	55.60
12.5	323	44	0.1362	0.8638	48.90
13.5	167	26	0.1557	0.8443	42.24
					35.66
Total	44,780	1,606			

Column 2 from Schedule 3, Column 12, Plant Exposed to Retirement.
Column 3 from Schedule 1, Column 12, Retirements for Each Year.
Column 4 = Column 3 Divided by Column 2.
Column 5 = 1.0000 Minus Column 4.
Column 6 = Column 5 Multiplied by Column 6 as of the Preceding Age Interval.

The original survivor curve is plotted from the original life table (column 6, Schedule 4). When the curve terminates at a percent surviving greater than zero, it is called a stub survivor curve. Survivor curves developed from retirement rate studies generally are stub curves.

Smoothing the Original Survivor Curve. The smoothing of the original survivor curve eliminates any irregularities and serves as the basis for the preliminary extrapolation to zero percent surviving of the original stub curve. Even if the original survivor curve is complete from 100 percent to zero percent, it is desirable to eliminate any irregularities, as there is still an extrapolation for the vintages which have not yet lived to the age at which the curve reaches zero percent. In this study, the smoothing of the original curve with established type curves was used to eliminate irregularities in the original curve.

The Iowa type curves are used in this study to smooth those original stub curves which are expressed as percents surviving at ages in years. Each original survivor curve was compared to the Iowa curves using visual and mathematical matching in order to determine the better fitting smooth curves. In Figures 6, 7, and 8, the original curve developed in Schedule 4 is compared with the L, S, and R Iowa type curves which most nearly fit the original survivor curve. In Figure 6, the L1 curve with an average life between 12 and 13 years appears to be the best fit. In Figure 7, the S0 type curve with a 12-year average life appears to be the best fit and appears to be better than the L1 fitting. In Figure 8, the R1 type curve with a 12-year average life appears to be the best fit and appears to be better than either the L1 or the S0. In Figure 9, the three fittings, 12-L1, 12-S0 and 12-R1 are drawn for comparison purposes. It is probable that the 12-R1 Iowa curve would be selected as the most representative of the plotted survivor characteristics of the group, assuming no contrary relevant factors external to the analysis of historical data.

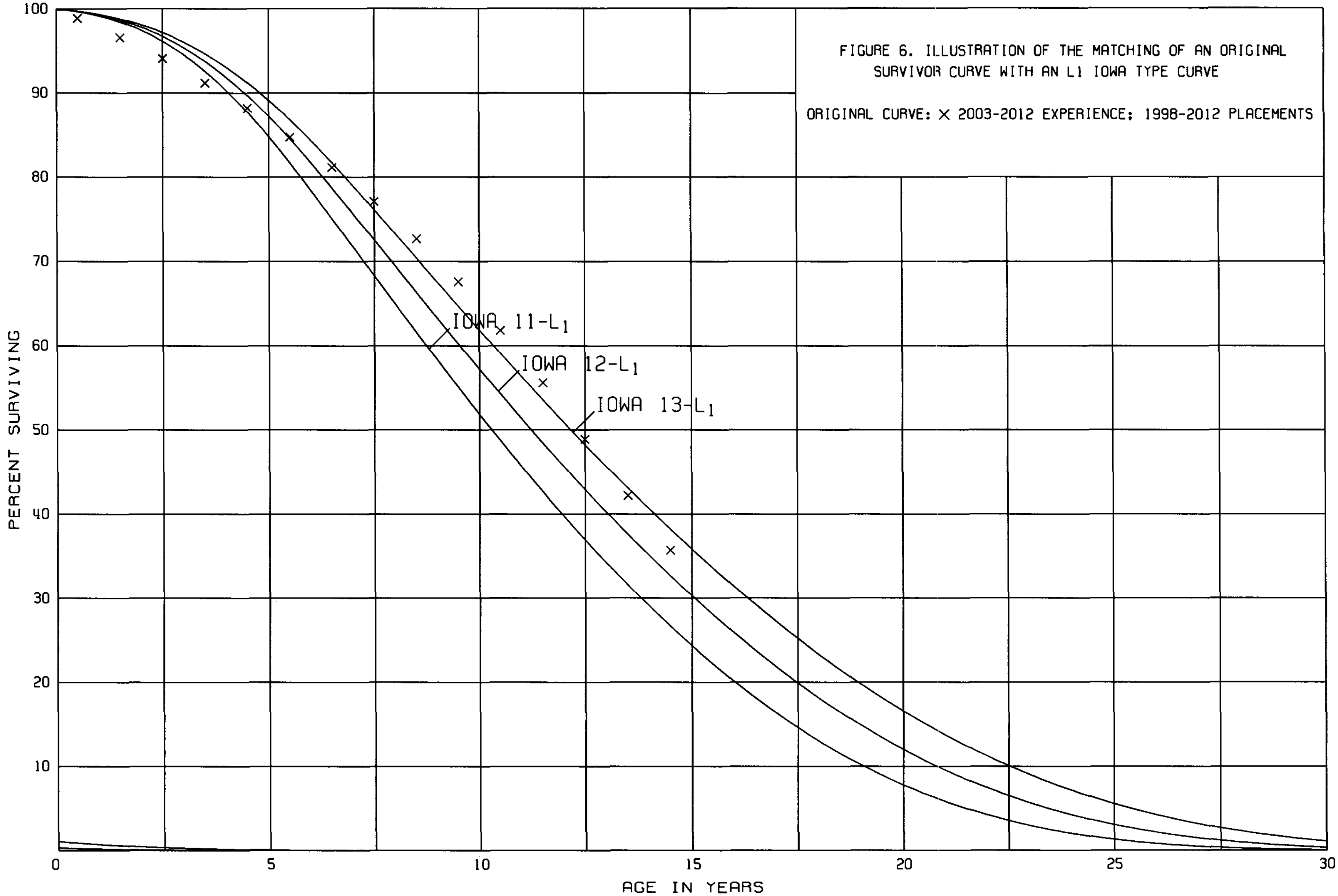


FIGURE 6. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1 IOWA TYPE CURVE

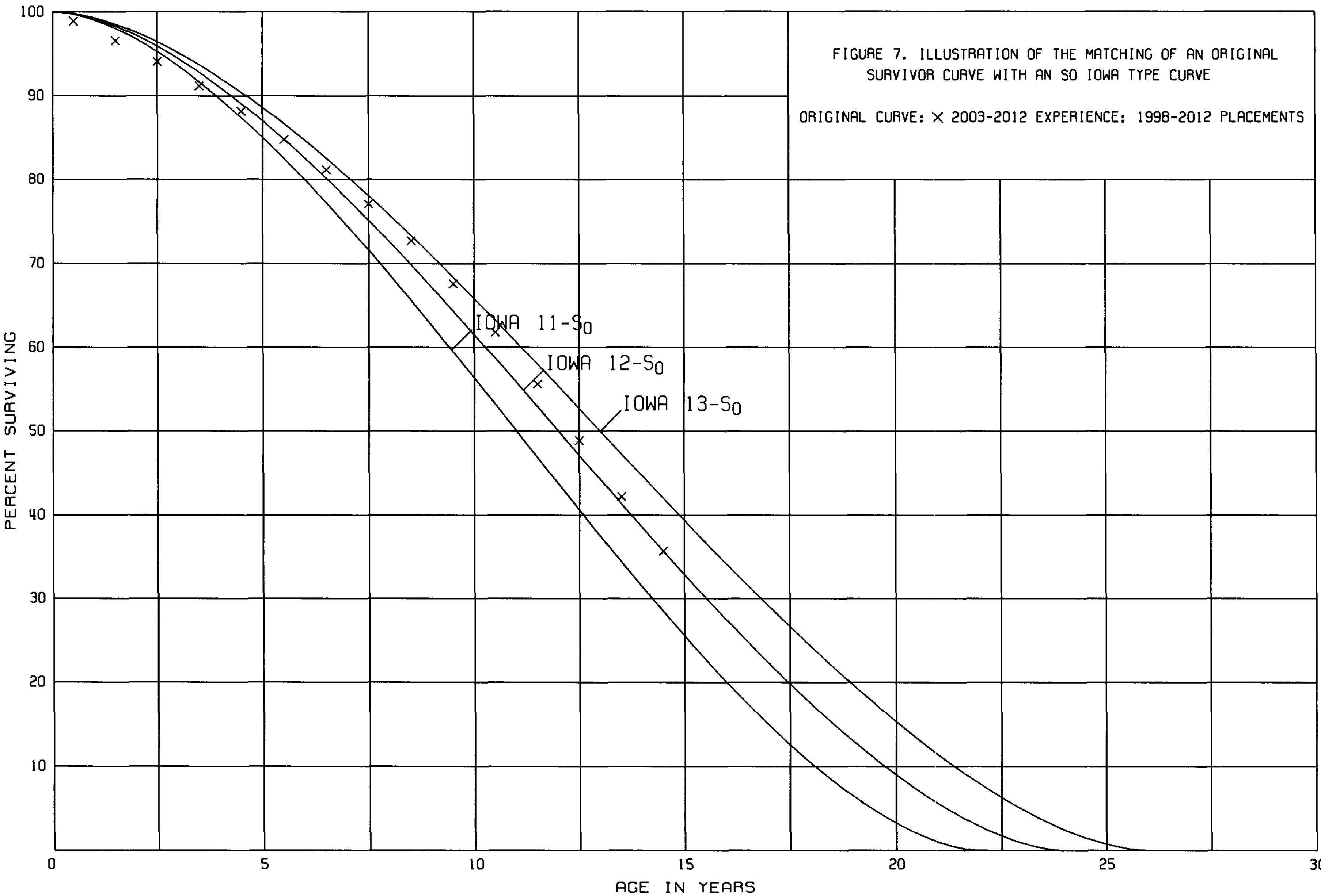


FIGURE 7. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN SO IOWA TYPE CURVE
ORIGINAL CURVE: × 2003-2012 EXPERIENCE: 1998-2012 PLACEMENTS
IOWA 11-S0
IOWA 12-S0
IOWA 13-S0
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

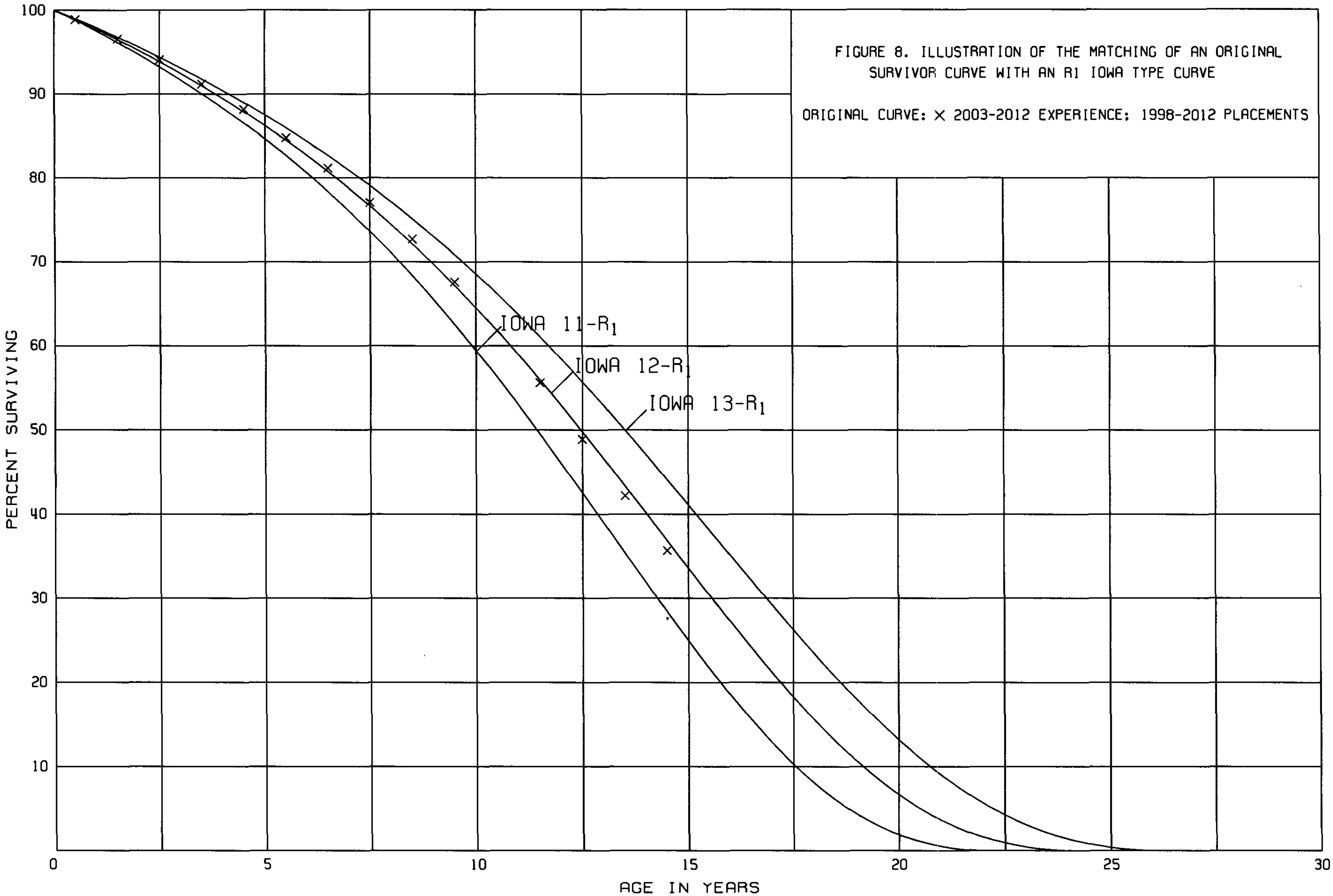


FIGURE 8. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN R1 IOWA TYPE CURVE

ORIGINAL CURVE: × 2003-2012 EXPERIENCE; 1998-2012 PLACEMENTS

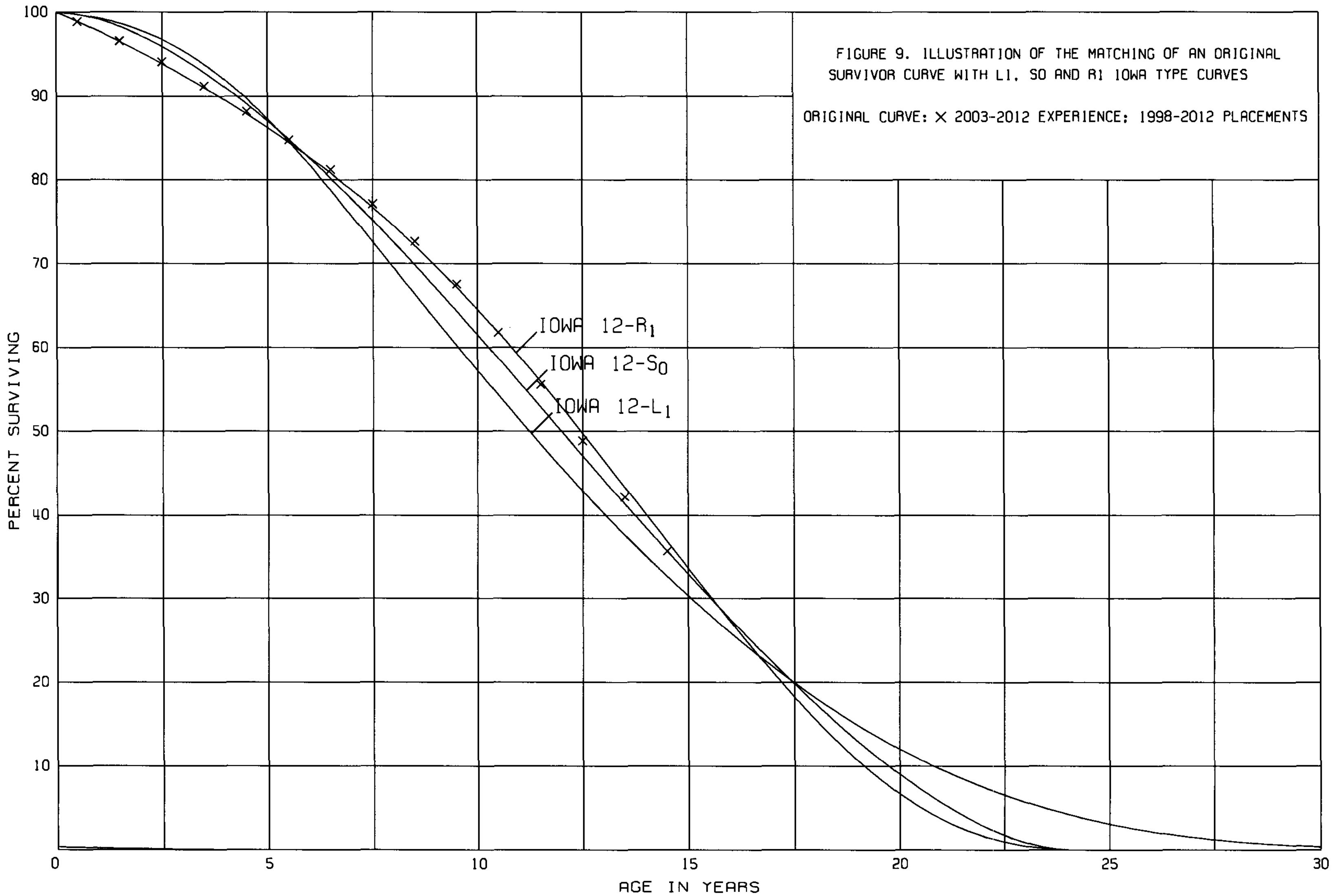


FIGURE 9. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL
SURVIVOR CURVE WITH L1, SO AND R1 IOWA TYPE CURVES
ORIGINAL CURVE: X 2003-2012 EXPERIENCE: 1998-2012 PLACEMENTS
IOWA 12-R_1
IOWA 12-S_0
IOWA 12-L_1
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

Service Life Considerations

The service life estimates were based on judgment which considered a number of factors. The primary factors were the statistical analyses of data; current Company policies and outlook as determined during conversations with management; and the survivor curve estimates from previous studies of this company and other electric companies.

For 30 of the plant accounts and subaccounts for which survivor curves were estimated, the statistical analyses using the retirement rate method resulted in good to excellent indications of the survivor patterns experienced. These accounts represent 51 percent of depreciable plant. Generally, the information external to the statistics led to no significant departure from the indicated survivor curves for the accounts listed below. The statistical support for the service life estimates is presented in the section beginning on page III-9.

ELECTRIC PLANT

Steam Plant

311.00	Structures and Improvements
315.00	Accessory Electric Equipment
316.00	Miscellaneous Power Plant Equipment

Transmission Plant

352.00	Structures and Improvements
353.00	Station Equipment
355.00	Poles and Fixtures
356.00	Overhead Conductors and Devices

Distribution Plant

361.00	Structures and Improvements
361.05	Land Improvements
362.00	Station Equipment
364.00	Poles, Towers and Fixtures
365.00	Overhead Conductors and Devices
366.00	Underground Conduit
367.00	Underground Conductors and Devices
368.01	Line Transformers - Other Equipment
368.02	Line Transformers - Conventional
368.03	Line Transformers - Padmount
369.01	Services - Overhead
369.02	Services - Underground

370.01	Meters
371.00	Installations on Customer Premises
373.00	Street Lighting and Signal Systems

General Plant

390.01	Structures and Improvements
392.01	Transportation Equipment - Subunit
392.02	Transportation Equipment - Cars
392.03	Transportation Equipment - Light Trucks
392.04	Transportation Equipment - Medium Trucks
392.05	Transportation Equipment - Heavy Trucks
392.06	Transportation Equipment - Trailers
397.01	Communication Equipment - Towers

Electric Plant Account 362.00 Station Equipment, is used to illustrate the manner in which the study was conducted for the groups in the preceding list. Aged plant accounting data for the distribution plant have been compiled for the years 1946 through 2012. These data have been coded in the course of the Company's normal record keeping according to account or property group, type of transaction, year in which the transaction took place, and year in which the electric plant was placed in service. The retirements, other plant transactions, and plant additions were analyzed by the retirement rate method.

The survivor curve estimate is based on the statistical indications for the period 1946 through 2012. The Iowa 45-R2 is a reasonable fit of the stub original survivor of station equipment. The 45-year service life is within the typical service life range of 35 to 55 years for station equipment. The 45-year life reflects the Company's plans to continue to upgrade equipment when necessary with expectations that some assets based on demand could be in service well beyond the average life.

Account 364.00, Poles, Towers and Fixtures, is another large account for which the statistical analyses was a strong indicator of life characteristics. Aged plant accounting data have been compiled for the years 1950 through 2012. The Iowa 50-R2 is a good fit of the stub original curve of poles. The 50-year service life reflects the statistical indications, Company plans to replace poles primarily due to wear and tear as well as load upgrades, and the range of estimates of other electric utilities for poles.

Inasmuch as production plant consists of large generating units, the life span technique was employed in conjunction with the use of interim survivor curves which reflect interim retirements that occur prior to the ultimate retirement of the major unit. An interim survivor curve was estimated for each plant account, inasmuch as the rate of interim retirements differ from account to account. The interim survivor curves estimated for steam and other production plant related to Black Hills Power stations were based on the retirement rate method.

The life span estimates for power generating stations were the result of considering experienced life spans of similar generating units, the age of surviving units, general operating characteristics of the units, major refurbishing, and discussions with management personnel concerning the probable long-term outlook for the units. Final decisions as to date of retirement will be determined by management on a unit by unit basis.

The life span estimates for the steam, base-load units is 45-61 years, which is within the typical range of life spans for such units. The life span estimates for other production units is 45-54 years which is slightly long for combustion turbines and diesel units.

A summary of the year in service, life span and probable retirement year for each power production unit follows:

Depreciable Group	Year in Service	Probable Retirement Year	Life Span
Steam Production Plant			
Ben French	1962	2014	52
Neil Simpson I	1969	2014	45
Neil Simpson II	1998	2045	47

Depreciable Group	Year in Service	Probable Retirement Year	Life Span
Osage	1953	2014	61
Wygen 3	2010	2060	50
Wyodak	1991	2039	48
Other Production Plant			
Ben French CT	1977	2030	53
Lange CT	2003	2048	45
Neil Simpson CT	2001	2046	45
Ben French Diesel	1966	2020	54

The survivor curve estimates for the remaining accounts were based on judgment incorporating the statistical analyses and previous studies for this and other electric and gas utilities.

Salvage Analysis

The estimates of net salvage by account were based in part on historical data compiled through 2012. Cost of removal and salvage were expressed as percents of the original cost of plant retired, both on annual and three-year moving average bases. The most recent five-year average also was calculated for consideration. The net salvage estimates by account are expressed as a percent of the original cost of plant retired.

Net Salvage Considerations

The estimates of future net salvage are expressed as percentages of surviving plant in service, i.e., all future retirements. In cases in which removal costs are expected to exceed salvage receipts, a negative net salvage percentage is estimated. The net salvage estimates were based on judgment which incorporated analyses of historical cost of removal and salvage data, expectations with respect to future removal requirements and markets for retired equipment and materials.

The analyses of historical cost of removal and salvage data are presented in the section titled "Net Salvage Statistics" for the plant accounts for which the net salvage estimate relied partially on those analyses.

Statistical analyses of historical data for the period 1997 through 2012 contributed significantly toward the net salvage estimates for 20 plant accounts, representing 83 percent of the depreciable plant, as follows:

ELECTRIC PLANT

Steam Production Plant

312.01	Boiler Plant Equipment
314.00	Turbogenerators
316.00	Miscellaneous Power Plant Equipment

Other Production Plant

342.00	Fuel Holders and Accessories
344.01	Generators

Transmission Plant

352.00	Structures and Improvements
353.00	Station Equipment
355.00	Poles and Fixtures

Distribution Plant

362.00	Station Equipment
364.00	Poles, Towers and Fixtures
365.00	Overhead Conductors and Devices
366.00	Underground Conduit
367.00	Underground Conductors and Devices
369.01	Services - Overhead
369.02	Services - Underground
370.01	Meters
370.04	Meters - AMI
371.00	Installations on Customer Premises
373.00	Street Lighting and Signal Systems

General Plant

390.01	Structures and Improvements

The Electric Plant analyses for Account 365.00, Overhead Conductors and Devices, is used to illustrate the manner in which the study was conducted for the groups in the preceding list. Net salvage data for the period 1997 through 2012 were analyzed for this account. The data include cost of removal, gross salvage and net salvage amounts and each of these amounts is expressed as a percent of the original cost of regular retirements.

Three-year moving averages for the 1997-1999 through 2010-2012 periods were computed to smooth the annual amounts.

Cost of removal fluctuated during the 16-year period. The primary cause of cost of removal was the effort needed to replace overhead conductor. Cost of removal for the most recent five years averaged 47 percent.

Gross salvage has fluctuated throughout the period. The years 2007 and 2008 had high reuse salvage which is not expected to occur annually. The most recent five-year average of 24 percent gross salvage reflects some of the reuse salvage for early retirements.

The net salvage percent based on the overall period 1997 through 2012 is 20 percent negative net salvage and based on the most recent five-year period is negative 24 percent. The range of estimates made by other electric companies for overhead conductors is negative 15 to negative 75 percent. The net salvage estimate for overhead conductor is negative 20 percent, is within the range of other estimates and reflects expectations of the future for negative net salvage.

The net salvage percents for the remaining accounts were based on judgment incorporating estimates of previous studies of this and other electric and gas utilities.

CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

After the survivor curve and salvage are estimated, the annual depreciation accrual rate can be calculated. In the average service life procedure, the annual accrual rate is computed by the following equation:

$$\textit{Annual Accrual Rate, Percent} = \frac{(100\% \quad \textit{Net Salvage, Percent})}{\textit{Average Service Life}}.$$

The calculated accrued depreciation for each depreciable property group represents that portion of the depreciable cost of the group which will not be allocated to expense through future depreciation accruals if current forecasts of life characteristics are used as a basis for straight line depreciation accounting.

The accrued depreciation calculation consists of applying an appropriate ratio to the surviving original cost of each vintage of each account, based upon the attained age and the estimated survivor curve. The accrued depreciation ratios are calculated as follows:

$$\textit{Ratio} = \left(1 - \frac{\textit{Average Remaining Life Expectancy}}{\textit{Average Service Life}}\right)\left(1 - \textit{Net Salvage, Percent}\right).$$

The application of these procedures is described for a single unit of property and a group of property units. Salvage is omitted from the description for ease of application.

Single Unit of Property

The calculation of straight line depreciation for a single unit of property is straightforward. For example, if a $1,000 unit of property attains an age of four years and has a life expectancy of six years, the annual accrual over the total life is:

$$\frac{\$1{,}000}{(4 + 6)} = \$100 \textit{ per year.}$$

The accrued depreciation is:

$$\$1{,}000 \left(1 - \frac{6}{10}\right) = \$400.$$

Group Depreciation Procedures

When more than a single item of property is under consideration, a group procedure for depreciation is appropriate because normally all of the items within a group do not have identical service lives, but have lives that are dispersed over a range of time. There are two primary group procedures, namely, average service life and equal life group.

Remaining Life Annual Accruals. For the purpose of calculating remaining life accruals as of December 31, 2012 the depreciation reserve for each plant account is allocated among vintages in proportion to the calculated accrued depreciation for the account. Explanations of remaining life accruals and calculated accrued depreciation follow. The detailed calculations as of December 31, 2012 are set forth in the Results of Study section of the report.

Average Service Life Procedure. In the average service life procedure, the remaining life annual accrual for each vintage is determined by dividing future book accruals (original cost less book reserve) by the average remaining life of the vintage. The average remaining life is a directly weighted average derived from the estimated future survivor curve in accordance with the average service life procedure.

The calculated accrued depreciation for each depreciable property group represents that portion of the depreciable cost of the group which would not be allocated to expense through future depreciation accruals, if current forecasts of life characteristics are used as the basis for such accruals. The accrued depreciation calculation consists of applying an appropriate ratio to the surviving original cost of each vintage of each account, based upon the attained age and service life. The straight line accrued depreciation ratios are calculated as follows for the average service life procedure:

$$\textit{Ratio} = 1 - \frac{\textit{Average Remaining Life}}{\textit{Average Service Life}}.$$

CALCULATION OF ANNUAL AND ACCRUED AMORTIZATION

Amortization, as defined in the Uniform System of Accounts, is the gradual extinguishment of an amount in an account by distributing such amount over a fixed period, over the life of the asset or liability to which it applies, or over the period during which it is anticipated the benefit will be realized. Normally, the distribution of the amount is in equal amounts to each year of the amortization period.

The calculation of annual and accrued amortization requires the selection of an amortization period. The amortization periods used in this report were based on judgment which incorporated a consideration of the period during which the assets will render most of their service, the amortization periods and service lives used by other utilities, and the service life estimates previously used for the asset under depreciation accounting.

Amortization accounting is appropriate for certain General Plant accounts that represent numerous units of property, but a very small portion of depreciable electric and gas plant in service. The accounts and their amortization periods are as follows:

	Account	Amortization Period, Years
GENERAL PLANT		
391.01	Office Furniture and Equipment	20
391.03	Computer Hardware	5
391.05	System Development	5
393.00	Stores Equipment	20
394.00	Tools, Shop and Garage Equipment	25
395.00	Laboratory Equipment	25
397.00	Communication Equipment	20
398.00	Miscellaneous Equipment	20

For the purpose of calculating annual amortization amounts as of December 31, 2012, the book or ratemaking book depreciation reserve for each plant account or subaccount is assigned or allocated to vintages. The reserve assigned to vintages with an age greater than the amortization period is equal to the vintage's original cost. The remaining reserve is allocated among vintages with an age less than the amortization period in proportion to the calculated accrued amortization. The calculated accrued amortization is equal to the original cost multiplied by the ratio of the vintage's age to its amortization period. The annual amortization amount is determined by dividing the future amortizations (original cost less allocated book reserve) by the remaining period of amortization for the vintage.

III-1 PART III. RESULTS OF STUDY

PART III. RESULTS OF STUDY

QUALIFICATION OF RESULTS

The calculated annual depreciation accrual amounts and rates are the principal results of the study. Continued surveillance and periodic revisions are normally required to maintain continued use of appropriate annual depreciation accrual rates. An assumption that accrual rates can remain unchanged over a long period of time implies a disregard for the inherent variability in service lives and salvage and for the change of the composition of property in service. The annual accrual rates were calculated in accordance with the straight line remaining life method of depreciation using the average service life procedure based on estimates which reflect considerations of current historical evidence and expected future conditions.

The annual depreciation accrual rates are applicable specifically to the electric, gas and common plant in service as of December 31, 2012. For most plant accounts, the application of such rates to future balances that reflect additions subsequent to December 31, 2012, is reasonable for a period of three to five years.

DESCRIPTION OF STATISTICAL SUPPORT

The service life and salvage estimates were based on judgment which incorporated statistical analyses of retirement data, discussions with management and consideration of estimates made for other electric utility companies. The results of the statistical analyses of service life are presented in the section titled "Service Life Statistics".

The estimated survivor curves for each account are presented in graphical form. The charts depict the estimated smooth survivor curve and original survivor curve(s), when applicable, related to each specific group. For groups where the original survivor curve was plotted, the calculation of the original life table is also presented.

The analyses of salvage data are presented in the section titled, "Net Salvage Statistics". The tabulations present annual cost of removal and salvage data, three-year moving averages and the most recent five-year average. Data are shown in dollars and as percentages of the original cost retired.

DESCRIPTION OF DEPRECIATION TABULATIONS

Summaries of the results of the study, as applied to the original cost of electric plant as of December 31, 2012, are presented on pages III-4 through III-8 of this report. The schedule sets forth the original cost, the book depreciation reserve, future accruals, the calculated annual depreciation rate and amount, and the composite remaining life related to electric plant.

The tables of the calculated annual depreciation accruals are presented in account sequence in the section titled "Depreciation Calculations." The tables indicate the estimated survivor curve and salvage percent for the account and set forth, for each installation year, the original cost, the calculated accrued depreciation, the allocated book reserve, future accruals, the remaining life and the calculated annual accrual amount.

BLACK HILLS POWER

SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE
AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2012

	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)
	STEAM PRODUCTION PLANT									
	BEN FRENCH STATION									
311.00	STRUCTURES AND IMPROVEMENTS	80-R1.5	*	(28)	2,251,067.03	2,470,217	411,149	225,045	10.00	1.8
312.01	BOILER PLANT EQUIPMENT	55-S0.5	*	(28)	6,842,535.53	6,971,855	1,786,590	985,304	14.40	1.8
314.00	TURBOGENERATOR UNITS	55-S0.5	*	(28)	3,956,115.75	3,267,891	1,795,937	987,811	24.97	1.8
315.00	ACCESSORY ELECTRIC EQUIPMENT	65-R2.5	*	(28)	756,487.01	817,196	151,107	83,050	10.98	1.8
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(28)	461,437.84	529,424	61,216	33,837	7.33	1.8
	TOTAL BEN FRENCH STATION				14,267,643.16	14,056,583	4,205,999	2,315,047	16.23	1.8
	NEIL SIMPSON I									
311.00	STRUCTURES AND IMPROVEMENTS	80-R1.5	*	(13)	2,263,790.00	2,055,490	502,593	275,250	12.16	1.8
312.01	BOILER PLANT EQUIPMENT	55-S0.5	*	(13)	14,327,824.99	10,348,851	5,841,591	3,210,557	22.41	1.8
314.00	TURBOGENERATOR UNITS	55-S0.5	*	(13)	3,916,967.11	2,797,900	1,628,273	896,130	22.88	1.8
315.00	ACCESSORY ELECTRIC EQUIPMENT	65-R2.5	*	(13)	1,334,432.06	622,246	885,662	484,612	36.32	1.8
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(13)	424,995.16	434,602	45,643	25,339	5.96	1.8
	TOTAL NEIL SIMPSON I				22,268,009.32	16,259,089	8,903,762	4,891,888	21.97	1.8
	NEIL SIMPSON II									
311.00	STRUCTURES AND IMPROVEMENTS	80-R1.5	*	(14)	15,863,029.45	5,523,394	12,560,460	412,027	2.60	30.5
312.01	BOILER PLANT EQUIPMENT	55-S0.5	*	(14)	76,897,107.11	26,330,450	61,332,252	2,211,622	2.88	27.7
314.00	TURBOGENERATOR UNITS	55-S0.5	*	(14)	41,534,097.95	11,029,471	36,319,401	1,278,221	3.08	28.4
315.00	ACCESSORY ELECTRIC EQUIPMENT	65-R2.5	*	(14)	8,429,093.00	2,511,631	7,097,535	230,583	2.74	30.8
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(14)	875,989.44	165,386	833,242	31,072	3.55	26.8
	TOTAL NEIL SIMPSON II				143,599,316.95	45,560,332	118,142,890	4,163,525	2.90	28.4
	OSAGE PLANT									
311.00	STRUCTURES AND IMPROVEMENTS	80-R1.5	*	(22)	4,233,377.67	4,422,755	741,966	406,009	9.59	1.8
312.01	BOILER PLANT EQUIPMENT	55-S0.5	*	(22)	7,454,702.13	7,272,558	1,822,179	1,005,395	13.49	1.8
314.00	TURBOGENERATOR UNITS	55-S0.5	*	(22)	4,780,167.64	4,641,657	1,190,148	656,960	13.74	1.8
315.00	ACCESSORY ELECTRIC EQUIPMENT	65-R2.5	*	(22)	1,054,887.74	1,198,790	88,173	48,528	4.60	1.8
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(22)	455,950.73	459,478	96,782	53,529	11.74	1.8
	TOTAL OSAGE PLANT				17,979,085.91	17,995,238	3,939,248	2,170,421	12.07	1.8
	WY GEN 3									
311.00	STRUCTURES AND IMPROVEMENTS	80-R1.5	*	(13)	6,799,493.56	417,254	7,266,174	166,503	2.45	43.6
312.01	BOILER PLANT EQUIPMENT	55-S0.5	*	(13)	57,567,754.14	4,343,796	60,707,766	1,517,622	2.64	40.0
314.00	TURBOGENERATOR UNITS	55-S0.5	*	(13)	58,398,596.28	3,202,879	62,787,535	1,569,482	2.69	40.0
315.00	ACCESSORY ELECTRIC EQUIPMENT	65-R2.5	*	(13)	6,737,220.28	377,879	7,235,180	163,953	2.43	44.1
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(13)	709,079.57	28,882	772,378	21,429	3.02	36.0
	TOTAL WY GEN 3				130,212,143.83	8,370,690	138,769,033	3,438,989	2.64	40.4

BLACK HILLS POWER

SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE
AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2012

	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)
	WYODAK PLANT									
311.00	STRUCTURES AND IMPROVEMENTS	80-R1.5	*	(13)	9,164,989.89	7,214,391	3,142,048	125,770	1.37	25.0
312.01	BOILER PLANT EQUIPMENT	55-S0.5	*	(13)	76,887,888.24	29,347,729	57,535,585	2,378,850	3.09	24.2
313.00	ENGINES AND GENERATORS	50-S1.5	*	(13)	341,748.14	216,828	169,347	6,793	1.99	24.9
314.00	TURBOGENERATOR UNITS	55-S0.5	*	(13)	15,192,790.87	5,557,047	11,610,807	482,632	3.18	24.1
315.00	ACCESSORY ELECTRIC EQUIPMENT	65-R2.5	*	(13)	6,616,782.96	5,008,048	2,468,917	99,004	1.50	24.9
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	45-S0	*	(13)	1,007,314.51	427,522	710,743	31,411	3.12	22.6
	TOTAL WYODAK PLANT				109,211,514.61	47,771,565	75,637,447	3,124,460	2.86	24.2
	TOTAL STEAM PRODUCTION PLANT				**437,537,713.78**	**150,013,497**	**349,598,379**	**20,104,330**	**4.59**	**17.4**
	OTHER PRODUCTION PLANT									
	BEN FRENCH CT									
341.00	STRUCTURES AND IMPROVEMENTS	55-R3	*	(13)	22,448.14	18,574	6,792	437	1.95	15.5
342.00	FUEL HOLDERS AND ACCESSORIES	50-S0.5	*	(13)	1,375,821.53	903,454	651,224	40,929	2.97	15.9
344.10	GENERATORS	45-R2	*	(13)	16,549,367.07	12,793,447	5,907,338	415,401	2.51	14.2
345.00	ACCESSORY ELECTRIC EQUIPMENT	40-S2	*	(13)	672,968.54	427,262	333,192	29,853	4.44	11.2
346.00	MISCELLANEOUS POWER PLANT EQUIPMENT	30-S1.5	*	(13)	14,717.62	12,177	4,454	569	3.87	7.8
	TOTAL BEN FRENCH CT				18,635,322.90	14,154,914	6,903,000	487,189	2.61	14.2
	BEN FRENCH DIESEL									
342.00	FUEL HOLDERS AND ACCESSORIES	50-S0.5	*	(22)	51,864.25	47,265	16,009	2,215	4.27	7.2
344.10	GENERATORS	45-R2	*	(22)	828,868.97	774,635	236,585	36,709	4.43	6.4
345.00	ACCESSORY ELECTRIC EQUIPMENT	40-S2	*	(22)	110,823.34	60,434	74,770	11,226	10.13	6.7
	TOTAL BEN FRENCH DIESEL				991,556.56	882,334	327,364	50,150	5.06	6.5
	LANGE CT									
341.00	STRUCTURES AND IMPROVEMENTS	55-R3	*	(5)	324,886.40	102,053	239,078	7,174	2.21	33.3
342.00	FUEL HOLDERS AND ACCESSORIES	50-S0.5	*	(5)	1,722,516.16	526,052	1,282,590	43,258	2.51	29.6
344.10	GENERATORS	45-R2	*	(5)	26,182,995.19	9,824,794	17,667,351	593,903	2.27	29.7
345.00	ACCESSORY ELECTRIC EQUIPMENT	40-S2	*	(5)	2,095,868.47	792,608	1,408,054	50,943	2.43	27.6
346.00	MISCELLANEOUS POWER PLANT EQUIPMENT	30-S1.5	*	(5)	16,611.59	6,306	11,136	527	3.17	21.1
	TOTAL LANGE CT				30,342,877.81	11,251,813	20,608,209	695,805	2.29	29.6
	NEIL SIMPSON CT									
341.00	STRUCTURES AND IMPROVEMENTS	55-R3	*	(5)	176,358.69	78,850	106,327	3,405	1.93	31.2
342.00	FUEL HOLDERS AND ACCESSORIES	50-S0.5	*	(5)	2,116,073.40	616,956	1,604,921	56,038	2.65	28.6
344.10	GENERATORS	45-R2	*	(5)	25,644,954.15	8,133,641	18,793,561	660,704	2.58	28.4
345.00	ACCESSORY ELECTRIC EQUIPMENT	40-S2	*	(5)	1,987,599.72	927,847	1,159,133	45,006	2.26	25.8
346.00	MISCELLANEOUS POWER PLANT EQUIPMENT	30-S1.5	*	(5)	51,538.76	24,278	29,838	1,316	2.55	22.7
	TOTAL NEIL SIMPSON CT				29,976,524.72	9,781,572	21,693,780	766,469	2.56	28.3
	TOTAL OTHER PRODUCTION PLANT				**79,946,281.99**	**36,070,633**	**49,532,353**	**1,999,613**	**2.50**	**24.8**

BLACK HILLS POWER

SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE
AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2012

	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)
	TRANSMISSION PLANT								
352.00	STRUCTURES AND IMPROVEMENTS	50-S4	(10)	1,782,604.36	663,629	1,297,236	32,627	1.83	39.8
353.00	STATION EQUIPMENT	42-S0	(5)	49,207,432.58	14,189,839	37,477,965	1,045,761	2.13	35.8
354.00	TOWERS AND FIXTURES	60-R2	(20)	864,826.03	201,748	836,043	15,029	1.74	55.6
355.00	POLES AND FIXTURES	55-R3	(30)	28,042,178.61	7,653,538	28,801,294	768,083	2.74	37.5
356.00	OVERHEAD CONDUCTORS AND DEVICES	60-R2.5	(20)	29,442,220.30	8,331,379	26,999,285	604,638	2.05	44.7
359.00	ROADS AND TRAILS	60-S4	0	6,920.28	3,176	3,744	119	1.72	31.5
	TOTAL TRANSMISSION PLANT			**109,346,182.16**	**31,043,309**	**95,415,567**	**2,466,257**	**2.26**	**38.7**
	DISTRIBUTION PLANT								
361.00	STRUCTURES AND IMPROVEMENTS	40-S1	(5)	659,707.01	153,649	539,043	16,194	2.45	33.3
361.05	LAND IMPROVEMENTS	40-S1	(5)	47,783.26	657	49,515	1,286	2.69	38.5
362.00	STATION EQUIPMENT	45-R2	(10)	72,055,912.50	23,390,537	55,870,967	1,638,639	2.27	34.1
364.00	POLES, TOWERS AND FIXTURES	50-R2	(70)	68,260,183.69	24,123,729	91,918,583	2,486,400	3.64	37.0
365.00	OVERHEAD CONDUCTORS AND DEVICES	50-R1.5	(20)	42,228,224.86	13,891,548	36,782,322	954,411	2.26	38.5
366.00	UNDERGROUND CONDUIT	37-R1	(5)	4,085,013.44	494,158	3,795,106	114,803	2.81	33.1
367.00	UNDERGROUND CONDUCTORS AND DEVICES	40-R2	(5)	39,568,735.94	13,938,668	27,608,505	917,643	2.32	30.1
368.01	LINE TRANSFORMERS - OTHER EQUIPMENT	36-R1.5	0	2,254,569.34	381,303	1,873,266	61,742	2.74	30.3
368.02	LINE TRANSFORMERS - CONVENTIONAL	36-R1.5	0	13,091,278.10	5,064,696	8,026,582	320,622	2.45	25.0
368.03	LINE TRANSFORMERS - PADMOUNT	36-R1.5	0	19,896,434.33	6,765,246	13,131,188	468,469	2.35	28.0
	TOTAL LINE TRANSFORMERS			35,242,281.77	12,211,245	23,031,036	850,833	2.41	27.1
369.01	SERVICES - OVERHEAD	62-R2.5	(50)	8,107,256.27	2,533,355	9,627,529	196,837	2.43	48.9
369.02	SERVICES - UNDERGROUND	62-R2.5	(50)	20,822,507.10	6,780,554	24,453,207	467,045	2.24	52.4
	TOTAL SERVICES			28,929,763.37	9,313,909	34,080,736	663,882	2.29	51.3
370.01	METERS	21-L0	0	1,026,068.51	301,036	725,033	56,414	5.50	12.9
370.04	METERS - AMI	21-L0	0	6,018,676.65	203,672	5,815,005	301,309	5.01	19.3
371.00	INSTALLATIONS ON CUSTOMER PREMISES	30-R1	(10)	2,174,339.20	840,423	1,551,350	69,981	3.22	22.2
373.00	STREET LIGHTING AND SIGNAL SYSTEMS	25-L0.5	(15)	1,721,562.86	813,101	1,166,696	68,224	3.96	17.1
	TOTAL DISTRIBUTION PLANT			**302,018,253.06**	**99,676,332**	**282,933,897**	**8,140,019**	**2.70**	**34.8**
	GENERAL PLANT								
390.01	STRUCTURES AND IMPROVEMENTS - OWNED	40-R1	(10)	12,789,236.43	7,132,242	6,935,918	214,020	1.67	32.4
391.01	OFFICE FURNITURE AND EQUIPMENT								
	FULLY ACCRUED	Fully Accrued	0	439,368.05	439,368	0	0	-	-
	AMORTIZED	20-SQ	0	2,833,405.36	1,230,525	1,602,880	133,570	4.71 **	12.0
	TOTAL OFFICE FURNITURE AND EQUIPMENT			3,272,773.41	1,669,893	1,602,880	133,570	4.08	12.0
391.03	COMPUTER HARDWARE								
	FULLY ACCRUED	Fully Accrued	0	17,662.46	17,662	0	0	-	-
	AMORTIZED	5-SQ	0	1,656,308.57	329,591	1,326,718	402,931	24.33 **	3.3
	TOTAL COMPUTER HARDWARE			1,673,971.03	347,253	1,326,718	402,931	24.07	3.3

BLACK HILLS POWER

SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE
AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2012

	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)
391.04	COMPUTER SOFTWARE	9-S2.5	0	3,651,575.26	1,690,032	1,961,543	288,228	7.89	6.8
391.05	SYSTEM DEVELOPMENT	5-SQ	0	59,725.18	32,332	27,393	10,957	18.35 **	2.5
392.01	TRANSPORTATION EQUIPMENT - SUBUNIT	13-S0	10	131,626.96	96,167	22,297	2,033	1.54	11.0
392.02	TRANSPORTATION EQUIPMENT - CARS	13-S0	10	215,057.80	40,669	152,883	14,960	6.96	10.2
392.03	TRANSPORTATION EQUIPMENT - LIGHT TRUCKS	13-S0	10	2,871,325.77	1,448,754	1,135,439	108,226	3.77	10.5
392.04	TRANSPORTATION EQUIPMENT - MEDIUM TRUCKS	13-S0	10	803,668.92	362,133	361,169	35,265	4.39	10.2
392.05	TRANSPORTATION EQUIPMENT - HEAVY TRUCKS	13-S0	10	2,853,372.77	1,705,290	862,745	81,089	2.84	10.6
392.06	TRANSPORTATION EQUIPMENT - TRAILERS	13-S0	10	628,623.37	383,415	182,346	17,587	2.80	10.4
	TOTAL TRANSPORTATION EQUIPMENT			7,503,675.59	4,036,428	2,716,879	259,160	3.45	10.5
393.00	STORES EQUIPMENT								
	FULLY ACCRUED	Fully Accrued	0	186,168.41	186,168	0	0	-	-
	AMORTIZED	20-SQ	0	136,266.21	1,886	134,380	30,063	22.06 **	4.5
	TOTAL STORES EQUIPMENT			322,434.62	188,054	134,380	30,063	9.32	4.5
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT								
	FULLY ACCRUED	Fully Accrued	0	197,599.87	197,600	0	0	-	-
	AMORTIZED	25-SQ	0	4,109,027.80	1,675,628	2,433,400	143,467	3.49 **	17.0
	TOTAL TOOLS, SHOP AND GARAGE EQUIPMENT			4,306,627.67	1,873,228	2,433,400	143,467	3.33	17.0
395.00	LABORATORY EQUIPMENT	25-SQ	0	318,024.39	5,569	312,455	23,721	7.46 **	13.2
396.01	POWER OPERATED EQUIPMENT - SHORT LIFE	30-S1.5	20	52,741.62	37,100	5,093	233	0.44	21.9
396.02	POWER OPERATED EQUIPMENT - LONG LIFE	30-S1.5	20	792,630.34	185,556	448,548	16,731	2.11	26.8
397.00	COMMUNICATION EQUIPMENT								
	FULLY ACCRUED	Fully Accrued	0	139,781.98	139,782	0	0	-	-
	AMORTIZED	20-SQ	0	3,666,737.20	880,781	2,785,956	229,558	6.26 **	12.1
	TOTAL COMMUNICATION EQUIPMENT			3,806,519.18	1,020,563	2,785,956	229,558	6.03	12.1
397.10	COMMUNICATION EQUIPMENT - TOWERS	20-L1.5	0	4,403,055.70	890,216	3,512,840	229,649	5.22	15.3
398.00	MISCELLANEOUS EQUIPMENT								
	FULLY ACCRUED	Fully Accrued	0	13,139.05	13,139	0	0	-	-
	AMORTIZED	20-SQ	0	184,159.00	33,461	150,698	11,438	6.21 **	13.2
	TOTAL MISCELLANEOUS EQUIPMENT			197,298.05	46,600	150,698	11,438	5.80	13.2
	TOTAL GENERAL PLANT			**43,150,288.47**	**19,155,066**	**24,354,701**	**1,993,726**	**4.62**	**12.2**
	TOTAL DEPRECIABLE PLANT			**971,998,719.46**	**335,958,837**	**801,834,897**	**34,703,945**	**3.57**	**23.1**

BLACK HILLS POWER

SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2012

	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								
310.01	LAND			333,639.32	31,963				
340.01	LAND			2,705.00					
350.01	LAND			1,053,181.88					
350.02	LAND RIGHTS/RIGHTS OF WAY - NONDEPRECIABLE			4,692,747.84					
360.01	LAND			956,864.59	(21,473)				
360.02	LAND RIGHTS/RIGHTS OF WAY - NONDEPRECIABLE			1,138,377.52	(21,552)				
389.01	LAND			856,913.03					
	TOTAL NONDEPRECIABLE PLANT			**9,034,429.18**	**(11,062)**				
	TOTAL ELECTRIC PLANT			**981,033,148.64**	**335,947,775**	**801,834,897**	**34,703,945**		

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

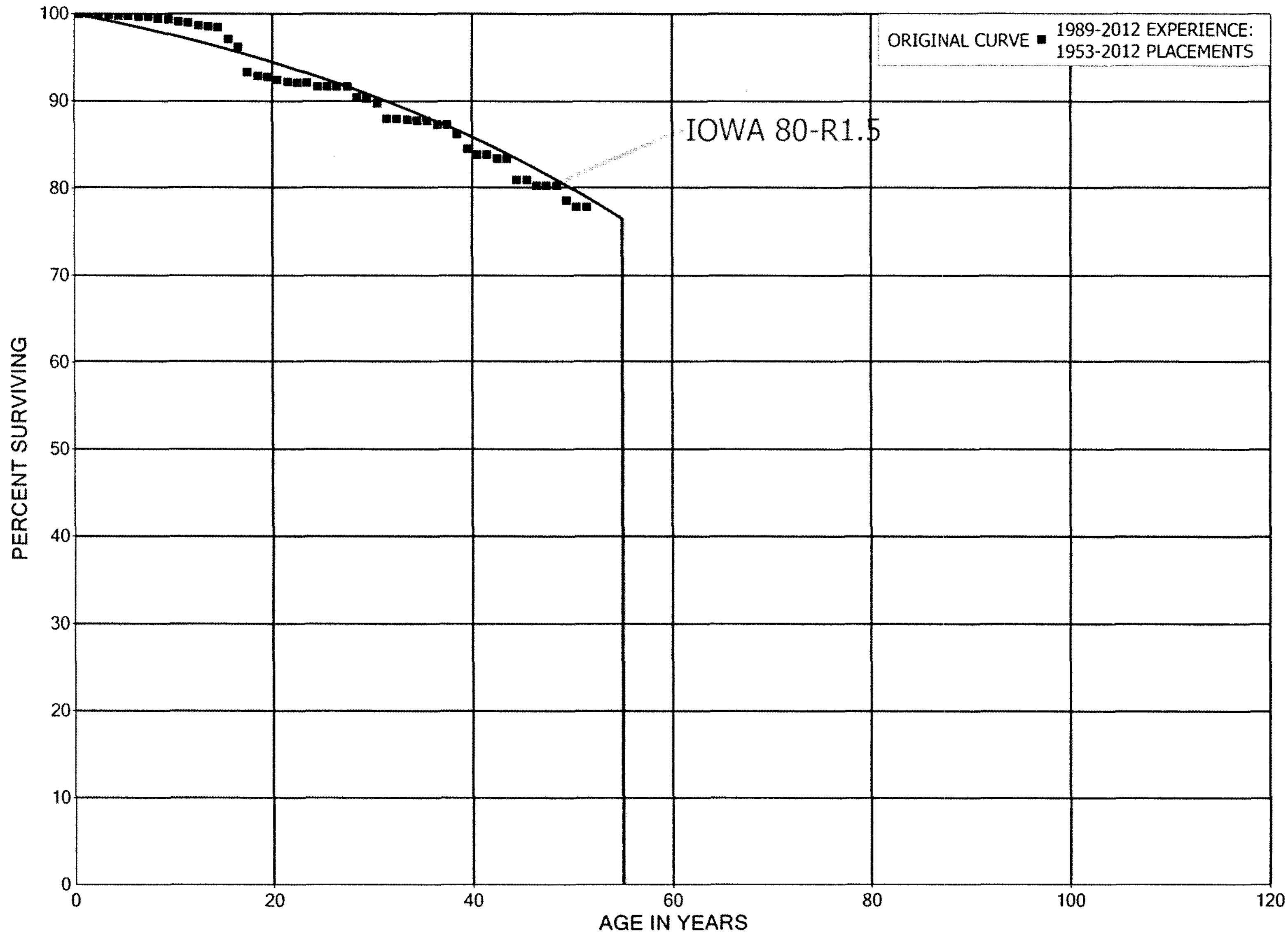
** ADDITIONS AS OF JANUARY 1, 2013 WILL UTILIZE THE STANDARD AMORTIZATION RATE

NOTE: RATES FOR THE CHEYENNE PRAIRIE COMBINED CYCLE UNIT ARE AS FOLLOWS:

ACCOUNT	RATE
341.00	3.08
342.00	3.30
344.00	3.29
345.00	3.27
346.00	3.80
COMPOSITE	3.29

III-9 SERVICE LIFE STATISTICS

BLACK HILLS POWER
ACCOUNT 311 STRUCTURES AND IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1953-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	35,663,001		0.0000	1.0000	100.00
0.5	35,799,924		0.0000	1.0000	100.00
1.5	36,354,283	67,393	0.0019	0.9981	100.00
2.5	29,805,318		0.0000	1.0000	99.81
3.5	27,262,104	22,339	0.0008	0.9992	99.81
4.5	27,532,420		0.0000	1.0000	99.73
5.5	27,288,769	20,348	0.0007	0.9993	99.73
6.5	27,393,544		0.0000	1.0000	99.66
7.5	27,654,895	74,467	0.0027	0.9973	99.66
8.5	28,022,371	17,822	0.0006	0.9994	99.39
9.5	28,076,826	87,422	0.0031	0.9969	99.33
10.5	27,993,366	21,268	0.0008	0.9992	99.02
11.5	28,011,213	85,053	0.0030	0.9970	98.94
12.5	27,821,525	42,700	0.0015	0.9985	98.64
13.5	26,431,259	29,951	0.0011	0.9989	98.49
14.5	14,958,756	207,567	0.0139	0.9861	98.38
15.5	14,751,691	132,037	0.0090	0.9910	97.01
16.5	14,238,198	430,834	0.0303	0.9697	96.15
17.5	14,420,236	68,732	0.0048	0.9952	93.24
18.5	13,158,162	6,988	0.0005	0.9995	92.79
19.5	12,582,184	48,946	0.0039	0.9961	92.74
20.5	12,198,572	31,950	0.0026	0.9974	92.38
21.5	4,018,867	5,277	0.0013	0.9987	92.14
22.5	3,855,808		0.0000	1.0000	92.02
23.5	3,625,515	14,981	0.0041	0.9959	92.02
24.5	3,277,623	1,657	0.0005	0.9995	91.64
25.5	3,140,325		0.0000	1.0000	91.59
26.5	3,804,058	373	0.0001	0.9999	91.59
27.5	3,774,076	48,872	0.0129	0.9871	91.58
28.5	3,326,248	2,395	0.0007	0.9993	90.40
29.5	3,225,428	20,834	0.0065	0.9935	90.33
30.5	2,893,511	58,267	0.0201	0.9799	89.75
31.5	2,551,617		0.0000	1.0000	87.94
32.5	2,101,989	2,794	0.0013	0.9987	87.94
33.5	1,968,242	3,373	0.0017	0.9983	87.82
34.5	2,056,967		0.0000	1.0000	87.67
35.5	2,636,407	10,595	0.0040	0.9960	87.67
36.5	2,625,812	845	0.0003	0.9997	87.32
37.5	2,624,968	34,727	0.0132	0.9868	87.29
38.5	2,548,982	48,237	0.0189	0.9811	86.14

BLACK HILLS POWER

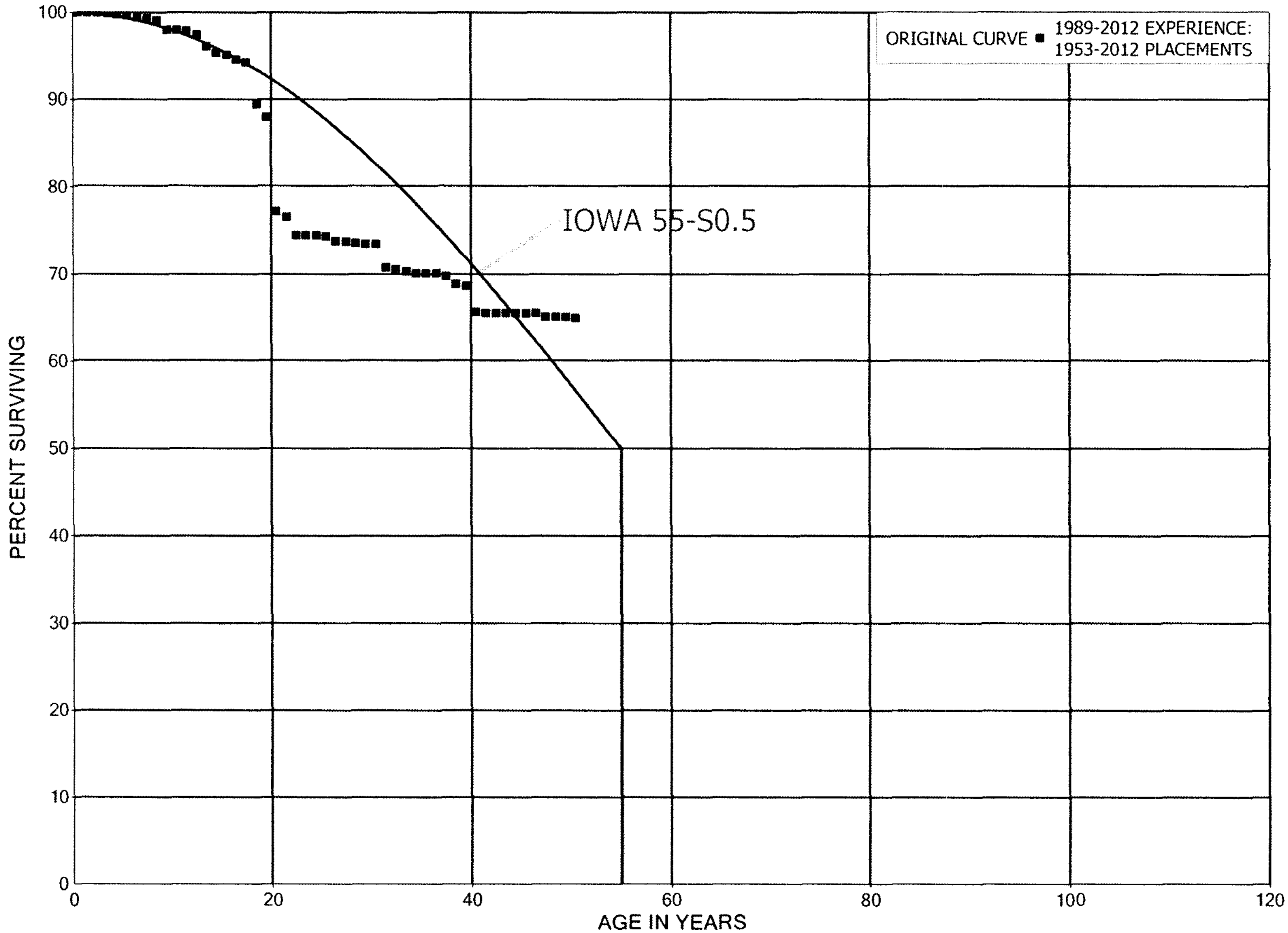
ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1953-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,498,935	20,004	0.0080	0.9920	84.51
40.5	2,470,853		0.0000	1.0000	83.83
41.5	1,740,983	9,769	0.0056	0.9944	83.83
42.5	1,705,646		0.0000	1.0000	83.36
43.5	1,705,646	49,410	0.0290	0.9710	83.36
44.5	1,656,236		0.0000	1.0000	80.95
45.5	1,656,236	13,871	0.0084	0.9916	80.95
46.5	1,638,497		0.0000	1.0000	80.27
47.5	1,638,497		0.0000	1.0000	80.27
48.5	1,638,497	33,371	0.0204	0.9796	80.27
49.5	1,605,125	16,864	0.0105	0.9895	78.63
50.5	642,773		0.0000	1.0000	77.81
51.5	642,773		0.0000	1.0000	77.81
52.5	642,773		0.0000	1.0000	77.81
53.5	642,773		0.0000	1.0000	77.81
54.5	617,295		0.0000	1.0000	77.81
55.5	617,295		0.0000	1.0000	77.81
56.5	617,295		0.0000	1.0000	77.81
57.5	617,295		0.0000	1.0000	77.81
58.5	617,295	13,389	0.0217	0.9783	77.81
59.5					76.12

BLACK HILLS POWER
ACCOUNT 312.01 BOILER PLANT EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 312.01 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1953-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	241,636,614	36,065	0.0001	0.9999	100.00
0.5	240,625,444	30,316	0.0001	0.9999	99.99
1.5	209,704,551	131,083	0.0006	0.9994	99.97
2.5	148,712,878	144,159	0.0010	0.9990	99.91
3.5	142,272,322	137,357	0.0010	0.9990	99.81
4.5	141,166,431	125,480	0.0009	0.9991	99.72
5.5	139,161,996	375,123	0.0027	0.9973	99.63
6.5	134,682,404	124,622	0.0009	0.9991	99.36
7.5	134,726,474	313,526	0.0023	0.9977	99.27
8.5	136,612,172	1,522,948	0.0111	0.9889	99.04
9.5	141,135,738	19,963	0.0001	0.9999	97.93
10.5	140,984,760	123,507	0.0009	0.9991	97.92
11.5	140,803,282	694,994	0.0049	0.9951	97.83
12.5	138,982,428	1,763,661	0.0127	0.9873	97.35
13.5	136,090,651	1,216,171	0.0089	0.9911	96.11
14.5	65,757,885	114,176	0.0017	0.9983	95.26
15.5	65,548,653	427,521	0.0065	0.9935	95.09
16.5	64,542,901	192,159	0.0030	0.9970	94.47
17.5	64,069,517	3,253,349	0.0508	0.9492	94.19
18.5	63,683,892	1,076,005	0.0169	0.9831	89.41
19.5	61,480,020	7,474,932	0.1216	0.8784	87.90
20.5	47,804,306	442,286	0.0093	0.9907	77.21
21.5	27,950,771	766,708	0.0274	0.9726	76.49
22.5	26,998,741	6,468	0.0002	0.9998	74.40
23.5	14,881,058		0.0000	1.0000	74.38
24.5	13,721,044	18,192	0.0013	0.9987	74.38
25.5	13,667,583	110,133	0.0081	0.9919	74.28
26.5	15,444,500	15,885	0.0010	0.9990	73.68
27.5	15,360,485	30,748	0.0020	0.9980	73.61
28.5	15,069,138	3,616	0.0002	0.9998	73.46
29.5	14,955,462	7,706	0.0005	0.9995	73.44
30.5	14,471,315	526,096	0.0364	0.9636	73.40
31.5	13,584,339	49,909	0.0037	0.9963	70.73
32.5	11,566,093	32,391	0.0028	0.9972	70.47
33.5	4,883,199	17,296	0.0035	0.9965	70.28
34.5	4,756,619		0.0000	1.0000	70.03
35.5	5,917,774		0.0000	1.0000	70.03
36.5	5,894,866	29,267	0.0050	0.9950	70.03
37.5	5,865,599	72,949	0.0124	0.9876	69.68
38.5	5,792,217	16,295	0.0028	0.9972	68.81

BLACK HILLS POWER

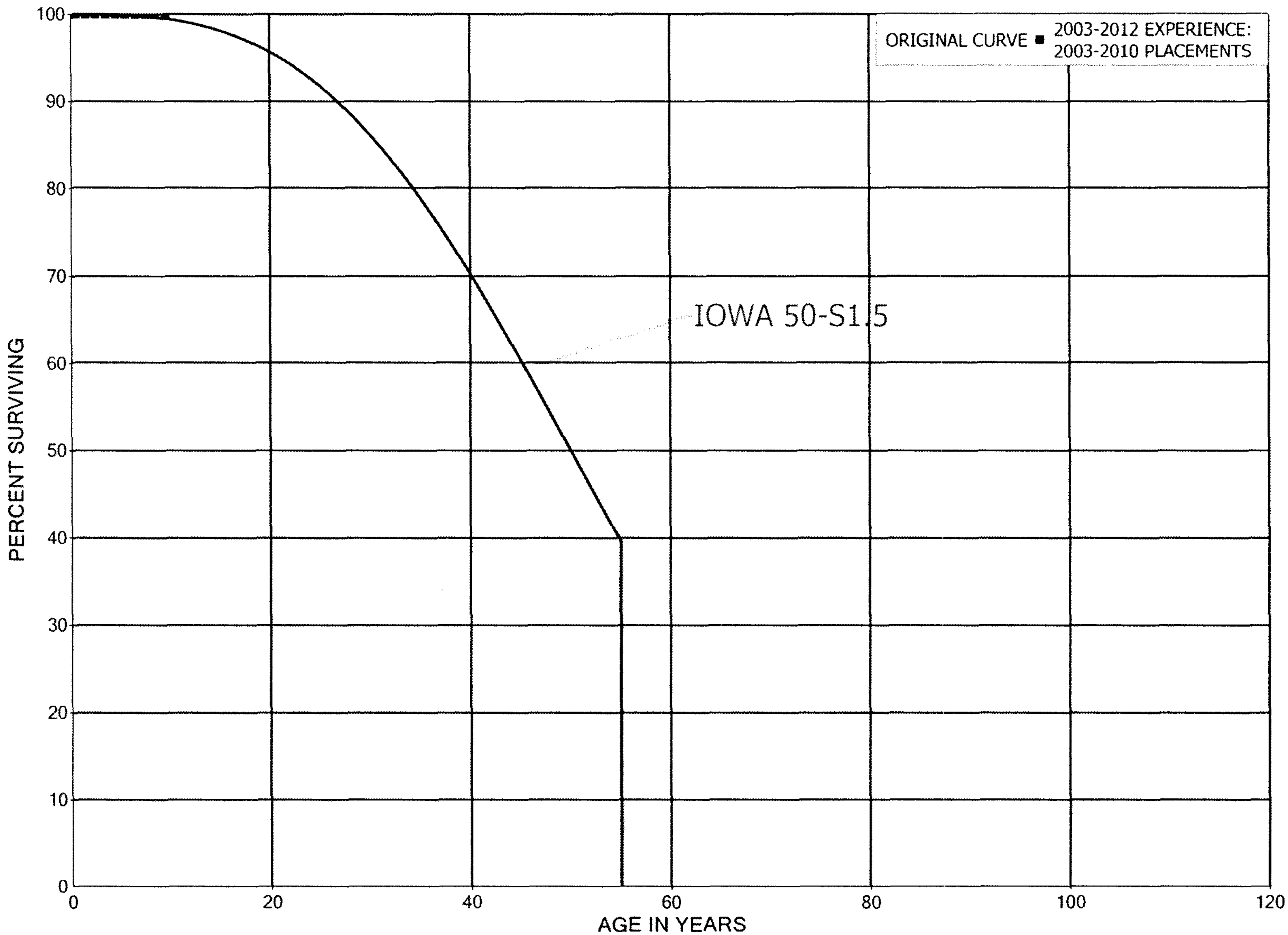
ACCOUNT 312.01 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1953-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	5,775,291	255,284	0.0442	0.9558	68.62
40.5	5,520,007	6,764	0.0012	0.9988	65.59
41.5	5,499,896	799	0.0001	0.9999	65.51
42.5	3,191,807		0.0000	1.0000	65.50
43.5	3,191,807		0.0000	1.0000	65.50
44.5	3,189,095		0.0000	1.0000	65.50
45.5	3,189,095		0.0000	1.0000	65.50
46.5	3,157,881	19,811	0.0063	0.9937	65.50
47.5	3,222,092		0.0000	1.0000	65.09
48.5	3,222,092	2,226	0.0007	0.9993	65.09
49.5	3,216,222	1,650	0.0005	0.9995	65.04
50.5	1,213,452	606	0.0005	0.9995	65.01
51.5	1,211,895	6,841	0.0056	0.9944	64.98
52.5	1,204,679		0.0000	1.0000	64.61
53.5	1,204,679		0.0000	1.0000	64.61
54.5	1,177,332		0.0000	1.0000	64.61
55.5	1,177,332	233	0.0002	0.9998	64.61
56.5	1,177,099	18,622	0.0158	0.9842	64.60
57.5	1,158,477	3,593	0.0031	0.9969	63.57
58.5	1,154,884		0.0000	1.0000	63.38
59.5					63.38

BLACK HILLS POWER
ACCOUNT 313 ENGINES AND GENERATORS
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

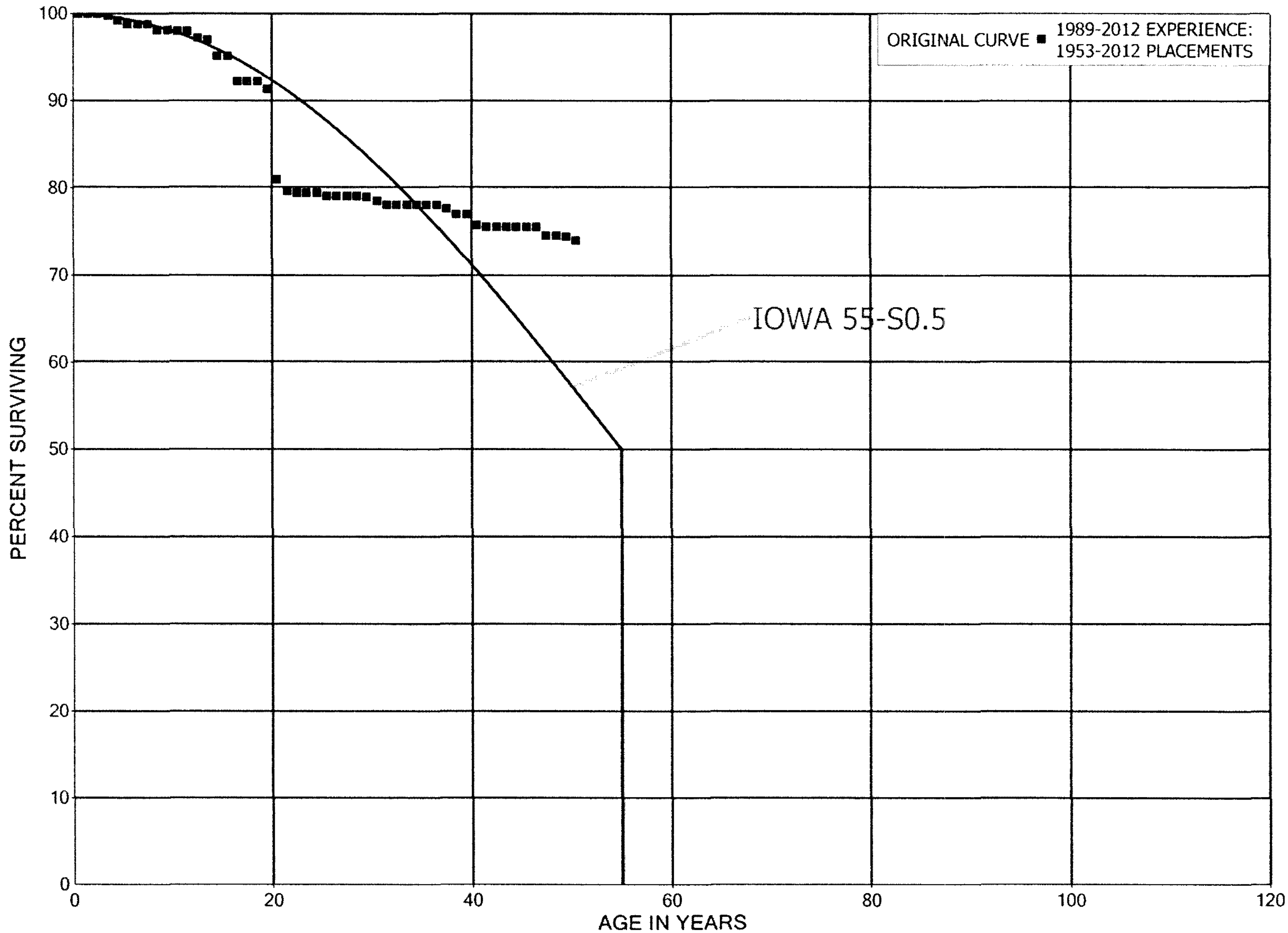
ACCOUNT 313 ENGINES AND GENERATORS

ORIGINAL LIFE TABLE

PLACEMENT BAND 2003-2010 EXPERIENCE BAND 2003-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	351,789		0.0000	1.0000	100.00
0.5	341,748		0.0000	1.0000	100.00
1.5	341,748		0.0000	1.0000	100.00
2.5	308,804		0.0000	1.0000	100.00
3.5	249,991		0.0000	1.0000	100.00
4.5	249,991		0.0000	1.0000	100.00
5.5	249,991		0.0000	1.0000	100.00
6.5	249,991		0.0000	1.0000	100.00
7.5	240,387		0.0000	1.0000	100.00
8.5	232,960		0.0000	1.0000	100.00
9.5					100.00

BLACK HILLS POWER
ACCOUNT 314 TURBOGENERATOR UNITS
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 314 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1953-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	125,123,478	7,603	0.0001	0.9999	100.00
0.5	121,962,240		0.0000	1.0000	99.99
1.5	116,402,191	20,681	0.0002	0.9998	99.99
2.5	58,298,478	139,918	0.0024	0.9976	99.98
3.5	48,297,890	293,112	0.0061	0.9939	99.74
4.5	46,113,553	204,140	0.0044	0.9956	99.13
5.5	45,692,826		0.0000	1.0000	98.69
6.5	43,812,634		0.0000	1.0000	98.69
7.5	43,802,983	265,635	0.0061	0.9939	98.69
8.5	43,418,853		0.0000	1.0000	98.09
9.5	43,284,132	38,902	0.0009	0.9991	98.09
10.5	41,255,885	21,617	0.0005	0.9995	98.01
11.5	41,215,265	333,834	0.0081	0.9919	97.95
12.5	40,844,345	103,164	0.0025	0.9975	97.16
13.5	40,735,927	756,016	0.0186	0.9814	96.92
14.5	14,151,747		0.0000	1.0000	95.12
15.5	14,119,129	442,553	0.0313	0.9687	95.12
16.5	13,174,066		0.0000	1.0000	92.14
17.5	13,163,374		0.0000	1.0000	92.14
18.5	14,997,213	132,678	0.0088	0.9912	92.14
19.5	13,997,939	1,589,046	0.1135	0.8865	91.32
20.5	11,872,925	189,522	0.0160	0.9840	80.95
21.5	4,842,682	16,069	0.0033	0.9967	79.66
22.5	4,578,759		0.0000	1.0000	79.40
23.5	4,452,305	1,828	0.0004	0.9996	79.40
24.5	3,689,088	15,855	0.0043	0.9957	79.36
25.5	3,673,233		0.0000	1.0000	79.02
26.5	4,634,882		0.0000	1.0000	79.02
27.5	3,669,410		0.0000	1.0000	79.02
28.5	3,651,923	5,000	0.0014	0.9986	79.02
29.5	3,630,508	20,000	0.0055	0.9945	78.92
30.5	3,619,192	17,500	0.0048	0.9952	78.48
31.5	3,601,692	1,000	0.0003	0.9997	78.10
32.5	3,598,798		0.0000	1.0000	78.08
33.5	3,598,798	1,973	0.0005	0.9995	78.08
34.5	3,588,347		0.0000	1.0000	78.04
35.5	4,672,935		0.0000	1.0000	78.04
36.5	4,672,935	26,799	0.0057	0.9943	78.04
37.5	4,646,136	39,891	0.0086	0.9914	77.59
38.5	4,606,245		0.0000	1.0000	76.92

BLACK HILLS POWER

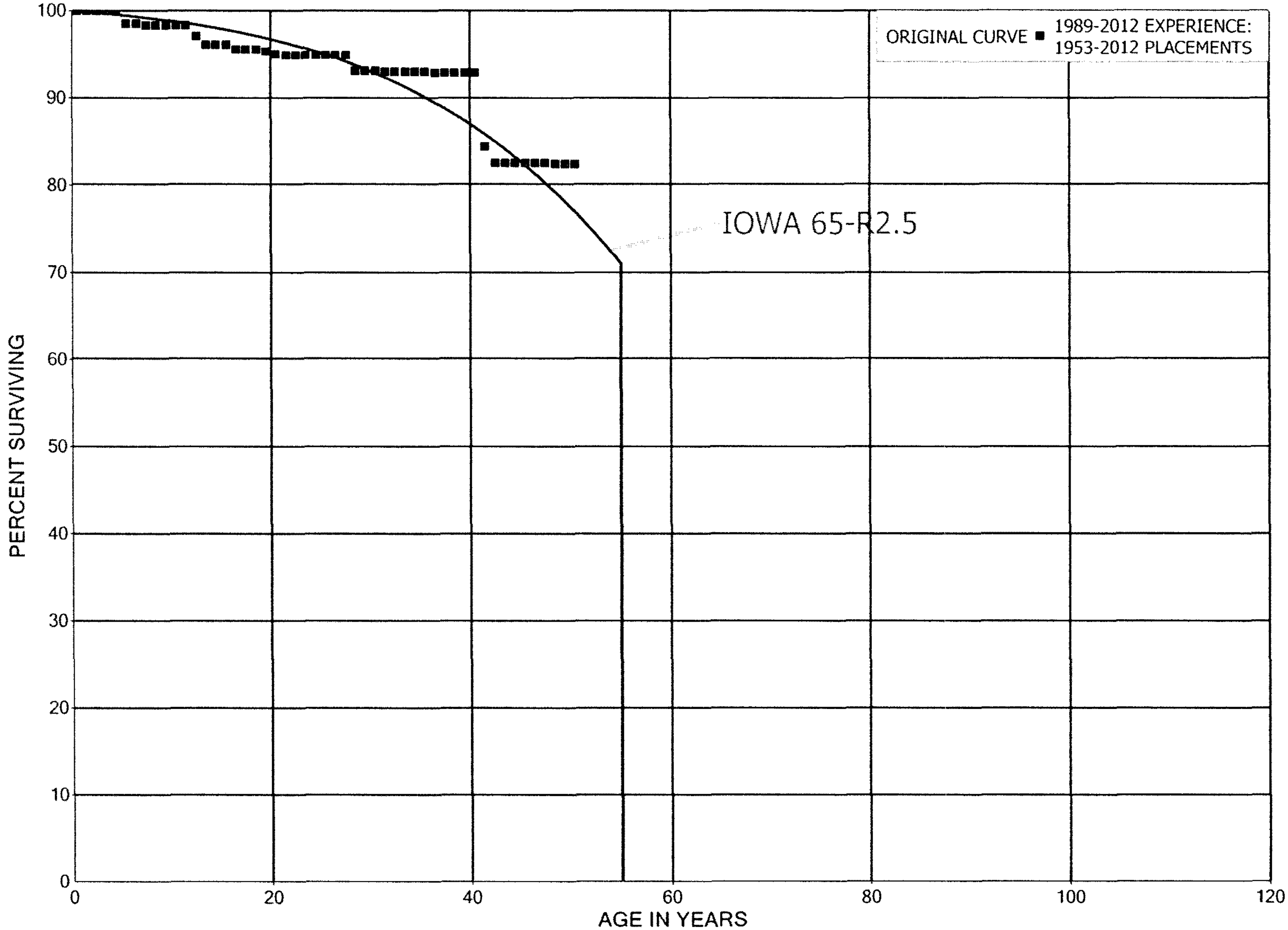
ACCOUNT 314 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1953-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,606,245	72,108	0.0157	0.9843	76.92
40.5	4,528,278	12,386	0.0027	0.9973	75.72
41.5	4,515,892		0.0000	1.0000	75.51
42.5	2,735,551		0.0000	1.0000	75.51
43.5	2,735,551		0.0000	1.0000	75.51
44.5	2,735,551		0.0000	1.0000	75.51
45.5	2,735,551		0.0000	1.0000	75.51
46.5	2,735,551	38,000	0.0139	0.9861	75.51
47.5	2,697,551		0.0000	1.0000	74.46
48.5	2,697,551	4,192	0.0016	0.9984	74.46
49.5	2,693,359	15,470	0.0057	0.9943	74.35
50.5	1,093,270		0.0000	1.0000	73.92
51.5	1,093,270		0.0000	1.0000	73.92
52.5	1,093,270		0.0000	1.0000	73.92
53.5	1,093,270		0.0000	1.0000	73.92
54.5	1,084,587		0.0000	1.0000	73.92
55.5	1,084,587	321	0.0003	0.9997	73.92
56.5	1,084,266	672	0.0006	0.9994	73.90
57.5	1,083,594		0.0000	1.0000	73.85
58.5	1,083,594		0.0000	1.0000	73.85
59.5					73.85

BLACK HILLS POWER
ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1953-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	23,211,429		0.0000	1.0000	100.00
0.5	21,173,659		0.0000	1.0000	100.00
1.5	21,244,958		0.0000	1.0000	100.00
2.5	13,337,352		0.0000	1.0000	100.00
3.5	13,415,744		0.0000	1.0000	100.00
4.5	13,544,359	208,756	0.0154	0.9846	100.00
5.5	13,332,842		0.0000	1.0000	98.46
6.5	13,318,801	19,982	0.0015	0.9985	98.46
7.5	13,288,635	8,583	0.0006	0.9994	98.31
8.5	13,335,614		0.0000	1.0000	98.25
9.5	13,284,490		0.0000	1.0000	98.25
10.5	13,245,243		0.0000	1.0000	98.25
11.5	13,443,550	166,630	0.0124	0.9876	98.25
12.5	13,276,920	131,703	0.0099	0.9901	97.03
13.5	13,011,564		0.0000	1.0000	96.07
14.5	6,797,887		0.0000	1.0000	96.07
15.5	6,796,424	39,235	0.0058	0.9942	96.07
16.5	6,346,514		0.0000	1.0000	95.51
17.5	6,346,514		0.0000	1.0000	95.51
18.5	6,749,996	16,950	0.0025	0.9975	95.51
19.5	6,623,493	20,735	0.0031	0.9969	95.27
20.5	6,581,745	11,710	0.0018	0.9982	94.97
21.5	1,612,214		0.0000	1.0000	94.81
22.5	1,635,236		0.0000	1.0000	94.81
23.5	1,606,537		0.0000	1.0000	94.81
24.5	1,605,594		0.0000	1.0000	94.81
25.5	1,588,852		0.0000	1.0000	94.81
26.5	1,841,336		0.0000	1.0000	94.81
27.5	1,699,978	31,044	0.0183	0.9817	94.81
28.5	1,606,852		0.0000	1.0000	93.07
29.5	986,202	607	0.0006	0.9994	93.07
30.5	988,753	1,143	0.0012	0.9988	93.02
31.5	987,610		0.0000	1.0000	92.91
32.5	981,678		0.0000	1.0000	92.91
33.5	975,442		0.0000	1.0000	92.91
34.5	977,052		0.0000	1.0000	92.91
35.5	975,025	858	0.0009	0.9991	92.91
36.5	1,100,700		0.0000	1.0000	92.83
37.5	1,100,700		0.0000	1.0000	92.83
38.5	1,100,700		0.0000	1.0000	92.83

BLACK HILLS POWER

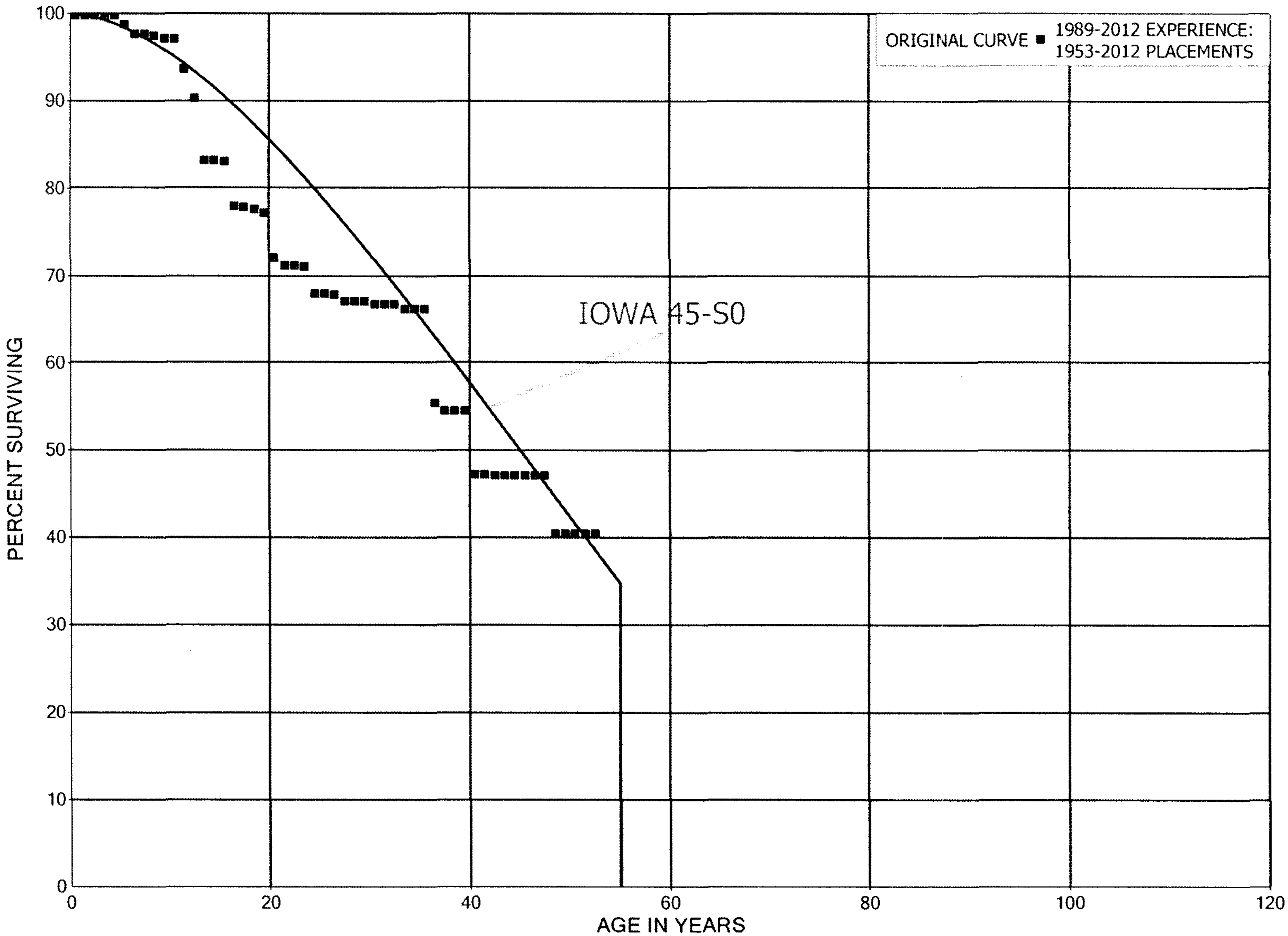
ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1953-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,098,711		0.0000	1.0000	92.83
40.5	1,098,711	99,740	0.0908	0.9092	92.83
41.5	998,971	22,572	0.0226	0.9774	84.40
42.5	589,453		0.0000	1.0000	82.49
43.5	589,453		0.0000	1.0000	82.49
44.5	589,078		0.0000	1.0000	82.49
45.5	948,758		0.0000	1.0000	82.49
46.5	948,267		0.0000	1.0000	82.49
47.5	948,267	1,573	0.0017	0.9983	82.49
48.5	946,694		0.0000	1.0000	82.36
49.5	946,694		0.0000	1.0000	82.36
50.5	559,119		0.0000	1.0000	82.36
51.5	559,119		0.0000	1.0000	82.36
52.5	559,119	84	0.0001	0.9999	82.36
53.5	559,035		0.0000	1.0000	82.34
54.5	555,961		0.0000	1.0000	82.34
55.5	555,961		0.0000	1.0000	82.34
56.5	555,961		0.0000	1.0000	82.34
57.5	555,961		0.0000	1.0000	82.34
58.5	555,961		0.0000	1.0000	82.34
59.5					82.34

BLACK HILLS POWER
ACCOUNT 316 MISCELLANEOUS POWER PLANT EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 316 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1953-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	3,364,774	7,978	0.0024	0.9976	100.00
0.5	3,201,591		0.0000	1.0000	99.76
1.5	3,190,110		0.0000	1.0000	99.76
2.5	2,471,767		0.0000	1.0000	99.76
3.5	2,251,410		0.0000	1.0000	99.76
4.5	2,246,450	24,385	0.0109	0.9891	99.76
5.5	2,251,371	25,186	0.0112	0.9888	98.68
6.5	2,115,707		0.0000	1.0000	97.58
7.5	2,052,438	2,757	0.0013	0.9987	97.58
8.5	2,064,051	7,645	0.0037	0.9963	97.45
9.5	2,112,669		0.0000	1.0000	97.08
10.5	2,143,030	76,500	0.0357	0.9643	97.08
11.5	2,168,562	77,011	0.0355	0.9645	93.62
12.5	2,078,079	164,141	0.0790	0.9210	90.29
13.5	1,909,289	6	0.0000	1.0000	83.16
14.5	1,716,599	1,833	0.0011	0.9989	83.16
15.5	1,709,684	104,241	0.0610	0.9390	83.07
16.5	1,466,259	3,588	0.0024	0.9976	78.01
17.5	1,445,716	3,232	0.0022	0.9978	77.82
18.5	1,397,651	7,776	0.0056	0.9944	77.64
19.5	1,370,225	92,032	0.0672	0.9328	77.21
20.5	1,082,565	12,635	0.0117	0.9883	72.02
21.5	863,003		0.0000	1.0000	71.18
22.5	857,742	938	0.0011	0.9989	71.18
23.5	788,519	35,602	0.0452	0.9548	71.11
24.5	677,429		0.0000	1.0000	67.90
25.5	566,132	438	0.0008	0.9992	67.90
26.5	580,206	6,360	0.0110	0.9890	67.84
27.5	557,248		0.0000	1.0000	67.10
28.5	490,810		0.0000	1.0000	67.10
29.5	330,410	1,791	0.0054	0.9946	67.10
30.5	263,975		0.0000	1.0000	66.74
31.5	233,574		0.0000	1.0000	66.74
32.5	200,406	1,652	0.0082	0.9918	66.74
33.5	170,445		0.0000	1.0000	66.19
34.5	206,716		0.0000	1.0000	66.19
35.5	221,599	36,023	0.1626	0.8374	66.19
36.5	184,506	3,058	0.0166	0.9834	55.43
37.5	180,530		0.0000	1.0000	54.51
38.5	178,593		0.0000	1.0000	54.51

BLACK HILLS POWER

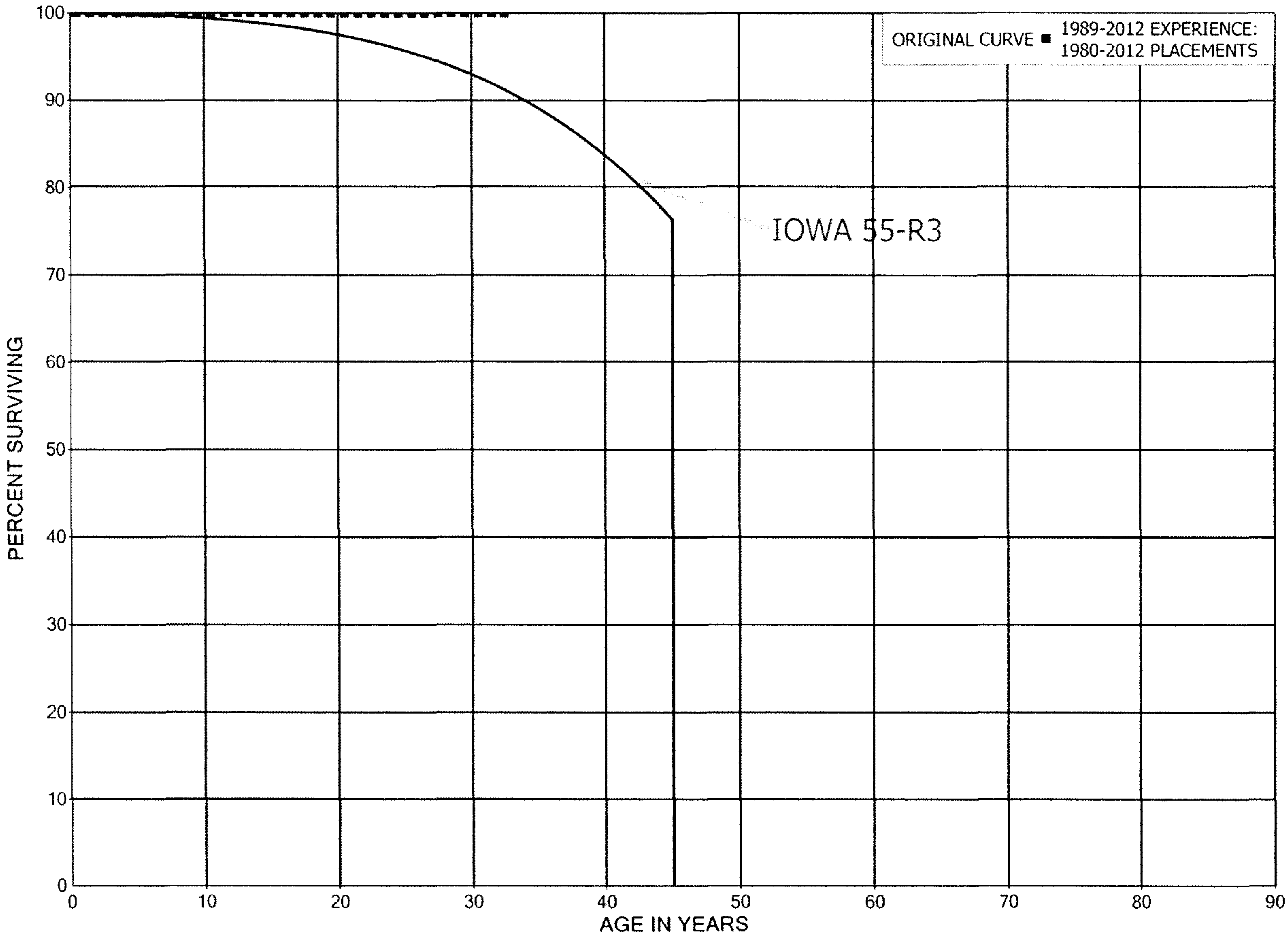
ACCOUNT 316 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1953-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	176,210	23,834	0.1353	0.8647	54.51
40.5	149,965		0.0000	1.0000	47.14
41.5	149,054	59	0.0004	0.9996	47.14
42.5	82,311	129	0.0016	0.9984	47.12
43.5	82,183		0.0000	1.0000	47.04
44.5	82,183		0.0000	1.0000	47.04
45.5	82,183		0.0000	1.0000	47.04
46.5	78,670		0.0000	1.0000	47.04
47.5	78,670	11,090	0.1410	0.8590	47.04
48.5	67,580		0.0000	1.0000	40.41
49.5	67,580		0.0000	1.0000	40.41
50.5	18,222		0.0000	1.0000	40.41
51.5	18,222		0.0000	1.0000	40.41
52.5	18,222		0.0000	1.0000	40.41
53.5	18,222		0.0000	1.0000	40.41
54.5	17,067		0.0000	1.0000	40.41
55.5	17,067		0.0000	1.0000	40.41
56.5	17,067	2,386	0.1398	0.8602	40.41
57.5	14,680		0.0000	1.0000	34.76
58.5	14,680		0.0000	1.0000	34.76
59.5					34.76

BLACK HILLS POWER
ACCOUNT 341 STRUCTURES AND IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

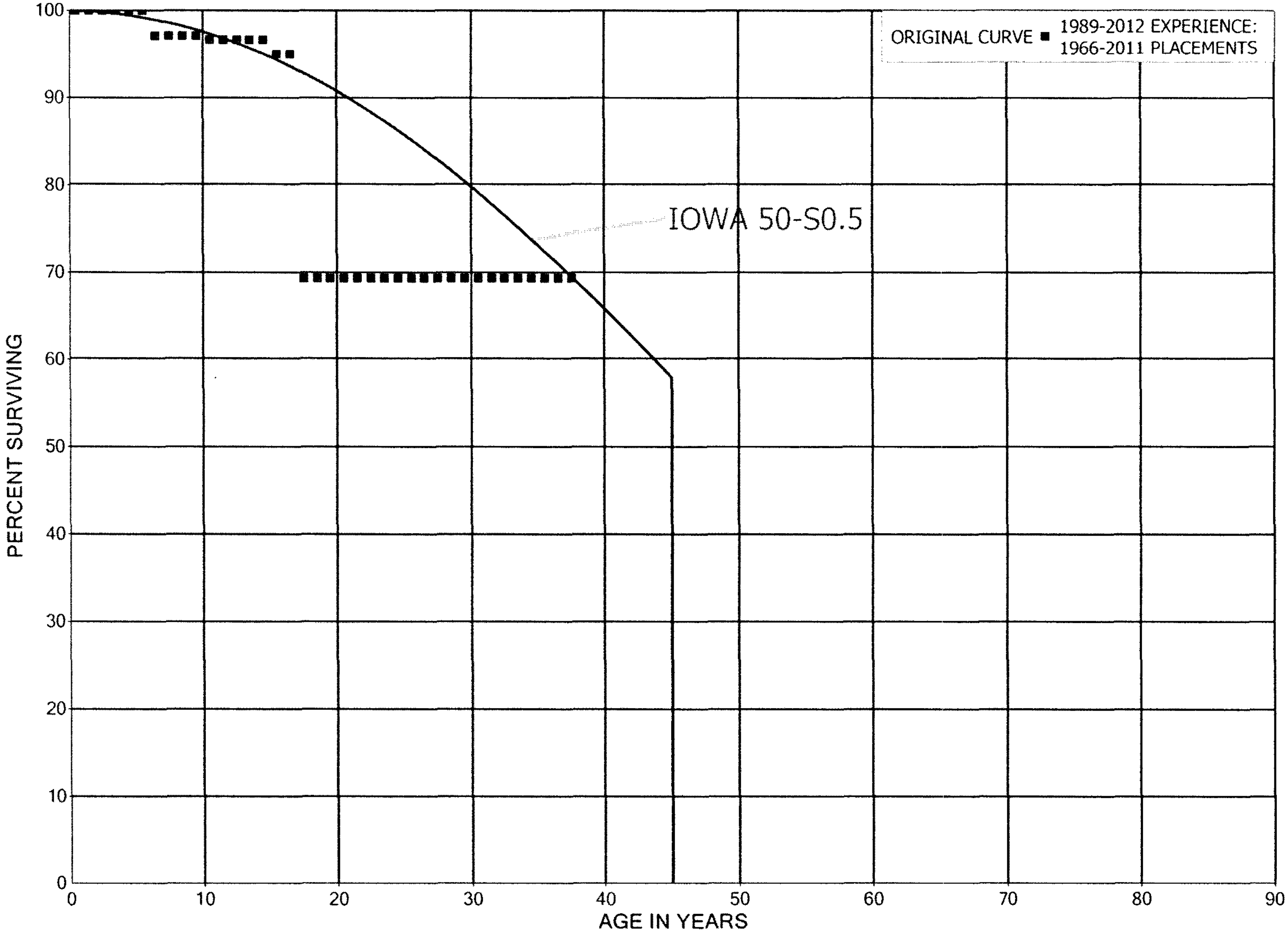
ACCOUNT 341 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1980-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	466,936		0.0000	1.0000	100.00
0.5	458,777		0.0000	1.0000	100.00
1.5	493,087		0.0000	1.0000	100.00
2.5	446,740		0.0000	1.0000	100.00
3.5	412,431		0.0000	1.0000	100.00
4.5	412,431		0.0000	1.0000	100.00
5.5	412,431		0.0000	1.0000	100.00
6.5	412,431		0.0000	1.0000	100.00
7.5	412,431		0.0000	1.0000	100.00
8.5	395,034		0.0000	1.0000	100.00
9.5	175,183		0.0000	1.0000	100.00
10.5	175,183		0.0000	1.0000	100.00
11.5	22,448		0.0000	1.0000	100.00
12.5	22,448		0.0000	1.0000	100.00
13.5	22,448		0.0000	1.0000	100.00
14.5	22,448		0.0000	1.0000	100.00
15.5	22,448		0.0000	1.0000	100.00
16.5	22,448		0.0000	1.0000	100.00
17.5	22,448		0.0000	1.0000	100.00
18.5	22,448		0.0000	1.0000	100.00
19.5	22,448		0.0000	1.0000	100.00
20.5	22,448		0.0000	1.0000	100.00
21.5	22,448		0.0000	1.0000	100.00
22.5	22,448		0.0000	1.0000	100.00
23.5	22,448		0.0000	1.0000	100.00
24.5	22,448		0.0000	1.0000	100.00
25.5	22,448		0.0000	1.0000	100.00
26.5	22,448		0.0000	1.0000	100.00
27.5	22,448		0.0000	1.0000	100.00
28.5	22,448		0.0000	1.0000	100.00
29.5	22,448		0.0000	1.0000	100.00
30.5	22,448		0.0000	1.0000	100.00
31.5	22,448		0.0000	1.0000	100.00
32.5					100.00

BLACK HILLS POWER
ACCOUNT 342 FUEL HOLDERS AND ACCESSORIES
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 342 FUEL HOLDERS AND ACCESSORIES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1966-2011 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	4,910,849		0.0000	1.0000	100.00
0.5	4,910,849		0.0000	1.0000	100.00
1.5	4,788,381		0.0000	1.0000	100.00
2.5	4,788,381		0.0000	1.0000	100.00
3.5	4,717,641		0.0000	1.0000	100.00
4.5	4,717,641		0.0000	1.0000	100.00
5.5	4,555,565	131,849	0.0289	0.9711	100.00
6.5	3,195,896		0.0000	1.0000	97.11
7.5	3,195,896		0.0000	1.0000	97.11
8.5	3,551,620		0.0000	1.0000	97.11
9.5	2,193,443	10,000	0.0046	0.9954	97.11
10.5	2,183,443		0.0000	1.0000	96.66
11.5	1,537,092		0.0000	1.0000	96.66
12.5	1,478,702		0.0000	1.0000	96.66
13.5	1,478,702		0.0000	1.0000	96.66
14.5	1,478,702	26,068	0.0176	0.9824	96.66
15.5	1,422,207		0.0000	1.0000	94.96
16.5	1,317,104	355,724	0.2701	0.7299	94.96
17.5	961,380		0.0000	1.0000	69.31
18.5	961,380	1,074	0.0011	0.9989	69.31
19.5	527,163		0.0000	1.0000	69.23
20.5	435,596		0.0000	1.0000	69.23
21.5	435,596		0.0000	1.0000	69.23
22.5	436,594		0.0000	1.0000	69.23
23.5	436,594		0.0000	1.0000	69.23
24.5	436,594		0.0000	1.0000	69.23
25.5	436,594		0.0000	1.0000	69.23
26.5	436,594		0.0000	1.0000	69.23
27.5	436,594		0.0000	1.0000	69.23
28.5	436,594		0.0000	1.0000	69.23
29.5	436,594		0.0000	1.0000	69.23
30.5	405,619		0.0000	1.0000	69.23
31.5	405,619		0.0000	1.0000	69.23
32.5	405,619		0.0000	1.0000	69.23
33.5	158,169		0.0000	1.0000	69.23
34.5	158,169		0.0000	1.0000	69.23
35.5	999		0.0000	1.0000	69.23
36.5	999		0.0000	1.0000	69.23
37.5	999		0.0000	1.0000	69.23
38.5	999		0.0000	1.0000	69.23

BLACK HILLS POWER

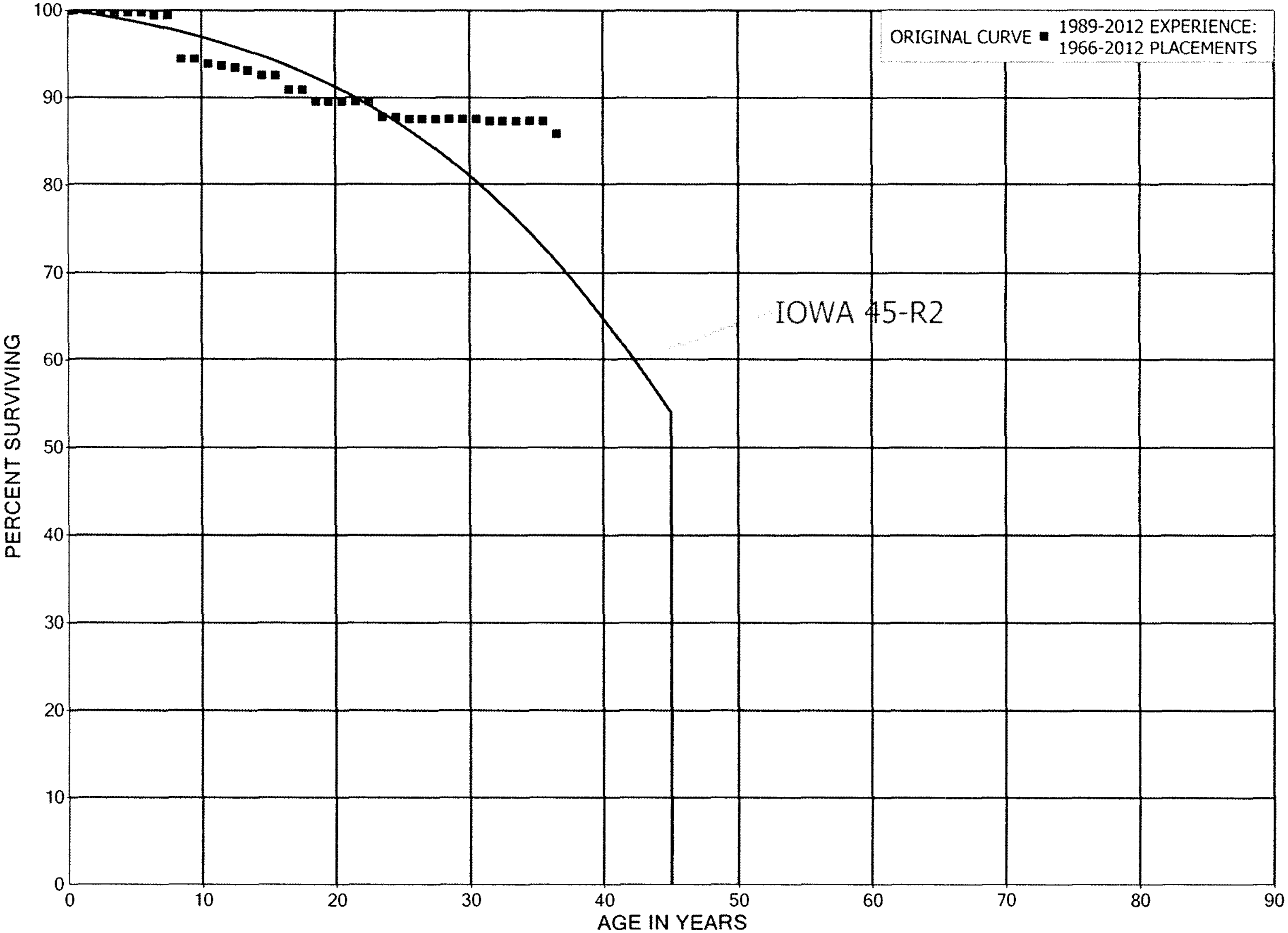
ACCOUNT 342 FUEL HOLDERS AND ACCESSORIES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1966-2011 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	999		0.0000	1.0000	69.23
40.5	999		0.0000	1.0000	69.23
41.5	999		0.0000	1.0000	69.23
42.5	999		0.0000	1.0000	69.23
43.5	999		0.0000	1.0000	69.23
44.5	999		0.0000	1.0000	69.23
45.5	999		0.0000	1.0000	69.23
46.5					69.23

BLACK HILLS POWER
ACCOUNT 344.1 GENERATORS
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 344.1 GENERATORS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1966-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	58,588,783		0.0000	1.0000	100.00
0.5	58,428,528		0.0000	1.0000	100.00
1.5	57,369,115		0.0000	1.0000	100.00
2.5	57,369,115	154,414	0.0027	0.9973	100.00
3.5	54,413,510	32,619	0.0006	0.9994	99.73
4.5	53,593,052		0.0000	1.0000	99.67
5.5	53,044,417	160,003	0.0030	0.9970	99.67
6.5	52,884,413		0.0000	1.0000	99.37
7.5	52,884,413	2,643,127	0.0500	0.9500	99.37
8.5	50,231,062	31,196	0.0006	0.9994	94.40
9.5	28,014,012	146,532	0.0052	0.9948	94.35
10.5	30,933,916	74,350	0.0024	0.9976	93.85
11.5	17,077,591	47,321	0.0028	0.9972	93.63
12.5	15,755,901	47,321	0.0030	0.9970	93.37
13.5	15,708,580	93,529	0.0060	0.9940	93.09
14.5	15,615,051		0.0000	1.0000	92.53
15.5	15,572,019	290,000	0.0186	0.9814	92.53
16.5	15,282,019		0.0000	1.0000	90.81
17.5	15,263,156	217,004	0.0142	0.9858	90.81
18.5	15,046,152		0.0000	1.0000	89.52
19.5	13,727,330		0.0000	1.0000	89.52
20.5	13,683,869		0.0000	1.0000	89.52
21.5	13,683,869		0.0000	1.0000	89.52
22.5	14,446,209	290,000	0.0201	0.9799	89.52
23.5	14,156,209		0.0000	1.0000	87.72
24.5	14,156,209	31,837	0.0022	0.9978	87.72
25.5	14,124,372	9,500	0.0007	0.9993	87.52
26.5	14,114,872		0.0000	1.0000	87.46
27.5	14,114,872	2,000	0.0001	0.9999	87.46
28.5	14,106,247		0.0000	1.0000	87.45
29.5	14,094,676		0.0000	1.0000	87.45
30.5	14,094,676	24,000	0.0017	0.9983	87.45
31.5	14,070,676	225	0.0000	1.0000	87.30
32.5	14,070,451		0.0000	1.0000	87.30
33.5	10,361,376		0.0000	1.0000	87.30
34.5	7,031,116		0.0000	1.0000	87.30
35.5	695,003	12,000	0.0173	0.9827	87.30
36.5	683,003		0.0000	1.0000	85.79
37.5	683,003		0.0000	1.0000	85.79
38.5	683,003		0.0000	1.0000	85.79

BLACK HILLS POWER

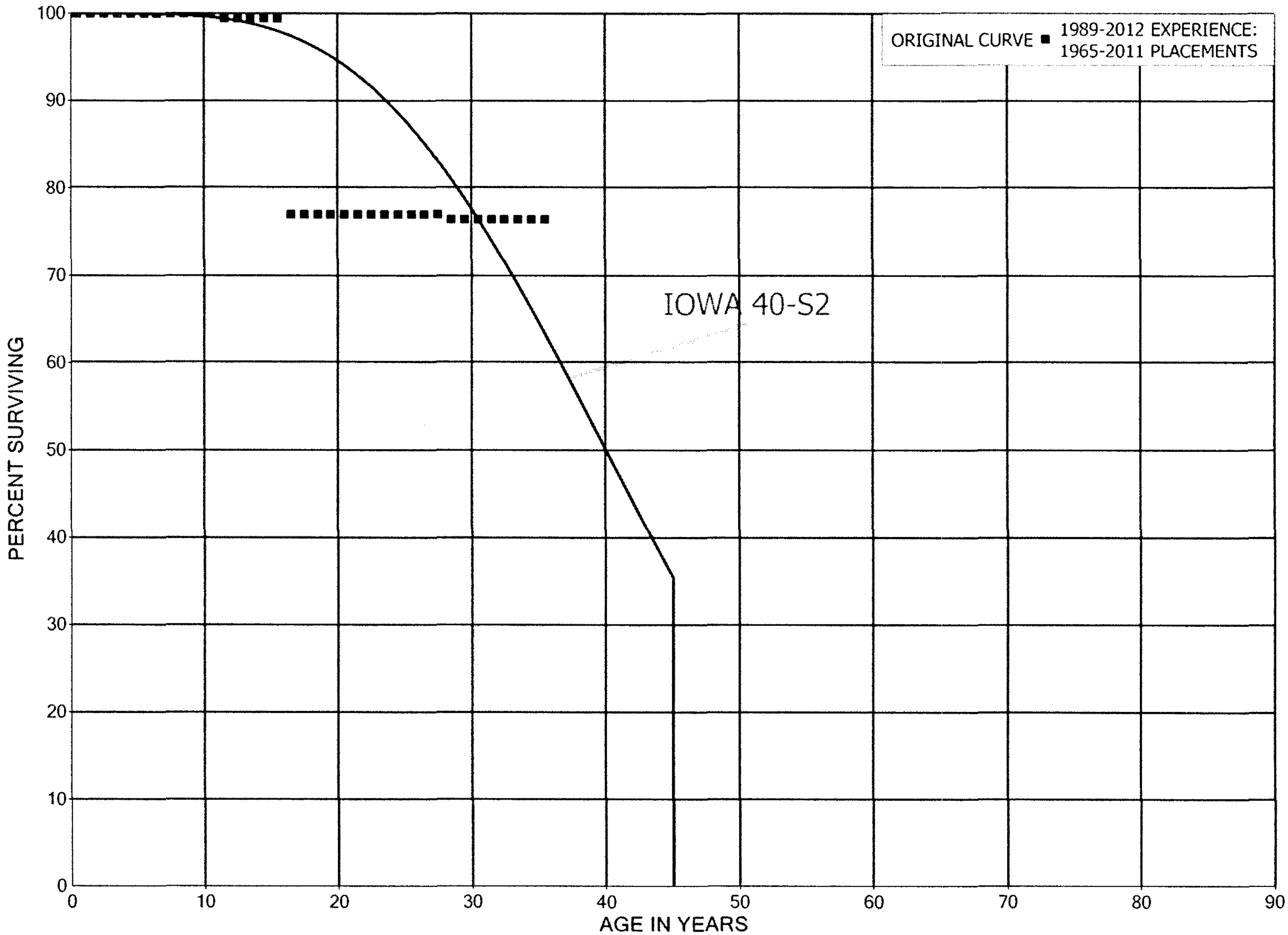
ACCOUNT 344.1 GENERATORS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1966-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	683,003		0.0000	1.0000	85.79
40.5	683,003		0.0000	1.0000	85.79
41.5	683,003		0.0000	1.0000	85.79
42.5	683,003		0.0000	1.0000	85.79
43.5	683,003		0.0000	1.0000	85.79
44.5	683,003		0.0000	1.0000	85.79
45.5	683,003		0.0000	1.0000	85.79
46.5					85.79

BLACK HILLS POWER
ACCOUNT 345 ACCESSORY ELECTRIC EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 345 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1965-2011 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	4,255,308		0.0000	1.0000	100.00
0.5	4,255,308		0.0000	1.0000	100.00
1.5	4,246,501		0.0000	1.0000	100.00
2.5	4,211,887		0.0000	1.0000	100.00
3.5	4,198,451		0.0000	1.0000	100.00
4.5	4,186,727		0.0000	1.0000	100.00
5.5	4,196,228		0.0000	1.0000	100.00
6.5	4,196,228	4,266	0.0010	0.9990	100.00
7.5	4,191,962		0.0000	1.0000	99.90
8.5	4,191,962		0.0000	1.0000	99.90
9.5	2,096,094		0.0000	1.0000	99.90
10.5	2,086,334	9,501	0.0046	0.9954	99.90
11.5	125,796		0.0000	1.0000	99.44
12.5	125,796		0.0000	1.0000	99.44
13.5	79,723		0.0000	1.0000	99.44
14.5	79,723		0.0000	1.0000	99.44
15.5	79,723	18,056	0.2265	0.7735	99.44
16.5	55,099		0.0000	1.0000	76.92
17.5	55,099		0.0000	1.0000	76.92
18.5	20,397		0.0000	1.0000	76.92
19.5	186,423		0.0000	1.0000	76.92
20.5	357,488		0.0000	1.0000	76.92
21.5	637,274		0.0000	1.0000	76.92
22.5	641,274		0.0000	1.0000	76.92
23.5	641,274		0.0000	1.0000	76.92
24.5	641,274		0.0000	1.0000	76.92
25.5	641,274		0.0000	1.0000	76.92
26.5	641,274		0.0000	1.0000	76.92
27.5	641,274	4,000	0.0062	0.9938	76.92
28.5	637,274		0.0000	1.0000	76.44
29.5	637,274		0.0000	1.0000	76.44
30.5	637,274		0.0000	1.0000	76.44
31.5	637,274		0.0000	1.0000	76.44
32.5	637,274		0.0000	1.0000	76.44
33.5	471,248		0.0000	1.0000	76.44
34.5	291,443		0.0000	1.0000	76.44
35.5					76.44
36.5					
37.5					
38.5					

BLACK HILLS POWER

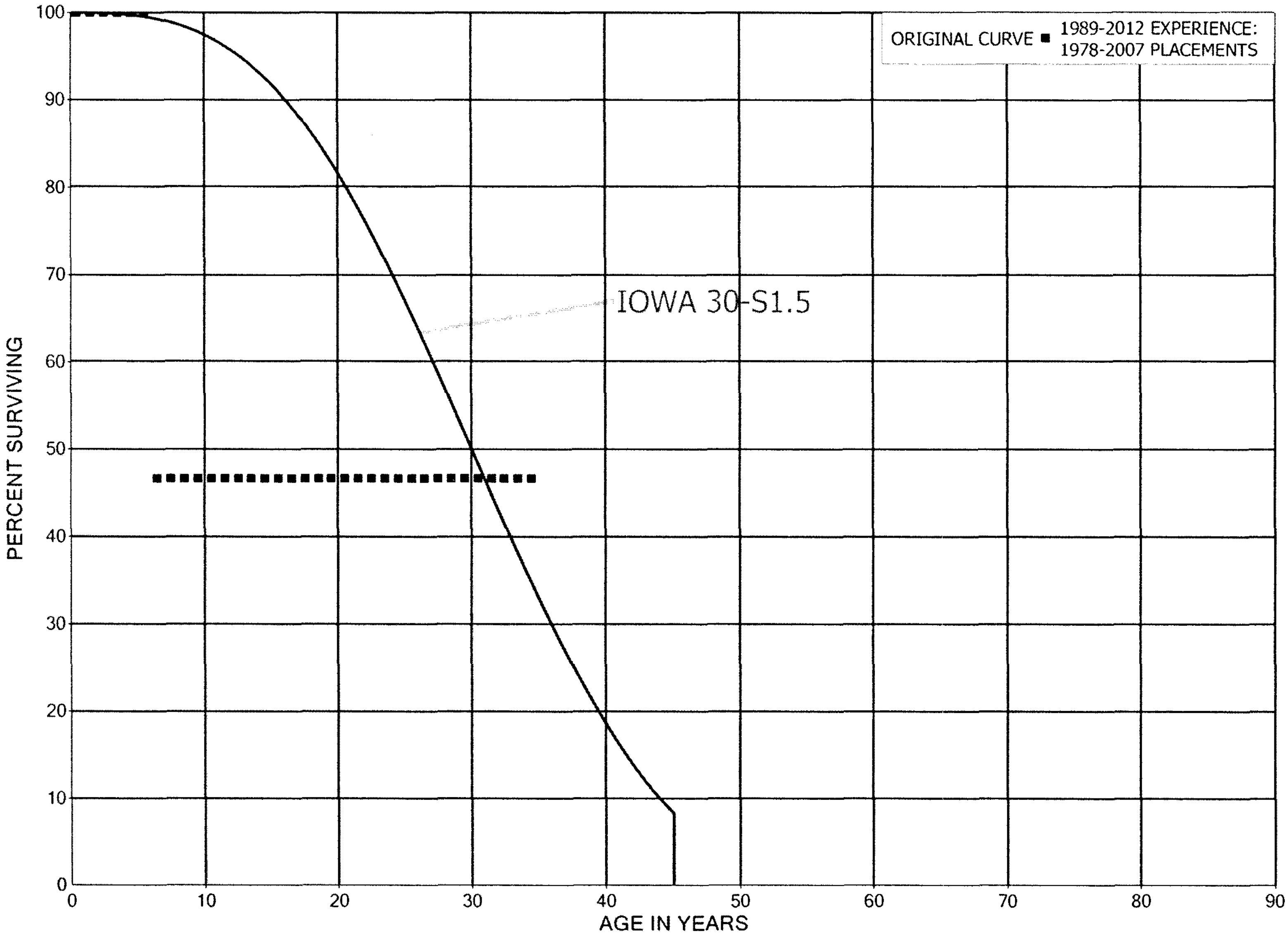
ACCOUNT 345 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1965-2011 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5					
40.5					
41.5					
42.5					
43.5					
44.5	43,074		0.0000		
45.5	43,074		0.0000		
46.5	43,074		0.0000		
47.5					

BLACK HILLS POWER
ACCOUNT 346 MISCELLANEOUS POWER PLANT EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

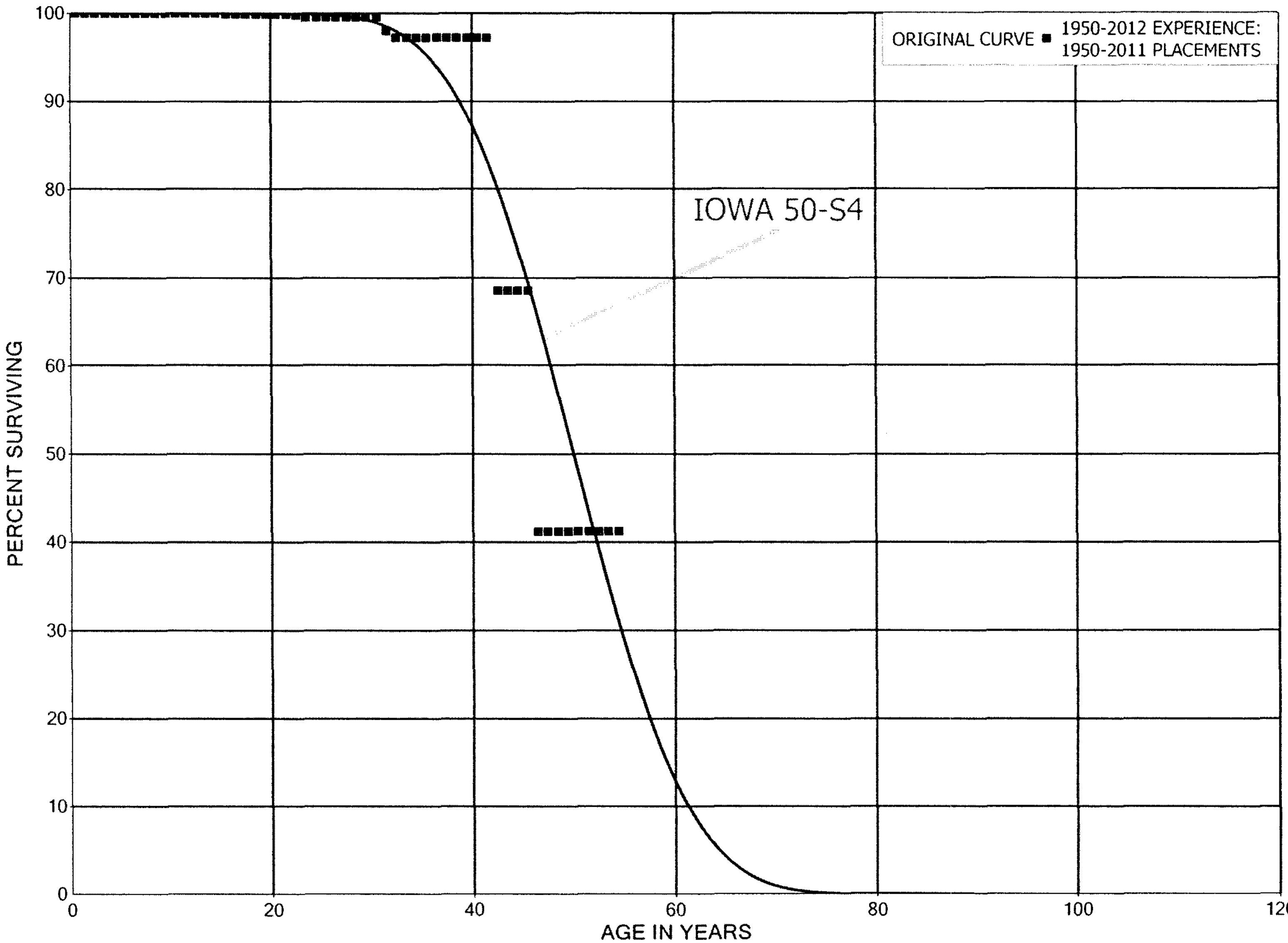
ACCOUNT 346 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1978-2007 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	104,822		0.0000	1.0000	100.00
0.5	104,822		0.0000	1.0000	100.00
1.5	104,822		0.0000	1.0000	100.00
2.5	104,822		0.0000	1.0000	100.00
3.5	104,822		0.0000	1.0000	100.00
4.5	104,822		0.0000	1.0000	100.00
5.5	68,667	36,672	0.5341	0.4659	100.00
6.5	42,761		0.0000	1.0000	46.59
7.5	42,761		0.0000	1.0000	46.59
8.5	34,077		0.0000	1.0000	46.59
9.5	20,611		0.0000	1.0000	46.59
10.5	18,681		0.0000	1.0000	46.59
11.5	14,718		0.0000	1.0000	46.59
12.5	14,718		0.0000	1.0000	46.59
13.5	14,718		0.0000	1.0000	46.59
14.5	14,718		0.0000	1.0000	46.59
15.5	14,718		0.0000	1.0000	46.59
16.5	14,718		0.0000	1.0000	46.59
17.5	14,718		0.0000	1.0000	46.59
18.5	14,718		0.0000	1.0000	46.59
19.5	14,718		0.0000	1.0000	46.59
20.5	14,718		0.0000	1.0000	46.59
21.5	14,718		0.0000	1.0000	46.59
22.5	14,718		0.0000	1.0000	46.59
23.5	14,718		0.0000	1.0000	46.59
24.5	14,718		0.0000	1.0000	46.59
25.5	14,718		0.0000	1.0000	46.59
26.5	14,718		0.0000	1.0000	46.59
27.5	14,718		0.0000	1.0000	46.59
28.5	14,718		0.0000	1.0000	46.59
29.5	14,718		0.0000	1.0000	46.59
30.5	3,952		0.0000	1.0000	46.59
31.5	3,952		0.0000	1.0000	46.59
32.5	3,952		0.0000	1.0000	46.59
33.5	2,847		0.0000	1.0000	46.59
34.5					46.59

BLACK HILLS POWER
ACCOUNT 352 STRUCTURES AND IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



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BLACK HILLS POWER

ACCOUNT 352 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1950-2011 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,975,073	299	0.0002	0.9998	100.00
0.5	1,988,156		0.0000	1.0000	99.98
1.5	1,854,101		0.0000	1.0000	99.98
2.5	1,846,801	897	0.0005	0.9995	99.98
3.5	1,845,904		0.0000	1.0000	99.94
4.5	1,845,904		0.0000	1.0000	99.94
5.5	1,656,257		0.0000	1.0000	99.94
6.5	1,640,673		0.0000	1.0000	99.94
7.5	753,809		0.0000	1.0000	99.94
8.5	753,809		0.0000	1.0000	99.94
9.5	753,809		0.0000	1.0000	99.94
10.5	753,809	29	0.0000	1.0000	99.94
11.5	753,780		0.0000	1.0000	99.93
12.5	743,585		0.0000	1.0000	99.93
13.5	737,897		0.0000	1.0000	99.93
14.5	710,347	877	0.0012	0.9988	99.93
15.5	703,311		0.0000	1.0000	99.81
16.5	703,311		0.0000	1.0000	99.81
17.5	703,311		0.0000	1.0000	99.81
18.5	703,311		0.0000	1.0000	99.81
19.5	703,311		0.0000	1.0000	99.81
20.5	703,311		0.0000	1.0000	99.81
21.5	670,430	268	0.0004	0.9996	99.81
22.5	646,960	2,017	0.0031	0.9969	99.77
23.5	644,541		0.0000	1.0000	99.46
24.5	198,380		0.0000	1.0000	99.46
25.5	198,380		0.0000	1.0000	99.46
26.5	198,380		0.0000	1.0000	99.46
27.5	198,380		0.0000	1.0000	99.46
28.5	198,380		0.0000	1.0000	99.46
29.5	189,227		0.0000	1.0000	99.46
30.5	189,227	2,968	0.0157	0.9843	99.46
31.5	186,259	1,413	0.0076	0.9924	97.90
32.5	170,709		0.0000	1.0000	97.16
33.5	170,709		0.0000	1.0000	97.16
34.5	170,709		0.0000	1.0000	97.16
35.5	170,709		0.0000	1.0000	97.16
36.5	79,530		0.0000	1.0000	97.16
37.5	46,947		0.0000	1.0000	97.16
38.5	46,947		0.0000	1.0000	97.16

BLACK HILLS POWER

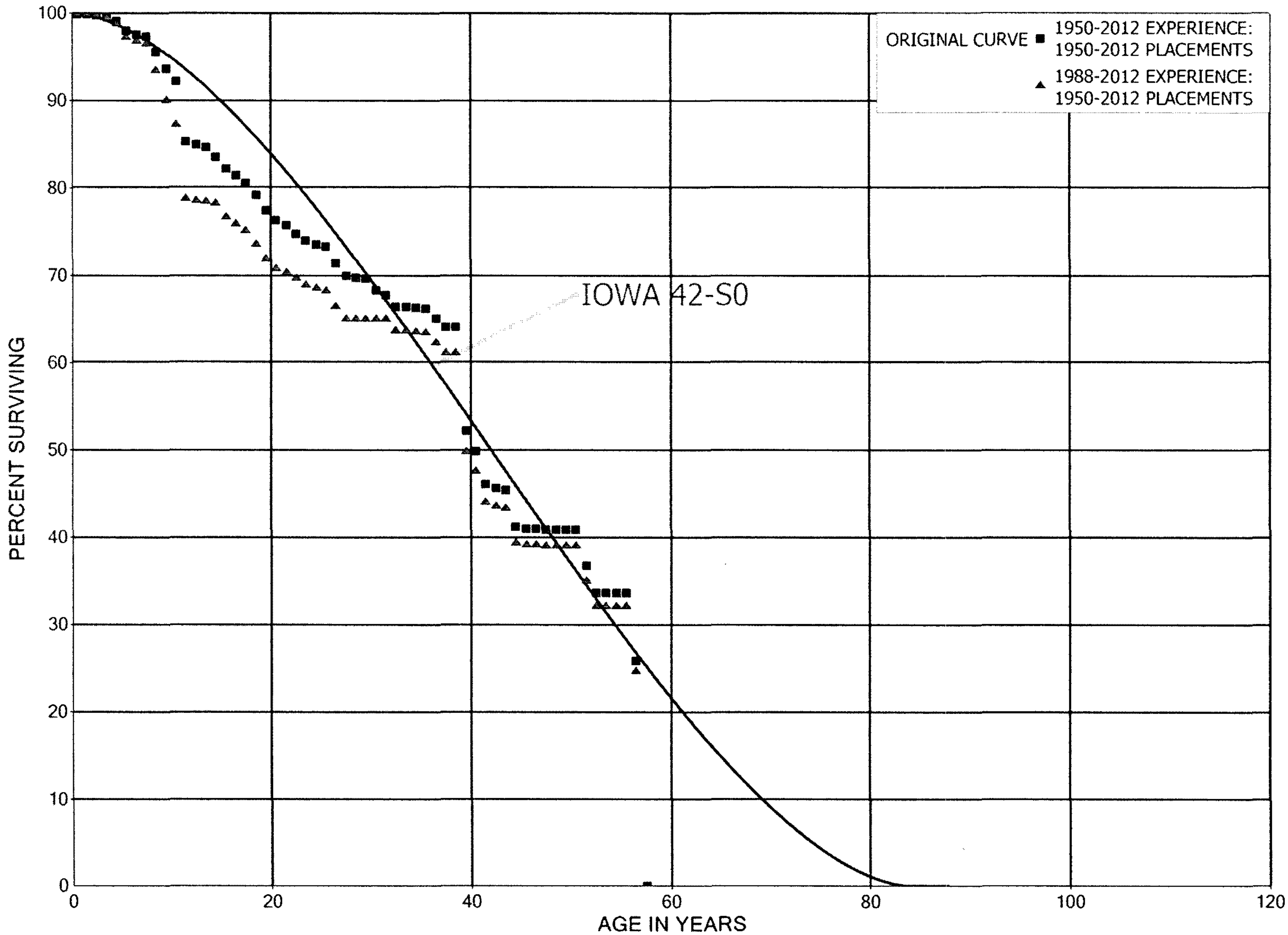
ACCOUNT 352 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1950-2011 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	46,947		0.0000	1.0000	97.16
40.5	46,947		0.0000	1.0000	97.16
41.5	46,947	13,850	0.2950	0.7050	97.16
42.5	33,097		0.0000	1.0000	68.49
43.5	33,097		0.0000	1.0000	68.49
44.5	20,385		0.0000	1.0000	68.49
45.5	20,385	8,139	0.3993	0.6007	68.49
46.5	12,246		0.0000	1.0000	41.15
47.5	12,246		0.0000	1.0000	41.15
48.5	5,307		0.0000	1.0000	41.15
49.5	5,307		0.0000	1.0000	41.15
50.5	5,307		0.0000	1.0000	41.15
51.5	5,307		0.0000	1.0000	41.15
52.5	5,307		0.0000	1.0000	41.15
53.5	5,307		0.0000	1.0000	41.15
54.5					41.15

BLACK HILLS POWER
ACCOUNT 353 STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



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BLACK HILLS POWER

ACCOUNT 353 STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	88,681,207	131,358	0.0015	0.9985	100.00
0.5	87,276,759	10,674	0.0001	0.9999	99.85
1.5	82,202,645	82,395	0.0010	0.9990	99.84
2.5	72,225,161	146,809	0.0020	0.9980	99.74
3.5	64,693,559	300,410	0.0046	0.9954	99.54
4.5	62,918,880	741,436	0.0118	0.9882	99.07
5.5	60,787,800	219,646	0.0036	0.9964	97.91
6.5	57,911,668	160,645	0.0028	0.9972	97.55
7.5	39,651,249	702,407	0.0177	0.9823	97.28
8.5	37,104,074	754,367	0.0203	0.9797	95.56
9.5	33,481,607	529,510	0.0158	0.9842	93.62
10.5	31,982,393	2,395,560	0.0749	0.9251	92.14
11.5	27,465,331	85,256	0.0031	0.9969	85.23
12.5	26,958,918	124,497	0.0046	0.9954	84.97
13.5	26,826,266	329,344	0.0123	0.9877	84.58
14.5	25,053,022	419,996	0.0168	0.9832	83.54
15.5	21,932,197	185,844	0.0085	0.9915	82.14
16.5	21,611,982	244,615	0.0113	0.9887	81.44
17.5	21,310,407	370,037	0.0174	0.9826	80.52
18.5	20,482,866	452,111	0.0221	0.9779	79.12
19.5	18,282,495	257,041	0.0141	0.9859	77.38
20.5	17,681,868	124,721	0.0071	0.9929	76.29
21.5	16,983,156	241,892	0.0142	0.9858	75.75
22.5	16,046,585	160,639	0.0100	0.9900	74.67
23.5	15,579,820	81,258	0.0052	0.9948	73.92
24.5	14,794,819	57,374	0.0039	0.9961	73.54
25.5	14,647,738	374,969	0.0256	0.9744	73.25
26.5	12,796,007	253,797	0.0198	0.9802	71.38
27.5	10,878,650	35,322	0.0032	0.9968	69.96
28.5	9,129,045	16,172	0.0018	0.9982	69.74
29.5	8,034,714	150,628	0.0187	0.9813	69.61
30.5	7,273,498	67,320	0.0093	0.9907	68.31
31.5	6,952,165	135,240	0.0195	0.9805	67.67
32.5	6,531,641		0.0000	1.0000	66.36
33.5	6,423,310	5,229	0.0008	0.9992	66.36
34.5	6,031,388	15,782	0.0026	0.9974	66.30
35.5	3,603,096	55,219	0.0153	0.9847	66.13
36.5	3,079,381	49,532	0.0161	0.9839	65.12
37.5	1,947,116	270	0.0001	0.9999	64.07
38.5	1,649,409	306,692	0.1859	0.8141	64.06

BLACK HILLS POWER

ACCOUNT 353 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,342,717	58,919	0.0439	0.9561	52.15
40.5	1,001,636	75,838	0.0757	0.9243	49.86
41.5	909,973	8,371	0.0092	0.9908	46.09
42.5	876,377	4,904	0.0056	0.9944	45.66
43.5	871,473	80,277	0.0921	0.9079	45.41
44.5	774,111	4,965	0.0064	0.9936	41.22
45.5	767,770		0.0000	1.0000	40.96
46.5	717,574	1,640	0.0023	0.9977	40.96
47.5	715,934		0.0000	1.0000	40.87
48.5	540,053		0.0000	1.0000	40.87
49.5	540,053		0.0000	1.0000	40.87
50.5	540,053	54,831	0.1015	0.8985	40.87
51.5	485,222	40,909	0.0843	0.9157	36.72
52.5	444,313		0.0000	1.0000	33.62
53.5	444,313		0.0000	1.0000	33.62
54.5	441,963		0.0000	1.0000	33.62
55.5	441,963	102,864	0.2327	0.7673	33.62
56.5	339,099	339,099	1.0000		25.80
57.5					

BLACK HILLS POWER

ACCOUNT 353 STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1988-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	66,145,459	122,353	0.0018	0.9982	100.00
0.5	64,652,901	5,000	0.0001	0.9999	99.82
1.5	60,579,422	46,689	0.0008	0.9992	99.81
2.5	50,759,648	145,417	0.0029	0.9971	99.73
3.5	43,354,628	293,615	0.0068	0.9932	99.44
4.5	41,770,855	676,164	0.0162	0.9838	98.77
5.5	40,438,403	205,513	0.0051	0.9949	97.17
6.5	37,969,701	91,635	0.0024	0.9976	96.68
7.5	20,523,346	659,493	0.0321	0.9679	96.45
8.5	18,329,617	667,850	0.0364	0.9636	93.35
9.5	16,547,009	518,205	0.0313	0.9687	89.94
10.5	22,780,790	2,202,401	0.0967	0.9033	87.13
11.5	20,276,188	57,822	0.0029	0.9971	78.70
12.5	22,996,944	19,617	0.0009	0.9991	78.48
13.5	22,973,015	80,115	0.0035	0.9965	78.41
14.5	21,403,114	418,924	0.0196	0.9804	78.14
15.5	18,681,162	183,657	0.0098	0.9902	76.61
16.5	18,464,089	195,181	0.0106	0.9894	75.86
17.5	18,333,467	365,323	0.0199	0.9801	75.06
18.5	17,510,639	421,912	0.0241	0.9759	73.56
19.5	15,750,854	232,127	0.0147	0.9853	71.79
20.5	15,184,035	92,802	0.0061	0.9939	70.73
21.5	14,558,598	139,681	0.0096	0.9904	70.30
22.5	13,688,839	160,639	0.0117	0.9883	69.62
23.5	13,544,354	67,822	0.0050	0.9950	68.81
24.5	12,773,042	49,208	0.0039	0.9961	68.46
25.5	12,599,223	328,860	0.0261	0.9739	68.20
26.5	10,793,600	228,815	0.0212	0.9788	66.42
27.5	9,659,100	3,886	0.0004	0.9996	65.01
28.5	7,917,538	831	0.0001	0.9999	64.98
29.5	6,875,364	2,989	0.0004	0.9996	64.98
30.5	6,253,974		0.0000	1.0000	64.95
31.5	6,510,285	134,961	0.0207	0.9793	64.95
32.5	6,090,040		0.0000	1.0000	63.60
33.5	5,981,347	5,229	0.0009	0.9991	63.60
34.5	5,589,425	15,782	0.0028	0.9972	63.55
35.5	3,161,133	55,219	0.0175	0.9825	63.37
36.5	2,637,418	49,532	0.0188	0.9812	62.26
37.5	1,947,116	270	0.0001	0.9999	61.09
38.5	1,649,409	306,692	0.1859	0.8141	61.08

BLACK HILLS POWER

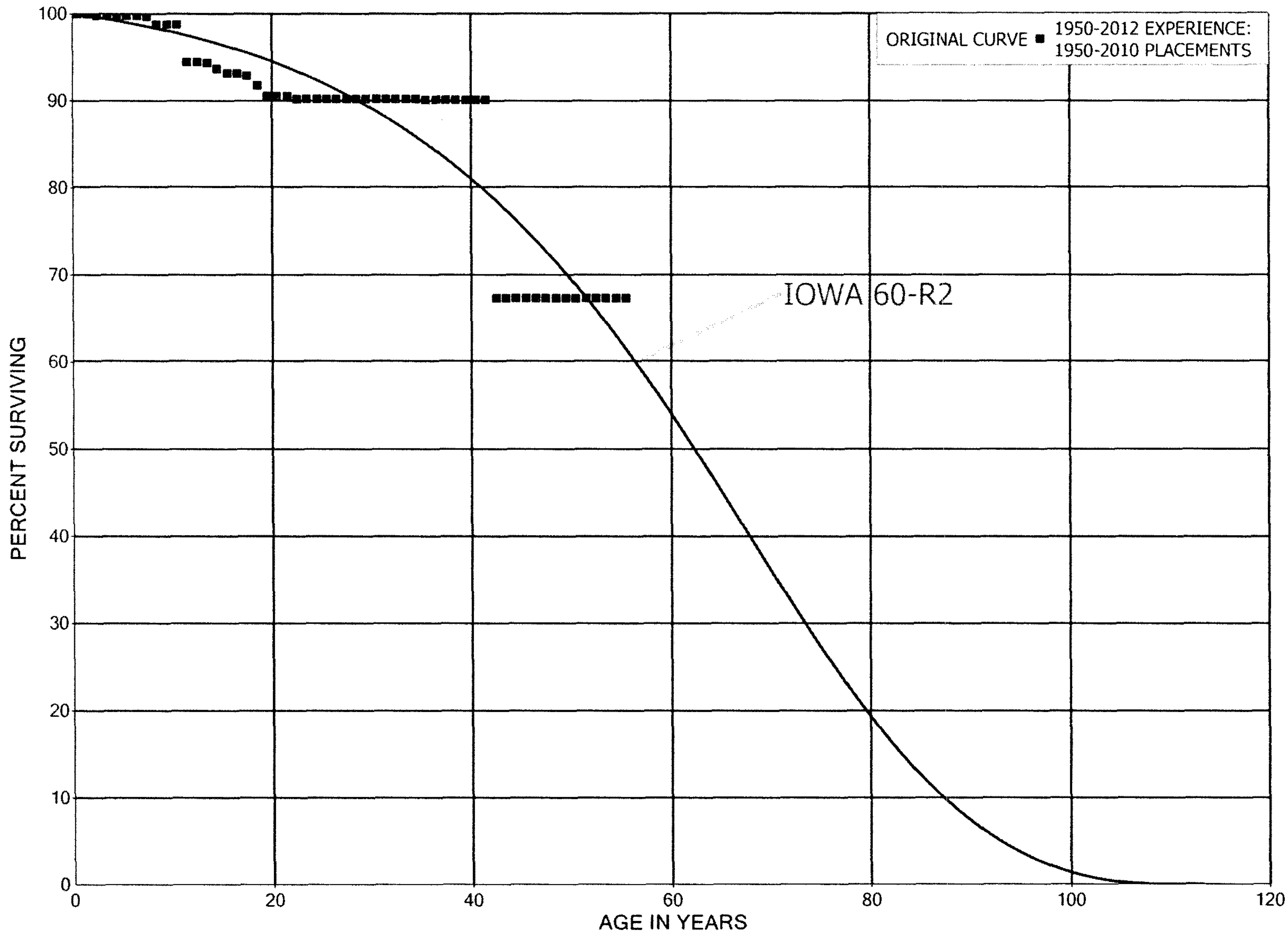
ACCOUNT 353 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1988-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,342,717	58,919	0.0439	0.9561	49.72
40.5	1,001,636	75,838	0.0757	0.9243	47.54
41.5	909,973	8,371	0.0092	0.9908	43.94
42.5	876,377	4,904	0.0056	0.9944	43.54
43.5	871,473	80,277	0.0921	0.9079	43.29
44.5	774,111	4,965	0.0064	0.9936	39.31
45.5	767,770		0.0000	1.0000	39.05
46.5	717,574	1,640	0.0023	0.9977	39.05
47.5	715,934		0.0000	1.0000	38.97
48.5	540,053		0.0000	1.0000	38.97
49.5	540,053		0.0000	1.0000	38.97
50.5	540,053	54,831	0.1015	0.8985	38.97
51.5	485,222	40,909	0.0843	0.9157	35.01
52.5	444,313		0.0000	1.0000	32.06
53.5	444,313		0.0000	1.0000	32.06
54.5	441,963		0.0000	1.0000	32.06
55.5	441,963	102,864	0.2327	0.7673	32.06
56.5	339,099	339,099	1.0000		24.60
57.5					

BLACK HILLS POWER
ACCOUNT 354 TOWERS AND FIXTURES
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 354 TOWERS AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1950-2010 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	882,906	901	0.0010	0.9990	100.00
0.5	882,005		0.0000	1.0000	99.90
1.5	882,005	1,301	0.0015	0.9985	99.90
2.5	463,555		0.0000	1.0000	99.75
3.5	463,555		0.0000	1.0000	99.75
4.5	463,555	200	0.0004	0.9996	99.75
5.5	463,355	100	0.0002	0.9998	99.71
6.5	463,255	200	0.0004	0.9996	99.69
7.5	64,954	600	0.0092	0.9908	99.64
8.5	64,354		0.0000	1.0000	98.72
9.5	64,354		0.0000	1.0000	98.72
10.5	64,354	2,802	0.0435	0.9565	98.72
11.5	60,952		0.0000	1.0000	94.42
12.5	60,952	100	0.0016	0.9984	94.42
13.5	60,452	400	0.0066	0.9934	94.27
14.5	60,052	400	0.0067	0.9933	93.65
15.5	59,652		0.0000	1.0000	93.02
16.5	59,652	100	0.0017	0.9983	93.02
17.5	59,552	701	0.0118	0.9882	92.87
18.5	58,851	800	0.0136	0.9864	91.77
19.5	58,051		0.0000	1.0000	90.53
20.5	58,051		0.0000	1.0000	90.53
21.5	58,051	200	0.0034	0.9966	90.53
22.5	57,851		0.0000	1.0000	90.21
23.5	57,851		0.0000	1.0000	90.21
24.5	57,851		0.0000	1.0000	90.21
25.5	57,851		0.0000	1.0000	90.21
26.5	57,851		0.0000	1.0000	90.21
27.5	57,851		0.0000	1.0000	90.21
28.5	57,851		0.0000	1.0000	90.21
29.5	57,851		0.0000	1.0000	90.21
30.5	57,851		0.0000	1.0000	90.21
31.5	57,851		0.0000	1.0000	90.21
32.5	57,851		0.0000	1.0000	90.21
33.5	57,851		0.0000	1.0000	90.21
34.5	57,851	100	0.0017	0.9983	90.21
35.5	57,751		0.0000	1.0000	90.06
36.5	8,175		0.0000	1.0000	90.06
37.5	8,175		0.0000	1.0000	90.06
38.5	8,175		0.0000	1.0000	90.06

BLACK HILLS POWER

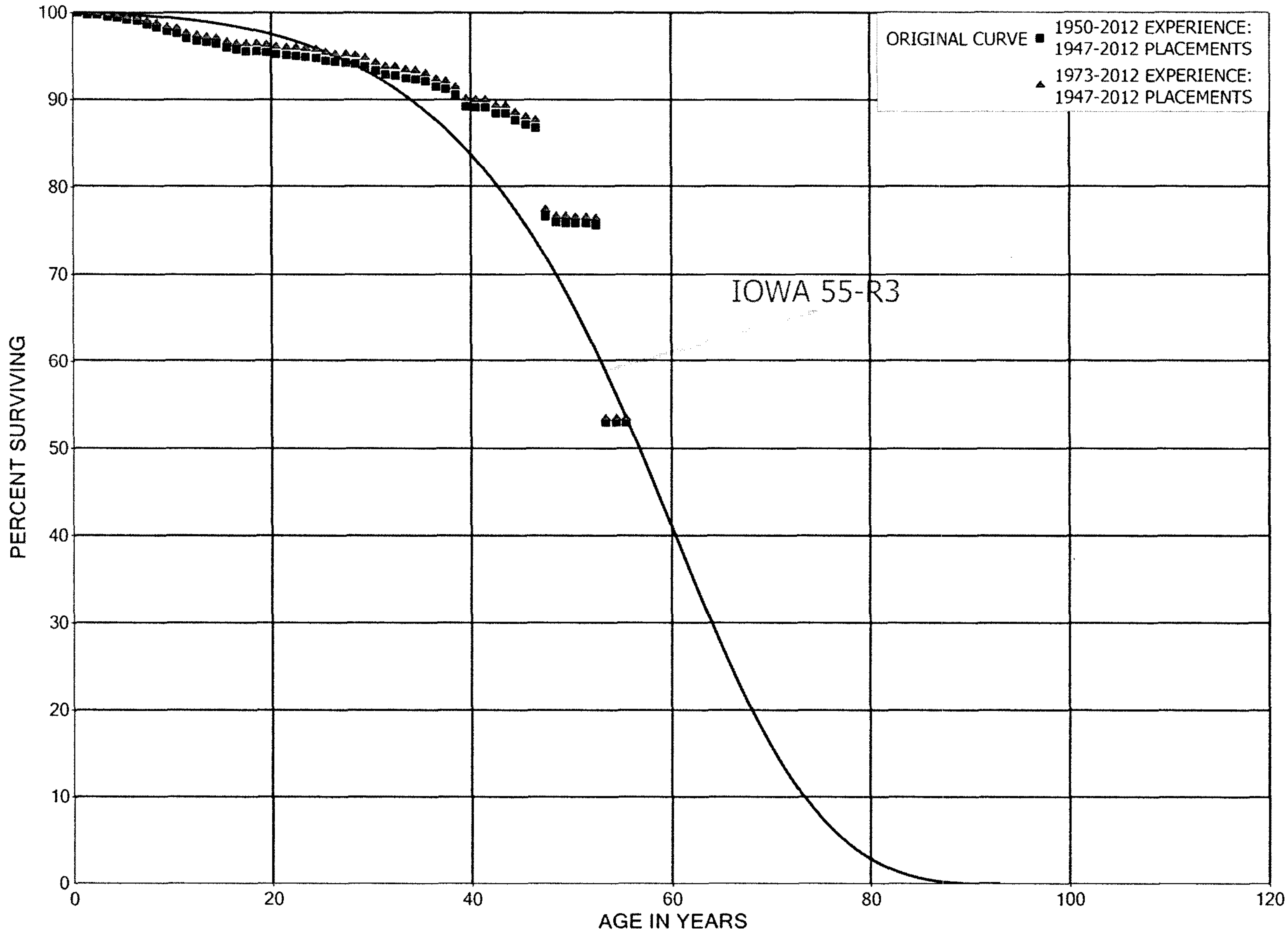
ACCOUNT 354 TOWERS AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1950-2010 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	8,175		0.0000	1.0000	90.06
40.5	8,175		0.0000	1.0000	90.06
41.5	8,175	2,072	0.2535	0.7465	90.06
42.5	6,103		0.0000	1.0000	67.23
43.5	6,103		0.0000	1.0000	67.23
44.5	6,103		0.0000	1.0000	67.23
45.5	6,103		0.0000	1.0000	67.23
46.5	6,103		0.0000	1.0000	67.23
47.5	6,103		0.0000	1.0000	67.23
48.5	6,103		0.0000	1.0000	67.23
49.5	6,103		0.0000	1.0000	67.23
50.5	6,103		0.0000	1.0000	67.23
51.5	6,103		0.0000	1.0000	67.23
52.5	6,103		0.0000	1.0000	67.23
53.5	6,103		0.0000	1.0000	67.23
54.5	6,103		0.0000	1.0000	67.23
55.5					67.23

BLACK HILLS POWER
ACCOUNT 355 POLES AND FIXTURES
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 355 POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1947-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	47,059,651	30,383	0.0006	0.9994	100.00
0.5	47,092,828	84,349	0.0018	0.9982	99.94
1.5	46,632,173	35,463	0.0008	0.9992	99.76
2.5	35,218,088	58,140	0.0017	0.9983	99.68
3.5	29,560,902	21,787	0.0007	0.9993	99.52
4.5	28,627,456	77,257	0.0027	0.9973	99.44
5.5	28,526,191	39,140	0.0014	0.9986	99.17
6.5	26,437,461	118,259	0.0045	0.9955	99.04
7.5	26,079,018	68,886	0.0026	0.9974	98.60
8.5	24,992,325	118,691	0.0047	0.9953	98.33
9.5	24,295,280	62,242	0.0026	0.9974	97.87
10.5	23,881,500	147,755	0.0062	0.9938	97.62
11.5	22,886,156	56,485	0.0025	0.9975	97.01
12.5	22,437,791	42,609	0.0019	0.9981	96.77
13.5	22,187,147	44,905	0.0020	0.9980	96.59
14.5	22,100,621	99,660	0.0045	0.9955	96.39
15.5	21,123,030	58,439	0.0028	0.9972	95.96
16.5	20,073,113	38,570	0.0019	0.9981	95.69
17.5	19,510,203	8,925	0.0005	0.9995	95.51
18.5	19,183,677	8,919	0.0005	0.9995	95.47
19.5	19,129,144	50,178	0.0026	0.9974	95.42
20.5	18,788,210	24,144	0.0013	0.9987	95.17
21.5	18,314,808	20,520	0.0011	0.9989	95.05
22.5	18,258,708	14,749	0.0008	0.9992	94.94
23.5	18,196,146	21,618	0.0012	0.9988	94.87
24.5	15,899,765	58,725	0.0037	0.9963	94.75
25.5	15,815,155	24,424	0.0015	0.9985	94.40
26.5	11,451,175	5,813	0.0005	0.9995	94.26
27.5	11,416,766	14,441	0.0013	0.9987	94.21
28.5	11,380,041	40,505	0.0036	0.9964	94.09
29.5	11,287,160	58,190	0.0052	0.9948	93.76
30.5	10,928,312	51,173	0.0047	0.9953	93.27
31.5	10,566,184	11,760	0.0011	0.9989	92.84
32.5	10,551,518	32,299	0.0031	0.9969	92.73
33.5	10,447,050	13,489	0.0013	0.9987	92.45
34.5	10,400,692	34,693	0.0033	0.9967	92.33
35.5	8,328,293	57,116	0.0069	0.9931	92.02
36.5	4,987,771	11,122	0.0022	0.9978	91.39
37.5	2,767,998	20,868	0.0075	0.9925	91.19
38.5	2,747,130	40,432	0.0147	0.9853	90.50

BLACK HILLS POWER

ACCOUNT 355 POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1947-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,706,698	3,317	0.0012	0.9988	89.17
40.5	2,271,458	60	0.0000	1.0000	89.06
41.5	2,152,687	16,153	0.0075	0.9925	89.06
42.5	2,132,910	186	0.0001	0.9999	88.39
43.5	2,086,307	19,081	0.0091	0.9909	88.38
44.5	2,057,546	12,841	0.0062	0.9938	87.57
45.5	2,034,566	6,378	0.0031	0.9969	87.02
46.5	1,492,351	174,088	0.1167	0.8833	86.75
47.5	1,285,218	12,413	0.0097	0.9903	76.63
48.5	1,179,483	430	0.0004	0.9996	75.89
49.5	788,421	799	0.0010	0.9990	75.86
50.5	787,622		0.0000	1.0000	75.79
51.5	787,622	1,929	0.0024	0.9976	75.79
52.5	785,693	235,958	0.3003	0.6997	75.60
53.5	549,735		0.0000	1.0000	52.90
54.5	130,010		0.0000	1.0000	52.90
55.5	46,298	9,919	0.2142	0.7858	52.90
56.5	36,379	3,510	0.0965	0.9035	41.56
57.5	32,869	32,869	1.0000		37.55
58.5					

BLACK HILLS POWER

ACCOUNT 355 POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1947-2012 EXPERIENCE BAND 1973-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	43,078,733	6,110	0.0001	0.9999	100.00
0.5	43,053,431	26,439	0.0006	0.9994	99.99
1.5	42,672,951	24,332	0.0006	0.9994	99.92
2.5	31,284,969	53,807	0.0017	0.9983	99.87
3.5	25,655,783	15,902	0.0006	0.9994	99.70
4.5	24,937,177	57,147	0.0023	0.9977	99.63
5.5	24,818,623	21,372	0.0009	0.9991	99.41
6.5	23,287,244	91,399	0.0039	0.9961	99.32
7.5	22,957,255	40,530	0.0018	0.9982	98.93
8.5	22,674,209	99,642	0.0044	0.9956	98.76
9.5	21,989,295	29,691	0.0014	0.9986	98.32
10.5	21,612,364	132,717	0.0061	0.9939	98.19
11.5	20,655,763	44,657	0.0022	0.9978	97.59
12.5	20,293,299	37,017	0.0018	0.9982	97.37
13.5	20,048,051	30,368	0.0015	0.9985	97.20
14.5	20,023,559	87,157	0.0044	0.9956	97.05
15.5	19,066,270	38,405	0.0020	0.9980	96.63
16.5	18,759,871	13,855	0.0007	0.9993	96.43
17.5	18,221,844	3,897	0.0002	0.9998	96.36
18.5	17,950,681	6,934	0.0004	0.9996	96.34
19.5	17,899,622	36,847	0.0021	0.9979	96.30
20.5	17,571,933	21,924	0.0012	0.9988	96.11
21.5	17,119,262	14,570	0.0009	0.9991	95.99
22.5	18,252,116	14,749	0.0008	0.9992	95.90
23.5	18,189,554	21,618	0.0012	0.9988	95.83
24.5	15,893,173	58,725	0.0037	0.9963	95.71
25.5	15,815,155	24,424	0.0015	0.9985	95.36
26.5	11,451,175	5,813	0.0005	0.9995	95.21
27.5	11,416,766	14,441	0.0013	0.9987	95.16
28.5	11,380,041	40,505	0.0036	0.9964	95.04
29.5	11,287,160	58,190	0.0052	0.9948	94.70
30.5	10,928,312	51,173	0.0047	0.9953	94.22
31.5	10,566,184	11,760	0.0011	0.9989	93.78
32.5	10,551,518	32,299	0.0031	0.9969	93.67
33.5	10,447,050	13,489	0.0013	0.9987	93.38
34.5	10,400,692	34,693	0.0033	0.9967	93.26
35.5	8,328,293	57,116	0.0069	0.9931	92.95
36.5	4,987,771	11,122	0.0022	0.9978	92.32
37.5	2,767,998	20,868	0.0075	0.9925	92.11
38.5	2,747,130	40,432	0.0147	0.9853	91.41

BLACK HILLS POWER

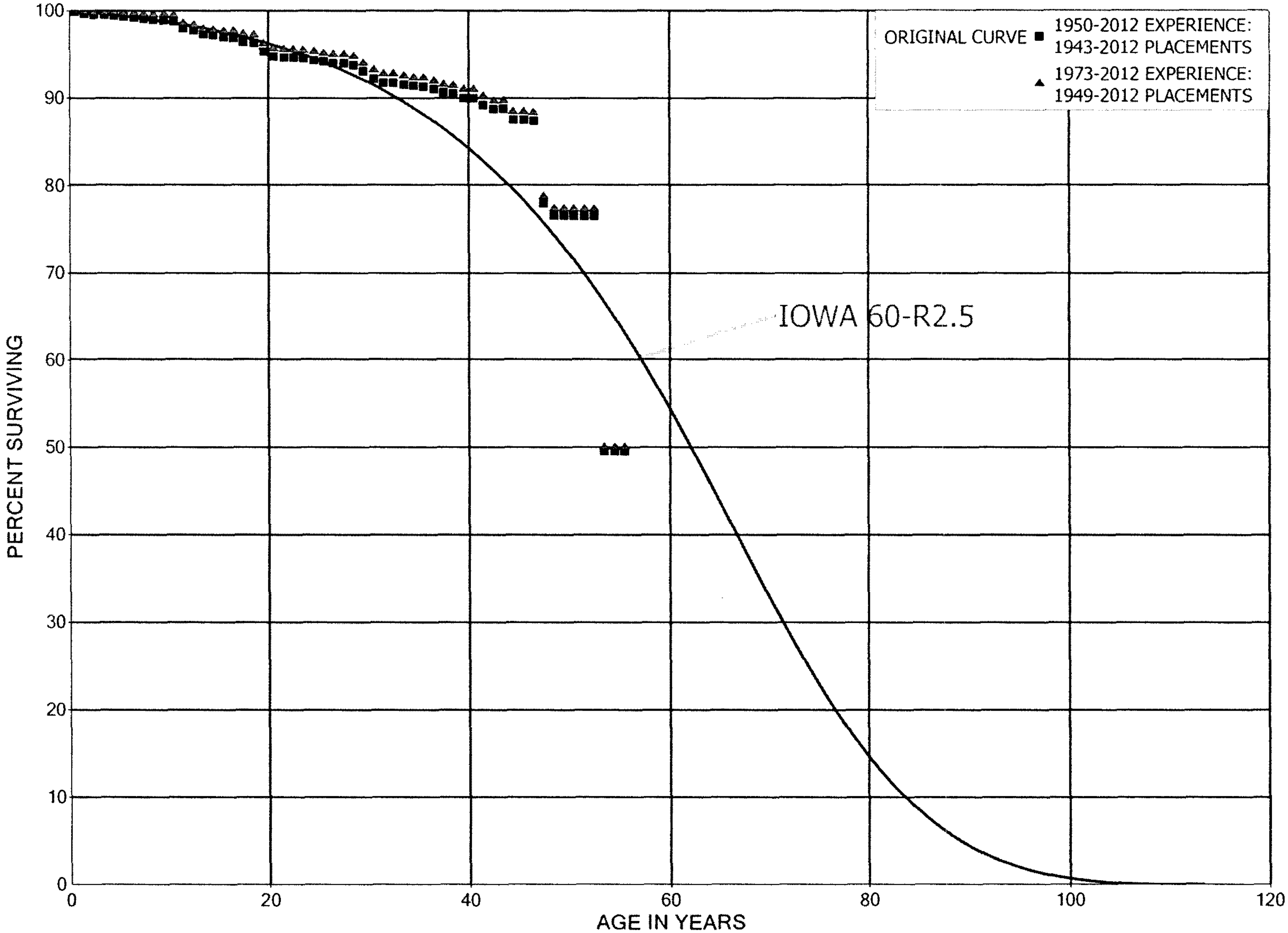
ACCOUNT 355 POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1947-2012 EXPERIENCE BAND 1973-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,706,698	3,317	0.0012	0.9988	90.07
40.5	2,271,458	60	0.0000	1.0000	89.96
41.5	2,152,687	16,153	0.0075	0.9925	89.96
42.5	2,132,910	186	0.0001	0.9999	89.28
43.5	2,086,307	19,081	0.0091	0.9909	89.27
44.5	2,057,546	12,841	0.0062	0.9938	88.46
45.5	2,034,566	6,378	0.0031	0.9969	87.91
46.5	1,492,351	174,088	0.1167	0.8833	87.63
47.5	1,285,218	12,413	0.0097	0.9903	77.41
48.5	1,179,483	430	0.0004	0.9996	76.66
49.5	788,421	799	0.0010	0.9990	76.63
50.5	787,622		0.0000	1.0000	76.55
51.5	787,622	1,929	0.0024	0.9976	76.55
52.5	785,693	235,958	0.3003	0.6997	76.37
53.5	549,735		0.0000	1.0000	53.43
54.5	130,010		0.0000	1.0000	53.43
55.5	46,298	9,919	0.2142	0.7858	53.43
56.5	36,379	3,510	0.0965	0.9035	41.98
57.5	32,869	32,869	1.0000		37.93
58.5					

BLACK HILLS POWER
ACCOUNT 356 OVERHEAD CONDUCTORS AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 356 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1943-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	45,234,782	75,934	0.0017	0.9983	100.00
0.5	45,108,507	114,348	0.0025	0.9975	99.83
1.5	44,503,905	32,950	0.0007	0.9993	99.58
2.5	34,807,340	14,009	0.0004	0.9996	99.51
3.5	29,661,923	9,158	0.0003	0.9997	99.47
4.5	28,992,895	44,242	0.0015	0.9985	99.43
5.5	28,650,596	24,518	0.0009	0.9991	99.28
6.5	28,046,212	41,356	0.0015	0.9985	99.20
7.5	25,500,820	32,277	0.0013	0.9987	99.05
8.5	23,525,865	14,557	0.0006	0.9994	98.93
9.5	23,240,953	37,188	0.0016	0.9984	98.87
10.5	23,019,671	189,750	0.0082	0.9918	98.71
11.5	22,146,805	31,728	0.0014	0.9986	97.89
12.5	21,846,956	103,431	0.0047	0.9953	97.75
13.5	21,607,347	26,273	0.0012	0.9988	97.29
14.5	21,436,900	43,731	0.0020	0.9980	97.17
15.5	20,669,626	36,461	0.0018	0.9982	96.97
16.5	19,998,467	90,921	0.0045	0.9955	96.80
17.5	19,605,406	18,327	0.0009	0.9991	96.36
18.5	19,140,316	195,176	0.0102	0.9898	96.27
19.5	18,903,109	114,497	0.0061	0.9939	95.29
20.5	18,712,651	14,084	0.0008	0.9992	94.71
21.5	18,587,767	14,009	0.0008	0.9992	94.64
22.5	18,551,782	15,609	0.0008	0.9992	94.57
23.5	18,532,881	32,372	0.0017	0.9983	94.49
24.5	17,610,565	34,795	0.0020	0.9980	94.33
25.5	17,591,579	29,323	0.0017	0.9983	94.14
26.5	12,901,813	8,806	0.0007	0.9993	93.98
27.5	12,887,529	27,696	0.0021	0.9979	93.92
28.5	12,853,645	95,630	0.0074	0.9926	93.72
29.5	12,469,028	116,138	0.0093	0.9907	93.02
30.5	12,196,586	54,095	0.0044	0.9956	92.15
31.5	11,863,667	377	0.0000	1.0000	91.74
32.5	11,857,404	25,720	0.0022	0.9978	91.74
33.5	11,780,173	24,543	0.0021	0.9979	91.54
34.5	11,741,867	6,807	0.0006	0.9994	91.35
35.5	9,437,840	34,631	0.0037	0.9963	91.30
36.5	5,270,894	21,834	0.0041	0.9959	90.96
37.5	3,499,920	4,056	0.0012	0.9988	90.59
38.5	3,495,864	20,431	0.0058	0.9942	90.48

BLACK HILLS POWER

ACCOUNT 356 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1943-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,475,433		0.0000	1.0000	89.95
40.5	2,929,102	24,096	0.0082	0.9918	89.95
41.5	2,832,923	16,417	0.0058	0.9942	89.21
42.5	2,816,506		0.0000	1.0000	88.70
43.5	2,816,506	37,495	0.0133	0.9867	88.70
44.5	2,779,011		0.0000	1.0000	87.52
45.5	2,720,169	3,386	0.0012	0.9988	87.52
46.5	2,119,656	229,476	0.1083	0.8917	87.41
47.5	1,712,598	32,105	0.0187	0.9813	77.94
48.5	1,584,470		0.0000	1.0000	76.48
49.5	977,757		0.0000	1.0000	76.48
50.5	977,757		0.0000	1.0000	76.48
51.5	916,640		0.0000	1.0000	76.48
52.5	916,640	323,812	0.3533	0.6467	76.48
53.5	592,828		0.0000	1.0000	49.46
54.5	117,750		0.0000	1.0000	49.46
55.5	61,670		0.0000	1.0000	49.46
56.5	61,670		0.0000	1.0000	49.46
57.5	61,670	61,669	1.0000	0.0000	49.46
58.5	1	1	1.0000		0.00
59.5					

BLACK HILLS POWER

ACCOUNT 356 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2012 EXPERIENCE BAND 1973-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	40,308,475	16,552	0.0004	0.9996	100.00
0.5	40,110,669	70,149	0.0017	0.9983	99.96
1.5	39,547,504	20,821	0.0005	0.9995	99.78
2.5	29,873,081	8,642	0.0003	0.9997	99.73
3.5	24,756,340	2,204	0.0001	0.9999	99.70
4.5	24,661,716	27,245	0.0011	0.9989	99.69
5.5	24,309,156	1,788	0.0001	0.9999	99.58
6.5	24,327,330	14,924	0.0006	0.9994	99.58
7.5	21,791,571	8,051	0.0004	0.9996	99.52
8.5	20,881,700	3,009	0.0001	0.9999	99.48
9.5	20,608,336	23,795	0.0012	0.9988	99.46
10.5	20,407,885	182,701	0.0090	0.9910	99.35
11.5	19,671,346	24,207	0.0012	0.9988	98.46
12.5	19,470,162	95,637	0.0049	0.9951	98.34
13.5	19,238,455	22,330	0.0012	0.9988	97.86
14.5	19,077,247	22,541	0.0012	0.9988	97.74
15.5	18,235,893	2,760	0.0002	0.9998	97.63
16.5	18,550,862	70,204	0.0038	0.9962	97.61
17.5	18,179,086	7,860	0.0004	0.9996	97.24
18.5	17,790,982	194,286	0.0109	0.9891	97.20
19.5	17,555,114	95,158	0.0054	0.9946	96.14
20.5	17,383,824	12,791	0.0007	0.9993	95.62
21.5	17,027,853	12,537	0.0007	0.9993	95.55
22.5	18,551,781	15,609	0.0008	0.9992	95.48
23.5	18,532,881	32,372	0.0017	0.9983	95.40
24.5	17,610,565	34,795	0.0020	0.9980	95.23
25.5	17,574,172	11,916	0.0007	0.9993	95.04
26.5	12,901,813	8,806	0.0007	0.9993	94.98
27.5	12,887,529	27,696	0.0021	0.9979	94.91
28.5	12,853,645	95,630	0.0074	0.9926	94.71
29.5	12,469,028	116,138	0.0093	0.9907	94.00
30.5	12,196,586	54,095	0.0044	0.9956	93.13
31.5	11,863,667	377	0.0000	1.0000	92.72
32.5	11,857,404	25,720	0.0022	0.9978	92.71
33.5	11,780,173	24,543	0.0021	0.9979	92.51
34.5	11,741,867	6,807	0.0006	0.9994	92.32
35.5	9,437,840	34,631	0.0037	0.9963	92.27
36.5	5,270,894	21,834	0.0041	0.9959	91.93
37.5	3,499,920	4,056	0.0012	0.9988	91.55
38.5	3,495,864	20,431	0.0058	0.9942	91.44

BLACK HILLS POWER

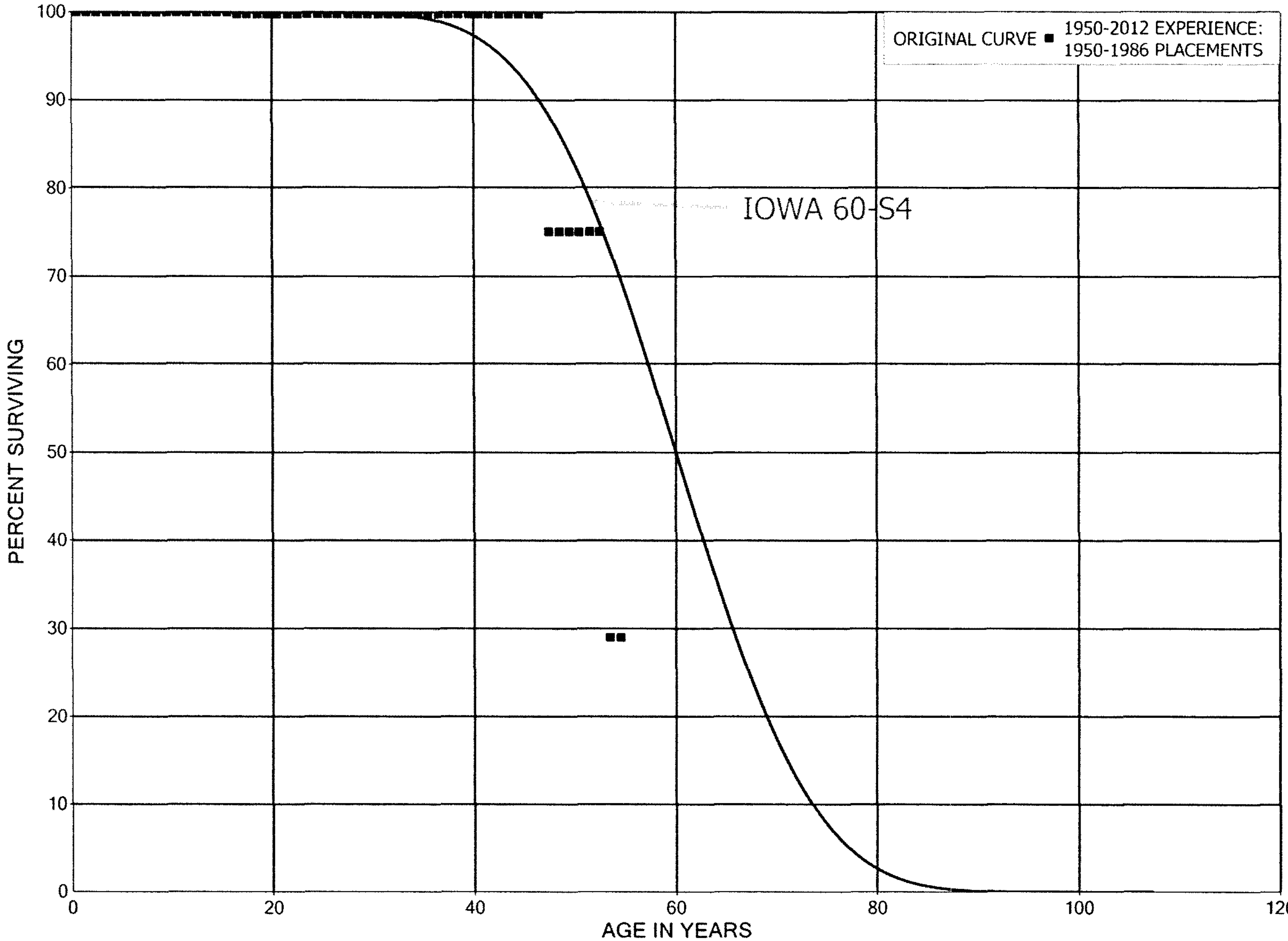
ACCOUNT 356 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2012 EXPERIENCE BAND 1973-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,475,433		0.0000	1.0000	90.91
40.5	2,929,102	24,096	0.0082	0.9918	90.91
41.5	2,832,923	16,417	0.0058	0.9942	90.16
42.5	2,816,506		0.0000	1.0000	89.64
43.5	2,816,506	37,495	0.0133	0.9867	89.64
44.5	2,779,011		0.0000	1.0000	88.44
45.5	2,720,169	3,386	0.0012	0.9988	88.44
46.5	2,119,656	229,476	0.1083	0.8917	88.33
47.5	1,712,598	32,105	0.0187	0.9813	78.77
48.5	1,584,470		0.0000	1.0000	77.29
49.5	977,757		0.0000	1.0000	77.29
50.5	977,757		0.0000	1.0000	77.29
51.5	916,640		0.0000	1.0000	77.29
52.5	916,640	323,812	0.3533	0.6467	77.29
53.5	592,828		0.0000	1.0000	49.99
54.5	117,750		0.0000	1.0000	49.99
55.5	61,670		0.0000	1.0000	49.99
56.5	61,670		0.0000	1.0000	49.99
57.5	61,670	61,669	1.0000	0.0000	49.99
58.5	1	1	1.0000		0.00
59.5					

BLACK HILLS POWER
ACCOUNT 359 ROADS AND TRAILS
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 359 ROADS AND TRAILS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1950-1986 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	49,058		0.0000	1.0000	100.00
0.5	49,058		0.0000	1.0000	100.00
1.5	49,058		0.0000	1.0000	100.00
2.5	49,058		0.0000	1.0000	100.00
3.5	49,058		0.0000	1.0000	100.00
4.5	49,058		0.0000	1.0000	100.00
5.5	49,058		0.0000	1.0000	100.00
6.5	49,058		0.0000	1.0000	100.00
7.5	49,058		0.0000	1.0000	100.00
8.5	49,058		0.0000	1.0000	100.00
9.5	49,058		0.0000	1.0000	100.00
10.5	49,058		0.0000	1.0000	100.00
11.5	49,058		0.0000	1.0000	100.00
12.5	49,058		0.0000	1.0000	100.00
13.5	49,058		0.0000	1.0000	100.00
14.5	49,058		0.0000	1.0000	100.00
15.5	49,058	109	0.0022	0.9978	100.00
16.5	48,949		0.0000	1.0000	99.78
17.5	48,949		0.0000	1.0000	99.78
18.5	48,949		0.0000	1.0000	99.78
19.5	48,949		0.0000	1.0000	99.78
20.5	48,949		0.0000	1.0000	99.78
21.5	48,949		0.0000	1.0000	99.78
22.5	48,949		0.0000	1.0000	99.78
23.5	48,949		0.0000	1.0000	99.78
24.5	48,949		0.0000	1.0000	99.78
25.5	48,949		0.0000	1.0000	99.78
26.5	42,765		0.0000	1.0000	99.78
27.5	42,765		0.0000	1.0000	99.78
28.5	42,765		0.0000	1.0000	99.78
29.5	42,765		0.0000	1.0000	99.78
30.5	42,765		0.0000	1.0000	99.78
31.5	42,765		0.0000	1.0000	99.78
32.5	42,765		0.0000	1.0000	99.78
33.5	42,765		0.0000	1.0000	99.78
34.5	42,765		0.0000	1.0000	99.78
35.5	42,765		0.0000	1.0000	99.78
36.5	42,765		0.0000	1.0000	99.78
37.5	42,765		0.0000	1.0000	99.78
38.5	42,765		0.0000	1.0000	99.78

BLACK HILLS POWER

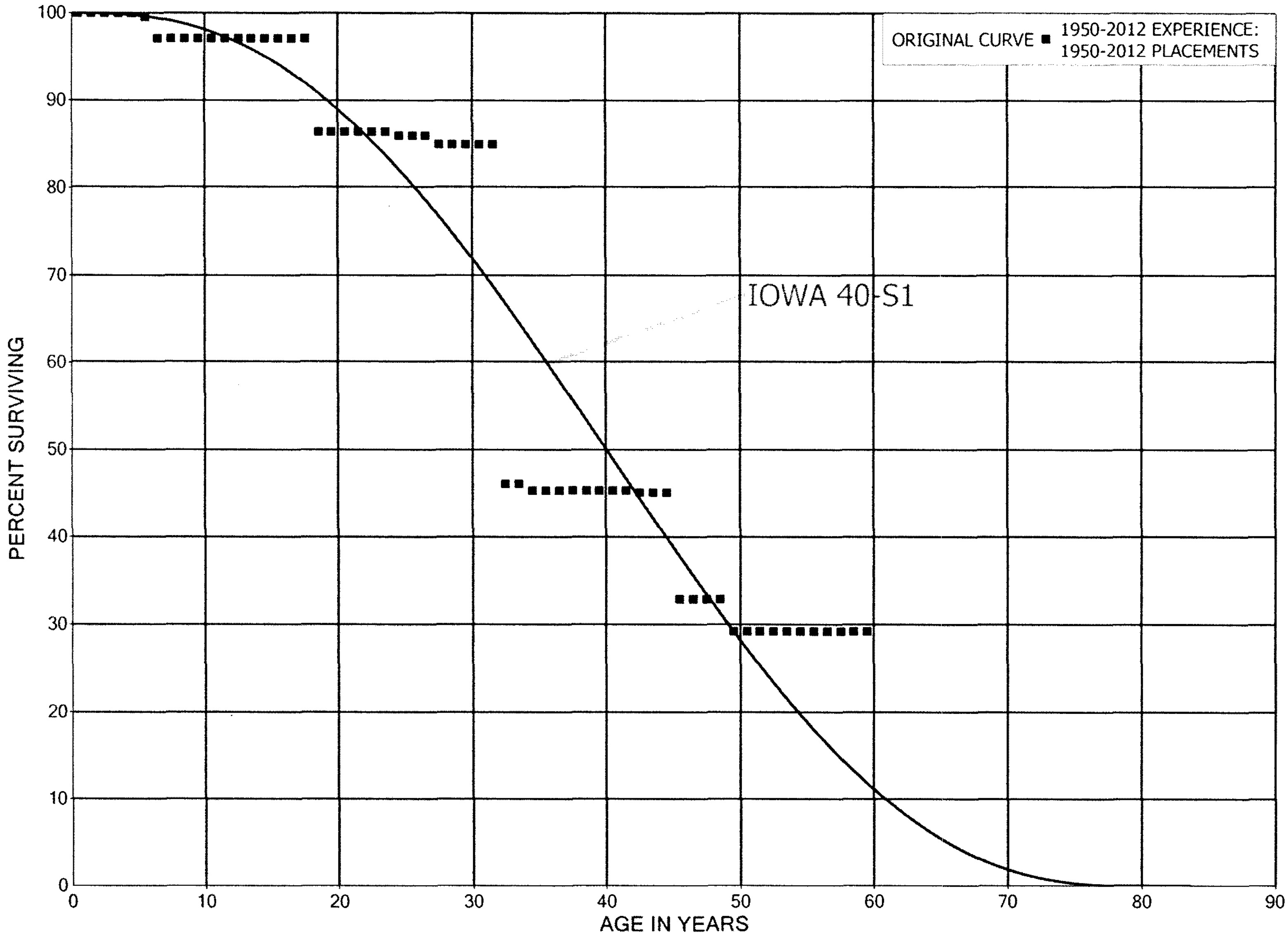
ACCOUNT 359 ROADS AND TRAILS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1950-1986 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	42,765		0.0000	1.0000	99.78
40.5	42,765		0.0000	1.0000	99.78
41.5	42,765		0.0000	1.0000	99.78
42.5	42,765		0.0000	1.0000	99.78
43.5	42,765		0.0000	1.0000	99.78
44.5	42,765		0.0000	1.0000	99.78
45.5	42,765		0.0000	1.0000	99.78
46.5	42,029	10,422	0.2480	0.7520	99.78
47.5	29,571		0.0000	1.0000	75.04
48.5	29,462		0.0000	1.0000	75.04
49.5	20,288		0.0000	1.0000	75.04
50.5	17,382		0.0000	1.0000	75.04
51.5	17,382		0.0000	1.0000	75.04
52.5	17,382	10,677	0.6143	0.3857	75.04
53.5	6,705		0.0000	1.0000	28.94
54.5					28.94

BLACK HILLS POWER
ACCOUNTS 361 AND 361.05 STRUCTURES AND LAND IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNTS 361 AND 361.05 STRUCTURES AND LAND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	516,999		0.0000	1.0000	100.00
0.5	360,116		0.0000	1.0000	100.00
1.5	61,867		0.0000	1.0000	100.00
2.5	81,091		0.0000	1.0000	100.00
3.5	81,091		0.0000	1.0000	100.00
4.5	81,203	420	0.0052	0.9948	100.00
5.5	173,197	4,292	0.0248	0.9752	99.48
6.5	168,905		0.0000	1.0000	97.02
7.5	170,293		0.0000	1.0000	97.02
8.5	169,776		0.0000	1.0000	97.02
9.5	167,686		0.0000	1.0000	97.02
10.5	148,462		0.0000	1.0000	97.02
11.5	148,462		0.0000	1.0000	97.02
12.5	150,294		0.0000	1.0000	97.02
13.5	57,880		0.0000	1.0000	97.02
14.5	55,810		0.0000	1.0000	97.02
15.5	53,820		0.0000	1.0000	97.02
16.5	63,613		0.0000	1.0000	97.02
17.5	65,123	7,128	0.1095	0.8905	97.02
18.5	48,279		0.0000	1.0000	86.40
19.5	109,770		0.0000	1.0000	86.40
20.5	102,324		0.0000	1.0000	86.40
21.5	102,324		0.0000	1.0000	86.40
22.5	96,165		0.0000	1.0000	86.40
23.5	96,567	501	0.0052	0.9948	86.40
24.5	129,597		0.0000	1.0000	85.95
25.5	129,597		0.0000	1.0000	85.95
26.5	129,597	1,510	0.0117	0.9883	85.95
27.5	128,087		0.0000	1.0000	84.95
28.5	128,087		0.0000	1.0000	84.95
29.5	129,537		0.0000	1.0000	84.95
30.5	129,537		0.0000	1.0000	84.95
31.5	124,646	57,082	0.4580	0.5420	84.95
32.5	48,170		0.0000	1.0000	46.05
33.5	48,170	755	0.0157	0.9843	46.05
34.5	47,415		0.0000	1.0000	45.32
35.5	47,415		0.0000	1.0000	45.32
36.5	47,415		0.0000	1.0000	45.32
37.5	43,841		0.0000	1.0000	45.32
38.5	44,110		0.0000	1.0000	45.32

BLACK HILLS POWER

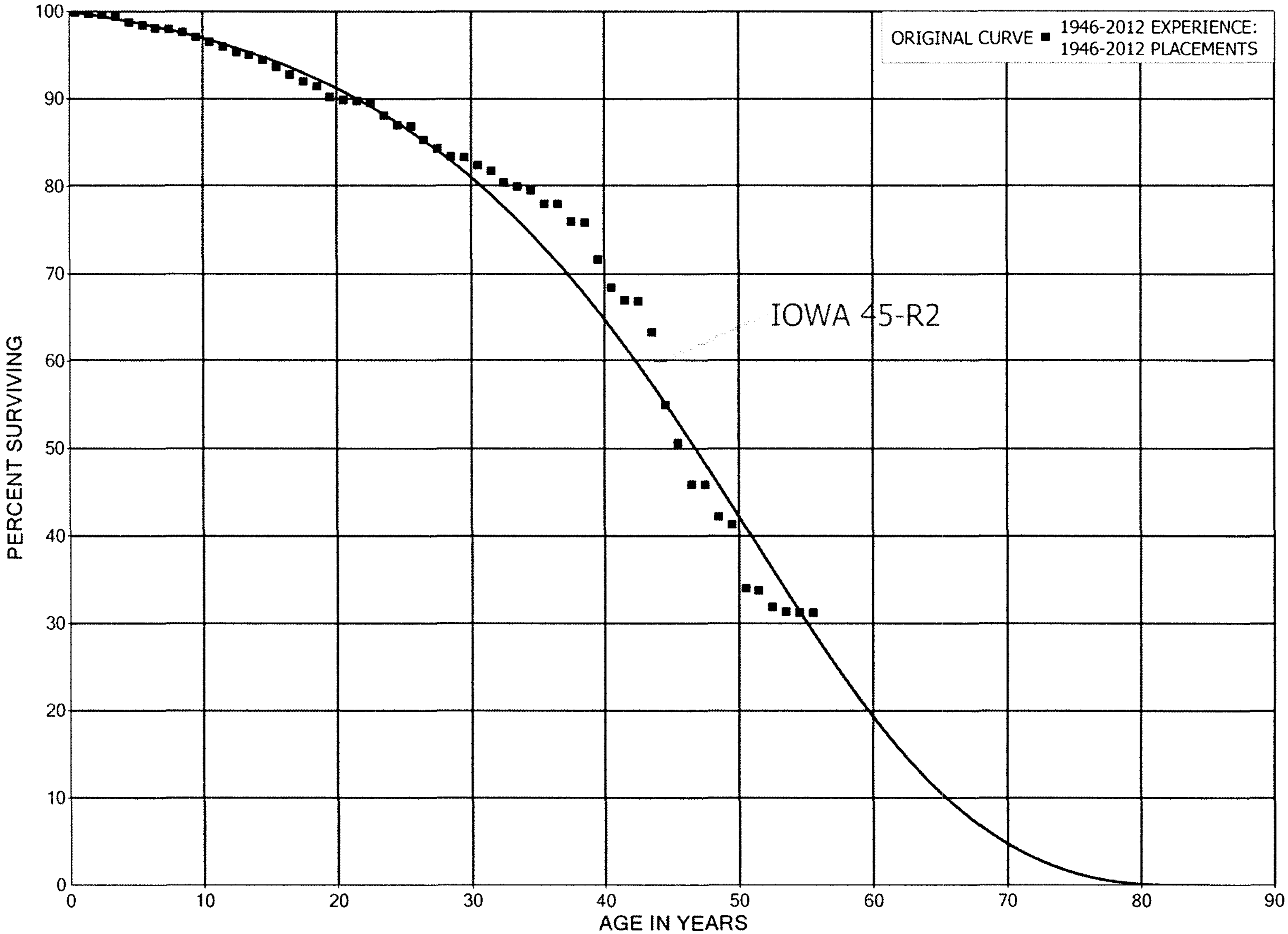
ACCOUNTS 361 AND 361.05 STRUCTURES AND LAND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	44,110		0.0000	1.0000	45.32
40.5	29,972		0.0000	1.0000	45.32
41.5	29,972	183	0.0061	0.9939	45.32
42.5	37,330		0.0000	1.0000	45.05
43.5	37,330		0.0000	1.0000	45.05
44.5	37,330	10,088	0.2702	0.7298	45.05
45.5	37,330		0.0000	1.0000	32.87
46.5	37,130		0.0000	1.0000	32.87
47.5	37,130		0.0000	1.0000	32.87
48.5	37,130	4,226	0.1138	0.8862	32.87
49.5	32,904		0.0000	1.0000	29.13
50.5	19,124		0.0000	1.0000	29.13
51.5	19,124		0.0000	1.0000	29.13
52.5	19,124		0.0000	1.0000	29.13
53.5	19,124		0.0000	1.0000	29.13
54.5	10,088		0.0000	1.0000	29.13
55.5	10,088		0.0000	1.0000	29.13
56.5	10,088		0.0000	1.0000	29.13
57.5	10,088		0.0000	1.0000	29.13
58.5	10,088		0.0000	1.0000	29.13
59.5					29.13

BLACK HILLS POWER
ACCOUNT 362 STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 362 STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1946-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	51,670,432	80,232	0.0016	0.9984	100.00
0.5	46,934,939	58,626	0.0012	0.9988	99.84
1.5	46,384,525	70,690	0.0015	0.9985	99.72
2.5	43,277,021	96,424	0.0022	0.9978	99.57
3.5	36,564,698	221,764	0.0061	0.9939	99.35
4.5	35,289,439	123,162	0.0035	0.9965	98.74
5.5	36,335,542	114,293	0.0031	0.9969	98.40
6.5	35,763,738	58,287	0.0016	0.9984	98.09
7.5	34,811,915	117,674	0.0034	0.9966	97.93
8.5	34,956,108	202,875	0.0058	0.9942	97.60
9.5	32,809,672	169,754	0.0052	0.9948	97.03
10.5	31,603,923	186,655	0.0059	0.9941	96.53
11.5	31,349,889	233,631	0.0075	0.9925	95.96
12.5	30,407,603	79,093	0.0026	0.9974	95.24
13.5	26,978,139	161,645	0.0060	0.9940	95.00
14.5	24,636,389	221,036	0.0090	0.9910	94.43
15.5	22,462,263	215,418	0.0096	0.9904	93.58
16.5	19,685,659	156,219	0.0079	0.9921	92.68
17.5	16,988,645	110,670	0.0065	0.9935	91.95
18.5	16,572,914	208,319	0.0126	0.9874	91.35
19.5	13,055,381	51,761	0.0040	0.9960	90.20
20.5	11,607,952	21,686	0.0019	0.9981	89.84
21.5	11,639,194	25,878	0.0022	0.9978	89.68
22.5	9,894,898	159,668	0.0161	0.9839	89.48
23.5	9,352,997	112,923	0.0121	0.9879	88.03
24.5	9,170,760	18,100	0.0020	0.9980	86.97
25.5	9,243,498	166,000	0.0180	0.9820	86.80
26.5	9,558,284	104,314	0.0109	0.9891	85.24
27.5	10,567,081	113,239	0.0107	0.9893	84.31
28.5	11,643,567	19,456	0.0017	0.9983	83.40
29.5	10,638,525	108,760	0.0102	0.9898	83.27
30.5	10,098,701	78,148	0.0077	0.9923	82.41
31.5	9,627,798	160,984	0.0167	0.9833	81.78
32.5	9,346,688	47,547	0.0051	0.9949	80.41
33.5	9,262,090	51,231	0.0055	0.9945	80.00
34.5	8,137,328	162,891	0.0200	0.9800	79.56
35.5	6,730,119	5,390	0.0008	0.9992	77.97
36.5	5,060,266	130,325	0.0258	0.9742	77.90
37.5	3,974,885	603	0.0002	0.9998	75.90
38.5	4,108,306	229,681	0.0559	0.9441	75.88

BLACK HILLS POWER

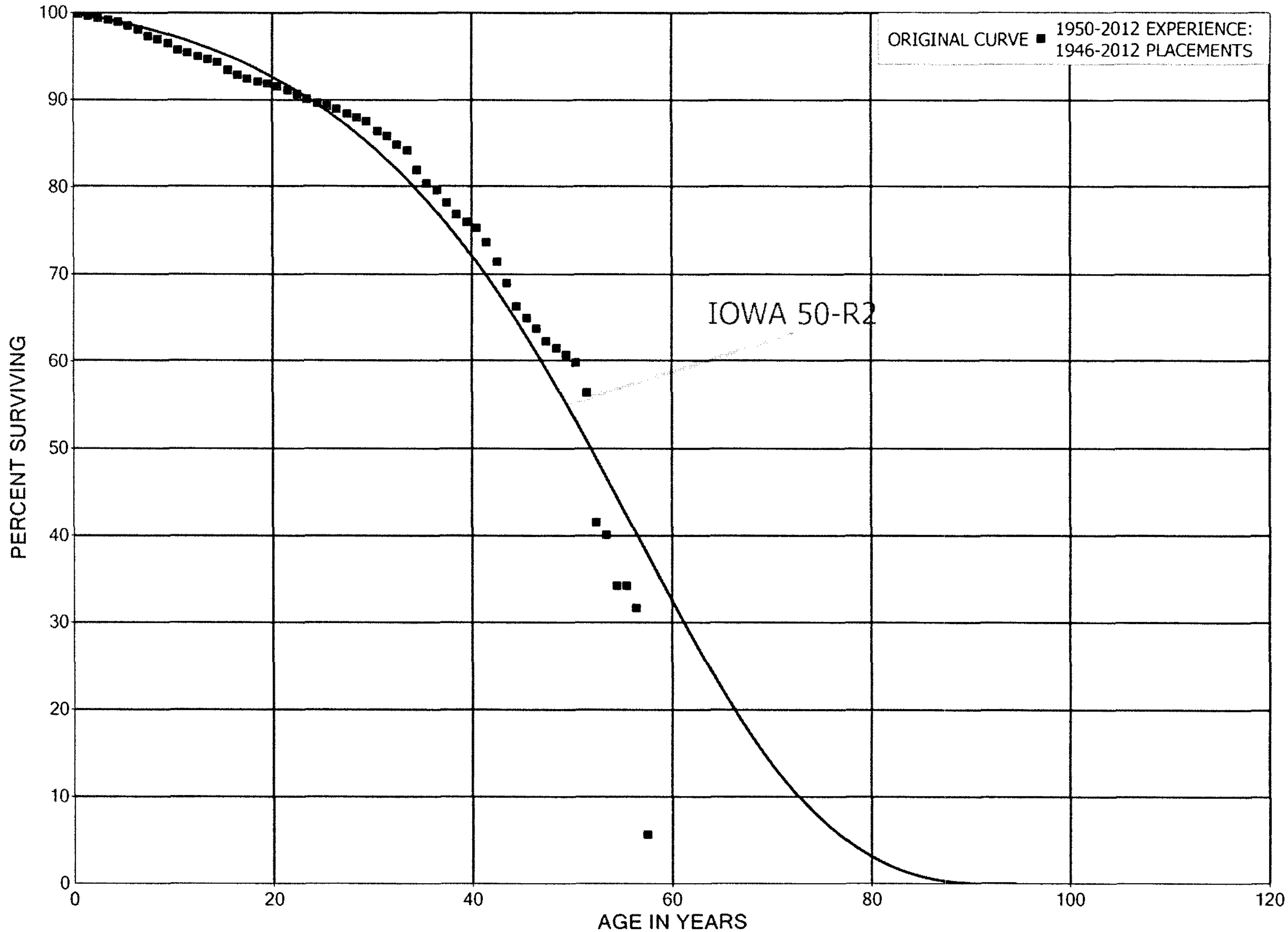
ACCOUNT 362 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1946-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,876,444	177,518	0.0458	0.9542	71.64
40.5	3,165,719	63,067	0.0199	0.9801	68.36
41.5	2,269,441	4,781	0.0021	0.9979	67.00
42.5	2,354,764	123,976	0.0526	0.9474	66.86
43.5	2,246,664	297,437	0.1324	0.8676	63.34
44.5	1,949,227	154,549	0.0793	0.9207	54.95
45.5	1,794,678	168,970	0.0942	0.9058	50.60
46.5	1,730,095	500	0.0003	0.9997	45.83
47.5	1,730,971	138,991	0.0803	0.9197	45.82
48.5	1,588,746	30,756	0.0194	0.9806	42.14
49.5	1,558,785	277,512	0.1780	0.8220	41.32
50.5	694,534	5,675	0.0082	0.9918	33.97
51.5	688,859	37,338	0.0542	0.9458	33.69
52.5	651,521	11,403	0.0175	0.9825	31.86
53.5	640,118	1,920	0.0030	0.9970	31.31
54.5	330,257		0.0000	1.0000	31.21
55.5	330,257	178,900	0.5417	0.4583	31.21
56.5	151,357	2,244	0.0148	0.9852	14.30
57.5	149,113		0.0000	1.0000	14.09
58.5	149,113		0.0000	1.0000	14.09
59.5	619	619	1.0000		14.09
60.5					

BLACK HILLS POWER
ACCOUNT 364 POLES, TOWERS AND FIXTURES
ORIGINAL AND SMOOTH SURVIVOR CURVES



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BLACK HILLS POWER

ACCOUNT 364 POLES, TOWERS AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	59,488,160	101,373	0.0017	0.9983	100.00
0.5	56,932,195	142,780	0.0025	0.9975	99.83
1.5	51,210,832	107,008	0.0021	0.9979	99.58
2.5	50,849,795	105,824	0.0021	0.9979	99.37
3.5	48,643,343	121,751	0.0025	0.9975	99.16
4.5	42,955,273	179,381	0.0042	0.9958	98.92
5.5	41,326,268	180,195	0.0044	0.9956	98.50
6.5	40,484,104	346,728	0.0086	0.9914	98.07
7.5	39,047,134	126,760	0.0032	0.9968	97.23
8.5	38,461,132	170,825	0.0044	0.9956	96.92
9.5	36,173,275	296,128	0.0082	0.9918	96.49
10.5	33,869,847	96,079	0.0028	0.9972	95.70
11.5	31,744,921	154,751	0.0049	0.9951	95.43
12.5	30,266,408	97,461	0.0032	0.9968	94.96
13.5	29,620,391	110,443	0.0037	0.9963	94.66
14.5	25,865,880	235,624	0.0091	0.9909	94.30
15.5	24,891,717	163,006	0.0065	0.9935	93.44
16.5	23,451,221	104,840	0.0045	0.9955	92.83
17.5	21,755,148	76,544	0.0035	0.9965	92.42
18.5	21,199,662	66,864	0.0032	0.9968	92.09
19.5	19,774,082	64,001	0.0032	0.9968	91.80
20.5	18,164,609	90,572	0.0050	0.9950	91.50
21.5	17,337,227	73,855	0.0043	0.9957	91.05
22.5	16,522,142	112,328	0.0068	0.9932	90.66
23.5	14,177,344	61,587	0.0043	0.9957	90.04
24.5	13,676,674	63,502	0.0046	0.9954	89.65
25.5	13,478,562	40,896	0.0030	0.9970	89.24
26.5	12,990,166	86,882	0.0067	0.9933	88.96
27.5	12,340,451	59,320	0.0048	0.9952	88.37
28.5	11,632,039	59,268	0.0051	0.9949	87.95
29.5	10,747,485	133,518	0.0124	0.9876	87.50
30.5	10,402,892	74,830	0.0072	0.9928	86.41
31.5	7,827,327	87,999	0.0112	0.9888	85.79
32.5	7,320,636	58,991	0.0081	0.9919	84.82
33.5	6,619,335	169,506	0.0256	0.9744	84.14
34.5	6,885,496	135,659	0.0197	0.9803	81.99
35.5	6,491,384	63,258	0.0097	0.9903	80.37
36.5	6,141,058	111,636	0.0182	0.9818	79.59
37.5	5,723,856	97,774	0.0171	0.9829	78.14
38.5	5,162,360	57,531	0.0111	0.9889	76.81

BLACK HILLS POWER

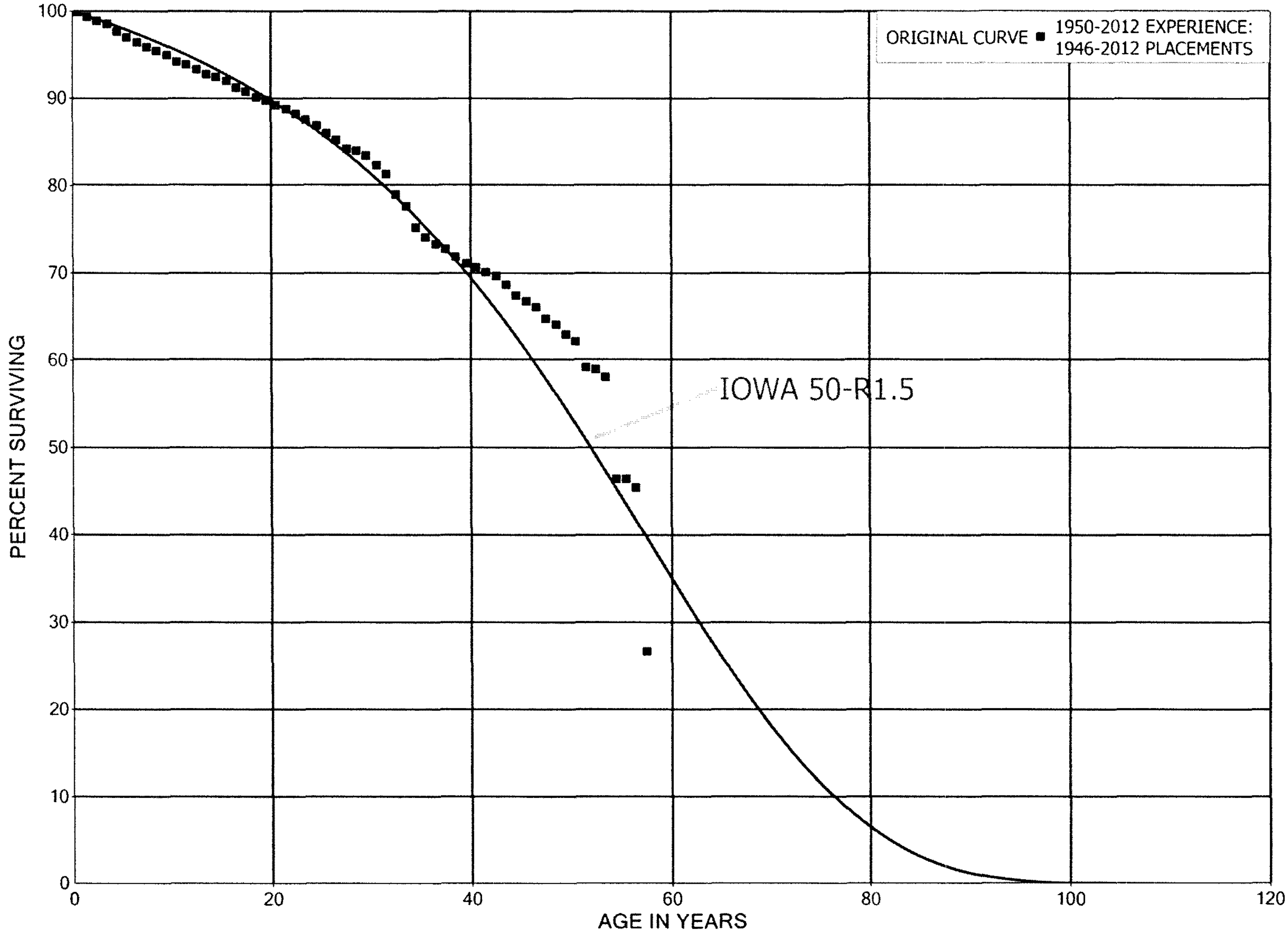
ACCOUNT 364 POLES, TOWERS AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,937,979	43,859	0.0089	0.9911	75.95
40.5	4,637,300	103,435	0.0223	0.9777	75.28
41.5	4,358,067	132,494	0.0304	0.9696	73.60
42.5	3,157,884	107,748	0.0341	0.9659	71.36
43.5	3,172,011	119,022	0.0375	0.9625	68.92
44.5	3,052,998	63,284	0.0207	0.9793	66.34
45.5	2,989,715	55,147	0.0184	0.9816	64.96
46.5	2,203,686	52,462	0.0238	0.9762	63.76
47.5	2,555,970	31,447	0.0123	0.9877	62.25
48.5	2,614,338	33,181	0.0127	0.9873	61.48
49.5	2,581,157	38,223	0.0148	0.9852	60.70
50.5	2,207,415	125,762	0.0570	0.9430	59.80
51.5	2,081,653	547,963	0.2632	0.7368	56.39
52.5	1,533,690	54,803	0.0357	0.9643	41.55
53.5	1,478,887	215,817	0.1459	0.8541	40.06
54.5	933,904		0.0000	1.0000	34.22
55.5	933,904	69,625	0.0746	0.9254	34.22
56.5	864,279	709,725	0.8212	0.1788	31.67
57.5	154,554	25,132	0.1626	0.8374	5.66
58.5	129,423	20,624	0.1594	0.8406	4.74
59.5	1,107	1,107	1.0000		3.99
60.5					

BLACK HILLS POWER
ACCOUNT 365 OVERHEAD CONDUCTORS AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 365 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	37,142,950	77,452	0.0021	0.9979	100.00
0.5	35,272,731	188,892	0.0054	0.9946	99.79
1.5	31,246,387	129,333	0.0041	0.9959	99.26
2.5	29,762,208	94,971	0.0032	0.9968	98.85
3.5	28,854,262	259,009	0.0090	0.9910	98.53
4.5	23,899,619	161,597	0.0068	0.9932	97.65
5.5	23,131,739	151,319	0.0065	0.9935	96.99
6.5	23,334,269	134,131	0.0057	0.9943	96.35
7.5	22,837,322	99,762	0.0044	0.9956	95.80
8.5	22,939,938	105,631	0.0046	0.9954	95.38
9.5	20,871,901	172,454	0.0083	0.9917	94.94
10.5	20,008,694	73,093	0.0037	0.9963	94.16
11.5	19,711,649	104,361	0.0053	0.9947	93.81
12.5	19,007,155	117,101	0.0062	0.9938	93.32
13.5	18,809,577	69,244	0.0037	0.9963	92.74
14.5	16,708,483	88,876	0.0053	0.9947	92.40
15.5	16,871,602	137,170	0.0081	0.9919	91.91
16.5	16,132,075	85,060	0.0053	0.9947	91.16
17.5	15,491,688	102,353	0.0066	0.9934	90.68
18.5	15,531,731	63,687	0.0041	0.9959	90.08
19.5	14,740,293	85,980	0.0058	0.9942	89.71
20.5	13,809,489	66,115	0.0048	0.9952	89.19
21.5	13,468,031	94,873	0.0070	0.9930	88.76
22.5	12,473,560	95,458	0.0077	0.9923	88.14
23.5	10,629,364	74,240	0.0070	0.9930	87.46
24.5	9,625,875	103,083	0.0107	0.9893	86.85
25.5	9,470,530	85,521	0.0090	0.9910	85.92
26.5	8,981,757	97,017	0.0108	0.9892	85.14
27.5	8,489,370	32,580	0.0038	0.9962	84.22
28.5	7,671,002	49,029	0.0064	0.9936	83.90
29.5	6,961,654	87,752	0.0126	0.9874	83.36
30.5	6,703,028	81,760	0.0122	0.9878	82.31
31.5	5,374,156	156,144	0.0291	0.9709	81.31
32.5	4,941,349	85,160	0.0172	0.9828	78.95
33.5	4,401,718	135,519	0.0308	0.9692	77.59
34.5	4,535,800	69,501	0.0153	0.9847	75.20
35.5	4,327,975	44,637	0.0103	0.9897	74.05
36.5	4,144,803	30,802	0.0074	0.9926	73.28
37.5	3,951,108	46,509	0.0118	0.9882	72.74
38.5	3,554,382	37,927	0.0107	0.9893	71.88

BLACK HILLS POWER

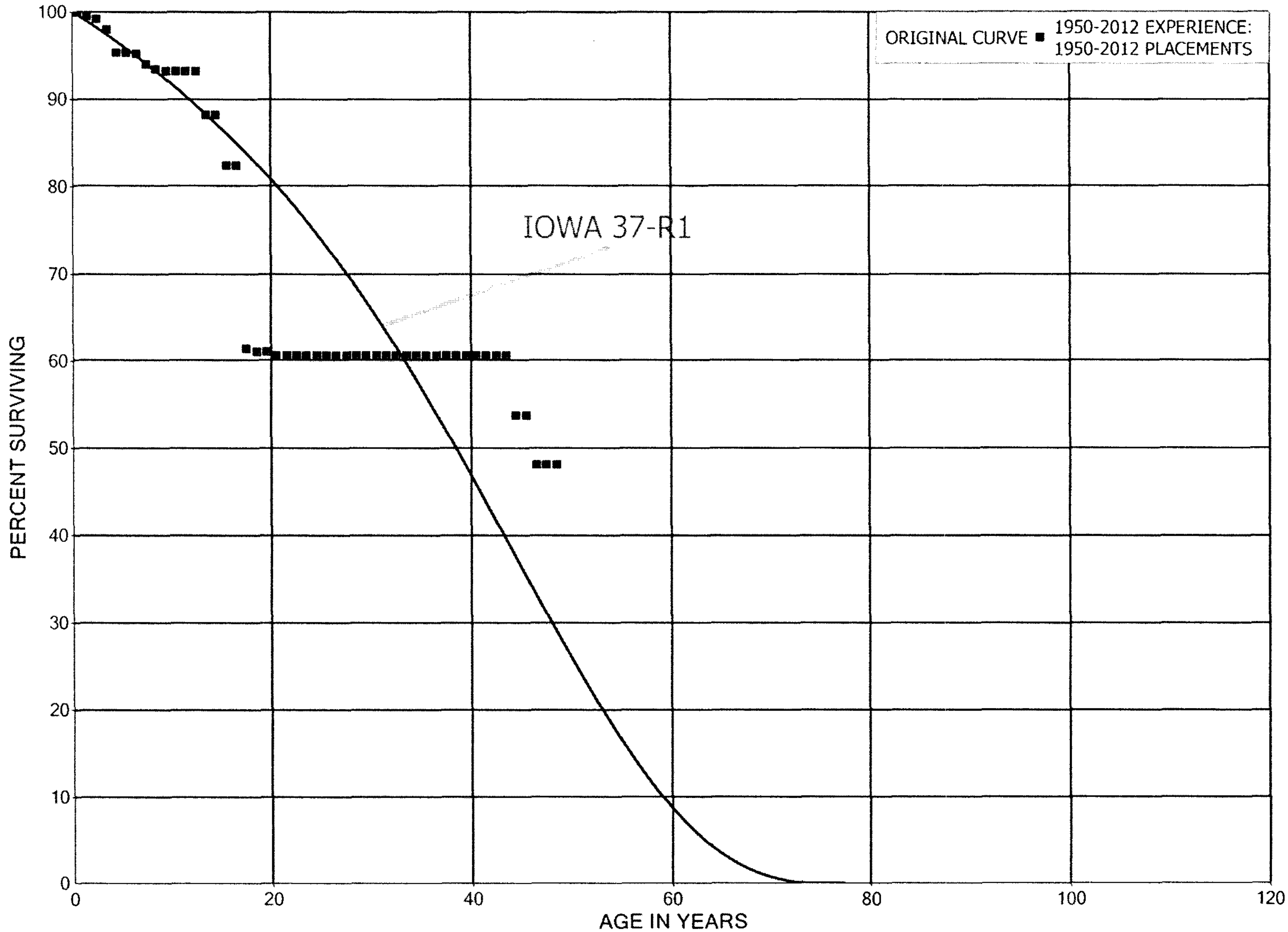
ACCOUNT 365 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,458,282	25,671	0.0074	0.9926	71.11
40.5	3,292,213	24,376	0.0074	0.9926	70.59
41.5	3,167,527	21,853	0.0069	0.9931	70.06
42.5	2,298,086	32,158	0.0140	0.9860	69.58
43.5	2,447,275	42,183	0.0172	0.9828	68.61
44.5	2,398,277	25,106	0.0105	0.9895	67.42
45.5	2,370,721	23,186	0.0098	0.9902	66.72
46.5	1,985,694	40,836	0.0206	0.9794	66.07
47.5	2,548,269	26,611	0.0104	0.9896	64.71
48.5	2,521,652	41,324	0.0164	0.9836	64.03
49.5	2,477,712	32,686	0.0132	0.9868	62.98
50.5	2,150,316	103,509	0.0481	0.9519	62.15
51.5	2,703,773	10,019	0.0037	0.9963	59.16
52.5	2,693,754	37,851	0.0141	0.9859	58.94
53.5	2,651,999	536,992	0.2025	0.7975	58.11
54.5	1,367,179		0.0000	1.0000	46.35
55.5	1,367,179	29,175	0.0213	0.9787	46.35
56.5	1,338,004	551,368	0.4121	0.5879	45.36
57.5	677,854	54,853	0.0809	0.9191	26.67
58.5	622,502	18,008	0.0289	0.9711	24.51
59.5	988	988	1.0000		23.80
60.5					

BLACK HILLS POWER
ACCOUNT 366 UNDERGROUND CONDUIT
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 366 UNDERGROUND CONDUIT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	3,599,192	3,628	0.0010	0.9990	100.00
0.5	3,386,683	13,483	0.0040	0.9960	99.90
1.5	3,081,351	10,743	0.0035	0.9965	99.50
2.5	2,615,209	32,515	0.0124	0.9876	99.15
3.5	1,899,211	50,410	0.0265	0.9735	97.92
4.5	1,428,879	380	0.0003	0.9997	95.32
5.5	1,377,622	1,199	0.0009	0.9991	95.30
6.5	876,334	11,120	0.0127	0.9873	95.21
7.5	736,358	4,816	0.0065	0.9935	94.01
8.5	542,420	1,536	0.0028	0.9972	93.39
9.5	416,893		0.0000	1.0000	93.13
10.5	240,076		0.0000	1.0000	93.13
11.5	179,292		0.0000	1.0000	93.13
12.5	189,427	10,135	0.0535	0.9465	93.13
13.5	172,696		0.0000	1.0000	88.14
14.5	186,465	12,065	0.0647	0.9353	88.14
15.5	220,756		0.0000	1.0000	82.44
16.5	62,340	15,929	0.2555	0.7445	82.44
17.5	62,340	309	0.0050	0.9950	61.38
18.5	62,031		0.0000	1.0000	61.07
19.5	66,539	502	0.0075	0.9925	61.07
20.5	45,847		0.0000	1.0000	60.61
21.5	45,847		0.0000	1.0000	60.61
22.5	45,847		0.0000	1.0000	60.61
23.5	45,847		0.0000	1.0000	60.61
24.5	45,847		0.0000	1.0000	60.61
25.5	45,847		0.0000	1.0000	60.61
26.5	44,891		0.0000	1.0000	60.61
27.5	36,724		0.0000	1.0000	60.61
28.5	36,724		0.0000	1.0000	60.61
29.5	35,213		0.0000	1.0000	60.61
30.5	35,213		0.0000	1.0000	60.61
31.5	35,213		0.0000	1.0000	60.61
32.5	35,213		0.0000	1.0000	60.61
33.5	35,213		0.0000	1.0000	60.61
34.5	35,213		0.0000	1.0000	60.61
35.5	35,213		0.0000	1.0000	60.61
36.5	30,721		0.0000	1.0000	60.61
37.5	28,365		0.0000	1.0000	60.61
38.5	19,872		0.0000	1.0000	60.61

BLACK HILLS POWER

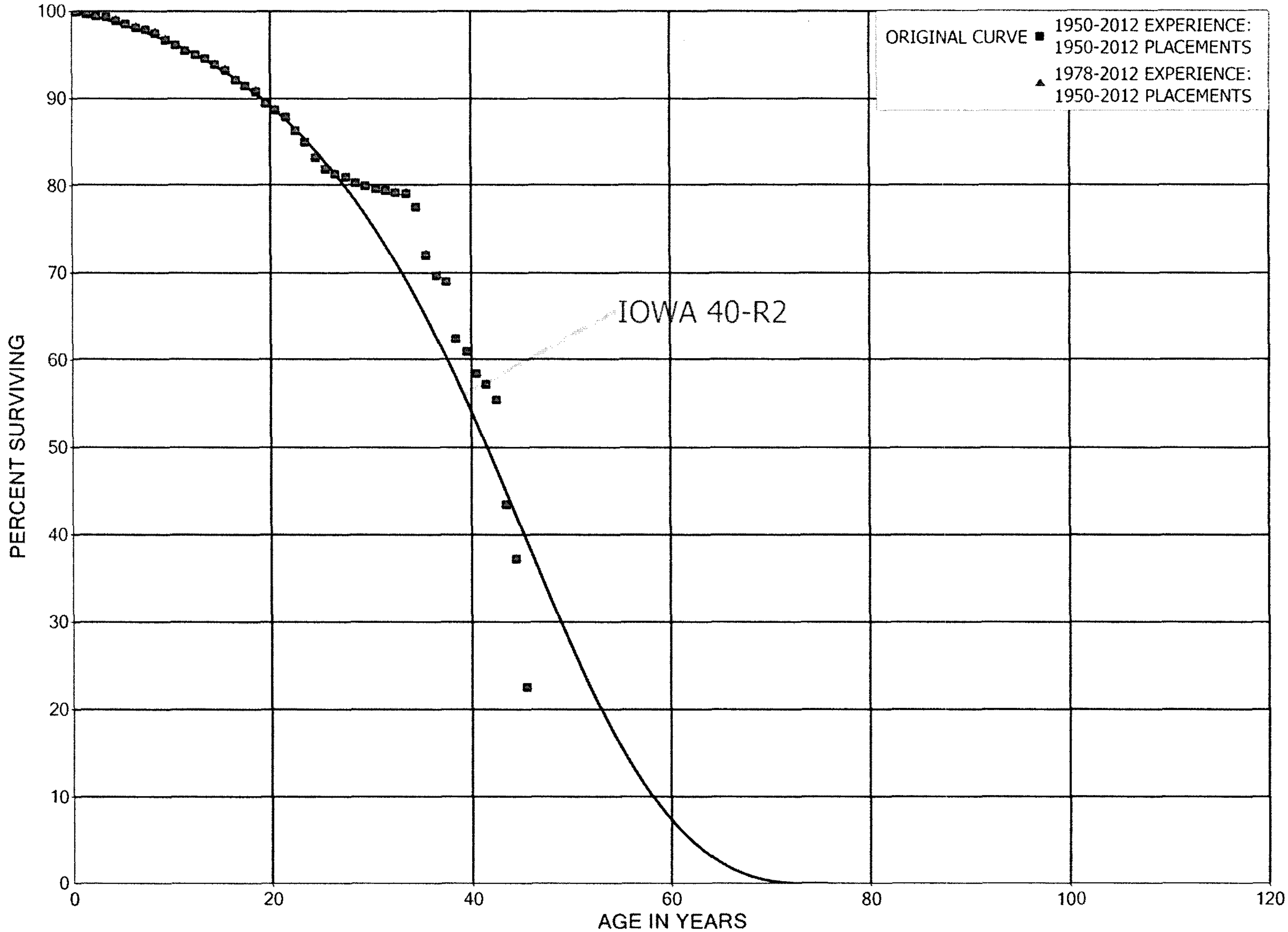
ACCOUNT 366 UNDERGROUND CONDUIT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	19,872		0.0000	1.0000	60.61
40.5	14,337		0.0000	1.0000	60.61
41.5	14,337		0.0000	1.0000	60.61
42.5	6,315		0.0000	1.0000	60.61
43.5	5,820	660	0.1133	0.8867	60.61
44.5	5,160		0.0000	1.0000	53.74
45.5	5,160	547	0.1060	0.8940	53.74
46.5	4,330		0.0000	1.0000	48.05
47.5	4,330		0.0000	1.0000	48.05
48.5	4,330		0.0000	1.0000	48.05
49.5	4,330		0.0000	1.0000	48.05
50.5	4,330		0.0000	1.0000	48.05
51.5	4,330		0.0000	1.0000	48.05
52.5	4,330		0.0000	1.0000	48.05
53.5	4,330		0.0000	1.0000	48.05
54.5	4,330		0.0000	1.0000	48.05
55.5	4,330		0.0000	1.0000	48.05
56.5	4,330		0.0000	1.0000	48.05
57.5	4,330		0.0000	1.0000	48.05
58.5	4,330	1,360	0.3141	0.6859	48.05
59.5	5,690	5,690	1.0000		32.95
60.5					

BLACK HILLS POWER
ACCOUNT 367 UNDERGROUND CONDUCTORS AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 367 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	44,303,065	65,787	0.0015	0.9985	100.00
0.5	43,476,377	82,865	0.0019	0.9981	99.85
1.5	42,100,290	105,732	0.0025	0.9975	99.66
2.5	40,112,008	58,341	0.0015	0.9985	99.41
3.5	38,015,628	147,897	0.0039	0.9961	99.27
4.5	34,293,909	116,084	0.0034	0.9966	98.88
5.5	32,676,450	141,554	0.0043	0.9957	98.55
6.5	30,393,780	97,735	0.0032	0.9968	98.12
7.5	28,788,305	112,229	0.0039	0.9961	97.80
8.5	26,839,312	207,568	0.0077	0.9923	97.42
9.5	25,072,839	150,913	0.0060	0.9940	96.67
10.5	22,569,405	159,281	0.0071	0.9929	96.09
11.5	21,193,015	104,646	0.0049	0.9951	95.41
12.5	19,120,587	85,774	0.0045	0.9955	94.94
13.5	18,544,854	125,993	0.0068	0.9932	94.51
14.5	16,664,955	114,219	0.0069	0.9931	93.87
15.5	14,652,514	179,579	0.0123	0.9877	93.23
16.5	13,910,810	99,277	0.0071	0.9929	92.08
17.5	11,849,065	85,691	0.0072	0.9928	91.43
18.5	11,046,257	164,410	0.0149	0.9851	90.76
19.5	9,768,537	82,265	0.0084	0.9916	89.41
20.5	7,241,896	70,357	0.0097	0.9903	88.66
21.5	5,838,733	99,205	0.0170	0.9830	87.80
22.5	4,718,922	76,311	0.0162	0.9838	86.31
23.5	3,805,063	75,851	0.0199	0.9801	84.91
24.5	3,465,760	55,885	0.0161	0.9839	83.22
25.5	3,327,933	23,040	0.0069	0.9931	81.88
26.5	3,273,443	15,070	0.0046	0.9954	81.31
27.5	3,100,654	24,364	0.0079	0.9921	80.94
28.5	2,924,388	12,160	0.0042	0.9958	80.30
29.5	2,728,946	11,585	0.0042	0.9958	79.97
30.5	2,591,268	8,421	0.0032	0.9968	79.63
31.5	2,373,157	7,226	0.0030	0.9970	79.37
32.5	2,133,598	283	0.0001	0.9999	79.13
33.5	1,810,949	36,149	0.0200	0.9800	79.12
34.5	1,629,114	116,452	0.0715	0.9285	77.54
35.5	1,361,311	44,282	0.0325	0.9675	71.99
36.5	1,219,655	13,138	0.0108	0.9892	69.65
37.5	971,224	91,547	0.0943	0.9057	68.90
38.5	743,517	18,068	0.0243	0.9757	62.41

BLACK HILLS POWER

ACCOUNT 367 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	532,985	22,115	0.0415	0.9585	60.89
40.5	461,468	9,553	0.0207	0.9793	58.36
41.5	428,985	13,323	0.0311	0.9689	57.16
42.5	385,639	83,282	0.2160	0.7840	55.38
43.5	289,434	41,933	0.1449	0.8551	43.42
44.5	247,501	97,379	0.3934	0.6066	37.13
45.5	150,051	119,625	0.7972	0.2028	22.52
46.5	2,225		0.0000	1.0000	4.57
47.5	2,225		0.0000	1.0000	4.57
48.5	2,225		0.0000	1.0000	4.57
49.5	2,225		0.0000	1.0000	4.57
50.5	2,225		0.0000	1.0000	4.57
51.5	2,225		0.0000	1.0000	4.57
52.5	2,225		0.0000	1.0000	4.57
53.5	2,225		0.0000	1.0000	4.57
54.5	2,225		0.0000	1.0000	4.57
55.5	2,225		0.0000	1.0000	4.57
56.5	2,225		0.0000	1.0000	4.57
57.5	2,225		0.0000	1.0000	4.57
58.5	2,225		0.0000	1.0000	4.57
59.5					4.57

BLACK HILLS POWER

ACCOUNT 367 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1978-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	41,865,874	65,787	0.0016	0.9984	100.00
0.5	41,297,076	69,894	0.0017	0.9983	99.84
1.5	40,085,980	102,810	0.0026	0.9974	99.67
2.5	38,515,418	54,767	0.0014	0.9986	99.42
3.5	36,728,063	141,221	0.0038	0.9962	99.28
4.5	33,464,598	115,973	0.0035	0.9965	98.90
5.5	32,038,349	121,677	0.0038	0.9962	98.55
6.5	29,869,203	97,567	0.0033	0.9967	98.18
7.5	28,314,985	110,771	0.0039	0.9961	97.86
8.5	26,380,374	207,006	0.0078	0.9922	97.47
9.5	24,687,154	150,913	0.0061	0.9939	96.71
10.5	22,183,720	159,059	0.0072	0.9928	96.12
11.5	21,178,043	104,646	0.0049	0.9951	95.43
12.5	19,105,614	85,774	0.0045	0.9955	94.96
13.5	18,542,322	125,993	0.0068	0.9932	94.53
14.5	16,662,423	114,219	0.0069	0.9931	93.89
15.5	14,649,982	179,579	0.0123	0.9877	93.25
16.5	13,908,278	99,277	0.0071	0.9929	92.10
17.5	11,846,532	85,691	0.0072	0.9928	91.45
18.5	11,043,725	164,410	0.0149	0.9851	90.78
19.5	9,766,004	82,265	0.0084	0.9916	89.43
20.5	7,239,364	70,357	0.0097	0.9903	88.68
21.5	5,836,200	99,205	0.0170	0.9830	87.82
22.5	4,716,390	76,311	0.0162	0.9838	86.32
23.5	3,802,530	75,544	0.0199	0.9801	84.93
24.5	3,463,534	55,885	0.0161	0.9839	83.24
25.5	3,325,708	23,040	0.0069	0.9931	81.90
26.5	3,271,218	15,070	0.0046	0.9954	81.33
27.5	3,100,654	24,364	0.0079	0.9921	80.96
28.5	2,924,388	12,160	0.0042	0.9958	80.32
29.5	2,728,946	11,585	0.0042	0.9958	79.99
30.5	2,591,268	8,421	0.0032	0.9968	79.65
31.5	2,373,157	7,226	0.0030	0.9970	79.39
32.5	2,133,598	283	0.0001	0.9999	79.14
33.5	1,810,949	36,149	0.0200	0.9800	79.13
34.5	1,629,114	116,452	0.0715	0.9285	77.55
35.5	1,361,311	44,282	0.0325	0.9675	72.01
36.5	1,219,655	13,138	0.0108	0.9892	69.67
37.5	971,224	91,547	0.0943	0.9057	68.92
38.5	743,517	18,068	0.0243	0.9757	62.42

BLACK HILLS POWER

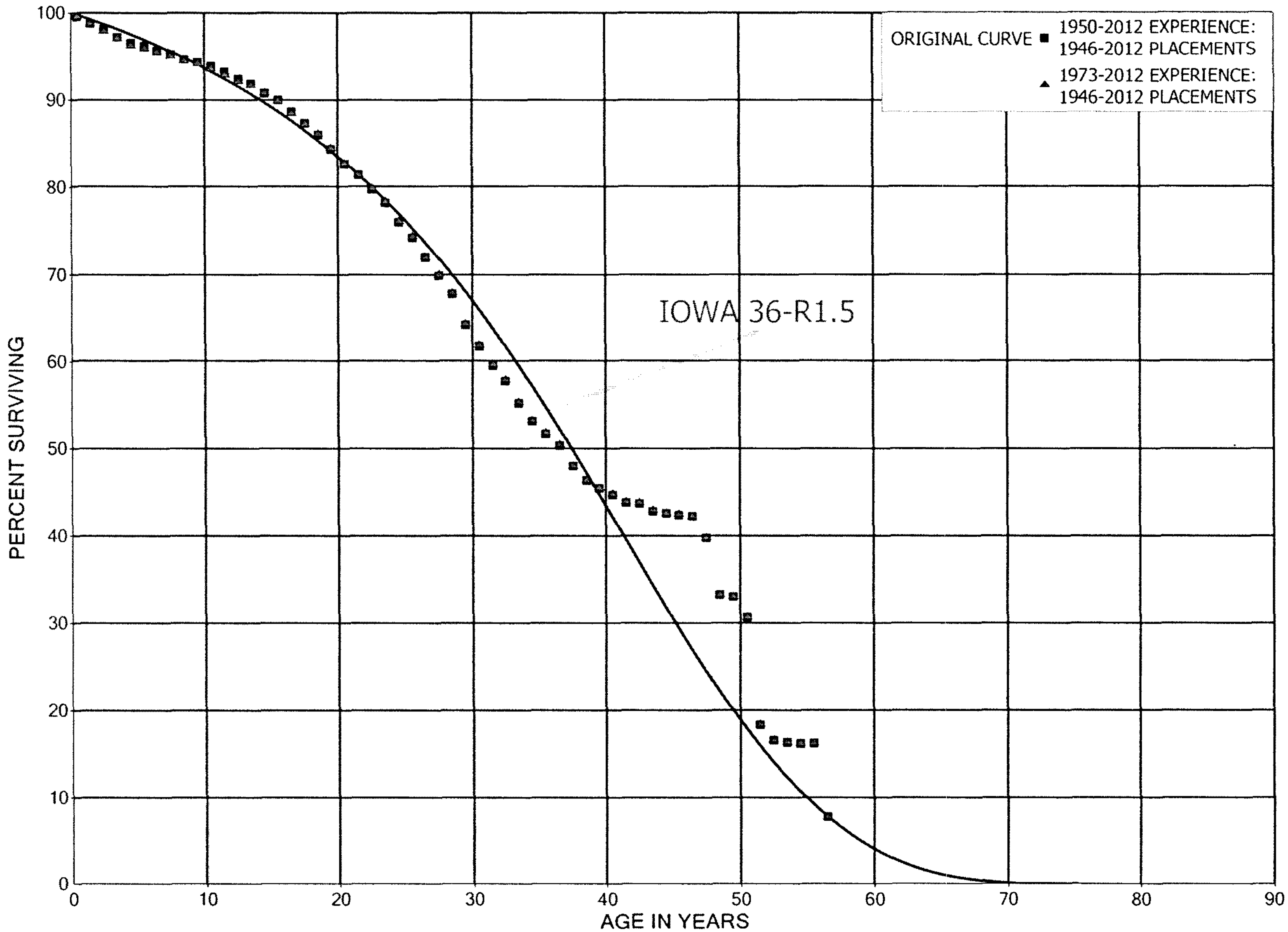
ACCOUNT 367 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1978-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	532,985	22,115	0.0415	0.9585	60.91
40.5	461,468	9,553	0.0207	0.9793	58.38
41.5	428,985	13,323	0.0311	0.9689	57.17
42.5	385,639	83,282	0.2160	0.7840	55.39
43.5	289,434	41,933	0.1449	0.8551	43.43
44.5	247,501	97,379	0.3934	0.6066	37.14
45.5	150,051	119,625	0.7972	0.2028	22.53
46.5	2,225		0.0000	1.0000	4.57
47.5	2,225		0.0000	1.0000	4.57
48.5	2,225		0.0000	1.0000	4.57
49.5	2,225		0.0000	1.0000	4.57
50.5	2,225		0.0000	1.0000	4.57
51.5	2,225		0.0000	1.0000	4.57
52.5	2,225		0.0000	1.0000	4.57
53.5	2,225		0.0000	1.0000	4.57
54.5	2,225		0.0000	1.0000	4.57
55.5	2,225		0.0000	1.0000	4.57
56.5	2,225		0.0000	1.0000	4.57
57.5	2,225		0.0000	1.0000	4.57
58.5	2,225		0.0000	1.0000	4.57
59.5					4.57

BLACK HILLS POWER
ACCOUNTS 368.01 THROUGH 368.03 LINE TRANSFORMERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNTS 368.01 THROUGH 368.03 LINE TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	42,863,207	219,516	0.0051	0.9949	100.00
0.5	40,512,754	295,054	0.0073	0.9927	99.49
1.5	38,954,233	295,908	0.0076	0.9924	98.76
2.5	38,324,086	320,293	0.0084	0.9916	98.01
3.5	36,679,069	271,777	0.0074	0.9926	97.19
4.5	34,337,510	123,505	0.0036	0.9964	96.47
5.5	31,644,498	151,970	0.0048	0.9952	96.13
6.5	29,416,211	147,954	0.0050	0.9950	95.67
7.5	28,055,706	174,888	0.0062	0.9938	95.18
8.5	26,788,411	85,904	0.0032	0.9968	94.59
9.5	25,376,630	130,253	0.0051	0.9949	94.29
10.5	24,316,604	174,044	0.0072	0.9928	93.80
11.5	23,013,775	178,147	0.0077	0.9923	93.13
12.5	21,597,986	126,853	0.0059	0.9941	92.41
13.5	20,453,533	255,348	0.0125	0.9875	91.87
14.5	19,301,588	172,566	0.0089	0.9911	90.72
15.5	18,114,466	257,629	0.0142	0.9858	89.91
16.5	16,643,904	255,567	0.0154	0.9846	88.63
17.5	15,573,259	242,975	0.0156	0.9844	87.27
18.5	14,133,406	260,346	0.0184	0.9816	85.91
19.5	13,083,189	257,217	0.0197	0.9803	84.33
20.5	12,227,786	193,980	0.0159	0.9841	82.67
21.5	11,249,865	220,333	0.0196	0.9804	81.36
22.5	10,364,707	206,802	0.0200	0.9800	79.76
23.5	9,803,583	276,085	0.0282	0.9718	78.17
24.5	9,095,494	212,671	0.0234	0.9766	75.97
25.5	8,510,483	263,718	0.0310	0.9690	74.19
26.5	7,845,736	228,998	0.0292	0.9708	71.90
27.5	7,226,654	216,500	0.0300	0.9700	69.80
28.5	6,641,137	342,755	0.0516	0.9484	67.71
29.5	5,968,402	227,876	0.0382	0.9618	64.21
30.5	5,549,665	201,782	0.0364	0.9636	61.76
31.5	5,215,556	156,197	0.0299	0.9701	59.51
32.5	4,938,746	218,772	0.0443	0.9557	57.73
33.5	4,139,287	156,565	0.0378	0.9622	55.17
34.5	3,331,883	89,384	0.0268	0.9732	53.09
35.5	3,040,288	81,150	0.0267	0.9733	51.66
36.5	2,785,816	130,627	0.0469	0.9531	50.28
37.5	2,587,412	90,224	0.0349	0.9651	47.93
38.5	2,328,543	45,000	0.0193	0.9807	46.26

BLACK HILLS POWER

ACCOUNTS 368.01 THROUGH 368.03 LINE TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,986,185	31,030	0.0156	0.9844	45.36
40.5	1,820,724	35,770	0.0196	0.9804	44.65
41.5	1,740,460	5,257	0.0030	0.9970	43.78
42.5	1,590,376	32,694	0.0206	0.9794	43.64
43.5	1,565,313	9,315	0.0060	0.9940	42.75
44.5	1,555,998	7,432	0.0048	0.9952	42.49
45.5	1,551,255	5,171	0.0033	0.9967	42.29
46.5	1,417,339	82,773	0.0584	0.9416	42.15
47.5	1,333,770	219,343	0.1645	0.8355	39.69
48.5	1,114,428	8,887	0.0080	0.9920	33.16
49.5	1,106,377	77,865	0.0704	0.9296	32.90
50.5	803,468	324,038	0.4033	0.5967	30.58
51.5	479,430	45,060	0.0940	0.9060	18.25
52.5	433,448	6,567	0.0152	0.9848	16.53
53.5	430,784	4,098	0.0095	0.9905	16.28
54.5	323,822		0.0000	1.0000	16.13
55.5	323,822	169,388	0.5231	0.4769	16.13
56.5	154,100	60,612	0.3933	0.6067	7.69
57.5	93,489	2,125	0.0227	0.9773	4.67
58.5	91,863	3,071	0.0334	0.9666	4.56
59.5					4.41

BLACK HILLS POWER

ACCOUNTS 368.01 THROUGH 368.03 LINE TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1973-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	37,832,837	177,928	0.0047	0.9953	100.00
0.5	35,524,531	293,716	0.0083	0.9917	99.53
1.5	34,280,641	290,403	0.0085	0.9915	98.71
2.5	33,814,814	315,018	0.0093	0.9907	97.87
3.5	32,175,816	249,172	0.0077	0.9923	96.96
4.5	30,460,986	123,370	0.0041	0.9959	96.21
5.5	27,763,515	120,898	0.0044	0.9956	95.82
6.5	25,710,676	137,111	0.0053	0.9947	95.40
7.5	24,363,722	137,454	0.0056	0.9944	94.89
8.5	23,969,790	85,904	0.0036	0.9964	94.36
9.5	22,551,981	119,308	0.0053	0.9947	94.02
10.5	21,758,345	169,621	0.0078	0.9922	93.52
11.5	20,451,501	151,938	0.0074	0.9926	92.79
12.5	19,845,291	115,738	0.0058	0.9942	92.10
13.5	18,711,953	182,476	0.0098	0.9902	91.57
14.5	17,822,758	167,656	0.0094	0.9906	90.67
15.5	16,640,546	255,820	0.0154	0.9846	89.82
16.5	15,796,558	224,774	0.0142	0.9858	88.44
17.5	14,756,706	192,906	0.0131	0.9869	87.18
18.5	13,366,921	255,617	0.0191	0.9809	86.04
19.5	12,428,032	257,217	0.0207	0.9793	84.40
20.5	11,572,629	179,572	0.0155	0.9845	82.65
21.5	10,609,116	194,486	0.0183	0.9817	81.37
22.5	10,290,689	205,136	0.0199	0.9801	79.87
23.5	9,795,370	276,085	0.0282	0.9718	78.28
24.5	9,089,466	212,671	0.0234	0.9766	76.08
25.5	8,504,455	263,718	0.0310	0.9690	74.30
26.5	7,845,736	228,998	0.0292	0.9708	71.99
27.5	7,226,654	216,500	0.0300	0.9700	69.89
28.5	6,641,137	342,755	0.0516	0.9484	67.80
29.5	5,968,402	227,876	0.0382	0.9618	64.30
30.5	5,549,665	201,782	0.0364	0.9636	61.84
31.5	5,215,556	156,197	0.0299	0.9701	59.59
32.5	4,938,746	218,772	0.0443	0.9557	57.81
33.5	4,139,287	156,565	0.0378	0.9622	55.25
34.5	3,331,883	89,384	0.0268	0.9732	53.16
35.5	3,040,288	81,150	0.0267	0.9733	51.73
36.5	2,785,816	130,627	0.0469	0.9531	50.35
37.5	2,587,412	90,224	0.0349	0.9651	47.99
38.5	2,328,543	45,000	0.0193	0.9807	46.32

BLACK HILLS POWER

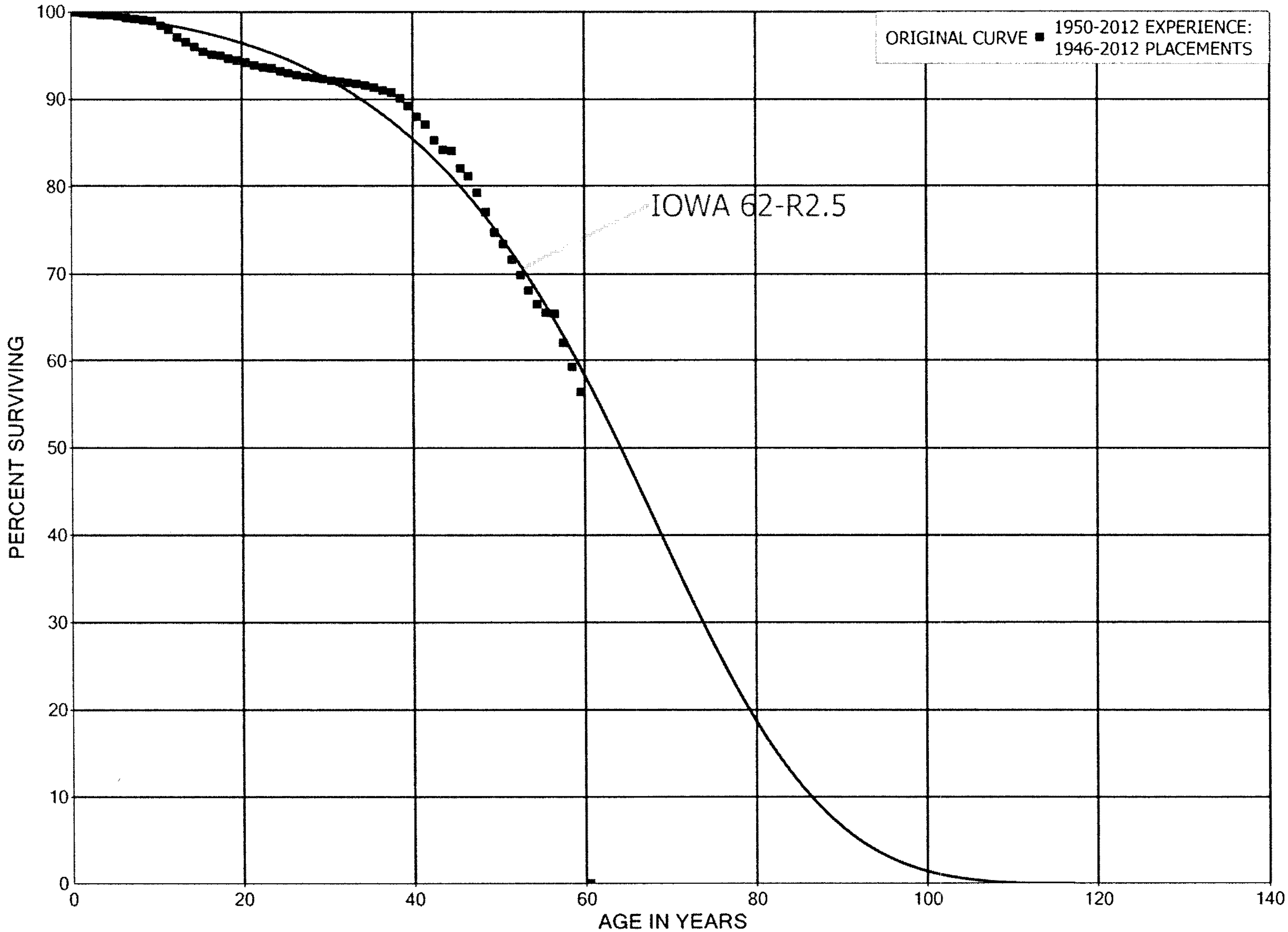
ACCOUNTS 368.01 THROUGH 368.03 LINE TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1973-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,986,185	31,030	0.0156	0.9844	45.42
40.5	1,820,724	35,770	0.0196	0.9804	44.71
41.5	1,740,460	5,257	0.0030	0.9970	43.83
42.5	1,590,376	32,694	0.0206	0.9794	43.70
43.5	1,565,313	9,315	0.0060	0.9940	42.80
44.5	1,555,998	7,432	0.0048	0.9952	42.55
45.5	1,551,255	5,171	0.0033	0.9967	42.35
46.5	1,417,339	82,773	0.0584	0.9416	42.20
47.5	1,333,770	219,343	0.1645	0.8355	39.74
48.5	1,114,428	8,887	0.0080	0.9920	33.20
49.5	1,106,377	77,865	0.0704	0.9296	32.94
50.5	803,468	324,038	0.4033	0.5967	30.62
51.5	479,430	45,060	0.0940	0.9060	18.27
52.5	433,448	6,567	0.0152	0.9848	16.55
53.5	430,784	4,098	0.0095	0.9905	16.30
54.5	323,822		0.0000	1.0000	16.15
55.5	323,822	169,388	0.5231	0.4769	16.15
56.5	154,100	60,612	0.3933	0.6067	7.70
57.5	93,489	2,125	0.0227	0.9773	4.67
58.5	91,863	3,071	0.0334	0.9666	4.57
59.5					4.41

BLACK HILLS POWER
ACCOUNTS 369.01 AND 369.02 SERVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNTS 369.01 AND 369.02 SERVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	29,750,158	31,074	0.0010	0.9990	100.00
0.5	28,119,771	15,090	0.0005	0.9995	99.90
1.5	26,913,742	23,965	0.0009	0.9991	99.84
2.5	25,256,500	22,857	0.0009	0.9991	99.75
3.5	23,476,694	23,304	0.0010	0.9990	99.66
4.5	21,637,811	20,137	0.0009	0.9991	99.56
5.5	19,756,648	28,360	0.0014	0.9986	99.47
6.5	17,973,316	22,651	0.0013	0.9987	99.33
7.5	16,327,240	22,412	0.0014	0.9986	99.20
8.5	14,912,195	22,331	0.0015	0.9985	99.07
9.5	13,697,497	68,550	0.0050	0.9950	98.92
10.5	12,551,750	63,102	0.0050	0.9950	98.42
11.5	11,737,252	97,842	0.0083	0.9917	97.93
12.5	10,815,437	62,640	0.0058	0.9942	97.11
13.5	10,119,145	59,876	0.0059	0.9941	96.55
14.5	9,040,774	57,650	0.0064	0.9936	95.98
15.5	7,874,748	21,345	0.0027	0.9973	95.37
16.5	7,574,325	16,690	0.0022	0.9978	95.11
17.5	6,080,128	16,164	0.0027	0.9973	94.90
18.5	5,898,278	16,049	0.0027	0.9973	94.65
19.5	5,357,055	13,496	0.0025	0.9975	94.39
20.5	4,627,011	14,132	0.0031	0.9969	94.15
21.5	4,191,238	10,493	0.0025	0.9975	93.86
22.5	4,004,328	6,791	0.0017	0.9983	93.63
23.5	3,834,370	10,520	0.0027	0.9973	93.47
24.5	3,620,744	11,806	0.0033	0.9967	93.21
25.5	3,577,510	7,994	0.0022	0.9978	92.91
26.5	3,513,244	6,127	0.0017	0.9983	92.70
27.5	3,386,174	5,157	0.0015	0.9985	92.54
28.5	3,227,428	5,230	0.0016	0.9984	92.40
29.5	3,077,906	6,569	0.0021	0.9979	92.25
30.5	3,033,365	3,801	0.0013	0.9987	92.05
31.5	2,820,201	2,377	0.0008	0.9992	91.94
32.5	2,628,410	5,264	0.0020	0.9980	91.86
33.5	2,427,827	3,686	0.0015	0.9985	91.68
34.5	2,243,296	6,396	0.0029	0.9971	91.54
35.5	2,080,666	8,777	0.0042	0.9958	91.28
36.5	1,836,911	2,922	0.0016	0.9984	90.89
37.5	1,594,445	12,335	0.0077	0.9923	90.75
38.5	1,373,933	12,878	0.0094	0.9906	90.04

BLACK HILLS POWER

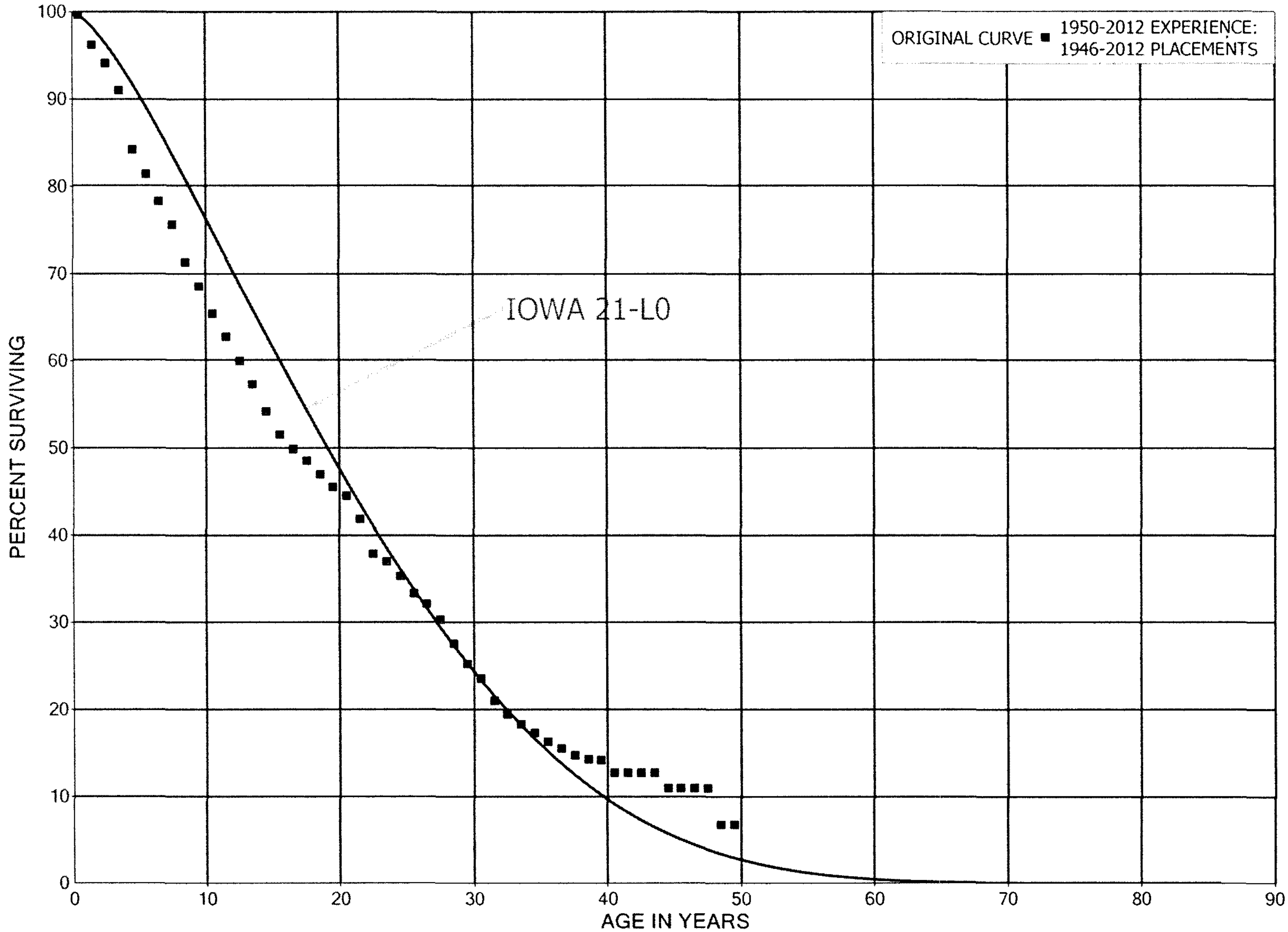
ACCOUNTS 369.01 AND 369.02 SERVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,250,978	17,984	0.0144	0.9856	89.20
40.5	1,109,869	10,754	0.0097	0.9903	87.92
41.5	1,037,131	21,732	0.0210	0.9790	87.07
42.5	851,815	10,795	0.0127	0.9873	85.24
43.5	841,120	1,107	0.0013	0.9987	84.16
44.5	840,013	19,696	0.0234	0.9766	84.05
45.5	820,326	9,025	0.0110	0.9890	82.08
46.5	639,452	15,155	0.0237	0.9763	81.18
47.5	624,296	17,097	0.0274	0.9726	79.25
48.5	606,584	18,892	0.0311	0.9689	77.08
49.5	587,652	10,403	0.0177	0.9823	74.68
50.5	405,342	9,830	0.0242	0.9758	73.36
51.5	395,456	9,866	0.0249	0.9751	71.58
52.5	383,646	9,361	0.0244	0.9756	69.79
53.5	374,285	8,534	0.0228	0.9772	68.09
54.5	246,055	4,022	0.0163	0.9837	66.54
55.5	242,033	240	0.0010	0.9990	65.45
56.5	241,793	12,238	0.0506	0.9494	65.39
57.5	229,555	10,278	0.0448	0.9552	62.08
58.5	219,277	10,661	0.0486	0.9514	59.30
59.5	258	258	1.0000		56.41
60.5					

BLACK HILLS POWER
ACCOUNTS 370.01 AND 370.04 METERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNTS 370.01 AND 370.04 METERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	18,431,973	64,569	0.0035	0.9965	100.00
0.5	18,023,110	619,873	0.0344	0.9656	99.65
1.5	17,172,907	389,344	0.0227	0.9773	96.22
2.5	11,003,161	363,510	0.0330	0.9670	94.04
3.5	10,639,652	785,988	0.0739	0.9261	90.93
4.5	9,850,777	334,363	0.0339	0.9661	84.22
5.5	9,516,415	362,429	0.0381	0.9619	81.36
6.5	9,153,985	304,869	0.0333	0.9667	78.26
7.5	8,849,117	513,235	0.0580	0.9420	75.65
8.5	8,335,642	326,238	0.0391	0.9609	71.27
9.5	8,009,546	362,519	0.0453	0.9547	68.48
10.5	7,647,027	312,944	0.0409	0.9591	65.38
11.5	7,334,082	315,446	0.0430	0.9570	62.70
12.5	7,072,292	324,871	0.0459	0.9541	60.00
13.5	6,747,421	360,894	0.0535	0.9465	57.25
14.5	6,374,558	318,883	0.0500	0.9500	54.19
15.5	6,055,675	192,979	0.0319	0.9681	51.48
16.5	5,855,249	158,480	0.0271	0.9729	49.84
17.5	5,696,769	175,670	0.0308	0.9692	48.49
18.5	5,521,099	172,372	0.0312	0.9688	46.99
19.5	5,300,393	114,252	0.0216	0.9784	45.52
20.5	5,184,623	316,813	0.0611	0.9389	44.54
21.5	4,861,024	460,435	0.0947	0.9053	41.82
22.5	4,395,302	105,134	0.0239	0.9761	37.86
23.5	4,213,958	185,805	0.0441	0.9559	36.95
24.5	4,020,904	229,636	0.0571	0.9429	35.32
25.5	3,762,096	143,738	0.0382	0.9618	33.31
26.5	3,618,358	198,508	0.0549	0.9451	32.03
27.5	3,393,478	308,304	0.0909	0.9091	30.28
28.5	3,072,738	265,454	0.0864	0.9136	27.53
29.5	2,777,559	184,643	0.0665	0.9335	25.15
30.5	2,550,370	275,058	0.1079	0.8921	23.48
31.5	2,259,876	169,171	0.0749	0.9251	20.94
32.5	2,066,601	113,492	0.0549	0.9451	19.38
33.5	1,922,661	105,897	0.0551	0.9449	18.31
34.5	1,793,574	101,136	0.0564	0.9436	17.30
35.5	1,661,809	86,483	0.0520	0.9480	16.33
36.5	1,564,015	74,441	0.0476	0.9524	15.48
37.5	1,481,359	41,247	0.0278	0.9722	14.74
38.5	1,427,397	19,010	0.0133	0.9867	14.33

BLACK HILLS POWER

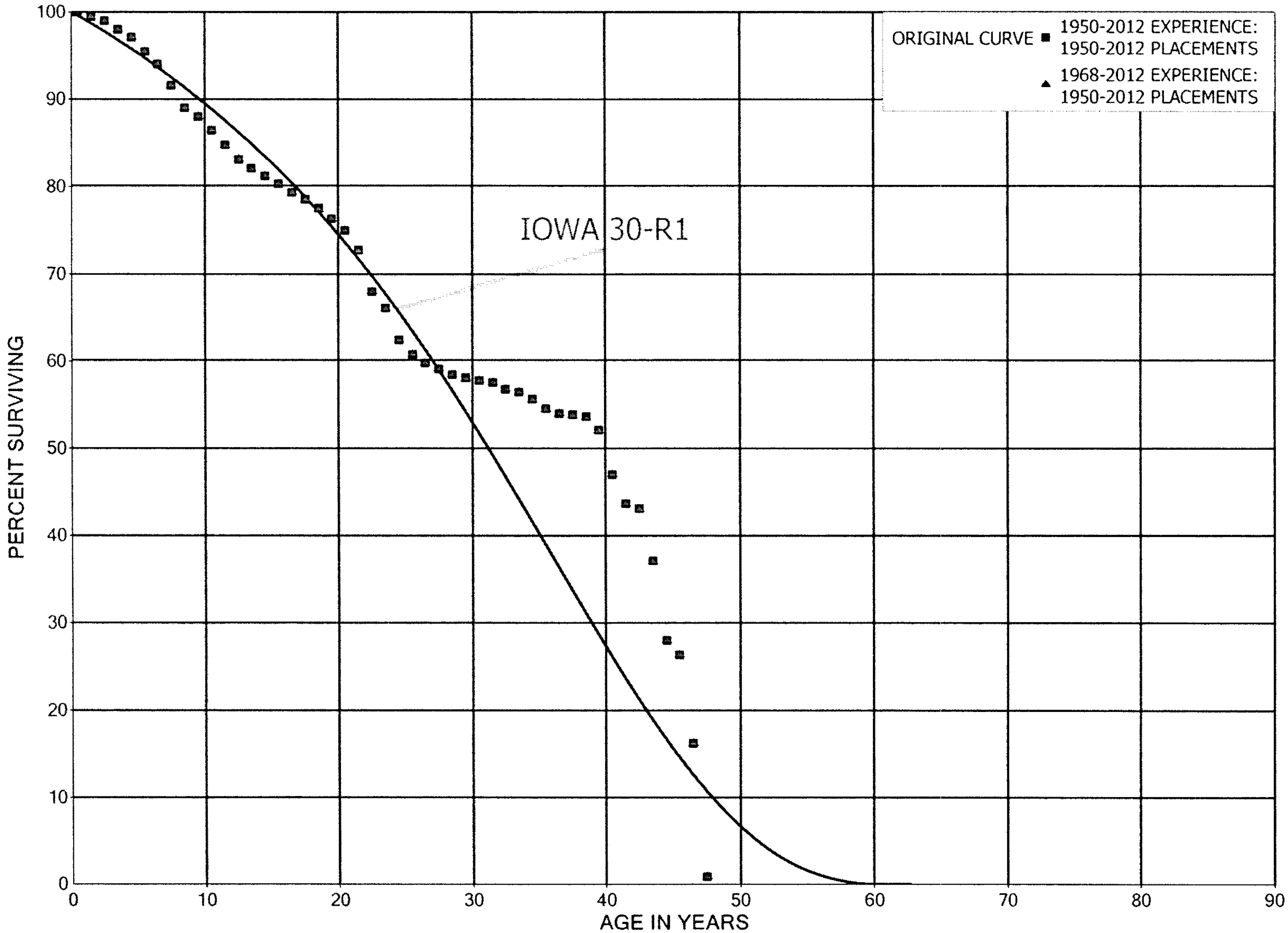
ACCOUNTS 370.01 AND 370.04 METERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1946-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,393,230	140,992	0.1012	0.8988	14.14
40.5	1,244,029		0.0000	1.0000	12.71
41.5	1,244,029		0.0000	1.0000	12.71
42.5	1,213,998	1,241	0.0010	0.9990	12.71
43.5	1,212,757	161,652	0.1333	0.8667	12.70
44.5	1,051,105		0.0000	1.0000	11.00
45.5	1,051,105		0.0000	1.0000	11.00
46.5	1,017,311	1,934	0.0019	0.9981	11.00
47.5	1,015,377	396,987	0.3910	0.6090	10.98
48.5	618,390		0.0000	1.0000	6.69
49.5	620,008		0.0000	1.0000	6.69
50.5	580,186	2,357	0.0041	0.9959	6.69
51.5	577,829	287,693	0.4979	0.5021	6.66
52.5	290,136		0.0000	1.0000	3.35
53.5	290,136		0.0000	1.0000	3.35
54.5	257,728		0.0000	1.0000	3.35
55.5	257,728	2,553	0.0099	0.9901	3.35
56.5	255,175	42,603	0.1670	0.8330	3.31
57.5	212,572	171,455	0.8066	0.1934	2.76
58.5	41,117	36,708	0.8928	0.1072	0.53
59.5	141	141	1.0000		0.06
60.5					

BLACK HILLS POWER
ACCOUNT 371 INSTALLATIONS ON CUSTOMER PREMISES
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 371 INSTALLATIONS ON CUSTOMER PREMISES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	2,511,755	2,292	0.0009	0.9991	100.00
0.5	2,393,736	12,870	0.0054	0.9946	99.91
1.5	2,326,497	10,581	0.0045	0.9955	99.37
2.5	2,078,479	20,254	0.0097	0.9903	98.92
3.5	2,050,901	17,617	0.0086	0.9914	97.96
4.5	1,943,661	34,845	0.0179	0.9821	97.11
5.5	1,866,030	27,691	0.0148	0.9852	95.37
6.5	1,771,884	46,512	0.0263	0.9737	93.96
7.5	1,765,105	48,612	0.0275	0.9725	91.49
8.5	1,663,565	18,122	0.0109	0.9891	88.97
9.5	1,581,010	28,025	0.0177	0.9823	88.00
10.5	1,494,105	30,506	0.0204	0.9796	86.44
11.5	1,450,633	27,576	0.0190	0.9810	84.68
12.5	1,324,115	16,382	0.0124	0.9876	83.07
13.5	1,223,116	13,001	0.0106	0.9894	82.04
14.5	1,085,667	11,815	0.0109	0.9891	81.17
15.5	924,531	11,319	0.0122	0.9878	80.28
16.5	870,937	8,587	0.0099	0.9901	79.30
17.5	666,412	9,009	0.0135	0.9865	78.52
18.5	650,297	9,768	0.0150	0.9850	77.46
19.5	589,428	9,937	0.0169	0.9831	76.30
20.5	544,777	16,847	0.0309	0.9691	75.01
21.5	506,237	32,641	0.0645	0.9355	72.69
22.5	460,623	13,218	0.0287	0.9713	68.00
23.5	425,142	23,365	0.0550	0.9450	66.05
24.5	375,586	10,292	0.0274	0.9726	62.42
25.5	359,665	5,750	0.0160	0.9840	60.71
26.5	339,671	3,734	0.0110	0.9890	59.74
27.5	321,558	3,710	0.0115	0.9885	59.08
28.5	302,346	1,899	0.0063	0.9937	58.40
29.5	280,198	1,486	0.0053	0.9947	58.03
30.5	267,857	807	0.0030	0.9970	57.73
31.5	238,213	3,281	0.0138	0.9862	57.55
32.5	210,730	1,242	0.0059	0.9941	56.76
33.5	191,500	2,862	0.0149	0.9851	56.43
34.5	176,402	3,518	0.0199	0.9801	55.58
35.5	159,104	1,446	0.0091	0.9909	54.47
36.5	142,974	512	0.0036	0.9964	53.98
37.5	122,342	442	0.0036	0.9964	53.79
38.5	104,335	3,023	0.0290	0.9710	53.59

BLACK HILLS POWER

ACCOUNT 371 INSTALLATIONS ON CUSTOMER PREMISES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	83,075	8,073	0.0972	0.9028	52.04
40.5	63,955	4,619	0.0722	0.9278	46.98
41.5	56,185	744	0.0132	0.9868	43.59
42.5	45,730	6,360	0.1391	0.8609	43.01
43.5	39,371	9,611	0.2441	0.7559	37.03
44.5	29,760	1,783	0.0599	0.9401	27.99
45.5	27,977	10,731	0.3836	0.6164	26.31
46.5	11,644	11,009	0.9455	0.0545	16.22
47.5	635		0.0000	1.0000	0.88
48.5	635	120	0.1895	0.8105	0.88
49.5	515	196	0.3798	0.6202	0.72
50.5					0.44

BLACK HILLS POWER

ACCOUNT 371 INSTALLATIONS ON CUSTOMER PREMISES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1968-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	2,499,036	2,292	0.0009	0.9991	100.00
0.5	2,381,017	12,870	0.0054	0.9946	99.91
1.5	2,322,193	10,581	0.0046	0.9954	99.37
2.5	2,074,175	20,254	0.0098	0.9902	98.92
3.5	2,046,597	17,617	0.0086	0.9914	97.95
4.5	1,939,357	34,845	0.0180	0.9820	97.11
5.5	1,862,361	27,691	0.0149	0.9851	95.36
6.5	1,768,215	46,512	0.0263	0.9737	93.94
7.5	1,761,436	48,612	0.0276	0.9724	91.47
8.5	1,659,896	18,122	0.0109	0.9891	88.95
9.5	1,577,341	28,025	0.0178	0.9822	87.98
10.5	1,490,436	30,506	0.0205	0.9795	86.41
11.5	1,446,964	27,576	0.0191	0.9809	84.65
12.5	1,320,446	16,382	0.0124	0.9876	83.03
13.5	1,219,447	13,001	0.0107	0.9893	82.00
14.5	1,081,998	11,815	0.0109	0.9891	81.13
15.5	920,862	11,319	0.0123	0.9877	80.24
16.5	867,268	8,587	0.0099	0.9901	79.26
17.5	666,412	9,009	0.0135	0.9865	78.47
18.5	650,297	9,768	0.0150	0.9850	77.41
19.5	589,428	9,937	0.0169	0.9831	76.25
20.5	544,777	16,847	0.0309	0.9691	74.96
21.5	506,237	32,641	0.0645	0.9355	72.64
22.5	460,623	13,218	0.0287	0.9713	67.96
23.5	425,142	23,365	0.0550	0.9450	66.01
24.5	375,586	10,292	0.0274	0.9726	62.38
25.5	359,665	5,750	0.0160	0.9840	60.67
26.5	339,671	3,734	0.0110	0.9890	59.70
27.5	321,558	3,710	0.0115	0.9885	59.05
28.5	302,346	1,899	0.0063	0.9937	58.36
29.5	280,198	1,486	0.0053	0.9947	58.00
30.5	267,857	807	0.0030	0.9970	57.69
31.5	238,213	3,281	0.0138	0.9862	57.52
32.5	210,730	1,242	0.0059	0.9941	56.72
33.5	191,500	2,862	0.0149	0.9851	56.39
34.5	176,402	3,518	0.0199	0.9801	55.55
35.5	159,104	1,446	0.0091	0.9909	54.44
36.5	142,974	512	0.0036	0.9964	53.94
37.5	122,342	442	0.0036	0.9964	53.75
38.5	104,335	3,023	0.0290	0.9710	53.56

BLACK HILLS POWER

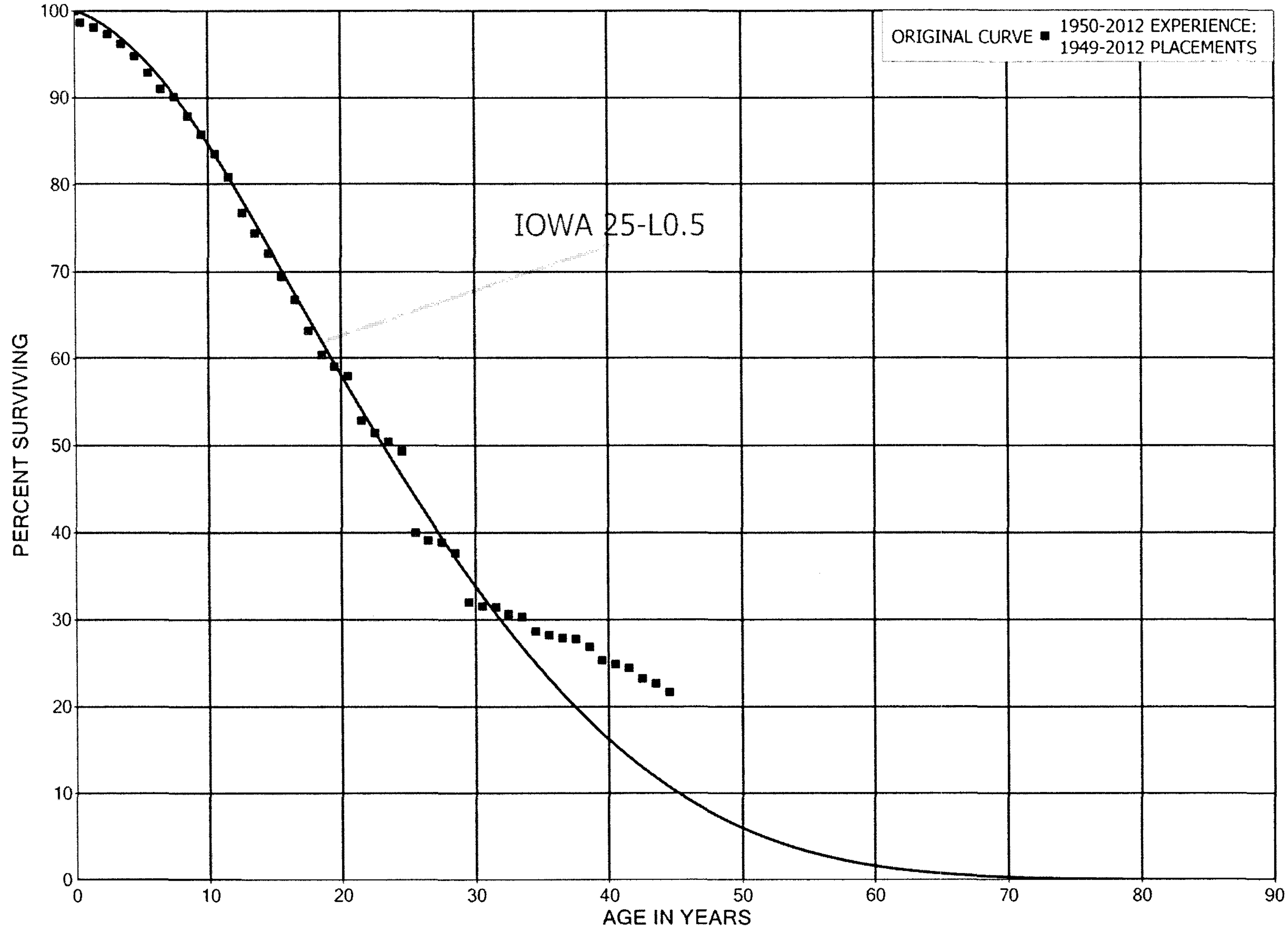
ACCOUNT 371 INSTALLATIONS ON CUSTOMER PREMISES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1950-2012 EXPERIENCE BAND 1968-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	83,075	8,073	0.0972	0.9028	52.01
40.5	63,955	4,619	0.0722	0.9278	46.95
41.5	56,185	744	0.0132	0.9868	43.56
42.5	45,730	6,360	0.1391	0.8609	42.98
43.5	39,371	9,611	0.2441	0.7559	37.01
44.5	29,760	1,783	0.0599	0.9401	27.97
45.5	27,977	10,731	0.3836	0.6164	26.30
46.5	11,644	11,009	0.9455	0.0545	16.21
47.5	635		0.0000	1.0000	0.88
48.5	635	120	0.1895	0.8105	0.88
49.5	515	196	0.3798	0.6202	0.72
50.5					0.44

BLACK HILLS POWER
ACCOUNT 373 STREET LIGHTING AND SIGNAL SYSTEMS
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 373 STREET LIGHTING AND SIGNAL SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	3,538,708	50,225	0.0142	0.9858	100.00
0.5	3,522,593	19,875	0.0056	0.9944	98.58
1.5	3,453,256	25,137	0.0073	0.9927	98.02
2.5	3,362,231	37,640	0.0112	0.9888	97.31
3.5	3,121,399	48,436	0.0155	0.9845	96.22
4.5	2,983,728	59,208	0.0198	0.9802	94.73
5.5	2,837,167	56,489	0.0199	0.9801	92.85
6.5	2,715,824	29,253	0.0108	0.9892	91.00
7.5	2,537,875	60,717	0.0239	0.9761	90.02
8.5	2,430,640	58,639	0.0241	0.9759	87.87
9.5	2,332,838	61,407	0.0263	0.9737	85.75
10.5	2,211,245	71,343	0.0323	0.9677	83.49
11.5	2,050,604	103,087	0.0503	0.9497	80.80
12.5	1,941,252	59,495	0.0306	0.9694	76.73
13.5	1,819,030	56,791	0.0312	0.9688	74.38
14.5	1,672,371	62,917	0.0376	0.9624	72.06
15.5	1,536,758	58,809	0.0383	0.9617	69.35
16.5	1,451,594	76,499	0.0527	0.9473	66.70
17.5	1,293,443	57,335	0.0443	0.9557	63.18
18.5	1,224,188	25,794	0.0211	0.9789	60.38
19.5	1,168,087	23,054	0.0197	0.9803	59.11
20.5	1,080,829	95,879	0.0887	0.9113	57.94
21.5	967,605	24,993	0.0258	0.9742	52.80
22.5	938,800	18,314	0.0195	0.9805	51.44
23.5	648,018	14,157	0.0218	0.9782	50.43
24.5	621,390	118,859	0.1913	0.8087	49.33
25.5	498,760	10,055	0.0202	0.9798	39.90
26.5	481,161	3,056	0.0064	0.9936	39.09
27.5	473,937	15,342	0.0324	0.9676	38.84
28.5	451,390	67,776	0.1502	0.8498	37.59
29.5	377,918	5,070	0.0134	0.9866	31.94
30.5	370,065	1,379	0.0037	0.9963	31.51
31.5	360,767	9,542	0.0264	0.9736	31.40
32.5	338,925	3,329	0.0098	0.9902	30.57
33.5	329,831	18,121	0.0549	0.9451	30.27
34.5	308,411	4,613	0.0150	0.9850	28.60
35.5	300,174	3,542	0.0118	0.9882	28.18
36.5	293,529	1,332	0.0045	0.9955	27.84
37.5	266,059	8,861	0.0333	0.9667	27.72
38.5	251,960	13,956	0.0554	0.9446	26.79

BLACK HILLS POWER

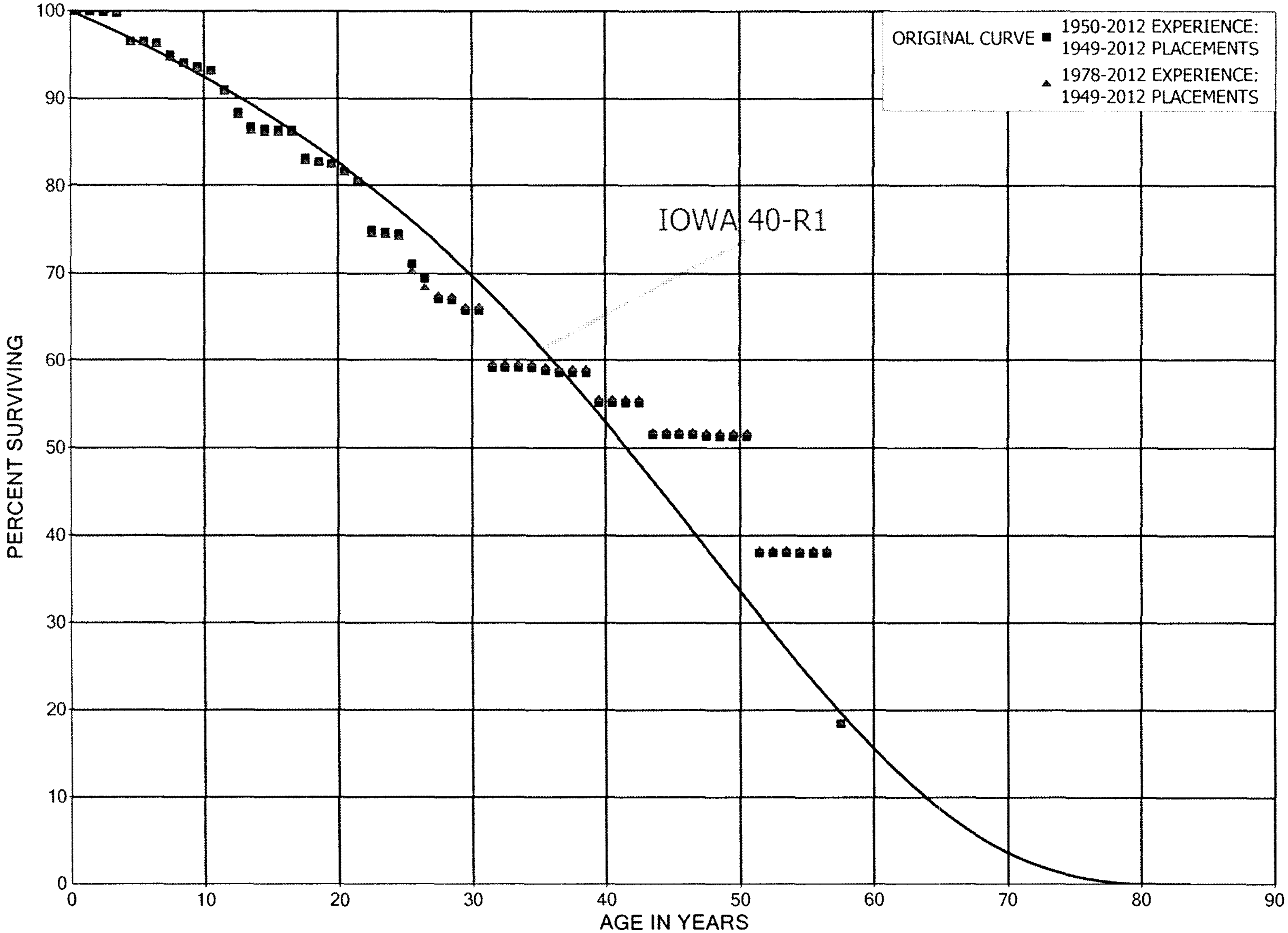
ACCOUNT 373 STREET LIGHTING AND SIGNAL SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	236,910	4,399	0.0186	0.9814	25.31
40.5	229,144	4,503	0.0197	0.9803	24.84
41.5	222,140	10,536	0.0474	0.9526	24.35
42.5	169,960	3,868	0.0228	0.9772	23.20
43.5	166,092	7,623	0.0459	0.9541	22.67
44.5	158,469	5,717	0.0361	0.9639	21.63
45.5	152,752	17	0.0001	0.9999	20.85
46.5	129,938	9,368	0.0721	0.9279	20.85
47.5	120,570	4,692	0.0389	0.9611	19.34
48.5	115,878	500	0.0043	0.9957	18.59
49.5	115,378	353	0.0031	0.9969	18.51
50.5	73,827	3,060	0.0414	0.9586	18.45
51.5	70,767		0.0000	1.0000	17.69
52.5	70,767	7,364	0.1041	0.8959	17.69
53.5	63,403		0.0000	1.0000	15.85
54.5	53,723	256	0.0048	0.9952	15.85
55.5	53,467		0.0000	1.0000	15.77
56.5	53,467	3,672	0.0687	0.9313	15.77
57.5	49,795	21,541	0.4326	0.5674	14.69
58.5	28,254		0.0000	1.0000	8.33
59.5					8.33

BLACK HILLS POWER
ACCOUNT 390.01 STRUCTURES AND IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNT 390.01 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	16,217,373	14,409	0.0009	0.9991	100.00
0.5	15,042,619	2,315	0.0002	0.9998	99.91
1.5	14,045,469	5,050	0.0004	0.9996	99.90
2.5	13,867,019	22,782	0.0016	0.9984	99.86
3.5	13,535,446	428,106	0.0316	0.9684	99.70
4.5	12,806,650	8,926	0.0007	0.9993	96.54
5.5	12,324,326	28,514	0.0023	0.9977	96.48
6.5	11,854,113	167,635	0.0141	0.9859	96.25
7.5	11,602,023	101,270	0.0087	0.9913	94.89
8.5	11,356,449	60,530	0.0053	0.9947	94.06
9.5	10,546,294	38,501	0.0037	0.9963	93.56
10.5	10,009,226	246,168	0.0246	0.9754	93.22
11.5	9,759,192	270,169	0.0277	0.9723	90.93
12.5	9,353,624	179,559	0.0192	0.9808	88.41
13.5	8,952,935	23,518	0.0026	0.9974	86.71
14.5	8,852,119	9,206	0.0010	0.9990	86.48
15.5	8,822,729	4,296	0.0005	0.9995	86.39
16.5	8,571,568	315,365	0.0368	0.9632	86.35
17.5	8,197,932	41,126	0.0050	0.9950	83.18
18.5	8,207,993	28,452	0.0035	0.9965	82.76
19.5	8,121,395	89,081	0.0110	0.9890	82.47
20.5	5,313,755	67,983	0.0128	0.9872	81.57
21.5	5,223,546	365,258	0.0699	0.9301	80.52
22.5	4,714,981	12,024	0.0026	0.9974	74.89
23.5	4,828,582	11,483	0.0024	0.9976	74.70
24.5	3,695,964	173,479	0.0469	0.9531	74.52
25.5	3,495,368	79,737	0.0228	0.9772	71.03
26.5	3,413,673	114,170	0.0334	0.9666	69.41
27.5	3,301,046	7,000	0.0021	0.9979	67.08
28.5	3,136,161	54,963	0.0175	0.9825	66.94
29.5	3,037,732	1,719	0.0006	0.9994	65.77
30.5	2,991,307	296,174	0.0990	0.9010	65.73
31.5	452,768		0.0000	1.0000	59.22
32.5	440,563	483	0.0011	0.9989	59.22
33.5	440,080		0.0000	1.0000	59.16
34.5	440,080	2,091	0.0048	0.9952	59.16
35.5	432,270	1,716	0.0040	0.9960	58.88
36.5	373,914		0.0000	1.0000	58.64
37.5	373,914		0.0000	1.0000	58.64
38.5	373,423	22,059	0.0591	0.9409	58.64

BLACK HILLS POWER

ACCOUNT 390.01 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2012 EXPERIENCE BAND 1950-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	351,364		0.0000	1.0000	55.18
40.5	351,364		0.0000	1.0000	55.18
41.5	350,747		0.0000	1.0000	55.18
42.5	344,131	23,260	0.0676	0.9324	55.18
43.5	320,871		0.0000	1.0000	51.45
44.5	320,871		0.0000	1.0000	51.45
45.5	320,871		0.0000	1.0000	51.45
46.5	297,033	658	0.0022	0.9978	51.45
47.5	296,375		0.0000	1.0000	51.34
48.5	296,375		0.0000	1.0000	51.34
49.5	296,375		0.0000	1.0000	51.34
50.5	296,366	77,048	0.2600	0.7400	51.34
51.5	219,318		0.0000	1.0000	37.99
52.5	219,318		0.0000	1.0000	37.99
53.5	219,318		0.0000	1.0000	37.99
54.5	175,009		0.0000	1.0000	37.99
55.5	175,009		0.0000	1.0000	37.99
56.5	175,009	90,461	0.5169	0.4831	37.99
57.5	84,548	46,092	0.5452	0.4548	18.35
58.5	38,456		0.0000	1.0000	8.35
59.5					8.35

BLACK HILLS POWER

ACCOUNT 390.01 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2012 EXPERIENCE BAND 1978-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	14,977,313	14,355	0.0010	0.9990	100.00
0.5	13,834,548		0.0000	1.0000	99.90
1.5	12,901,629		0.0000	1.0000	99.90
2.5	12,728,805	19,859	0.0016	0.9984	99.90
3.5	12,406,198	424,461	0.0342	0.9658	99.75
4.5	11,690,378	8,926	0.0008	0.9992	96.34
5.5	11,217,573	27,993	0.0025	0.9975	96.26
6.5	10,752,050	164,469	0.0153	0.9847	96.02
7.5	10,509,741	81,564	0.0078	0.9922	94.55
8.5	10,281,807	59,364	0.0058	0.9942	93.82
9.5	9,660,022	30,860	0.0032	0.9968	93.28
10.5	9,130,595	236,873	0.0259	0.9741	92.98
11.5	8,913,694	258,539	0.0290	0.9710	90.57
12.5	8,526,637	167,259	0.0196	0.9804	87.94
13.5	8,180,535	19,593	0.0024	0.9976	86.22
14.5	8,083,644	9,106	0.0011	0.9989	86.01
15.5	8,054,364	1,497	0.0002	0.9998	85.91
16.5	7,974,229	294,281	0.0369	0.9631	85.90
17.5	7,632,253	10,697	0.0014	0.9986	82.73
18.5	7,556,317	28,452	0.0038	0.9962	82.61
19.5	7,514,028	81,514	0.0108	0.9892	82.30
20.5	4,713,955	54,585	0.0116	0.9884	81.41
21.5	4,725,023	356,598	0.0755	0.9245	80.46
22.5	4,225,118	5,208	0.0012	0.9988	74.39
23.5	4,345,535	11,483	0.0026	0.9974	74.30
24.5	3,250,595	173,479	0.0534	0.9466	74.10
25.5	3,049,999	79,737	0.0261	0.9739	70.15
26.5	2,968,304	37,965	0.0128	0.9872	68.31
27.5	3,242,483	7,000	0.0022	0.9978	67.44
28.5	3,136,161	54,963	0.0175	0.9825	67.30
29.5	3,037,732	1,719	0.0006	0.9994	66.12
30.5	2,991,307	296,174	0.0990	0.9010	66.08
31.5	452,768		0.0000	1.0000	59.54
32.5	440,563	483	0.0011	0.9989	59.54
33.5	440,080		0.0000	1.0000	59.47
34.5	440,080	2,091	0.0048	0.9952	59.47
35.5	432,270	1,716	0.0040	0.9960	59.19
36.5	373,914		0.0000	1.0000	58.95
37.5	373,914		0.0000	1.0000	58.95
38.5	373,423	22,059	0.0591	0.9409	58.95

BLACK HILLS POWER

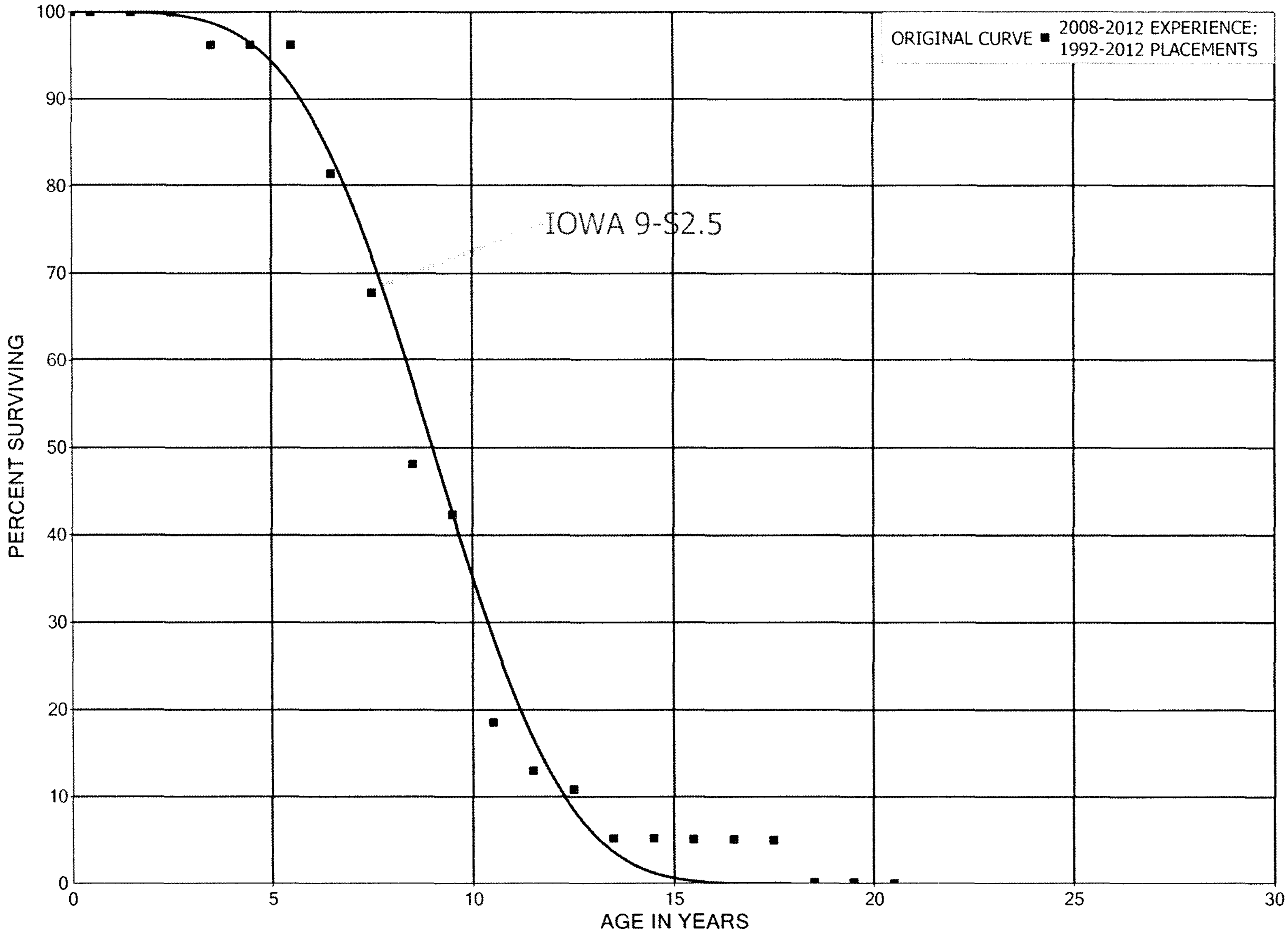
ACCOUNT 390.01 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2012 EXPERIENCE BAND 1978-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	351,364		0.0000	1.0000	55.47
40.5	351,364		0.0000	1.0000	55.47
41.5	350,747		0.0000	1.0000	55.47
42.5	344,131	23,260	0.0676	0.9324	55.47
43.5	320,871		0.0000	1.0000	51.72
44.5	320,871		0.0000	1.0000	51.72
45.5	320,871		0.0000	1.0000	51.72
46.5	297,033	658	0.0022	0.9978	51.72
47.5	296,375		0.0000	1.0000	51.61
48.5	296,375		0.0000	1.0000	51.61
49.5	296,375		0.0000	1.0000	51.61
50.5	296,366	77,048	0.2600	0.7400	51.61
51.5	219,318		0.0000	1.0000	38.19
52.5	219,318		0.0000	1.0000	38.19
53.5	219,318		0.0000	1.0000	38.19
54.5	175,009		0.0000	1.0000	38.19
55.5	175,009		0.0000	1.0000	38.19
56.5	175,009	90,461	0.5169	0.4831	38.19
57.5	84,548	46,092	0.5452	0.4548	18.45
58.5	38,456		0.0000	1.0000	8.39
59.5					8.39

BLACK HILLS POWER
ACCOUNT 391.04 COMPUTER SOFTWARE
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

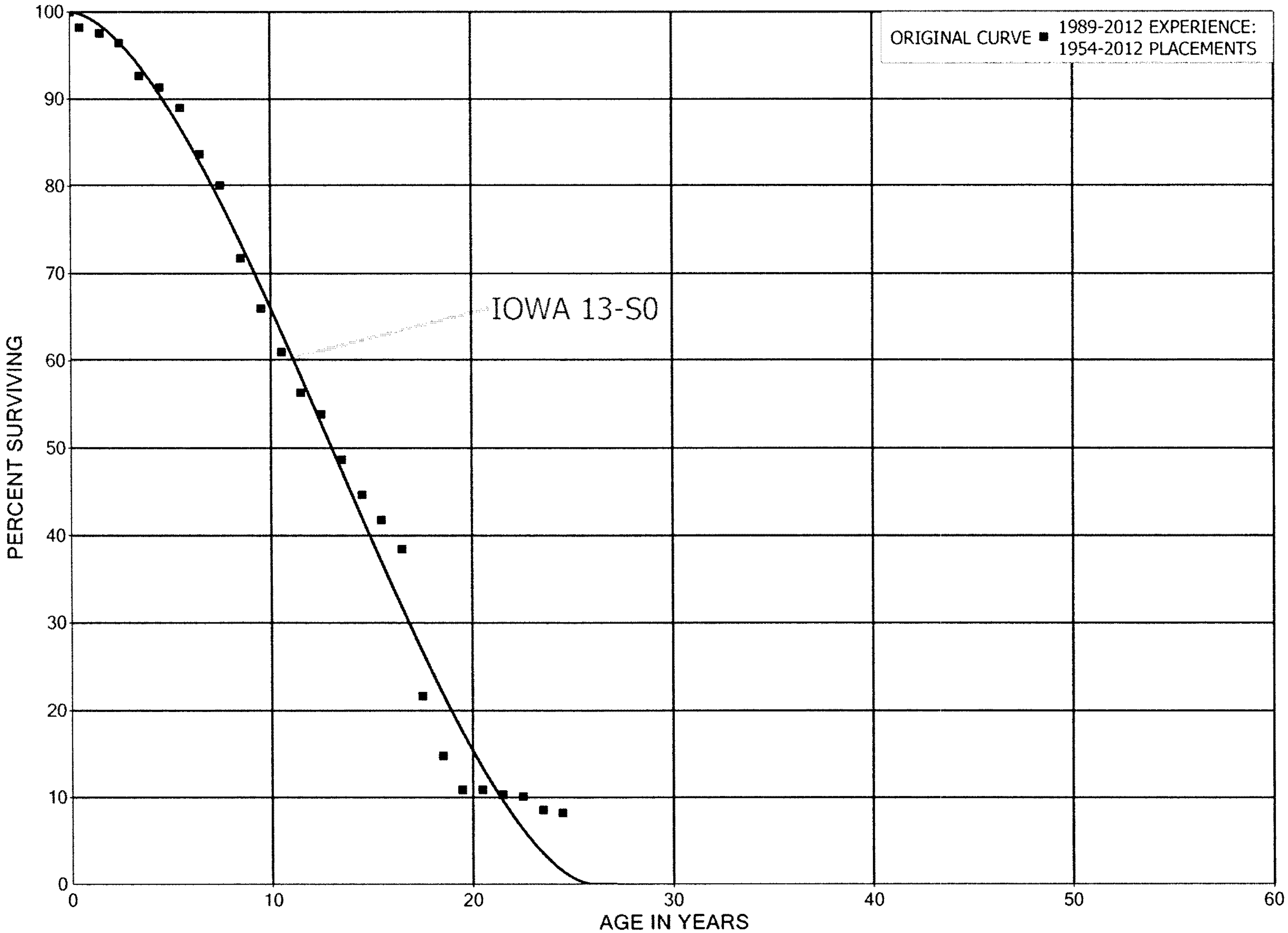
ACCOUNT 391.04 COMPUTER SOFTWARE

ORIGINAL LIFE TABLE

PLACEMENT BAND 1992-2012 EXPERIENCE BAND 2008-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	3,493,014		0.0000	1.0000	100.00
0.5	2,722,543		0.0000	1.0000	100.00
1.5	2,659,007		0.0000	1.0000	100.00
2.5	2,388,967	90,387	0.0378	0.9622	100.00
3.5	1,327,858		0.0000	1.0000	96.22
4.5	825,609		0.0000	1.0000	96.22
5.5	941,637	144,602	0.1536	0.8464	96.22
6.5	877,556	147,952	0.1686	0.8314	81.44
7.5	716,501	207,429	0.2895	0.7105	67.71
8.5	635,644	76,677	0.1206	0.8794	48.11
9.5	568,972	320,815	0.5639	0.4361	42.30
10.5	283,339	84,620	0.2987	0.7013	18.45
11.5	198,719	32,364	0.1629	0.8371	12.94
12.5	233,340	121,167	0.5193	0.4807	10.83
13.5	1,966,199	10,006	0.0051	0.9949	5.21
14.5	1,956,194	35,183	0.0180	0.9820	5.18
15.5	1,960,855		0.0000	1.0000	5.09
16.5	1,960,855	66,985	0.0342	0.9658	5.09
17.5	1,893,870	1,854,026	0.9790	0.0210	4.91
18.5	39,843		0.0000	1.0000	0.10
19.5	39,843	39,843	1.0000		0.10
20.5					

BLACK HILLS POWER
ACCOUNTS 392.01 THROUGH 392.06 TRANSPORTATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

ACCOUNTS 392.01 THROUGH 392.06 TRANSPORTATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1954-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	12,274,968	230,305	0.0188	0.9812	100.00
0.5	11,431,516	73,090	0.0064	0.9936	98.12
1.5	11,045,754	125,596	0.0114	0.9886	97.50
2.5	9,621,398	377,359	0.0392	0.9608	96.39
3.5	8,270,861	115,409	0.0140	0.9860	92.61
4.5	7,551,482	193,540	0.0256	0.9744	91.32
5.5	7,175,992	432,510	0.0603	0.9397	88.97
6.5	6,295,640	271,178	0.0431	0.9569	83.61
7.5	5,504,737	571,783	0.1039	0.8961	80.01
8.5	4,783,886	383,491	0.0802	0.9198	71.70
9.5	3,836,475	294,327	0.0767	0.9233	65.95
10.5	3,263,033	245,921	0.0754	0.9246	60.89
11.5	2,635,392	112,968	0.0429	0.9571	56.30
12.5	2,245,806	220,582	0.0982	0.9018	53.89
13.5	1,917,615	157,616	0.0822	0.9178	48.60
14.5	1,557,808	100,205	0.0643	0.9357	44.60
15.5	1,401,700	111,945	0.0799	0.9201	41.73
16.5	1,271,968	557,066	0.4380	0.5620	38.40
17.5	698,828	220,668	0.3158	0.6842	21.58
18.5	478,161	126,895	0.2654	0.7346	14.77
19.5	336,143		0.0000	1.0000	10.85
20.5	301,376	14,835	0.0492	0.9508	10.85
21.5	286,542	5,799	0.0202	0.9798	10.31
22.5	273,837	43,601	0.1592	0.8408	10.11
23.5	230,236	8,450	0.0367	0.9633	8.50
24.5	172,441		0.0000	1.0000	8.18
25.5	129,218	6,184	0.0479	0.9521	8.18
26.5	77,886		0.0000	1.0000	7.79
27.5	80,536		0.0000	1.0000	7.79
28.5	61,250	8,711	0.1422	0.8578	7.79
29.5	52,540		0.0000	1.0000	6.68
30.5	52,540		0.0000	1.0000	6.68
31.5	53,707		0.0000	1.0000	6.68
32.5	15,425		0.0000	1.0000	6.68
33.5	9,151		0.0000	1.0000	6.68
34.5	11,480		0.0000	1.0000	6.68
35.5	11,480		0.0000	1.0000	6.68
36.5	9,807	3,613	0.3684	0.6316	6.68
37.5	6,194		0.0000	1.0000	4.22
38.5	6,194		0.0000	1.0000	4.22

BLACK HILLS POWER

ACCOUNTS 392.01 THROUGH 392.06 TRANSPORTATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

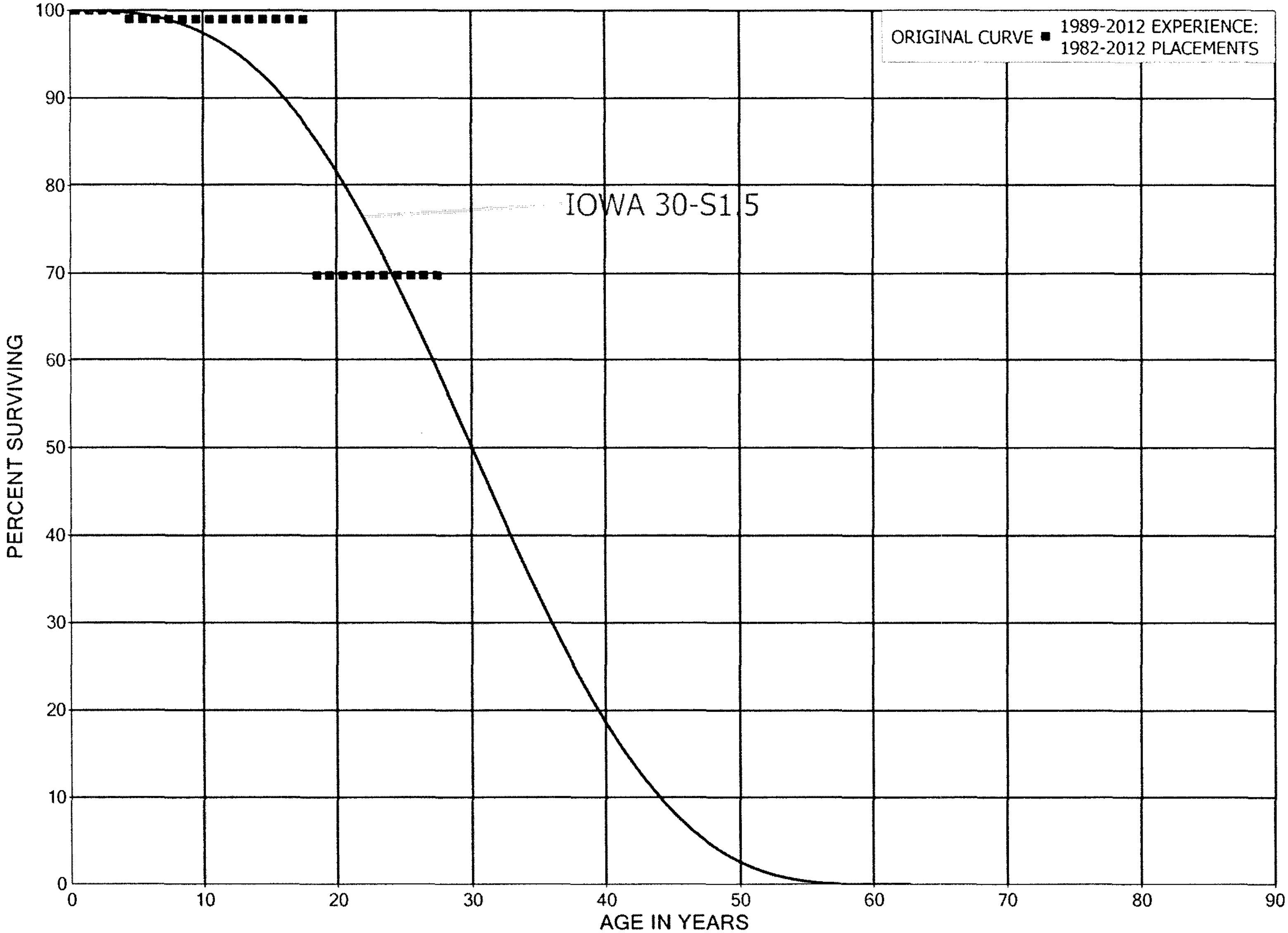
PLACEMENT BAND 1954-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	6,194		0.0000	1.0000	4.22
40.5	6,194		0.0000	1.0000	4.22
41.5	6,194		0.0000	1.0000	4.22
42.5	6,194		0.0000	1.0000	4.22
43.5	6,194		0.0000	1.0000	4.22
44.5	6,194		0.0000	1.0000	4.22
45.5	6,194		0.0000	1.0000	4.22
46.5	6,194		0.0000	1.0000	4.22
47.5	6,194		0.0000	1.0000	4.22
48.5	6,194		0.0000	1.0000	4.22
49.5	4,473		0.0000	1.0000	4.22
50.5	4,473		0.0000	1.0000	4.22
51.5	1,823		0.0000	1.0000	4.22
52.5	1,823		0.0000	1.0000	4.22
53.5	1,823		0.0000	1.0000	4.22
54.5	1,823		0.0000	1.0000	4.22
55.5	656		0.0000	1.0000	4.22
56.5	656		0.0000	1.0000	4.22
57.5	656		0.0000	1.0000	4.22
58.5					4.22

BLACK HILLS POWER

ACCOUNTS 396.01 AND 396.02 POWER OPERATED EQUIPMENT

ORIGINAL AND SMOOTH SURVIVOR CURVES



BLACK HILLS POWER

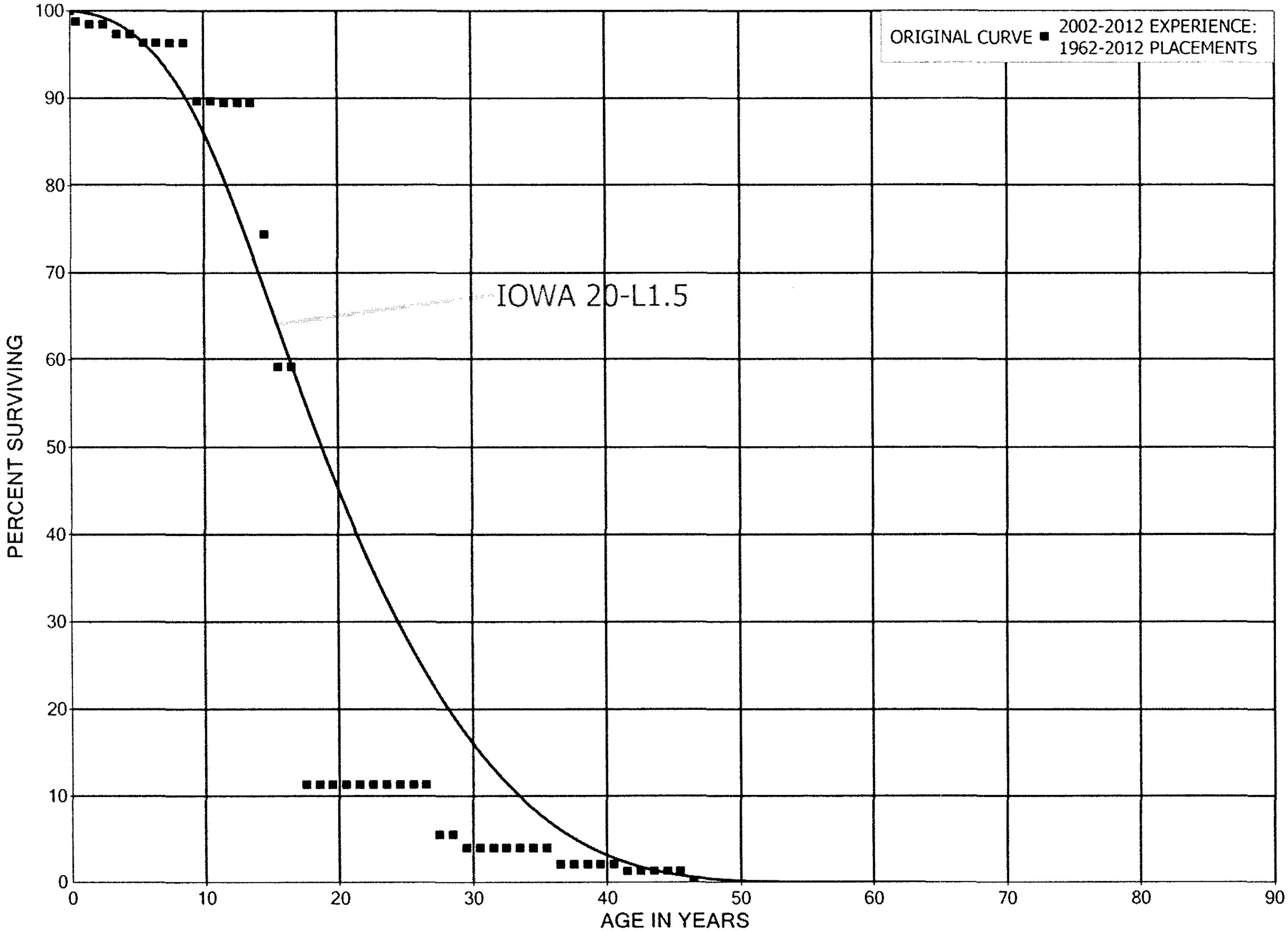
ACCOUNTS 396.01 AND 396.02 POWER OPERATED EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1982-2012 EXPERIENCE BAND 1989-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	817,296		0.0000	1.0000	100.00
0.5	752,971		0.0000	1.0000	100.00
1.5	636,935		0.0000	1.0000	100.00
2.5	558,306		0.0000	1.0000	100.00
3.5	338,495	3,643	0.0108	0.9892	100.00
4.5	244,782		0.0000	1.0000	98.92
5.5	244,782		0.0000	1.0000	98.92
6.5	244,782		0.0000	1.0000	98.92
7.5	149,555		0.0000	1.0000	98.92
8.5	96,814		0.0000	1.0000	98.92
9.5	96,814		0.0000	1.0000	98.92
10.5	96,814		0.0000	1.0000	98.92
11.5	61,445		0.0000	1.0000	98.92
12.5	61,445		0.0000	1.0000	98.92
13.5	61,445		0.0000	1.0000	98.92
14.5	61,445		0.0000	1.0000	98.92
15.5	61,445		0.0000	1.0000	98.92
16.5	61,445		0.0000	1.0000	98.92
17.5	61,445	18,117	0.2949	0.7051	98.92
18.5	43,328		0.0000	1.0000	69.76
19.5	43,328		0.0000	1.0000	69.76
20.5	43,328		0.0000	1.0000	69.76
21.5	43,328		0.0000	1.0000	69.76
22.5	5,343		0.0000	1.0000	69.76
23.5	5,343		0.0000	1.0000	69.76
24.5	5,343		0.0000	1.0000	69.76
25.5	5,343		0.0000	1.0000	69.76
26.5	5,343		0.0000	1.0000	69.76
27.5					69.76

BLACK HILLS POWER
ACCOUNT 397.1 COMMUNICATION EQUIPMENT - TOWERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



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BLACK HILLS POWER

ACCOUNT 397.1 COMMUNICATION EQUIPMENT - TOWERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1962-2012 EXPERIENCE BAND 2002-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	4,506,567	58,801	0.0130	0.9870	100.00
0.5	4,440,013	12,650	0.0028	0.9972	98.70
1.5	4,367,424		0.0000	1.0000	98.41
2.5	4,372,480	48,258	0.0110	0.9890	98.41
3.5	4,223,222		0.0000	1.0000	97.33
4.5	1,886,092	19,185	0.0102	0.9898	97.33
5.5	1,189,324		0.0000	1.0000	96.34
6.5	335,484		0.0000	1.0000	96.34
7.5	325,543		0.0000	1.0000	96.34
8.5	47,952	3,346	0.0698	0.9302	96.34
9.5	44,399		0.0000	1.0000	89.62
10.5	39,232	101	0.0026	0.9974	89.62
11.5	38,672		0.0000	1.0000	89.38
12.5	38,624		0.0000	1.0000	89.38
13.5	32,602	5,470	0.1678	0.8322	89.38
14.5	27,132	5,537	0.2041	0.7959	74.39
15.5	13,940		0.0000	1.0000	59.21
16.5	13,940	11,274	0.8087	0.1913	59.21
17.5	2,667		0.0000	1.0000	11.33
18.5	8,473		0.0000	1.0000	11.33
19.5	7,009		0.0000	1.0000	11.33
20.5	24,514		0.0000	1.0000	11.33
21.5	24,514		0.0000	1.0000	11.33
22.5	34,070		0.0000	1.0000	11.33
23.5	34,070		0.0000	1.0000	11.33
24.5	34,070		0.0000	1.0000	11.33
25.5	34,070		0.0000	1.0000	11.33
26.5	34,070	17,505	0.5138	0.4862	11.33
27.5	16,565		0.0000	1.0000	5.51
28.5	16,565	4,761	0.2874	0.7126	5.51
29.5	8,056		0.0000	1.0000	3.92
30.5	8,056		0.0000	1.0000	3.92
31.5	8,056		0.0000	1.0000	3.92
32.5	8,056		0.0000	1.0000	3.92
33.5	3,261		0.0000	1.0000	3.92
34.5	6,930		0.0000	1.0000	3.92
35.5	6,930	3,261	0.4705	0.5295	3.92
36.5	3,669		0.0000	1.0000	2.08
37.5	3,669		0.0000	1.0000	2.08
38.5	3,669		0.0000	1.0000	2.08

BLACK HILLS POWER

ACCOUNT 397.1 COMMUNICATION EQUIPMENT - TOWERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1962-2012 EXPERIENCE BAND 2002-2012

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	7,261		0.0000	1.0000	2.08
40.5	7,261	2,822	0.3887	0.6113	2.08
41.5	4,439		0.0000	1.0000	1.27
42.5	4,439		0.0000	1.0000	1.27
43.5	4,439		0.0000	1.0000	1.27
44.5	4,439		0.0000	1.0000	1.27
45.5	3,592	3,592	1.0000		1.27
46.5					

III-118 NET SALVAGE STATISTICS

BLACK HILLS POWER

TABLE 1. CALCULATION OF TERMINAL AND INTERIM RETIREMENTS AS A PERCENT OF TOTAL RETIREMENTS

Location	Total Projected Retirements	Total Terminal Retirements Amount	Total Terminal Retirements (%)	Total Interim Retirements Amount	Total Interim Retirements (%)
(1)	(2)	(3)	(4)=(3)/(2)	(5)	(6)=(5)/(2)
Ben French Station	(14,267,643)	(14,090,268)	98.76	(177,375)	1.24
Neil Simpson I	(22,268,009)	(22,056,844)	99.05	(211,165)	0.95
Neil Simpson II	(143,599,317)	(100,995,752)	70.33	(42,603,565)	29.67
Osage Plant	(17,979,086)	(17,756,086)	98.76	(223,000)	1.24
WY GEN 3	(130,212,144)	(78,428,792)	60.23	(51,783,352)	39.77
Wyodak Plant	(109,211,515)	(84,551,750)	77.42	(24,659,765)	22.58
	(437,537,714)	(317,879,492)		(119,658,222)	
Ben French CT	(18,635,323)	(10,778,671)	57.84	(7,856,652)	42.16
Ben French Diesel	(991,557)	(725,309)	73.15	(266,247)	26.85
Lange CT	(30,342,878)	(16,964,452)	55.91	(13,378,425)	44.09
Neil Simpson CT	(29,976,525)	(17,632,678)	58.82	(12,343,846)	41.18
	(79,946,282)	(46,101,111)		(33,845,171)	

BLACK HILLS POWER

TABLE 2. CALCULATION OF WEIGHTED NET SALVAGE PERCENT

Location	Terminal Retirements: Retirements (%)	Terminal Retirements: Net Salvage (%)	Interim Retirements: Retirements (%)	Interim Retirements: Net Salvage (%)	Weighted Average Net Salvage %
(1)	(2)	(3)	(4)	(5)	(6)=(2)*(3)+(4)*(5)
Ben French Station	98.76	(28)	1.24	(20)	(28)
Neil Simpson I	99.05	(13)	0.95	(20)	(13)
Neil Simpson II	70.33	(12)	29.67	(20)	(14)
Osage Plant	98.76	(22)	1.24	(20)	(22)
WY GEN 3	60.23	(9)	39.77	(20)	(13)
Wyodak Plant	77.42	(11)	22.58	(20)	(13)
Ben French CT	57.84	(19)	42.16	(5)	(13)
Ben French Diesel	73.15	(28)	26.85	(5)	(22)
Lange CT	55.91	(5)	44.09	(5)	(5)
Neil Simpson CT	58.82	(5)	41.18	(5)	(5)

BLACK HILLS POWER

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	521,670		0		0	120,150	23	120,150	23
1998	136,832	3,205	2		0		0	3,205-	2-
1999	74,467	7,136	10		0		0	7,136-	10-
2000	56,726	55,946	99		0	1,610	3	54,336-	96-
2001									
2002	16,750	644	4		0		0	644-	4-
2003									
2004	43,133	1,200	3		0		0	1,200-	3-
2005									
2006	9,028		0		0		0		0
2007	100,304	8,399	8		0		0	8,399-	8-
2008		3,563						3,563-	
2009	277,476	15,156	5		0		0	15,156-	5-
2010	14,793	10,517	71		0		0	10,517-	71-
2011	166,496	6,688	4		0	59,729	36	53,041	32
2012	85,125	60,401	71		0		0	60,401-	71-
TOTAL	1,502,798	172,855	12		0	181,489	12	8,634	1

THREE-YEAR MOVING AVERAGES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
97-99	244,323	3,447	1		0	40,050	16	36,603	15
98-00	89,342	22,096	25		0	537	1	21,559-	24-
99-01	43,731	21,027	48		0	537	1	20,491-	47-
00-02	24,492	18,863	77		0	537	2	18,327-	75-
01-03	5,583	215	4		0		0	215-	4-
02-04	19,961	615	3		0		0	615-	3-
03-05	14,378	400	3		0		0	400-	3-
04-06	17,387	400	2		0		0	400-	2-
05-07	36,444	2,800	8		0		0	2,800-	8-
06-08	36,444	3,987	11		0		0	3,987-	11-
07-09	125,927	9,039	7		0		0	9,039-	7-
08-10	97,423	9,745	10		0		0	9,745-	10-
09-11	152,921	10,787	7		0	19,910	13	9,123	6
10-12	88,804	25,869	29		0	19,910	22	5,959-	7-

FIVE-YEAR AVERAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
08-12	108,778	19,265	18		0	11,946	11	7,319-	7-

BLACK HILLS POWER

ACCOUNT 312.01 BOILER PLANT EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	9,642		0		0	8,940	93	8,940	93
1998	55,314	16,500	30		0		0	16,500-	30-
1999	957,293	77,602	8		0	11,376	1	66,226-	7-
2000	105,652	404,072	382		0	12,790	12	391,282-	370-
2001	339,562	500	0		0	93,433	28	92,933	27
2002	68,416	6,395	9		0		0	6,395-	9-
2003	16,789	715	4		0		0	715-	4-
2004	153,320	11,384	7		0	600	0	10,784-	7-
2005	19,699	1,693	9		0		0	1,693-	9-
2006	156,616	59,063	38		0		0	59,063-	38-
2007	4,236,445	394,063	9	1,695	0		0	392,368-	9-
2008	35,265	51,862	147		0		0	51,862-	147-
2009	333,334	136,711	41	3,695	1		0	133,016-	40-
2010	1,926,356	1,274,294	66	2,457	0		0	1,271,837-	66-
2011	9,853,857	1,044,947	11		0	4,379	0	1,040,568-	11-
2012	2,012,433	698,664	35		0	19,183	1	679,481-	34-
TOTAL	20,279,991	4,178,464	21	7,847	0	150,700	1	4,019,917-	20-
THREE-YEAR MOVING AVERAGES									
97-99	340,749	31,367	9		0	6,772	2	24,595-	7-
98-00	372,753	166,058	45		0	8,055	2	158,003-	42-
99-01	467,502	160,725	34		0	39,200	8	121,525-	26-
00-02	171,210	136,989	80		0	35,408	21	101,581-	59-
01-03	141,589	2,537	2		0	31,144	22	28,608	20
02-04	79,508	6,165	8		0	200	0	5,965-	8-
03-05	63,269	4,597	7		0	200	0	4,397-	7-
04-06	109,878	24,047	22		0	200	0	23,847-	22-
05-07	1,470,920	151,606	10	565	0		0	151,041-	10-
06-08	1,476,109	168,329	11	565	0		0	167,764-	11-
07-09	1,535,015	194,212	13	1,797	0		0	192,415-	13-
08-10	764,985	487,622	64	2,051	0		0	485,572-	63-
09-11	4,037,849	818,651	20	2,051	0	1,460	0	815,141-	20-
10-12	4,597,549	1,005,968	22	819	0	7,854	0	997,296-	22-
FIVE-YEAR AVERAGE									
08-12	2,832,249	641,296	23	1,230	0	4,712	0	635,353-	22-

BLACK HILLS POWER

ACCOUNT 314 TURBOGENERATOR UNITS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	REUSE PCT	GROSS SALVAGE FINAL AMOUNT	FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	7,929		0		0		0		0
1998									
1999	73,635	83,231	113		0		0	83,231-	113-
2000		50,609				2,900		47,709-	
2001									
2002	159,525	1,701	1		0		0	1,701-	1-
2003									
2004	1,973	500	25		0		0	500-	25-
2005	3,081	250	8		0		0	250-	8-
2006	192,000	71,844	37		0		0	71,844-	37-
2007	494,573	51,681	10		0		0	51,681-	10-
2008	131,971	58,829	45		0		0	58,829-	45-
2009	64,646	113,307	175		0		0	113,307-	175-
2010	706,747	82,008	12		0		0	82,008-	12-
2011	1,726,137	714,134	41		0		0	714,134-	41-
2012	880,485	277,613	32		0		0	277,613-	32-
TOTAL	4,442,702	1,505,706	34		0	2,900	0	1,502,806-	34-

THREE-YEAR MOVING AVERAGES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	REUSE PCT	GROSS SALVAGE FINAL AMOUNT	FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
97-99	27,188	27,744	102		0		0	27,744-	102-
98-00	24,545	44,613	182		0	967	4	43,646-	178-
99-01	24,545	44,613	182		0	967	4	43,646-	178-
00-02	53,175	17,437	33		0	967	2	16,470-	31-
01-03	53,175	567	1		0		0	567-	1-
02-04	53,833	734	1		0		0	734-	1-
03-05	1,685	250	15		0		0	250-	15-
04-06	65,685	24,198	37		0		0	24,198-	37-
05-07	229,885	41,258	18		0		0	41,258-	18-
06-08	272,848	60,785	22		0		0	60,785-	22-
07-09	230,397	74,606	32		0		0	74,606-	32-
08-10	301,121	84,714	28		0		0	84,714-	28-
09-11	832,510	303,149	36		0		0	303,149-	36-
10-12	1,104,456	357,918	32		0		0	357,918-	32-

FIVE-YEAR AVERAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	REUSE PCT	GROSS SALVAGE FINAL AMOUNT	FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
08-12	701,997	249,178	35		0		0	249,178-	35-

BLACK HILLS POWER

ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1998	31,044	240	1		0		0	240-	1-
1999	1,649	31	2		0		0	31-	2-
2000		16,502				548		15,954-	
2001									
2002	18,518	203	1		0		0	203-	1-
2003									
2004	20,735	2,000	10		0		0	2,000-	10-
2005	19,982	312	2		0		0	312-	2-
2006									
2007	45,222	3,416	8		0		0	3,416-	8-
2008	21,673	1,293	6		0		0	1,293-	6-
2009									
2010	7,797	750	10		0		0	750-	10-
2011	392,168	16,906	4		0		0	16,906-	4-
2012	2,794	6,449	231		0	54,670		48,221	
TOTAL	561,583	48,103	9		0	55,218	10	7,115	1

THREE-YEAR MOVING AVERAGES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
98-00	10,898	5,591	51		0	183	2	5,409-	50-
99-01	550	5,511			0	183	33	5,329-	970-
00-02	6,173	5,568	90		0	183	3	5,386-	87-
01-03	6,173	68	1		0		0	68-	1-
02-04	13,084	734	6		0		0	734-	6-
03-05	13,572	771	6		0		0	771-	6-
04-06	13,572	771	6		0		0	771-	6-
05-07	21,735	1,243	6		0		0	1,243-	6-
06-08	22,299	1,570	7		0		0	1,570-	7-
07-09	22,299	1,570	7		0		0	1,570-	7-
08-10	9,823	681	7		0		0	681-	7-
09-11	133,322	5,885	4		0		0	5,885-	4-
10-12	134,253	8,035	6		0	18,223	14	10,188	8

FIVE-YEAR AVERAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
08-12	84,887	5,080	6		0	10,934	13	5,854	7

BLACK HILLS POWER

ACCOUNT 316 MISCELLANEOUS POWER PLANT EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE REUSE AMOUNT	PCT	GROSS SALVAGE FINAL AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1997	7,352		0		0	910	12	910	12
1998									
1999									
2000		6,002				244		5,758-	
2001									
2002	27,363	800	3		0		0	800-	3-
2003									
2004	6,495		0		0		0		0
2005									
2006	9,360		0		0		0		0
2007	98,519	9,105	9		0		0	9,105-	9-
2008	6,826		0		0		0		0
2009	1,749		0		0		0		0
2010	14,022	1,006	7		0		0	1,006-	7-
2011	44,236	671	2	500	1		0	171-	0
2012	42,750	8,996	21		0		0	8,996-	21-
TOTAL	258,671	26,579	10	500	0	1,154	0	24,925-	10-

THREE-YEAR MOVING AVERAGES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE REUSE AMOUNT	PCT	GROSS SALVAGE FINAL AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
97-99	2,451		0		0	303	12	303	12
98-00		2,001				81		1,919-	
99-01		2,001				81		1,919-	
00-02	9,121	2,267	25		0	81	1	2,186-	24-
01-03	9,121	267	3		0		0	267-	3-
02-04	11,286	267	2		0		0	267-	2-
03-05	2,165		0		0		0		0
04-06	5,285		0		0		0		0
05-07	35,960	3,035	8		0		0	3,035-	8-
06-08	38,235	3,035	8		0		0	3,035-	8-
07-09	35,698	3,035	9		0		0	3,035-	9-
08-10	7,532	335	4		0		0	335-	4-
09-11	20,002	559	3	167	1		0	392-	2-
10-12	33,669	3,558	11	167	0		0	3,391-	10-

FIVE-YEAR AVERAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE REUSE AMOUNT	PCT	GROSS SALVAGE FINAL AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
08-12	21,916	2,134	10	100	0		0	2,034-	9-

BLACK HILLS POWER

ACCOUNT 342 FUEL HOLDERS AND ACCESSORIES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	355,724		0		0		0		0
1998									
1999									
2000									
2001									
2002									
2003									
2004									
2005									
2006									
2007									
2008									
2009	131,849	795	1		0		0	795-	1-
2010									
2011	10,000		0		0		0		0
2012	1,074	18,847			0		0	18,847-	
TOTAL	498,647	19,642	4		0		0	19,642-	4-
THREE-YEAR MOVING AVERAGES									
97-99	118,575		0		0		0		0
98-00									
99-01									
00-02									
01-03									
02-04									
03-05									
04-06									
05-07									
06-08									
07-09	43,950	265	1		0		0	265-	1-
08-10	43,950	265	1		0		0	265-	1-
09-11	47,283	265	1		0		0	265-	1-
10-12	3,691	6,282	170		0		0	6,282-	170-
FIVE-YEAR AVERAGE									
08-12	28,585	3,928	14		0		0	3,928-	14-

BLACK HILLS POWER

ACCOUNT 344.1 GENERATORS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	24,000	400	2		0		0	400-	2-
1998									
1999									
2000	290,000		0		0		0		0
2001									
2002	12,000	500	4		0		0	500-	4-
2003									
2004									
2005									
2006									
2007	400,621	16,827	4	13,874	3		0	2,953-	1-
2008									
2009	2,643,127	10,000	0		0		0	10,000-	0
2010									
2011	310,176	101,511	33		0		0	101,511-	33-
2012	105,546	6,836	6		0		0	6,836-	6-
TOTAL	3,785,470	136,074	4	13,874	0		0	122,200-	3-

THREE-YEAR MOVING AVERAGES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
97-99	8,000	133	2		0		0	133-	2-
98-00	96,667		0		0		0		0
99-01	96,667		0		0		0		0
00-02	100,667	167	0		0		0	167-	0
01-03	4,000	167	4		0		0	167-	4-
02-04	4,000	167	4		0		0	167-	4-
03-05									
04-06									
05-07	133,540	5,609	4	4,625	3		0	984-	1-
06-08	133,540	5,609	4	4,625	3		0	984-	1-
07-09	1,014,583	8,942	1	4,625	0		0	4,318-	0
08-10	881,042	3,333	0		0		0	3,333-	0
09-11	984,434	37,170	4		0		0	37,170-	4-
10-12	138,574	36,116	26		0		0	36,116-	26-

FIVE-YEAR AVERAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
08-12	611,770	23,669	4		0		0	23,669-	4-

BLACK HILLS POWER

ACCOUNT 345 ACCESSORY ELECTRIC EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
2009	3,000		0		0		0		0
2010	22,322	300	1		0		0	300-	1-
2011									
2012									
TOTAL	25,322	300	1		0		0	300-	1-

THREE-YEAR MOVING AVERAGES

09-11	8,441	100	1		0		0	100-	1-
10-12	7,441	100	1		0		0	100-	1-

BLACK HILLS POWER

ACCOUNT 346 MISCELLANEOUS POWER PLANT EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	REUSE PCT	GROSS SALVAGE FINAL AMOUNT	FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
2007	36,672		0		0		0		0
2008									
2009									
2010									
2011									
2012									
TOTAL	36,672		0		0		0		0
THREE-YEAR MOVING AVERAGES									
07-09	12,224		0		0		0		0
08-10									
09-11									
10-12									
FIVE-YEAR AVERAGE									
08-12									

BLACK HILLS POWER

ACCOUNT 352 STRUCTURES AND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	268	300	112		0		0	300-	112-
1998	2,017	100	5		0		0	100-	5-
1999									
2000									
2001									
2002									
2003									
2004									
2005									
2006	24,957	3,495	14	482	2		0	3,013-	12-
2007	1,413	300	21		0		0	300-	21-
2008									
2009									
2010									
2011									
2012									
TOTAL	28,655	4,195	15	482	2		0	3,713-	13-

THREE-YEAR MOVING AVERAGES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
97-99	762	133	18		0		0	133-	18-
98-00	672	33	5		0		0	33-	5-
99-01									
00-02									
01-03									
02-04									
03-05									
04-06	8,319	1,165	14	161	2		0	1,004-	12-
05-07	8,790	1,265	14	161	2		0	1,104-	13-
06-08	8,790	1,265	14	161	2		0	1,104-	13-
07-09	471	100	21		0		0	100-	21-
08-10									
09-11									
10-12									

FIVE-YEAR AVERAGE

08-12

BLACK HILLS POWER

ACCOUNT 353 STATION EQUIPMENT

SUMMARY OF BOOK SALVAGE

		COST OF		G R O S S	S A L V A G E			NET	
	REGULAR	REMOVAL		REUSE		FINAL		SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1997	368,823	9,062	2		0	4,598	1	4,465-	1-
1998	131,304	21,019	16		0	1,635	1	19,385-	15-
1999	667,993	31,004	5		0	13,145	2	17,859-	3-
2000	657,312	19,206	3		0	114,249	17	95,043	14
2001	816,139	21,576	3		0	2,974	0	18,602-	2-
2002	614,591	13,323	2		0	106,550	17	93,227	15
2003	84,811	13,647	16		0	20,563	24	6,916	8
2004	209,051	57,505	28		0	1,352	1	56,152-	27-
2005	15,575	2,820	18		0	28,267	181	25,447	163
2006	102,864	7,353	7	62,370	61		0	55,016	53
2007	393,930	12,840	3	3,000	1		0	9,840-	2-
2008	40,909		0		0		0		0
2009	153,722	26,640	17	1,522	1		0	25,118-	16-
2010									
2011	1,720,812	11,110	1		0		0	11,110-	1-
2012		291						291-	
TOTAL	5,977,835	247,398	4	66,891	1	293,334	5	112,827	2
THREE-YEAR MOVING AVERAGES									
97-99	389,373	20,362	5		0	6,459	2	13,903-	4-
98-00	485,536	23,743	5		0	43,010	9	19,266	4
99-01	713,815	23,929	3		0	43,456	6	19,527	3
00-02	696,014	18,035	3		0	74,591	11	56,556	8
01-03	505,180	16,182	3		0	43,363	9	27,180	5
02-04	302,818	28,158	9		0	42,822	14	14,664	5
03-05	103,146	24,657	24		0	16,727	16	7,930-	8-
04-06	109,163	22,559	21	20,790	19	9,873	9	8,104	7
05-07	170,790	7,671	4	21,790	13	9,422	6	23,541	14
06-08	179,234	6,731	4	21,790	12		0	15,059	8
07-09	196,187	13,160	7	1,507	1		0	11,653-	6-
08-10	64,877	8,880	14	507	1		0	8,373-	13-
09-11	624,844	12,583	2	507	0		0	12,076-	2-
10-12	573,604	3,800	1		0		0	3,800-	1-
FIVE-YEAR AVERAGE									
08-12	383,088	7,608	2	304	0		0	7,304-	2-

ACCOUNT 355 POLES AND FIXTURES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	221,868	94,031	42		0	84	0	93,947-	42-
1998	88,057	66,610	76		0	29,691	34	36,919-	42-
1999	12,638	10,131	80		0	1,382	11	8,749-	69-
2000	22,651	7,088	31		0	9,131	40	2,043	9
2001	7,363	2,482	34		0	135	2	2,347-	32-
2002	16,723	13,181	79		0	2,925	17	10,256-	61-
2003	418,467	251,512	60		0	81,395	19	170,117-	41-
2004	47,570	14,412	30		0	2,891	6	11,521-	24-
2005	1,517	3,435	226		0		0	3,435-	226-
2006	9,919	5,471	55		0		0	5,471-	55-
2007	3,510	789	22		0		0	789-	22-
2008	32,869	6,329	19	1,711	5		0	4,619-	14-
2009									
2010	6,182	7,500	121		0		0	7,500-	121-
2011	38,415	12,895	34		0		0	12,895-	34-
2012	63,057	22,000	35		0		0	22,000-	35-
TOTAL	990,806	517,865	52	1,711	0	127,634	13	388,520-	39-

THREE-YEAR MOVING AVERAGES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
97-99	107,521	56,924	53		0	10,386	10	46,538-	43-
98-00	41,115	27,943	68		0	13,401	33	14,541-	35-
99-01	14,217	6,567	46		0	3,550	25	3,017-	21-
00-02	15,579	7,583	49		0	4,064	26	3,520-	23-
01-03	147,518	89,058	60		0	28,152	19	60,907-	41-
02-04	160,920	93,035	58		0	29,070	18	63,965-	40-
03-05	155,851	89,786	58		0	28,095	18	61,691-	40-
04-06	19,669	7,772	40		0	964	5	6,809-	35-
05-07	4,982	3,231	65		0		0	3,231-	65-
06-08	15,433	4,196	27	570	4		0	3,626-	23-
07-09	12,126	2,373	20	570	5		0	1,802-	15-
08-10	13,017	4,610	35	570	4		0	4,040-	31-
09-11	14,866	6,798	46		0		0	6,798-	46-
10-12	35,885	14,132	39		0		0	14,132-	39-

FIVE-YEAR AVERAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
08-12	28,105	9,745	35	342	1		0	9,403-	33-

BLACK HILLS POWER

ACCOUNT 356 OVERHEAD CONDUCTORS AND DEVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	308,680	128,293	42		0	283,188	92	154,894	50
1998	74,108	52,536	71		0	21,566	29	30,970-	42-
1999	10,187	7,658	75		0	2,428	24	5,230-	51-
2000	1,067	2,586	242		0		0	2,586-	242-
2001									
2002	7,102	4,744	67		0	1,911	27	2,833-	40-
2003	401,919	200,318	50		0	119,063	30	81,255-	20-
2004	88,864	36,277	41		0	888	1	35,389-	40-
2005	199,666	132,608	66		0		0	132,608-	66-
2006									
2007									
2008	61,670	8,131	13	5,228	8		0	2,904-	5-
2009									
2010									
2011									
2012	6,095		0		0		0		0
TOTAL	1,159,358	573,152	49	5,228	0	429,043	37	138,881-	12-

THREE-YEAR MOVING AVERAGES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
97-99	130,992	62,829	48		0	102,394	78	39,565	30
98-00	28,454	20,927	74		0	7,998	28	12,929-	45-
99-01	3,751	3,415	91		0	809	22	2,605-	69-
00-02	2,723	2,443	90		0	637	23	1,806-	66-
01-03	136,340	68,354	50		0	40,325	30	28,029-	21-
02-04	165,962	80,446	48		0	40,621	24	39,826-	24-
03-05	230,150	123,068	53		0	39,984	17	83,084-	36-
04-06	96,177	56,295	59		0	296	0	55,999-	58-
05-07	66,555	44,203	66		0		0	44,203-	66-
06-08	20,557	2,710	13	1,743	8		0	968-	5-
07-09	20,557	2,710	13	1,743	8		0	968-	5-
08-10	20,557	2,710	13	1,743	8		0	968-	5-
09-11									
10-12	2,032		0		0		0		0

FIVE-YEAR AVERAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
08-12	13,553	1,626	12	1,046	8		0	581-	4-

BLACK HILLS POWER

ACCOUNT 359 ROADS AND TRAILS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	10,422		0		0		0		0
1998									
1999									
2000									
2001									
2002									
2003	10,677		0		0		0		0
2004									
2005									
2006									
2007									
2008									
2009									
2010									
2011									
2012									
TOTAL	21,099		0		0		0		0
THREE-YEAR MOVING AVERAGES									
97-99	3,474		0		0		0		0
98-00									
99-01									
00-02									
01-03	3,559		0		0		0		0
02-04	3,559		0		0		0		0
03-05	3,559		0		0		0		0
04-06									
05-07									
06-08									
07-09									
08-10									
09-11									
10-12									
FIVE-YEAR AVERAGE									
08-12									

BLACK HILLS POWER

ACCOUNTS 361 AND 361.05 STRUCTURES AND LAND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

		COST OF REMOVAL		GROSS SALVAGE				NET SALVAGE	
				REUSE		FINAL			
YEAR	REGULAR RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1999	14,314	16,641	116		0		0	16,641-	116-
2000									
2001									
2002									
2003									
2004		1,034						1,034-	
2005									
2006									
2007									
2008									
2009									
2010									
2011									
2012									
TOTAL	14,314	17,675	123		0		0	17,675-	123-

THREE-YEAR MOVING AVERAGES

99-01	4,771	5,547	116		0		0	5,547-	116-
00-02									
01-03									
02-04		345						345-	
03-05		345						345-	
04-06		345						345-	
05-07									
06-08									
07-09									
08-10									
09-11									
10-12									

FIVE-YEAR AVERAGE

08-12

BLACK HILLS POWER

ACCOUNT 362 STATION EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE REUSE AMOUNT	PCT	GROSS SALVAGE FINAL AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1997	363,317		0		0	56,504	16	56,504	16
1998	300,777	2,554	1		0	86,653	29	84,100	28
1999	105,635	1,648	2		0	135	0	1,513-	1-
2000	153,790	2,652	2		0	60,086	39	57,433	37
2001	54,594	4,432	8		0	9,602	18	5,170	9
2002	188,219	9,675	5		0	5,858	3	3,816-	2-
2003	197,661	35,160	18		0	16,616	8	18,543-	9-
2004	101,768	20,180	20		0	5,449	5	14,731-	14-
2005	337,508	39,981	12		0	142,915	42	102,934	30
2006	1,075,019	151,340	14	284,961	27		0	133,621	12
2007	509,678	23,271	5	134,305	26		0	111,034	22
2008	264,709	88,938	34	7,297	3		0	81,642-	31-
2009	229,670	47,812	21	1,337	1		0	46,475-	20-
2010	88,991	3,420	4	372	0		0	3,048-	3-
2011	107,978	18,018	17		0		0	18,018-	17-
2012	393,659	29,021	7		0		0	29,021-	7-
TOTAL	4,472,974	478,102	11	428,272	10	383,819	9	333,989	7
THREE-YEAR MOVING AVERAGES									
97-99	256,576	1,401	1		0	47,764	19	46,364	18
98-00	186,734	2,285	1		0	48,958	26	46,673	25
99-01	104,673	2,911	3		0	23,274	22	20,363	19
00-02	132,201	5,586	4		0	25,182	19	19,596	15
01-03	146,825	16,422	11		0	10,692	7	5,730-	4-
02-04	162,549	21,671	13		0	9,308	6	12,364-	8-
03-05	212,312	31,774	15		0	54,994	26	23,220	11
04-06	504,765	70,500	14	94,987	19	49,455	10	73,941	15
05-07	640,735	71,531	11	139,755	22	47,638	7	115,863	18
06-08	616,469	87,850	14	142,188	23		0	54,338	9
07-09	334,686	53,340	16	47,646	14		0	5,694-	2-
08-10	194,457	46,723	24	3,002	2		0	43,721-	22-
09-11	142,213	23,083	16	570	0		0	22,514-	16-
10-12	196,876	16,820	9	124	0		0	16,696-	8-
FIVE-YEAR AVERAGE									
08-12	217,002	37,442	17	1,801	1		0	35,641-	16-

BLACK HILLS POWER

ACCOUNT 364 POLES, TOWERS AND FIXTURES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	REUSE PCT	GROSS SALVAGE FINAL AMOUNT	FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	66,330	91,691	138		0	21,540	32	70,151-	106-
1998	79,970	156,249	195		0	24,884	31	131,365-	164-
1999	50,953	63,138	124		0	18,473	36	44,665-	88-
2000	103,460	101,264	98		0	19,799	19	81,465-	79-
2001	160,304	198,590	124		0	30,319	19	168,271-	105-
2002	123,726	207,585	168		0	37,590	30	169,995-	137-
2003	72,011	126,247	175		0	13,972	19	112,275-	156-
2004	87,177	125,616	144		0	18,730	21	106,887-	123-
2005	221,358	220,162	99		0	57,913	26	162,249-	73-
2006	126,872	300,998	237	10,682	8		0	290,316-	229-
2007	650,135	485,307	75	78,039	12		0	407,269-	63-
2008	532,203	377,344	71	24,576	5		0	352,768-	66-
2009	91,560	178,702	195	13,977	15		0	164,726-	180-
2010	503,997	429,515	85	53,919	11		0	375,596-	75-
2011	205,581	170,587	83	7,342	4	8,071	4	155,174-	75-
2012	807,139	378,917	47	4,376	1	6,140	1	368,401-	46-
TOTAL	3,882,777	3,611,912	93	192,911	5	257,430	7	3,161,572-	81-

THREE-YEAR MOVING AVERAGES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	REUSE PCT	GROSS SALVAGE FINAL AMOUNT	FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
97-99	65,751	103,693	158		0	21,632	33	82,060-	125-
98-00	78,128	106,884	137		0	21,052	27	85,832-	110-
99-01	104,906	120,997	115		0	22,864	22	98,134-	94-
00-02	129,163	169,146	131		0	29,236	23	139,910-	108-
01-03	118,680	177,474	150		0	27,294	23	150,180-	127-
02-04	94,305	153,149	162		0	23,430	25	129,719-	138-
03-05	126,849	157,342	124		0	30,205	24	127,137-	100-
04-06	145,136	215,592	149	3,561	2	25,547	18	186,484-	128-
05-07	332,788	335,489	101	29,574	9	19,304	6	286,611-	86-
06-08	436,403	387,883	89	37,766	9		0	350,118-	80-
07-09	424,633	347,118	82	38,864	9		0	308,254-	73-
08-10	375,920	328,520	87	30,824	8		0	297,696-	79-
09-11	267,046	259,602	97	25,079	9	2,690	1	231,832-	87-
10-12	505,572	326,340	65	21,879	4	4,737	1	299,724-	59-

FIVE-YEAR AVERAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	REUSE PCT	GROSS SALVAGE FINAL AMOUNT	FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
08-12	428,096	307,013	72	20,838	5	2,842	1	283,333-	66-

BLACK HILLS POWER

ACCOUNT 365 OVERHEAD CONDUCTORS AND DEVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	37,983	48,754	128		0	17,914	47	30,840-	81-
1998	182,891	111,632	61		0	43,001	24	68,631-	38-
1999	41,369	35,216	85		0	11,972	29	23,244-	56-
2000	45,916	25,039	55		0	6,937	15	18,102-	39-
2001	97,184	79,078	81		0	17,041	18	62,037-	64-
2002	82,589	98,863	120		0	26,558	32	72,305-	88-
2003	113,230	104,561	92		0	22,615	20	81,946-	72-
2004	60,885	51,326	84		0	15,207	25	36,120-	59-
2005	154,396	102,493	66		0	39,305	25	63,188-	41-
2006	76,101	103,553	136	9,768	13		0	93,785-	123-
2007	424,773	315,572	74	662,668	156		0	347,096	82
2008	326,440	243,024	74	330,654	101		0	87,631	27
2009	137,018	60,254	44	13,154	10		0	47,100-	34-
2010	171,422	109,642	64	16,072	9		0	93,570-	55-
2011	223,457	61,931	28	2,237	1	8,944	4	50,750-	23-
2012	759,735	288,059	38	2,197	0	3,004	0	282,857-	37-
TOTAL	2,935,389	1,838,998	63	1,036,750	35	212,499	7	589,748-	20-

THREE-YEAR MOVING AVERAGES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
97-99	87,414	65,201	75		0	24,296	28	40,905-	47-
98-00	90,059	57,296	64		0	20,637	23	36,659-	41-
99-01	61,490	46,444	76		0	11,983	19	34,461-	56-
00-02	75,230	67,660	90		0	16,845	22	50,815-	68-
01-03	97,668	94,167	96		0	22,071	23	72,096-	74-
02-04	85,568	84,917	99		0	21,460	25	63,457-	74-
03-05	109,504	86,127	79		0	25,709	23	60,418-	55-
04-06	97,127	85,791	88	3,256	3	18,170	19	64,364-	66-
05-07	218,423	173,873	80	224,145	103	13,102	6	63,374	29
06-08	275,771	220,716	80	334,363	121		0	113,647	41
07-09	296,077	206,283	70	335,492	113		0	129,209	44
08-10	211,627	137,640	65	119,960	57		0	17,680-	8-
09-11	177,299	77,276	44	10,488	6	2,981	2	63,807-	36-
10-12	384,871	153,211	40	6,835	2	3,983	1	142,392-	37-

FIVE-YEAR AVERAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
08-12	323,614	152,582	47	72,863	23	2,390	1	77,329-	24-

BLACK HILLS POWER

ACCOUNT 366 UNDERGROUND CONDUIT

SUMMARY OF BOOK SALVAGE

		COST OF REMOVAL		GROSS SALVAGE				NET SALVAGE	
	REGULAR			REUSE		FINAL			
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2009	29,330	5,187	18	2,010	7		0	3,177-	11-
2010	36,717	2,803	8	1,314	4		0	1,489-	4-
2011	23,722	2,216	9	3,869	16		0	1,653	7
2012	80,293	5,275	7	84	0		0	5,192-	6-
TOTAL	170,062	15,481	9	7,277	4		0	8,204-	5-

THREE-YEAR MOVING AVERAGES

09-11	29,923	3,402	11	2,398	8		0	1,004-	3-
10-12	46,911	3,431	7	1,755	4		0	1,676-	4-

BLACK HILLS POWER

ACCOUNT 367 UNDERGROUND CONDUCTORS AND DEVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE REUSE AMOUNT	PCT	GROSS SALVAGE FINAL AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1997	58,227	7,849	13		0	7,696	13	153-	0
1998	253,385	13,292	5		0	11,217	4	2,075-	1-
1999	83,315	105	0		0	11,681	14	11,576	14
2000	284,595	1,479	1		0	23,287	8	21,808	8
2001	133,200	17,310	13		0	15,866	12	1,444-	1-
2002	193,848	2,968	2		0	7,722	4	4,754	2
2003	123,029	1,651	1		0	373	0	1,278-	1-
2004	110,926	1,095	1		0	7,267	7	6,172	6
2005	103,416	4,555	4		0	2,654	3	1,901-	2-
2006	149,026	17,615	12	1,027	1		0	16,588-	11-
2007	27,123	2,687	10	587	2		0	2,100-	8-
2008	72,373	13,589	19	1,338	2		0	12,250-	17-
2009	137,299	21,625	16	361	0		0	21,264-	15-
2010	83,193	8,954	11	1,419	2		0	7,534-	9-
2011	159,532	7,521	5	20,678	13		0	13,157	8
2012	190,522	11,795	6	13,717	7		0	1,922	1
TOTAL	2,163,010	134,089	6	39,128	2	87,762	4	7,198-	0
THREE-YEAR MOVING AVERAGES									
97-99	131,642	7,082	5		0	10,198	8	3,116	2
98-00	207,098	4,958	2		0	15,395	7	10,436	5
99-01	167,037	6,298	4		0	16,944	10	10,647	6
00-02	203,881	7,252	4		0	15,625	8	8,373	4
01-03	150,026	7,310	5		0	7,987	5	678	0
02-04	142,601	1,905	1		0	5,121	4	3,216	2
03-05	112,457	2,434	2		0	3,431	3	998	1
04-06	121,123	7,755	6	342	0	3,307	3	4,106-	3-
05-07	93,188	8,285	9	538	1	885	1	6,863-	7-
06-08	82,841	11,297	14	984	1		0	10,313-	12-
07-09	78,932	12,634	16	762	1		0	11,871-	15-
08-10	97,622	14,722	15	1,039	1		0	13,683-	14-
09-11	126,675	12,700	10	7,486	6		0	5,214-	4-
10-12	144,416	9,423	7	11,938	8		0	2,515	2
FIVE-YEAR AVERAGE									
08-12	128,584	12,697	10	7,503	6		0	5,194-	4-

BLACK HILLS POWER

ACCOUNTS 368.01 THROUGH 368.03 LINE TRANSFORMERS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	REUSE PCT	GROSS SALVAGE FINAL AMOUNT	FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	363,122		0		0	33,536	9	33,536	9
1998	378,097	1,750	0		0	15,415	4	13,665	4
1999	211,079	420	0		0	48,815	23	48,394	23
2000	368,799	322	0		0	35,239	10	34,916	9
2001	256,952	9,483	4		0	21,836	8	12,353	5
2002	295,000	26,504	9		0	17,832	6	8,672-	3-
2003	310,549		0		0	24,969	8	24,969	8
2004	359,180	2,571	1		0	53,736	15	51,165	14
2005	222,337	2,687	1		0	25,907	12	23,220	10
2006	282,089	10,229	4	72,714	26		0	62,485	22
2007	364,469	9,871	3	194,438	53		0	184,566	51
2008	209,124	7,271	3	133,982	64		0	126,711	61
2009	189,988	2,119	1	41,295	22		0	39,176	21
2010	271,741	602	0	20,015	7	34,535	13	53,949	20
2011	418,408	6,864	2	116	0	111,569	27	104,821	25
2012	572,180	21	0		0	37,959	7	37,938	7
TOTAL	5,073,113	80,715	2	462,560	9	461,346	9	843,191	17
THREE-YEAR MOVING AVERAGES									
97-99	317,433	723	0		0	32,589	10	31,865	10
98-00	319,325	831	0		0	33,156	10	32,325	10
99-01	278,943	3,409	1		0	35,296	13	31,888	11
00-02	306,917	12,103	4		0	24,969	8	12,866	4
01-03	287,500	11,996	4		0	21,545	7	9,550	3
02-04	321,576	9,692	3		0	32,179	10	22,487	7
03-05	297,355	1,753	1		0	34,870	12	33,118	11
04-06	287,869	5,162	2	24,238	8	26,548	9	45,623	16
05-07	289,632	7,596	3	89,051	31	8,636	3	90,090	31
06-08	285,227	9,124	3	133,711	47		0	124,587	44
07-09	254,527	6,420	3	123,238	48		0	116,818	46
08-10	223,618	3,330	1	65,097	29	11,512	5	73,278	33
09-11	293,379	3,195	1	20,475	7	48,701	17	65,982	22
10-12	420,776	2,496	1	6,710	2	61,354	15	65,569	16
FIVE-YEAR AVERAGE									
08-12	332,288	3,375	1	39,082	12	36,813	11	72,519	22

BLACK HILLS POWER

ACCOUNTS 369.01 AND 369.02 SERVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	REUSE PCT	GROSS SALVAGE FINAL AMOUNT	FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	15,669	9,142	58		0	11,221	72	2,080	13
1998	19,655	13,620	69		0	7,118	36	6,503-	33-
1999	11,359	5,253	46		0	3,442	30	1,811-	16-
2000	10,655	8,485	80		0	4,836	45	3,648-	34-
2001	10,211	7,759	76		0	2,525	25	5,233-	51-
2002	13,826	13,001	94		0	4,616	33	8,386-	61-
2003	9,818	6,791	69		0	2,727	28	4,064-	41-
2004	8,201	10,149	124		0	1,895	23	8,254-	101-
2005	9,365	6,111	65		0	1,908	20	4,204-	45-
2006	12,787	11,830	93	835	7		0	10,996-	86-
2007	8,923	19,226	215	1,861	21		0	17,365-	195-
2008	9,107	14,321	157	1,540	17		0	12,780-	140-
2009	6,550	4,076	62	471	7		0	3,606-	55-
2010	5,457	5,071	93	1,311	24		0	3,760-	69-
2011	18,998	466	2	267	1		0	200-	1-
2012	12,023	2,556	21		0		0	2,556-	21-
TOTAL	182,604	137,857	75	6,284	3	40,288	22	91,285-	50-

THREE-YEAR MOVING AVERAGES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	REUSE PCT	GROSS SALVAGE FINAL AMOUNT	FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
97-99	15,561	9,338	60		0	7,260	47	2,078-	13-
98-00	13,890	9,119	66		0	5,132	37	3,987-	29-
99-01	10,742	7,165	67		0	3,601	34	3,564-	33-
00-02	11,564	9,748	84		0	3,992	35	5,756-	50-
01-03	11,285	9,184	81		0	3,289	29	5,894-	52-
02-04	10,615	9,980	94		0	3,079	29	6,901-	65-
03-05	9,128	7,684	84		0	2,176	24	5,507-	60-
04-06	10,118	9,363	93	278	3	1,267	13	7,818-	77-
05-07	10,358	12,389	120	898	9	636	6	10,855-	105-
06-08	10,272	15,126	147	1,412	14		0	13,714-	134-
07-09	8,193	12,541	153	1,291	16		0	11,250-	137-
08-10	7,038	7,823	111	1,107	16		0	6,715-	95-
09-11	10,335	3,205	31	683	7		0	2,522-	24-
10-12	12,159	2,698	22	526	4		0	2,172-	18-

FIVE-YEAR AVERAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	REUSE PCT	GROSS SALVAGE FINAL AMOUNT	FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
08-12	10,427	5,298	51	718	7		0	4,580-	44-

BLACK HILLS POWER

ACCOUNTS 370.01 AND 370.04 METERS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	512	717	140		0	242	47	475-	93-
1998	18,023	40	0		0	48	0	8	0
1999									
2000									
2001									
2002	115		0		0	53	46	53	46
2003	20		0		0		0		0
2004	2,126		0		0	1,266	60	1,266	60
2005	4,588	17	0		0	4,761	104	4,744	103
2006	4,578		0	4,578	100		0	4,578	100
2007									
2008	2,704,139		0		0		0		0
2009	141,884		0		0		0		0
2010	7,734,738		0		0		0		0
2011									
2012	10,007		0		0		0		0
TOTAL	10,620,729	774	0	4,578	0	6,370	0	10,174	0
THREE-YEAR MOVING AVERAGES									
97-99	6,178	252	4		0	97	2	155-	3-
98-00	6,008	13	0		0	16	0	3	0
99-01									
00-02	38		0		0	18	46	18	46
01-03	45		0		0	18	39	18	39
02-04	754		0		0	440	58	440	58
03-05	2,245	6	0		0	2,009	90	2,003	89
04-06	3,764	6	0	1,526	41	2,009	53	3,529	94
05-07	3,055	6	0	1,526	50	1,587	52	3,107	102
06-08	902,906		0	1,526	0		0	1,526	0
07-09	948,674		0		0		0		0
08-10	3,526,920		0		0		0		0
09-11	2,625,540		0		0		0		0
10-12	2,581,581		0		0		0		0
FIVE-YEAR AVERAGE									
08-12	2,118,153		0		0		0		0

BLACK HILLS POWER

ACCOUNT 371 INSTALLATIONS ON CUSTOMER PREMISES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	22,983	5,522	24		0	8,454	37	2,932	13
1998	13,469	6,902	51		0	3,016	22	3,886-	29-
1999	11,792	3,318	28		0	3,295	28	23-	0
2000	22,660	5,747	25		0	5,444	24	303-	1-
2001	9,683	3,716	38		0	2,617	27	1,099-	11-
2002	17,347	5,764	33		0	6,497	37	733	4
2003	28,755	5,779	20		0	2,745	10	3,034-	11-
2004	19,894	3,491	18		0	4,164	21	673	3
2005	11,852	2,421	20		0	1,689	14	733-	6-
2006	9,970	7,699	77	1,304	13		0	6,395-	64-
2007	17,112	9,484	55	1,791	10		0	7,693-	45-
2008	9,598	3,618	38	794	8		0	2,824-	29-
2009	5,599	1,862	33	1,100	20		0	762-	14-
2010	2,221	639	29	1,018	46		0	379	17
2011	12,814	804	6	785	6		0	20-	0
2012	9,002	624	7		0		0	624-	7-
TOTAL	224,751	67,390	30	6,791	3	37,921	17	22,677-	10-
THREE-YEAR MOVING AVERAGES									
97-99	16,081	5,247	33		0	4,922	31	326-	2-
98-00	15,974	5,322	33		0	3,918	25	1,404-	9-
99-01	14,712	4,260	29		0	3,785	26	475-	3-
00-02	16,563	5,076	31		0	4,853	29	223-	1-
01-03	18,595	5,086	27		0	3,953	21	1,133-	6-
02-04	21,999	5,012	23		0	4,469	20	543-	2-
03-05	20,167	3,897	19		0	2,866	14	1,031-	5-
04-06	13,905	4,537	33	435	3	1,951	14	2,151-	15-
05-07	12,978	6,535	50	1,032	8	563	4	4,940-	38-
06-08	12,227	6,934	57	1,296	11		0	5,637-	46-
07-09	10,770	4,988	46	1,228	11		0	3,760-	35-
08-10	5,806	2,039	35	971	17		0	1,069-	18-
09-11	6,878	1,102	16	967	14		0	134-	2-
10-12	8,012	689	9	601	7		0	88-	1-
FIVE-YEAR AVERAGE									
08-12	7,847	1,509	19	739	9		0	770-	10-

BLACK HILLS POWER

ACCOUNT 373 STREET LIGHTING AND SIGNAL SYSTEMS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	REUSE PCT	GROSS SALVAGE FINAL AMOUNT	FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	12,365	6,990	57		0	4,871	39	2,120-	17-
1998	17,318	3,344	19		0	2,508	14	836-	5-
1999	3,608	925	26		0	1,626	45	701	19
2000	11,837	5,693	48		0	4,960	42	733-	6-
2001	10,501	9,440	90		0	5,176	49	4,264-	41-
2002	4,483	2,022	45		0	3,530	79	1,507	34
2003	64,963	4,215	6		0	1,882	3	2,333-	4-
2004	6,397	6,339	99		0	2,713	42	3,626-	57-
2005	6,244	4,845	78		0	3,660	59	1,185-	19-
2006	3,476	3,983	115	1,494	43		0	2,489-	72-
2007	12,079	10,711	89	3,844	32		0	6,867-	57-
2008	9,536	6,999	73	1,519	16		0	5,480-	57-
2009	13,672	5,057	37	2,002	15		0	3,055-	22-
2010	5,324	1,060	20	1,131	21		0	71	1
2011	14,099	2	0	94	1		0	91	1
2012	8,055	1,025	13	35	0		0	990-	12-
TOTAL	203,958	72,652	36	10,119	5	30,926	15	31,607-	15-
THREE-YEAR MOVING AVERAGES									
97-99	11,097	3,753	34		0	3,001	27	752-	7-
98-00	10,921	3,321	30		0	3,031	28	289-	3-
99-01	8,649	5,353	62		0	3,921	45	1,432-	17-
00-02	8,940	5,719	64		0	4,555	51	1,163-	13-
01-03	26,649	5,226	20		0	3,529	13	1,697-	6-
02-04	25,281	4,192	17		0	2,708	11	1,484-	6-
03-05	25,868	5,133	20		0	2,752	11	2,381-	9-
04-06	5,372	5,056	94	498	9	2,124	40	2,433-	45-
05-07	7,266	6,513	90	1,779	24	1,220	17	3,514-	48-
06-08	8,364	7,231	86	2,286	27		0	4,945-	59-
07-09	11,762	7,589	65	2,455	21		0	5,134-	44-
08-10	9,511	4,372	46	1,551	16		0	2,821-	30-
09-11	11,032	2,040	18	1,076	10		0	964-	9-
10-12	9,159	696	8	420	5		0	276-	3-
FIVE-YEAR AVERAGE									
08-12	10,137	2,829	28	956	9		0	1,872-	18-

BLACK HILLS POWER

ACCOUNT 390.01 STRUCTURES AND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	7,725	500	6		0		0	500-	6-
1998	22,468	2,757	12		0	400	2	2,357-	10-
1999	37,892	6,548	17		0		0	6,548-	17-
2000	83,326	3,460	4		0		0	3,460-	4-
2001									
2002	67,723	12,248	18		0		0	12,248-	18-
2003	617,614	9,345	2		0		0	9,345-	2-
2004	35,790		0		0		0		0
2005	10,119	2,720	27		0		0	2,720-	27-
2006	12,471	4,450	36		0		0	4,450-	36-
2007	353,673	22,829	6		0		0	22,829-	6-
2008	13,548	805	6		0		0	805-	6-
2009	289,344	52,150	18		0		0	52,150-	18-
2010									
2011	14,461	4,350	30		0		0	4,350-	30-
2012	182,154	32,991	18		0		0	32,991-	18-
TOTAL	1,748,308	155,153	9		0	400	0	154,753-	9-
THREE-YEAR MOVING AVERAGES									
97-99	22,695	3,268	14		0	133	1	3,135-	14-
98-00	47,895	4,255	9		0	133	0	4,122-	9-
99-01	40,406	3,336	8		0		0	3,336-	8-
00-02	50,350	5,236	10		0		0	5,236-	10-
01-03	228,446	7,198	3		0		0	7,198-	3-
02-04	240,376	7,198	3		0		0	7,198-	3-
03-05	221,174	4,022	2		0		0	4,022-	2-
04-06	19,460	2,390	12		0		0	2,390-	12-
05-07	125,421	10,000	8		0		0	10,000-	8-
06-08	126,564	9,361	7		0		0	9,361-	7-
07-09	218,855	25,261	12		0		0	25,261-	12-
08-10	100,964	17,652	17		0		0	17,652-	17-
09-11	101,268	18,833	19		0		0	18,833-	19-
10-12	65,538	12,447	19		0		0	12,447-	19-
FIVE-YEAR AVERAGE									
08-12	99,901	18,059	18		0		0	18,059-	18-

BLACK HILLS POWER

ACCOUNTS 392.01 THROUGH 392.06 TRANSPORTATION EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
1997	474,226		0		0	160,517	34	160,517	34
1998	144,167		0		0	47,075	33	47,075	33
1999	10,158		0		0	2,200	22	2,200	22
2000	330,032		0		0	105,312	32	105,312	32
2001	169,661		0		0	29,270	17	29,270	17
2002	271,775		0		0	75,400	28	75,400	28
2003	207,247		0		0	27,423	13	27,423	13
2004	258,810		0		0	54,303	21	54,303	21
2005	407,763		0		0	123,232	30	123,232	30
2006	451,078		0	66,402	15		0	66,402	15
2007	149,564		0	12,402	8		0	12,402	8
2008	126,895		0	35,716	28		0	35,716	28
2009	456,297	11,300-	2-	86,619	19		0	97,919	21
2010	245,105		0	3,588	1	25,064	10	28,652	12
2011	257,722		0		0	63,711	25	63,711	25
2012	257,553		0		0	69,670	27	69,670	27
TOTAL	4,218,052	11,300-	0	204,727	5	783,176	19	999,203	24
THREE-YEAR MOVING AVERAGES									
97-99	209,517		0		0	69,931	33	69,931	33
98-00	161,452		0		0	51,529	32	51,529	32
99-01	169,950		0		0	45,594	27	45,594	27
00-02	257,156		0		0	69,994	27	69,994	27
01-03	216,228		0		0	44,031	20	44,031	20
02-04	245,944		0		0	52,375	21	52,375	21
03-05	291,273		0		0	68,319	23	68,319	23
04-06	372,550		0	22,134	6	59,178	16	81,312	22
05-07	336,135		0	26,268	8	41,077	12	67,345	20
06-08	242,512		0	38,173	16		0	38,173	16
07-09	244,252	3,767-	2-	44,912	18		0	48,679	20
08-10	276,099	3,767-	1-	41,974	15	8,355	3	54,096	20
09-11	319,708	3,767-	1-	30,069	9	29,592	9	63,427	20
10-12	253,460		0	1,196	0	52,815	21	54,011	21
FIVE-YEAR AVERAGE									
08-12	268,714	2,260-	1-	25,185	9	31,689	12	59,134	22

BLACK HILLS POWER

ACCOUNTS 396.01 AND 396.02 POWER OPERATED EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	COST OF REMOVAL PCT	GROSS SALVAGE REUSE AMOUNT	GROSS SALVAGE REUSE PCT	GROSS SALVAGE FINAL AMOUNT	GROSS SALVAGE FINAL PCT	NET SALVAGE AMOUNT	NET SALVAGE PCT
2007	18,117		0	4,951	27		0	4,951	27
2008									
2009									
2010									
2011									
2012									
TOTAL	18,117		0	4,951	27		0	4,951	27
THREE-YEAR MOVING AVERAGES									
07-09	6,039		0	1,650	27		0	1,650	27
08-10									
09-11									
10-12									
FIVE-YEAR AVERAGE									
08-12									

III-149

DEPRECIATION CALCULATIONS

BLACK HILLS POWER

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
BEN FRENCH STATION						
INTERIM SURVIVOR CURVE.. IOWA 80-R1.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -28						
1962	937,743.02	1,154,543	1,091,145	109,166	1.82	59,981
1966	1,830.21	2,247	2,124	219	1.82	120
1972	1,890.92	2,309	2,182	238	1.82	131
1974	15,879.00	19,348	18,286	2,040	1.82	1,121
1977	37,746.13	45,822	43,306	5,009	1.82	2,752
1980	58,612.83	70,840	66,950	8,074	1.82	4,436
1981	103,110.05	124,371	117,542	14,439	1.83	7,890
1982	47,347.42	57,010	53,879	6,725	1.83	3,675
1983	29,873.92	35,902	33,931	4,308	1.83	2,354
1984	136,429.74	163,630	154,645	19,985	1.83	10,921
1986	17,736.72	21,177	20,014	2,689	1.83	1,469
1987	128,571.82	153,124	144,716	19,856	1.83	10,850
1988	220,880.70	262,357	247,951	34,777	1.83	19,004
1989	9,155.73	10,843	10,248	1,472	1.83	804
1990	3,453.44	4,077	3,853	567	1.83	310
1991	40,109.25	47,184	44,593	6,747	1.83	3,687
1992	32,045.43	37,556	35,494	5,524	1.83	3,019
1993	42,529.11	49,634	46,909	7,529	1.83	4,114
1995	4,748.53	5,488	5,187	891	1.83	487
1996	16,842.58	19,356	18,293	3,265	1.83	1,784
2000	17,205.27	19,160	18,108	3,915	1.83	2,139
2002	25,329.65	27,539	26,027	6,395	1.83	3,495
2003	12,030.32	12,878	12,171	3,228	1.83	1,764
2004	100,652.36	105,743	99,936	28,899	1.83	15,792
2005	8,945.68	9,180	8,676	2,775	1.83	1,516
2006	14,575.75	14,518	13,721	4,936	1.83	2,697
2009	63,538.52	53,248	50,324	31,005	1.83	16,943
2010	89,029.12	65,572	61,971	51,986	1.83	28,408
2011	33,223.81	19,086	18,038	24,489	1.83	13,382
	2,251,067.03	2,613,742	2,470,217	411,149		225,045
NEIL SIMPSON I						
INTERIM SURVIVOR CURVE.. IOWA 80-R1.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -13						
1953	144,870.63	158,267	139,845	23,858	1.81	13,181
1958	20,203.71	22,013	19,451	3,379	1.82	1,857
1962	6,860.05	7,456	6,588	1,164	1.82	640

BLACK HILLS POWER

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
NEIL SIMPSON I						
INTERIM SURVIVOR CURVE.. IOWA 80-R1.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -13						
1966	2,038.52	2,209	1,952	352	1.82	193
1970	25,567.77	27,617	24,403	4,489	1.82	2,466
1971	729,870.36	787,607	695,933	128,821	1.82	70,781
1973	1,809.84	1,949	1,722	323	1.82	177
1977	109.51	117	103	20	1.82	11
1979	79,102.37	84,532	74,693	14,693	1.82	8,073
1980	10,009.53	10,680	9,437	1,874	1.82	1,030
1981	77,854.99	82,903	73,253	14,723	1.83	8,045
1982	262,578.67	279,113	246,625	50,088	1.83	27,370
1983	48,185.63	51,123	45,173	9,277	1.83	5,069
1984	4,997.79	5,292	4,676	971	1.83	531
1985	24,577.82	25,967	22,945	4,828	1.83	2,638
1986	24,188.80	25,496	22,528	4,805	1.83	2,626
1987	7,069.32	7,433	6,568	1,421	1.83	777
1988	7,835.68	8,216	7,260	1,595	1.83	872
1989	6,594.48	6,894	6,092	1,360	1.83	743
1990	91,834.21	95,708	84,568	19,205	1.83	10,495
1992	55,001.10	56,905	50,282	11,870	1.83	6,486
1993	24,915.28	25,670	22,682	5,472	1.83	2,990
1994	3,292.49	3,377	2,984	737	1.83	403
1995	41,923.30	42,777	37,798	9,575	1.83	5,232
1996	240,423.49	243,918	215,527	56,152	1.83	30,684
1998	11,349.24	11,358	10,036	2,789	1.83	1,524
2007	144,587.04	122,256	108,026	55,357	1.83	30,250
2008	105,667.47	84,665	74,810	44,594	1.83	24,368
2009	60,470.91	44,738	39,531	28,801	1.83	15,738
	2,263,790.00	2,326,256	2,055,490	502,593		275,250
NEIL SIMPSON II						
INTERIM SURVIVOR CURVE.. IOWA 80-R1.5						
PROBABLE RETIREMENT YEAR.. 6-2045						
NET SALVAGE PERCENT.. -14						
1989	29,316.47	13,710	16,054	17,366	29.82	582
1998	11,467,731.75	3,940,659	4,614,487	8,458,727	30.36	278,614
1999	1,137,713.23	371,783	435,356	861,637	30.41	28,334
2000	87,430.44	27,058	31,685	67,986	30.46	2,232
2002	5,393.17	1,466	1,717	4,432	30.56	145
2003	23,326.29	5,875	6,880	19,712	30.61	644

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
NEIL SIMPSON II						
INTERIM SURVIVOR CURVE.. IOWA 80-R1.5						
PROBABLE RETIREMENT YEAR.. 6-2045						
NET SALVAGE PERCENT.. -14						
2004	338,343.34	78,164	91,530	294,182	30.65	9,598
2006	82,845.35	15,380	18,010	76,434	30.74	2,486
2007	75,683.81	12,202	14,288	71,991	30.78	2,339
2009	2,207,254.84	239,071	279,951	2,236,320	30.86	72,467
2010	16,684.98	1,328	1,555	17,466	30.90	565
2011	110,814.53	5,469	6,404	119,924	30.94	3,876
2012	280,491.25	4,678	5,478	314,282	30.98	10,145
	15,863,029.45	4,716,843	5,523,394	12,560,460		412,027
OSAGE PLANT						
INTERIM SURVIVOR CURVE.. IOWA 80-R1.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -22						
1953	459,035.89	541,425	503,277	56,747	1.81	31,352
1958	5,274.24	6,204	5,767	668	1.82	367
1962	884.77	1,038	965	115	1.82	63
1972	6,187.42	7,201	6,694	855	1.82	470
1974	25,379.75	29,475	27,398	3,565	1.82	1,959
1978	32,681.97	37,762	35,101	4,771	1.82	2,621
1979	51,851.15	59,823	55,608	7,650	1.82	4,203
1980	381,005.52	438,899	407,974	56,852	1.82	31,237
1981	102,661.52	118,025	109,709	15,538	1.83	8,491
1982	38,599.72	44,298	41,177	5,915	1.83	3,232
1983	20,364.91	23,327	21,683	3,162	1.83	1,728
1984	257,528.23	294,394	273,651	40,533	1.83	22,149
1985	5,031.66	5,739	5,335	804	1.83	439
1986	400,962.91	456,297	424,147	65,028	1.83	35,534
1988	95,138.01	107,706	100,117	15,951	1.83	8,716
1989	185,226.29	209,075	194,344	31,632	1.83	17,285
1990	70,069.60	78,842	73,287	12,198	1.83	6,666
1991	17,369.16	19,475	18,103	3,088	1.83	1,687
1992	145,043.96	162,017	150,601	26,352	1.83	14,400
1993	501,546.19	557,894	518,585	93,301	1.83	50,984
1994	1,202,087.64	1,331,009	1,237,227	229,320	1.83	125,311
1995	84,032.87	92,573	86,050	16,470	1.83	9,000
1996	7,810.00	8,555	7,952	1,576	1.83	861
1997	1,680.05	1,829	1,700	350	1.83	191

BLACK HILLS POWER

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
OSAGE PLANT						
INTERIM SURVIVOR CURVE.. IOWA 80-R1.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -22						
1998	4,730.76	5,111	4,751	1,021	1.83	558
2004	2,721.15	2,725	2,533	787	1.83	430
2007	128,472.33	117,283	109,019	47,717	1.83	26,075
	4,233,377.67	4,758,001	4,422,755	741,966		406,009
WY GEN 3						
INTERIM SURVIVOR CURVE.. IOWA 80-R1.5						
PROBABLE RETIREMENT YEAR.. 6-2060						
NET SALVAGE PERCENT.. -13						
2010	6,799,493.56	376,718	417,254	7,266,174	43.64	166,503
	6,799,493.56	376,718	417,254	7,266,174		166,503
WYODAK PLANT						
INTERIM SURVIVOR CURVE.. IOWA 80-R1.5						
PROBABLE RETIREMENT YEAR.. 6-2039						
NET SALVAGE PERCENT.. -13						
1988	9,056.60	4,806	8,032	2,202	24.76	89
1991	8,090,276.99	4,002,099	6,688,338	2,453,675	24.89	98,581
1992	102,575.28	49,421	82,593	33,317	24.93	1,336
1994	35,264.59	16,022	26,776	13,073	25.00	523
1996	172,544.21	73,121	122,200	72,775	25.08	2,902
1999	209,852.03	78,244	130,762	106,371	25.18	4,224
2003	30,029.37	8,757	14,635	19,298	25.30	763
2004	41,586.90	11,161	18,652	28,341	25.33	1,119
2005	26,266.85	6,406	10,706	18,976	25.36	748
2006	139,283.53	30,337	50,699	106,691	25.38	4,204
2008	633.49	102	170	545	25.44	21

BLACK HILLS POWER

ACCOUNT 311 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WYODAK PLANT						
INTERIM SURVIVOR CURVE.. IOWA 80-R1.5						
PROBABLE RETIREMENT YEAR.. 6-2039						
NET SALVAGE PERCENT.. -13						
2009	260,864.49	33,731	56,372	238,405	25.46	9,364
2010	22,818.96	2,177	3,638	22,147	25.49	869
2012	23,936.60	489	817	26,231	25.54	1,027
	9,164,989.89	4,316,873	7,214,391	3,142,048		125,770
	40,575,747.60	19,108,433	22,103,501	24,624,390		1,610,604

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.3 3.97

BLACK HILLS POWER

ACCOUNT 312 BOILER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
BEN FRENCH STATION						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -28						
1960	375.00	461	407	73	1.79	41
1961	950.39	1,167	1,030	186	1.79	104
1962	1,969,412.87	2,417,670	2,134,301	386,548	1.79	215,949
1963	3,644.49	4,472	3,948	717	1.79	401
1966	9,473.26	11,599	10,240	1,886	1.80	1,048
1968	2,711.57	3,316	2,927	543	1.80	302
1970	52,751.47	64,402	56,854	10,668	1.80	5,927
1971	11,075.00	13,510	11,927	2,249	1.80	1,249
1976	18,086.97	21,947	19,375	3,777	1.81	2,087
1978	182,657.65	221,097	195,183	38,619	1.81	21,336
1979	2,122,346.36	2,565,533	2,264,833	451,771	1.81	249,597
1980	41,751.31	50,397	44,490	8,952	1.81	4,946
1981	63,517.03	76,552	67,580	13,722	1.81	7,581
1982	71,762.83	86,348	76,227	15,629	1.81	8,635
1983	12,951.86	15,557	13,734	2,845	1.81	1,572
1984	170,510.74	204,416	180,457	37,797	1.81	20,882
1985	23,790.13	28,463	25,127	5,324	1.81	2,941
1987	4,780.64	5,691	5,024	1,095	1.82	602
1988	70,248.53	83,411	73,635	16,284	1.82	8,947
1989	37,021.94	43,836	38,698	8,690	1.82	4,775
1990	22,956.70	27,099	23,923	5,462	1.82	3,001
1991	28,482.99	33,511	29,583	6,875	1.82	3,777
1992	104,063.38	121,983	107,686	25,515	1.82	14,019
1993	21,688.56	25,321	22,353	5,408	1.82	2,971
1994	35,581.65	41,354	36,507	9,038	1.82	4,966
1995	129,310.26	149,545	132,017	33,500	1.82	18,407
1997	11,942.92	13,649	12,049	3,238	1.82	1,779
1998	57,047.06	64,735	57,148	15,873	1.82	8,721
1999	30,381.17	34,198	30,190	8,698	1.82	4,779
2000	271,829.66	303,127	267,598	80,344	1.82	44,145
2002	19,483.83	21,198	18,713	6,226	1.83	3,402
2004	62,347.13	65,570	57,885	21,920	1.83	11,978
2005	22,791.74	23,420	20,675	8,498	1.83	4,644
2006	230,602.07	230,012	203,053	92,118	1.83	50,338
2007	192,872.60	184,990	163,308	83,569	1.83	45,666
2008	609,630.02	554,016	489,081	291,245	1.83	159,150

BLACK HILLS POWER

ACCOUNT 312 BOILER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
BEN FRENCH STATION						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -28						
2009	24,269.50	20,379	17,990	13,075	1.83	7,145
2010	45,384.02	33,540	29,609	28,483	1.83	15,564
2011	52,050.23	30,011	26,493	40,131	1.83	21,930
	6,842,535.53	7,897,503	6,971,855	1,786,590		985,304
NEIL SIMPSON I						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -13						
1966	14,998.41	16,212	12,012	4,936	1.80	2,742
1970	2,254,538.75	2,429,928	1,800,465	747,164	1.80	415,091
1974	432.84	465	345	145	1.80	81
1976	4,821.41	5,165	3,827	1,621	1.81	896
1977	678.74	726	538	229	1.81	127
1978	901.19	963	714	305	1.81	169
1979	1,562,216.90	1,667,136	1,235,271	530,034	1.81	292,836
1980	547,872.83	583,826	432,588	186,508	1.81	103,043
1981	117,771.95	125,308	92,847	40,235	1.81	22,229
1982	47,091.46	50,022	37,064	16,149	1.81	8,922
1983	19,301.49	20,466	15,164	6,646	1.81	3,672
1984	6,736.06	7,129	5,282	2,329	1.81	1,287
1985	9,524.03	10,059	7,453	3,309	1.81	1,828
1986	8,879.83	9,358	6,934	3,100	1.81	1,713
1988	259,069.77	271,563	201,216	91,533	1.82	50,293
1989	367,794.45	384,454	284,863	130,745	1.82	71,838
1990	38,437.80	40,056	29,680	13,755	1.82	7,558
1991	8,235.18	8,553	6,337	2,968	1.82	1,631
1992	4,817,213.58	4,985,004	3,693,658	1,749,793	1.82	961,425
1993	50,049.65	51,584	38,221	18,335	1.82	10,074
1995	177,858.07	181,585	134,546	66,433	1.82	36,502
1996	7,881.44	8,002	5,929	2,977	1.82	1,636
1998	356,529.01	357,163	264,641	138,236	1.82	75,954
1999	27,761.41	27,587	20,441	10,930	1.82	6,005
2000	103,033.55	101,432	75,156	41,271	1.82	22,676
2001	11,803.47	11,485	8,510	4,828	1.83	2,638
2002	11,591.37	11,134	8,250	4,848	1.83	2,649
2003	61,690.34	58,350	43,235	26,475	1.83	14,467
2004	142,428.93	132,239	97,983	62,962	1.83	34,405

BLACK HILLS POWER

ACCOUNT 312 BOILER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
NEIL SIMPSON I						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -13						
2005	3,675.76	3,335	2,471	1,683	1.83	920
2006	52,019.22	45,806	33,940	24,842	1.83	13,575
2007	336,141.64	284,622	210,892	168,948	1.83	92,321
2008	43,803.45	35,143	26,039	23,459	1.83	12,819
2009	2,475,422.28	1,835,037	1,359,678	1,437,549	1.83	785,546
2010	89,269.41	58,242	43,155	57,720	1.83	31,541
2011	290,349.32	147,790	109,506	218,589	1.83	119,448
	14,327,824.99	13,966,929	10,348,851	5,841,591		3,210,557
NEIL SIMPSON II						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2045						
NET SALVAGE PERCENT.. -14						
1997	28,757.81	11,092	10,973	21,811	27.30	799
1998	68,714,128.61	25,340,300	25,068,903	53,265,204	27.50	1,936,917
1999	816,011.49	286,537	283,468	646,785	27.70	23,350
2000	773,905.41	257,512	254,754	627,498	27.90	22,491
2001	75,546.77	23,676	23,422	62,701	28.09	2,232
2002	134,156.31	39,319	38,898	114,040	28.29	4,031
2003	54,044.37	14,678	14,521	47,090	28.49	1,653
2004	301,395.47	75,157	74,352	269,239	28.68	9,388
2005	17,111.03	3,862	3,821	15,686	28.88	543
2007	1,173,513.52	205,166	202,969	1,134,837	29.26	38,785
2009	2,104,706.73	247,495	244,844	2,154,521	29.65	72,665
2010	392,037.74	33,908	33,545	413,378	29.84	13,853
2011	968,881.61	51,880	51,324	1,053,201	30.03	35,072
2012	1,342,910.24	24,923	24,656	1,506,262	30.22	49,843
	76,897,107.11	26,615,505	26,330,450	61,332,252		2,211,622
OSAGE PLANT						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -22						
1953	1,154,884.31	1,356,701	1,182,540	226,419	1.78	127,202
1958	27,347.40	32,059	27,944	5,420	1.79	3,028

BLACK HILLS POWER

ACCOUNT 312 BOILER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
OSAGE PLANT						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -22						
1962	31,706.99	37,099	32,337	6,346	1.79	3,545
1966	6,742.64	7,869	6,859	1,367	1.80	759
1971	2,271.97	2,642	2,303	469	1.80	261
1973	631.33	733	639	131	1.80	73
1977	15,498.02	17,903	15,605	3,303	1.81	1,825
1979	2,965,940.68	3,417,226	2,978,554	639,894	1.81	353,533
1980	82,648.26	95,087	82,881	17,950	1.81	9,917
1981	125,205.29	143,827	125,364	27,387	1.81	15,131
1983	77,805.72	89,073	77,639	17,284	1.81	9,549
1984	25,083.93	28,662	24,983	5,620	1.81	3,105
1986	35,191.37	40,041	34,901	8,033	1.81	4,438
1987	34,132.67	38,729	33,757	7,885	1.82	4,332
1989	49,167.01	55,487	48,364	11,620	1.82	6,385
1990	155,142.66	174,552	152,145	37,129	1.82	20,401
1991	26,763.72	30,012	26,159	6,492	1.82	3,567
1992	795,620.17	888,908	774,798	195,858	1.82	107,614
1993	1,056,129.00	1,175,194	1,024,333	264,144	1.82	145,134
1995	30,331.22	33,433	29,141	7,863	1.82	4,320
1996	27,648.41	30,305	26,415	7,316	1.82	4,020
1997	54,987.18	59,898	52,209	14,876	1.82	8,174
1999	29,976.62	32,161	28,032	8,539	1.82	4,692
2002	35,441.98	36,753	32,035	11,204	1.83	6,122
2004	50,139.44	50,260	43,808	17,362	1.83	9,487
2005	22,787.55	22,318	19,453	8,348	1.83	4,562
2007	182,904.50	167,206	145,742	77,402	1.83	42,296
2008	80,866.74	70,045	61,053	37,604	1.83	20,549
2009	188,307.96	150,711	131,364	98,372	1.83	53,755
2010	83,397.39	58,744	51,203	50,542	1.83	27,619
	7,454,702.13	8,343,638	7,272,558	1,822,179		1,005,395

BLACK HILLS POWER

ACCOUNT 312 BOILER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WY GEN 3						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2060						
NET SALVAGE PERCENT.. -13						
2010	57,320,509.03	3,723,752	4,333,472	60,438,703	40.00	1,510,968
2011	209,250.76	8,361	9,730	226,723	40.38	5,615
2012	37,994.35	510	594	42,340	40.77	1,039
	57,567,754.14	3,732,623	4,343,796	60,707,766		1,517,622
WYODAK PLANT						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2039						
NET SALVAGE PERCENT.. -13						
1980	1,296,064.56	817,660	1,059,773	404,780	20.76	19,498
1981	54,385.96	33,851	43,874	17,582	20.91	841
1982	392,537.67	240,791	312,090	131,477	21.07	6,240
1984	58,644.12	34,881	45,209	21,058	21.37	985
1985	35,766.07	20,919	27,113	13,302	21.52	618
1986	47,139.46	27,087	35,108	18,160	21.67	838
1988	830,696.35	459,299	595,300	343,387	21.96	15,637
1989	11,657,231.40	6,310,105	8,178,556	4,994,115	22.11	225,876
1991	19,347,766.26	9,993,566	12,952,707	8,910,269	22.40	397,780
1992	466,137.83	234,666	304,152	222,584	22.54	9,875
1994	78,596.37	37,352	48,412	40,402	22.83	1,770
1996	542,701.52	241,082	312,467	300,785	23.11	13,015
1999	223,984.66	87,789	113,784	139,319	23.52	5,923
2003	1,083,802.25	333,399	432,120	792,577	24.06	32,942
2004	393,727.98	111,606	144,653	300,260	24.19	12,413
2005	213,987.34	55,098	71,413	170,393	24.33	7,003
2006	4,696,476.55	1,081,464	1,401,690	3,905,328	24.46	159,662
2007	103,581.67	20,819	26,984	90,064	24.59	3,663
2008	621,689.54	105,742	137,053	565,456	24.72	22,874
2009	1,681,687.28	229,899	297,973	1,602,333	24.85	64,480
2010	3,042,900.78	308,260	399,537	3,038,941	24.98	121,655
2011	28,973,406.85	1,834,747	2,378,024	30,361,926	25.10	1,209,638
2012	1,044,975.77	22,943	29,737	1,151,086	25.23	45,624
	76,887,888.24	22,643,025	29,347,729	57,535,585		2,378,850
	239,977,812.14	83,199,223	84,615,239	189,025,963		11,309,350

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 16.7 4.71

BLACK HILLS POWER

ACCOUNT 313 ENGINES AND GENERATORS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WYODAK PLANT						
INTERIM SURVIVOR CURVE.. IOWA 50-S1.5						
PROBABLE RETIREMENT YEAR.. 6-2039						
NET SALVAGE PERCENT.. -13						
2003	232,959.77	72,890	177,881	85,363	24.47	3,488
2004	7,427.10	2,135	5,210	3,182	24.65	129
2005	9,603.64	2,499	6,099	4,754	24.83	191
2009	58,813.68	8,020	19,572	46,887	25.43	1,844
2010	32,943.95	3,305	8,066	29,161	25.56	1,141
	341,748.14	88,849	216,828	169,347		6,793

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 24.9 1.99

BLACK HILLS POWER

ACCOUNT 314 TURBOGENERATOR UNITS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
BEN FRENCH STATION						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -28						
1962	1,582,631.83	1,942,854	1,530,222	495,546	1.79	276,841
1970	3,780.26	4,615	3,635	1,204	1.80	669
1978	46,821.55	56,675	44,638	15,293	1.81	8,449
1988	5,489.04	6,518	5,134	1,892	1.82	1,040
1990	3,254.62	3,842	3,026	1,140	1.82	626
1991	32,398.71	38,117	30,022	11,449	1.82	6,291
1992	54,776.00	64,208	50,571	19,542	1.82	10,737
1993	98,837.75	115,389	90,882	35,630	1.82	19,577
1994	47,258.76	54,925	43,260	17,231	1.82	9,468
1995	8,909.91	10,304	8,116	3,289	1.82	1,807
2002	269,232.08	292,925	230,712	113,905	1.83	62,243
2007	116,548.86	111,785	88,044	61,139	1.83	33,409
2008	1,398,046.47	1,270,509	1,000,673	788,827	1.83	431,053
2009	75,786.84	63,639	50,123	46,884	1.83	25,620
2010	66,325.77	49,017	38,607	46,290	1.83	25,295
2011	78,384.07	45,194	35,596	64,736	1.83	35,375
2012	67,633.23	18,577	14,632	71,939	1.83	39,311
	3,956,115.75	4,149,093	3,267,891	1,795,937		987,811
NEIL SIMPSON I						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -13						
1958	1,306.88	1,419	1,051	426	1.79	238
1962	1,490.56	1,615	1,196	488	1.79	273
1970	1,776,560.87	1,914,767	1,418,448	589,065	1.80	327,258
1980	1,893.21	2,017	1,494	645	1.81	356
1983	4,225.00	4,480	3,319	1,455	1.81	804
1984	9,141.35	9,675	7,167	3,163	1.81	1,748
1985	21,973.86	23,209	17,193	7,637	1.81	4,219
1988	629,331.74	659,679	488,686	222,458	1.82	122,230
1989	6,876.62	7,188	5,325	2,446	1.82	1,344
1991	86,929.15	90,288	66,885	31,345	1.82	17,223
1993	21,734.13	22,400	16,594	7,966	1.82	4,377
1995	6,609.74	6,748	4,999	2,470	1.82	1,357
1996	94,421.56	95,860	71,013	35,684	1.82	19,607
2001	4,290.71	4,175	3,093	1,756	1.83	960
2002	82,946.90	79,670	59,019	34,711	1.83	18,968

BLACK HILLS POWER

ACCOUNT 314 TURBOGENERATOR UNITS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
NEIL SIMPSON I						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -13						
2004	19,160.87	17,790	13,179	8,473	1.83	4,630
2007	555.69	471	349	279	1.83	152
2009	976,289.21	723,726	536,132	567,075	1.83	309,877
2010	171,229.06	111,715	82,758	110,731	1.83	60,509
	3,916,967.11	3,776,892	2,797,900	1,628,273		896,130
NEIL SIMPSON II						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2045						
NET SALVAGE PERCENT.. -14						
1998	25,828,164.18	9,524,874	9,258,327	20,185,780	27.50	734,028
2000	37,085.49	12,340	11,995	30,283	27.90	1,085
2001	3,361.76	1,054	1,025	2,808	28.09	100
2002	1,712,333.52	501,855	487,811	1,464,249	28.29	51,759
2003	122,792.31	33,350	32,417	107,567	28.49	3,776
2004	76,774.47	19,145	18,609	68,914	28.68	2,403
2007	77,190.19	13,495	13,117	74,879	29.26	2,559
2008	196,176.86	28,774	27,969	195,673	29.46	6,642
2009	9,512,427.93	1,118,576	1,087,273	9,756,894	29.65	329,069
2010	253,211.15	21,901	21,288	267,373	29.84	8,960
2011	77,340.18	4,141	4,025	84,143	30.03	2,802
2012	3,637,239.91	67,504	65,615	4,080,839	30.22	135,038
	41,534,097.95	11,347,009	11,029,471	36,319,401		1,278,221
OSAGE PLANT						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -22						
1953	1,083,594.32	1,272,953	1,113,046	208,939	1.78	117,381
1958	7,376.24	8,647	7,561	1,438	1.79	803
1962	496.15	581	508	97	1.79	54
1972	5,859.27	6,806	5,951	1,197	1.80	665
1978	28,346.07	32,703	28,595	5,987	1.81	3,308
1983	12,189.76	13,955	12,202	2,670	1.81	1,475
1984	8,345.60	9,536	8,338	1,844	1.81	1,019

BLACK HILLS POWER

ACCOUNT 314 TURBOGENERATOR UNITS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
OSAGE PLANT						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -22						
1985	943,497.95	1,075,903	940,749	210,318	1.81	116,198
1986	724,131.20	823,932	720,431	163,009	1.81	90,060
1988	126,567.81	143,238	125,245	29,168	1.82	16,026
1989	112,398.60	126,847	110,913	26,214	1.82	14,403
1990	244,598.78	275,200	240,630	57,781	1.82	31,748
1992	184,500.57	206,134	180,240	44,851	1.82	24,643
1993	746,023.78	830,129	725,849	184,300	1.82	101,264
1997	32,617.91	35,531	31,068	8,726	1.82	4,795
2001	11,350.26	11,923	10,425	3,422	1.83	1,870
2005	8,566.69	8,390	7,336	3,115	1.83	1,702
2006	5,339.04	5,076	4,438	2,075	1.83	1,134
2007	38,705.76	35,384	30,939	16,282	1.83	8,897
2008	318,246.51	275,657	241,029	147,231	1.83	80,454
2009	137,415.37	109,980	96,164	71,482	1.83	39,061
	4,780,167.64	5,308,505	4,641,657	1,190,148		656,960
WY GEN 3						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2060						
NET SALVAGE PERCENT.. -13						
2010	58,000,763.02	3,767,944	3,198,067	62,342,796	40.00	1,558,570
2011	12,414.76	496	421	13,608	40.38	337
2012	385,418.50	5,174	4,391	431,131	40.77	10,575
	58,398,596.28	3,773,614	3,202,879	62,787,535		1,569,482
WYODAK PLANT						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2039						
NET SALVAGE PERCENT.. -13						
1989	7,179.20	3,886	4,638	3,474	22.11	157
1991	6,721,393.29	3,471,754	4,143,974	3,451,201	22.40	154,071
1992	296,691.27	149,362	178,282	156,979	22.54	6,964
1996	413,948.44	183,886	219,491	248,271	23.11	10,743
1999	5,253.87	2,059	2,458	3,479	23.52	148
2003	55,163.11	16,969	20,255	42,080	24.06	1,749

BLACK HILLS POWER

ACCOUNT 314 TURBOGENERATOR UNITS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WYODAK PLANT						
INTERIM SURVIVOR CURVE.. IOWA 55-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2039						
NET SALVAGE PERCENT.. -13						
2004	24,453.32	6,932	8,274	19,358	24.19	800
2005	1,083.61	279	333	891	24.33	37
2006	1,874,852.96	431,725	515,318	1,603,266	24.46	65,546
2007	1.53			2	24.59	
2009	144,920.17	19,812	23,648	140,112	24.85	5,638
2010	316,341.90	32,047	38,252	319,214	24.98	12,779
2011	5,313,961.58	336,508	401,664	5,603,112	25.10	223,232
2012	17,546.62	385	460	19,368	25.23	768
	15,192,790.87	4,655,604	5,557,047	11,610,807		482,632
	127,778,735.60	33,010,717	30,496,845	115,332,101		5,871,236

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 19.6 4.59

BLACK HILLS POWER

ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
BEN FRENCH STATION						
INTERIM SURVIVOR CURVE.. IOWA 65-R2.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -28						
1962	383,198.60	472,115	429,295	61,199	1.81	33,812
1968	374.76	460	418	61	1.81	34
1973	1,989.11	2,429	2,209	337	1.82	185
1977	198,307.49	240,972	219,116	34,717	1.82	19,075
1979	6,235.14	7,555	6,870	1,111	1.82	610
1986	2,616.08	3,127	2,843	505	1.83	276
1989	28,699.36	34,030	30,944	5,792	1.83	3,165
1991	5,769.61	6,796	6,180	1,205	1.83	658
1992	13,820.40	16,218	14,747	2,943	1.83	1,608
1993	781.17	913	830	170	1.83	93
1997	1,211.52	1,385	1,259	291	1.83	159
2004	71,417.03	75,140	68,325	23,089	1.83	12,617
2008	32,476.28	29,514	26,837	14,733	1.83	8,051
2009	9,590.46	8,053	7,323	4,953	1.83	2,707
	756,487.01	898,707	817,196	151,107		83,050
NEIL SIMPSON I						
INTERIM SURVIVOR CURVE.. IOWA 65-R2.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -13						
1962	555.53	604	328	299	1.81	165
1966	221.83	241	131	120	1.81	66
1970	386,946.32	418,286	227,408	209,841	1.82	115,297
1980	4,284.00	4,576	2,488	2,353	1.82	1,293
1983	3,773.68	4,010	2,180	2,084	1.82	1,145
1984	157,338.12	166,781	90,673	87,119	1.83	47,606
1988	942.24	989	538	527	1.83	288
1991	5,695.75	5,923	3,220	3,216	1.83	1,757
1992	1,891.92	1,960	1,066	1,072	1.83	586
1998	77,589.86	77,754	42,272	45,404	1.83	24,811
2002	32,411.87	31,154	16,937	19,688	1.83	10,758
2009	6,380.51	4,730	2,572	4,638	1.83	2,534
2010	656,400.43	427,527	232,432	509,300	1.83	278,306
	1,334,432.06	1,144,535	622,246	885,662		484,612

BLACK HILLS POWER

ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
NEIL SIMPSON II						
INTERIM SURVIVOR CURVE.. IOWA 65-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2045						
NET SALVAGE PERCENT.. -14						
1998	5,961,812.54	2,122,808	2,406,934	4,389,532	30.36	144,583
1999	12,144.09	4,108	4,658	9,186	30.48	301
2004	139,183.19	33,128	37,562	121,107	30.96	3,912
2009	32,327.99	3,597	4,078	32,775	31.34	1,046
2010	137,179.86	11,233	12,736	143,649	31.40	4,575
2011	107,733.72	5,410	6,134	116,682	31.47	3,708
2012	2,038,711.61	34,862	39,528	2,284,603	31.53	72,458
	8,429,093.00	2,215,146	2,511,631	7,097,535		230,583
OSAGE PLANT						
INTERIM SURVIVOR CURVE.. IOWA 65-R2.5						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -22						
1953	555,960.96	655,971	650,323	27,949	1.79	15,614
1958	3,074.23	3,619	3,588	163	1.80	91
1962	3,821.11	4,487	4,448	213	1.81	118
1966	269.10	315	312	16	1.81	9
1980	1,648.52	1,901	1,885	127	1.82	70
1984	3,768.61	4,313	4,276	322	1.83	176
1985	141,357.40	161,429	160,039	12,417	1.83	6,785
1986	8,554.68	9,747	9,663	774	1.83	423
1987	16,742.62	19,029	18,865	1,561	1.83	853
1992	5,675.77	6,348	6,293	631	1.83	345
1993	108,771.59	121,148	120,105	12,596	1.83	6,883
1996	11,106.13	12,181	12,076	1,473	1.83	805
1997	2,240.18	2,441	2,420	313	1.83	171
1998	174,274.81	188,554	186,931	25,685	1.83	14,036
1999	602.59	647	641	94	1.83	51
2002	6,835.52	7,094	7,033	1,306	1.83	714
2005	10,183.92	9,977	9,891	2,533	1.83	1,384
	1,054,887.74	1,209,201	1,198,790	88,173		48,528

BLACK HILLS POWER

ACCOUNT 315 ACCESSORY ELECTRIC EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WY GEN 3						
INTERIM SURVIVOR CURVE.. IOWA 65-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2060						
NET SALVAGE PERCENT.. -13						
2009	12,904.68	1,033	997	13,585	43.94	309
2010	6,724,315.60	390,410	376,882	7,221,595	44.13	163,644
	6,737,220.28	391,443	377,879	7,235,180		163,953
WYODAK PLANT						
INTERIM SURVIVOR CURVE.. IOWA 65-R2.5						
PROBABLE RETIREMENT YEAR.. 6-2039						
NET SALVAGE PERCENT.. -13						
1991	5,563,231.79	2,834,875	4,532,406	1,754,046	24.68	71,072
1994	24,139.69	11,272	18,022	9,256	24.95	371
1996	399,569.51	174,018	278,220	173,293	25.10	6,904
1999	120,906.77	46,232	73,916	62,709	25.32	2,477
2003	57,359.03	17,132	27,391	37,425	25.55	1,465
2006	14,208.12	3,165	5,060	10,995	25.70	428
2007	23,553.30	4,571	7,308	19,307	25.75	750
2008	11,171.76	1,833	2,931	9,693	25.79	376
2009	1,761.40	232	371	1,619	25.83	63
2010	400,881.59	39,044	62,424	390,573	25.87	15,098
	6,616,782.96	3,132,374	5,008,048	2,468,917		99,004
	24,928,903.05	8,991,406	10,535,790	17,926,574		1,109,730

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 16.2 4.45

BLACK HILLS POWER

ACCOUNT 316 MISCELLANEOUS POWER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)

BEN FRENCH STATION
INTERIM SURVIVOR CURVE.. IOWA 45-S0
PROBABLE RETIREMENT YEAR.. 10-2014
NET SALVAGE PERCENT.. -28

1962	49,049.43	59,956	59,313	3,471	1.77	1,961
1966	385.47	470	465	28	1.78	16
1970	924.51	1,124	1,112	71	1.79	40
1971	558.35	678	671	44	1.79	25
1972	2,001.85	2,430	2,404	158	1.79	88
1973	1,058.55	1,284	1,270	85	1.79	47
1974	623.79	756	748	51	1.79	28
1976	295.59	357	353	25	1.79	14
1978	1,566.97	1,890	1,870	136	1.80	76
1979	3,000.60	3,614	3,575	266	1.80	148
1980	11,690.33	14,061	13,910	1,054	1.80	586
1981	9,328.99	11,204	11,084	857	1.80	476
1982	19,824.01	23,772	23,517	1,858	1.80	1,032
1983	42,525.81	50,907	50,361	4,072	1.80	2,262
1984	10,258.58	12,258	12,126	1,005	1.80	558
1985	2,940.92	3,507	3,469	295	1.80	164
1986	4,868.80	5,794	5,732	500	1.80	278
1987	78,194.63	92,842	91,846	8,243	1.80	4,579
1988	12,145.52	14,378	14,224	1,323	1.81	731
1989	31,106.28	36,724	36,330	3,486	1.81	1,926
1990	6,736.14	7,929	7,844	778	1.81	430
1991	15,139.74	17,762	17,571	1,807	1.81	998
1992	25,398.43	29,692	29,373	3,137	1.81	1,733
1993	5,982.81	6,967	6,892	766	1.81	423
1994	26,594.23	30,832	30,501	3,539	1.81	1,955
1995	3,986.66	4,599	4,550	553	1.81	306
1996	3,905.49	4,481	4,433	566	1.81	313
1997	8,305.35	9,471	9,369	1,261	1.81	697
1998	598.56	678	671	95	1.81	52
1999	2,616.61	2,937	2,905	444	1.82	244
2000	2,077.91	2,311	2,286	374	1.82	205
2001	9,155.01	10,074	9,966	1,753	1.82	963
2002	25,641.29	27,860	27,561	5,260	1.82	2,890
2003	9,665.08	10,343	10,232	2,139	1.82	1,175
2004	6,287.29	6,605	6,534	1,514	1.82	832
2006	12,555.88	12,517	12,383	3,689	1.82	2,027
2009	14,442.38	12,103	11,973	6,513	1.83	3,559
	461,437.84	535,167	529,424	61,216		33,837

BLACK HILLS POWER

ACCOUNT 316 MISCELLANEOUS POWER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
NEIL SIMPSON I						
INTERIM SURVIVOR CURVE.. IOWA 45-S0						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -13						
1958	65.00	70	68	5	1.76	3
1962	203.94	220	214	17	1.77	10
1970	65,810.08	70,639	68,635	5,730	1.79	3,201
1972	346.12	371	360	31	1.79	17
1973	1,156.86	1,239	1,204	103	1.79	58
1974	1,417.08	1,516	1,473	128	1.79	72
1975	295.73	316	307	27	1.79	15
1976	632.07	675	656	58	1.79	32
1977	2,183.04	2,328	2,262	205	1.79	115
1978	1,013.47	1,079	1,048	97	1.80	54
1979	21,391.46	22,746	22,101	2,072	1.80	1,151
1980	5,513.96	5,855	5,689	542	1.80	301
1981	5,747.93	6,094	5,921	574	1.80	319
1982	28,492.17	30,162	29,306	2,890	1.80	1,606
1983	101,175.92	106,924	103,891	10,438	1.80	5,799
1984	35,849.66	37,817	36,744	3,766	1.80	2,092
1985	639.60	673	654	69	1.80	38
1986	31,484.41	33,077	32,139	3,439	1.80	1,911
1987	27,123.20	28,430	27,624	3,026	1.80	1,681
1988	11,784.80	12,316	11,967	1,350	1.81	746
1989	17,008.74	17,727	17,224	1,996	1.81	1,103
1990	3,766.58	3,914	3,803	453	1.81	250
1991	4,169.95	4,319	4,196	516	1.81	285
1992	12,916.60	13,330	12,952	1,644	1.81	908
1994	25,487.46	26,086	25,346	3,455	1.81	1,909
1995	9,686.47	9,865	9,585	1,361	1.81	752
1996	5,716.15	5,790	5,626	833	1.81	460
1997	398.55	401	390	61	1.81	34
2003	2,753.50	2,601	2,527	584	1.82	321
2004	764.66	709	689	175	1.82	96
	424,995.16	447,289	434,602	45,643		25,339
NEIL SIMPSON II						
INTERIM SURVIVOR CURVE.. IOWA 45-S0						
PROBABLE RETIREMENT YEAR.. 6-2045						
NET SALVAGE PERCENT.. -14						
1958	219.80	174	158	93	13.76	7
1962	104.44	78	71	48	15.32	3

BLACK HILLS POWER

ACCOUNT 316 MISCELLANEOUS POWER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
NEIL SIMPSON II						
INTERIM SURVIVOR CURVE.. IOWA 45-S0						
PROBABLE RETIREMENT YEAR.. 6-2045						
NET SALVAGE PERCENT.. -14						
1972	62.84	41	37	34	18.70	2
1978	217.26	131	119	129	20.41	6
1979	2,869.93	1,708	1,550	1,722	20.67	83
1982	2,032.56	1,151	1,044	1,273	21.44	59
1983	367.34	204	185	234	21.69	11
1984	4,611.43	2,518	2,284	2,973	21.94	136
1986	216.93	114	103	144	22.42	6
1987	1,014.00	521	473	683	22.65	30
1988	784.06	394	357	536	22.89	23
1989	3,714.92	1,825	1,656	2,579	23.12	112
1990	5,563.90	2,668	2,421	3,922	23.34	168
1991	9,153.07	4,275	3,878	6,556	23.57	278
1992	7,831.84	3,559	3,229	5,699	23.79	240
1998	186,798.68	68,453	62,103	150,847	25.12	6,005
1999	2,771.61	969	879	2,281	25.34	90
2000	14,157.23	4,696	4,260	11,879	25.56	465
2001	43,204.53	13,536	12,280	36,973	25.78	1,434
2002	7,852.13	2,306	2,092	6,859	26.00	264
2003	35,709.08	9,740	8,837	31,872	26.23	1,215
2004	21,565.06	5,420	4,917	19,667	26.45	744
2005	70,096.40	16,001	14,517	65,393	26.68	2,451
2008	20,113.62	3,022	2,742	20,188	27.40	737
2009	213,661.10	25,831	23,435	220,139	27.65	7,962
2010	100,545.48	9,006	8,171	106,451	27.91	3,814
2011	44,528.94	2,484	2,254	48,509	28.18	1,721
2012	76,221.26	1,471	1,335	85,558	28.46	3,006
	875,989.44	182,296	165,386	833,242		31,072
OSAGE PLANT						
INTERIM SURVIVOR CURVE.. IOWA 45-S0						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -22						
1953	14,680.17	17,167	15,629	2,281	1.75	1,303
1958	870.58	1,016	925	137	1.76	78
1966	3,127.14	3,635	3,309	506	1.78	284
1970	168.54	195	178	28	1.79	16
1971	352.72	408	371	59	1.79	33
1973	168.27	195	178	28	1.79	16

BLACK HILLS POWER

ACCOUNT 316 MISCELLANEOUS POWER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
OSAGE PLANT						
INTERIM SURVIVOR CURVE.. IOWA 45-S0						
PROBABLE RETIREMENT YEAR.. 10-2014						
NET SALVAGE PERCENT.. -22						
1975	621.80	717	653	106	1.79	59
1976	142.69	164	149	25	1.79	14
1978	200.68	231	210	35	1.80	19
1979	1,046.59	1,201	1,093	183	1.80	102
1980	15,963.84	18,301	16,662	2,814	1.80	1,563
1981	15,324.13	17,542	15,971	2,725	1.80	1,514
1982	15,230.43	17,407	15,848	2,733	1.80	1,518
1983	16,331.54	18,634	16,965	2,960	1.80	1,644
1984	15,780.85	17,973	16,363	2,890	1.80	1,606
1985	13,017.88	14,797	13,472	2,410	1.80	1,339
1986	41,107.88	46,626	42,449	7,702	1.80	4,279
1987	4,965.48	5,619	5,116	942	1.80	523
1988	34,602.68	39,044	35,547	6,669	1.81	3,685
1989	16,455.57	18,517	16,858	3,218	1.81	1,778
1990	22,924.36	25,719	23,415	4,553	1.81	2,515
1991	10,096.90	11,291	10,280	2,039	1.81	1,127
1992	120,032.07	133,744	121,763	24,676	1.81	13,633
1993	13,828.44	15,348	13,973	2,898	1.81	1,601
1994	5,897.98	6,517	5,933	1,262	1.81	697
1995	4,998.98	5,497	5,005	1,094	1.81	604
1998	8,031.37	8,669	7,892	1,906	1.81	1,053
1999	710.83	761	693	174	1.82	96
2000	1,282.36	1,359	1,237	327	1.82	180
2001	3,714.24	3,896	3,547	984	1.82	541
2002	22,538.95	23,341	21,250	6,247	1.82	3,432
2004	6,307.03	6,315	5,749	1,945	1.82	1,069
2005	2,538.28	2,483	2,261	836	1.82	459
2006	11,902.04	11,309	10,296	4,225	1.82	2,321
2007	4,127.65	3,773	3,435	1,601	1.82	880
2008	2,806.65	2,426	2,209	1,215	1.83	664
2010	4,053.14	2,850	2,595	2,350	1.83	1,284
	455,950.73	504,687	459,478	96,782		53,529

BLACK HILLS POWER

ACCOUNT 316 MISCELLANEOUS POWER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WY GEN 3						
INTERIM SURVIVOR CURVE.. IOWA 45-S0						
PROBABLE RETIREMENT YEAR.. 6-2060						
NET SALVAGE PERCENT.. -13						
2010	692,346.23	47,723	28,733	753,618	36.02	20,922
2012	16,733.34	247	149	18,760	36.99	507
	709,079.57	47,970	28,882	772,378		21,429
WYODAK PLANT						
INTERIM SURVIVOR CURVE.. IOWA 45-S0						
PROBABLE RETIREMENT YEAR.. 6-2039						
NET SALVAGE PERCENT.. -13						
1988	16,170.44	8,769	12,053	6,220	20.17	308
1991	171,669.25	87,108	119,730	74,257	20.65	3,596
1992	29,448.46	14,571	20,028	13,249	20.81	637
1994	120,135.04	56,222	77,277	58,476	21.12	2,769
1996	136,521.28	59,866	82,286	71,983	21.43	3,359
1999	482.38	187	257	288	21.89	13
2003	11,248.09	3,456	4,750	7,960	22.52	353
2004	2,034.48	578	794	1,505	22.68	66
2005	25,486.40	6,600	9,072	19,728	22.84	864
2006	151,357.27	35,093	48,235	122,799	23.01	5,337
2007	126,600.19	25,716	35,347	107,712	23.18	4,647
2008	43,928.69	7,583	10,423	39,217	23.35	1,680
2009	9,361.88	1,305	1,794	8,785	23.53	373
2010	3,920.81	407	559	3,871	23.71	163
2012	158,949.85	3,578	4,918	174,695	24.11	7,246
	1,007,314.51	311,039	427,522	710,743		31,411
	3,934,767.25	2,028,448	2,045,294	2,520,004		196,617

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.8 5.00

BLACK HILLS POWER

ACCOUNT 341 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
BEN FRENCH CT INTERIM SURVIVOR CURVE.. IOWA 55-R3 PROBABLE RETIREMENT YEAR.. 6-2030 NET SALVAGE PERCENT.. -13						
1980	22,448.14	16,769	18,574	6,792	15.55	437
	22,448.14	16,769	18,574	6,792		437
LANGE CT INTERIM SURVIVOR CURVE.. IOWA 55-R3 PROBABLE RETIREMENT YEAR.. 6-2048 NET SALVAGE PERCENT.. -5						
2003	219,850.91	50,765	82,862	147,981	32.99	4,486
2004	24,379.64	5,142	8,393	17,205	33.18	519
2009	34,309.26	3,329	5,434	30,591	33.98	900
2010	46,346.59	3,286	5,364	43,300	34.11	1,269
	324,886.40	62,522	102,053	239,078		7,174
NEIL SIMPSON CT INTERIM SURVIVOR CURVE.. IOWA 55-R3 PROBABLE RETIREMENT YEAR.. 6-2046 NET SALVAGE PERCENT.. -5						
2001	152,734.85	42,587	72,821	87,551	31.06	2,819
2004	15,465.42	3,396	5,807	10,432	31.58	330
2012	8,158.42	130	222	8,344	32.56	256
	176,358.69	46,113	78,850	106,327		3,405
	523,693.23	125,404	199,477	352,197		11,016

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 32.0   2.10

BLACK HILLS POWER

ACCOUNT 342 FUEL HOLDERS AND ACCESSORIES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
BEN FRENCH CT INTERIM SURVIVOR CURVE.. IOWA 50-S0.5 PROBABLE RETIREMENT YEAR.. 6-2030 NET SALVAGE PERCENT.. -13						
1977	157,170.83	117,843	140,763	36,841	14.28	2,580
1979	247,449.55	182,213	217,652	61,966	14.46	4,285
1982	30,975.15	22,106	26,405	8,596	14.73	584
1992	83,307.32	50,876	60,771	33,366	15.57	2,143
1993	433,142.46	258,592	308,886	180,565	15.65	11,538
1996	62,497.43	34,434	41,131	29,491	15.89	1,856
1997	30,426.93	16,248	19,408	14,974	15.96	938
2000	58,390.21	27,721	33,113	32,868	16.19	2,030
2007	116,994.79	32,136	38,386	93,818	16.69	5,621
2011	155,466.86	14,181	16,939	158,738	16.97	9,354
	1,375,821.53	756,350	903,454	651,224		40,929
BEN FRENCH DIESEL INTERIM SURVIVOR CURVE.. IOWA 50-S0.5 PROBABLE RETIREMENT YEAR.. 6-2020 NET SALVAGE PERCENT.. -22						
1966	998.51	1,028	1,106	112	6.69	17
1992	8,260.52	7,327	7,886	2,192	7.18	305
1996	42,605.22	35,559	38,272	13,706	7.24	1,893
	51,864.25	43,914	47,265	16,009		2,215
LANGE CT INTERIM SURVIVOR CURVE.. IOWA 50-S0.5 PROBABLE RETIREMENT YEAR.. 6-2048 NET SALVAGE PERCENT.. -5						
2003	1,606,695.34	386,532	507,410	1,179,620	29.54	39,933
2007	45,081.21	6,915	9,077	38,258	30.63	1,249
2009	70,739.61	7,286	9,565	64,712	31.17	2,076
	1,722,516.16	400,733	526,052	1,282,590		43,258

ACCOUNT 342 FUEL HOLDERS AND ACCESSORIES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
NEIL SIMPSON CT						
INTERIM SURVIVOR CURVE.. IOWA 50-S0.5						
PROBABLE RETIREMENT YEAR.. 6-2046						
NET SALVAGE PERCENT.. -5						
2001	828,521.42	238,148	312,127	557,820	27.83	20,044
2006	1,258,795.79	231,172	302,984	1,018,751	29.06	35,057
2011	28,756.19	1,407	1,844	28,350	30.27	937
	2,116,073.40	470,727	616,956	1,604,921		56,038
	5,266,275.34	1,671,724	2,093,727	3,554,744		142,440

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.0 2.70

BLACK HILLS POWER

ACCOUNT 344 GENERATORS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
BEN FRENCH CT						
INTERIM SURVIVOR CURVE.. IOWA 45-R2						
PROBABLE RETIREMENT YEAR.. 6-2030						
NET SALVAGE PERCENT.. -13						
1977	6,336,112.94	4,897,523	5,330,424	1,829,384	13.22	138,380
1978	3,330,260.12	2,543,881	2,768,739	994,455	13.44	73,992
1979	3,709,074.84	2,798,920	3,046,322	1,144,933	13.65	83,878
1983	11,571.59	8,286	9,018	4,057	14.40	282
1993	1,317,567.90	783,583	852,845	636,006	15.76	40,356
2000	1,274,369.30	597,443	650,252	789,785	16.36	48,275
2007	450,791.94	121,098	131,802	377,593	16.77	22,516
2012	119,618.44	3,716	4,044	131,124	16.98	7,722
	16,549,367.07	11,754,450	12,793,447	5,907,338		415,401
BEN FRENCH DIESEL						
INTERIM SURVIVOR CURVE.. IOWA 45-R2						
PROBABLE RETIREMENT YEAR.. 6-2020						
NET SALVAGE PERCENT.. -22						
1966	683,002.88	711,374	662,821	170,442	6.17	27,624
1984	6,625.00	6,335	5,903	2,180	7.04	310
1992	43,460.99	38,472	35,846	17,176	7.22	2,379
1993	1,254.09	1,095	1,020	510	7.24	70
1995	18,862.23	15,971	14,881	8,131	7.27	1,118
1997	43,032.29	35,079	32,685	19,815	7.30	2,714
2002	32,631.49	23,052	21,479	18,332	7.35	2,494
	828,868.97	831,378	774,635	236,585		36,709
LANGE CT						
INTERIM SURVIVOR CURVE.. IOWA 45-R2						
PROBABLE RETIREMENT YEAR.. 6-2048						
NET SALVAGE PERCENT.. -5						
2003	25,942,474.95	6,078,516	9,782,776	17,456,823	29.73	587,179
2004	10,224.84	2,183	3,513	7,223	30.05	240
2007	55,025.76	8,086	13,014	44,763	30.91	1,448
2008	114,129.90	14,021	22,565	97,271	31.17	3,121
2011	31,389.74	1,377	2,216	30,743	31.88	964
2012	29,750.00	441	710	30,528	32.10	951
	26,182,995.19	6,104,624	9,824,794	17,667,351		593,903

BLACK HILLS POWER

ACCOUNT 344 GENERATORS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
NEIL SIMPSON CT						
INTERIM SURVIVOR CURVE.. IOWA 45-R2						
PROBABLE RETIREMENT YEAR.. 6-2046						
NET SALVAGE PERCENT.. -5						
2001	20,791,616.87	5,864,296	7,492,824	14,338,374	27.99	512,268
2002	278,513.00	73,110	93,413	199,026	28.29	7,035
2007	54,389.30	8,309	10,616	46,492	29.60	1,571
2008	680,334.73	87,272	111,508	602,844	29.82	20,216
2009	2,801,190.41	285,537	364,831	2,576,419	30.04	85,766
2011	1,028,023.50	47,138	60,228	1,019,196	30.44	33,482
2012	10,886.34	173	221	11,210	30.62	366
	25,644,954.15	6,365,835	8,133,641	18,793,561		660,704
	69,206,185.38	25,056,287	31,526,517	42,604,835		1,706,717

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.0 2.47

BLACK HILLS POWER

ACCOUNT 345 ACCESSORY ELECTRIC EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
BEN FRENCH CT						
INTERIM SURVIVOR CURVE.. IOWA 40-S2						
PROBABLE RETIREMENT YEAR.. 6-2030						
NET SALVAGE PERCENT.. -13						
1977	291,442.65	240,148	192,913	136,417	10.58	12,894
1978	179,805.09	146,456	117,649	85,530	10.86	7,876
1979	166,025.79	133,668	107,377	80,233	11.13	7,209
1994	13,451.00	8,248	6,626	8,574	14.95	574
2009	13,436.28	2,565	2,060	13,123	17.22	762
2011	8,807.73	793	637	9,316	17.33	538
	672,968.54	531,878	427,262	333,192		29,853
BEN FRENCH DIESEL						
INTERIM SURVIVOR CURVE.. IOWA 40-S2						
PROBABLE RETIREMENT YEAR.. 6-2020						
NET SALVAGE PERCENT.. -22						
1965	43,073.69	45,592	32,926	19,624	5.21	3,767
1994	21,250.96	18,566	13,408	12,518	7.16	1,748
1996	6,567.64	5,540	4,001	4,012	7.24	554
2008	11,723.62	5,373	3,880	10,423	7.48	1,393
2010	28,207.43	8,612	6,219	28,194	7.49	3,764
	110,823.34	83,683	60,434	74,770		11,226
LANGE CT						
INTERIM SURVIVOR CURVE.. IOWA 40-S2						
PROBABLE RETIREMENT YEAR.. 6-2048						
NET SALVAGE PERCENT.. -5						
2003	2,095,868.47	559,364	792,608	1,408,054	27.64	50,943
	2,095,868.47	559,364	792,608	1,408,054		50,943

BLACK HILLS POWER

ACCOUNT 345 ACCESSORY ELECTRIC EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
NEIL SIMPSON CT						
INTERIM SURVIVOR CURVE.. IOWA 40-S2						
PROBABLE RETIREMENT YEAR.. 6-2046						
NET SALVAGE PERCENT.. -5						
2001	1,962,693.78	630,036	919,080	1,141,749	25.73	44,374
2002	18,500.00	5,496	8,017	11,408	26.31	434
2010	6,405.94	514	750	5,976	30.19	198
	1,987,599.72	636,046	927,847	1,159,133		45,006
	4,867,260.07	1,810,971	2,208,151	2,975,149		137,028

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 21.7   2.82

BLACK HILLS POWER

ACCOUNT 346 MISCELLANEOUS POWER PLANT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
BEN FRENCH CT						
INTERIM SURVIVOR CURVE.. IOWA 30-S1.5						
PROBABLE RETIREMENT YEAR.. 6-2030						
NET SALVAGE PERCENT.. -13						
1978	2,846.96	2,479	2,459	758	6.88	110
1979	1,104.76	949	941	307	7.19	43
1982	10,765.90	8,850	8,777	3,388	8.14	416
	14,717.62	12,278	12,177	4,454		569
LANGE CT						
INTERIM SURVIVOR CURVE.. IOWA 30-S1.5						
PROBABLE RETIREMENT YEAR.. 6-2048						
NET SALVAGE PERCENT.. -5						
2003	7,926.96	2,521	3,165	5,158	20.69	249
2004	8,684.63	2,502	3,141	5,978	21.47	278
	16,611.59	5,023	6,306	11,136		527
NEIL SIMPSON CT						
INTERIM SURVIVOR CURVE.. IOWA 30-S1.5						
PROBABLE RETIREMENT YEAR.. 6-2046						
NET SALVAGE PERCENT.. -5						
2001	3,963.71	1,495	2,933	1,229	19.02	65
2002	4,776.88	1,668	3,273	1,743	19.75	88
2003	6,643.25	2,127	4,173	2,802	20.49	137
2007	36,154.92	7,084	13,899	24,064	23.45	1,026
	51,538.76	12,374	24,278	29,838		1,316
	82,867.97	29,675	42,761	45,428		2,412

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 18.8 2.91

BLACK HILLS POWER

ACCOUNT 352 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-S4						
NET SALVAGE PERCENT.. -10						
1975	32,582.52	25,920	34,618	1,223	13.84	88
1976	91,179.30	71,010	94,839	5,458	14.60	374
1988	412,630.08	222,226	296,798	157,095	25.52	6,156
1998	27,550.33	8,789	11,738	18,567	35.50	523
1999	5,687.71	1,689	2,256	4,000	36.50	110
2005	886,018.65	146,193	195,251	779,370	42.50	18,338
2006	15,584.06	2,229	2,977	14,165	43.50	326
2007	97,233.58	11,765	15,713	91,244	44.50	2,050
2011	214,138.13	7,067	9,439	226,113	48.50	4,662
	1,782,604.36	496,888	663,629	1,297,236		32,627

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 39.8 1.83

BLACK HILLS POWER

ACCOUNT 353 STATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 42-S0						
NET SALVAGE PERCENT.. -5						
1958	2,350.38	1,801	2,468			
1966	15,729.31	10,727	16,516			
1970	152.26	97	153	7	16.48	
1975	1,082,733.08	629,337	990,786	146,084	18.75	7,791
1976	67,593.92	38,512	60,631	10,343	19.21	538
1977	2,411,982.92	1,345,282	2,117,923	414,659	19.69	21,059
1978	265,454.64	144,938	228,181	50,546	20.16	2,507
1979	10,958.76	5,852	9,213	2,294	20.64	111
1981	2,455.53	1,252	1,971	607	21.61	28
1982	614,559.01	305,589	481,099	164,188	22.11	7,426
1984	40,420.49	19,088	30,051	12,391	23.11	536
1986	469,540.80	209,651	330,061	162,957	24.14	6,750
1988	16,156.16	6,786	10,683	6,281	25.20	249
1990	580,596.29	228,177	359,227	250,399	26.28	9,528
1992	139,757.49	51,012	80,310	66,435	27.40	2,425
1993	1,557,373.56	546,253	859,984	775,258	27.97	27,717
1994	44,759.11	15,050	23,694	23,303	28.55	816
1995	53,959.70	17,348	27,312	29,346	29.14	1,007
1996	18,458.85	5,658	8,908	10,474	29.74	352
1997	2,589,543.43	754,202	1,187,365	1,531,656	30.35	50,466
1998	86,099.88	23,742	37,378	53,027	30.97	1,712
1999	9,934.49	2,583	4,067	6,364	31.60	201
2000	16,145.18	3,935	6,195	10,757	32.25	334
2002	442,862.05	93,224	146,766	318,239	33.58	9,477
2003	2,138,146.45	413,202	650,518	1,594,536	34.27	46,529
2004	1,158,970.38	203,396	320,213	896,706	34.98	25,635
2005	17,791,549.09	2,797,686	4,404,489	14,276,638	35.71	399,794
2006	224,006.26	31,024	48,842	186,365	36.46	5,111
2007	164,370.76	19,601	30,859	141,730	37.23	3,807
2008	423,080.32	42,096	66,273	377,961	38.02	9,941
2009	6,238,773.15	492,876	775,951	5,774,761	38.84	148,681
2010	8,467,390.73	488,992	769,836	8,120,924	39.69	204,609
2011	1,698,024.70	60,281	94,902	1,688,024	40.58	41,597
2012	363,543.45	4,455	7,014	374,707	41.51	9,027
	49,207,432.58	9,013,705	14,189,839	37,477,965		1,045,761

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 35.8 2.13

BLACK HILLS POWER

ACCOUNT 354 TOWERS AND FIXTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R2						
NET SALVAGE PERCENT.. -20						
1976	49,575.86	29,329	58,419	1,072	30.42	35
2005	398,100.89	53,185	105,938	371,783	53.32	6,973
2010	417,149.28	18,772	37,391	463,188	57.75	8,021
	864,826.03	101,286	201,748	836,043		15,029

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 55.6 1.74

BLACK HILLS POWER

ACCOUNT 355 POLES AND FIXTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R3						
NET SALVAGE PERCENT.. -30						
1958	39,913.60	41,199	30,550	21,338	11.33	1,883
1966	535,837.25	497,615	368,996	327,592	15.71	20,852
1970	3,623.81	3,146	2,333	2,378	18.27	130
1975	2,197,542.23	1,726,024	1,279,898	1,576,907	21.77	72,435
1976	3,122,314.46	2,398,509	1,778,565	2,280,444	22.50	101,353
1977	2,037,706.04	1,529,199	1,133,946	1,515,072	23.25	65,164
1978	8,915.70	6,531	4,843	6,747	24.01	281
1982	229,396.69	151,061	112,016	186,200	27.14	6,861
1983	39,020.32	24,957	18,506	32,220	27.94	1,153
1984	10,757.57	6,672	4,947	9,038	28.76	314
1985	25,786.19	15,487	11,484	22,038	29.59	745
1986	4,323,922.18	2,512,125	1,862,815	3,758,284	30.42	123,546
1988	55,271.07	29,904	22,175	49,677	32.11	1,547
1989	11,778.97	6,133	4,548	10,765	32.97	327
1990	3,832.52	1,917	1,422	3,560	33.84	105
1991	27,265.58	13,070	9,692	25,753	34.72	742
1992	140,610.40	64,477	47,812	134,982	35.60	3,792
1993	37,930.69	16,595	12,306	37,004	36.49	1,014
1995	252,735.42	99,763	73,977	254,579	38.30	6,647
1997	289,243.53	101,660	75,384	300,633	40.13	7,491
1998	24,147.65	7,956	5,900	25,492	41.06	621
1999	69,509.63	21,375	15,850	74,513	41.99	1,775
2000	39,980.47	11,406	8,458	43,517	42.93	1,014
2001	65,808.77	17,312	12,837	72,714	43.87	1,657
2002	15,851.09	3,818	2,831	17,775	44.81	397
2003	311,641.49	67,990	50,416	354,718	45.77	7,750
2004	10,817.12	2,117	1,570	12,492	46.72	267
2005	10,798.58	1,866	1,384	12,654	47.69	265
2006	46,392.73	6,963	5,163	55,148	48.65	1,134
2007	35,252.67	4,483	3,324	42,504	49.62	857
2008	125,700.25	13,102	9,716	153,694	50.59	3,038
2009	5,235,193.53	424,407	314,709	6,491,043	51.57	125,869
2010	8,212,765.55	477,564	354,127	10,322,468	52.54	196,469
2011	415,861.38	14,548	10,788	529,832	53.52	9,900
2012	29,053.48	337	250	37,520	54.51	688
	28,042,178.61	10,321,288	7,653,538	28,801,294		768,083

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 37.5 2.74

BLACK HILLS POWER

ACCOUNT 356 OVERHEAD CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R2.5						
NET SALVAGE PERCENT.. -20						
1958	2,487.07	2,135	2,012	972	17.08	57
1966	597,126.79	456,322	430,050	286,502	21.79	13,148
1975	1,717,561.82	1,100,964	1,037,577	1,023,497	27.95	36,619
1976	3,622,283.35	2,268,998	2,138,363	2,208,377	28.68	77,001
1977	2,297,220.76	1,404,989	1,324,098	1,432,567	29.42	48,694
1978	2,282.34	1,362	1,284	1,455	30.17	48
1982	73,852.26	39,526	37,250	51,373	33.24	1,546
1983	16,323.95	8,479	7,991	11,598	34.03	341
1986	4,640,018.23	2,186,395	2,060,515	3,507,507	36.44	96,254
1992	2,553.44	948	893	2,171	41.44	52
1993	32,457.74	11,490	10,828	28,121	42.30	665
1995	69,849.13	22,310	21,026	62,793	44.03	1,426
1997	229,324.28	65,220	61,465	213,724	45.78	4,669
1998	146,023.51	38,930	36,689	138,539	46.67	2,968
1999	1,178.63	293	276	1,138	47.56	24
2000	20,080.03	4,638	4,371	19,725	48.45	407
2002	3,813.82	743	700	3,877	50.26	77
2003	113,057.00	19,966	18,816	116,852	51.17	2,284
2004	1,255,646.63	198,894	187,443	1,319,333	52.08	25,333
2005	2,362,389.94	330,744	311,702	2,523,166	53.00	47,607
2007	87,023.78	8,963	8,447	95,982	54.85	1,750
2008	221,038.30	18,700	17,623	247,623	55.77	4,440
2009	4,871,340.06	320,515	302,062	5,543,546	56.71	97,753
2010	6,911,430.22	326,192	307,412	7,986,304	57.64	138,555
2011	66,697.08	1,894	1,785	78,251	58.58	1,336
2012	79,160.14	744	701	94,291	59.53	1,584
	29,442,220.30	8,840,354	8,331,379	26,999,285		604,638

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 44.7   2.05

BLACK HILLS POWER

ACCOUNT 359 ROADS AND TRAILS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-S4						
NET SALVAGE PERCENT.. 0						
1966	735.98	546	529	207	15.52	13
1986	6,184.30	2,730	2,647	3,537	33.51	106
	6,920.28	3,276	3,176	3,744		119

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 31.5 1.72

BLACK HILLS POWER

ACCOUNT 361 STRUCTURES AND IMPROVMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-S1						
NET SALVAGE PERCENT.. -5						
1953	10,088.45	9,046	10,119	474	5.84	81
1958	9,035.77	7,718	8,633	855	7.46	115
1962	13,779.32	11,274	12,611	1,857	8.83	210
1966	7,140.49	5,571	6,232	1,266	10.28	123
1970	5,970.29	4,416	4,940	1,329	11.82	112
1972	14,137.26	10,157	11,362	3,482	12.63	276
1975	3,573.49	2,447	2,737	1,015	13.91	73
1980	33,531.06	20,949	23,434	11,774	16.20	727
1981	4,891.46	2,993	3,348	1,788	16.69	107
1983	2,123.00	1,243	1,390	839	17.70	47
1990	6,159.00	2,970	3,322	3,145	21.63	145
1992	7,446.06	3,346	3,743	4,075	22.88	178
1994	9,715.96	4,030	4,508	5,694	24.20	235
1997	1,989.73	716	801	1,288	26.30	49
1998	8,229.02	2,797	3,129	5,511	27.05	204
1999	92,414.36	29,571	33,078	63,957	27.81	2,300
2000	2,167.88	649	726	1,550	28.59	54
2002	19,224.07	4,940	5,526	14,659	30.21	485
2003	2,089.16	490	548	1,646	31.06	53
2004	517.46	110	123	420	31.92	13
2005	602.04	114	128	504	32.81	15
2011	247,481.32	9,745	10,900	248,955	38.50	6,466
2012	157,400.36	2,066	2,311	162,959	39.50	4,126
	659,707.01	137,358	153,649	539,043		16,194

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 33.3 2.45

BLACK HILLS POWER

ACCOUNT 361.05 LAND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-S1						
NET SALVAGE PERCENT.. -5						
2011	47,783.26	1,881	657	49,515	38.50	1,286
	47,783.26	1,881	657	49,515		1,286

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 38.5 2.69

BLACK HILLS POWER

ACCOUNT 362 STATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-R2						
NET SALVAGE PERCENT.. -10						
1953	148,494.46	138,588	157,271	6,073	6.82	890
1958	307,940.77	274,751	311,791	26,944	8.50	3,170
1962	586,739.37	501,557	569,173	76,240	10.03	7,601
1966	151,590.92	123,210	139,820	26,930	11.75	2,292
1970	382,119.60	292,551	331,990	88,342	13.68	6,458
1971	833,211.16	627,522	712,119	204,413	14.19	14,405
1972	533,206.50	394,668	447,874	138,653	14.72	9,419
1973	2,181.75	1,586	1,800	600	15.26	39
1974	160,031.87	114,148	129,536	46,499	15.82	2,939
1975	955,056.54	667,926	757,970	292,592	16.39	17,852
1976	1,664,463.36	1,140,455	1,294,202	536,708	16.97	31,627
1977	1,238,221.37	830,547	942,514	419,530	17.56	23,891
1978	1,262,797.86	828,501	940,193	448,885	18.16	24,718
1979	144,313.98	92,496	104,966	53,779	18.78	2,864
1980	565,931.49	354,011	401,736	220,789	19.41	11,375
1981	393,955.77	240,267	272,658	160,693	20.05	8,015
1982	322,338.13	191,469	217,281	137,291	20.70	6,632
1983	985,585.89	569,295	646,042	438,102	21.37	20,501
1984	435,879.36	244,634	277,613	201,854	22.04	9,159
1985	401,588.06	218,616	248,088	193,659	22.73	8,520
1986	508,398.84	268,189	304,344	254,895	23.42	10,884
1987	1,532.78	782	887	799	24.13	33
1988	746,078.79	367,668	417,234	403,453	24.84	16,242
1989	543,035.32	257,919	292,689	304,650	25.57	11,914
1990	2,121,550.74	969,795	1,100,535	1,233,171	26.30	46,889
1991	63,719.03	27,959	31,728	38,363	27.05	1,418
1992	1,516,945.43	637,788	723,769	944,871	27.80	33,988
1993	3,336,986.84	1,340,204	1,520,879	2,149,807	28.57	75,247
1994	740,392.18	283,422	321,631	492,800	29.34	16,796
1995	2,675,184.56	973,064	1,104,244	1,838,459	30.12	61,038
1996	2,681,318.12	923,502	1,048,001	1,901,449	30.91	61,516
1997	2,088,553.51	678,494	769,963	1,527,446	31.71	48,169
1998	3,600,269.73	1,099,220	1,247,408	2,712,889	32.51	83,448
1999	3,429,964.55	979,310	1,111,332	2,661,629	33.32	79,881
2000	1,164,829.39	308,937	350,585	930,727	34.15	27,254
2001	2,656,899.69	650,773	738,505	2,184,085	34.98	62,438
2002	1,566,407.00	351,881	399,319	1,323,729	35.81	36,965
2003	3,665,088.16	747,176	847,904	3,183,693	36.66	86,844
2004	431,763.41	79,049	89,706	385,234	37.51	10,270
2005	1,414,169.14	229,542	260,487	1,295,099	38.36	33,762
2006	1,872,276.97	264,070	299,670	1,759,835	39.23	44,859
2007	843,087.71	100,984	114,598	812,798	40.10	20,269

BLACK HILLS POWER

ACCOUNT 362 STATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-R2						
NET SALVAGE PERCENT.. -10						
2008	2,099,299.42	206,283	234,092	2,075,137	40.98	50,638
2009	7,846,881.79	602,311	683,509	7,948,061	41.86	189,872
2010	4,473,728.64	246,055	279,226	4,641,876	42.75	108,582
2011	3,510,850.68	115,858	131,477	3,730,459	43.65	85,463
2012	4,981,051.87	54,792	62,178	5,416,979	44.55	121,593
	72,055,912.50	20,611,825	23,390,537	55,870,967		1,638,639

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 34.1 2.27

BLACK HILLS POWER

ACCOUNT 364 POLES, TOWERS AND FIXTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

SURVIVOR CURVE.. IOWA 50-R2
NET SALVAGE PERCENT.. -70

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
1953	107,692.01	147,084	123,707	59,369	9.83	6,040
1958	329,165.89	427,409	359,477	200,105	11.81	16,944
1962	335,518.48	415,238	349,240	221,141	13.60	16,260
1966	824,769.32	965,491	812,036	590,072	15.57	37,898
1970	1,077,429.29	1,182,134	994,246	837,384	17.73	47,230
1971	175,797.95	189,475	159,360	139,497	18.30	7,623
1972	257,353.37	272,300	229,021	208,480	18.88	11,042
1973	217,652.74	225,854	189,957	180,053	19.48	9,243
1974	550,222.91	559,731	470,768	464,611	20.08	23,138
1975	305,565.11	304,404	256,022	263,439	20.70	12,727
1976	286,526.51	279,398	234,991	252,104	21.32	11,825
1977	291,679.12	278,075	233,878	261,977	21.96	11,930
1978	386,559.34	360,119	302,882	354,269	22.60	15,676
1979	682,159.50	620,192	521,619	638,052	23.26	27,431
1980	421,599.01	373,697	314,302	402,416	23.93	16,816
1981	2,831,170.23	2,444,999	2,056,392	2,756,597	24.60	112,057
1982	282,015.06	236,932	199,274	280,152	25.29	11,078
1983	839,523.07	685,622	576,649	850,540	25.98	32,738
1984	661,917.46	524,596	441,217	684,043	26.69	25,629
1985	579,460.78	445,258	374,489	610,594	27.40	22,284
1986	461,937.17	343,487	288,893	496,400	28.13	17,647
1987	160,875.52	115,631	97,253	176,235	28.86	6,107
1988	2,658,485.72	1,843,926	1,550,853	2,968,573	29.60	100,290
1989	2,285,388.99	1,526,868	1,284,188	2,600,973	30.35	85,699
1990	773,747.06	497,210	418,184	897,186	31.10	28,848
1991	1,154,873.17	711,887	598,740	1,364,544	31.87	42,816
1992	1,697,348.08	1,001,843	842,610	2,042,882	32.64	62,588
1993	1,370,754.40	772,722	649,906	1,680,376	33.42	50,281
1994	797,845.12	428,331	360,252	996,085	34.21	29,117
1995	1,872,359.96	954,267	802,596	2,380,416	35.01	67,992
1996	2,148,290.48	1,036,464	871,729	2,780,365	35.81	77,642
1997	1,327,598.70	603,951	507,959	1,748,959	36.62	47,760
1998	3,659,280.79	1,562,659	1,314,291	4,906,486	37.44	131,049
1999	675,656.41	269,695	226,830	921,786	38.26	24,093
2000	1,629,428.80	604,420	508,354	2,261,675	39.09	57,858
2001	2,878,139.21	985,417	828,795	4,064,042	39.93	101,779
2002	2,342,987.74	735,276	618,412	3,364,667	40.77	82,528
2003	2,376,384.43	676,271	568,785	3,471,069	41.63	83,379
2004	1,541,518.40	394,135	331,491	2,289,090	42.48	53,886
2005	1,319,620.13	298,366	250,944	1,992,410	43.35	45,961
2006	2,663,388.09	523,409	440,218	4,087,542	44.22	92,436
2007	1,402,105.58	234,068	196,865	2,186,714	45.09	48,497

BLACK HILLS POWER

ACCOUNT 364 POLES, TOWERS AND FIXTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R2						
NET SALVAGE PERCENT.. -70						
2008	6,371,097.77	872,968	734,219	10,096,647	45.97	219,636
2009	2,270,686.79	242,419	203,889	3,656,279	46.86	78,026
2010	2,616,885.80	200,192	168,374	4,280,332	47.75	89,640
2011	5,905,936.38	271,082	227,996	9,812,096	48.65	201,687
2012	2,453,785.85	37,543	31,576	4,139,860	49.55	83,549
	68,260,183.69	28,682,515	24,123,729	91,918,583		2,486,400

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 37.0   3.64

BLACK HILLS POWER

ACCOUNT 365 OVERHEAD CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R1.5						
NET SALVAGE PERCENT.. -20						
1953	603,284.52	549,182	618,381	105,560	12.07	8,746
1958	741,789.86	639,660	720,259	169,889	14.07	12,075
1962	294,359.32	241,328	271,736	81,495	15.84	5,145
1966	452,371.05	349,809	393,886	148,959	17.78	8,378
1970	851,167.02	615,087	692,590	328,810	19.89	16,531
1971	97,123.94	68,904	77,586	38,963	20.44	1,906
1972	140,130.54	97,531	109,820	58,337	21.00	2,778
1973	118,712.94	80,972	91,175	51,281	21.58	2,376
1974	416,575.71	278,339	313,411	186,480	22.16	8,415
1975	161,947.42	105,914	119,260	75,077	22.75	3,300
1976	133,792.18	85,573	96,355	64,196	23.35	2,749
1977	129,780.44	81,108	91,328	64,409	23.96	2,688
1978	228,606.03	139,468	157,041	117,286	24.58	4,772
1979	475,771.98	283,065	318,732	252,194	25.21	10,004
1980	279,176.04	161,877	182,274	152,737	25.84	5,911
1981	1,548,312.61	873,620	983,699	874,276	26.49	33,004
1982	245,635.02	134,765	151,746	143,016	27.14	5,270
1983	658,662.21	350,935	395,154	395,241	27.80	14,217
1984	788,735.71	407,556	458,910	487,573	28.47	17,126
1985	404,501.63	202,510	228,027	257,375	29.14	8,832
1986	378,014.95	182,989	206,046	247,572	29.83	8,299
1987	53,318.60	24,928	28,069	35,913	30.52	1,177
1988	1,790,886.46	807,188	908,897	1,240,167	31.22	39,723
1989	1,773,211.82	769,432	866,383	1,261,471	31.92	39,520
1990	919,069.78	383,142	431,419	671,465	32.63	20,578
1991	615,796.32	246,072	277,078	461,878	33.35	13,849
1992	932,963.08	356,690	401,634	717,922	34.07	21,072
1993	726,826.70	265,146	298,555	573,637	34.80	16,484
1994	303,065.75	105,249	118,511	245,168	35.53	6,900
1995	805,967.57	265,582	299,046	668,115	36.27	18,421
1996	1,217,640.69	379,319	427,115	1,034,054	37.02	27,932
1997	341,572.38	100,258	112,891	296,996	37.77	7,863
1998	2,032,422.14	559,973	630,532	1,808,375	38.52	46,946
1999	208,762.78	53,710	60,478	190,037	39.28	4,838
2000	835,832.89	199,597	224,747	778,252	40.05	19,432
2001	871,392.02	191,985	216,176	829,494	40.82	20,321
2002	879,340.50	177,486	199,850	855,359	41.59	20,566
2003	2,123,960.64	388,940	437,948	2,110,805	42.37	49,818
2004	599,456.18	98,551	110,969	608,378	43.15	14,099
2005	506,953.99	73,731	83,021	525,324	43.94	11,955
2006	1,021,141.84	129,154	145,428	1,079,942	44.73	24,144
2007	821,300.41	88,109	99,211	886,349	45.53	19,467

BLACK HILLS POWER

ACCOUNT 365 OVERHEAD CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R1.5						
NET SALVAGE PERCENT.. -20						
2008	5,145,685.42	453,232	510,340	5,664,483	46.33	122,264
2009	695,156.89	47,716	53,728	780,460	47.14	16,556
2010	2,258,493.01	111,118	125,119	2,585,073	47.95	53,912
2011	3,833,239.36	113,157	127,416	4,472,471	48.77	91,705
2012	1,766,316.52	17,381	19,571	2,100,009	49.59	42,347
	42,228,224.86	12,337,038	13,891,548	36,782,322		954,411

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 38.5 2.26

BLACK HILLS POWER

ACCOUNT 366 UNDERGROUND CONDUIT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 37-R1						
NET SALVAGE PERCENT.. -5						
1966	283.75	223	239	59	9.36	6
1970	8,021.70	5,907	6,319	2,104	11.05	190
1972	5,535.25	3,936	4,210	1,602	11.94	134
1974	8,492.84	5,816	6,222	2,695	12.87	209
1975	2,356.76	1,582	1,692	783	13.35	59
1976	4,491.68	2,953	3,159	1,557	13.83	113
1983	1,511.00	836	894	693	17.50	40
1985	8,166.58	4,257	4,554	4,021	18.63	216
1986	956.11	483	517	487	19.21	25
1992	20,189.98	8,096	8,661	12,538	22.87	548
1993	15,682.55	6,008	6,427	10,040	23.50	427
1996	158,416.08	51,879	55,496	110,841	25.46	4,354
1997	19,827.59	6,122	6,549	14,270	26.12	546
1998	615.32	178	190	456	26.79	17
1999	6,595.58	1,786	1,911	5,014	27.46	183
2001	60,783.93	14,110	15,094	48,729	28.82	1,691
2002	176,817.41	37,583	40,204	145,454	29.51	4,929
2003	123,991.02	23,926	25,594	104,597	30.20	3,463
2004	189,122.20	32,793	35,080	163,498	30.89	5,293
2005	128,855.96	19,783	21,162	114,137	31.59	3,613
2006	496,367.90	66,347	70,973	450,213	32.29	13,943
2007	123,728.26	14,045	15,024	114,891	33.00	3,482
2008	510,326.23	47,502	50,814	485,029	33.72	14,384
2009	864,479.24	62,804	67,183	840,520	34.44	24,405
2010	562,485.91	29,371	31,419	559,191	35.16	15,904
2011	355,185.52	11,188	11,968	360,977	35.89	10,058
2012	231,727.09	2,433	2,603	240,710	36.63	6,571
	4,085,013.44	461,947	494,158	3,795,106		114,803

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 33.1 2.81

BLACK HILLS POWER

ACCOUNT 367 UNDERGROUND CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-R2						
NET SALVAGE PERCENT.. -5						
1966	28,200.61	23,481	29,413	198	8.28	24
1969	12,923.22	10,350	12,965	604	9.49	64
1970	30,022.72	23,706	29,695	1,829	9.92	184
1971	22,317.48	17,358	21,744	1,689	10.37	163
1972	49,401.27	37,827	47,384	4,487	10.83	414
1973	192,463.96	144,947	181,568	20,519	11.31	1,814
1974	135,912.13	100,609	126,028	16,680	11.80	1,414
1975	235,121.06	170,962	214,156	32,721	12.30	2,660
1976	97,373.93	69,474	87,027	15,216	12.82	1,187
1977	151,235.13	105,759	132,479	26,318	13.36	1,970
1978	141,923.91	97,198	121,755	27,265	13.91	1,960
1979	322,366.16	216,038	270,620	67,864	14.47	4,690
1980	231,845.84	151,845	190,209	53,229	15.05	3,537
1981	209,584.87	134,019	167,879	52,185	15.64	3,337
1982	122,928.05	76,638	96,001	33,073	16.25	2,035
1983	183,281.87	111,282	139,398	53,048	16.87	3,145
1984	151,902.38	89,717	112,384	47,113	17.50	2,692
1985	154,668.64	88,712	111,125	51,277	18.15	2,825
1986	31,450.04	17,494	21,914	11,109	18.81	591
1987	77,868.59	41,944	52,541	29,221	19.48	1,500
1988	263,452.16	137,206	171,871	104,754	20.16	5,196
1989	837,548.32	420,805	527,122	352,304	20.86	16,889
1990	1,020,604.85	494,024	618,840	452,795	21.56	21,002
1991	1,332,806.35	619,955	776,587	622,860	22.28	27,956
1992	2,444,375.81	1,090,161	1,365,591	1,201,004	23.01	52,195
1993	1,093,120.26	466,284	584,091	563,685	23.75	23,734
1994	717,116.73	291,777	365,495	387,478	24.50	15,815
1995	1,946,539.92	753,165	943,453	1,100,414	25.26	43,563
1996	567,326.22	208,046	260,609	335,084	26.03	12,873
1997	1,832,038.04	633,839	793,979	1,129,661	26.82	42,120
1998	1,739,522.08	565,758	708,697	1,117,801	27.61	40,485
1999	489,958.10	149,064	186,725	327,731	28.41	11,536
2000	1,950,622.48	552,489	692,076	1,356,078	29.21	46,425
2001	1,199,471.30	313,917	393,229	866,216	30.03	28,845
2002	2,352,827.35	564,502	707,124	1,763,345	30.86	57,140
2003	1,558,904.98	340,056	425,972	1,210,878	31.69	38,210
2004	1,836,763.42	359,684	450,558	1,478,044	32.54	45,422
2005	1,505,222.83	261,175	327,161	1,253,323	33.39	37,536
2006	2,139,963.72	323,563	405,312	1,841,650	34.24	53,787
2007	1,403,320.88	180,134	225,645	1,247,842	35.11	35,541
2008	3,483,521.23	367,599	460,473	3,197,224	35.98	88,861
2009	1,849,543.94	151,963	190,357	1,751,664	36.87	47,509

BLACK HILLS POWER

ACCOUNT 367 UNDERGROUND CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-R2						
NET SALVAGE PERCENT.. -5						
2010	1,775,081.47	104,841	131,329	1,732,507	37.75	45,894
2011	1,207,210.86	42,781	53,590	1,213,981	38.65	31,410
2012	439,080.78	5,187	6,497	454,538	39.55	11,493
	39,568,735.94	11,127,335	13,938,668	27,608,505		917,643

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 30.1 2.32

BLACK HILLS POWER

ACCOUNT 368.01 LINE TRANSFORMERS - OTHER EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

SURVIVOR CURVE.. IOWA 36-R1.5
NET SALVAGE PERCENT.. 0

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
1953	7,930.35	7,122	7,411	519	3.67	141
1956	333.93	293	305	29	4.43	7
1958	10,541.69	9,086	9,455	1,087	4.97	219
1960	151.48	128	133	18	5.54	3
1962	5,971.18	4,954	5,155	816	6.13	133
1966	8,771.27	6,968	7,251	1,520	7.40	205
1970	3,775.72	2,851	2,967	809	8.82	92
1971	1,210.08	901	938	272	9.21	30
1974	12,480.43	8,861	9,221	3,259	10.44	312
1976	2,321.63	1,590	1,655	667	11.34	59
1979	906.52	584	608	299	12.79	23
1980	224.82	142	148	77	13.31	6
1981	8,939.24	5,505	5,729	3,210	13.83	232
1982	953.14	573	596	357	14.37	25
1983	429.33	251	261	168	14.93	11
1984	36,778.88	20,943	21,794	14,985	15.50	967
1985	11,000.07	6,087	6,334	4,666	16.08	290
1986	48,571.00	26,067	27,126	21,445	16.68	1,286
1987	7,597.49	3,949	4,109	3,488	17.29	202
1988	76,506.47	38,445	40,007	36,499	17.91	2,038
1989	44,223.51	21,448	22,319	21,905	18.54	1,181
1990	314.81	147	153	162	19.19	8
1991	41,691.38	18,715	19,475	22,216	19.84	1,120
1992	14,192.15	6,107	6,355	7,837	20.51	382
1993	2,382.00	980	1,020	1,362	21.19	64
1994	49,943.06	19,589	20,385	29,558	21.88	1,351
1995	1,744.84	651	677	1,068	22.57	47
1996	39,409.00	13,924	14,490	24,919	23.28	1,070
1997	1,490.25	497	517	973	24.00	41
1998	6,128.85	1,920	1,998	4,131	24.72	167
1999	1,258.87	369	384	875	25.45	34
2000	36,674.63	9,994	10,400	26,275	26.19	1,003
2001	58,911.52	14,826	15,428	43,484	26.94	1,614
2002	6,527.08	1,507	1,568	4,959	27.69	179
2003	25,253.22	5,296	5,511	19,742	28.45	694
2004	60,558.87	11,405	11,868	48,691	29.22	1,666
2005	11,617.99	1,940	2,019	9,599	29.99	320
2006	155,280.87	22,559	23,475	131,806	30.77	4,284
2007	128,119.46	15,801	16,443	111,676	31.56	3,539
2008	93,170.90	9,447	9,831	83,340	32.35	2,576
2009	245,709.92	19,453	20,243	225,467	33.15	6,801

BLACK HILLS POWER

ACCOUNT 368.01 LINE TRANSFORMERS - OTHER EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 36-R1.5						
NET SALVAGE PERCENT.. 0						
2010	204,154.85	11,569	12,039	192,116	33.96	5,657
2011	179,375.13	6,129	6,378	172,997	34.77	4,975
2012	601,041.46	6,846	7,124	593,917	35.59	16,688
	2,254,569.34	366,419	381,303	1,873,266		61,742

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 30.3 2.74

BLACK HILLS POWER

ACCOUNT 368.02 LINE TRANSFORMERS - CONVENTIONAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 36-R1.5						
NET SALVAGE PERCENT.. 0						
1953	48,339.05	43,411	48,339			
1958	98,253.69	84,689	96,829	1,425	4.97	287
1960	771.01	652	745	26	5.54	5
1962	219,423.40	182,060	208,158	11,265	6.13	1,838
1966	124,395.38	98,825	112,991	11,404	7.40	1,541
1970	106,630.60	80,506	92,046	14,585	8.82	1,654
1971	36,231.77	26,963	30,828	5,404	9.21	587
1972	107,287.59	78,648	89,922	17,366	9.61	1,807
1973	169,373.58	122,232	139,754	29,620	10.02	2,956
1974	48,028.43	34,100	38,988	9,040	10.44	866
1975	49,047.53	34,224	39,130	9,918	10.88	912
1976	101,714.39	69,674	79,662	22,052	11.34	1,945
1977	69,925.54	46,986	53,721	16,205	11.81	1,372
1978	341,620.77	224,995	257,248	84,373	12.29	6,865
1979	271,762.03	175,210	200,326	71,436	12.79	5,585
1980	101,830.58	64,182	73,382	28,449	13.31	2,137
1981	113,887.97	70,136	80,190	33,698	13.83	2,437
1982	178,009.06	106,953	122,285	55,724	14.37	3,878
1983	175,778.83	102,880	117,628	58,151	14.93	3,895
1984	141,696.78	80,688	92,255	49,442	15.50	3,190
1985	166,485.76	92,122	105,328	61,158	16.08	3,803
1986	147,789.55	79,314	90,684	57,106	16.68	3,424
1987	176,557.02	91,760	104,914	71,643	17.29	4,144
1988	213,440.72	107,254	122,629	90,812	17.91	5,070
1989	198,136.42	96,096	109,871	88,265	18.54	4,761
1990	245,081.67	114,438	130,843	114,239	19.19	5,953
1991	390,844.95	175,446	200,596	190,249	19.84	9,589
1992	337,316.74	145,141	165,947	171,370	20.51	8,355
1993	450,122.01	185,176	211,721	238,401	21.19	11,251
1994	431,699.42	169,321	193,593	238,106	21.88	10,882
1995	394,508.90	147,175	168,272	226,237	22.57	10,024
1996	460,928.96	162,860	186,206	274,723	23.28	11,801
1997	405,526.93	135,174	154,551	250,976	24.00	10,457
1998	461,712.18	144,668	165,406	296,306	24.72	11,986
1999	314,273.33	92,101	105,303	208,970	25.45	8,211
2000	435,964.91	118,800	135,830	300,135	26.19	11,460
2001	408,670.88	102,850	117,593	291,078	26.94	10,805
2002	269,258.90	62,153	71,063	198,196	27.69	7,158
2003	440,908.21	92,467	105,722	335,186	28.45	11,782
2004	243,598.60	45,877	52,453	191,146	29.22	6,542
2005	322,505.74	53,839	61,557	260,949	29.99	8,701
2006	589,560.50	85,651	97,929	491,632	30.77	15,978

BLACK HILLS POWER

ACCOUNT 368.02 LINE TRANSFORMERS - CONVENTIONAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 36-R1.5						
NET SALVAGE PERCENT.. 0						
2007	649,302.51	80,078	91,557	557,746	31.56	17,673
2008	614,895.13	62,344	71,281	543,614	32.35	16,804
2009	263,148.41	20,833	23,819	239,329	33.15	7,220
2010	273,382.52	15,493	17,714	255,669	33.96	7,529
2011	429,916.68	14,690	16,796	413,121	34.77	11,882
2012	851,732.57	9,701	11,091	840,642	35.59	23,620
	13,091,278.10	4,430,836	5,064,696	8,026,582		320,622

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.0 2.45

BLACK HILLS POWER

ACCOUNT 368.03 LINE TRANSFORMERS - PADMOUNT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 36-R1.5						
NET SALVAGE PERCENT.. 0						
1953	32,522.23	29,207	32,522			
1970	34,419.96	25,987	34,420			
1971	10,850.38	8,075	10,712	138	9.21	15
1972	27,500.04	20,159	26,742	758	9.61	79
1973	127,983.77	92,362	122,525	5,459	10.02	545
1974	108,135.64	76,776	101,849	6,287	10.44	602
1975	20,360.14	14,207	18,847	1,513	10.88	139
1976	73,671.68	50,465	66,946	6,726	11.34	593
1977	137,431.86	92,346	122,504	14,928	11.81	1,264
1978	309,705.80	203,975	270,589	39,117	12.29	3,183
1979	303,842.12	195,893	259,867	43,975	12.79	3,438
1980	35,850.43	22,596	29,975	5,875	13.31	441
1981	18,176.77	11,194	14,850	3,327	13.83	241
1982	26,044.96	15,649	20,760	5,285	14.37	368
1983	173,469.88	101,528	134,685	38,785	14.93	2,598
1984	187,685.59	106,876	141,779	45,907	15.50	2,962
1985	200,727.98	111,069	147,342	53,386	16.08	3,320
1986	249,113.60	133,692	177,353	71,761	16.68	4,302
1987	186,246.72	96,796	128,407	57,840	17.29	3,345
1988	183,772.89	92,346	122,504	61,269	17.91	3,421
1989	124,203.48	60,239	79,912	44,291	18.54	2,389
1990	421,200.61	196,675	260,905	160,296	19.19	8,353
1991	350,156.32	157,182	208,514	141,642	19.84	7,139
1992	239,203.80	102,925	136,538	102,666	20.51	5,006
1993	345,387.46	142,089	188,492	156,895	21.19	7,404
1994	717,008.80	281,225	373,067	343,942	21.88	15,719
1995	397,356.95	148,238	196,649	200,708	22.57	8,893
1996	713,066.31	251,948	334,229	378,837	23.28	16,273
1997	641,810.61	213,935	283,802	358,009	24.00	14,917
1998	428,755.99	134,342	178,215	250,541	24.72	10,135
1999	698,705.58	204,763	271,634	427,072	25.45	16,781
2000	887,371.30	241,809	320,779	566,592	26.19	21,634
2001	673,503.90	169,501	224,856	448,648	26.94	16,654
2002	661,671.52	152,734	202,614	459,058	27.69	16,578
2003	865,743.02	181,564	240,859	624,884	28.45	21,964
2004	789,457.47	148,679	197,234	592,223	29.22	20,268
2005	879,862.19	146,884	194,853	685,009	29.99	22,841
2006	1,328,648.14	193,026	256,064	1,072,584	30.77	34,858
2007	1,723,576.65	212,569	281,990	1,441,587	31.56	45,678
2008	1,361,444.29	138,037	183,117	1,178,327	32.35	36,424
2009	880,482.81	69,708	92,473	788,010	33.15	23,771

BLACK HILLS POWER

ACCOUNT 368.03 LINE TRANSFORMERS - PADMOUNT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 36-R1.5						
NET SALVAGE PERCENT.. 0						
2010	271,264.89	15,373	20,393	250,872	33.96	7,387
2011	725,319.45	24,784	32,878	692,441	34.77	19,915
2012	1,323,720.35	15,077	20,001	1,303,719	35.59	36,632
	19,896,434.33	5,104,504	6,765,246	13,131,188		468,469

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 28.0 2.35

BLACK HILLS POWER

ACCOUNT 369.01 SERVICES - OVERHEAD

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 62-R2.5						
NET SALVAGE PERCENT.. -50						
1953	208,579.33	232,077	230,140	82,729	16.01	5,167
1958	113,738.86	119,288	118,292	52,316	18.65	2,805
1962	171,906.36	170,561	169,137	88,723	20.99	4,227
1966	171,849.32	159,987	158,651	99,123	23.52	4,214
1970	163,652.98	141,666	140,483	104,996	26.22	4,004
1971	61,692.56	52,374	51,937	40,602	26.91	1,509
1972	89,558.22	74,493	73,871	60,466	27.62	2,189
1973	36,855.53	30,013	29,762	25,521	28.34	901
1974	43,469.52	34,642	34,353	30,851	29.06	1,062
1975	33,814.10	26,342	26,122	24,599	29.80	825
1976	51,694.51	39,346	39,018	38,524	30.54	1,261
1977	41,320.58	30,700	30,444	31,537	31.29	1,008
1978	40,989.18	29,711	29,463	32,021	32.04	999
1979	36,269.96	25,614	25,400	29,005	32.81	884
1980	55,074.18	37,868	37,552	45,059	33.58	1,342
1981	67,303.24	45,007	44,631	56,324	34.36	1,639
1982	14,418.94	9,366	9,288	12,340	35.15	351
1983	64,584.17	40,719	40,379	56,497	35.94	1,572
1984	64,594.56	39,460	39,131	57,761	36.75	1,572
1985	39,674.29	23,459	23,263	36,248	37.56	965
1986	28,511.23	16,300	16,164	26,603	38.37	693
1987	20,770.61	11,462	11,366	19,790	39.19	505
1988	63,009.04	33,507	33,227	61,287	40.02	1,531
1989	62,320.97	31,874	31,608	61,873	40.86	1,514
1990	70,656.04	34,701	34,411	71,573	41.70	1,716
1991	229,213.67	107,860	106,960	236,861	42.55	5,567
1992	194,967.78	87,736	87,004	205,448	43.40	4,734
1993	157,957.42	67,757	67,191	169,745	44.27	3,834
1994	31,416.58	12,823	12,716	34,409	45.13	762
1995	341,666.95	132,256	131,152	381,348	46.00	8,290
1996	83,516.55	30,551	30,296	94,979	46.88	2,026
1997	264,780.95	91,222	90,461	306,710	47.76	6,422
1998	298,740.46	96,487	95,682	352,429	48.65	7,244
1999	154,145.61	46,468	46,080	185,138	49.54	3,737
2000	158,349.00	44,286	43,916	193,608	50.44	3,838
2001	156,256.56	40,300	39,964	194,421	51.34	3,787
2002	227,242.15	53,604	53,156	287,707	52.25	5,506
2003	176,826.29	37,818	37,502	227,737	53.16	4,284
2004	154,021.79	29,549	29,302	201,731	54.07	3,731
2005	148,256.67	25,143	24,933	197,452	54.99	3,591
2006	147,437.78	21,687	21,506	199,651	55.92	3,570
2007	173,809.22	21,699	21,518	239,196	56.84	4,208

BLACK HILLS POWER

ACCOUNT 369.01 SERVICES - OVERHEAD

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 62-R2.5						
NET SALVAGE PERCENT.. -50						
2008	253,149.86	25,909	25,693	354,032	57.77	6,128
2009	263,694.12	20,987	20,812	374,729	58.71	6,383
2010	373,922.65	21,347	21,169	539,715	59.64	9,050
2011	978,509.92	33,612	33,332	1,434,433	60.58	23,678
2012	1,323,066.01	15,043	14,917	1,969,682	61.53	32,012
	8,107,256.27	2,554,681	2,533,355	9,627,529		196,837

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 48.9 2.43

BLACK HILLS POWER

ACCOUNT 369.02 SERVICES - UNDERGROUND

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 62-R2.5						
NET SALVAGE PERCENT.. -50						
1958	6,064.21	6,360	8,349	747	18.65	40
1971	290.96	247	324	112	26.91	4
1972	33,566.84	27,920	36,653	13,697	27.62	496
1973	73,272.22	59,669	78,333	31,575	28.34	1,114
1974	164,739.30	131,287	172,353	74,756	29.06	2,572
1975	205,817.65	160,337	210,490	98,236	29.80	3,297
1976	183,296.31	139,512	183,151	91,793	30.54	3,006
1977	114,913.42	85,378	112,084	60,286	31.29	1,927
1978	139,855.60	101,374	133,084	76,699	32.04	2,394
1979	159,115.29	112,370	147,519	91,154	32.81	2,778
1980	134,273.80	92,325	121,204	80,207	33.58	2,389
1981	142,266.14	95,136	124,894	88,505	34.36	2,576
1982	23,079.46	14,992	19,681	14,938	35.15	425
1983	79,707.84	50,254	65,973	53,589	35.94	1,491
1984	88,993.86	54,365	71,370	62,121	36.75	1,690
1985	81,237.73	48,035	63,060	58,797	37.56	1,565
1986	27,697.78	15,835	20,788	20,759	38.37	541
1987	7,548.85	4,166	5,469	5,854	39.19	149
1988	140,165.86	74,537	97,852	112,397	40.02	2,809
1989	100,845.59	51,578	67,712	83,556	40.86	2,045
1990	105,694.03	51,910	68,147	90,394	41.70	2,168
1991	191,813.95	90,261	118,495	169,226	42.55	3,977
1992	522,798.95	235,260	308,849	475,349	43.40	10,953
1993	367,217.11	157,520	206,792	344,034	44.27	7,771
1994	134,268.73	54,802	71,944	129,459	45.13	2,869
1995	1,136,619.21	439,974	577,598	1,127,331	46.00	24,507
1996	195,395.78	71,477	93,835	199,259	46.88	4,250
1997	843,595.07	290,635	381,545	883,848	47.76	18,506
1998	719,754.68	232,466	305,181	774,451	48.65	15,919
1999	484,449.34	146,040	191,721	534,953	49.54	10,798
2000	708,930.03	198,270	260,289	803,106	50.44	15,922
2001	598,034.15	154,239	202,485	694,566	51.34	13,529
2002	850,644.23	200,658	263,424	1,012,542	52.25	19,379
2003	1,017,460.25	217,604	285,670	1,240,520	53.16	23,336
2004	1,238,811.59	237,666	312,008	1,546,209	54.07	28,596
2005	1,472,619.64	249,742	327,861	1,881,068	54.99	34,207
2006	1,607,850.16	236,499	310,476	2,101,299	55.92	37,577
2007	1,685,302.91	210,402	276,216	2,251,738	56.84	39,615
2008	1,554,108.57	159,055	208,807	2,122,356	57.77	36,738
2009	1,500,165.14	119,398	156,746	2,093,502	58.71	35,658

BLACK HILLS POWER

ACCOUNT 369.02 SERVICES - UNDERGROUND

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 62-R2.5						
NET SALVAGE PERCENT.. -50						
2010	1,266,716.32	72,317	94,937	1,805,137	59.64	30,267
2011	216,600.53	7,440	9,767	315,134	60.58	5,202
2012	496,908.02	5,650	7,418	737,944	61.53	11,993
	20,822,507.10	5,164,962	6,780,554	24,453,207		467,045

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 52.4 2.24

BLACK HILLS POWER

ACCOUNT 370.01 METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 21-L0						
NET SALVAGE PERCENT.. 0						
1953	4,268.40	3,431	2,846	1,422	4.12	345
1958	32,407.36	24,877	20,632	11,775	4.88	2,413
1962	39,822.52	29,336	24,331	15,492	5.53	2,801
1966	33,793.90	23,784	19,726	14,068	6.22	2,262
1970	30,031.17	20,078	16,652	13,379	6.96	1,922
1972	8,208.51	5,336	4,426	3,783	7.35	515
1973	15,157.47	9,708	8,052	7,105	7.55	941
1974	12,713.78	8,022	6,653	6,061	7.75	782
1975	8,215.16	5,101	4,231	3,984	7.96	501
1976	11,310.79	6,910	5,731	5,580	8.17	683
1977	30,629.24	18,407	15,266	15,363	8.38	1,833
1978	23,189.76	13,693	11,357	11,833	8.60	1,376
1979	30,447.73	17,645	14,634	15,814	8.83	1,791
1980	24,103.83	13,705	11,367	12,737	9.06	1,406
1981	15,436.64	8,608	7,139	8,298	9.29	893
1982	42,546.04	23,238	19,273	23,273	9.53	2,442
1983	29,725.80	15,896	13,184	16,542	9.77	1,693
1984	12,436.24	6,502	5,393	7,043	10.02	703
1985	26,371.87	13,475	11,176	15,196	10.27	1,480
1987	29,172.81	14,170	11,752	17,421	10.80	1,613
1988	7,249.42	3,428	2,843	4,406	11.07	398
1989	59,664.79	27,446	22,762	36,903	11.34	3,254
1990	5,287.57	2,359	1,956	3,332	11.63	287
1991	6,785.65	2,937	2,436	4,350	11.91	365
1992	1,518.14	635	527	991	12.21	81
1993	48,334.11	19,541	16,207	32,127	12.51	2,568
1996	7,447.23	2,670	2,214	5,233	13.47	388
1998	11,968.00	3,910	3,243	8,725	14.14	617
2000	9,625.94	2,819	2,338	7,288	14.85	491
2010	102,207.06	8,517	7,064	95,143	19.25	4,942
2011	19,614.03	1,055	875	18,739	19.87	943
2012	286,377.55	5,728	4,750	281,628	20.58	13,685
	1,026,068.51	362,967	301,036	725,033		56,414

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.9 5.50

BLACK HILLS POWER

ACCOUNT 370.04 METERS - AMI

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 21-L0						
NET SALVAGE PERCENT.. 0						
2010	5,678,194.49	473,164	197,874	5,480,320	19.25	284,692
2011	208,637.94	11,227	4,695	203,943	19.87	10,264
2012	131,844.22	2,637	1,103	130,741	20.58	6,353
	6,018,676.65	487,028	203,672	5,815,005		301,309

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 19.3 5.01

BLACK HILLS POWER

ACCOUNT 371 INSTALLATIONS ON CUSTOMER PREMISES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 30-R1						
NET SALVAGE PERCENT.. -10						
1962	319.31	315	351			
1966	5,601.48	5,264	6,162			
1970	9,711.26	8,635	10,331	351	5.75	61
1971	3,150.91	2,759	3,301	165	6.12	27
1972	11,046.92	9,523	11,393	759	6.49	117
1973	18,236.66	15,460	18,496	1,564	6.88	227
1974	17,565.30	14,640	17,515	1,807	7.27	249
1975	20,021.09	16,393	19,612	2,411	7.67	314
1976	14,769.37	11,865	14,195	2,051	8.09	254
1977	11,178.87	8,809	10,539	1,758	8.51	207
1978	12,275.30	9,479	11,341	2,162	8.94	242
1979	17,960.71	13,579	16,246	3,511	9.38	374
1980	24,219.07	17,903	21,419	5,222	9.84	531
1981	28,837.51	20,830	24,921	6,800	10.30	660
1982	10,854.03	7,649	9,151	2,788	10.78	259
1983	20,248.85	13,914	16,647	5,627	11.26	500
1984	15,530.25	10,387	12,427	4,656	11.76	396
1985	14,320.84	9,310	11,138	4,615	12.27	376
1986	14,244.44	8,989	10,754	4,915	12.79	384
1987	5,695.82	3,484	4,168	2,097	13.32	157
1988	26,190.43	15,499	18,543	10,266	13.86	741
1989	22,262.45	12,718	15,216	9,273	14.42	643
1990	12,938.74	7,121	8,520	5,713	14.99	381
1991	21,692.01	11,477	13,731	10,130	15.57	651
1992	34,776.03	17,648	21,114	17,140	16.16	1,061
1993	51,059.56	24,788	29,656	26,510	16.76	1,582
1994	7,105.46	3,291	3,937	3,879	17.37	223
1995	195,938.03	86,284	103,230	112,302	17.99	6,242
1996	42,275.40	17,640	21,104	25,399	18.62	1,364
1997	149,321.32	58,803	70,351	93,902	19.26	4,875
1998	124,447.81	46,041	55,083	81,810	19.91	4,109
1999	84,668.99	29,307	35,063	58,073	20.56	2,825
2000	99,176.98	31,929	38,200	70,895	21.22	3,341
2001	47,462.00	14,113	16,885	35,323	21.89	1,614
2002	58,583.42	15,960	19,094	45,348	22.57	2,009
2003	65,286.24	16,158	19,331	52,484	23.25	2,257
2004	53,449.03	11,896	14,232	44,562	23.93	1,862
2005	72,253.26	14,253	17,052	62,427	24.62	2,536
2006	65,380.04	11,219	13,422	58,496	25.32	2,310
2007	42,786.55	6,244	7,470	39,595	26.02	1,522
2008	89,029.82	10,675	12,772	85,161	26.73	3,186
2009	109,863.39	10,312	12,337	108,513	27.44	3,955

BLACK HILLS POWER

ACCOUNT 371 INSTALLATIONS ON CUSTOMER PREMISES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 30-R1						
NET SALVAGE PERCENT.. -10						
2010	237,927.76	16,051	19,204	242,517	28.16	8,612
2011	54,588.89	2,222	2,658	57,390	28.89	1,987
2012	130,087.60	1,764	2,111	140,985	29.63	4,758
	2,174,339.20	702,600	840,423	1,551,350		69,981

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 22.2 3.22

BLACK HILLS POWER

ACCOUNT 373 STREET LIGHTING AND SIGNAL SYSTEMS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 25-L0.5						
NET SALVAGE PERCENT.. -15						
1953	28,254.05	24,668	29,740	2,752	6.02	457
1958	9,679.42	8,170	9,850	1,281	6.65	193
1962	41,197.80	33,638	40,554	6,823	7.25	941
1966	22,796.72	17,900	21,580	4,636	7.93	585
1970	41,448.34	31,097	37,490	10,176	8.69	1,171
1971	2,498.87	1,852	2,233	641	8.89	72
1972	3,811.45	2,788	3,361	1,022	9.10	112
1973	1,094.92	790	952	307	9.31	33
1974	5,237.99	3,727	4,493	1,531	9.53	161
1975	26,137.45	18,335	22,105	7,953	9.75	816
1976	4,400.23	3,040	3,665	1,395	9.98	140
1977	3,626.26	2,465	2,972	1,198	10.22	117
1978	3,298.32	2,206	2,660	1,133	10.46	108
1979	5,765.32	3,792	4,572	2,058	10.70	192
1980	9,662.71	6,245	7,529	3,583	10.95	327
1981	7,919.52	5,024	6,057	3,050	11.21	272
1982	2,380.81	1,482	1,787	951	11.47	83
1983	5,695.83	3,474	4,188	2,362	11.74	201
1984	7,232.57	4,322	5,211	3,106	12.01	259
1985	4,167.91	2,437	2,938	1,855	12.29	151
1986	5,142.99	2,938	3,542	2,372	12.58	189
1987	1,840.49	1,027	1,238	879	12.87	68
1988	12,471.45	6,787	8,182	6,160	13.17	468
1989	272,467.06	144,386	174,071	139,266	13.48	10,331
1990	3,812.55	1,966	2,370	2,014	13.79	146
1991	17,359.57	8,696	10,484	9,480	14.11	672
1992	64,124.51	31,149	37,553	36,190	14.44	2,506
1993	30,261.65	14,241	17,169	17,632	14.77	1,194
1994	11,910.22	5,418	6,532	7,165	15.11	474
1995	82,126.38	36,040	43,449	50,996	15.46	3,299
1996	26,288.46	11,101	13,383	16,849	15.82	1,065
1997	72,695.90	29,461	35,518	48,082	16.19	2,970
1998	90,509.36	35,139	42,363	61,723	16.56	3,727
1999	61,858.44	22,906	27,615	43,522	16.95	2,568
2000	43,695.66	15,377	18,538	31,712	17.35	1,828
2001	54,664.15	18,180	21,918	40,946	17.77	2,304
2002	59,891.06	18,706	22,552	46,323	18.21	2,544
2003	37,612.15	10,917	13,161	30,093	18.69	1,610
2004	46,502.29	12,428	14,983	38,495	19.19	2,006
2005	36,069.22	8,744	10,542	30,938	19.73	1,568
2006	66,830.13	14,449	17,420	59,435	20.30	2,928
2007	56,062.72	10,548	12,717	51,755	20.91	2,475

BLACK HILLS POWER

ACCOUNT 373 STREET LIGHTING AND SIGNAL SYSTEMS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 25-L0.5						
NET SALVAGE PERCENT.. -15						
2008	90,032.61	14,247	17,176	86,362	21.56	4,006
2009	97,769.92	12,413	14,965	97,470	22.24	4,383
2010	65,682.16	6,164	7,431	68,103	22.96	2,966
2011	51,814.69	3,027	3,649	55,938	23.73	2,357
2012	25,760.58	533	643	28,982	24.55	1,181
	1,721,562.86	674,440	813,101	1,166,696		68,224

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 17.1 3.96

BLACK HILLS POWER

ACCOUNT 390.01 STRUCTURES AND IMPROVEMENTS - OWNED

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-R1						
NET SALVAGE PERCENT.. -10						
1953	38,455.65	35,247	42,301			
1958	44,309.10	38,419	48,740			
1962	9.00	7	10			
1966	23,838.27	18,552	26,222			
1970	6,615.69	4,821	7,277			
1971	617.37	442	679			
1974	490.67	332	540			
1976	56,640.37	36,697	62,304			
1977	5,719.09	3,624	6,291			
1980	12,204.95	7,189	12,985	440	18.58	24
1981	2,242,365.23	1,286,949	2,324,512	142,090	19.13	7,428
1982	44,705.81	24,957	45,078	4,098	19.70	208
1983	43,465.55	23,583	42,596	5,216	20.27	257
1984	157,884.83	83,146	150,180	23,493	20.85	1,127
1985	57,020.38	29,103	52,566	10,156	21.44	474
1986	1,957.43	967	1,747	406	22.04	18
1987	27,116.89	12,946	23,383	6,446	22.64	285
1988	1,127,120.98	518,870	937,193	302,640	23.26	13,011
1989	46,595.92	20,656	37,309	13,947	23.88	584
1990	143,306.99	61,045	110,261	47,377	24.51	1,933
1991	22,225.71	9,083	16,406	8,042	25.14	320
1992	2,718,559.58	1,063,093	1,920,179	1,070,237	25.78	41,514
1993	65,186.11	24,326	43,938	27,767	26.43	1,051
1994	65,238.84	23,161	41,834	29,929	27.09	1,105
1995	58,271.58	19,630	35,456	28,643	27.75	1,032
1996	78,637.49	25,064	45,271	41,230	28.41	1,451
1997	23,955.40	7,194	12,994	13,357	29.08	459
1998	77,298.18	21,788	39,354	45,674	29.75	1,535
1999	221,130.18	58,196	105,115	138,128	30.43	4,539
2000	128,518.24	31,419	56,750	84,620	31.11	2,720
2001	3,866.37	872	1,575	2,678	31.80	84
2002	498,567.30	102,967	185,981	362,443	32.49	11,156
2003	749,624.54	140,592	253,940	570,647	33.18	17,199
2004	146,369.74	24,634	44,494	116,513	33.88	3,439
2005	92,123.52	13,731	24,801	76,535	34.58	2,213
2006	441,699.06	57,333	103,556	382,313	35.28	10,837
2007	472,494.62	51,974	93,876	425,868	36.00	11,830
2008	285,397.03	25,821	46,638	267,299	36.71	7,281
2009	308,790.75	21,824	39,419	300,251	37.43	8,022

BLACK HILLS POWER

ACCOUNT 390.01 STRUCTURES AND IMPROVEMENTS - OWNED

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-R1						
NET SALVAGE PERCENT.. -10						
2010	173,399.94	8,774	15,848	174,892	38.16	4,583
2011	937,594.64	28,620	51,694	979,660	38.89	25,191
2012	1,139,847.44	11,598	20,949	1,232,883	39.63	31,110
	12,789,236.43	3,979,246	7,132,242	6,935,918		214,020

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 32.4 1.67

BLACK HILLS POWER

ACCOUNT 391.01 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
NET SALVAGE PERCENT.. 0						
1953	316.17	316	316			
1962	139.83	140	140			
1966	58.14	58	58			
1970	130.09	130	130			
1972	283.22	283	283			
1973	260.27	260	260			
1974	163.96	164	164			
1978	417.52	418	418			
1979	1,591.56	1,592	1,592			
1980	15,422.38	15,422	15,422			
1981	4,976.35	4,976	4,976			
1982	235.66	236	236			
1983	3,060.36	3,060	3,060			
1984	3,171.57	3,172	3,172			
1985	2,048.38	2,048	2,048			
1986	54,115.95	54,116	54,116			
1987	23,379.42	23,379	23,379			
1988	61,319.84	61,320	61,320			
1989	45,852.56	45,853	45,853			
1990	14,038.30	14,038	14,038			
1991	40,498.57	40,499	40,499			
1992	167,887.95	167,888	167,888			
	439,368.05	439,368	439,368			
AMORTIZED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1993	54,543.00	53,179	54,543			
1994	4,545.16	4,204	4,354	192	1.50	128
1995	68,450.75	59,894	62,026	6,425	2.50	2,570
1996	39,609.82	32,678	33,841	5,769	3.50	1,648
1997	8,772.84	6,799	7,041	1,732	4.50	385
1998	160,582.22	116,422	120,566	40,016	5.50	7,276
1999	82,722.12	55,837	57,824	24,898	6.50	3,830
2000	268,831.38	168,020	174,000	94,831	7.50	12,644
2001	189,806.94	109,139	113,024	76,783	8.50	9,033
2002	206,476.71	108,400	112,258	94,218	9.50	9,918
2003	322,127.61	153,011	158,457	163,671	10.50	15,588
2004	101,385.31	43,089	44,623	56,763	11.50	4,936
2005	65,004.86	24,377	25,245	39,760	12.50	3,181

BLACK HILLS POWER

ACCOUNT 391.01 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
AMORTIZED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2006	139,207.64	45,242	46,852	92,355	13.50	6,841
2007	309,270.97	85,050	88,077	221,194	14.50	15,255
2008	119,702.89	26,933	27,892	91,811	15.50	5,923
2009	427,176.23	74,756	77,417	349,759	16.50	21,198
2010	52,410.69	6,551	6,784	45,627	17.50	2,607
2011	196,834.74	14,763	15,288	181,546	18.50	9,813
2012	15,943.48	399	413	15,530	19.50	796
	2,833,405.36	1,188,743	1,230,525	1,602,880		133,570
	3,272,773.41	1,628,111	1,669,893	1,602,880		133,570

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.0 4.08

BLACK HILLS POWER

ACCOUNT 391.03 COMPUTER HARDWARE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
NET SALVAGE PERCENT.. 0						
1990	1,951.98	1,952	1,952			
2007	15,710.48	15,710	15,710			
	17,662.46	17,662	17,662			
AMORTIZED						
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2008	11,329.20	10,196	7,009	4,320	0.50	4,320
2009	302,151.86	211,506	145,390	156,762	1.50	104,508
2010	249,070.50	124,535	85,606	163,465	2.50	65,386
2011	119,295.06	35,789	24,602	94,694	3.50	27,055
2012	974,461.95	97,446	66,985	907,477	4.50	201,662
	1,656,308.57	479,472	329,591	1,326,718		402,931
	1,673,971.03	497,134	347,253	1,326,718		402,931

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 3.3   24.07

BLACK HILLS POWER

ACCOUNT 391.04 COMPUTER SOFTWARE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 9-S2.5						
NET SALVAGE PERCENT.. 0						
2006	3,917.50	2,503	3,918			
2007	245,030.61	138,305	217,713	27,318	3.92	6,969
2008	592,126.68	282,906	445,336	146,791	4.70	31,232
2009	1,167,721.09	443,734	698,504	469,217	5.58	84,089
2010	415,221.52	114,418	180,111	235,111	6.52	36,060
2011	212,055.93	35,343	55,635	156,421	7.50	20,856
2012	1,015,501.93	56,421	88,815	926,687	8.50	109,022
	3,651,575.26	1,073,630	1,690,032	1,961,543		288,228

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 6.8 7.89

BLACK HILLS POWER

ACCOUNT 391.05 SYSTEM DEVELOPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 5-SQUARE NET SALVAGE PERCENT.. 0						
2010	59,725.18	29,863	32,332	27,393	2.50	10,957
	59,725.18	29,863	32,332	27,393		10,957

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 2.5 18.35

BLACK HILLS POWER

ACCOUNT 392.01 TRANSPORTATION EQUIPMENT - SUBUNIT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 13-S0						
NET SALVAGE PERCENT.. +10						
2001	21,724.16	10,753	19,552			
2003	20,314.03	8,705	18,283			
2004	8,674.45	3,411	7,807			
2005	10,385.81	3,710	9,347			
2007	8,223.18	2,294	7,199	202	8.97	23
2008	29,139.80	6,899	21,652	4,574	9.58	477
2009	8,939.84	1,714	5,379	2,667	10.23	261
2011	24,225.69	2,214	6,948	14,855	11.68	1,272
	131,626.96	39,700	96,167	22,297		2,033

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.0 1.54

BLACK HILLS POWER

ACCOUNT 392.02 TRANSPORTATION EQUIPMENT - CARS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 13-S0						
NET SALVAGE PERCENT.. +10						
1998	15,402.47	9,053	8,946	4,916	4.51	1,090
2001	17,366.36	8,596	8,494	7,136	5.85	1,220
2003	4,452.00	1,908	1,885	2,122	6.81	312
2006	15,429.25	4,924	4,866	9,020	8.39	1,075
2008	29,238.75	6,923	6,841	19,474	9.58	2,033
2009	34,042.66	6,528	6,450	24,188	10.23	2,364
2012	99,126.31	3,225	3,187	86,027	12.53	6,866
	215,057.80	41,157	40,669	152,883		14,960

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.2 6.96

BLACK HILLS POWER

ACCOUNT 392.03 TRANSPORTATION EQUIPMENT - LIGHT TRUCKS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 13-S0						
NET SALVAGE PERCENT.. +10						
1992	17,495.68	13,251	15,746			
1996	17,787.00	11,501	16,008			
1998	54,129.11	31,816	48,716			
1999	20,797.88	11,591	18,718			
2000	90,310.92	47,580	81,280			
2001	143,585.88	71,075	129,227			
2002	123,160.99	56,872	109,343	1,502	6.33	237
2003	290,703.22	124,577	239,514	22,119	6.81	3,248
2004	20,861.05	8,203	15,771	3,004	7.32	410
2005	288,900.62	103,203	198,421	61,590	7.84	7,856
2006	247,996.89	79,150	152,176	71,021	8.39	8,465
2007	18,725.06	5,224	10,044	6,809	8.97	759
2008	311,201.70	73,684	141,666	138,416	9.58	14,448
2009	307,122.88	58,898	113,239	163,172	10.23	15,950
2010	337,843.23	48,649	93,533	210,526	10.92	19,279
2011	256,551.15	23,445	45,076	185,820	11.68	15,909
2012	324,152.51	10,546	20,276	271,461	12.53	21,665
	2,871,325.77	779,265	1,448,754	1,135,439		108,226

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.5 3.77

BLACK HILLS POWER

ACCOUNT 392.04 TRANSPORTATION EQUIPMENT - MEDIUM TRUCKS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 13-S0						
NET SALVAGE PERCENT.. +10						
1993	15,122.51	11,045	13,610			
2000	19,119.74	10,073	17,208			
2001	23,800.00	11,781	21,420			
2002	25,215.54	11,644	21,316	1,378	6.33	218
2003	72,986.91	31,277	57,256	8,432	6.81	1,238
2005	52,081.65	18,605	34,058	12,815	7.84	1,635
2006	65,804.59	21,002	38,446	20,778	8.39	2,477
2007	33,662.69	9,392	17,193	13,103	8.97	1,461
2008	67,798.57	16,053	29,387	31,632	9.58	3,302
2009	71,451.62	13,702	25,083	39,223	10.23	3,834
2010	285,493.64	41,111	75,257	181,687	10.92	16,638
2011	71,131.46	6,500	11,899	52,119	11.68	4,462
	803,668.92	202,185	362,133	361,169		35,265

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.2 4.39

BLACK HILLS POWER

ACCOUNT 392.05 TRANSPORTATION EQUIPMENT - HEAVY TRUCKS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 13-S0						
NET SALVAGE PERCENT.. +10						
1980	32,008.53	28,808	28,808			
1987	44,944.25	39,858	40,450			
1988	43,496.75	37,491	39,147			
1997	59,516.03	36,753	53,564			
1998	60,155.15	35,358	54,140			
1999	64,568.72	35,985	58,112			
2000	135,140.82	71,198	121,627			
2001	156,641.22	77,537	140,977			
2002	154,294.54	71,249	138,865			
2003	153,241.80	65,669	137,918			
2004	149,189.80	58,666	131,166	3,105	7.32	424
2005	177,066.96	63,253	141,422	17,938	7.84	2,288
2006	81,251.22	25,932	57,979	15,147	8.39	1,805
2007	121,338.77	33,854	75,691	33,514	8.97	3,736
2008	79,420.28	18,804	42,042	29,436	9.58	3,073
2009	489,354.55	93,845	209,820	230,599	10.23	22,541
2010	688,581.19	99,156	221,694	398,029	10.92	36,450
2012	163,162.19	5,308	11,868	134,978	12.53	10,772
	2,853,372.77	898,724	1,705,290	862,745		81,089

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.6 2.84

BLACK HILLS POWER

ACCOUNT 392.06 TRANSPORTATION EQUIPMENT - TRAILERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 13-S0						
NET SALVAGE PERCENT.. +10						
1954	655.89	590	590			
1957	1,166.82	1,050	1,050			
1961	2,650.09	2,385	2,385			
1963	1,721.29	1,549	1,549			
1976	1,673.24	1,506	1,506			
1979	6,273.48	5,646	5,646			
1980	6,273.48	5,646	5,646			
1984	19,285.28	17,357	17,357			
1986	45,148.20	40,633	40,633			
1988	5,848.20	5,041	5,263			
1990	6,906.00	5,594	6,215			
1992	17,271.27	13,081	15,544			
1995	4,700.00	3,172	4,230			
1998	72,504.44	42,616	65,254			
2000	32,046.80	16,884	28,842			
2001	18,601.91	9,208	16,742			
2002	12,670.00	5,851	11,317	86	6.33	14
2003	28,495.32	12,211	23,618	2,028	6.81	298
2004	8,625.96	3,392	6,561	1,202	7.32	164
2006	37,360.67	11,924	23,063	10,562	8.39	1,259
2008	118,525.11	28,063	54,278	52,395	9.58	5,469
2009	64,591.70	12,387	23,959	34,174	10.23	3,341
2010	66,055.29	9,512	18,397	41,053	10.92	3,759
2011	5,708.04	522	1,010	4,127	11.68	353
2012	43,864.89	1,427	2,760	36,718	12.53	2,930
	628,623.37	257,247	383,415	182,346		17,587

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.4 2.80

BLACK HILLS POWER

ACCOUNT 393 STORES EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
NET SALVAGE PERCENT.. 0						
1958	1,469.86	1,470	1,470			
1966	709.17	709	709			
1970	3,202.89	3,203	3,203			
1981	107,059.70	107,060	107,060			
1982	8,210.41	8,210	8,210			
1983	37,568.69	37,569	37,569			
1984	16,487.15	16,487	16,487			
1985	1,982.98	1,983	1,983			
1986	617.84	618	618			
1988	7,335.00	7,335	7,335			
1992	1,524.72	1,525	1,524			
	186,168.41	186,169	186,168			
AMORTIZED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1993	15,716.71	15,324	421	15,295	0.50	15,295
1995	997.31	873	24	973	2.50	389
1997	36,507.06	28,293	778	35,729	4.50	7,940
1998	3,288.53	2,384	66	3,223	5.50	586
1999	5,795.80	3,912	108	5,688	6.50	875
2000	1,597.59	998	27	1,570	7.50	209
2006	38,464.88	12,501	344	38,121	13.50	2,824
2009	22,932.10	4,013	110	22,822	16.50	1,383
2012	10,966.23	274	8	10,959	19.50	562
	136,266.21	68,572	1,886	134,380		30,063
	322,434.62	254,741	188,054	134,380		30,063

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 4.5 9.32

BLACK HILLS POWER

ACCOUNT 394 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
NET SALVAGE PERCENT.. 0						
1953	199.08	199	199			
1958	83.00	83	83			
1970	92.19	92	92			
1971	463.30	463	463			
1972	710.33	710	710			
1973	326.79	327	327			
1974	74.77	75	75			
1977	126.46	126	126			
1978	1,106.07	1,106	1,106			
1979	75.93	76	76			
1980	9,380.67	9,381	9,381			
1981	80,578.94	80,579	80,579			
1982	1,650.21	1,650	1,650			
1983	2,029.07	2,029	2,029			
1984	3,760.63	3,761	3,761			
1985	27,240.72	27,241	27,241			
1986	7,615.01	7,615	7,615			
1987	62,086.70	62,087	62,087			
	197,599.87	197,600	197,600			
AMORTIZED						
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
1988	81,491.82	79,862	81,492			
1989	21,456.58	20,169	21,457			
1991	2,838.54	2,441	2,839			
1992	798.41	655	768	31	4.50	7
1993	5,636.14	4,396	5,153	483	5.50	88
1994	4,690.50	3,471	4,069	621	6.50	96
1996	37,983.92	25,069	29,388	8,596	8.50	1,011
1997	126,515.17	78,439	91,954	34,561	9.50	3,638
1998	114,649.24	66,497	77,954	36,695	10.50	3,495
1999	188,377.21	101,724	119,251	69,126	11.50	6,011
2000	331,072.79	165,536	194,058	137,015	12.50	10,961
2001	327,650.31	150,719	176,688	150,963	13.50	11,182
2002	461,820.58	193,965	227,385	234,436	14.50	16,168
2003	293,675.01	111,597	130,825	162,850	15.50	10,506
2004	266,106.73	90,476	106,065	160,042	16.50	9,700
2005	411,920.85	123,576	144,868	267,053	17.50	15,260
2006	444,677.88	115,616	135,536	309,141	18.50	16,710

BLACK HILLS POWER

ACCOUNT 394 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
AMORTIZED						
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
2007	77,599.86	17,072	20,013	57,586	19.50	2,953
2008	187,016.81	33,663	39,463	147,554	20.50	7,198
2009	220,743.24	30,904	36,229	184,515	21.50	8,582
2010	111,054.36	11,105	13,018	98,036	22.50	4,357
2011	170,209.30	10,213	11,973	158,237	23.50	6,733
2012	221,042.55	4,421	5,183	215,860	24.50	8,811
	4,109,027.80	1,441,586	1,675,628	2,433,400		143,467
	4,306,627.67	1,639,186	1,873,228	2,433,400		143,467

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 17.0 3.33

BLACK HILLS POWER

ACCOUNT 395 LABORATORY EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
1994	10,563.13	7,817	332	10,231	6.50	1,574
1995	25,106.65	17,575	747	24,360	7.50	3,248
1996	4,075.49	2,690	114	3,961	8.50	466
1998	33,720.72	19,558	831	32,890	10.50	3,132
1999	26,482.24	14,300	607	25,875	11.50	2,250
2001	65,588.64	30,171	1,282	64,307	13.50	4,763
2002	21,882.16	9,191	390	21,492	14.50	1,482
2003	9,806.37	3,726	158	9,648	15.50	622
2005	41,413.86	12,424	528	40,886	17.50	2,336
2006	37,282.68	9,693	412	36,871	18.50	1,993
2007	2,554.70	562	24	2,531	19.50	130
2010	28,746.10	2,875	122	28,624	22.50	1,272
2011	7,525.02	452	19	7,506	23.50	319
2012	3,276.63	66	3	3,274	24.50	134
	318,024.39	131,100	5,569	312,455		23,721

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 13.2   7.46

BLACK HILLS POWER

ACCOUNT 396.01 POWER OPERATED EQUIPMENT - SHORT LIFE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 30-S1.5						
NET SALVAGE PERCENT.. +20						
2004	52,741.62	11,420	37,100	5,093	21.88	233
	52,741.62	11,420	37,100	5,093		233

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 21.9 0.44

BLACK HILLS POWER

ACCOUNT 396.02 POWER OPERATED EQUIPMENT - LONG LIFE

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 30-S1.5						
NET SALVAGE PERCENT.. +20						
1985	5,342.50	2,898	4,274			
1990	37,985.10	18,172	30,388			
2001	35,369.02	10,035	21,070	7,225	19.36	373
2005	95,226.26	18,360	38,550	37,631	22.77	1,653
2008	96,579.22	11,409	23,955	53,308	25.57	2,085
2009	225,153.36	20,835	43,748	136,375	26.53	5,140
2010	78,628.62	5,221	10,962	51,941	27.51	1,888
2011	116,036.26	4,641	9,745	83,084	28.50	2,915
2012	102,310.00	1,364	2,864	78,984	29.50	2,677
	792,630.34	92,935	185,556	448,548		16,731

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 26.8 2.11

BLACK HILLS POWER

ACCOUNT 397 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
NET SALVAGE PERCENT.. 0						
1953	4,806.75	4,807	4,807			
1955	1,686.02	1,686	1,686			
1957	317.60	318	318			
1958	1,702.76	1,703	1,703			
1960	1,830.27	1,830	1,830			
1970	9,836.41	9,836	9,836			
1973	246.38	246	246			
1974	1,510.64	1,511	1,511			
1975	5,529.15	5,529	5,529			
1979	651.06	651	651			
1981	10,493.53	10,494	10,494			
1983	747.75	748	748			
1984	6,846.83	6,847	6,847			
1985	598.74	599	599			
1986	514.66	515	515			
1988	4,022.74	4,023	4,023			
1989	5,759.84	5,760	5,760			
1990	5,346.84	5,347	5,347			
1992	77,334.01	77,334	77,334			
	139,781.98	139,784	139,782			
AMORTIZED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1993	59,637.75	58,147	43,112	16,526	0.50	16,526
1995	70,944.21	62,076	46,025	24,919	2.50	9,968
1996	46,356.64	38,244	28,355	18,001	3.50	5,143
1997	23,190.64	17,973	13,326	9,865	4.50	2,192
1998	342.48	248	184	159	5.50	29
1999	45,982.98	31,039	23,013	22,970	6.50	3,534
2000	267,004.72	166,878	123,728	143,277	7.50	19,104
2001	5,752.16	3,307	2,452	3,300	8.50	388
2002	58,482.11	30,703	22,764	35,718	9.50	3,760
2003	2,582.59	1,227	910	1,673	10.50	159
2004	347,203.50	147,561	109,406	237,798	11.50	20,678
2005	201,156.53	75,434	55,929	145,228	12.50	11,618
2006	419,837.78	136,447	101,166	318,672	13.50	23,605
2007	179,814.59	49,449	36,663	143,152	14.50	9,873
2008	1,301,698.34	292,882	217,151	1,084,547	15.50	69,971
2009	362,566.25	63,449	47,043	315,523	16.50	19,123

BLACK HILLS POWER

ACCOUNT 397 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
AMORTIZED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2010	12,296.06	1,537	1,140	11,156	17.50	637
2011	96,061.12	7,205	5,342	90,719	18.50	4,904
2012	165,826.75	4,146	3,074	162,753	19.50	8,346
	3,666,737.20	1,187,952	880,781	2,785,956		229,558
	3,806,519.18	1,327,736	1,020,563	2,785,956		229,558

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.1 6.03

BLACK HILLS POWER

ACCOUNT 397.1 COMMUNICATION EQUIPMENT - TOWERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 20-L1.5						
NET SALVAGE PERCENT.. 0						
1967	846.61	721	623	224	2.96	76
1979	4,795.17	3,544	3,061	1,734	5.22	332
1983	7,008.76	4,857	4,195	2,814	6.14	458
1993	1,464.46	826	713	751	8.72	86
1994	1,202.13	661	571	631	9.00	70
1997	7,654.99	3,873	3,345	4,310	9.88	436
1999	6,021.69	2,836	2,450	3,572	10.58	338
2001	961.09	413	357	604	11.41	53
2004	279,484.59	97,540	84,251	195,234	13.02	14,995
2005	21,914.92	6,925	5,982	15,933	13.68	1,165
2006	853,963.99	239,964	207,270	646,694	14.38	44,972
2007	677,681.33	165,015	142,533	535,148	15.13	35,370
2008	2,364,140.87	482,285	416,576	1,947,565	15.92	122,334
2009	100,999.86	16,362	14,133	86,867	16.76	5,183
2010	965.10	114	98	867	17.64	49
2011	60,908.02	4,385	3,788	57,120	18.56	3,078
2012	13,042.12	313	270	12,772	19.52	654
	4,403,055.70	1,030,634	890,216	3,512,840		229,649

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.3 5.22

BLACK HILLS POWER

ACCOUNT 398 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2012

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
FULLY ACCRUED						
NET SALVAGE PERCENT.. 0						
1981	1,048.95	1,049	1,049			
1985	2,529.05	2,529	2,529			
1988	9,142.35	9,142	9,142			
1992	418.70	419	419			
	13,139.05	13,139	13,139			
AMORTIZED						
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2003	64,367.44	30,575	16,940	47,428	10.50	4,517
2004	2,061.68	876	485	1,576	11.50	137
2006	54,863.88	17,831	9,879	44,985	13.50	3,332
2008	23,415.51	5,268	2,919	20,497	15.50	1,322
2009	30,504.59	5,338	2,957	27,547	16.50	1,670
2011	5,666.67	425	235	5,431	18.50	294
2012	3,279.23	82	45	3,234	19.50	166
	184,159.00	60,395	33,461	150,698		11,438
	197,298.05	73,534	46,600	150,698		11,438

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 13.2 5.80

Direct Testimony and Exhibit
Brian G. Iverson

Before the South Dakota Public Utilities Commission
of the State of South Dakota

In the Matter of the Application of
Black Hills Power, Inc., a South Dakota Corporation

For Authority to Increase Rates
in South Dakota

Docket No. EL14-___

March 31, 2014

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Exhibit

Exhibit BGI-1: Black Hills Power Historical Capital Structure QTD and MTD 2011-2013

I. INTRODUCTION AND QUALIFICATIONS

Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?

A. My name is Brian G. Iverson. My business address is 625 9th Street, Rapid City, South Dakota 57709.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am currently employed by Black Hills Service Company ("Service Company"), and serve as Vice President and Treasurer of Black Hills Corporation ("BHC") and its subsidiaries.

Q. ON WHOSE BEHALF ARE YOU APPEARING IN THIS APPLICATION?

A. I am appearing on behalf of Black Hills Power, Inc. ("Black Hills Power" or the "Company"), a wholly-owned direct subsidiary of BHC.

Q. PLEASE DESCRIBE YOUR DUTIES AND RESPONSIBILITIES IN YOUR CURRENT POSITION.

A. In my role, I am responsible for the financing activities of BHC and its subsidiaries and affiliates, including Black Hills Power.

Q. WOULD YOU PLEASE OUTLINE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?

A. I have a B.S. degree in Accounting and a M.B.A. from the University of South Dakota. I am a Certified Public Accountant (South Dakota). I have a law degree also from the University of South Dakota.

I have been employed by BHC since 2004, working in various positions within the legal, regulatory, resource planning, and finance areas. Prior to joining BHC, I worked in the banking industry and in the private practice of law, where I focused on business and financial transactions.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to support the following areas of the rate application:

- Certify Books and Records of Black Hills Power
- Certify Use of Federal Energy Regulatory Commission ("FERC") Uniform System of Accounts for Black Hills Power
- Discuss Corporate Finance Philosophy of Black Hills Power
- Support Proposed Capital Structure of Black Hills Power
- Support Long Term Debt and Cost of Equity
- Discuss Debt Financing Activity
- Support Weighted Average Cost of Capital

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes. I am sponsoring Exhibit BGI-1, which I will describe and refer to in my testimony.

Q. DOES YOUR DIRECT TESTIMONY SUPPORT ANY SPECIFIC SCHEDULES THAT ARE PART OF THE COMPANY'S RATE APPLICATION IN THIS PROCEEDING?

A. Yes. My testimony supports the weighted average cost of capital schedules and adjustments.

Q. HAVE THE TESTIMONY AND EXHIBITS WHICH YOU ARE SPONSORING BEEN PREPARED BY YOU OR UNDER YOUR SUPERVISION?

A. Yes.

III. ACCOUNTING RECORDS

Q. ARE YOU FAMILIAR WITH THE BOOKS AND RECORDS OF BLACK HILLS POWER AND THE MANNER IN WHICH THEY ARE KEPT?

A. Yes. The financial statements and records have been prepared on the accrual basis in conformity with Generally Accepted Accounting Principles ("GAAP") and in accordance with accounting requirements of the Federal Energy Regulatory Commission as set forth in its applicable Uniform System of Accounts.

IV. FINANCIAL INTEGRITY OF BLACK HILLS POWER

Q. PLEASE EXPLAIN THE CORPORATE FINANCE PHILOSOPHY OF BLACK HILLS POWER.

A. The corporate philosophy of Black Hills Power is the same philosophy established by BHC. In particular, Black Hills Power must maintain financial integrity and its ability to access capital as needed at a reasonable cost. Financial integrity is critical to Black Hills Power's ability to satisfy its obligation to supply safe and reliable electric services. Black Hills Power defines financial integrity as the financial stability necessary to weather the peaks and valleys of business cycles, volatility in financial markets and interest rates, and unanticipated changes in operational requirements; all of which may strain an organization's ability to finance expenditures and provide quality service. A strong financial position provides the financial flexibility necessary to meet the ongoing demand for utility services. Black Hills Power is conservative in its financial philosophy and only takes on risk where appropriate and reasonable. Even with a conservative corporate finance philosophy, no corporation is insulated from market forces, credit crunches, and other financing difficulties that cannot be foreseen or avoided. In those situations, Black Hills Power follows the guidelines of prudence and reasonableness in evaluating its credit and financing options.

Q. WHAT IS BLACK HILLS POWER'S PRO FORMA CAPITAL STRUCTURE?

A. Black Hills Power's witness, Dr. William Avera, provides a detailed analysis in support of the recommended capital structure in his testimony. However, my testimony supports the pro forma capital structure for Black Hills Power of 53.32 percent equity and 46.68 percent debt.

Q. HOW DO INVESTORS EVALUATE A COMPANY'S FINANCIAL INTEGRITY?

A. Dr. Avera will cover this topic in greater detail; however, investors generally rely on nationally recognized credit rating services to evaluate a company's financial integrity and to inform them of the company's current financial position. Three nationally recognized credit rating services are Moody's Investors Service ("Moody's"), Standard and Poor's ("S&P"), and Fitch Ratings ("Fitch"). As of the end of February 2014, Black Hills Power's senior secured debt is respectively rated A1 by Moody's, A- by S&P, and A- by Fitch. Fitch rates Black Hills Power with a "positive" outlook, and Moody's and S&P rate Black Hills Power as "stable." As of the end of February 2014, BHC's senior secured debt is respectively rated Baa1 by Moody's, BBB by S&P, and BBB by Fitch. Fitch rates BHC with a "positive" outlook, and Moody's and S&P rate BHC as "stable."

Q. HOW DO RATING AGENCIES PERFORM THIS FUNCTION?

A. The credit rating services issue guidelines that all companies must follow. In general, a company must provide detailed financial and operational information to rating agencies for their analysis before issuing credit ratings for the company's securities. As noted below, these credit rating agencies compare quantitative measures of a company's financial performance, as well as a qualitative assessment of the company's risks (such as management, forecasts, and regulatory climate), to their guidelines to rate the company and determine the investment attributes of its debt securities. The credit ratings given by these agencies provide important information to creditors, investors, vendors and counterparties regarding the creditworthiness of BHC and Black Hills Power.

Q. WHAT CRITERIA DO RATING AGENCIES USE IN EVALUATING A UTILITY?

A. As noted by Dr. Avera, the ratings evaluation process includes an analysis of both qualitative and quantitative factors. There are several steps in the ratings evaluation process. For example, one step is to assess the extent of a "regulated" company's exposure to unregulated businesses. The strongest position is enjoyed by those companies operating in a wholly regulated business. Another step in the methodology is to assess the credit support that is gained from operating within a particular regulatory framework. The rating agencies also consider the exact level of risk posed by the business. These criteria and others established by the credit rating agencies then lead to an overall assessment of the qualitative business risk of the company's activities.

As part of the quantitative assessment of a given entity, the rating agencies will review numerous financial ratios of a given entity. Such ratios will be used to review trends over various periods of time within a given entity, as well as to provide comparisons among other companies in a given industry, or among various industry averages.

For example, Moody's has identified four areas that are considered most useful in completing analysis of electric utility companies. They are as follows: (1) Regulated Framework, (2) Ability to Recover Costs and Earn Returns, (3) Diversification and (4) Financial Strength and Liquidity. By maintaining good credit ratings, BHC and Black Hills Power achieve better credit terms and lower cost of debt which directly benefit our customers.

Q. WHAT IS THE FINANCIAL CONDITION OF BLACK HILLS POWER?

A. The financial integrity of Black Hills Power is sound. The goal of Black Hills Power is to maintain and, if possible, improve its credit metrics.

If Black Hills Power's credit metrics are weak, that will impact its ability to obtain short and long-term financing, the cost of such financing, and vendor payment terms, including collateral requirements. Black Hills Power has its own credit rating, and is able to issue first mortgage bonds. Additionally, Black Hills Power also has access to short-term capital through BHC, its parent company. Black Hills Power's financial integrity is an important factor in supporting BHC's investment grade credit rating.

As a means of protecting its credit ratings, Black Hills Power generally maintains and will continue to maintain a capitalization level (GAAP basis) of approximately 45 to 48% debt and expects to continue this level of capitalization in the future.

Q. HOW DOES THIS FINANCE PHILOSOPHY AFFECT THE RETURNS THAT EQUITY INVESTORS EXPECT?

A. For a company to attract equity capital, the potential investor must believe that the company will earn a return that exceeds the cost of capital. If a company earns less than its cost of capital, value is destroyed for the shareholders, and consequently, the ability to raise additional capital for future projects declines. The components of cost of capital include both cost of debt and the cost of equity. The cost of equity is impacted by a number of factors, including the risk premium investors expect above the long-term U.S. Treasury Rates, the market risk of the company, the industry risk premium, the size of market capitalization, and the ratio of debt to total capitalization. Black Hills Power believes that its cost of equity capital is 10.25% and therefore is requesting rates to support that return. If Black Hills Power earns less than 10.25% on its equity capital component, its shareholders will not meet their return expectations, and consequently, access to capital markets will be diminished. I believe the philosophy of Black Hills Power is consistent with the opinion of Dr. Avera.

Q. HOW DO THE CREDIT RATING AGENCIES AFFECT THE COMPANY'S ABILITY TO ISSUE DEBT?

A. The ratings of credit agencies affect a company's ability to issue debt in a couple of ways. First, the lower the rating, the greater the risk premium required from those willing to invest in a company. Second, a low rating also limits the number of potential investors interested in a company's debt, which reduces the market for the company's debt. Both of these circumstances tend to increase the overall cost of debt to a company.

Q. WHY IS THIS IMPORTANT TO BLACK HILLS POWER?

A. Access to capital is important to refinancing and to provide additional funds for expansion of plant and the potential acquisition of additional generation for Black

Hills Power. In addition, as noted above, credit ratings impact vendor payments, including collateral requirements.

V. <u>CAPITAL STRUCTURE</u>

Q. WHAT IS THE CAPITAL STRUCTURE PROPOSED FOR BLACK HILLS POWER?

A. The Company proposes a capital structure of 53.32 percent equity and 46.68 percent debt.

Q. WHY IS THIS CAPITAL STRUCTURE APPROPRIATE FOR BLACK HILLS POWER?

A. This capital structure is appropriate because it is not only the actual capital structure of Black Hills Power, but it is also appropriate for the financial position and relative size of Black Hills Power to support utility operations, to serve its customers with the appropriate capacity, for replacement and expansion of assets used to provide power, to maintain liquidity, and to attract cost effective sources of capital for refinancing plant improvement and growth. Black Hills Power issues debt in its own name and maintains a separate capital structure. Thus, a capital structure of 53.32% equity and 46.68% debt structure for Black Hills Power should be approved in this proceeding.

Q. IS THE CAPITAL STRUCTURE PROPOSED FOR BLACK HILLS POWER CONSISTENT WITH ITS HISTORICAL CAPITAL STRUCTURE?

A. Yes. Exhibit BGI-1 sets forth the capital structure for Black Hills Power for the period of March 2011 to December 2013. As shown on this Exhibit, the percentage of debt of Black Hills Power has been less than 47 percent for each of the years shown on the Exhibit. In the prior rate case, my direct testimony included a similar schedule dating back to 2010 which verified that the percentage of debt for Black Hills Power has consistently been less than 47%. Thus, applying a capital structure of 53.32% equity and 46.68% debt represents the actual capital structure that Black Hills Power has used for a number of years.

Q. ARE THERE PLANS TO ISSUE ANY NEW DEBT FOR BLACK HILLS POWER?

A. Yes. During 2014, new bonds will be issued to help finance the anticipated costs related to Cheyenne Prairie Generating Station ("CPGS"). Black Hills Power will own approximately 42 percent of this new $222 million, 132 MW gas-fired generating plant. Cheyenne Light, Fuel and Power Company will own approximately 58 percent of CPGS. Black Hills Power anticipates adding approximately $50 million of long-term financing for Black Hills Power's portion of the costs of this new generating plant and other plant additions. The cost of that new debt is currently calculated at an all-in cost of debt of 5.67 percent.

VI. COST OF DEBT

Q. WHAT IS THE COST OF DEBT FOR BLACK HILLS POWER?

A. The pro forma cost of debt for Black Hills Power is 6.45 percent, which is lower than the test period cost of debt of 6.57 percent as interest rates on our new financing are expected at a lower cost than our current fixed rate bonds (Series AE, Series AF and Series 2004 Campbell County).

Q. HOW MUCH LONG-TERM DEBT DOES BLACK HILLS POWER HAVE OUTSTANDING?

A. Black Hills Power has $270,055,000 of existing long-term debt outstanding as of December 30, 2013.

Q. HOW DID YOU DETERMINE THE COST OF DEBT FOR BLACK HILLS POWER?

A. The average cost of long-term debt is determined by taking the weighted average of the amount of the individual debt issue components and their respective interest rates (adjusted for issuance costs), along with the estimated cost of the new long-term financing for CPGS.

Q. WHAT IS THE WEIGHTED AVERAGE COST OF CAPITAL REQUESTED FOR BLACK HILLS POWER?

A. The weighted average cost of capital requested for Black Hills Power incorporates the cost of equity of 10.25 percent, the weighted average cost of debt of 6.45 percent, and a capital structure of 53.32 percent equity and 46.68 percent debt financing. This calculation results in a weighted average cost of capital of 8.48 percent.

Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

BLACK HILLS POWER INC
Capital Structure
QTD 2011, 2012, 2013
MTD Jan 2013- Dec 2013

QTD

	Mar 2011	Jun 2011	Sep 2011	Dec 2011	Mar 2012	Jun 2012	Sep 2012	Dec 2012	Mar 2013	Jun 2013	Sep 2013	Dec 2013
Long-Term Debt with Current Maturities	276.5	276.5	276.4	276.4	276.4	269.9	270.1	269.9	269.9	269.9	269.9	269.9
Total Debt	**276.5**	**276.5**	**276.4**	**276.4**	**276.4**	**269.9**	**270.1**	**269.9**	**269.9**	**269.9**	**269.9**	**269.9**
AOCI	(1.3)	(1.2)	(1.2)	(1.3)	(1.3)	(1.3)	(1.3)	(1.4)	(1.4)	(1.4)	(1.4)	(1.2)
Common Stock	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
APIC	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6
Retained Earnings	253.6	257.3	267.8	274.8	280.8	243.6	251.7	257.9	263.5	270.1	271.4	280.1
Total Equity	**315.3**	**319.1**	**329.6**	**336.5**	**342.5**	**305.3**	**313.5**	**319.5**	**325.1**	**331.7**	**333.1**	**341.9**
Total Debt and Equity	**591.8**	**595.6**	**606.0**	**612.9**	**618.9**	**575.2**	**583.6**	**589.4**	**595.0**	**601.6**	**603.0**	**611.8**
Debt %	46.7%	46.4%	45.6%	45.1%	44.7%	46.9%	46.3%	45.8%	45.4%	44.9%	44.8%	44.1%
Equity %	53.3%	53.6%	54.4%	54.9%	55.3%	53.1%	53.7%	54.2%	54.6%	55.1%	55.2%	55.9%

MTD

	Jan 2013	Feb 2013	Mar 2013	Apr 2013	May 2013	Jun 2013	Jul 2013	Aug 2013	Sep 2013	Oct 2013	Nov 2013	Dec 2013
Long-Term Debt with Current Maturities	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9	269.9
Total Debt	**269.9**	**269.9**	**269.9**	**269.9**	**269.9**	**269.9**	**269.9**	**269.9**	**269.9**	**269.9**	**269.9**	**269.9**
AOCI	(1.4)	(1.4)	(1.4)	(1.4)	(1.4)	(1.4)	(1.4)	(1.4)	(1.4)	(1.3)	(1.3)	(1.2)
Common Stock	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
APIC	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6
Retained Earnings	259.8	261.6	263.5	265.4	266.9	270.1	273.9	277.5	271.4	273.6	276.6	280.1
Total Equity	**321.4**	**323.2**	**325.1**	**327.0**	**328.5**	**331.7**	**335.5**	**339.2**	**333.1**	**335.2**	**338.3**	**341.9**
Total Debt and Equity	**591.3**	**593.1**	**595.0**	**596.9**	**598.4**	**601.6**	**605.4**	**609.1**	**603.0**	**605.1**	**608.2**	**611.8**
Debt %	45.6%	45.5%	45.4%	45.2%	45.1%	44.9%	44.6%	44.3%	44.8%	44.6%	44.4%	44.1%
Equity %	54.4%	54.5%	54.6%	54.8%	54.9%	55.1%	55.4%	55.7%	55.2%	55.4%	55.6%	55.9%

BEFORE THE

SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

DIRECT TESTIMONY OF

WILLIAM E. AVERA

On Behalf of Black Hills Power, Inc.

Docket No. EL14-_____

March 31, 2014

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I. INTRODUCTION

Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A1. My name is William E. Avera and my business address is 3907 Red River, Austin, Texas, 78751.

Q2. IN WHAT CAPACITY ARE YOU EMPLOYED?

A2. I am the President of FINCAP, Inc., a firm providing financial, economic, and policy consulting services to business and government.

A. Qualifications

Q3. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A3. I received a B.A. degree with a major in economics from Emory University. After serving in the U.S. Navy, I entered the doctoral program in economics at the University of North Carolina at Chapel Hill. Upon receiving my Ph.D., I joined the faculty at the University of North Carolina and taught finance in the Graduate School of Business. I subsequently accepted a position at the University of Texas at Austin where I taught courses in financial management and investment analysis. I then went to work for International Paper Company in New York City as Manager of Financial Education, a position in which I had responsibility for all corporate education programs in finance, accounting, and economics.

In 1977, I joined the staff of the Public Utility Commission of Texas ("PUCT") as Director of the Economic Research Division. During my tenure at the PUCT, I managed a division responsible for financial analysis, cost allocation and rate design, economic and financial research, and data processing systems, and I testified in cases on a variety of financial and economic issues. Since leaving the PUCT, I have been engaged as a consultant. I have participated in a wide range of assignments involving utility-related matters on behalf of utilities, industrial customers, municipalities, and regulatory commissions. I have previously testified before the Federal Energy Regulatory Commission ("FERC"), as well as the Federal Communications Commission, the Surface Transportation Board (and its predecessor, the Interstate Commerce Commission), the Canadian Radio-Television and Telecommunications Commission, and regulatory agencies, courts, and legislative committees in over 40 states, including the South Dakota Public Utilities Commission ("SDPUC" or "Commission")

In 1995, I was appointed by the PUCT to the Synchronous Interconnection Committee to advise the Texas legislature on the costs and benefits of connecting Texas to the national electric transmission grid. In addition, I served as an outside director of Georgia System Operations Corporation, the system operator for electric cooperatives in Georgia.

I have served as Lecturer in the Finance Department at the University of Texas at Austin and taught in the evening graduate program at St. Edward's University for twenty years. In addition, I have lectured on economic and regulatory topics in programs sponsored by universities and industry groups. I have taught in hundreds of educational programs for financial analysts in programs sponsored by the Association for Investment Management and Research, the Financial Analysts Review, and local financial analysts societies. These programs have been presented in Asia, Europe, and North America, including the Financial Analysts Seminar at Northwestern University. I hold the Chartered Financial Analyst (CFA®) designation and have served as Vice President for Membership of the Financial Management Association. I have also served on the Board of Directors of the North Carolina Society of Financial Analysts. I was elected Vice Chairman of the National Association of Regulatory

Commissioners ("NARUC") Subcommittee on Economics and appointed to NARUC's Technical Subcommittee on the National Energy Act. I have also served as an officer of various other professional organizations and societies. A resume containing the details of my experience and qualifications is attached as Exhibit WEA-1.

B. Overview

Q4. FOR WHOM ARE YOU TESTIFYING IN THIS CASE?

A4. I am testifying on behalf of Black Hills Power, Inc. ("Black Hills Power" or "the Company").

Q5. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A5. The purpose of my testimony is to present to the SDPUC my independent assessment of the fair rate of return on equity ("ROE") that Black Hills Power should be authorized to earn on its investment in providing electric utility service. In addition, I also examined the reasonableness of Black Hills Power's requested capital structure, considering both the specific risks faced by the Company and other industry guidelines.

Q6. PLEASE SUMMARIZE THE INFORMATION AND MATERIALS YOU RELIED ON TO SUPPORT THE OPINIONS AND CONCLUSIONS CONTAINED IN YOUR TESTIMONY.

A6. To prepare my testimony, I used information from a variety of sources that would normally be relied upon by a person in my capacity. In connection with the present filing, I considered and relied upon corporate disclosures, publicly available financial reports and filings, and other published information relating to Black Hills Power. I also reviewed information relating generally to capital market conditions and specifically to investor perceptions, requirements, and expectations for utilities. These sources, coupled with my experience in the fields of finance and utility regulation, have given me a working knowledge of the issues relevant to investors' required return for Black Hills Power, and they form the basis of my analyses and conclusions.

Q7. HOW IS YOUR TESTIMONY ORGANIZED?

A7. After first summarizing my conclusions and recommendations, I briefly reviewed the operations and finances of Black Hills Power. I then examined current conditions in the capital markets and their implications in evaluating a fair ROE for Black Hills Power. With this as a background, I conducted well-accepted quantitative analyses to estimate the current cost of equity for a reference group of comparable-risk electric utilities. These included the discounted cash flow ("DCF") model, the empirical form of Capital Asset Pricing Model ("ECAPM"), and an equity risk premium approach based on allowed ROEs for electric utilities, which are all methods that are commonly relied on in regulatory proceedings. Based on the cost of equity estimates indicated by my analyses, a fair ROE for Black Hills Power's electric utility operations was evaluated taking into account the Company's specific risks and requirements for financial strength that provides benefits to customers, as well as flotation costs, which are properly considered in setting a fair rate of return on equity.

Finally, I tested my recommended ROE for Black Hills Power based on the results of alternative ROE benchmarks, including reference to applications of the traditional Capital Asset Pricing Model ("CAPM") and expected rates of return for electric utilities. Further, I corroborated my utility quantitative analyses by applying the DCF model to a group of extremely low risk non-utility firms.

Q8. WHAT IS THE ROLE OF THE ROE IN SETTING UTILITY RATES?

A8. The ROE compensates common equity investors for the use of their capital to finance the plant and equipment necessary to provide utility service. Investors commit capital only if they expect to earn a return on their investment commensurate with returns available from alternative investments with comparable risks. To be consistent with sound regulatory economics and the standards set forth by the Supreme Court in the Bluefield[1] and Hope[2] cases, a utility's allowed ROE should be sufficient to: (1) fairly compensate investors for capital invested in the utility, (2) enable the utility to offer a return adequate to attract new capital on reasonable terms, and (3) maintain the utility's financial integrity.

II. RETURN ON EQUITY FOR BLACK HILLS POWER

Q9. WHAT IS THE PURPOSE OF THIS SECTION?

A9. This section presents my conclusions regarding the fair ROE applicable to Black Hills Power's electric utility operations. This section also discusses the relationship between ROE and preservation of a utility's financial integrity and the ability to attract capital.

Q10. WHAT ROLE DOES THE SDPUC PLAY IN SAVING CUSTOMERS MONEY THROUGH SUPPORTING INVESTOR CONFIDENCE?

A10. Regulatory signals are a major driver of investors' risk assessment for utilities. Security analysts study commission orders and regulatory policy statements to advise investors where to put their money. If the Commission's actions instill confidence that the regulatory environment is supportive, investors make capital

[1] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923).
[2] *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

available to South Dakota's utilities on more reasonable terms. When investors are confident that a utility has reasonable and balanced regulation, they will make funds available even in times of turmoil in the financial markets. When Black Hills Power can negotiate from a position of financial strength it will get a better deal for its customers.

Q11. WHAT IS YOUR CONCLUSION REGARDING THE 10.25% ROE REQUESTED BY BLACK HILLS POWER FOR ITS ELECTRIC UTILITY OPERATIONS?

A11. Based on my evaluation of the adjusted cost of equity ranges and estimates presented on page 1 of Exhibit WEA-2, I conclude that the 10.25% ROE requested by the Company is fair and reasonable, and should be approved.

Black Hills Power's relatively weaker credit standing and small size imply a level of investment risk and required return that exceeds that of the proxy group used to estimate the cost of equity. As discussed in the testimony of Mr. Brian Iverson, however, Black Hills Power is requesting an ROE of 10.25% in this case. Because the Company's requested ROE falls below the midpoint of my recommended range, it represents a reasonable compromise between balancing the impact on customers and the need to provide Black Hills Power with a return that is adequate to compensate investors, maintain financial integrity, and attract capital.

Q12. PLEASE SUMMARIZE THE RESULTS OF THE QUANTITATIVE ANALYSES ON WHICH YOUR CONCLUSIONS WERE BASED.

A12. The cost of common equity estimates produced by the DCF, ECAPM, and risk premium analyses described subsequently are presented on page 1 of Exhibit WEA-2. My evaluation of these results indicates that the 10.25% ROE requested for Black Hills Power's electric utility operations represents a reasonable estimate of investors' required rate of return. The bases for my conclusion are summarized below:

- In order to reflect the risks and prospects associated with Black Hills Power's jurisdictional utility operations, my analyses focused on a proxy group of 27 other utilities with comparable investment risks;

- Based on my evaluation of the strengths and weaknesses of the DCF, ECAPM, and risk premium methods, I concluded that a fair ROE for the proxy group of utilities is in the 9.82% to 11.22% range:

  - In evaluating the results of the DCF model, I considered the relative merits of the alternative growth rates, giving little weight to the internal, "br+sv" growth measures;

  - The forward-looking ECAPM estimates suggested an ROE in the range of 10.8% to 11.8%;

  - The utility risk premium approach implies an ROE estimate on the order of 10.3% to 11.2%;

  - Taken together, and giving little weight to extremes at the high and low ends of the range, these results indicated that the "bare bones cost of equity," that is, the cost of equity before flotation costs, falls within a range of 9.7% to 11.1%;

  - Adding a flotation cost adjustment of 14 basis points to this bare bones cost of equity range resulted in an ROE range for the proxy group of 9.84% to 11.24%.

- These results indicate that the 10.25% ROE requested by Black Hills Power is reasonable and should be approved:

  - An ROE of 10.25% falls below the 10.54% midpoint of the proxy group range;

  - An ROE from above the midpoint of the range is supported by the fact that current bond yields are anomalous, and result in DCF values that are understated;

  - Widespread expectations for higher interest rates emphasize the implication of considering the impact of projected bond yields in evaluating the results of the ECAPM and risk premium methods;

- Apart from the expected upward trend in capital costs, a cost of equity of 10.25% is consistent with the need to support financial integrity and fund capital investment even under adverse circumstances.

Q13. DOES AN ROE OF 10.25% REPRESENT A REASONABLE COST FOR BLACK HILLS POWER'S CUSTOMERS TO PAY?

A13. Yes. Investors have many options vying for their money. They make investment capital available to Black Hills Power only if the expected returns justify the risk. Customers will enjoy reliable and efficient service so long as investors are willing to make the capital investments necessary to maintain and improve Black Hills Power's utility system. Providing an adequate return to investors is a necessary cost to ensure that capital is available to Black Hills Power now and in the future. If regulatory decisions increase risk or limit returns to levels that are insufficient to justify the risk, investors will look elsewhere to invest capital.

Apart from the results of the quantitative methods described above, it is crucial to recognize the importance of maintaining a strong financial position so that Black Hills Power remains prepared to respond to unforeseen events that may materialize in the future. While this imperative is reinforced by current capital market conditions, it extends well beyond the financial markets and includes the Company's ability to absorb potential shocks associated with unexpected events. Recent challenges in the capital markets and ongoing economic uncertainties highlight the benefits of bolstering Black Hills Power's financial standing to ensure that the Company can attract the capital needed to secure reliable service at a lower cost for customers. Changing course from the path of financial strength would be extremely shortsighted, especially considering that a combination of events could adversely impact Black Hills Power's ability to serve customers if its current financial strength were not maintained.

Q14. WHAT DID THE RESULTS OF ALTERNATIVE ROE BENCHMARKS INDICATE WITH RESPECT TO YOUR EVALUATION?

A14. The results of alternative ROE benchmarks, which are presented on page 2 of Exhibit WEA-2, confirm the conclusion that the 10.25% ROE requested for Black Hills Power is reasonable:

- Applying the traditional CAPM approach implied a current cost of equity on the order of 10.3% to 11.3%;
- Expected returns for electric utilities suggested an ROE range of 9.7% to 10.5%, excluding any adjustment for flotation costs;
- DCF estimates for an extremely low-risk group of non-utility firms resulted in an ROE range of 11.1% to 11.6%.

These tests of reasonableness confirm that a 10.25% ROE falls in the lower end of the reasonable range to maintain Black Hills Power's financial integrity, provides a return commensurate with investments of comparable risk, and supports the Company's ability to attract capital.

III. FUNDAMENTAL ANALYSES

Q15. WHAT IS THE PURPOSE OF THIS SECTION?

A15. As a predicate to subsequent quantitative analyses, this section briefly reviews the operations and finances of Black Hills Power. In addition, it examines conditions in the capital markets and the general economy. An understanding of the fundamental factors driving the risks and prospects of utilities is essential in developing an informed opinion of investors' expectations and requirements that are the basis of a fair ROE.

A. Black Hills Power

Q16. BRIEFLY DESCRIBE BLACK HILLS POWER.

A16. Black Hills Power is primarily engaged in the generation, transmission, and distribution of electric power to approximately 68,000 customers within a 9,300 square mile area in western South Dakota, northeastern Wyoming, and Southern Montana. During 2013, Black Hills Power's energy deliveries totaled approximately 3.2 million megawatt hours ("mWh"). The Company's revenue mix was comprised of 28% residential, 35% commercial, and 12% industrial sales revenue, with 10% from contract wholesale, 13% wholesale off-system, and 2% municipal. As of December 31, 2013, Black Hills Power had total assets of approximately $901.2 million, with operating revenues for the most recent fiscal year totaling approximately $254.0 million.

As of October 1, 2014, Black Hills Power's generating units, located in South Dakota and Wyoming, will provide total generating capacity of approximately 445 megawatts ("MW"), with coal-fired capacity accounting for approximately 49 percent of company-owned facilities and natural gas and oil-fired plants making up 51 percent.

Black Hills Power's transmission and distribution facilities consist of approximately 1,090 miles of high voltage lines and 2,550 miles of lower voltage lines. In addition, Black Hills Power is 35% owner of an AC-DC-AC transmission tie that provides an interconnection between the Western and Eastern transmission grids with a total transfer capacity of 400 MW. In connection with certain wholesale sales, Black Hills Power also has firm transmission access to deliver power on specific segments of PacifiCorp's transmission system. The Company's retail electric operations are subject to the jurisdiction of the SDPUC, the Montana Public Service Commission, and the Wyoming Public Service Commission.

Q17. WHERE DOES BLACK HILLS POWER OBTAIN THE CAPITAL USED TO FINANCE ITS INVESTMENT IN UTILITY PLANT?

A17. As a wholly-owned subsidiary of Black Hills Corporation ("BHC"), the Company obtains common equity capital solely from its parent, whose common stock is publicly traded on the New York Stock Exchange. In addition to common equity, Black Hills Power has access to long-term debt financing by issuing bonds in its own name, or through debt capital allocated to the Company from BHC.

Q18. WHAT CREDIT RATINGS HAVE BEEN ASSIGNED TO BLACK HILLS POWER?

A18. Black Hills Power has been assigned a corporate credit rating of "BBB" by Standard & Poor's Corporation ("S&P"), an issuer credit rating of "A3" by Moody's Investor Services, Inc. ("Moody's"), and an issuer default rating of "BBB" by Fitch Ratings Ltd. ("Fitch").[3]

Q19. DOES THE COMPANY ANTICIPATE THE NEED FOR ADDITIONAL CAPITAL GOING FORWARD?

A19. Yes. Black Hills Power will require capital investment to provide for necessary maintenance and replacements of its utility infrastructure, as well as to fund new investment in electric generation, transmission and distribution facilities. Support for the Company's financial integrity and flexibility will be instrumental in attracting the capital required to meet these fund needs in an effective manner.

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[3] These corporate and/or issuer ratings are distinct from the senior secured debt ratings reported in Mr. Iverson's testimony (p. 5), and reflect the overall risk profile of the firm as a whole rather than the specific risks of a particular debt issue.

B. Outlook for Capital Costs

Q20. DO CURRENT CAPITAL MARKET CONDITIONS PROVIDE A REPRESENTATIVE BASIS ON WHICH TO EVALUATE A FAIR ROE?

A20. No. Current capital market conditions reflect the legacy of the Great Recession, and are not representative of what investors expect in the future. Investors have had to contend with a level of economic uncertainty and capital market volatility that has been unprecedented in recent history. The ongoing potential for renewed turmoil in the capital markets has been seen repeatedly, with common stock prices exhibiting the dramatic volatility that is indicative of heightened sensitivity to risk. In response to heightened uncertainties in recent years, investors have repeatedly sought a safe haven in U.S. government bonds. As a result of this "flight to safety," Treasury bond yields have been pushed significantly lower in the face of political, economic, and capital market risks. In addition, the Federal Reserve has implemented measures designed to push interest rates to historically low levels in an effort to stimulate the economy and bolster employment and investor confidence in the face of heightened economic risk.

Q21. HOW DO CURRENT YIELDS ON PUBLIC UTILITY BONDS COMPARE WITH WHAT INVESTORS HAVE EXPERIENCED IN THE PAST?

A21. Despite recent increases, the yields on utility bonds remain near their lowest levels in modern history. Figure WEA-1, below, compares the February 2014 average yield on long-term, triple-B rated utility bonds with those prevailing since 1968:

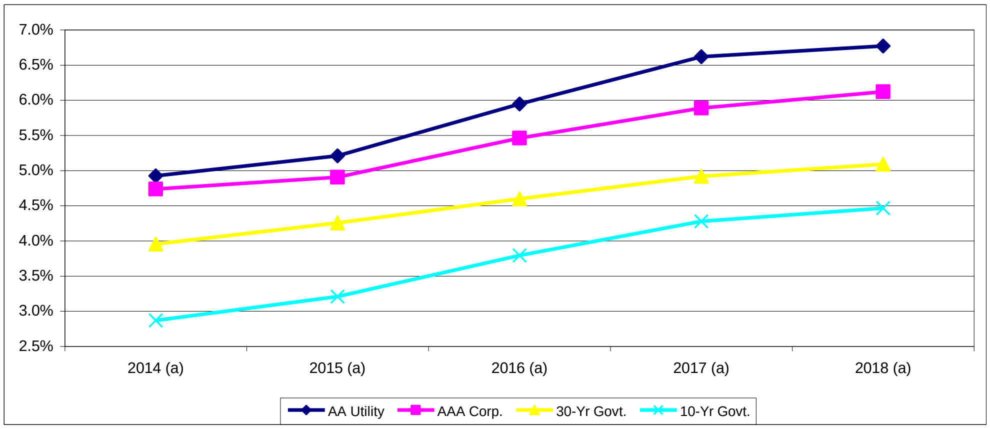
FIGURE WEA-1
BBB UTILITY BOND YIELDS – CURRENT VS. HISTORICAL

As illustrated above, prevailing capital market conditions, as reflected in the yields on triple-B utility bonds, are an anomaly when compared with historical experience.

Q22. ARE THESE VERY LOW INTEREST RATES EXPECTED TO CONTINUE?

A22. No. Investors do not anticipate that these low interest rates will continue into the future. It is widely anticipated that as the economy stabilizes and resumes a more robust pattern of growth, long-term capital costs will increase significantly from present levels. Figure WEA-2 below compares current interest rates on 30-year Treasury bonds, triple-A rated corporate bonds, and double-A rated utility bonds with near-term projections from the Value Line Investment Survey ("Value Line"), IHS Global Insight, Blue Chip Financial Forecasts ("Blue Chip"), and the Energy Information Administration ("EIA"):

FIGURE WEA-2
INTEREST RATE TRENDS



(a) Value Line Investment Survey, Forecast for the U.S. Economy (Feb. 21, 2014)
IHS Global Insight, U.S. Economic Outlook at 25 (Nov. 2013)
Energy Information Administration, Annual Energy Outlook 2014, Early Release (Dec. 16, 2013)
Blue Chip Financial Forecasts, Vol. 32, No. 12 (Dec. 1, 2013)

These forecasting services are highly regarded and widely referenced, with the Federal Energy Regulatory Commission ("FERC") incorporating forecasts from IHS Global Insight and the EIA in its preferred DCF model for natural gas pipelines. As evidenced above, there is a clear consensus in the investment community that the cost of long-term capital will be significantly higher over 2014-2018 than it is currently.

Q23. DO RECENT ACTIONS OF THE FEDERAL RESERVE SUPPORT THE CONTENTION THAT CURRENT LOW INTEREST RATES WILL CONTINUE INDEFINITELY?

A23. No. While the Federal Reserve continues to express support for maintaining highly accommodative monetary policy and an exceptionally low target range for the federal funds rate, it has also acted to steadily pare back its $85 billion-amonth bond-buying program.[4] The Federal Reserve's decision to begin tapering its asset purchases was based on improving conditions for employment and the economy. Reductions in the Federal Reserve's bond buying program should ease downward pressure on long-term interest rates, with The Wall Street Journal observing that:

> The Fed's decision to begin trimming its $85 billion monthly bond-buying program is widely expected to result in higher medium-term and long-term market interest rates. That means many borrowers, from home buyers to businesses, will be paying higher rates in the near future.[5]

While the Federal Reserve's tapering announcements have moderated uncertainties over just when, and to what degree, the stimulus program would be altered, investors continue to face ongoing uncertainties over future moves. The International Monetary Fund noted that, "A lack of Fed clarity could cause a major spike in borrowing costs that could cause severe damage to the U.S. recovery and send destructive shockwaves around the global economy," adding that, "A smooth and gradual upward shift in the yield curve might be difficult to engineer, and there could be periods of higher volatility when longer yields jump sharply—as recent events suggest."[6] Similarly, the Wall Street Journal noted investors' "hypersensitivity to Fed interest rate decisions," and expectations that higher interest rates "may come a bit sooner and be a touch more aggressive than expected."[7]

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[4] *Press Release,* Board of Governors of the Federal Reserve System (Dec. 18, 2013, Jan. 29, 2014, Mar. 19, 2014).

[5] Hilsenrath, Jon, "Fed Dials Back Bond Buying, Keeps a Wary Eye on Growth," *The Wall Street Journal* at A1 (Dec. 19, 2013).

[6] Talley, Ian, "IMF Urges 'Improved' U.S. Fed Policy Transparency as It Mulls Easy Money Exit," *The Wall Street Journal* (July 26, 2013).

[7] Jon Hilsenrath and Victoria McGrane, "Yellen Debut Rattles Markets," Wall Street Journal (Mar. 19, 2014).

These developments highlight concerns for investors and support expectations for higher interest rates as the economy and labor markets continue to recover. With the Federal Reserve continuing to evaluate additional tapering of its bond-buying program, ongoing concerns over political stalemate in Washington, and continued economic weakness in the Eurozone, and political and economic unrest in Ukraine and emerging markets, the potential for significant volatility and higher capital costs is clearly evident to investors. To address the reality of current capital markets, it is imperative that the SDPUC consider near-term forecasts for public utility bond yields when evaluating the reasonableness of cost of equity estimates and a fair ROE for Black Hills Power.

Q24. WHAT DO THESE EVENTS IMPLY WITH RESPECT TO THE ROE FOR BLACK HILLS POWER MORE GENERALLY?

A24. Current capital market conditions continue to reflect the impact of unprecedented policy measures taken in response to recent dislocations in the economy and financial markets and ongoing economic and political risks. As a result, current capital costs are not representative of what is likely to prevail over the near-term future. This conclusion is supported by comparisons of current conditions to the historical record and independent forecasts. As demonstrated earlier, recognized economic forecasting services project that long-term capital costs will increase from present levels. To address the reality of current capital markets, my testimony expressly considers near-term forecasts for public utility bond yields in assessing the reasonableness of individual cost of equity estimates and in evaluating a fair ROE for Black Hills Power from within the range of reasonableness. As discussed below, this result is supported by economic studies that show that equity risk premiums are higher when interest rates are at very low levels.

IV. COMPARABLE RISK PROXY GROUP

Q25. HOW DID YOU IMPLEMENT QUANTITATIVE METHODS TO ESTIMATE THE COST OF COMMON EQUITY FOR BLACK HILLS POWER?

A25. Application of quantitative methods to estimate the cost of common equity requires observable capital market data, such as stock prices. Moreover, even for a firm with publicly traded stock, the cost of common equity can only be estimated. As a result, applying quantitative models using observable market data only produces an estimate that inherently includes some degree of observation error. Thus, the accepted approach to increase confidence in the results is to apply quantitative methods such as the DCF and ECAPM to a proxy group of publicly traded companies that investors regard as risk-comparable.

Q26. WHAT SPECIFIC PROXY GROUP OF UTILITIES DID YOU RELY ON FOR YOUR ANALYSIS?

A26. In order to reflect the risks and prospects associated with Black Hills Power's jurisdictional electric utility operations, my analyses focused on a reference group of other utilities composed of those companies included in Value Line's electric utility industry groups with:

1. Corporate credit ratings from Standard & Poor's Corporation ("S&P") of "BBB-", "BBB", or "BBB+";
2. Value Line Safety Rank of "2" or "3",
3. No involvement in a major merger or acquisition; and,
4. No recent cuts in dividend payments.

These criteria resulted in a proxy group composed of 27 companies, which I refer to as the "Electric Group."

Q27. HOW DID YOU EVALUATE THE RISKS OF THE ELECTRIC GROUP RELATIVE TO BLACK HILLS POWER?

A27. My evaluation of relative risk considered four objective, published benchmarks that are widely relied on in the investment community. Credit ratings are assigned by independent rating agencies for the purpose of providing investors with a broad assessment of the creditworthiness of a firm. Ratings generally extend from triple-A (the highest) to D (in default). Other symbols (*e.g.*, "+" or "-") are used to show relative standing within a category. Because the rating agencies' evaluation includes virtually all of the factors normally considered important in assessing a firm's relative credit standing, corporate credit ratings provide a broad, objective measure of overall investment risk that is readily available to investors. Widely cited in the investment community and referenced by investors, credit ratings are also frequently used as a primary risk indicator in establishing proxy groups to estimate the cost of common equity.

While credit ratings provide the most widely referenced benchmark for investment risks, other quality rankings published by investment advisory services also provide relative assessments of risks that are considered by investors in forming their expectations for common stocks. Value Line's primary risk indicator is its Safety Rank, which ranges from "1" (Safest) to "5" (Riskiest). This overall risk measure is intended to capture the total risk of a stock, and incorporates elements of stock price stability and financial strength. Given that Value Line is perhaps the most widely available source of investment advisory information, its Safety Rank provides useful guidance regarding the risk perceptions of investors.

The Financial Strength Rating is designed as a guide to overall financial strength and creditworthiness, with the key inputs including financial leverage, business volatility measures, and company size. Value Line's Financial Strength Ratings range from "A++" (strongest) down to "C" (weakest) in nine steps. These objective, published indicators incorporate consideration of a broad spectrum of risks, including financial and business position, relative size, and exposure to firm-specific factors.

Finally, beta measures a utility's stock price volatility relative to the market as a whole, and reflects the tendency of a stock's price to follow changes in the market. A stock that tends to respond less to market movements has a beta less than 1.00, while stocks that tend to move more than the market have betas greater than 1.00. Beta is the only relevant measure of investment risk under modern capital market theory, and is widely cited in academics and in the investment industry as a guide to investors' risk perceptions. Moreover, in my experience Value Line is the most widely referenced source for beta in regulatory proceedings. As noted in *New Regulatory Finance*:

> Value Line is the largest and most widely circulated independent investment advisory service, and influences the expectations of a large number of institutional and individual investors. … Value Line betas are computed on a theoretically sound basis using a broadly based market index, and they are adjusted for the regression tendency of betas to converge to 1.00.[8]

Q28. HOW DO THE OVERALL RISKS OF YOUR PROXY GROUP COMPARE TO BLACK HILLS POWER?

A28. Table WEA-1 compares the Electric Group with Black Hills Power across the four key indicia of investment risk discussed above. Because Black Hills Power has no publicly traded common stock, the Value Line risk measures shown reflect those published for its parent, BHC:

[8] Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports* at 71 (2006).

TABLE WEA-1
COMPARISON OF RISK INDICATORS

	S&P Credit Rating	Value Line Safety Rank	Value Line Financial Strength	Value Line Beta
Electric Group	BBB	2	B++	0.76
Black Hills Power	BBB	3	B+	0.90

Q29. WHAT DOES THIS COMPARISON INDICATE REGARDING INVESTORS' ASSESSMENT OF THE RELATIVE RISKS ASSOCIATED WITH YOUR ELECTRIC GROUP?

A29. As shown above, the "BBB" rating corresponding to the Company is identical to the average corporate credit rating for the Electric Group. Meanwhile, the average Value Line Financial Strength Rating, Safety Rank, and beta associated with Black Hills Power all suggests more risk than for the Electric Group. Considered together, this comparison of objective measures, which incorporate a broad spectrum of risks, including financial and business position, relative size, and exposure to company specific factors, indicates that investors would likely conclude that the overall investment risks for Black Hills Power are somewhat greater than those of the firms in the Electric Group.

Q30. IS AN EVALUATION OF THE CAPITAL STRUCTURE MAINTAINED BY A UTILITY RELEVANT IN ASSESSING ITS RETURN ON EQUITY?

A30. Yes. Other things equal, a higher debt ratio, or lower common equity ratio, translates into increased financial risk for all investors. A greater amount of debt means more investors have a senior claim on available cash flow, thereby reducing the certainty that each will receive his contractual payments. This increases the risks to which lenders are exposed, and they require correspondingly higher rates of interest. From common shareholders' standpoint, a higher debt ratio means that there are proportionately more investors ahead of them, thereby increasing the uncertainty as to the amount of cash flow, if any, that will remain.

Q31. WHAT COMMON EQUITY RATIO IS USED IN BLACK HILLS POWER'S CAPITAL STRUCTURE?

A31. As summarized in the testimony of Mr. Brian Iverson, Black Hills Power is proposing a common equity ratio of 53.32%.

Q32. HOW DOES THIS COMPARE TO THE AVERAGE CAPITALIZATION MAINTAINED BY THE ELECTRIC GROUP?

A32. As shown on Exhibit WEA-3, common equity ratios for the individual firms in the Electric Group ranged from a low of 31.3% to a high of 70.2% at year-end 2013, and averaged 49.4%. Meanwhile, Value Line's three-to-five year forecast indicates an average common equity ratio of 49.0% for the Electric Group, with the individual equity ratios ranging from 38.0% to 58.0%.

Q33. WHAT OTHER FACTORS DO INVESTORS CONSIDER IN THEIR ASSESSMENT OF A COMPANY'S CAPITAL STRUCTURE?

A33. Utilities are facing significant capital investment plans, uncertainties over accommodating future environmental mandates, and ongoing regulatory risks. Coupled with th e potential for turmoil in capital markets, these considerations warrant a stronger balance sheet to deal with an increasingly uncertain environment. A more conservative financial profile, in the form of a higher common equity ratio, is consistent with increasing uncertainties and the need to maintain the continuous access to capital that is required to fund operations and necessary system investment, even during times of adverse capital market conditions. In addition, depending on their specific attributes, contractual agreements or other obligations that require the utility to make specified payments may be treated as debt in evaluating the Company's financial risk.

Q34. WHAT DOES THIS EVIDENCE SUGGEST WITH RESPECT TO THE COMPANY'S PROPOSED CAPITAL STRUCTURE?

A34. Based on my evaluation, I concluded that Black Hills Power's requested capital structure falls within the range for the proxy group and represents a reasonable mix of capital sources from which to calculate the Company's overall rate of return. While industry averages provide one benchmark for comparison, each firm must select its capitalization based on the risks and prospects it faces, as well its specific needs to access the capital markets. A public utility with an obligation to serve must maintain ready access to capital so that it can meet the service requirements of its customers. The need for access becomes even more important when the company has large capital requirements over a period of years, and financing must be continuously available, even during unfavorable capital market conditions.

Black Hills Power's proposed capital structure is consistent with the range of industry benchmarks and reflects the Company's ongoing efforts to strengthen its credit standing and support access to capital on reasonable terms. The reasonableness of Black Hills Power's requested capital structure is reinforced by the ongoing uncertainties associated with the utility industry, the need to accommodate the additional risks associated the Company's relatively small size, and the importance of supporting continued investment in system improvements, even during times of adverse industry or market conditions.

V. CAPITAL MARKET ESTIMATES

Q35. WHAT IS THE PURPOSE OF THIS SECTION?

A35. This section presents capital market estimates of the cost of equity. First, I address the concept of the cost of common equity, along with the risk-return tradeoff principle fundamental to capital markets. Next, I describe DCF, ECAPM, and risk premium analyses conducted to estimate the cost of common equity for the proxy group of comparable risk firms. Finally, I examine flotation costs, which are properly considered in evaluating a fair ROE.

A. Economic Standards

Q36. WHAT ROLE DOES THE ROE PLAY IN A UTILITY'S RATES?

A36. The ROE is the cost of inducing and retaining common equity investment in the utility's physical plant and assets. This investment is necessary to finance the asset base needed to provide utility service. Competition for investor funds is intense and investors are free to invest their funds wherever they choose. Investors will commit money to a particular investment only if they expect it to produce a return commensurate with those from other investments with comparable risks.

Q37. WHAT FUNDAMENTAL ECONOMIC PRINCIPLE UNDERLIES THE COST OF EQUITY CONCEPT?

A37. The fundamental economic principle underlying the cost of equity concept is the notion that investors are risk averse. In capital markets where relatively risk-free assets are available (*e.g.*, U.S. Treasury securities), investors can be induced to hold riskier assets only if they are offered a premium, or additional return, above the rate of return on a risk-free asset. Because all assets compete with each other for investor funds, riskier assets must yield a higher expected rate of return than safer assets to induce investors to invest and hold them.

Given this risk-return tradeoff, the required rate of return (k) from an asset (i) can generally be expressed as:

$$k_i = R_f + RP_i$$

where: R_f = Risk-free rate of return, and
RP_i = Risk premium required to hold riskier asset i.

Thus, the required rate of return for a particular asset at any time is a function of: (1) the yield on risk-free assets, and (2) the asset's relative risk, with investors demanding correspondingly larger risk premiums for bearing greater risk.

Q38. IS THERE EVIDENCE THAT THE RISK-RETURN TRADEOFF PRINCIPLE ACTUALLY OPERATES IN THE CAPITAL MARKETS?

A38. Yes. The risk-return tradeoff can be readily documented in segments of the capital markets where required rates of return can be directly inferred from market data and where generally accepted measures of risk exist. Bond yields, for example, reflect investors' expected rates of return, and bond ratings measure the risk of individual bond issues. Comparing the observed yields on government securities, which are considered free of default risk, to the yields on bonds of various rating categories demonstrates that the risk-return tradeoff does, in fact, exist.

Q39. DOES THE RISK-RETURN TRADEOFF OBSERVED WITH FIXED INCOME SECURITIES EXTEND TO COMMON STOCKS AND OTHER ASSETS?

A39. Yes. It is widely accepted that the risk-return tradeoff evidenced with long-term debt extends to all assets. Documenting the risk-return tradeoff for assets other than fixed income securities, however, is complicated by two factors. First, there is no standard measure of risk applicable to all assets. Second, for most assets – including common stock – required rates of return cannot be directly observed. Yet there is every reason to believe that investors exhibit risk aversion in deciding whether or not to hold common stocks and other assets, just as when choosing among fixed-income securities.

Q40. IS THIS RISK-RETURN TRADEOFF LIMITED TO DIFFERENCES BETWEEN FIRMS?

A40. No. The risk-return tradeoff principle applies not only to investments in different firms, but also to different securities issued by the same firm. The securities issued by a utility vary considerably in risk because they have different characteristics and priorities. Long-term debt is senior among all capital in its claim on a utility's net revenues and is, therefore, the least risky. The last investors in line are common shareholders. They receive only the net revenues, if any, remaining after all other claimants have been paid. As a result, the rate of return that investors require from a utility's common stock, the most junior and riskiest of its securities, must be considerably higher than the yield offered by the utility's senior, long-term debt.

Q41. DOES THE FACT THAT BLACK HILLS POWER IS A SUBSIDIARY OF BHC IN ANY WAY ALTER THESE FUNDAMENTAL STANDARDS UNDERLYING A FAIR ROE?

A41. No. While Black Hills Power has no publicly traded common stock and BHC is its only shareholder, this does not change the standards governing the determination of a fair ROE for the Company. Ultimately, the common equity that is required to support Black Hills Power's utility operations must be raised in the capital markets, where investors consider the Company's ability to offer a rate of return that is competitive with other risk-comparable alternatives. As noted above, Black Hills Power must compete with other investment opportunities and unless there is a reasonable expectation that the Company can earn a return that is commensurate with its underlying risks, capital will be allocated elsewhere, Black

Hills Power's financial integrity will be weakened, and investors will demand an even higher rate of return. The Company's ability to offer a reasonable return on investment is a necessary ingredient in ensuring that customers continue to enjoy economical rates and reliable service.

Q42. WHAT DOES THE ABOVE DISCUSSION IMPLY WITH RESPECT TO ESTIMATING THE COST OF COMMON EQUITY FOR A UTILITY?

A42. Although the cost of common equity cannot be observed directly, it is a function of the returns available from other investment alternatives and the risks to which the equity capital is exposed. Because it is not readily observable, the cost of common equity for a particular utility must be estimated by analyzing information about capital market conditions generally, assessing the relative risks of the company specifically, and employing various quantitative methods that focus on investors' required rates of return. These various quantitative methods typically attempt to infer investors' required rates of return from stock prices, interest rates, or other capital market data.

B. Discounted Cash Flow Analyses

Q43. HOW IS THE DCF MODEL USED TO ESTIMATE THE COST OF COMMON EQUITY?

A43. DCF models attempt to replicate the market valuation process that sets the price investors are willing to pay for a share of a company's stock. The model rests on the assumption that investors evaluate the risks and expected rates of return from all securities in the capital markets. Given these expectations, the price of each stock is adjusted by the market until investors are adequately compensated for the risks they bear. Therefore, we can look to the market to determine what investors believe a share of common stock is worth. By estimating the cash flows investors expect to receive from the stock in the way of future dividends and capital gains, we can calculate their required rate of return. In other words, the cash flows that investors expect from a stock are estimated, and given its current market price, we can "back-into" the discount rate, or cost of common equity, that investors implicitly used in bidding the stock to that price. The formula for the general form of the DCF model is as follows:

$$P_0 = \frac{D_1}{(1+k_e)^1} + \frac{D_2}{(1+k_e)^2} + \cdots + \frac{D_t}{(1+k_e)^t} + \frac{P_t}{(1+k_e)^t}$$

where: P_0 = Current price per share;
P_t = Expected future price per share in period t;
D_t = Expected dividend per share in period t;
k_e = Cost of common equity.

That is, the cost of common equity is the discount rate that will equate the current price of a share of stock with the present value of all expected cash flows from the stock.

Q44. WHAT FORM OF THE DCF MODEL IS CUSTOMARILY USED TO ESTIMATE THE COST OF COMMON EQUITY IN RATE CASES?

A44. Rather than developing annual estimates of cash flows into perpetuity, the DCF model can be simplified to a "constant growth" form:[9]

$$P_0 = \frac{D_1}{k_e - g}$$

[9] The constant growth DCF model is dependent on a number of strict assumptions, which in practice are never met. These include a constant growth rate for both dividends and earnings; a stable dividend payout ratio; the discount rate exceeds the growth rate; a constant growth rate for book value and price; a constant earned rate of return on book value; no sales of stock at a price above or below book value; a constant price-earnings ratio; a constant discount rate (*i.e.*, no changes in risk or interest rate levels and a flat yield curve); and all of the above extend to infinity. Nevertheless, the DCF method provides a workable and practical approach to estimate investors' required return that is widely referenced in utility ratemaking.

where: g = Investors' long-term growth expectations.

The cost of common equity (k_e) can be isolated by rearranging terms within the equation:

$$k_e = \frac{D_1}{P_0} + g$$

This constant growth form of the DCF model recognizes that the rate of return to stockholders consists of two parts: 1) dividend yield (D_1/P_0); and, 2) growth (*g*). In other words, investors expect to receive a portion of their total return in the form of current dividends and the remainder through the capital gains associated with price appreciation over the investors' holding period.

Q45. WHAT FORM OF THE DCF MODEL DID YOU USE?

A45. I applied the constant growth DCF model to estimate the cost of common equity for Black Hills Power, which is the form of the model most commonly relied on to establish the cost of common equity for traditional regulated utilities and the method most often referenced by regulators.

Q46. HOW IS THE CONSTANT GROWTH FORM OF THE DCF MODEL TYPICALLY USED TO ESTIMATE THE COST OF COMMON EQUITY?

A46. The first step in implementing the constant growth DCF model is to determine the expected dividend yield (D_1/P_0) for the firm in question. This is usually calculated based on an estimate of dividends to be paid in the coming year divided by the current price of the stock. The second step is to estimate investors' long-term growth expectations (*g*) for the firm. The final step is to sum the firm's dividend yield and estimated growth rate to arrive at an estimate of its cost of common equity.

Q47. HOW DID YOU DETERMINE THE DIVIDEND YIELD FOR THE ELECTRIC GROUP?

A47. For D_1, I used estimates of dividends to be paid by each of these utilities over the next 12 months, obtained from Value Line. This annual dividend was then divided by a 30-day average stock price for each utility to arrive at the expected dividend yield. The expected dividends, stock prices, and resulting dividend yields for the firms in the Electric Group are presented on Exhibit WEA-4. As shown on page 1, dividend yields for the firms in the Electric Group ranged from 2.9% to 5.6%.

Q48. WHAT IS THE NEXT STEP IN APPLYING THE CONSTANT GROWTH DCF MODEL?

A48. The next step is to evaluate long-term growth expectations, or "*g*", for the firm in question. In constant growth DCF theory, earnings, dividends, book value, and market price are all assumed to grow in lockstep, and the growth horizon of the DCF model is infinite. But implementation of the DCF model is more than just a theoretical exercise; it is an attempt to replicate the mechanism investors used to arrive at observable stock prices. A wide variety of techniques can be used to derive growth rates, but the only "*g*" that matters in applying the DCF model is the value that investors expect.

Q49. ARE HISTORICAL GROWTH RATES LIKELY TO BE REPRESENTATIVE OF INVESTORS' EXPECTATIONS FOR UTILITIES?

A49. No. If past trends in earnings, dividends, and book value are to be representative of investors' expectations for the future, then the historical conditions giving rise to these growth rates should be expected to continue. That is clearly not the case for utilities, where structural and industry changes have led to declining growth in dividends, earnings pressure, and, in many cases, significant write-offs. While these conditions serve to distort historical growth measures, they are neither representative of long-term growth for the utility industry nor the expectations that investors have incorporated into current market prices. As a result, historical growth measures for utilities do not currently meet the requirements of the DCF model.

Q50. WHAT ARE INVESTORS MOST LIKELY TO CONSIDER IN DEVELOPING THEIR LONG-TERM GROWTH EXPECTATIONS?

A50. Implementation of the DCF model is solely concerned with replicating the forward-looking evaluation of real-world investors. In the case of utilities, dividend growth rates are not likely to provide a meaningful guide to investors' current growth expectations. This is because utilities have significantly altered their dividend policies in response to more accentuated business risks in the industry, with the payout ratio for electric utilities falling significantly. As a result of this trend towards a more conservative payout ratio, dividend growth in the utility industry has remained largely stagnant as utilities conserve financial resources to provide a hedge against heightened uncertainties.

As payout ratios for firms in the utility industry trended downward, investors' focus has increasingly shifted from dividends to earnings as a measure of long-term growth. Future trends in earnings per share ("EPS"), which provide the source for future dividends and ultimately support share prices, play a pivotal role in determining investors' long-term growth expectations. The importance of earnings in evaluating investors' expectations and requirements is well accepted in the investment community, and surveys of analytical techniques relied on by professional analysts indicate that growth in earnings is far more influential than trends in dividends per share ("DPS"). Apart from Value Line, investment advisory services do not generally publish comprehensive DPS growth projections, and this scarcity of dividend growth rates relative to the abundance of earnings forecasts attests to their relative influence. The fact that securities analysts focus on EPS growth, and that dividend growth rates are not routinely published, indicates that projected EPS growth rates are likely to provide a superior indicator of the future long-term growth expected by investors.

Q51. DO THE GROWTH RATE PROJECTIONS OF SECURITY ANALYSTS CONSIDER HISTORICAL TRENDS?

A51. Yes. Professional security analysts study historical trends extensively in developing their projections of future earnings. Hence, to the extent there is any useful information in historical patterns, that information is incorporated into analysts' growth forecasts.

Q52. DID PROFESSOR MYRON J. GORDON, WHO ORIGINATED THE DCF APPROACH, RECOGNIZE THE PIVOTAL ROLE THAT EARNINGS PLAY IN FORMING INVESTORS' EXPECTATIONS?

A52. Yes. Dr. Gordon specifically recognized that "it is the growth that investors expect that should be used" in applying the DCF model and he concluded:

> A number of considerations suggest that investors may, in fact, use earnings growth as a measure of expected future growth."[10]

[10] Gordon, Myron J., "The Cost of Capital to a Public Utility," *MSU Public Utilities Studies* at 89 (1974).

Q53. WHAT ARE SECURITY ANALYSTS CURRENTLY PROJECTING IN THE WAY OF GROWTH FOR THE FIRMS IN THE ELECTRIC GROUP?

A53. The earnings growth projections for each of the firms in the Electric Group reported by Value Line, Thomson Reuters ("IBES"), Zacks Investment Research ("Zacks"), and Reuters are displayed on page 2 of Exhibit WEA-4. [11]

Q54. SOME ARGUE THAT ANALYSTS' ASSESSMENTS OF GROWTH RATES ARE BIASED. DO YOU BELIEVE THESE PROJECTIONS ARE APPROPRIATE FOR ESTIMATING INVESTORS' REQUIRED RETURN USING THE DCF MODEL?

A54. Yes. In applying the DCF model to estimate the cost of common equity, the only relevant growth rate is the forward-looking expectations of investors that are captured in current stock prices. Investors, just like securities analysts and others in the investment community, do not know how the future will actually turn out. They can only make investment decisions based on their best estimate of what the future holds in the way of long-term growth for a particular stock, and securities prices are constantly adjusting to reflect their assessment of available information.

Any claims that analysts' estimates are not relied upon by investors are illogical given the reality of a competitive market for investment advice. If financial analysts' forecasts do not add value to investors' decision making, then it is irrational for investors to pay for these estimates. Similarly, those financial analysts who fail to provide reliable forecasts will lose out in competitive markets relative to those analysts whose forecasts investors find more credible. The reality that analyst estimates are routinely referenced in the financial media and in

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[11] Formerly I/B/E/S International, Inc., IBES growth rates are now compiled and published by Thomson Reuters.

investment advisory publications (*e.g.*, Value Line) implies that investors use them as a basis for their expectations.

The continued success of investment services such as Thompson Reuters and Value Line, and the fact that projected growth rates from such sources are widely referenced, provides strong evidence that investors give considerable weight to analysts' earnings projections in forming their expectations for future growth. While the projections of securities analysts may be proven optimistic or pessimistic in hindsight, this is irrelevant in assessing the expected growth that investors have incorporated into current stock prices, and any bias in analysts' forecasts – whether pessimistic or optimistic – is irrelevant if investors share analysts' views. Earnings growth projections of security analysts provide the most frequently referenced guide to investors' views and are widely accepted in applying the DCF model. As explained in *New Regulatory Finance*:

> Because of the dominance of institutional investors and their influence on individual investors, analysts' forecasts of long-run growth rates provide a sound basis for estimating required returns. Financial analysts exert a strong influence on the expectations of many investors who do not possess the resources to make their own forecasts, that is, they are a cause of *g* [growth]. <u>The accuracy of these forecasts in the sense of whether they turn out to be correct is not an issue here, as long as they reflect widely held expectations.</u>[12]

Q55. HAVE OTHER REGULATORS ALSO RECOGNIZED THAT ANALYSTS' GROWTH RATE ESTIMATES ARE AN IMPORTANT AND MEANINGFUL GUIDE TO INVESTORS' EXPECTATIONS?

A55. Yes. FERC has expressed a clear preference for projected EPS growth rates from IBES in applying the DCF model to estimate the cost of equity for both electric

[12] Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 298 (2006) (emphasis added).

and natural gas pipeline utilities, and has expressly rejected reliance on other sources.[13] As FERC concluded:

> Opinion No. 414-A held that the IBES five-year growth forecasts for each company in the proxy group are the best available evidence of the short-term growth rates expected by the investment community. It cited evidence that (1) those forecasts are provided to IBES by professional security analysts, (2) IBES reports the forecast for each firm as a service to investors, and (3) the IBES reports are well known in the investment community and used by investors. The Commission has also rejected the suggestion that the IBES analysts are biased and stated that "in fact the analysts have a significant incentive to make their analyses as accurate as possible to meet the needs of their clients since those investors will not utilize brokerage firms whose analysts repeatedly overstate the growth potential of companies."[14]

Similarly, the Kentucky Public Service Commission has also indicated its preference for relying on analysts' projections in establishing investors' expectations:

> KU's argument concerning the appropriateness of using investors' expectations in performing a DCF analysis is more persuasive than the AG's argument that analysts' projections should be rejected in favor of historical results. The Commission agrees that analysts' projections of growth will be relatively more compelling in forming investors' forward-looking expectations than relying on historical performance, especially given the current state of the economy. [15]

More recently, the Public Utility Regulatory Authority of Connecticut noted that:

> The Authority used growth in earnings exclusively based on the record of this docket showing that financial literature supports security analysts' EPS growth rate projections as superior for use in a DCF analysis. Response to Interrogatory FI-106. The Authority takes note that long-term, there is not growth in DPS

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[13] *See, e.g., Midwest Independent Transmission System Operator, Inc.*, 99 FERC ¶ 63,011 at P 53 (2002); *Golden Spread Elec. Coop. Inc.*, 123 FERC ¶ 61,047 (2008).

[14] *Kern River Gas Transmission Co.*, 126 FERC ¶ 61,034at P 121 (2009) ((footnote omitted).

[15] *Order*, Case No. 2009-00548 at 30-31 (Jul. 30, 2010).

> without growth in EPS. Market prices are more highly influenced by security analyst's earnings expectations then expectations in dividends. The Authority agrees with Ms. Ahern that "the use of earnings growth rates in a DCF analysis provides a better matching between investors' market price appreciation expectations and the growth rate component of the DCF."[16]

Q56. HOW ELSE ARE INVESTORS' EXPECTATIONS OF FUTURE LONG-TERM GROWTH PROSPECTS OFTEN ESTIMATED WHEN APPLYING THE CONSTANT GROWTH DCF MODEL?

A56. In constant growth theory, growth in book equity will be equal to the product of the earnings retention ratio (one minus the dividend payout ratio) and the earned rate of return on book equity. Furthermore, if the earned rate of return and the payout ratio are constant over time, growth in earnings and dividends will be equal to growth in book value. Despite the fact that these conditions are never met in practice, this "sustainable growth" approach may provide a rough guide for evaluating a firm's growth prospects and is frequently proposed in regulatory proceedings.

The sustainable growth rate is calculated by the formula, g = br+sv, where "b" is the expected retention ratio, "r" is the expected earned return on equity, "s" is the percent of common equity expected to be issued annually as new common stock, and "v" is the equity accretion rate.

Q57. WHAT IS THE PURPOSE OF THE "SV" TERM?

A57. Under DCF theory, the "sv" factor is a component of the growth rate designed to capture the impact of issuing new common stock at a price above, or below, book value. When a company's stock price is greater than its book value per share, the per-share contribution in excess of book value associated with new stock issues

[16] *Decision*, Docket No. 13-02-20 (Sep. 24, 2013).

will accrue to the current shareholders. This increase to the book value of existing shareholders leads to higher expected earnings and dividends, with the "sv" factor incorporating this additional growth component.

Q58. WHAT GROWTH RATE DOES THE EARNINGS RETENTION METHOD SUGGEST FOR THE ELECTRIC GROUP?

A58. The sustainable, "br+sv" growth rates for each firm in the Electric Group are summarized on page 2 of Exhibit WEA-4, with the underlying details being presented on Exhibit WEA-5. For each firm, the expected retention ratio (b) was calculated based on Value Line's projected dividends and earnings per share. Likewise, each firm's expected earned rate of return (r) was computed by dividing projected earnings per share by projected net book value. Because Value Line reports end-of-year book values, an adjustment factor was incorporated to compute an average rate of return over the year, consistent with the theory underlying this approach to estimating investors' growth expectations. Meanwhile, the percent of common equity expected to be issued annually as new common stock (s) was equal to the product of the projected market-to-book ratio and growth in common shares outstanding, while the equity accretion rate (v) was computed as 1 minus the inverse of the projected market-to-book ratio.

Q59. ARE THERE SIGNIFICANT SHORTCOMINGS ASSOCIATED WITH THE "BR+SV" GROWTH RATE?

A59. Yes. First, in order to calculate the sustainable growth rate, it is necessary to develop estimates of investors' expectations for four separate variables; namely, "b", "r", "s", and "v." Given the inherent difficulty in forecasting each parameter and the difficulty of estimating the expectations of investors, the potential for measurement error is significantly increased when using four variables, as opposed to referencing a direct projection for EPS growth. Second, empirical research in the finance literature indicates that sustainable growth rates are not as significantly correlated to measures of value, such as share prices, as are analysts' EPS growth forecasts.[17]

The "sustainable growth" approach was included for completeness, but evidence indicates that analysts' forecasts provide a superior and more direct guide to investors' growth expectations. Accordingly, I give less weight to cost of equity estimates based on br+sv growth rates in evaluating the results of the DCF model.

Q60. WHAT COST OF COMMON EQUITY ESTIMATES WERE IMPLIED FOR THE ELECTRIC GROUP USING THE DCF MODEL?

A60. After combining the dividend yields and respective growth projections for each utility, the resulting cost of common equity estimates are shown on page 3 of Exhibit WEA-4.

Q61. IN EVALUATING THE RESULTS OF THE CONSTANT GROWTH DCF MODEL, IS IT APPROPRIATE TO ELIMINATE ESTIMATES THAT ARE EXTREME LOW OR HIGH OUTLIERS?

A61. Yes. In applying quantitative methods to estimate the cost of equity, it is essential that the resulting values pass fundamental tests of reasonableness and economic logic. Accordingly, DCF estimates that are implausibly low or high should be eliminated when evaluating the results of this method.

Q62. HOW DID YOU EVALUATE DCF ESTIMATES AT THE LOW END OF THE RANGE?

A62. I based my evaluation of DCF estimates at the low end of the range on the fundamental risk-return tradeoff, which holds that investors will only take on

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[17] Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.*, at 307 (2006).

more risk if they expect to earn a higher rate of return to compensate them for the greater uncertainly. Because common stocks lack the protections associated with an investment in long-term bonds, a utility's common stock imposes far greater risks on investors. As a result, the rate of return that investors require from a utility's common stock is considerably higher than the yield offered by senior, long-term debt. Consistent with this principle, DCF results that are not sufficiently higher than the yield available on less risky utility bonds must be eliminated.

Q63. HAVE SIMILAR TESTS BEEN APPLIED BY REGULATORS?

A63. Yes. FERC has noted that adjustments are justified where applications of the DCF approach produce illogical results. FERC evaluates DCF results against observable yields on long-term public utility debt and has recognized that it is appropriate to eliminate estimates that do not sufficiently exceed this threshold. The practice of eliminating low-end outliers has been affirmed in numerous FERC proceedings,[18] and in its April 15, 2010 decision in *SoCal Edison*, FERC affirmed that, "it is reasonable to exclude any company whose low-end ROE fails to exceed the average bond yield by about 100 basis points or more."[19]

Q64. WHAT INTEREST RATE BENCHMARK DID YOU CONSIDER IN EVALUATING THE DCF RESULTS FOR BLACK HILLS POWER?

A64. As noted earlier, S&P has assigned a corporate credit rating of "BBB" to Black Hills Power. Companies rated "BBB-", "BBB", and "BBB+" are all considered part of the triple-B rating category, with Moody's monthly yields on triple-B bonds averaging approximately 5.1% in February 2014.[20] Based on my

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[18] *See, e.g., Virginia Electric Power Co.*, 123 FERC ¶ 61,098 at P 64 (2008).
[19] *Southern California Edison Co.*, 131 FERC ¶ 61,020 at P 55 (2010) ("*SoCal Edison*").
[20] Moody's Investors Service, http://credittrends.moodys.com/chartroom.asp?c=3.

professional experience and the risk-return principle that is fundamental to finance, it is inconceivable that investors are not requiring a substantially higher rate of return for holding common stock.

Q65. WHAT ELSE SHOULD BE CONSIDERED IN EVALUATING DCF ESTIMATES AT THE LOW END OF THE RANGE?

A65. As indicated earlier, while corporate bond yields have declined substantially as the worst of the financial crisis has abated, it is generally expected that long-term interest rates will rise as the economy returns to a more normal pattern of growth. As shown in Table WEA-2 below, forecasts of IHS Global Insight and the EIA imply an average triple-B bond yield of approximately 6.6% over the period 2014-2018:

TABLE WEA-2
IMPLIED BBB BOND YIELD

	2014-18
Projected AA Utility Yield	
IHS Global Insight (a)	6.04%
EIA (b)	5.75%
Average	5.89%
Current BBB - AA Yield Spread (c)	0.67%
Implied Triple-B Utility Yield	**6.56%**

(a) IHS Global Insight, U.S. Economic Outlook at 25 (Nov. 2013)
(b) Energy Information Administration, Annual Energy Outlook 2014, Early Release (Dec. 16, 2013)
(c) Based on monthly average bond yields from Moody's Investors Service for the six-month period Sep. 2013 - Feb. 2014

The increase in debt yields anticipated by IHS Global Insight and EIA is also supported by the widely referenced Blue Chip Financial Forecasts, which projects that yields on corporate bonds will climb on the order of 165 basis points through 2018.[21]

Q66. WHAT DOES THIS TEST OF LOGIC IMPLY WITH RESPECT TO THE DCF RESULTS FOR THE ELECTRIC GROUP?

A66. As highlighted on page 3 of Exhibit WEA-4, I eliminated low-end DCF estimates ranging from -1.2% to 7.4%. In light of the risk-return tradeoff principle, it is inconceivable that investors are not requiring a substantially higher rate of return for holding common stock, which is the riskiest of a utility's securities. As a result, consistent with the upward trend expected for utility bond yields, these values provide little guidance as to the returns investors require from utility common stocks and should be excluded.

Q67. IS THERE A BASIS TO EXCLUDE DCF ESTIMATES AT THE HIGH END OF THE RANGE?

A67. Yes. It is just as important to eliminate high-end outliers as low-end outliers. This is also consistent with the precedent adopted by FERC, which has established that estimates found to be "extreme outliers" should be disregarded in interpreting the results of the DCF model.[22] In my current analysis, the upper end of the cost of common equity range produced for the Electric Group was set by a cost of equity estimate of 25.0%. When compared with the balance of the remaining estimates, this value is implausible and should be excluded in evaluating the results of the DCF model.

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[21] *Blue Chip Financial Forecasts*, Vol. 32, No.12 (Dec. 1, 2013).

[22] See, *e.g.*, *ISO New England, Inc.*, 109 FERC ¶ 61,147 at P 205 (2004). Under FERC's test, cost of equity estimates of 17.7% or greater are considered extreme outliers, as are estimates based on growth rates of 13.3% or higher.

Q68. WHAT COST OF COMMON EQUITY ESTIMATES ARE IMPLIED BY YOUR DCF RESULTS FOR THE ELECTRIC GROUP?

A68. As shown on page 3 of Exhibit WEA-4 and summarized in Table WEA-3, below, after eliminating illogical values, application of the constant growth DCF model resulted in the following cost of equity estimates:

TABLE WEA-3
DCF RESULTS – ELECTRIC GROUP

	Cost of Equity	
Growth Rate	**Average**	**Midpoint**
Value Line	10.4%	11.9%
IBES	9.7%	11.0%
Zacks	9.8%	9.6%
Reuters	9.6%	10.4%
br + sv	8.4%	8.6%

C. Empirical Capital Asset Pricing Model

Q69. PLEASE DESCRIBE THE ECAPM.

A69. The ECAPM is a variant of the traditional CAPM, which is a theory of market equilibrium that measures risk using the beta coefficient. Assuming investors are fully diversified, the relevant risk of an individual asset (*e.g.*, common stock) is its volatility relative to the market as a whole, with beta reflecting the tendency of a stock's price to follow changes in the market. A stock that tends to respond less to market movements has a beta less than 1.00, while stocks that tend to move more than the market have betas greater than 1.00. The CAPM is mathematically expressed as:

$$R_j = R_f + \beta_j(R_m - R_f)$$

where:
R_j = required rate of return for stock j;
R_f = risk-free rate;
R_m = expected return on the market portfolio; and,
β_j = beta, or systematic risk, for stock j.

Like the DCF model, the ECAPM is an *ex-ante,* or forward-looking model based on expectations of the future. As a result, in order to produce a meaningful estimate of investors' required rate of return, the ECAPM must be applied using estimates that reflect the expectations of actual investors in the market, not with backward-looking, historical data.

Q70. WHY IS THE ECAPM APPROACH AN APPROPRIATE COMPONENT IN EVALUATING THE COST OF EQUITY FOR BLACK HILLS POWER?

A70. The CAPM approach, which forms the foundation of the ECAPM, generally is considered to be the most widely referenced method for estimating the cost of equity among academicians and professional practitioners, with the pioneering researchers of this method receiving the Nobel Prize in 1990. Because this is the dominant model for estimating the cost of equity outside the regulatory sphere,[23] the ECAPM provides important insight into investors' required rate of return for utility stocks, including Black Hills Power.

Q71. HOW DOES THE ECAPM APPROACH DIFFER FROM TRADITIONAL APPLICATIONS OF THE CAPM?

A71. Myriad empirical tests of the CAPM have shown that low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted. In other words, the CAPM tends to overstate the

[23] *See*, *e.g.*, Bruner, R.F., Eades, K.M., Harris, R.S., and Higgins, R.C., "Best Practices in Estimating Cost of Capital: Survey and Synthesis," *Financial Practice and Education* (1998).

actual sensitivity of the cost of capital to beta, with low-beta stocks tending to have higher returns and high-beta stocks tending to have lower risk returns than predicted by the CAPM. This empirical finding is widely reported in the finance literature, as summarized in *New Regulatory Finance*:

> As discussed in the previous section, several finance scholars have developed refined and expanded versions of the standard CAPM by relaxing the constraints imposed on the CAPM, such as dividend yield, size, and skewness effects. These enhanced CAPMs typically produce a risk-return relationship that is flatter than the CAPM prediction in keeping with the actual observed risk-return relationship. The ECAPM makes use of these empirical relationships.[24]

As discussed in *New Regulatory Finance*, based on a review of the empirical evidence, the expected return on a security is related to its risk by the ECAPM, which is represented by the following formula:

$$R_j = R_f + 0.25(R_m - R_f) + 0.75[\beta_j(R_m - R_f)]$$

This ECAPM equation, and the associated weighting factors, recognize the observed relationship between standard CAPM estimates and the cost of capital documented in the financial research, and correct for the understated returns that would otherwise be produced for low beta stocks.

Q72. HOW DID YOU APPLY THE ECAPM TO ESTIMATE THE COST OF COMMON EQUITY?

A72. Application of the ECAPM to the Electric Group based on a forward-looking estimate for investors' required rate of return from common stocks is presented on Exhibit WEA-6. In order to capture the expectations of today's investors in

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[24] Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports* at 189 (2006).

current capital markets, the expected market rate of return was estimated by conducting a DCF analysis on the 405 dividend paying firms in the S&P 500.

The dividend yield for each firm was obtained from Value Line, and the growth rate was equal to the average of the EPS growth projections for each firm published by IBES, with each firm's dividend yield and growth rate being weighted by its proportionate share of total market value. Based on the weighted average of the projections for the 405 individual firms, current estimates imply an average growth rate over the next five years of 10.1%. Combining this average growth rate with a year-ahead dividend yield of 2.3% results in a current cost of common equity estimate for the market as a whole (R_m) of approximately 12.4%. Subtracting a 3.8% risk-free rate based on the average yield on 30-year Treasury bonds for February 2014 produced a market equity risk premium of 8.6%.

Q73. WHAT WAS THE SOURCE OF THE BETA VALUES YOU USED TO APPLY THE ECAPM?

A73. As indicated earlier, I relied on the beta values reported by Value Line, which in my experience is the most widely referenced source for beta in regulatory proceedings.

Q74. WHAT ELSE SHOULD BE CONSIDERED IN APPLYING THE ECAPM?

A74. As explained by *Morningstar*:

> One of the most remarkable discoveries of modern finance is that of a relationship between firm size and return. The relationship cuts across the entire size spectrum but is most evident among smaller companies, which have higher returns on average than larger ones.[25]

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[25] *Morningstar*, "Ibbotson SBBI 2013 Valuation Yearbook," at p. 85.

Because financial research indicates that the ECAPM does not fully account for observed differences in rates of return attributable to firm size, a modification is required to account for this size effect.

According to the ECAPM, the expected return on a security should consist of the riskless rate, plus a premium to compensate for the systematic risk of the particular security. The degree of systematic risk is represented by the beta coefficient. The need for the size adjustment arises because differences in investors' required rates of return that are related to firm size are not fully captured by beta. To account for this, Morningstar has developed size premiums that need to be added to the theoretical ECAPM cost of equity estimates to account for the level of a firm's market capitalization in determining the ECAPM cost of equity.[26] These premiums correspond to the size deciles of publicly traded common stocks, and range from a premium of 6.0% for a company in the first decile (market capitalization less than $254.6 million), to a reduction of 37 basis points for firms in the tenth decile (market capitalization between $17.6 billion and $626.6 billion). Accordingly, my ECAPM analyses also incorporated an adjustment to recognize the impact of size distinctions, as measured by the average market capitalization for the Electric Group.

Q75. WHAT COST OF EQUITY IS IMPLIED FOR THE ELECTRIC GROUP USING THE ECAPM APPROACH?

A75. As shown on page 1 of Exhibit WEA-6, a forward-looking application of the ECAPM approach resulted in an average unadjusted ROE estimate of 10.8%. After adjusting for the impact of firm size, the ECAPM approach implied an average cost of equity of 11.8% for the Electric Group.[27]

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[26] *Id.* at Table C-1.

[27] The midpoint of the unadjusted and size adjusted ECAPM ranges were 10.9% and 11.6%, respectively.

Q76. DID YOU ALSO APPLY THE ECAPM USING FORECASTED BOND YIELDS?

A76. Yes. As discussed earlier, there is widespread consensus that interest rates will increase materially as the economy continues to strengthen. Accordingly, in addition to the use of current bond yields, I also applied the CAPM based on the forecasted long-term Treasury bond yields developed based on projections published by Value Line, IHS Global Insight and Blue Chip. As shown on page 2 of Exhibit WEA-6, incorporating a forecasted Treasury bond yield for 2014-2018 implied a cost of equity of approximately 11.0% for the Electric Group, or 12.0% after adjusting for the impact of relative size. The midpoints of the unadjusted and size adjusted cost of equity ranges were 11.1% and 11.8%, respectively.

D. Utility Risk Premium

Q77. BRIEFLY DESCRIBE THE RISK PREMIUM METHOD.

A77. The risk premium method extends the risk-return tradeoff observed with bonds to estimate investors' required rate of return on common stocks. The cost of equity is estimated by first determining the additional return investors require to forgo the relative safety of bonds and to bear the greater risks associated with common stock, and by then adding this equity risk premium to the current yield on bonds. Like the DCF model, the risk premium method is capital market oriented. However, unlike DCF models, which indirectly impute the cost of equity, risk premium methods directly estimate investors' required rate of return by adding an equity risk premium to observable bond yields.

Q78. IS THE RISK PREMIUM APPROACH A WIDELY ACCEPTED METHOD FOR ESTIMATING THE COST OF EQUITY?

A78. Yes. The risk premium approach is based on the fundamental risk-return principle that is central to finance, which holds that investors will require a premium in the form of a higher return in order to assume additional risk. This method is routinely referenced by the investment community and in academia and regulatory proceedings, and provides an important tool in estimating a fair ROE for Black Hills Power.

Q79. HOW DID YOU IMPLEMENT THE RISK PREMIUM METHOD?

A79. I based my estimates of equity risk premiums on surveys of previously authorized ROEs. Authorized ROEs presumably reflect regulatory commissions' best estimates of the cost of equity, however determined, at the time they issued their final order. Such ROEs should represent a balanced and impartial outcome that considers the need to maintain a utility's financial integrity and ability to attract capital. Moreover, allowed returns are an important consideration for investors and have the potential to influence other observable investment parameters, including credit ratings and borrowing costs. Thus, these data provide a logical and frequently referenced basis for estimating equity risk premiums for regulated utilities.

Q80. IS IT CIRCULAR TO CONSIDER RISK PREMIUMS BASED ON AUTHORIZED RETURNS IN ASSESSING A FAIR ROE FOR BLACK HILLS POWER?

A80. No. In establishing authorized ROEs, regulators typically consider the results of alternative market-based approaches, including the DCF model. Because allowed risk premiums consider objective market data (*e.g.*, stock prices dividends, beta, and interest rates), and are not based strictly on past actions of other regulators, this mitigates concerns over any potential for circularity.

Q81. HOW DID YOU CALCULATE THE EQUITY RISK PREMIUMS BASED ON ALLOWED ROES?

A81. The ROEs authorized for electric utilities by regulatory commissions across the U.S. are compiled by Regulatory Research Associates and published in its *Regulatory Focus* report. On page 3 of Exhibit WEA-7, the average yield on public utility bonds is subtracted from the average allowed ROE for electric utilities to calculate equity risk premiums for each year between 1974 and 2013.[28]

Q82. IS THERE ANY CAPITAL MARKET RELATIONSHIP THAT MUST BE CONSIDERED WHEN IMPLEMENTING THE RISK PREMIUM METHOD?

A82. Yes. The magnitude of equity risk premiums is not constant and equity risk premiums tend to move inversely with interest rates. In other words, when interest rate levels are relatively high, equity risk premiums narrow, and when interest rates are relatively low, equity risk premiums widen. The implication of this inverse relationship is that the cost of equity does not move as much as, or in lockstep with, interest rates. Accordingly, for a 1% increase or decrease in interest rates, the cost of equity may only rise or fall, say, 50 basis points. Therefore, when implementing the risk premium method, adjustments may be required to incorporate this inverse relationship if current interest rate levels have diverged from the average interest rate level represented in the data set.

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[28] My analysis encompasses the entire period for which published data is available.

Q83. HAS THIS INVERSE RELATIONSHIP BEEN DOCUMENTED IN THE FINANCIAL RESEARCH?

A83. Yes. There is considerable empirical evidence to support the finding that when interest rates are relatively high, equity risk premiums narrow, and when interest rates are relatively low, equity risk premiums are greater.[29] This inverse relationship between equity risk premiums and interest rates has been widely reported in the financial literature. For example, *New Regulatory Finance* documented this inverse relationship:

> Published studies by Brigham, Shome, and Vinson (1985), Harris (1986), Harris and Marston (1992, 1993), Carelton, Chambers, and Lakonishok (1983), Morin (2005), and McShane (2005), and others demonstrate that, beginning in 1980, risk premiums varied inversely with the level of interest rates – rising when rates fell and declining when rates rose.[30]

Other regulators have also recognized that the cost of equity does not move in tandem with interest rates.[31]

Q84. WHAT ARE THE IMPLICATIONS OF THIS RELATIONSHIP UNDER CURRENT CAPITAL MARKET CONDITIONS?

A84. As noted earlier, bond yields are at unprecedented lows. Given that equity risk premiums move inversely with interest rates, these uncharacteristically low bond yields also imply a sharp increase in the equity risk premium that investors require to accept the higher uncertainties associated with an investment in utility

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[29] *See, e.g.,* Brigham, E.F., Shome, D.K., and Vinson, S.R., "The Risk Premium Approach to Measuring a Utility's Cost of Equity," *Financial Management* (Spring 1985); Harris, R.S., and Marston, F.C., "Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts," *Financial Management* (Summer 1992).

[30] Morin, Roger A., "New Regulatory Finance," Public Utilities Reports, at 128 (2006).

[31] *See, e.g.*, California Public Utilities Commission, Decision 08-05-035 (May 29, 2008); Entergy Mississippi Formula Rate Plan FRP-5, http://www.entergy-mississippi.com/content/price/tariffs/emi_frp.pdf.

common stocks versus bonds. In other words, higher required equity risk premiums offset the impact of declining interest rates on the ROE.

Q85. WHAT COST OF EQUITY IS IMPLIED BY THE RISK PREMIUM METHOD USING SURVEYS OF ALLOWED ROES?

A85. Based on the regression output between the interest rates and equity risk premiums displayed on page 4 of Exhibit WEA-7, the equity risk premium for electric utilities increased approximately 42 basis points for each percentage point drop in the yield on average public utility bonds. As illustrated on page 1 of Exhibit WEA-7, with an average yield on public utility bonds for February 2014 of 4.72%, this implied a current equity risk premium of 5.22% for electric utilities. Adding this equity risk premium to the average yield on triple-B utility bonds for February 2014 of 5.01% implies a current cost of equity of approximately 10.3%.

Q86. WHAT RISK PREMIUM COST OF EQUITY ESTIMATE WAS PRODUCED FOR THE COMPANY'S OPERATIONS AFTER INCORPORATING FORECASTED BOND YIELDS?

A86. As shown on page 2 of Exhibit WEA-7, incorporating a forecasted yield for 2014-2018 and adjusting for changes in interest rates since the study period implied an equity risk premium of 4.59% for electric utilities. Adding this equity risk premium to the implied average yield on triple-B public utility bonds for 2014-2018 of 6.56% resulted in an implied cost of equity of approximately 11.2%.

E. Flotation Costs

Q87. WHAT OTHER CONSIDERATIONS ARE RELEVANT IN SETTING THE RETURN ON EQUITY FOR A UTILITY?

A87. The common equity used to finance the investment in utility assets is provided from either the sale of stock in the capital markets or from retained earnings not paid out as dividends. When equity is raised through the sale of common stock, there are costs associated with "floating" the new equity securities. These flotation costs include services such as legal, accounting, and printing, as well as the fees and discounts paid to compensate brokers for selling the stock to the public. Also, some argue that the "market pressure" from the additional supply of common stock and other market factors may further reduce the amount of funds utility nets when it issues common equity.

Q88. IS THERE AN ESTABLISHED MECHANISM FOR A UTILITY TO RECOGNIZE EQUITY ISSUANCE COSTS?

A88. No. While debt flotation costs are recorded on the books of the utility, amortized over the life of the issue, and thus increase the effective cost of debt capital, there is no similar accounting treatment to ensure that equity flotation costs are recorded and ultimately recognized. No rate of return is authorized on flotation costs necessarily incurred to obtain a portion of the equity capital used to finance plant. In other words, equity flotation costs are not included in a utility's rate base because neither that portion of the gross proceeds from the sale of common stock used to pay flotation costs is available to invest in plant and equipment, nor are flotation costs capitalized as an intangible asset. Unless some provision is made to recognize these issuance costs, a utility's revenue requirements will not fully reflect all of the costs incurred for the use of investors' funds. Because there is no accounting convention to accumulate the flotation costs associated with equity issues, they must be accounted for indirectly, with an upward adjustment to the cost of equity being the most appropriate mechanism.

Q89. IS THERE A THEORETICAL AND PRACTICAL BASIS TO INCLUDE A FLOTATION COST ADJUSTMENT IN THIS CASE?

A89. Yes. First, an adjustment for flotation costs associated with past equity issues is appropriate, even when the utility is not contemplating any new sales of common stock. The need for a flotation cost adjustment to compensate for past equity issues been recognized in the financial literature. In a *Public Utilities Fortnightly* article, for example, Brigham, Aberwald, and Gapenski demonstrated that even if no further stock issues are contemplated, a flotation cost adjustment in all future years is required to keep shareholders whole, and that the flotation cost adjustment must consider total equity, including retained earnings.[32] Similarly, *New Regulatory Finance* contains the following discussion:

> Another controversy is whether the flotation cost allowance should still be applied when the utility is not contemplating an imminent common stock issue. Some argue that flotation costs are real and should be recognized in calculating the fair rate of return on equity, but only at the time when the expenses are incurred. In other words, the flotation cost allowance should not continue indefinitely, but should be made in the year in which the sale of securities occurs, with no need for continuing compensation in future years. This argument implies that the company has already been compensated for these costs and/or the initial contributed capital was obtained freely, devoid of any flotation costs, which is an unlikely assumption, and certainly not applicable to most utilities. … The flotation cost adjustment cannot be strictly forward-looking unless all past flotation costs associated with past issues have been recovered.[33]

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[32] Brigham, E.F., Aberwald, D.A., and Gapenski, L.C., "Common Equity Flotation Costs and Rate Making," *Public Utilities Fortnightly,* May, 2, 1985.

[33] Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006) at 335.

Q90. WHAT IS THE MAGNITUDE OF THE ADJUSTMENT TO THE "BARE BONES" COST OF EQUITY TO ACCOUNT FOR ISSUANCE COSTS?

A90. There are a number of ways in which a flotation cost adjustment can be calculated, but the most common methods used to account for flotation costs in regulatory proceedings is to apply an average flotation-cost percentage to a utility's dividend yield. Based on a review of the finance literature, *Regulatory Finance: Utilities' Cost of Capital* concluded:

> The flotation cost allowance requires an estimated adjustment to the return on equity of approximately 5% to 10%, depending on the size and risk of the issue.[34]

Alternatively, a study of data from Morgan Stanley regarding issuance costs associated with utility common stock issuances suggests an average flotation cost percentage of 3.6%.[35] Multiplying this 3.6% expense percentage by a representative dividend yield of 4.0% produces a flotation cost adjustment on the order of 14 basis points.

VI. OTHER ROE BENCHMARKS

Q91. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A91. This section presents alternative tests to demonstrate that the end-results of the ROE analyses discussed earlier are reasonable and do not exceed a fair ROE given the facts and circumstances of Black Hills Power. The first test is based on applications of the traditional CAPM analysis using current and projected interest rates. The second test is based on expected earned returns for electric utilities.

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[34] Roger A. Morin, "Regulatory Finance: Utilities' Cost of Capital," *Public Utilities Reports, Inc. at 166* (1994).

[35] *Application of Yankee Gas Services Company for a Rate Increase*, DPUC Docket No. 04-06-01, Direct Testimony of George J. Eckenroth (Jul. 2, 2004) at Exhibit GJE-11.1. Updating the results presented by Mr. Eckenroth through April 2005 also resulted in an average flotation cost percentage of 3.6%.

Finally, I present a DCF analysis for an extremely low risk group of non-utility firms, with which Black Hills Power must compete for investors' money.

A. Capital Asset Pricing Model

Q92. WHAT COST OF EQUITY ESTIMATES WERE INDICATED BY THE TRADITIONAL CAPM?

A92. My applications of the traditional CAPM were based on the same forward-looking market rate of return, risk-free rates, and beta values discussed earlier in connections with the ECAPM. As shown on page 1 of Exhibit WEA-8, applying the forward-looking CAPM approach to the firms in the Electric Group results in an average theoretical cost of equity estimate of 10.3%, or 11.3% after incorporating the size adjustment corresponding to the market capitalization of the individual utilities.

As shown on page 2 of Exhibit WEA-8, incorporating a forecasted Treasury bond yield for 2014-2018 implied a cost of equity of approximately 10.5% for the Electric Group, or 11.5 % after adjusting for the impact of relative size.

B. Expected Earnings Approach

Q93. WHAT OTHER ANALYSES DID YOU CONDUCT TO ESTIMATE THE COST OF COMMON EQUITY?

A93. As noted earlier, I also evaluated the cost of common equity using the expected earnings method. Reference to rates of return available from alternative investments of comparable risk can provide an important benchmark in assessing the return necessary to assure confidence in the financial integrity of a firm and its ability to attract capital. This expected earnings approach is consistent with the economic underpinnings for a fair rate of return established by the U.S. Supreme Court in *Bluefield* and *Hope*. Moreover, it avoids the complexities and limitations of capital market methods and instead focuses on the returns earned on book equity, which are readily available to investors.

Q94. WHAT ECONOMIC PREMISE UNDERLIES THE EXPECTED EARNINGS APPROACH?

A94. The simple, but powerful concept underlying the expected earnings approach is that investors compare each investment alternative with the next best opportunity. If the utility is unable to offer a return similar to that available from other opportunities of comparable risk, investors will become unwilling to supply the capital on reasonable terms. For existing investors, denying the utility an opportunity to earn what is available from other similar risk alternatives prevents them from earning their opportunity cost of capital. In this situation the government is effectively taking the value of investors' capital without adequate compensation. The expected earnings approach is consistent with the economic rationale underpinning established regulatory standards, which specifies a methodology to determine an ROE benchmark based on earned rates of return for a peer group of other regional utilities.

Q95. HOW IS THE EXPECTED EARNINGS APPROACH TYPICALLY IMPLEMENTED?

A95. The traditional comparable earnings test identifies a group of companies that are believed to be comparable in risk to the utility. The actual earnings of those companies on the book value of their investment are then compared to the allowed return of the utility. While the traditional comparable earnings test is implemented using historical data taken from the accounting records, it is also common to use projections of returns on book investment, such as those published by recognized investment advisory publications (*e.g.*, Value Line). Because these returns on book value equity are analogous to the allowed return on a utility's rate base, this measure of opportunity costs results in a direct, "apples to apples" comparison.

Moreover, regulators do not set the returns that investors earn in the capital markets, which are a function of dividend payments and fluctuations in common stock prices- both of which are outside their control. Regulators can only establish the allowed ROE, which is applied to the book value of a utility's investment in rate base, as determined from its accounting records. This is directly analogous to the expected earnings approach, which measures the return that investors expect the utility to earn on book value. As a result, the expected earnings approach provides a meaningful guide to ensure that the allowed ROE is similar to what other utilities of comparable risk will earn on invested capital. This expected earnings test does not require theoretical models to indirectly infer investors' perceptions from stock prices or other market data. As long as the proxy companies are similar in risk, their expected earned returns on invested capital provide a direct benchmark for investors' opportunity costs that is independent of fluctuating stock prices, market-to-book ratios, debates over DCF growth rates, or the limitations inherent in any theoretical model of investor behavior.

Q96. WHAT RATES OF RETURN ON EQUITY ARE INDICATED FOR UTILITIES BASED ON THE EXPECTED EARNINGS APPROACH?

A96. Value Line's projections imply an average rate of return on common equity for the electric utility industry of 10.3% over its forecast horizon.[36] Meanwhile, for the

[36] The Value Line Investment Survey (Dec. 20, 2013, Jan. 31 & Feb. 21, 2014). Recall that Value Line reports return on year-end equity so the equivalent return on average equity would be higher.

firms in the Electric Group specifically, the year-end returns on common equity projected by Value Line over its forecast horizon are shown on Exhibit WEA-9. Consistent with the rationale underlying the development of the br+sv growth rates, these year-end values were converted to average returns using the same adjustment factor discussed earlier and developed on Exhibit WEA-5. As shown on Exhibit WEA-9, Value Line's projections for the Electric Group suggest an average ROE of approximately 9.7%, with a midpoint value of 10.5%.

C. Extremely Low Risk Non-Utility DCF

Q97. WHAT OTHER PROXY GROUP DID YOU CONSIDER IN EVALUATING A FAIR ROE FOR BLACK HILLS POWER?

A97. Consistent with underlying economic and regulatory standards, I also applied the DCF model to a reference group of low-risk risk companies in the non-utility sectors of the economy. I refer to this group as the "Non-Utility Group".

Q98. DO UTILITIES HAVE TO COMPETE WITH NON-REGULATED FIRMS FOR CAPITAL?

A98. Yes. The cost of capital is an opportunity cost based on the returns that investors could realize by putting their money in other alternatives. Clearly, the total capital invested in utility stocks is only the tip of the iceberg of total common stock investment, and there are a plethora of other enterprises available to investors beyond those in the utility industry. Utilities must compete for capital, not just against firms in their own industry, but with other investment opportunities of comparable risk. Indeed, modern portfolio theory is built on the assumption that rational investors will hold a diverse portfolio of stocks, not just companies in a single industry.

Q99. IS IT CONSISTENT WITH THE *BLUEFIELD* AND *HOPE* CASES TO CONSIDER INVESTORS' REQUIRED ROE FOR NON-UTILITY COMPANIES?

A99. Yes. The cost of equity capital in the competitive sector of the economy form the very underpinning for utility ROEs because regulation purports to serve as a substitute for the actions of competitive markets. The Supreme Court has recognized that it is the degree of risk, not the nature of the business, which is relevant in evaluating an allowed ROE for a utility. The *Bluefield* case refers to "business undertakings attended with comparable risks and uncertainties." It does not restrict consideration to other utilities. Similarly, the *Hope* case states:

> By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks.[37]

As in the *Bluefield* decision, there is nothing to restrict "other enterprises" solely to the utility industry.

In the early applications of the comparable earnings approach, utilities were explicitly eliminated due to a concern about circularity. In other words, soon after the *Hope* decision regulatory commissions did not want to get involved in circular logic by looking to the returns of utilities that were established by the same or similar regulatory commissions in the same geographic region. To avoid circularity, regulators looked only to the returns of non-utility companies.

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[37] *Federal Power Comm'n v. Hope Natural Gas Co.* 320 U.S. 391, (1944).

Q100. DOES CONSIDERATION OF THE RESULTS FOR THE NON-UTILITY GROUP MAKE THE ESTIMATION OF THE COST OF EQUITY USING THE DCF MODEL MORE RELIABLE?

A100. Yes. The estimates of growth from the DCF model depend on analysts' forecasts. It is possible for utility growth rates to be distorted by short-term trends in the industry, or by the industry falling into favor or disfavor by analysts. The result of such distortions would be to bias the DCF estimates for utilities. Because the Non-Utility Group includes low risk companies from many industries, it diversifies away any distortion that may be caused by the ebb and flow of enthusiasm for a particular sector.

Q101. WHAT CRITERIA DID YOU APPLY TO DEVELOP THE NON-UTILITY GROUP?

A101. The comparable risk proxy group was composed of those United States companies followed by Value Line that:

1) pay common dividends;
2) have a Safety Rank of "1";
3) have a Financial Strength Rating of "B++" or greater;
4) have a beta of 0.60 or less; and
5) have investment grade credit ratings from S&P.[38]

Q102. HOW DO THE OVERALL RISKS OF THIS NON-UTILITY GROUP COMPARE WITH THE ELECTRIC GROUP?

A102. Table WEA-4 compares the Non-Utility Group with the Electric Group and Black Hills Power across the four key risk measures discussed earlier:

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[38] Credit rating firms, such as S&P, use designations consisting of upper- and lower-case letters 'A' and 'B' to identify a bond's credit quality rating. 'AAA', 'AA', 'A', and 'BBB' ratings are considered investment grade. Credit ratings for bonds below these designations ('BB', 'B', 'CCC', etc.) are considered speculative grade, and are commonly referred to as "junk bonds". The term "investment grade" refers to bonds with ratings in the 'BBB' category and above.

TABLE WEA-4
COMPARISON OF RISK INDICATORS

	S&P Credit Rating	Value Line Safety Rank	Value Line Financial Strength	Value Line Beta
Non-Utility Group	A	1	A+	0.59
Electric Group	BBB	2	B++	0.76
Black Hills Power	BBB	3	B+	0.90

As shown above, the average credit rating, Safety Rank, Financial Strength Rating, and beta for the Non-Utility Group suggest less risk than for Black Hills Power and the proxy group of electric utilities. When considered together, a comparison of these objective measures, which consider a broad spectrum of risks, including financial and business position, relative size, and exposure to company-specific factors, indicates that investors would likely conclude that the overall investment risks for the Electric Group and Black Hills Power are greater than those of the firms in the Non-Utility Group.

The eight companies that make up the Non-Utility Group are representative of the pinnacle of corporate America. These firms, which include household names such as Colgate-Palmolive, McDonalds, and Wal-Mart, have long corporate histories, well-established track records, and exceedingly conservative risk profiles. Many of these companies pay dividends on a par with utilities, with the average dividend yield for the group approaching 3%. Moreover, because of their significance and name recognition, these companies receive intense scrutiny by the investment community, which increases confidence that published growth estimates are representative of the consensus expectations reflected in common stock prices.

Q103. WHAT WERE THE RESULTS OF YOUR DCF ANALYSIS FOR THE NON-UTILITY GROUP?

A103. I applied the DCF model to the Non-Utility Group using the same analysts' EPS growth projections described earlier for the Electric Group, with the results being presented in Exhibit WEA-10. As summarized in Table WEA-5, below, application of the constant growth DCF model resulted in the following cost of equity estimates:

TABLE WEA-5
DCF RESULTS – NON-UTILITY GROUP

Growth Rate	Average	Midpoint
Value Line	11.2%	11.1%
IBES	11.1%	11.4%
Zacks	11.2%	11.6%
Reuters	11.1%	11.4%

As discussed earlier, reference to the Non-Utility Group is consistent with established regulatory principles. Required returns for utilities should be in line with those of non-utility firms of comparable risk operating under the constraints of free competition.

Q104. HOW CAN YOU RECONCILE THESE DCF RESULTS FOR THE NON-UTILITY GROUP AGAINST THE SIGNIFICANTLY LOWER ESTIMATES PRODUCED FOR YOUR GROUP OF UTILITIES?

A104. First, it is important to be clear that the higher DCF results for the Non-Utility Group cannot be attributed to risk differences. As documented earlier, the risks that investors associate with the group of non-utility firms - as measured by S&P's credit ratings, Value Line's Safety Rank, Financial Strength, and beta – are lower than the risks investors associate with the Electric Group and Black Hills Power. The objective evidence provided by these observable risk measures rules out a conclusion that the higher non-utility DCF estimates are associated with higher investment risk.

Rather, the divergence between the DCF results for these groups of utility and non-utility firms can be attributed to the fact that DCF estimates invariably depart from the returns that investors actually require because their expectations may not be captured by the inputs to the model, particularly the assumed growth rate. Because the actual cost of equity is unobservable, and DCF results inherently incorporate a degree of error, the cost of equity estimates for the Non-Utility Group provide an important benchmark in evaluating a fair ROE for Black Hills Power. There is no basis to conclude that DCF results for a group of utilities would be inherently more reliable than those for firms in the competitive sector, and the divergence between the DCF estimates for the group of utilities and the Non-Utility Group suggests that both should be considered to ensure a balanced end-result. The DCF results for the Non-Utility Group suggest that the 10.25% requested ROE for Black Hills Power's utility operations is a conservative estimate of a fair return.

Q105. PLEASE SUMMARIZE THE RESULTS OF YOUR ALTERNATIVE ROE BENCHMARKS.

A105. The cost of common equity estimates produced by the various tests of reasonableness discussed above are shown on page 2 of Exhibit WEA-2, and summarized in Table WEA-6, below:

TABLE WEA-6
SUMMARY OF ALTERNATIVE ROE BENCHMARKS

	Average	Midpoint
CAPM - Current Bond Yield		
Unadjusted	10.3%	10.4%
Size Adjusted	11.3%	11.1%
CAPM - Projected Bond Yield		
Unadjusted	10.5%	10.6%
Size Adjusted	11.5%	11.3%
Expected Earnings		
Industry	10.3%	
Proxy Group	9.7%	10.5%
Non-Utility DCF		
Value Line	11.2%	11.1%
IBES	11.1%	11.4%
Zacks	11.2%	11.6%
Reuters	11.1%	11.4%

The results of these alternative benchmarks confirm my conclusion that an ROE of 10.25% for Black Hills Power's utility operations is reasonable.

Q106. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A106. Yes.

EXHIBIT WEA-1

QUALIFICATIONS OF WILLIAM E. AVERA

Q. WHAT IS THE PURPOSE OF THIS EXHIBIT?

A. This exhibit describes my background and experience and contains the details of my qualifications.

Q. DR. AVERA, PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I received a B.A. degree with a major in economics from Emory University. After serving in the U.S. Navy, I entered the doctoral program in economics at the University of North Carolina at Chapel Hill. Upon receiving my Ph.D., I joined the faculty at the University of North Carolina and taught finance in the Graduate School of Business. I subsequently accepted a position at the University of Texas at Austin where I taught courses in financial management and investment analysis. I then went to work for International Paper Company in New York City as Manager of Financial Education, a position in which I had responsibility for all corporate education programs in finance, accounting, and economics.

In 1977, I joined the staff of the Public Utility Commission of Texas ("PUCT") as Director of the Economic Research Division. During my tenure at the PUCT, I managed a division responsible for financial analysis, cost allocation and rate design, economic and financial research, and data processing systems, and I testified in cases on a variety of financial and economic issues. Since leaving the PUCT, I have been engaged as a consultant. I have participated in a wide range of assignments involving utility-related matters on behalf of utilities, industrial customers, municipalities, and regulatory commissions. I have previously testified before the Federal Energy Regulatory

Commission ("FERC"), as well as the Federal Communications Commission, the Surface Transportation Board (and its predecessor, the Interstate Commerce Commission), the Canadian Radio-Television and Telecommunications Commission, and regulatory agencies, courts, and legislative committees in over 40 states.

In 1995, I was appointed by the PUCT to the Synchronous Interconnection Committee to advise the Texas legislature on the costs and benefits of connecting Texas to the national electric transmission grid. In addition, I served as an outside director of Georgia System Operations Corporation, the system operator for electric cooperatives in Georgia.

I have served as Lecturer in the Finance Department at the University of Texas at Austin and taught in the evening graduate program at St. Edward's University for twenty years. In addition, I have lectured on economic and regulatory topics in programs sponsored by universities and industry groups. I have taught in hundreds of educational programs for financial analysts in programs sponsored by the Association for Investment Management and Research, the Financial Analysts Review, and local financial analysts societies. These programs have been presented in Asia, Europe, and North America, including the Financial Analysts Seminar at Northwestern University. I hold the Chartered Financial Analyst (CFA®) designation and have served as Vice President for Membership of the Financial Management Association. I have also served on the Board of Directors of the North Carolina Society of Financial Analysts. I was elected Vice Chairman of the National Association of Regulatory Commissioners ("NARUC") Subcommittee on Economics and appointed to NARUC's Technical Subcommittee on the National Energy Act. I have also served as an officer of various other professional organizations and societies. A resume containing the details of my experience and qualifications is attached.

WILLIAM E. AVERA

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Economic and Financial Counsel

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Summary of Qualifications

Ph.D. in economics and finance; Chartered Financial Analyst (CFA ®) designation; extensive expert witness testimony before courts, alternative dispute resolution panels, regulatory agencies and legislative committees; lectured in executive education programs around the world on ethics, investment analysis, and regulation; undergraduate and graduate teaching in business and economics; appointed to leadership positions in government, industry, academia, and the military.

Employment

Principal, FINCAP, Inc. (Sep. 1979 to present)	Financial, economic and policy consulting to business and government. Perform business and public policy research, cost/benefit analyses and financial modeling, valuation of businesses (almost 200 entities valued), estimation of damages, statistical and industry studies. Provide strategy advice and educational services in public and private sectors, and serve as expert witness before regulatory agencies, legislative committees, arbitration panels, and courts.
Director, Economic Research Division, Public Utility Commission of Texas (Dec. 1977 to Aug. 1979)	Responsible for research and testimony preparation on rate of return, rate structure, and econometric analysis dealing with energy, telecommunications, water and sewer utilities. Testified in major rate cases and appeared before legislative committees and served as Chief Economist for agency. Administered state and federal grant funds. Communicated frequently with political leaders and representatives from consumer groups, media, and investment community.
Manager, Financial Education, International Paper Company New York City (Feb. 1977 to Nov. 1977)	Directed corporate education programs in accounting, finance, and economics. Developed course materials, recruited and trained instructors, liaison within the company and with academic institutions. Prepared operating budget and designed financial controls for corporate professional development program.

Lecturer in Finance,
The University of Texas at Austin
(Sep. 1979 to May 1981)
Assistant Professor of Finance,
(Sep. 1975 to May 1977)

Taught graduate and undergraduate courses in financial management and investment theory. Conducted research in business and public policy. Named Outstanding Graduate Business Professor and received various administrative appointments.

Assistant Professor of Business,
University of North Carolina at Chapel Hill
(Sep. 1972 to Jul. 1975)

Taught in BBA, MBA, and Ph.D. programs. Created project course in finance, Financial Management for Women, and participated in developing Small Business Management sequence. Organized the North Carolina Institute for Investment Research, a group of financial institutions that supported academic research. Faculty advisor to the Media Board, which funds student publications and broadcast stations.

Education

Ph.D., Economics and Finance,
University of North Carolina at Chapel Hill
(Jan. 1969 to Aug. 1972)

Elective courses included financial management, public finance, monetary theory, and econometrics. Awarded the Stonier Fellowship by the American Bankers' Association and University Teaching Fellowship. Taught statistics, macroeconomics, and microeconomics.

Dissertation: *The Geometric Mean Strategy as a Theory of Multiperiod Portfolio Choice*

B.A., Economics,
Emory University, Atlanta, Georgia
(Sep. 1961 to Jun. 1965)

Active in extracurricular activities, president of the Barkley Forum (debate team), Emory Religious Association, and Delta Tau Delta chapter. Individual awards and team championships at national collegiate debate tournaments.

Professional Associations

Received Chartered Financial Analyst (CFA) designation in 1977; Vice President for Membership, Financial Management Association; President, Austin Chapter of Planning Executives Institute; Board of Directors, North Carolina Society of Financial Analysts; Candidate Curriculum Committee, Association for Investment Management and Research; Executive Committee of Southern Finance Association; Vice Chair, Staff Subcommittee on Economics and National Association of Regulatory Utility Commissioners (NARUC); Appointed to NARUC Technical Subcommittee on the National Energy Act.

Teaching in Executive Education Programs

University-Sponsored Programs: Central Michigan University, Duke University, Louisiana State University, National Defense University, National University of Singapore, Texas A&M University, University of Kansas, University of North Carolina, University of Texas.

Business and Government-Sponsored Programs: Advanced Seminar on Earnings Regulation, American Public Welfare Association, Association for Investment Management and Research, Congressional Fellows Program, Cost of Capital Workshop, Electricity Consumers Resource Council, Financial Analysts Association of Indonesia, Financial Analysts Review, Financial Analysts Seminar at Northwestern University, Governor's Executive Development Program of Texas, Louisiana Association of Business and Industry, National Association of Purchasing Management, National Association of Tire Dealers, Planning Executives Institute, School of Banking of the South, State of Wisconsin Investment Board, Stock Exchange of Thailand, Texas Association of State Sponsored Computer Centers, Texas Bankers' Association, Texas Bar Association, Texas Savings and Loan League, Texas Society of CPAs, Tokyo Association of Foreign Banks, Union Bank of Switzerland, U.S. Department of State, U.S. Navy, U.S. Veterans Administration, in addition to Texas state agencies and major corporations.

Presented papers for Mills B. Lane Lecture Series at the University of Georgia and Heubner Lectures at the University of Pennsylvania. Taught graduate courses in finance and economics for evening program at St. Edward's University in Austin from January 1979 through 1998.

Expert Witness Testimony

Testified in almost 300 cases before regulatory agencies addressing cost of capital, regulatory policy, rate design, and other economic and financial issues.

Federal Agencies: Federal Communications Commission, Federal Energy Regulatory Commission, Surface Transportation Board, Interstate Commerce Commission, and the Canadian Radio-Television and Telecommunications Commission.

State Regulatory Agencies: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Missouri, Nevada, New Mexico, Montana, Nebraska, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Testified in 42 cases before federal and state courts, arbitration panels, and alternative dispute tribunals (89 depositions given) regarding damages, valuation, antitrust liability, fiduciary duties, and other economic and financial issues.

Board Positions and Other Professional Activities

Co-chair, Synchronous Interconnection Committee established by Texas Legislature to study interconnection of Texas with national grid; Audit Committee and Outside Director, Georgia System Operations Corporation (electric system operator for member-owned electric cooperatives in Georgia); Chairman, Board of Print Depot, Inc. and FINCAP, Inc.; Appointed by Hays County Commission to Citizens Advisory Committee of Habitat Conservation Plan, Operator of AAA Ranch, a certified organic producer of agricultural products; Appointed to

Organic Livestock Advisory Committee by Texas Agricultural Commissioner; Appointed by Texas Railroad Commissioners to study group for *The UP/SP Merger: An Assessment of the Impacts on the State of Texas; A*ppointed by Hawaii Public Utilities Commission to team reviewing affiliate relationships of Hawaiian Electric Industries; Chairman, Energy Task Force, Greater Austin-San Antonio Corridor Council; Consultant to Public Utility Commission of Texas on cogeneration policy and other matters; Consultant to Public Service Commission of New Mexico on cogeneration policy; Evaluator of Energy Research Grant Proposals for Texas Higher Education Coordinating Board.

Community Activities

Treasurer, Dripping Springs Presbyterian Church; Board of Directors, Sustainable Food Center; Chair, Board of Deacons, Finance Committee, and Elder, Central Presbyterian Church of Austin; Founding Member, Orange-Chatham County (N.C.) Legal Aid Screening Committee.

Military

Captain, U.S. Naval Reserve (retired after 28 years service); Commanding Officer, Naval Special Warfare Engineering (SEAL) Support Unit; Officer-in-Charge of SWIFT patrol boat in Vietnam; Enlisted service as weather analyst (advanced to second class petty officer).

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Monographs

"Economic Perspectives on Texas Water Resources," with Robert M. Avera and Felipe Chacon in *Essentials of Texas Water Resources,* Mary K. Sahs, ed. State Bar of Texas (2012).

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"Consumer Expectations and the Economy," *Texas Business Review* (Nov. 1976)

"Portfolio Performance Evaluation and Long-run Capital Growth," with Henry A. Latané in *Proceedings of the Eastern Finance Association* (1973)

Book reviews in *Journal of Finance* and *Financial Review*. Abstracts for *CFA Digest*. Articles in *Carolina Financial Times*.

Selected Papers and Presentations

"Economic Perspective on Water Marketing in Texas," 2009 Water Law Institute, The University of Texas School of Law, Austin, TX (Dec. 2009).

"Estimating Utility Cost of Equity in Financial Turmoil," SNL EXNET 15th Annual FERC Briefing, Washington, D.C. (Mar. 2009)

"The Who, What, When, How, and Why of Ethics," San Antonio Financial Analysts Society (Jan. 16, 2002). Similar presentation given to the Austin Society of Financial Analysts (Jan. 17, 2002)

"Ethics for Financial Analysts," Sponsored by Canadian Council of Financial Analysts: delivered in Calgary, Edmonton, Regina, and Winnipeg, June 1997. Similar presentations given to Austin Society of Financial Analysts (Mar. 1994), San Antonio Society of Financial Analysts (Nov. 1985), and St. Louis Society of Financial Analysts (Feb. 1986)

"Cost of Capital for Multi-Divisional Corporations," Financial Management Association, New Orleans, Louisiana (Oct. 1996)

"Ethics and the Treasury Function," Government Treasurers Organization of Texas, Corpus Christi, Texas (Jun. 1996)

"A Cooperative Future," Iowa Association of Electric Cooperatives, Des Moines (December 1995). Similar presentations given to National G & T Conference, Irving, Texas (June 1995), Kentucky Association of Electric Cooperatives Annual Meeting, Louisville (Nov. 1994), Virginia, Maryland, and Delaware Association of Electric Cooperatives Annual Meeting, Richmond (July 1994), and Carolina Electric Cooperatives Annual Meeting, Raleigh (Mar. 1994)

"Information Superhighway Warnings: Speed Bumps on Wall Street and Detours from the Economy," Texas Society of Certified Public Accountants Natural Gas, Telecommunications and Electric Industries Conference, Austin (Apr. 1995)

"Economic/Wall Street Outlook," Carolinas Council of the Institute of Management Accountants, Myrtle Beach, South Carolina (May 1994). Similar presentation given to Bell Operating Company Accounting Witness Conference, Santa Fe, New Mexico (Apr. 1993)

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“Growth Rates, Expected Returns, and Variance in Portfolio Selection and Performance Evaluation,” with Henry A. Latané, Econometric Society, Oslo, Norway (Aug. 1973)

SUMMARY OF RESULTS

	Average		Midpoint
DCF			
Value Line	10.4%		11.9%
IBES	9.7%		11.0%
Zacks	9.8%		9.6%
Internal br + sv	8.4%		8.6%
Empirical CAPM - 2013 Yield			
Unadjusted	10.8%		10.9%
Size Adjusted	11.8%		11.6%
Empirical CAPM - Projected Yield			
Unadjusted	11.0%		11.1%
Size Adjusted	12.0%		11.8%
Utility Risk Premium			
Current Bond Yields		10.3%	
Projected Bond Yields		11.2%	
Cost of Equity Recommendation			
Cost of Equity Range	9.7%	--	11.1%
Flotation Cost Adjustment			
Dividend Yield		4.00%	
Flotation Cost Percentage		3.60%	
Adjustment		0.14%	
Recommended ROE Range	**9.84%**	**--**	**11.24%**
Midpoint		**10.54%**	

CHECKS OF REASONABLENESS

	Average	Midpoint
CAPM - Current Bond Yield		
Unadjusted	10.3%	10.4%
Size Adjusted	11.3%	11.1%
CAPM - Projected Bond Yield		
Unadjusted	10.5%	10.6%
Size Adjusted	11.5%	11.3%
Expected Earnings		
Industry	10.3%	
Proxy Group	9.7%	10.5%
Non-Utility DCF		
Value Line	11.2%	11.1%
IBES	11.1%	11.4%
Zacks	11.2%	11.6%
Reuters	11.1%	11.4%

UTILITY GROUP

		At Fiscal Year-End 2013 (a)			Value Line Projected (b)		
	Company	Debt	Preferred	Common Equity	Debt	Other	Common Equity
1	ALLETE	45.3%	0.0%	54.7%	42.0%	0.0%	58.0%
2	Ameren Corp.	47.5%	0.0%	52.5%	44.0%	1.0%	55.0%
3	American Elec Pwr	49.0%	0.0%	51.0%	46.0%	0.0%	54.0%
4	Avista Corp.	49.0%	0.0%	51.0%	48.5%	0.0%	51.5%
5	Black Hills Corp.	51.6%	0.0%	48.4%	57.5%	0.0%	42.5%
6	CMS Energy Corp.	68.7%	0.0%	31.3%	61.5%	0.5%	38.0%
7	DTE Energy Co.	50.2%	0.0%	49.8%	49.0%	0.0%	51.0%
8	Duke Energy Corp.	49.3%	0.0%	50.7%	51.5%	0.0%	48.5%
9	Edison International	47.1%	7.9%	44.9%	47.5%	7.5%	45.0%
10	El Paso Electric	51.4%	0.0%	48.6%	57.0%	0.0%	43.0%
11	Empire District Elec	49.8%	0.0%	50.2%	51.0%	0.0%	49.0%
12	Entergy Corp.	54.1%	1.4%	44.5%	57.0%	1.0%	42.0%
13	Exelon Corp.	44.8%	2.0%	53.2%	43.5%	0.0%	56.5%
14	Great Plains Energy	50.0%	0.6%	49.4%	47.5%	0.5%	52.0%
15	Hawaiian Elec.	46.4%	0.0%	53.6%	48.0%	1.0%	51.0%
16	IDACORP, Inc.	43.5%	6.6%	49.9%	49.0%	0.0%	51.0%
17	NorthWestern Corp.	29.8%	0.0%	70.2%	48.0%	0.0%	52.0%
18	Otter Tail Corp.	42.2%	0.0%	57.8%	46.0%	0.0%	54.0%
19	Pepco Holdings	51.0%	0.0%	49.0%	49.5%	0.0%	50.5%
20	PG&E Corp.	48.2%	0.9%	50.9%	50.5%	1.0%	48.5%
21	PNM Resources	49.8%	0.3%	49.9%	51.0%	0.0%	49.0%
22	Portland General Elec.	51.3%	0.0%	48.7%	48.5%	0.0%	51.5%
23	PPL Corp.	62.6%	0.0%	37.4%	57.5%	0.0%	42.5%
24	SCANA Corp.	53.9%	0.0%	46.1%	53.0%	0.0%	47.0%
25	Sempra Energy	51.1%	0.1%	48.8%	55.0%	0.0%	45.0%
26	UIL Holdings	56.2%	0.0%	43.8%	54.5%	0.0%	45.5%
27	Westar Energy	51.4%	0.0%	48.6%	50.0%	0.0%	50.0%
	Average	**49.8%**	**0.7%**	**49.4%**	**50.5%**	**0.5%**	**49.0%**

(a) Company Form 10-K and Annual Reports.
(b) The Value Line Investment Survey (Dec. 20, 2013, Jan. 31 & Feb. 21, 2014).

DIVIDEND YIELD

	Company	(a) Price	(b) Dividends	Yield
1	ALLETE	$ 49.47	$ 1.96	4.0%
2	Ameren Corp.	$ 37.26	$ 1.60	4.3%
3	American Elec Pwr	$ 48.09	$ 2.02	4.2%
4	Avista Corp.	$ 28.67	$ 1.27	4.4%
5	Black Hills Corp.	$ 54.25	$ 1.56	2.9%
6	CMS Energy Corp.	$ 27.29	$ 1.08	4.0%
7	DTE Energy Co.	$ 67.84	$ 2.69	4.0%
8	Duke Energy Corp.	$ 69.57	$ 3.15	4.5%
9	Edison International	$ 48.16	$ 1.45	3.0%
10	El Paso Electric	$ 35.81	$ 1.11	3.1%
11	Empire District Elec	$ 22.89	$ 1.03	4.5%
12	Entergy Corp.	$ 62.56	$ 3.32	5.3%
13	Exelon Corp.	$ 28.59	$ 1.24	4.3%
14	Great Plains Energy	$ 24.74	$ 0.94	3.8%
15	Hawaiian Elec.	$ 26.00	$ 1.24	4.8%
16	IDACORP, Inc.	$ 52.50	$ 1.72	3.3%
17	NorthWestern Corp.	$ 44.66	$ 1.56	3.5%
18	Otter Tail Corp.	$ 34.31	$ 1.21	3.5%
19	Pepco Holdings	$ 19.41	$ 1.08	5.6%
20	PG&E Corp.	$ 41.72	$ 1.82	4.4%
21	PNM Resources	$ 24.63	$ 0.74	3.0%
22	Portland General Elec.	$ 30.07	$ 1.12	3.7%
23	PPL Corp.	$ 30.48	$ 1.49	4.9%
24	SCANA Corp.	$ 47.10	$ 2.08	4.4%
25	Sempra Energy	$ 91.92	$ 2.64	2.9%
26	UIL Holdings	$ 38.55	$ 1.73	4.5%
27	Westar Energy	$ 33.20	$ 1.39	4.2%
	Average			**4.0%**

(a) Average of closing prices for 30 trading days ended Feb. 21, 2014.

(b) The Value Line Investment Survey, Summary & Index (Feb. 21, 2014).

GROWTH RATES

		(a)	(b)	(c)	(d)	(e)
		Earnings Growth				br+sv
	Company	V Line	IBES	Zacks	Reuters	Growth
1	ALLETE	6.0%	6.0%	6.0%	NA	4.7%
2	Ameren Corp.	-0.5%	5.0%	7.5%	5.0%	2.8%
3	American Elec Pwr	5.5%	4.2%	4.3%	4.2%	4.6%
4	Avista Corp.	6.5%	5.0%	5.0%	NA	3.9%
5	Black Hills Corp.	13.0%	4.0%	4.0%	NA	4.5%
6	CMS Energy Corp.	5.5%	6.2%	6.0%	6.2%	5.0%
7	DTE Energy Co.	5.0%	5.2%	6.2%	5.2%	4.2%
8	Duke Energy Corp.	4.0%	3.9%	3.9%	4.4%	2.8%
9	Edison International	1.5%	1.0%	2.2%	1.8%	5.9%
10	El Paso Electric	1.5%	3.7%	3.5%	NA	4.7%
11	Empire District Elec	5.0%	3.0%	3.0%	3.0%	3.1%
12	Entergy Corp.	-3.5%	-1.9%	NA	-0.4%	3.6%
13	Exelon Corp.	-5.5%	-4.8%	-4.1%	-2.9%	3.1%
14	Great Plains Energy	6.5%	5.0%	6.9%	5.0%	3.6%
15	Hawaiian Elec.	3.5%	4.2%	6.0%	4.5%	3.4%
16	IDACORP, Inc.	2.0%	4.0%	4.0%	4.0%	3.5%
17	NorthWestern Corp.	4.5%	7.0%	6.0%	7.0%	4.1%
18	Otter Tail Corp.	21.5%	6.0%	NA	NA	5.6%
19	Pepco Holdings	5.5%	6.2%	5.6%	6.2%	2.7%
20	PG&E Corp.	2.5%	6.7%	2.7%	6.5%	3.3%
21	PNM Resources	12.0%	6.7%	7.6%	1.4%	4.6%
22	Portland General Elec.	3.5%	10.9%	6.6%	9.7%	3.9%
23	PPL Corp.	NA	0.7%	-3.5%	0.7%	4.2%
24	SCANA Corp.	5.0%	4.6%	4.5%	4.6%	5.2%
25	Sempra Energy	4.5%	6.3%	6.0%	6.3%	5.2%
26	UIL Holdings	6.0%	5.8%	6.6%	5.4%	4.5%
27	Westar Energy	6.0%	3.3%	4.0%	3.3%	4.5%

(a) The Value Line Investment Survey (Dec. 20, 2013, Jan. 31 & Feb. 21, 2014).
(b) www.finance.yahoo.com (retrieved Feb. 28, 2014).
(c) www.zacks.com (retrieved Feb. 28, 2014).
(d) www.reuters.com/finance/stocks (retrieved Feb. 28, 2014).
(e) See Exhibit WEA-5.

DCF COST OF EQUITY ESTIMATES

		(a)	(a)	(a)	(a)	(a)
		Earnings Growth				br+sv
	Company	V Line	IBES	Zacks	Reuters	Growth
1	ALLETE	10.0%	10.0%	10.0%	NA	8.6%
2	Ameren Corp.	3.8%	9.3%	11.8%	9.3%	7.1%
3	American Elec Pwr	9.7%	8.4%	8.5%	8.4%	8.8%
4	Avista Corp.	10.9%	9.4%	9.4%	NA	8.3%
5	Black Hills Corp.	15.9%	6.9%	6.9%	NA	7.4%
6	CMS Energy Corp.	9.5%	10.2%	10.0%	10.2%	8.9%
7	DTE Energy Co.	9.0%	9.2%	10.1%	9.2%	8.2%
8	Duke Energy Corp.	8.5%	8.4%	8.4%	8.9%	7.3%
9	Edison International	4.5%	4.1%	5.2%	4.8%	9.0%
10	El Paso Electric	4.6%	6.8%	6.6%	NA	7.8%
11	Empire District Elec	9.5%	7.5%	7.5%	7.5%	7.6%
12	Entergy Corp.	1.8%	3.4%	NA	4.9%	8.9%
13	Exelon Corp.	-1.2%	-0.5%	0.3%	1.5%	7.4%
14	Great Plains Energy	10.3%	8.8%	10.7%	8.8%	7.4%
15	Hawaiian Elec.	8.3%	9.0%	10.8%	9.2%	8.2%
16	IDACORP, Inc.	5.3%	7.3%	7.3%	7.3%	6.8%
17	NorthWestern Corp.	8.0%	10.5%	9.5%	10.5%	7.6%
18	Otter Tail Corp.	25.0%	9.5%	NA	NA	9.1%
19	Pepco Holdings	11.1%	11.7%	11.1%	11.7%	8.2%
20	PG&E Corp.	6.9%	11.0%	7.0%	10.9%	7.6%
21	PNM Resources	15.0%	9.7%	10.6%	4.4%	7.6%
22	Portland General Elec.	7.2%	14.6%	10.3%	13.4%	7.6%
23	PPL Corp.	NA	5.6%	1.4%	5.6%	9.1%
24	SCANA Corp.	9.4%	9.0%	8.9%	9.0%	9.7%
25	Sempra Energy	7.4%	9.2%	8.9%	9.2%	8.1%
26	UIL Holdings	10.5%	10.3%	11.1%	9.8%	8.9%
27	Westar Energy	10.2%	7.5%	8.1%	7.5%	8.7%
	Average (b)	**10.4%**	**9.7%**	**9.8%**	**9.6%**	**8.4%**
	Midpoint (c)	**11.9%**	**11.0%**	**9.6%**	**10.4%**	**8.6%**

(a) Sum of dividend yield (Exhibit WEA-4, p. 1) and respective growth rate (Exhibit WEA-4, p. 2).
(b) Excludes highlighted figures.
(c) Average of low and high values.

DCF MODEL - UTILITY GROUP

BR+SV GROWTH RATE

		(a)	(a)	(a)			(b)	(c)		(d)	(e)		
		-------------- 2017		-------------			Adjustment			--------- "sv" Factor		--------	
	Company	EPS	DPS	BVPS	b	r	Factor	Adjusted r	br	s	v	sv	br + sv
1	ALLETE	$3.50	$2.20	$37.50	37.1%	9.3%	1.0403	9.7%	3.6%	0.0510	0.2105	1.07%	**4.7%**
2	Ameren Corp.	$2.50	$1.70	$30.00	32.0%	8.3%	1.0138	8.4%	2.7%	0.0109	0.0769	0.08%	**2.8%**
3	American Elec Pwr	$4.00	$2.30	$38.50	42.5%	10.4%	1.0222	10.6%	4.5%	0.0055	0.2300	0.13%	**4.6%**
4	Avista Corp.	$2.25	$1.40	$24.50	37.8%	9.2%	1.0237	9.4%	3.6%	0.0186	0.1833	0.34%	**3.9%**
5	Black Hills Corp.	$3.25	$1.80	$34.00	44.6%	9.6%	1.0229	9.8%	4.4%	0.0072	0.2000	0.14%	**4.5%**
6	CMS Energy Corp.	$2.00	$1.30	$16.25	35.0%	12.3%	1.0331	12.7%	4.5%	0.0125	0.4091	0.51%	**5.0%**
7	DTE Energy Co.	$5.00	$3.15	$53.25	37.0%	9.4%	1.0320	9.7%	3.6%	0.0259	0.2393	0.62%	**4.2%**
8	Duke Energy Corp.	$5.25	$3.40	$66.50	35.2%	7.9%	1.0140	8.0%	2.8%	0.0014	(0.0231)	0.00%	**2.8%**
9	Edison International	$4.00	$1.80	$38.00	55.0%	10.5%	1.0271	10.8%	5.9%	-	0.2762	0.00%	**5.9%**
10	El Paso Electric	$2.50	$1.30	$26.25	48.0%	9.5%	1.0245	9.8%	4.7%	(0.0008)	0.3000	-0.02%	**4.7%**
11	Empire District Elec	$1.70	$1.15	$19.50	32.4%	8.7%	1.0234	8.9%	2.9%	0.0201	0.0930	0.19%	**3.1%**
12	Entergy Corp.	$5.50	$3.40	$59.75	38.2%	9.2%	1.0149	9.3%	3.6%	0.0009	0.1759	0.02%	**3.6%**
13	Exelon Corp.	$2.25	$1.30	$31.00	42.2%	7.3%	1.0173	7.4%	3.1%	0.0022	(0.0333)	-0.01%	**3.1%**
14	Great Plains Energy	$2.00	$1.10	$25.25	45.0%	7.9%	1.0169	8.1%	3.6%	0.0030	(0.0521)	-0.02%	**3.6%**
15	Hawaiian Elec.	$1.75	$1.30	$20.75	25.7%	8.4%	1.0504	8.9%	2.3%	0.0663	0.1700	1.13%	**3.4%**
16	IDACORP, Inc.	$3.60	$2.20	$41.75	38.9%	8.6%	1.0195	8.8%	3.4%	0.0047	0.1211	0.06%	**3.5%**
17	NorthWestern Corp.	$3.00	$1.80	$31.50	40.0%	9.5%	1.0269	9.8%	3.9%	0.0112	0.1600	0.18%	**4.1%**
18	Otter Tail Corp.	$2.00	$1.30	$17.50	35.0%	11.4%	1.0297	11.8%	4.1%	0.0349	0.4167	1.45%	**5.6%**
19	Pepco Holdings	$1.75	$1.20	$21.90	31.4%	8.0%	1.0206	8.2%	2.6%	0.0090	0.1240	0.11%	**2.7%**
20	PG&E Corp.	$3.00	$2.10	$35.00	30.0%	8.6%	1.0246	8.8%	2.6%	0.0282	0.2222	0.63%	**3.3%**
21	PNM Resources	$2.15	$1.08	$23.85	49.8%	9.0%	1.0185	9.2%	4.6%	0.0009	0.0460	0.00%	**4.6%**
22	Portland General Elec.	$2.25	$1.25	$27.00	44.4%	8.3%	1.0343	8.6%	3.8%	0.0351	0.0182	0.06%	**3.9%**
23	PPL Corp.	$2.50	$1.60	$24.25	36.0%	10.3%	1.0265	10.6%	3.8%	0.0165	0.2538	0.42%	**4.2%**
24	SCANA Corp.	$4.25	$2.30	$43.50	45.9%	9.8%	1.0401	10.2%	4.7%	0.0342	0.1714	0.59%	**5.2%**
25	Sempra Energy	$5.50	$3.00	$52.25	45.5%	10.5%	1.0239	10.8%	4.9%	0.0092	0.3258	0.30%	**5.2%**
26	UIL Holdings	$3.00	$1.73	$29.10	42.3%	10.3%	1.0207	10.5%	4.5%	-	0.3874	0.00%	**4.5%**
27	Westar Energy	$2.75	$1.52	$29.65	44.7%	9.3%	1.0322	9.6%	4.3%	0.0155	0.1529	0.24%	**4.5%**

DCF MODEL - UTILITY GROUP

BR+SV GROWTH RATE

		(a)	(a)	(f)	(a)	(a)	(f)	(g)	(a)	(a)		(h)	(a)	(a)	(g)
		2012			2017			Chg	2017 Price				Common Shares		
	Company	Eq Ratio	Tot Cap	Com Eq	Eq Ratio	Tot Cap	Com Eq	Equity	High	Low	Avg.	M/B	2012	2017	Growth
1	ALLETE	56.3%	$2,135	$1,202	58.0%	$3,100	$1,798	8.4%	$55.00	$40.00	$47.50	1.267	39.40	48.00	4.03%
2	Ameren Corp.	49.4%	$13,384	$6,612	55.0%	$13,800	$7,590	2.8%	$40.00	$25.00	$32.50	1.083	242.60	255.00	1.00%
3	American Elec Pwr	49.4%	$30,823	$15,227	54.0%	$35,200	$19,008	4.5%	$60.00	$40.00	$50.00	1.299	485.67	496.00	0.42%
4	Avista Corp.	49.2%	$2,561	$1,260	51.5%	$3,100	$1,597	4.8%	$35.00	$25.00	$30.00	1.224	59.81	64.50	1.52%
5	Black Hills Corp.	56.8%	$2,171	$1,233	42.5%	$3,650	$1,551	4.7%	$50.00	$35.00	$42.50	1.250	44.21	45.50	0.58%
6	CMS Energy Corp.	31.6%	$10,101	$3,192	38.0%	$11,700	$4,446	6.9%	$35.00	$20.00	$27.50	1.692	264.10	274.00	0.74%
7	DTE Energy Co.	51.2%	$14,387	$7,366	51.0%	$19,900	$10,149	6.6%	$80.00	$60.00	$70.00	1.315	172.35	190.00	1.97%
8	Duke Energy Corp.	52.0%	$79,375	$41,275	48.5%	$97,900	$47,482	2.8%	$75.00	$55.00	$65.00	0.977	706.00	711.00	0.14%
9	Edison International	46.2%	$20,422	$9,435	45.0%	$27,500	$12,375	5.6%	$60.00	$45.00	$52.50	1.382	325.81	325.81	0.00%
10	El Paso Electric	45.2%	$1,825	$825	43.0%	$2,450	$1,054	5.0%	$45.00	$30.00	$37.50	1.429	40.11	40.00	-0.05%
11	Empire District Elec	50.9%	$1,409	$717	49.0%	$1,850	$907	4.8%	$25.00	$18.00	$21.50	1.103	42.48	46.50	1.82%
12	Entergy Corp.	42.9%	$21,432	$9,194	42.0%	$25,400	$10,668	3.0%	$85.00	$60.00	$72.50	1.213	177.81	178.50	0.08%
13	Exelon Corp.	55.0%	$41,200	$22,660	56.5%	$47,700	$26,951	3.5%	$35.00	$25.00	$30.00	0.968	857.00	867.00	0.23%
14	Great Plains Energy	54.4%	$6,136	$3,338	52.0%	$7,600	$3,952	3.4%	$30.00	$18.00	$24.00	0.950	153.53	156.00	0.32%
15	Hawaiian Elec.	53.1%	$3,001	$1,594	51.0%	$5,175	$2,639	10.6%	$30.00	$20.00	$25.00	1.205	97.93	128.00	5.50%
16	IDACORP, Inc.	54.5%	$3,225	$1,758	51.0%	$4,190	$2,137	4.0%	$55.00	$40.00	$47.50	1.138	50.16	51.20	0.41%
17	NorthWestern Corp.	46.2%	$2,021	$934	52.0%	$2,350	$1,222	5.5%	$45.00	$30.00	$37.50	1.190	37.22	39.00	0.94%
18	Otter Tail Corp.	54.4%	$959	$522	54.0%	$1,300	$702	6.1%	$35.00	$25.00	$30.00	1.714	36.17	40.00	2.03%
19	Pepco Holdings	54.0%	$8,750	$4,725	50.5%	$11,500	$5,808	4.2%	$30.00	$20.00	$25.00	1.142	250.00	260.00	0.79%
20	PG&E Corp.	50.4%	$25,956	$13,082	48.5%	$34,500	$16,733	5.0%	$55.00	$35.00	$45.00	1.286	430.72	480.00	2.19%
21	PNM Resources	48.7%	$3,278	$1,596	49.0%	$3,920	$1,921	3.8%	$30.00	$20.00	$25.00	1.048	79.65	80.00	0.09%
22	Portland General Elec.	52.9%	$3,264	$1,727	51.5%	$4,725	$2,433	7.1%	$30.00	$25.00	$27.50	1.019	75.56	89.50	3.44%
23	PPL Corp.	37.5%	$33,050	$12,394	42.5%	$38,000	$16,150	5.4%	$40.00	$25.00	$32.50	1.340	630.32	670.00	1.23%
24	SCANA Corp.	46.5%	$9,995	$4,648	47.0%	$14,775	$6,944	8.4%	$60.00	$45.00	$52.50	1.207	140.00	161.00	2.83%
25	Sempra Energy	46.7%	$22,002	$10,275	45.0%	$29,000	$13,050	4.9%	$90.00	$65.00	$77.50	1.483	242.37	250.00	0.62%
26	UIL Holdings	45.0%	$3,000	$1,350	45.5%	$3,650	$1,661	4.2%	$55.00	$40.00	$47.50	1.632	56.00	56.00	0.00%
27	Westar Energy	48.8%	$5,938	$2,898	50.0%	$8,000	$4,000	6.7%	$40.00	$30.00	$35.00	1.180	126.50	135.00	1.31%

(a) The Value Line Investment Survey (Dec. 20, 2013, Jan. 31 & Feb. 21, 2014).
(b) Computed using the formula 2*(1+5-Yr. Change in Equity)/(2+5 Yr. Change in Equity).
(c) Product of average year-end "r" for 2017 and Adjustment Factor.
(d) Product of change in common shares outstanding and M/B Ratio.
(e) Computed as 1 - B/M Ratio.
(f) Product of total capital and equity ratio.
(g) Five-year rate of change.
(h) Average of High and Low expected market prices divided by 2017 BVPS.

EMPIRICAL CAPM - CURRENT BOND YIELD

UTILITY GROUP

		(a)	(b)		(c)		(d)		(e)	(d)				(f)	(g)	
		Market Return (R_m)				Market										Size
		Div	Proj.	Cost of	Risk-Free	Risk	Unadjusted RP		Beta Adjusted RP			Total	Empirical	Market	Size	Adjusted
	Company	**Yield**	**Growth**	**Equity**	**Rate**	**Premium**	**Weight**	***RP*** [1]	**Beta**	**Weight**	***RP*** [2]	**RP**	**K_e**	**Cap**	**Adjustment**	**K_e**
1	ALLETE	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	$ 2,077.5	1.70%	12.5%
2	Ameren Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.80	75%	5.2%	7.4%	11.1%	$ 9,740.4	0.76%	11.8%
3	American Elec Pwr	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	$ 24,265.4	-0.37%	10.1%
4	Avista Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	$ 1,766.7	1.72%	12.5%
5	Black Hills Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.90	75%	5.9%	8.1%	11.7%	$ 2,505.8	1.70%	13.4%
6	CMS Energy Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	$ 7,514.5	0.92%	11.4%
7	DTE Energy Co.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.80	75%	5.2%	7.4%	11.1%	$ 12,595.0	0.76%	11.8%
8	Duke Energy Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	$ 49,723.6	-0.37%	10.1%
9	Edison International	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	$ 16,965.0	0.76%	11.5%
10	El Paso Electric	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.65	75%	4.3%	6.4%	10.1%	$ 1,408.1	1.72%	11.8%
11	Empire District Elec	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	$ 1,010.4	1.73%	12.2%
12	Entergy Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	$ 11,368.7	0.76%	11.2%
13	Exelon Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	$ 25,852.8	-0.37%	10.4%
14	Great Plains Energy	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.85	75%	5.6%	7.8%	11.4%	$ 3,971.8	1.14%	12.6%
15	Hawaiian Elec.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.80	75%	5.2%	7.4%	11.1%	$ 2,530.3	1.70%	12.8%
16	IDACORP, Inc.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	$ 2,795.4	1.14%	11.9%
17	NorthWestern Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	$ 1,756.2	1.72%	12.2%
18	Otter Tail Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.95	75%	6.2%	8.4%	12.1%	$ 1,106.6	1.73%	13.8%
19	Pepco Holdings	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.80	75%	5.2%	7.4%	11.1%	$ 5,101.6	0.92%	12.0%
20	PG&E Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.60	75%	3.9%	6.1%	9.8%	$ 19,464.3	-0.37%	9.4%
21	PNM Resources	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.95	75%	6.2%	8.4%	12.1%	$ 2,037.5	1.70%	13.8%
22	Portland General Elec.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	$ 2,470.0	1.70%	12.5%
23	PPL Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.70	75%	4.6%	6.8%	10.4%	$ 20,142.4	-0.37%	10.1%
24	SCANA Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	$ 6,895.0	0.92%	11.7%
25	Sempra Energy	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	$ 22,973.6	-0.37%	10.4%
26	UIL Holdings	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.85	75%	5.6%	7.8%	11.4%	$ 2,011.5	1.70%	13.1%
27	Westar Energy	2.3%	10.1%	12.4%	3.7%	8.7%	25%	2.2%	0.75	75%	4.9%	7.1%	10.8%	$ 4,360.8	0.92%	11.7%
	Average												**10.8%**			**11.8%**
	Midpoint (h)												**10.9%**			**11.6%**

(a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (Retreived Jan. 8, 2014).
(b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 from http://finance.yahoo.com (retrieved Jan. 13, 2014).
(c) Average yield on 30-year Treasury bonds for Feb. 2014 as reported at www.federalreserve.gov/releases/h15/data.htm.
(d) Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 190 (2006).
(e) The Value Line Investment Survey (Dec. 20, 2013, Jan. 31 & Feb. 21, 2014).
(f) www.valueline.com (retrieved Mar. 3, 2014).
(g) *Morningstar* , "Ibbotson SBBI 2013 Valuation Yearbook," at Appendix C, Table C-1 (2013).
(h) Average of low and high values.

EMPIRICAL CAPM - PROJECTED BOND YIELD

UTILITY GROUP

		(a)	(b)		(c)		(d)		(e)	(d)				(f)	(g)	
		Market Return (R_m)				Market										Size
		Div	Proj.	Cost of	Risk-Free	Risk	Unadjusted RP		Beta Adjusted RP			Total	Empirical	Market	Size	Adjusted
	Company	Yield	Growth	Equity	Rate	Premium	Weight	*RP* [1]	Beta	Weight	*RP* [2]	RP	K_e	Cap	Adjustment	K_e
1	ALLETE	2.3%	10.1%	12.4%	4.6%	7.8%	25%	2.0%	0.75	75%	4.4%	6.4%	10.9%	$ 2,077.5	1.70%	12.6%
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	Average												**11.0%**			**12.0%**
	Midpoint (h)												**11.1%**			**11.8%**

(a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (Retreived Jan. 8, 2014).

(b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 from http://finance.yahoo.com (retrieved Jan. 13, 2014).

(c) Average yield on 30-year Treasury bonds for 2014-2018 based on data from the Value Line Investment Survey, Forecast for the U.S. Economy (Feb. 21, 2014); IHS Global Insight, U.S. Economic Outlook at 25 (Nov. 2013); & Blue Chip Financial Forecasts, Vol. 32, No. 12 (Dec. 1, 2013).

(d) Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 190 (2006).

(e) The Value Line Investment Survey (Dec. 20, 2013, Jan. 31 & Feb. 21, 2014).

(f) www.valueline.com (retrieved Mar. 3, 2014).

(g) *Morningstar* , "Ibbotson SBBI 2013 Valuation Yearbook," at Appendix C, Table C-1 (2013).

(h) Average of low and high values.

ELECTRIC UTILITY RISK PREMIUM

CURRENT BOND YIELD

Current Equity Risk Premium

(a)	Avg. Yield over Study Period	8.69%
(b)	Average Utility Bond Yield	4.64%
	Change in Bond Yield	-4.05%
(c)	Risk Premium/Interest Rate Relationship	-0.4246
	Adjustment to Average Risk Premium	1.72%
(a)	Average Risk Premium over Study Period	3.53%
	Adjusted Risk Premium	**5.25%**

Implied Cost of Equity

(b)	BBB Utility Bond Yield	5.01%
	Adjusted Equity Risk Premium	5.25%
	Risk Premium Cost of Equity	**10.26%**

(a) Exhibit WEA-7, page 3.
(b) Average yield for Feb. 2014 from Moody's Investors Service at www.credittrends.com.
(c) Exhibit WEA-7, page 4.

PROJECTED BOND YIELD

Current Equity Risk Premium		
(a)	Avg. Yield over Study Period	8.69%
(b)	Projected Average Utility Bond Yield 2014-2018	6.18%
	Change in Bond Yield	-2.51%
(c)	Risk Premium/Interest Rate Relationship	-0.4246
	Adjustment to Average Risk Premium	1.06%
(a)	Average Risk Premium over Study Period	3.53%
	Adjusted Risk Premium	**4.59%**
Implied Cost of Equity		
(b)	Projected BBB Utility Bond Yield 2014-2018	6.56%
	Adjusted Equity Risk Premium	4.59%
	Risk Premium Cost of Equity	**11.15%**

(a) Exhibit WEA-7, page 3.
(b) Based on data from IHS Global Insight, U.S. Economic Outlook at 25 (Nov. 2013); Energy Information Administration, Annual Energy Outlook 2014, Early Release (Dec. 16, 2013); & Moody's Investors Service at www.credittrends.com.
(c) Exhibit WEA-7, page 4.

AUTHORIZED RETURNS

Year	(a) Allowed ROE	(b) Average Utility Bond Yield	Risk Premium
1974	13.10%	9.27%	3.83%
1975	13.20%	9.88%	3.32%
1976	13.10%	9.17%	3.93%
1977	13.30%	8.58%	4.72%
1978	13.20%	9.22%	3.98%
1979	13.50%	10.39%	3.11%
1980	14.23%	13.15%	1.08%
1981	15.22%	15.62%	-0.40%
1982	15.78%	15.33%	0.45%
1983	15.36%	13.31%	2.05%
1984	15.32%	14.03%	1.29%
1985	15.20%	12.29%	2.91%
1986	13.93%	9.46%	4.47%
1987	12.99%	9.98%	3.01%
1988	12.79%	10.45%	2.34%
1989	12.97%	9.66%	3.31%
1990	12.70%	9.76%	2.94%
1991	12.55%	9.21%	3.34%
1992	12.09%	8.57%	3.52%
1993	11.41%	7.56%	3.85%
1994	11.34%	8.30%	3.04%
1995	11.55%	7.91%	3.64%
1996	11.39%	7.74%	3.65%
1997	11.40%	7.63%	3.77%
1998	11.66%	7.00%	4.66%
1999	10.77%	7.55%	3.22%
2000	11.43%	8.09%	3.34%
2001	11.09%	7.72%	3.37%
2002	11.16%	7.53%	3.63%
2003	10.97%	6.61%	4.36%
2004	10.75%	6.20%	4.55%
2005	10.54%	5.67%	4.87%
2006	10.36%	6.08%	4.28%
2007	10.36%	6.11%	4.25%
2008	10.46%	6.65%	3.81%
2009	10.48%	6.28%	4.20%
2010	10.34%	5.56%	4.78%
2011	10.29%	5.13%	5.16%
2012	10.17%	4.26%	5.91%
2013	10.02%	4.55%	5.47%
Average	12.21%	8.69%	3.53%

(a) Major Rate Case Decisions, Regulatory Focus, Regulatory Research Associates; *UtilityScope Regulatory Service* , Argus.

(b) Moody's Investors Service.

ELECTRIC UTILITY RISK PREMIUM

REGRESSION RESULTS

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9186517
R Square	0.8439209
Adjusted R Square	0.8398135
Standard Error	0.0051378
Observations	40

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.005423795	0.005424	205.4662	6.5706E-17
Residual	38	0.001003105	2.64E-05		
Total	39	0.0064269			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.0721319	0.002698047	26.73484	3.02E-26	0.06666996	0.07759379	0.066669963	0.077593786
X Variable 1	-0.4245597	0.02961887	-14.3341	6.57E-17	-0.48451992	-0.36459938	-0.48451992	-0.364599382

CAPM - 2013 BOND YIELD

UTILITY GROUP

		(a)	(b)		(c)		(d)		(e)	(f)	
		Market Return (R_m)									
		Div	Proj.	Cost of	Risk-Free	Risk		Unadjusted	Market	Size	Implied
	Company	**Yield**	**Growth**	**Equity**	**Rate**	**Premium**	**Beta**	**K_e**	**Cap**	**Adjustment**	**Cost of Equity**
1	ALLETE	2.3%	10.1%	12.4%	3.7%	8.7%	0.75	10.2%	$ 2,077.5	1.70%	11.9%
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16	IDACORP, Inc.	2.3%	10.1%	12.4%	3.7%	8.7%	0.75	10.2%	$ 2,795.4	1.14%	11.4%
17	NorthWestern Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	0.70	9.8%	$ 1,756.2	1.72%	11.5%
18	Otter Tail Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	0.95	12.0%	$ 1,106.6	1.73%	13.7%
19	Pepco Holdings	2.3%	10.1%	12.4%	3.7%	8.7%	0.80	10.7%	$ 5,101.6	0.92%	11.6%
20	PG&E Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	0.60	8.9%	$ 19,464.3	-0.37%	8.5%
21	PNM Resources	2.3%	10.1%	12.4%	3.7%	8.7%	0.95	12.0%	$ 2,037.5	1.70%	13.7%
22	Portland General Elec.	2.3%	10.1%	12.4%	3.7%	8.7%	0.75	10.2%	$ 2,470.0	1.70%	11.9%
23	PPL Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	0.70	9.8%	$ 20,142.4	-0.37%	9.4%
24	SCANA Corp.	2.3%	10.1%	12.4%	3.7%	8.7%	0.75	10.2%	$ 6,895.0	0.92%	11.1%
25	Sempra Energy	2.3%	10.1%	12.4%	3.7%	8.7%	0.75	10.2%	$ 22,973.6	-0.37%	9.8%
26	UIL Holdings	2.3%	10.1%	12.4%	3.7%	8.7%	0.85	11.1%	$ 2,011.5	1.70%	12.8%
27	Westar Energy	2.3%	10.1%	12.4%	3.7%	8.7%	0.75	10.2%	$ 4,360.8	0.92%	11.1%
	Average							**10.3%**			**11.3%**
	Midpoint (g)							**10.4%**			**11.1%**

(a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (Retreived Jan. 8, 2014).
(b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 from http://finance.yahoo.com (retrieved Jan. 13, 2014).
(c) Average yield on 30-year Treasury bonds for Feb. 2014 as reported at www.federalreserve.gov/releases/h15/data.htm.
(d) The Value Line Investment Survey (Dec. 20, 2013, Jan. 31 & Feb. 21, 2014).
(e) www.valueline.com (retrieved Mar. 3, 2014).
(f) *Morningstar* , "Ibbotson SBBI 2013 Valuation Yearbook," at Appendix C, Table C-1 (2013).
(g) Average of low and high values.

CAPM - PROJECTED BOND YIELD

UTILITY GROUP

		(a)	(b)		(c)		(d)		(e)	(f)	
		Market Return (R_m)									
	Company	Div Yield	Proj. Growth	Cost of Equity	Risk-Free Rate	Risk Premium	Beta	Unadjusted K_e	Market Cap	Size Adjustment	Implied Cost of Equity
1	ALLETE	2.3%	10.1%	12.4%	4.6%	7.8%	0.75	10.4%	$ 2,077.5	1.70%	12.1%
2	Ameren Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	0.80	10.8%	$ 9,740.4	0.76%	11.6%
3	American Elec Pwr	2.3%	10.1%	12.4%	4.6%	7.8%	0.70	10.0%	$ 24,265.4	-0.37%	9.7%
4	Avista Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	0.75	10.4%	$ 1,766.7	1.72%	12.2%
5	Black Hills Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	0.90	11.6%	$ 2,505.8	1.70%	13.3%
6	CMS Energy Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	0.70	10.0%	$ 7,514.5	0.92%	11.0%
7	DTE Energy Co.	2.3%	10.1%	12.4%	4.6%	7.8%	0.80	10.8%	$ 12,595.0	0.76%	11.6%
8	Duke Energy Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	0.70	10.0%	$ 49,723.6	-0.37%	9.7%
9	Edison International	2.3%	10.1%	12.4%	4.6%	7.8%	0.75	10.4%	$ 16,965.0	0.76%	11.2%
10	El Paso Electric	2.3%	10.1%	12.4%	4.6%	7.8%	0.65	9.7%	$ 1,408.1	1.72%	11.4%
11	Empire District Elec	2.3%	10.1%	12.4%	4.6%	7.8%	0.70	10.0%	$ 1,010.4	1.73%	11.8%
12	Entergy Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	0.70	10.0%	$ 11,368.7	0.76%	10.8%
13	Exelon Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	0.75	10.4%	$ 25,852.8	-0.37%	10.1%
14	Great Plains Energy	2.3%	10.1%	12.4%	4.6%	7.8%	0.85	11.2%	$ 3,971.8	1.14%	12.4%
15	Hawaiian Elec.	2.3%	10.1%	12.4%	4.6%	7.8%	0.80	10.8%	$ 2,530.3	1.70%	12.5%
16	IDACORP, Inc.	2.3%	10.1%	12.4%	4.6%	7.8%	0.75	10.4%	$ 2,795.4	1.14%	11.6%
17	NorthWestern Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	0.70	10.0%	$ 1,756.2	1.72%	11.8%
18	Otter Tail Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	0.95	12.0%	$ 1,106.6	1.73%	13.7%
19	Pepco Holdings	2.3%	10.1%	12.4%	4.6%	7.8%	0.80	10.8%	$ 5,101.6	0.92%	11.8%
20	PG&E Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	0.60	9.3%	$ 19,464.3	-0.37%	8.9%
21	PNM Resources	2.3%	10.1%	12.4%	4.6%	7.8%	0.95	12.0%	$ 2,037.5	1.70%	13.7%
22	Portland General Elec.	2.3%	10.1%	12.4%	4.6%	7.8%	0.75	10.4%	$ 2,470.0	1.70%	12.1%
23	PPL Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	0.70	10.0%	$ 20,142.4	-0.37%	9.7%
24	SCANA Corp.	2.3%	10.1%	12.4%	4.6%	7.8%	0.75	10.4%	$ 6,895.0	0.92%	11.4%
25	Sempra Energy	2.3%	10.1%	12.4%	4.6%	7.8%	0.75	10.4%	$ 22,973.6	-0.37%	10.1%
26	UIL Holdings	2.3%	10.1%	12.4%	4.6%	7.8%	0.85	11.2%	$ 2,011.5	1.70%	12.9%
27	Westar Energy	2.3%	10.1%	12.4%	4.6%	7.8%	0.75	10.4%	$ 4,360.8	0.92%	11.4%
	Average							**10.5%**			**11.5%**
	Midpoint (g)							**10.6%**			**11.3%**

(a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (Retreived Jan. 8, 2014).
(b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 from http://finance.yahoo.com (retrieved Jan. 13, 2014).
(c) Average yield on 30-year Treasury bonds for 2014-2018 based on data from the Value Line Investment Survey, Forecast for the U.S. Economy (Feb. 21, 2014); IHS Global Insight, U.S. Economic Outlook at 25 (Nov. 2013); & Blue Chip Financial Forecasts, Vol. 32, No. 12 (Dec. 1, 2013).
(d) The Value Line Investment Survey (Dec. 20, 2013, Jan. 31 & Feb. 21, 2014).
(e) www.valueline.com (retrieved Mar. 3, 2014).
(f) *Morningstar* , "Ibbotson SBBI 2013 Valuation Yearbook," at Appendix C, Table C-1 (2013).
(g) Average of low and high values.

UTILITY GROUP

	Company	(a) Expected Return on Common Equity	(b) Adjustment Factor	(c) Adjusted Return on Common Equity
1	ALLETE	9.0%	1.040265	9.4%
2	Ameren Corp.	8.5%	1.013798	8.6%
3	American Elec Pwr	10.5%	1.022178	10.7%
4	Avista Corp.	9.0%	1.023657	9.2%
5	Black Hills Corp.	10.0%	1.022928	10.2%
6	CMS Energy Corp.	13.0%	1.033126	13.4%
7	DTE Energy Co.	9.5%	1.032037	9.8%
8	Duke Energy Corp.	8.0%	1.014007	8.1%
9	Edison International	11.0%	1.027119	11.3%
10	El Paso Electric	10.0%	1.024484	10.2%
11	Empire District Elec	8.5%	1.023394	8.7%
12	Entergy Corp.	9.5%	1.014865	9.6%
13	Exelon Corp.	7.5%	1.017338	7.6%
14	Great Plains Energy	8.0%	1.016887	8.1%
15	Hawaiian Elec.	8.5%	1.050411	8.9%
16	IDACORP, Inc.	8.5%	1.019524	8.7%
17	NorthWestern Corp.	9.5%	1.026917	9.8%
18	Otter Tail Corp.	11.5%	1.029655	11.8%
19	Pepco Holdings	8.0%	1.020625	8.2%
20	PG&E Corp.	8.5%	1.024608	8.7%
21	PNM Resources	9.0%	1.018501	9.2%
22	Portland General Elec.	8.5%	1.034296	8.8%
23	PPL Corp.	10.5%	1.026467	10.8%
24	SCANA Corp.	10.0%	1.040133	10.4%
25	Sempra Energy	11.0%	1.023904	11.3%
26	UIL Holdings	10.5%	1.020714	10.7%
27	Westar Energy	9.5%	1.032222	9.8%
	Average (d)			**9.7%**
	Midpoint (e)			**10.5%**

(a) The Value Line Investment Survey (Dec. 20, 2013, Jan. 31 & Feb. 21, 2014).
(b) Adjustment to convert year-end return to an average rate of return from Exhibit WEA-5.
(c) (a) x (b).
(d) Excludes highlighted figures.
(e) Average of low and high values.

DCF MODEL - NON-UTILITY GROUP

DIVIDEND YIELD

	Company	(a) Price	(b) Dividends	Yield
1	Church & Dwight	$ 65.87	$ 1.12	1.7%
2	Colgate-Palmolive	$ 64.52	$ 1.45	2.2%
3	Gen'l Mills	$ 49.33	$ 1.52	3.1%
4	Kellogg	$ 60.68	$ 1.84	3.0%
5	Kimberly-Clark	$ 104.75	$ 3.24	3.1%
6	McCormick & Co.	$ 68.79	$ 1.51	2.2%
7	McDonald's Corp.	$ 95.70	$ 3.24	3.4%
8	Wal-Mart Stores	$ 77.76	$ 2.00	2.6%
	Average			**2.7%**

(a) Average of closing prices for 30 trading days ended Jan. 23, 2014.

(b) The Value Line Investment Survey, Summary & Index (Jan. 24, 2014).

DCF MODEL - NON-UTILITY GROUP

GROWTH RATES

		(a)	(b)	(c)	(d)
		Earnings Growth Rates			
	Company	**V Line**	**IBES**	**Zacks**	**Reuters**
1	Church & Dwight	10.5%	11.4%	11.3%	11.4%
2	Colgate-Palmolive	10.0%	9.3%	8.7%	9.3%
3	Gen'l Mills	6.5%	7.7%	7.3%	7.7%
4	Kellogg	7.5%	6.7%	7.2%	6.7%
5	Kimberly-Clark	9.5%	7.7%	7.8%	7.7%
6	McCormick & Co.	8.5%	8.2%	8.3%	8.2%
7	McDonald's Corp.	8.0%	8.1%	9.1%	8.1%
8	Wal-Mart Stores	7.5%	8.6%	9.0%	8.6%

(a) The Value Line Investment Survey (Nov. 1, Nov. 29 & Dec. 27, 2013, Jan. 24, 2014).
(b) www.finance.yahoo.com (retrieved Jan. 24, 2014).
(c) www.zacks.com (retrieved Jan. 24, 2014).
(d) www.reuters.com/finance/stocks (retrieved Jan. 25, 2014).

DCF MODEL - NON-UTILITY GROUP

DCF COST OF EQUITY ESTIMATES

			(a)	(a)	(a)	(a)
			Cost of Equity Estimates			
	Company	**Industry Group**	**V Line**	**IBES**	**Zacks**	**Reuters**
1	Church & Dwight	Household Products	12.2%	13.1%	13.0%	13.1%
2	Colgate-Palmolive	Household Products	12.2%	11.5%	10.9%	11.5%
3	Gen'l Mills	Food Processing	9.6%	10.8%	10.4%	10.8%
4	Kellogg	Food Processing	10.5%	9.7%	10.3%	9.7%
5	Kimberly-Clark	Household Products	12.6%	10.7%	10.9%	10.7%
6	McCormick & Co.	Food Processing	10.7%	10.4%	10.5%	10.4%
7	McDonald's Corp.	Restaurant	11.4%	11.5%	12.5%	11.4%
8	Wal-Mart Stores	Retail Store	10.1%	11.2%	11.6%	11.2%
	Average (b)		**11.2%**	**11.1%**	**11.2%**	**11.1%**
	Midpoint (c)		**11.1%**	**11.4%**	**11.6%**	**11.4%**

(a) Sum of dividend yield (Exhibit WEA-10, p. 1) and respective growth rate (Exhibit WEA-10, p. 2).
(b) Excludes highlighted figures.
(c) Average of low and high values.