COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE ADJUSTMENT OF ELECTRIC RATES OF DUKE ENERGY KENTUCKY, INC.

CASE NO. 2024-00354

FILING REQUIREMENTS

VOLUME 17

Duke Energy Kentucky, Inc. Case No. 2024-00354 Forecasted Test Period Filing Requirements Table of Contents

Vol. #	Tab #	Filing Requirement	Description	Sponsoring Witness
1	1	KRS 278.180	30 days' notice of rates to PSC.	Amy B. Spiller
1	2	807 KAR 5:001	The original and 10 copies of application plus copy for anyone named as interested party.	Amy B. Spiller
1	3	Section 7(1) 807 KAR 5:001	(a) Amount and kinds of stock authorized.	Thomas J. Heath, Jr.
1	3	807 KAR 5:001	 (a) Amount and kinds of stock authorized. (b) Amount and kinds of stock issued and outstanding. (c) Terms of preference of preferred stock whether cumulative or participating, or on dividends or assets or otherwise. (d) Brief description of each mortgage on property of applicant, giving date of execution, name of mortgagor, name of mortgagee, or trustee, amount of indebtedness authorized to be secured thereby, and the amount of indebtedness actually secured, together with any sinking fund provisions. (e) Amount of bonds authorized, and amount issued, giving the name of the public utility which issued the same, describing each class separately, and giving date of issue, face value, rate of interest, date of maturity and how secured, together with amount of interest paid thereon during the last fiscal year. (f) Each note outstanding, giving date of issue, amount, date of maturity, rate of interest, in whose favor, together with amount of interest paid thereon during the last fiscal year. (g) Other indebtedness, giving same by classes and describing security, if any, with a brief statement of the devolution or assumption of any portion of such indebtedness upon or by person or corporation if the original liability has been transferred, together with amount of interest paid thereon during the last fiscal year. (h) Rate and amount of dividends paid during the five (5) previous fiscal years, and the amount of capital stock on which dividends were paid each year. (i) Detailed income statement and balance sheet. 	Amy B. Spiller
	<u> </u>	Section 14(1)	address of applicant and reference to the particular provision of law requiring PSC approval.	A D. 0
1	5	807 KAR 5:001 Section 14(2)	If a corporation, the applicant shall identify in the application the state in which it is incorporated and the date of its incorporation, attest that it is currently in good standing in the state in which it is incorporated, and, if it is not a Kentucky corporation, state if it is authorized to transact business in Kentucky.	Amy B. Spiller

1	6	807 KAR 5:001 Section 14(3)	If a limited liability company, the applicant shall identify in the application the state in which it is organized and the date on which it was organized, attest that it is in good standing in the state in which it is organized, and, if it is not a Kentucky limited liability company, state if it is authorized to transact business in Kentucky.	Amy B. Spiller
1	7	807 KAR 5:001 Section 14(4).	If the applicant is a limited partnership, a certified copy of its limited partnership agreement and all amendments, if any, shall be annexed to the application, or a written statement attesting that its partnership agreement and all amendments have been filed with the commission in a prior proceeding and referencing the case number of the prior proceeding.	Amy B. Spiller
.1	8	807 KAR 5:001 Section 16 (1)(b)(1)	Reason adjustment is required.	Amy B. Spiller Sarah E. Lawler
1	9	807 KAR 5:001 Section 16 (1)(b)(2)	Certified copy of certificate of assumed name required by KRS 365.015 or statement that certificate not necessary.	Amy B. Spiller
1	10	807 KAR 5:001 Section 16 (1)(b)(3)	New or revised tariff sheets, if applicable in a format that complies with 807 KAR 5:011 with an effective date not less than thirty (30) days from the date the application is filed	Bruce L. Sailers
1	11	807 KAR 5:001 Section 16 (1)(b)(4)	Proposed tariff changes shown by present and proposed tariffs in comparative form or by indicating additions in italics or by underscoring and striking over deletions in current tariff.	Bruce L. Sailers
1	12	807 KAR 5:001 Section 16 (1)(b)(5)	A statement that notice has been given in compliance with Section 17 of this administrative regulation with a copy of the notice.	Amy B. Spiller
1	13	807 KAR 5:001 Section 16(2)	If gross annual revenues exceed \$5,000,000, written notice of intent filed at least 30 days, but not more than 60 days prior to application. Notice shall state whether application will be supported by historical or fully forecasted test period.	Amy B. Spiller
1	14	807 KAR 5:001 Section 16(3)	Notice given pursuant to Section 17 of this administrative regulation shall satisfy the requirements of 807 KAR 5:051, Section 2.	Amy B. Spiller
1	15	807 KAR 5:001 Section 16(6)(a)	The financial data for the forecasted period shall be presented in the form of pro forma adjustments to the base period.	Grady "Tripp" S. Carpenter
1	16	807 KAR 5:001 Section 16(6)(b)	Forecasted adjustments shall be limited to the twelve (12) months immediately following the suspension period.	Lisa D. Steinkuhl Grady "Tripp" S. Carpenter Sharif S. Mitchell Jacob S. Colley
1	17	807 KAR 5:001 Section 16(6)(c)	Capitalization and net investment rate base shall be based on a thirteen (13) month average for the forecasted period.	Lisa D. Steinkuhl
1	18	807 KAR 5:001 Section 16(6)(d)	After an application based on a forecasted test period is filed, there shall be no revisions to the forecast, except for the correction of mathematical errors, unless the revisions reflect statutory or regulatory enactments that could not, with reasonable diligence, have been included in the forecast on the date it was filed. There shall be no revisions filed within thirty (30) days of a scheduled hearing on the rate application.	Grady "Tripp" S. Carpenter

1	19	807 KAR 5:001 Section 16(6)(e)	The commission may require the utility to prepare an alternative forecast based on a reasonable	Grady "Tripp" S. Carpenter
			number of changes in the variables, assumptions, and other factors used as the basis for the utility's forecast.	
1	20	807 KAR 5:001 Section 16(6)(f)	The utility shall provide a reconciliation of the rate base and capital used to determine its revenue requirements.	Lisa D. Steinkuhl
1	21	807 KAR 5:001 Section 16(7)(a)	Prepared testimony of each witness supporting its application including testimony from chief officer in charge of Kentucky operations on the existing programs to achieve improvements in efficiency and productivity, including an explanation of the purpose of the program.	All Witnesses
1	22	807 KAR 5:001 Section 16(7)(b)	Most recent capital construction budget containing at minimum 3 year forecast of construction expenditures.	Grady "Tripp" S. Carpenter William C. Luke Marc W. Arnold
1	23	807 KAR 5:001 Section 16(7)(c)	Complete description, which may be in prefiled testimony form, of all factors used to prepare forecast period. All econometric models, variables, assumptions, escalation factors, contingency provisions, and changes in activity levels shall be quantified, explained, and properly supported.	Grady "Tripp" S. Carpenter
1	24	807 KAR 5:001 Section 16(7)(d)	Annual and monthly budget for the 12 months preceding filing date, base period and forecasted period.	Grady "Tripp" S. Carpente
1	25	807 KAR 5:001 Section 16(7)(e)	 Attestation signed by utility's chief officer in charge of Kentucky operations providing: 1. That forecast is reasonable, reliable, made in good faith and that all basic assumptions used have been identified and justified; and 2. That forecast contains same assumptions and methodologies used in forecast prepared for use by management, or an identification and explanation for any differences; and 3. That productivity and efficiency gains are included in the forecast. 	Amy B. Spiller
1	26	807 KAR 5:001 Section 16(7)(f)	 For each major construction project constituting 5% or more of annual construction budget within 3 year forecast, following information shall be filed: 1. Date project began or estimated starting date; 2. Estimated completion date; 3. Total estimated cost of construction by year exclusive and inclusive of Allowance for Funds Used During construction ("AFUDC") or Interest During construction Credit; and 4. Most recent available total costs incurred exclusive and inclusive of AFUDC or Interest During Construction Credit. 	Grady "Tripp" S. Carpente William C. Luke Marc W. Arnold
1	27	807 KAR 5:001 Section 16(7)(g)	For all construction projects constituting less than 5% of annual construction budget within 3 year forecast, file aggregate of information requested in paragraph (f) 3 and 4 of this subsection.	Grady "Tripp" S. Carpente William C. Luke Marc W. Arnold

1	28	807 KAR 5:001	Financial forecast for each of 3 forecasted years	Grady "Tripp" S. Carpenter
,	2,0	Section $16(7)(h)$	included in capital construction budget supported	John D. Swez
			by underlying assumptions made in projecting	Ibrar A. Khera
			results of operations and including the following	
			information:	
			1. Operating income statement (exclusive of	
			dividends per share or earnings per share);	
			2. Balance sheet;	
			3. Statement of cash flows;	
			4. Revenue requirements necessary to support the	
			forecasted rate of return:	
			5. Load forecast including energy and demand	
			(electric);	
			6. Access line forecast (telephone);	
			7. Mix of generation (electric);	
			8. Mix of gas supply (gas);	
			9. Employee level;	
			10.Labor cost changes;	
			I1.Capital structure requirements;	
			12.Rate base;	
			13.Gallons of water projected to be sold (water);	
			14.Customer forecast (gas, water);	
			15.MCF sales forecasts (gas);	
			16.Toll and access forecast of number of calls and	
			number of minutes (telephone); and	
			17.A detailed explanation of any other information	
		000 1110 4 001	provided.	
1	29	807 KAR 5:001	Most recent FERC or FCC audit reports.	Danielle L. Weatherston
1	30	Section 16(7)(i) 807 KAR 5:001	Prospectuses of most recent stock or bond	Thomas I Heath In
1	50	Section 16(7)(j)	offerings.	Thomas J. Heath, Jr.
1	31	807 KAR 5:001	Most recent FERC Form 1 (electric), FERC Form	Danielle L. Weatherston
L		Section 16(7)(k)	2 (gas), or PSC Form T (telephone).	Damene E. Weatherston
2	32	807 KAR 5:001	Annual report to shareholders or members and	Thomas J. Heath, Jr.
2	52	Section 16(7)(l)	statistical supplements for the most recent 2 years	inotitus s. mouni, sr.
			prior to application filing date.	
3	33	807 KAR 5:001	Current chart of accounts if more detailed than	Danielle L. Weatherston
2		Section $16(7)(m)$	Uniform System of Accounts charts,	
3	34	807 KAR 5:001	Latest 12 months of the monthly managerial	Danielle L. Weatherston
.0	<u> </u>	Section 16(7)(n)	reports providing financial results of operations in	
			comparison to forecast.	
3	35	807 KAR 5:001	Complete monthly budget variance reports, with	Danielle L. Weatherston
		Section 16(7)(0)	narrative explanations, for the 12 months prior to	Grady "Tripp" S. Carpenter
			base period, each month of base period, and	
			subsequent months, as available.	
3-9	36	807 KAR 5:001	SEC's annual report for most recent 2 years, Form	Danielle L. Weatherston
		Section 16(7)(p)	10-Ks and any Form 8-Ks issued during prior 2	
			years and any Form 10-Qs issued during past 6	
			quarters.	
9	37	807 KAR 5:001	Independent auditor's annual opinion report, with	Danielle L. Weatherston
		Section 16(7)(q)	any written communication which indicates the	
			existence of a material weakness in internal	
			controls.	
9	38	807 KAR 5:001	Quarterly reports to the stockholders for the most	Thomas J. Heath, Jr.
		Section $16(7)(r)$	recent 5 quarters.	1

9	39	807 KAR 5:001	Summary of latest depreciation study with	John J. Spanos
		Section 16(7)(s)	schedules itemized by major plant accounts, except that telecommunications utilities adopting PSC's average depreciation rates shall identify current and base period depreciation rates used by major plant accounts. If information has been filed in another PSC case, refer to that case's	
9	40	807 KAR 5:001	number and style. List all commercial or in-house computer	Lisa D. Steinkuhl
2	40	Section 16(7)(t)	software, programs, and models used to develop schedules and work papers associated with application. Include each software, program, or model; its use; identify the supplier of each; briefly describe software, program, or model; specifications for computer hardware and operating system required to run program	Lisa D. Stellikulli
9	41	807 KAR 5:001 Section 16(7)(u)	 If utility had any amounts charged or allocated to it by affiliate or general or home office or paid any monies to affiliate or general or home office during the base period or during previous 3 calendar years, file: 1. Detailed description of method of calculation and amounts allocated or charged to utility by affiliate or general or home office for each allocation or payment; 2. method and amounts allocated during base period and method and estimated amounts to be allocated during forecasted test period; 3. Explain how allocator for both base and forecasted test period was determined; and 4. All facts relied upon, including other regulatory approval, to demonstrate that each amount charged, allocated or paid during base period is reasonable. 	Rebekah E. Buck
10	42	807 KAR 5:001 Section 16(7)(v)	If gas, electric or water utility with annual gross revenues greater than \$5,000,000, cost of service study based on methodology generally accepted in industry and based on current and reliable data from single time period.	James E. Ziolkowski
10	43	807 KAR 5:001 Section 16(7)(w)	 Local exchange carriers with fewer than 50,000 access lines need not file cost of service studies, except as specifically directed by PSC. Local exchange carriers with more than 50,000 access lines shall file: 1. Jurisdictional separations study consistent with Part 36 of the FCC's rules and regulations; and 2. Service specific cost studies supporting pricing of services generating annual revenue greater than \$1,000,000 except local exchange access: a. Based on current and reliable data from single time period; and b. Using generally recognized fully allocated, embedded, or incremental cost principles. 	N/A
10	44	807 KAR 5:001 Section 16(8)(a)	Jurisdictional financial summary for both base and forecasted periods detailing how utility derived amount of requested revenue increase.	Lisa D. Steinkuhl

10	45	807 KAR 5:001	Jurisdictional rate base summary for both base and	Lisa D. Steinkuhl
10	43	Section 16(8)(b)	forecasted periods with supporting schedules which include detailed analyses of each component of the rate base.	Sharif S. Mitchell Grady "Tripp" S. Carpenter John R. Panizza James E. Ziolkowski
				Danielle L. Weatherston
10	46	807 KAR 5:001 Section 16(8)(c)	Jurisdictional operating income summary for both base and forecasted periods with supporting schedules which provide breakdowns by major account group and by individual account.	Lisa D. Steinkuhl
10	47	807 KAR 5:001 Section 16(8)(d)	Summary of jurisdictional adjustments to operating income by major account with supporting schedules for individual adjustments and jurisdictional factors.	Lisa D. Steinkuhl Sharif S. Mitchell Grady "Tripp" S. Carpenter Jacob S. Colley James E. Ziolkowski
10	48	807 KAR 5:001 Section 16(8)(e)	Jurisdictional federal and state income tax summary for both base and forecasted periods with all supporting schedules of the various components of jurisdictional income taxes.	John R. Panizza
10	49	807 KAR 5:001 Section 16(8)(f)	Summary schedules for both base and forecasted periods (utility may also provide summary segregating items it proposes to recover in rates) of organization membership dues; initiation fees; expenditures for country club; charitable contributions; marketing, sales, and advertising; professional services; civic and political activities; employee parties and outings; employee gifts; and rate cases.	Lisa D. Steinkuhl
10	50	807 KAR 5:001 Section 16(8)(g)	Analyses of payroll costs including schedules for wages and salaries, employee benefits, payroll taxes, straight time and overtime hours, and executive compensation by title.	Lisa D. Steinkuhl Shannon A, Caldwell
10	51	807 KAR 5:001 Section 16(8)(h)	Computation of gross revenue conversion factor for forecasted period.	Lisa D. Steinkuhl
10	52	807 KAR 5:001 Section 16(8)(i)	Comparative income statements (exclusive of dividends per share or earnings per share), revenue statistics and sales statistics for 5 calendar years prior to application filing date, base period, forecasted period, and 2 calendar years beyond forecast period.	Danielle L. Weatherston Grady "Tripp" S. Carpenter
10	53	807 KAR 5:001 Section 16(8)(j)	Cost of capital summary for both base and forecasted periods with supporting schedules providing details on each component of the capital structure.	Thomas J. Heath, Jr.
10	54	807 KAR 5:001 Section 16(8)(k)	Comparative financial data and earnings measures for the 10 most recent calendar years, base period, and forecast period.	Sharif S. Mitchell Grady "Tripp" S. Carpenter Thomas J. Heath, Jr. Danielle L. Weatherston
10	5.5	807 KAR 5:001 Section 16(8)(1)	Narrative description and explanation of all proposed tariff changes.	Bruce L. Sailers
10	56	807 KAR 5:001 Section 16(8)(m)	Revenue summary for both base and forecasted periods with supporting schedules which provide detailed billing analyses for all customer classes.	Bruce L. Sailers
10	57	807 KAR 5:001 Section 16(8)(n)	Typical bill comparison under present and proposed rates for all customer classes.	Bruce L. Sailers
10	58	807 KAR 5:001 Section 16(9)	The commission shall notify the applicant of any deficiencies in the application within thirty (30) days of the application's submission. An application shall not be accepted for filing until the utility has cured all noted deficiencies.	Sarah E. Lawler

10	59	807 KAR 5:001 Section 16(10)	Request for waivers from the requirements of this section shall include the specific reasons for the request. The commission shall grant the request upon good cause shown by the utility.	Legal
10	60	807 KAR 5:001 Section (17)(1)	 (1) Public postings. (a) A utility shall post at its place of business a copy of the notice no later than the date the application is submitted to the commission. (b) A utility that maintains a Web site shall, within five (5) business days of the date the application is submitted to the commission, post on its Web sites: A copy of the public notice; and A hyperlink to the location on the commission's Web site where the case documents are available. (c) The information required in paragraphs (a) and (b) of this subsection shall not be removed until the commission issues a final decision on the application. 	Amy B. Spiller
10	61	807 KAR 5:001 Section 17(2)	 (2) Customer Notice. (a) If a utility has twenty (20) or fewer customers, the utility shall mail a written notice to each customer no later than the date on which the application is submitted to the commission. (b) If a utility has more than twenty (20) customers, it shall provide notice by: Including notice with customer bills mailed no later than the date the application is submitted to the commission; Mailing a written notice to each customer no later than the date the application is submitted to the commission; Publishing notice once a week for three (3) consecutive weeks in a prominent manner in a newspaper of general circulation in the utility's service area, the first publication to be made no later than the date the application is submitted to the commission; or Publishing notice in a trade publication or newsletter delivered to all customers no later than the date the application is submitted to the commission; or Publishing notice in a trade publication or newsletter delivered to all customers no later than the date the application is submitted to the commission. (c) A utility that provides service in more than one (1) county may use a combination of the notice methods listed in paragraph (b) of this 	Amy B. Spiller

10	62	807 KAR 5:001	(3) Proof of Notice. A utility shall file with the	Amy B. Spiller
	02	Section 17(3)	commission no later than forty-five (45) days from	
			the date the application was initially submitted to	
			the commission:	
			(a) If notice is mailed to its customers, an	
			affidavit from an authorized representative of the	
			utility verifying the contents of the notice, that	
			notice was mailed to all customers, and the date of	
			the mailing;	
			(b) If notice is published in a newspaper of	
			general circulation in the utility's service area, an	
			affidavit from the publisher verifying the contents	
			of the notice, that the notice was published, and	
	ļ		the dates of the notice's publication; or	
			(c) If notice is published in a trade publication	
			or newsletter delivered to all customers, an	
			affidavit from an authorized representative of the	
			utility verifying the contents of the notice, the	
			mailing of the trade publication or newsletter, that	
			notice was included in the publication or	
			newsletter, and the date of mailing.	

10	63	807 KAR 5:001	(4) Notice Content. Each notice issued in accordance	Bruce L. Sailers
		Section 17(4)	with this section shall contain:	
		,	(a) The proposed effective date and the date the	
			proposed rates are expected to be filed with the	
			commission;	
			(b) The present rates and proposed rates for each	
	ļ		customer classification to which the proposed rates	
			will apply;	
			(c) The amount of the change requested in both	
			dollar amounts and percentage change for each	
			customer classification to which the proposed rates	
			(d) The encount of the evenes wants and the	
			(d) The amount of the average usage and the effect upon the average bill for each customer	
			classification to which the proposed rates will apply,	
			except for local exchange companies, which shall	
			include the effect upon the average bill for each	
			customer classification for the proposed rate change	
			in basic local service;	
			(e) A statement that a person may examine this	
			application at the offices of (utility name) located at	
	ĺ		(utility address);	
			(f) A statement that a person may examine this	
			application at the commission's offices located at 211	
	1		Sower Boulevard, Frankfort, Kentucky, Monday	
			through Friday, 8:00 a.m. to 4:30 p.m., or through the	
			commission's Web site at http://psc.ky.gov;	
			(g) A statement that comments regarding the	
			application may be submitted to the Public Service	
			Commission through its Web site or by mail to Public	
			Service Commission, Post Office Box 615, Frankfort,	
			Kentucky 40602;	
			(h) A statement that the rates contained in this	
			notice are the rates proposed by (utility name) but	
			that the Public Service Commission may order rates	
			to be charged that differ from the proposed rates	
			contained in this notice;	
			(i) A statement that a person may submit a timely	
			written request for intervention to the Public Service	
			Commission, Post Office Box 615, Frankfort,	
			Kentucky 40602, establishing the grounds for the request including the status and interest of the party;	
			and (j) A statement that if the commission does not	
1			receive a written request for intervention within thirty	
			(30) days of initial publication or mailing of the	
			notice, the commission may take final action on the	
			application.	
10	64	807 KAR 5:001	(5) Abbreviated form of notice. Upon written	N/A
		Section 17(5)	request, the commission may grant a utility	
			permission to use an abbreviated form of	
			published notice of the proposed rates, provided	
			the notice includes a coupon that may be used to	
			obtain all the required information.	

11	-	807 KAR 5:001 Section 16(8)(a) through (k)	Schedule Book (Schedules A-K)	Various
12	-	807 KAR 5:001 Section 16(8)(l) through (n)	Schedule Book (Schedules L-N)	Bruce L. Sailers
13	-	.	Work Papers	Various
14	-	807 KAR 5:001 Section 16(7)(a)	Testimony (Volume 1 of 4)	Various
15	-	807 KAR 5:001 Section 16(7)(a)	Testimony (Volume 2 of 4)	Various
16		807 KAR 5:001 Section 16(7)(a)	Testimony (Volume 3 of 4)	Various
17	-	807 KAR 5:001 Section 16(7)(a)	Testimony (Volume 4 of 4)	Various
18-19	-	KRS 278.2205(6)	Cost Allocation Manual	Legal

TESTIMONY

VOLUME 4 OF 4

JOHN J. SPANOS LISA D. STEINKUHL JOHN D. SWEZ DANIELLE L. WEATHERSTON JAMES E. ZIOLKOWSKI

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF DUKE) ENERGY KENTUCKY, INC., FOR: 1) AN) ADJUSTMENT OF THE ELECTRIC RATES; 2)) CASE NO. APPROVAL OF NEW TARIFFS; 3) APPROVAL) 2024-00354 OF ACCOUNTING PRACTICES TO ESTABLISH) REGULATORY ASSETS AND LIABILITIES;) AND 4) ALL OTHER REQUIRED APPROVALS) AND RELIEF.

DIRECT TESTIMONY OF

JOHN J. SPANOS

ON BEHALF OF

DUKE ENERGY KENTUCKY

December 2, 2024

TABLE OF CONTENTS

PAGE

I.	INTRODUCTION	1
II.	DISCUSSION	2
III.	CONCLUSION	24

ATTACHMENTS:

Appendix A	John J. Spanos' Depreciation Experience
Attachment JJS-1	Depreciation Study

I. <u>INTRODUCTION</u>

1 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.

4 Q. ARE YOU ASSOCIATED WITH ANY FIRM?

5 A. Yes. I am associated with the firm of Gannett Fleming Valuation and Rate
6 Consultants, LLC (Gannett Fleming).

7 Q. HOW LONG HAVE YOU BEEN ASSOCIATED WITH GANNETT

- 8 FLEMING?
- 9 A. I have been associated with the firm since June 1986.

10 Q. WHAT IS YOUR POSITION WITH THE FIRM?

11 A. I am President.

12 Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?

A. I am testifying on behalf of Duke Energy Kentucky, Inc. (Duke Energy Kentucky
or the Company).

15 Q. PLEASE STATE YOUR QUALIFICATIONS.

A. I have over 38 years of depreciation experience, which includes giving expert testimony in more than 480 cases before 46 regulatory commissions in the United States and Canada, including this Commission. The cases include depreciation studies in the electric, gas, water, wastewater, and pipeline industries. In addition to the cases where I have submitted testimony, I have supervised over 900 other depreciation or valuation assignments. Please refer to Appendix A for additional information on my qualifications, which includes further information with respect to my work history, case experience, and my leadership in the Society of
 Depreciation Professionals.

3 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS 4 PROCEEDING?

A. My testimony will support and explain the depreciation study conducted under my
direction and supervision for the electric and common utility plant of Duke Energy
Kentucky, which was prepared in satisfaction of Filing Requirement (FR) 16(7)(s).
The study represents all electric and common plant assets.

II. <u>DEPRECIATION STUDY</u>

9 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 are known to be in current operation, 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, obsolescence, changes in the art, changes in demand and the requirements of public authorities.
- 17 Q. PLEASE IDENTIFY ATTACHMENT JJS-1.
- A. Attachment JJS-1 is a report entitled, "2023 Depreciation Study Calculated
 Annual Depreciation Accruals Related to Electric and Common Plant as of
 December 31, 2023." This report sets forth the results of my depreciation study for
 Duke Energy Kentucky (Depreciation Study).

Q. IS ATTACHMENT JJS-1 A TRUE AND ACCURATE COPY OF YOUR DEPRECIATION STUDY?

3 A. Yes.

4 Q. DOES ATTACHMENT JJS-1 ACCURATELY PORTRAY THE RESULTS 5 OF YOUR DEPRECIATION STUDY AS OF DECEMBER 31, 2023?

6 A. Yes.

7 Q. WHAT WAS THE PURPOSE OF YOUR DEPRECIATION STUDY?

A. The purpose of the Depreciation Study was to estimate the annual depreciation
 accruals related to electric and common plant in service for ratemaking purposes
 and determine appropriate average service lives and net salvage percents for each
 plant account.

12 Q. PLEASE DESCRIBE THE CONTENTS OF YOUR REPORT.

A. The Depreciation Study is presented in nine parts. Part I, Introduction, presents the 13 14 scope and basis for the Depreciation Study. Part II, Estimation of Survivor Curves, includes descriptions of the methodology of estimating survivor curves. Parts III 15 and IV set forth the analysis for determining service life and net salvage estimates. 16 17 Part V, Calculation of Annual and Accrued Depreciation, includes the concepts of depreciation and amortization using the remaining life. Part VI, Results of Study, 18 19 presents a description of the results of my analysis and a summary of the 20 depreciation calculations. Parts VII, VIII and IX include graphs and tables that relate to the service life and net salvage analyses, and the detailed depreciation 21 22 calculations by account.

1		The Depreciation Study also includes several tables and tabulations of data
2		and calculations. Table 1 on pages VI-4 through VI-6 of the Depreciation Study
3		presents the estimated survivor curve, the net salvage percent, the original cost as
4		of December 31, 2023, the book depreciation reserve, and the calculated annual
5		depreciation accrual and rate for each account or subaccount. The section
6		beginning on page VII-2 presents the results of the retirement rate analyses
7		prepared as the historical bases for the service life estimates. The section beginning
8		on page VIII-2 presents the results of the net salvage analysis. The section
9		beginning on page IX-2 presents the depreciation calculations related to surviving
10		original cost as of December 31, 2023.
11	Q.	PLEASE EXPLAIN HOW YOU PERFORMED YOUR DEPRECIATION
12		STUDY.
13		
-	A.	I used the straight line remaining life method of depreciation, with the average
14	А.	I used the straight line remaining life method of depreciation, with the average service life procedure for all plant assets except some general plant accounts. The
	А.	
14	А.	service life procedure for all plant assets except some general plant accounts. The
14 15	А.	service life procedure for all plant assets except some general plant accounts. The annual depreciation is based on a method of depreciation accounting that seeks to
14 15 16	Α.	service life procedure for all plant assets except some general plant accounts. 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
14 15 16 17	Α.	service life procedure for all plant assets except some general plant accounts. 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 rational manner.
14 15 16 17 18	А.	service life procedure for all plant assets except some general plant accounts. 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 rational manner. For Common Plant Accounts 191.00, 191.10, 194.00, 197.00, and 198.00
14 15 16 17 18 19	Α.	service life procedure for all plant assets except some general plant accounts. 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 rational manner. For Common Plant Accounts 191.00, 191.10, 194.00, 197.00, and 198.00 and for Electric General Plant Accounts 391.00, 391.10, 394.00 and 397.00, I used
14 15 16 17 18 19 20	Α.	service life procedure for all plant assets except some general plant accounts. 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 rational manner. For Common Plant Accounts 191.00, 191.10, 194.00, 197.00, and 198.00 and for Electric General Plant Accounts 391.00, 391.10, 394.00 and 397.00, I used the straight line remaining life method of amortization. The annual amortization is

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.

8 Q. PLEASE DESCRIBE THE FIRST PHASE OF THE DEPRECIATION
9 STUDY, IN WHICH YOU ESTIMATED THE SERVICE LIFE AND NET
10 SALVAGE CHARACTERISTICS FOR EACH DEPRECIABLE GROUP.

A. The service life and net salvage study consisted of compiling historical data from records related to Duke Energy Kentucky's plant; analyzing this data to obtain historical trends of survivor and net salvage characteristics; obtaining supplementary information from Duke Energy Kentucky's 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.

18 Q. WHAT HISTORICAL DATA DID YOU ANALYZE FOR THE PURPOSE

19

OF ESTIMATING SERVICE LIFE CHARACTERISTICS?

A. For generation accounts, I analyzed the Company's accounting entries that record plant transactions during the period 1956 through 2023. For transmission, distribution, and general plant accounts, the accounting entries for the period 1956 through 2021 were utilized in the prior study and that analysis was maintained. The

transactions included additions, retirements, transfers, and the related balances. 1 The Company records also included surviving dollar value by year installed for 2 each plant account as of December 31, 2023. 3 0. WHAT METHOD DID YOU USE TO ANALYZE THESE SERVICE LIFE 4 **DATA?** 5 6 A. I used the retirement rate method. This is the most appropriate method when aged 7 retirement data are available, because this method determines the average rates of retirement actually experienced by the Company during the period of time covered 8 9 by the study. PLEASE DESCRIBE HOW YOU USED THE RETIREMENT RATE 10 **Q**. METHOD TO ANALYZE DUKE ENERGY KENTUCKY'S SERVICE LIFE 11 DATA. 12 A. I applied the retirement rate method to each different group of property in the study. 13 14 For each property group, I used the retirement rate method to form a life table which, when plotted, shows an original survivor curve for that property group. 15 Each original survivor curve represents the average survivor pattern experienced 16 17 by the several vintage groups during the experience band studied. The survivor patterns do not necessarily describe the life characteristics of the property group; 18 19 therefore, interpretation of the original survivor curves is required in order to use 20 them as valid considerations in estimating service life. The Iowa-type survivor 21 curves were used to perform these interpretations.

JOHN J. SPANOS DIRECT

6

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 generalized 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 56-R2 indicates an average service life of 56 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 0.5 to 5).

20 Q. WHAT APPROACH DID YOU USE TO ESTIMATE THE LIVES OF 21 SIGNIFICANT PRODUCTION FACILITIES?

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 1 survivor curves and estimated probable retirement dates. The interim survivor 2 3 curve describes the rate of retirement related to the replacement of elements of the facility, such as, for a power plant, the retirement of assets such as pumps, motors 4 and piping that occur during the life of the facility. The probable retirement date 5 provides the rate of final retirement for all installations at the facility by truncating 6 the interim survivor curve for each installation year at its attained age at the date of 7 probable retirement. The use of interim survivor curves truncated at the date of 8 probable retirement provides a consistent method for estimating the lives of 9 installations for a particular facility inasmuch as a single concurrent retirement for 10 all years of installation will occur when it is retired. 11

Q. IS THIS APPROACH WIDELY ACCEPTED FOR ESTIMATING THE SERVICE LIVES OF PRODUCTION FACILITIES?

A. Yes. The life span technique has been used previously for Duke Energy Kentucky.
 My firm has also used the life span technique in performing depreciation studies
 presented to many other public utility commissions across the United States and
 Canada.

18 Q. HOW ARE THE LIFE SPANS ESTIMATED FOR DUKE ENERGY 19 KENTUCKY'S PRODUCTION FACILITIES?

A. The life span estimates are based on informed judgment that incorporates factors for each facility such as the technology of the facility, management plans and outlook for the facility, and the estimates for similar facilities for other utilities.

JOHN J. SPANOS DIRECT

Q. HAVE ANY LIFE SPAN ESTIMATES CHANGED SINCE THE LAST STUDY WAS CONDUCTED?

A. Yes. The life span for East Bend has changed to 2038. This date is different than
the 2035 date proposed in the last depreciation study. The life span for Woodsdale
units was maintained at the currently approved 2040 date. There were also new
solar facilities added, and all life spans for solar locations are 30 years from the
initial year of major installation.

8 Q. ARE THE NEW LIFE SPANS REASONABLE?

9 A. Yes. The new life span for East Bend is 57 years. The 48-year Woodsdale life span is on the long end compared to similar units but still reasonable for this facility. 10 The most common range of life spans for steam production facilities had been 55 11 to 65 years; however, in recent years, originally proposed life spans have been 12 shortened due to unit efficiencies and environmental regulations. The industry 13 14 average of similar units in recent years has been 46 years. For combustion turbines, the most common period for life spans has been 40 years; however, recently some 15 similar life spans have been lengthened in order to meet capacity requirements due 16 17 to steam retirements. The solar facilities have a life span of 30 years which is longer than early vintage solar but has been common for the most recent installations. 18 19 Consequently, all of these life spans are on the longer end but still reasonable.

20 Q. ARE THE NEW LIFE SPANS CONSISTENT WITH COMPANY PLANS?

A. Yes. While this Depreciation Study was being conducted, Duke Energy Kentucky
 personnel identified the Company's expected retirement date for these facilities.

Q. ARE THE FACTORS CONSIDERED IN YOUR ESTIMATES OF SERVICE LIFE AND NET SALVAGE PERCENTS PRESENTED IN ATTACHMENT JJS-1?

A. Yes. A discussion of the factors considered in the estimation of service lives and
net salvage percents are presented in Part III and Part IV of Attachment JJS-1. The
estimates of service lives and net salvage percentages for transmission, distribution
and general plant accounts were not updated in this study. The parameters for these
asset classes were maintained from the last case. The generation accounts were
updated as there were expected changes in life estimation.

10 Q. HAVE YOU PHYSICALLY OBSERVED DUKE ENERGY KENTUCKY'S 11 PLANT AND EQUIPMENT AS PART OF YOUR DEPRECIATION 12 STUDIES?

A. The field review made of Duke Energy Kentucky's property during 13 Yes. 14 November 2022 to observe representative portions of plant. As this was a recent visit, an additional field review was not necessary for this Depreciation Study. 15 Additionally, I have conducted field visits in prior studies since 1990 with the most 16 17 recent trip prior to the November 2022 trip being in January 2017. Field reviews are conducted to become familiar with Company operations and obtain an 18 19 understanding of the function of the plant and information with respect to the 20 reasons for past retirements and the expected future causes of retirements. This 21 knowledge was incorporated in the interpretation and extrapolation of the statistical 22 analyses.

1 Q. WOULD YOU PLEASE EXPLAIN THE CONCEPT OF "NET SALVAGE"?

A. Net salvage is a component of the service value of capital assets that is recovered
through depreciation rates. The service value of an asset is its original cost less its
net salvage. Net salvage is the gross salvage value received for the asset upon
retirement less the cost to retire the asset. When the cost to retire exceeds the gross
salvage value, the result is negative net salvage.

Inasmuch as depreciation expense is the loss in service value of an asset during a defined period, e.g., one year, it must include a ratable portion of both the original cost and the net salvage. That is, the net salvage related to an asset should be incorporated in the cost of service during the same period as its original cost so that customers receiving service from the asset pay rates that include a portion of both elements of the asset's service value, the original cost, and the net salvage value.

For example, the full recovery of the service value of a \$3,000 line transformer will include not only the \$3,000 of original cost, but also, on average, \$500 to remove the line transformer at the end of its life and \$50 in salvage value. In this example, the net salvage component is negative \$450 (\$50 - \$500), and the net salvage percent is negative 15% ((\$50 - \$500)/\$3,000).

19 Q. PLEASE DESCRIBE HOW YOU ESTIMATED NET SALVAGE 20 PERCENTAGES.

A. The net salvage percentages estimated in the Depreciation Study were based on informed judgment that incorporated factors such as the statistical analyses of historical net salvage data; information provided to me by the Company's operating

personnel, general knowledge and experience of the industry practices; and trends 1 in the industry in general. The statistical net salvage analyses incorporates the 2 3 Company's actual historical data for the period 1990 through 2023 for generation accounts, and considers the cost of removal and gross salvage ratios to the 4 associated retirements during the 34-year period. Trends of these data are also 5 measured based on three-year moving averages and the most recent five-year 6 indications. The analysis performed in the last study for transmission, distribution, 7 and general plant accounts through 2021 was maintained. 8

9

10

Q. WERE THE NET SALVAGE PERCENTAGES FOR GENERATING FACILITIES BASED ON THE SAME ANALYSES?

Yes, for the interim net salvage estimates. The net salvage percentages for 11 A. generating facilities were based on two components, the interim net salvage 12 percentage, and the final net salvage percentage. The interim net salvage 13 14 percentage is determined based on the historical indications from the period 1990 to 2023 of the cost of removal and gross salvage amounts as a percentage of the 15 16 associated plant retired. The final net salvage or dismantlement component was 17 determined based on the retirement activities associated with the assets anticipated to be retired at the concurrent date of final retirement. 18

19 Q. HAVE YOU INCLUDED A DISMANTLEMENT OR DECOMMISSIONING

20 COMPONENT INTO THE OVERALL RECOVERY OF GENERATING

- 21 FACILITIES?
- A. Yes. A dismantlement or decommissioning component has been included to the
 net salvage percentage for steam and other production facilities.

Q. CAN YOU EXPLAIN HOW THE FINAL NET SALVAGE COMPONENT IS INCLUDED IN THE DEPRECIATION STUDY?

3 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 4 Decommissioning Cost Study conducted by 1898 & Co. for Duke Energy 5 Kentucky, it was determined that the dismantlement or decommissioning costs for 6 steam and other production facilities is best calculated by dividing the 7 dismantlement cost by the surviving plant at final retirement. These amounts at a 8 location basis are weighted with the interim net salvage percentage of the assets 9 anticipated to be retired on an interim basis to produce an overall net salvage 10 11 percentage for each location. The detailed calculations of the overall, or weighted, net salvage for each location is set forth on pages VIII-2 and VIII-3 of the 12 Depreciation Study. 13

14 Q. WHAT IS THE BASIS OF THE DISMANTLEMENT OR 15 DECOMMISSIONING COST ESTIMATES?

The decommissioning cost estimates were developed from decommissioning 16 A. 17 studies of each generating site performed by 1898 & Co (previously known as Burns and McDonnell). These estimates are based on the cost to decommission the 18 19 facility which was updated in 2022. This component of net salvage was not 20 changed for this Depreciation Study. However, the costs to decommission power 21 plants has tended to increase over time (as have construction costs in general). For 22 this reason, in order to recover the full decommissioning costs for each site, these 23 costs need to be escalated to the time of retirement. The calculations of the

1		escalation of these costs have been provided in the table set forth on page VIII-3 of
2		the Depreciation Study.
3	Q.	HAVE THE COMPANY'S DEPRECIATION RATES PREVIOUSLY BEEN
4		APPROVED BY THE COMMISSION INCLUDING ESCALATION?
5	A.	Yes. Prior to the last case, the Company's terminal net salvage estimates included
6		escalation to the date of retirement and were developed in the same manner as
7		developed in this case. The Commission approved the Company's proposals with
8		regard to terminal net salvage:
9 10 11 12		The Commission finds Dukes Kentucky's recommendation on the treatment of terminal net salvage value in the computing the depreciation rates for generating units is reasonable in order to avoid intergenerational inequity and should be approved. ¹
13	Q.	WILL EXCLUSION OF AN ESCALATION COMPONENT WITHIN THE
14		ANNUAL ACCRUAL PROPERLY ALLOCATE THE COMPANY'S COSTS
15		OVER THE SERVICE LIVES OF THEIR GENERATING FACILITIES?
16	A.	No. The decommissioning study prepared by 1898 & Co. uses costs at current price
17		level. However, the Company's plants will be retired many years in the future. The
18		net salvage costs need to be escalated to the date of retirement to determine the
19		appropriate amounts to be recovered over the lives of the plants. Removing
20		escalation to the date of retirement from the decommissioning costs is insufficient
21		to fully recover the Company's costs or full service value of the facility. Separately

¹ In the Matter of Electronic Application of Duke Energy Kentucky, Inc. for: (1) an Adjustment of Electric Rates; (2) Approval of an Environmental Compliance Plan and Surcharge Mechanism; (3) Approval of New Tariffs; (4) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and (5) all Other Required Approvals and Tariffs, Case No. 2017-00321, Order, p. 27 (April 13, 2018).

1		recovering these costs after retirement is also an insufficient means of recovery, as
2		I will explain later in my testimony, since it creates intergenerational inequity.
3	Q.	IS THE METHOD APPROVED IN THE LAST CASE BASED ON
4		ACCEPTED DEPRECIATION PRACTICES?
5	A.	No. It is widely accepted that depreciation should include future net salvage costs,
6		which are recovered on a straight line basis, and that those costs should be based
7		on the expected cost to retire the Company's assets at the time of retirement or
8		removal. This applies not only to decommissioning costs but to the costs of all plant
9		assets.
10	Q.	SHOULD NET SALVAGE BE BASED ON THE FUTURE COSTS
11		EXPECTED TO BE INCURRED, NOT ON TODAY'S COSTS?
12	A.	Yes. Because net salvage must be based on future costs, decommissioning costs
13		for net salvage must also be estimates of the future cost at the time of
14		decommissioning. For this reason, if decommissioning estimates are developed
15		using the cost to decommission a plant today, then these costs must be escalated to
16		the time period in which they are expected to be incurred to achieve adequate
17		recovery.
18	Q.	SHOULD NET SALVAGE BE RECOVERED IN TODAY'S COST (THAT IS,
19		THE COST IN TODAY'S DOLLARS)?
20	A.	No. In order to recover the service value of the Company's assets, net salvage must
21		be determined at the cost that will be incurred in the future. When using the straight
22		line method of depreciation, these costs are recovered ratably, or in equal amounts
23		each year, over the life of the Company's plant.

JOHN J. SPANOS DIRECT 15

1	Q.	IS RECOVERING THE FUTURE COST OF NET SALVAGE CONSISTENT
2		WITH THE FEDRAL ENERGY REGULATORY COMMISSION'S
3		UNIFORM SYSTEM OF ACCOUNTS (FERC USOA)?
4	A.	Yes. The FERC USOA specifically defines net salvage as follows:
5 6		19. Net salvage value means the salvage value of property retired less the cost of removal.
7		Cost of removal is defined as:
8 9 10 11 12 13 14		10. Cost of removal means the cost of demolishing, dismantling, tearing down or otherwise removing electric plant, including the cost of transportation and handling incidental thereto. It does not include the cost of removal activities associated with asset retirement obligations that are capitalized as part of the tangible long-lived assets that give rise to the obligation. (See General Instruction 25).
15		Finally, cost is defined as (emphasis added):
16 17 18 19 20 21		9. Cost means the <u>amount of money actually paid</u> for property or services. When the consideration given is other than cash in a purchase and sale transaction, as distinguished from a transaction involving the issuance of common stock in a merger or a pooling of interest, the value of such consideration shall be determined on a cash basis.
22		Read together, it should be clear from these definitions that the USOA specifies
23		cost of removal, as part of net salvage, must be recovered through depreciation
24		expense and is the actual amount paid at the time of the transaction. Because net
25		salvage will occur in the future, it is an estimate of the future cost that must be
26		included in depreciation rates.

1	Q.	DO GENERALLY ACCEPTED DEPRECIATION CONCEPTS SUPPORT
2		THE CONCEPT THAT THE NET SALVAGE IN DEPRECIATION
3		SHOULD BE INCLUDED AT THE COST THAT WILL BE INCURRED?
4	A.	Yes. Including the future cost of net salvage for plant accounts is consistent with
5		established depreciation concepts. Depreciation is a cost allocation concept, in
6		which the full cost of an asset (original cost less net salvage) is allocated on a
7		straight line basis over the period of time an asset will be in service.
8	Q.	DO ANY AUTHORITATIVE DEPRECIATION TEXTS SUPPORT THAT
9		THE NET SALVAGE AMOUNT SHOULD REPRESENT THE FUTURE
10		COST?
11	A.	Yes. Two preeminent depreciation texts are the National Association of Regulatory
12		Utility Commissioners' Public Utility Depreciation Practices (typically referred to
13		as "NARUC") and Depreciation Systems by Wolf and Fitch (Wolf and Fitch). Both
14		texts are clear that net salvage should be included in depreciation as a future cost.
15		NARUC states the following:
16		[U]nder presently accepted concepts, the amount of depreciation to
17 18		be accrued over the life of an asset is its original cost less net salvage. Net salvage is the difference between the gross salvage that
18		will be realized when the asset is disposed of and the cost of retiring
20		<u>it.</u> ² (Emphasis added)
21		NARUC also explains that:
22		The goal of accounting for net salvage is to allocate the net cost of
23		an asset to accounting periods, making due allowance for the net
24		salvage, positive or negative, that will be obtained when the asset is
25		retired. This concept carries with it the premise that property
26		ownership includes the responsibility for the property's ultimate
27		abandonment or removal. Hence, if users benefit from its use, they
28		should pay their pro rata share of the costs involved in the

²NARUC Manual at 18.

1 2 3		abandonment or removal of the property and also receive their pro rata share of the benefits of the proceeds received. ³ (Emphasis added)
4		Wolf and Fitch explain that:
5 6 7 8		The matching principle specifies that all cost incurred to produce a service should be matched against the revenue produced. Estimated future costs of retiring an asset currently in service must be accrued and allocated as part of the current expenses. ⁴
9	Q.	CAN YOU FURTHER DISCUSS WHY RECOVERING TERMINAL NET
10		SALVAGE FOR EAST BEND AT A LATER DATE (THAT IS, AFTER
11		RETIREMENT) CREATES INTERGENERATIONAL INEQUITY?
12	A.	Yes. First, as mentioned above, the terminal net salvage should be included in the
13		depreciation rate based on all authoritative guidance. Second, the development of
14		the weighted net salvage includes both interim and terminal net salvage which is
15		based on the plant in service forecasted to be in place up to the date of retirement.
16		Therefore, the amount that is equitably included in the depreciation rate is
17		determined based on both the interim survivor curve and the decommissioning cost
18		as a percentage of the assets in service each year up to the date of retirement. Thus,
19		it is both expected and appropriate that the decommissioning costs will increase if
20		the original cost increases. If the terminal net salvage component is excluded and
21		not applied until a later date than costs to be recovered will be pushed back to
22		generations of ratepayers in the future who did not receive additional benefit from
23		the facility. Therefore, future ratepayers pay more for the same amount of service.
24		The same concept applies for Woodsdale as well.

³ NARUC Manual at 18. ⁴ Wolf and Fitch, p. 7.

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.

5 A. After I estimated the service life and net salvage characteristics for each depreciable 6 property group for generation and maintaining for all other accounts, I calculated 7 the annual depreciation accrual rates for each depreciable group based on the 8 straight line remaining life method, using remaining lives weighted consistent with 9 the average service life procedure. The calculation of annual depreciation accrual 10 rates was developed as of December 31, 2023.

11 Q. PLEASE DESCRIBE THE STRAIGHT LINE REMAINING LIFE 12 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.

16 Q. PLEASE DESCRIBE THE AVERAGE SERVICE LIFE PROCEDURE FOR

17 CALCULATING REMAINING LIFE ACCRUAL RATES.

A. The average service life procedure defines the group or account for which the remaining life annual accrual is determined. Under this procedure, the annual accrual rate is determined for the entire group or account based on its average remaining life and the rate is then applied to the surviving balance of the group's cost. The average remaining life of the group is calculated by first dividing the future book accruals (original cost less allocated book reserve less future net 1 salvage) by the average remaining life for each vintage. The average remaining life
2 for each vintage is derived from the area under the survivor curve between the
3 attained age of the vintage and the maximum age. The sum of the future book
4 accruals is then divided by the sum of the annual accruals to determine the average
5 remaining life of the entire group for use in calculating the annual depreciation
6 accrual rate. This calculation is further detailed in Part V of Attachment JJS-1.

7

Q. PLEASE DESCRIBE AMORTIZATION ACCOUNTING.

8 A. Amortization accounting is used for accounts with a large number of units, but 9 small asset values. In amortization accounting, units of property are capitalized in the same manner as they are in depreciation accounting. However, depreciation 10 accounting is difficult for these assets because periodic inventories are required to 11 properly reflect plant in service. Consequently, retirements are recorded when a 12 vintage is fully amortized rather than as the units are removed from service. That 13 14 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 15 assigned a fixed period which represents an anticipated life during which the asset 16 17 will render service. For example, in amortization accounting, assets that have a 15year amortization period will be fully recovered after 15 years of service and taken 18 19 off the Company books, but not necessarily removed from service. In contrast, 20 assets that are taken out of service before 15 years remain on the books until the 21 amortization period for that vintage has expired.

Q. TO WHICH PLANT ACCOUNTS IS AMORTIZATION ACCOUNTING BEING IMPLEMENTED FOR?

3 A. Amortization accounting is only appropriate for certain Common and Electric General Plant accounts. These accounts are 191.00, 191.10, 194.00, 197.00 and 4 198.00 for Common Plant and 391.00, 391.10, 394.00, and 397.00 for Electric 5 6 General Plant which represents slightly less than two percent of depreciable plant. PLEASE USE AN EXAMPLE TO ILLUSTRATE THE DEVELOPMENT 7 0. THE ANNUAL DEPRECIATION ACCRUAL RATE FOR A OF 8 PARTICULAR GROUP OF PROPERTY IN YOUR DEPRECIATION 9 STUDY. 10

A. I will use Account 364.00, Poles, Towers, and Fixtures, as an example because it is
 one of the largest depreciable groups and represents an easily understood asset.

The retirement rate method was used to analyze the survivor characteristics 13 14 of this property group. Aged plant accounting data were compiled from 1956 through 2021 and analyzed in periods that best represent the overall service life of 15 this property. The life table for the 1956-2021 experience band is presented in the 16 17 Depreciation Study on pages VII-102 through VII-104. Each life table displays the retirement and surviving ratios of the aged plant data exposed to retirement by age 18 19 interval. For example, page VII-102 of Attachment JJS-1, shows \$521,089 retired 20 during age interval 0.5-1.5 with \$88,980,239 exposed to retirement at the beginning 21 of the interval. Consequently, the retirement ratio is 0.0059 22 (\$521,089/\$88,980,239) and the survivor ratio is 0.9941 (1-0.0059). The life table, 23 or original survivor curve, is plotted along with the estimated smooth survivor

curve, the 55-R0.5, on page VII-101 of Attachment JJS-1. This analysis is the same
 information utilized in the last case and the survivor curve estimate from that case
 was maintained.

The net salvage percent is presented on pages VIII-37 and VIII-38. The 4 percentage is based on the result of annual gross salvage minus the cost to remove 5 plant assets as compared to the original cost of plant retired during the period 1990 6 through 2021. The 32-year period experienced \$6,295,817 (\$1,590,755 -7 \$7,886,572) in net salvage for \$11,211,038 plant retired. The result is negative net 8 salvage of 56 percent (\$6,295,817/\$11,211,038). Recent trends (i.e., the five-year 9 average) have shown indications of negative 229 percent, therefore, it was 10 determined that based on industry ranges, historical indications and Company 11 expectations, that negative 50 percent was the most appropriate estimate. The 12 negative 50 percent estimate considers the entire period, and does not put as much 13 14 weight on recent trends as cost of removal is expected to be lower in the future than the levels over last five years for the assets being retired. This analysis is the same 15 16 information utilized in the last case and the net salvage estimate from that case was maintained. 17

18 My calculation of the annual depreciation related to original cost of electric 19 utility plant as of December 31, 2023 for Account 364.00 is presented on pages IX-20 48 through IX-50 of Attachment JJS-1. The calculation is based on the 55-R0.5 21 survivor curve, 50% negative net salvage, the attained age, and the allocated book 22 reserve. The tabulation sets forth the installation year, the original cost, calculated 1

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accrued depreciation, allocated book reserve, future accruals, remaining life, and annual accrual. These totals are brought forward to Table 1 on page VI-4.

3 Q. HAVE YOU DEVELOPED RATES FOR FUTURE ASSETS?

Yes. There are plans to add new energy storage assets for generation, transmission, 4 A. and distribution plant. The rates for these assets will be based on a 15-L3 survivor 5 curve and zero percent net salvage. There are plans to add investment for the 6 Limestone conversion project. The rates for these assets in Accounts 311.00 7 through 316.00 will be based on interim survivor curves for each account, a 8 weighted net salvage percent for each account and a life span consistent with the 9 other assets at that location. Also, there are plans to add various electric vehicle 10 charging assets. The rates for the first group of assets will be based on a 10-S3 11 survivor curve and negative 2 percent net salvage. The rates for the other group of 12 assets will be based on a 10-S4 survivor curve and negative 1 percent net salvage. 13 14 The rate for all of these assets is presented on page VI-6 of Attachment JJS-1.

15 Q. ARE THERE OTHER SPECIAL RECOVERY AMOUNTS THAT WERE 16 INCLUDED IN THE STUDY?

A. Yes. The overall recovery of steam assets includes the remaining net plant of Miami Fort Unit 6. There was \$12,966,986 (\$16,640,000 - \$3,643,014) still to be recovered at time of retirement which related to the established decommissioning cost minus the previously accumulated reserve. Based on group depreciation, the remaining amount to be recovered for Miami Fort Unit 6 (\$4,887,000) should be recovered over the remaining life of the surviving assets.

The second special recovery amount is the unrecovered reserve 1 amortization established for certain general and common plant accounts. In order 2 to achieve a more stable accrual for general and common plant accounts in the 3 future, I have recommended a five-year amortization to adjust unrecovered reserve. 4 This approach will achieve consistent amortization rates for existing assets as well 5 6 as future assets. The reserve for each of these accounts is segregated into two components. The first component is the amount required to achieve the proper rate 7 for the amortization period. The remaining amount, which could be negative, is 8 9 amortized over 5 years separately from the assets.

III. <u>CONCLUSION</u>

- 10 Q. WAS ATTACHMENT JJS-1 IN SATISFACTION OF FR 16(7)(s)
 11 PREPARED UNDER YOUR DIRECTION AND CONTROL?
- 12 A. Yes.

13 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

14 A. Yes.

VERIFICATION

COMMONWEALTH OF PENNSYLVANIA)	
)	SS:
COUNTY OF CUMBERLAND)	

The undersigned, John J. Spanos, President of Gannett Fleming Valuation and Rate Consultants, LLC, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of his knowledge, information and belief.

John J. Spanos Affiant

Subscribed and sworn to before me by John J. Spanos on this 1/5/ day of November, 2024.

NOTARA PUBLIC

Commonwealth of Pennsylvania - Notary Seal Cheryl Ann Rutter, Notary Public Cumberland County My commission expires February 20, 2027 Commission number 1143028 My Commission Expires: Ebruary 10, 2027 Member, Pennsylvania Association of Notaries

JOHN SPANOS

DEPRECIATION EXPERIENCE

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 past 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, January 2013, February 2018 and February 2023.

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., in April 2012, I was promoted to the position as Senior Vice President of the Valuation and Rate Division of Gannett Fleming Inc. (now doing business as Gannett Fleming Valuation and Rate Consultants, LLC) and in January of 2019, I was promoted to my present position of President of Gannett Fleming Valuation and Rate Consultants, LLC. 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; Iowa-American Water Company; New Jersey-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; Aqua North Carolina; Aqua Ohio; Aqua Texas, Inc.; Aqua Illinois, Inc.; Ameren Missouri; 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; Monongahela Power Company; Potomac Edison Company; Duke Energy Ohio Gas; Duke Energy Kentucky; Duke Energy Indiana; Duke Energy Progress; Northern Indiana Public Service Company; Tennessee- American Water Company; Columbia Gas of Maryland; Maryland-American Water Company; 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; Louisville Gas and Electric Company; Kentucky Utilities Company; Madison Gas and Electric; Central Maine Power; PEPCO; PacifiCorp; Minnesota Energy Resource Group; Jersey Central Power & Light Company; Cheyenne Light, Fuel and Power Company; United Water Arkansas; 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; Black Hills Energy Arkansas, Inc.; Black Hills Kansas

Gas; Black Hills Service Company; Black Hills Utility Holdings; Public Service Company of Oklahoma; City of Dubois; Peoples Gas Light and Coke Company; North Shore Gas Company; Connecticut Light and Power; New York State Electric and Gas Corporation; Rochester Gas and Electric Corporation; Greater Missouri Operations; Tennessee Valley Authority; Omaha Public Power District; Indianapolis Power & Light Company; Vermont Gas Systems, Inc.; Metropolitan Edison; Pennsylvania Electric; West Penn Power; Pennsylvania Power; PHI Service Company - Delmarva Power and Light; Atmos Energy Corporation; Citizens Energy Group; PSE&G Company; Berkshire Gas Company; Alabama Gas Corporation; Mid-Atlantic Interstate Transmission, LLC; SUEZ Water; WEC Energy Group; Rocky Mountain Natural Gas, LLC; Illinois-American Water Company; Northern Illinois Gas Company; Public Service of New Hampshire; FirstEnergy Service Corporation; Northeast Ohio Natural Gas Corporation; Blue Granite Water Company; Spire Missouri, Inc.; Dominion Energy South Carolina, Inc.; South FirstEnergy Operating Companies; Dayton Power and Light Company; Liberty Utilities; East Kentucky Power Cooperative; Bangor Natural Gas; Hanover Borough Municipal Water Works; West Virginia American Water Company; Evergy Metro; Evergy Missouri West; Granite State Electric; Bluegrass Water; The Borough of Ambler; Newtown Artesian Water Company and Connecticut Water Company.

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; South Dakota Public Utilities Commission; Wisconsin Public Service Commission; Wyoming Public Service Commission; the Public Service Utilities Regulatory Authority; New Mexico Public Regulation Commission; Commonwealth of Massachusetts Department of Public Utilities; Rhode Island Public Utilities Commission 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.

Direct Testimony of John J. Spanos - Appendix A Y, cont. Page 8 of 22

LIST OF CASES IN WHICH JOHN J. SPANOS SUBMITTED TESTIMONY, cont.

	Year	<u>Jurisdiction</u>	Docket No.	Client Utility	<u>Subject</u>
01.	1998	PA PUC	R-00984375	City of Bethlehem – Bureau of Water	Original Cost and Depreciation
02.	1998	PA PUC	R-00984567	City of Lancaster	Original Cost and Depreciation
03.	1999	PA PUC	R-00994605	The York Water Company	Depreciation
04.	2000	D.T.&E.	DTE 00-105	Massachusetts-American Water Company	Depreciation
05.	2001	PA PUC	R-00016114	City of Lancaster	Original Cost and Depreciation
06.	2001	PA PUC	R-00017236	The York Water Company	Depreciation
07.	2001	PA PUC	R-00016339	Pennsylvania-American Water Company	Depreciation
08.	2001	OH PUC	01-1228-GA-AIR	Cinergy Corp – Cincinnati Gas & Elect Company	Depreciation
09.	2001	KY PSC	2001-092	Cinergy Corp – Union Light, Heat & Power Co.	Depreciation
10.	2002	PA PUC	R-00016750	Philadelphia Suburban Water Company	Depreciation
11.	2002	KY PSC	2002-00145	Columbia Gas of Kentucky	Depreciation
12.	2002	NJ BPU	GF02040245	NUI Corporation/Elizabethtown Gas Company	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	R-0027975	Cinergy Corp – PSI Energy, Inc.	Depreciation
16.	2003	PA PUC	R-00038304	Pennsylvania-American Water Company	Depreciation
17.	2003	MO PSC	WR-2003-0500	Missouri-American Water Company	Depreciation
18.	2003	FERC	ER03-1274-000	NSTAR-Boston Edison Company	Depreciation
19.	2003	NJ BPU	BPU 03080683	South Jersey Gas Company	Depreciation
20.	2003	NV PUC	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 Company	Depreciation
23.	2004	AB En/Util Bd	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	PUC 200400187	CenterPoint Energy – Arkla	Depreciation
28.	2004	OH PUC	04-680-El-AIR	Cinergy Corp. – Cincinnati Gas and Electric Company	Depreciation
29.	2004	RR Com of TX	GUD#	CenterPoint Energy – Entex Gas Services Div.	Depreciation
30.	2004	NY PUC	04-G-1047	National Fuel Gas Distribution Gas (NY)	Depreciation
31.	2004	AR PSC	04-121-U	CenterPoint Energy – Arkla	Depreciation
32.	2005	IL CC	05-ICC-06	North Shore Gas Company	Depreciation
33.	2005	IL CC	05-ICC-06	Peoples Gas Light and Coke Company	Depreciation
34.	2005	KY PSC	2005-00042	Union Light Heat & Power	Depreciation
			E		

Direct Testimony of John J. Spanos - Appendix A Y. cont. Page 9 of 22

	Year	Jurisdiction	Docket No.	<u>Client Utility</u>	<u>Subject</u>
35.	2005	IL CC	05-0308	MidAmerican Energy Company	Depreciation
36.	2005	MO PSC	GF-2005	Laclede Gas Company	Depreciation
37.	2005	KS CC	05-WSEE-981-RTS	Westar Energy	Depreciation
38.	2005	RR Com of TX	GUD #	CenterPoint Energy – Entex Gas Services Div.	Depreciation
39.	2005	US District Court	Cause No. 1:99-CV-1693- LJM/VSS	Cinergy Corporation	Accounting
40.	2005	OK CC	PUD 200500151	Oklahoma Gas and Electric Company	Depreciation
41.	2005	MA Dept Tele- com & Ergy	DTE 05-85	NSTAR	Depreciation
42.	2005	NY PUC	05-E-934/05-G-0935	Central Hudson Gas & Electric Company	Depreciation
43.	2005	AK Reg Com	U-04-102	Chugach Electric Association	Depreciation
44.	2005	CA PUC	A05-12-002	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 Company	Depreciation
47.	2006	NC Util Cm.	G-5, Sub522	Pub. Service Company of North Carolina	Depreciation
48.	2006	PA PUC	R-00051167	City of Lancaster	Depreciation
49.	2006	PA PUC	R00061346	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	KY PSC	2006-00172	Duke Energy Kentucky	Depreciation
54.	2006	SC PSC		SCANA	Accounting
55.	2006	AK Reg Com	U-06-6	Municipal Light and Power	Depreciation
56.	2006	DE PSC	06-284	Delmarva Power and Light	Depreciation
57.	2006	IN URC	IURC43081	Indiana American Water Company	Depreciation
58.	2006	AK Reg Com	U-06-134	Chugach Electric Association	Depreciation
59.	2006	MO PSC	WR-2007-0216	Missouri American Water Company	Depreciation
60.	2006	FERC	IS05-82-002, et al	TransAlaska Pipeline	Depreciation
61.	2006	PA PUC	R-00061493	National Fuel Gas Distribution Corp. (PA)	Depreciation
62.	2007	NC Util Com.	E-7 SUB 828	Duke Energy Carolinas, LLC	Depreciation
63.	2007	OH PSC	08-709-EL-AIR	Duke Energy Ohio Gas	Depreciation
64.	2007	PA PUC	R-00072155	PPL Electric Utilities Corporation	Depreciation
65.	2007	KY PSC	2007-00143	Kentucky American Water Company	Depreciation

	Year	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<u>Subject</u>
66.	2007	PA PUC	R-00072229	Pennsylvania American Water Company	Depreciation
67.	2007	KY PSC	2007-0008	NiSource – Columbia Gas of Kentucky	Depreciation
68.	2007	NY PSC	07-G-0141	National Fuel Gas Distribution Corp (NY)	Depreciation
69.	2008	AK PSC	U-08-004	Anchorage Water & Wastewater Utility	Depreciation
70.	2008	TN Reg Auth	08-00039	Tennessee-American Water Company	Depreciation
71.	2008	DE PSC	08-96	Artesian Water Company	Depreciation
72.	2008	PA PUC	R-2008-2023067	The York Water Company	Depreciation
73.	2008	KS CC	08-WSEE1-RTS	Westar Energy	Depreciation
74.	2008	IN URC	43526	Northern Indiana Public Service Company	Depreciation
75.	2008	IN URC	43501	Duke Energy Indiana	Depreciation
76.	2008	MD PSC	9159	NiSource – Columbia Gas of Maryland	Depreciation
77.	2008	KY PSC	2008-000251	Kentucky Utilities	Depreciation
78.	2008	KY PSC	2008-000252	Louisville Gas & Electric	Depreciation
79.	2008	PA PUC	2008-20322689	Pennsylvania American Water Co Wastewater	Depreciation
80.	2008	NY PSC	08-E887/08-00888	Central Hudson	Depreciation
81.	2008	WV TC	VE-080416/VG-8080417	Avista Corporation	Depreciation
82.	2008	IL CC	ICC-09-166	Peoples Gas, Light and Coke Company	Depreciation
83.	2009	IL CC	ICC-09-167	North Shore Gas Company	Depreciation
84.	2009	DC PSC	1076	Potomac Electric Power Company	Depreciation
85.	2009	KY PSC	2009-00141	NiSource – Columbia Gas of Kentucky	Depreciation
86.	2009	FERC	ER08-1056-002	Entergy Services	Depreciation
87.	2009	PA PUC	R-2009-2097323	Pennsylvania American Water Company	Depreciation
88.	2009	NC Util Cm	E-7, Sub 090	Duke Energy Carolinas, LLC	Depreciation
89.	2009	KY PSC	2009-00202	Duke Energy Kentucky	Depreciation
90.	2009	VA St. CC	PUE-2009-00059	Aqua Virginia, Inc.	Depreciation
91.	2009	PA PUC	2009-2132019	Aqua Pennsylvania, Inc.	Depreciation
92.	2009	MS PSC	Docket No. 2011-UA-183	Entergy Mississippi	Depreciation
93.	2009	AK PSC	09-08-U	Entergy Arkansas	Depreciation
94.	2009	TX PUC	37744	Entergy Texas	Depreciation
95.	2009	TX PUC	37690	El Paso Electric Company	Depreciation
96.	2009	PA PUC	R-2009-2106908	The Borough of Hanover	Depreciation
97.	2009	KS CC	10-KCPE-415-RTS	Kansas City Power & Light	Depreciation
98.	2009	PA PUC	R-2009-	United Water Pennsylvania	Depreciation

	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<u>Subject</u>
99.	2009	OH PUC		Aqua Ohio Water Company	Depreciation
100.	2009	WI PSC	3270-DU-103	Madison Gas & Electric Company	Depreciation
101.	2009	MO PSC	WR-2010	Missouri American Water Company	Depreciation
102.	2009	AK Reg Cm	U-09-097	Chugach Electric Association	Depreciation
103.	2010	IN URC	43969	Northern Indiana Public Service Company	Depreciation
104.	2010	WI PSC	6690-DU-104	Wisconsin Public Service Corp.	Depreciation
105.	2010	PA PUC	R-2010-2161694	PPL Electric Utilities Corp.	Depreciation
106.	2010	KY PSC	2010-00036	Kentucky American Water Company	Depreciation
107.	2010	PA PUC	R-2009-2149262	Columbia Gas of Pennsylvania	Depreciation
108.	2010	MO PSC	GR-2010-0171	Laclede Gas Company	Depreciation
109.	2010	SC PSC	2009-489-Е	South Carolina Electric & Gas Company	Depreciation
110.	2010	NJ BD OF PU	ER09080664	Atlantic City Electric	Depreciation
111.	2010	VA St. CC	PUE-2010-00001	Virginia American Water Company	Depreciation
112.	2010	PA PUC	R-2010-2157140	The York Water Company	Depreciation
113.	2010	MO PSC	ER-2010-0356	Greater Missouri Operations Company	Depreciation
114.	2010	MO PSC	ER-2010-0355	Kansas City Power and Light	Depreciation
115.	2010	PA PUC	R-2010-2167797	T.W. Phillips Gas and Oil Company	Depreciation
116.	2010	PSC SC	2009-489-Е	SCANA – Electric	Depreciation
117.	2010	PA PUC	R-2010-22010702	Peoples Natural Gas, LLC	Depreciation
118.	2010	AK PSC	10-067-U	Oklahoma Gas and Electric Company	Depreciation
119.	2010	IN URC	Cause No. 43894	Northern Indiana Public Serv. Company - NIFL	Depreciation
120.	2010	IN URC	Cause No. 43894	Northern Indiana Public Serv. Co Kokomo	Depreciation
121.	2010	PA PUC	R-2010-2166212	Pennsylvania American Water Co WW	Depreciation
122.	2010	NC Util Cn.	W-218,SUB310	Aqua North Carolina, Inc.	Depreciation
123.	2011	OH PUC	11-4161-WS-AIR	Ohio American Water Company	Depreciation
124.	2011	MS PSC	EC-123-0082-00	Entergy Mississippi	Depreciation
125.	2011	CO PUC	11AL-387E	Black Hills Colorado	Depreciation
126.	2011	PA PUC	R-2010-2215623	Columbia Gas of Pennsylvania	Depreciation
127.	2011	PA PUC	R-2010-2179103	City of Lancaster – Bureau of Water	Depreciation
128.	2011	IN URC	43114 IGCC 4S	Duke Energy Indiana	Depreciation
129.	2011	FERC	IS11-146-000	Enbridge Pipelines (Southern Lights)	Depreciation
130.	2011	IL CC	11-0217	MidAmerican Energy Corporation	Depreciation
131.	2011	OK CC	201100087	Oklahoma Gas & Electric Company	Depreciation
132.	2011	PA PUC	2011-2232243	Pennsylvania American Water Company	Depreciation

Direct Testimony of John J. Spanos - Appendix A Y. cont. Page 12 of 22

	Year	<u>Jurisdiction</u>	<u>Docket No.</u>	Client Utility	<u>Subject</u>
133.	2011	FERC	RP11000	Carolina Gas Transmission	Depreciation
134.	2012	WA UTC	UE-120436/UG-120437	Avista Corporation	Depreciation
135.	2012	AK Reg Cm	U-12-009	Chugach Electric Association	Depreciation
136.	2012	MA PUC	DPU 12-25	Columbia Gas of Massachusetts	Depreciation
137.	2012	TX PUC	40094	El Paso Electric Company	Depreciation
138.	2012	ID PUC	IPC-E-12	Idaho Power Company	Depreciation
139.	2012	PA PUC	R-2012-2290597	PPL Electric Utilities	Depreciation
140.	2012	PA PUC	R-2012-2311725	Borough of Hanover – Bureau of Water	Depreciation
141.	2012	KY PSC	2012-00222	Louisville Gas and Electric Company	Depreciation
142.	2012	KY PSC	2012-00221	Kentucky Utilities Company	Depreciation
143.	2012	PA PUC	R-2012-2285985	Peoples Natural Gas Company	Depreciation
144.	2012	DC PSC	Case 1087	Potomac Electric Power Company	Depreciation
145.	2012	OH PSC	12-1682-EL-AIR	Duke Energy Ohio (Electric)	Depreciation
146.	2012	OH PSC	12-1685-GA-AIR	Duke Energy Ohio (Gas)	Depreciation
147.	2012	PA PUC	R-2012-2310366	City of Lancaster – Sewer Fund	Depreciation
148.	2012	PA PUC	R-2012-2321748	Columbia Gas of Pennsylvania	Depreciation
149.	2012	FERC	ER-12-2681-000	ITC Holdings	Depreciation
150.	2012	MO PSC	ER-2012-0174	Kansas City Power and Light	Depreciation
151.	2012	MO PSC	ER-2012-0175	KCPL Greater Missouri Operations Company	Depreciation
152.	2012	MO PSC	GO-2012-0363	Laclede Gas Company	Depreciation
153.	2012	MN PUC	G007,001/D-12-533	Integrys – MN Energy Resource Group	Depreciation
154.	2012	TX PUC	SOAH 582-14-1051/	Aqua Texas	Depreciation
			TECQ 2013-2007-UCR		
155.	2012	PA PUC	2012-2336379	York Water Company	Depreciation
156.	2013	NJ BPU	ER12121071	PHI Service Company– Atlantic City Electric	Depreciation
157.	2013	KY PSC	2013-00167	Columbia Gas of Kentucky	Depreciation
158.	2013	VA St CC	2013-00020	Virginia Electric and Power Company	Depreciation
159.	2013	IA Util Bd	2013-0004	MidAmerican Energy Corporation	Depreciation
160.	2013	PA PUC	2013-2355276	Pennsylvania American Water Company	Depreciation
161.	2013	NY PSC	13-E-0030, 13-G-0031, 13-S-0032	Consolidated Edison of New York	Depreciation
162.	2013	PA PUC	2013-2355886	Peoples TWP LLC	Depreciation
163.	2013	TN Reg Auth	12-0504	Tennessee American Water	Depreciation
164.	2013	ME PUC	2013-168	Central Maine Power Company	Depreciation
165.	2013	DC PSC	Case 1103	PHI Service Company – PEPCO	Depreciation
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Direct Testimony of John J. Spanos - Appendix A NY, cont. Page 13 of 22

	Year	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<u>Subject</u>
166.	2013	WY PSC	2003-ER-13	Cheyenne Light, Fuel and Power Company	Depreciation
167.	2013	FERC	ER13-2428-0000	Kentucky Utilities	Depreciation
168.	2013	FERC	ER130000	MidAmerican Energy Company	Depreciation
169.	2013	FERC	ER13-2410-0000	PPL Utilities	Depreciation
170.	2013	PA PUC	R-2013-2372129	Duquesne Light Company	Depreciation
171.	2013	NJ BPU	ER12111052	Jersey Central Power and Light Company	Depreciation
172.	2013	PA PUC	R-2013-2390244	Bethlehem, City of – Bureau of Water	Depreciation
173.	2013	OK CC	UM 1679	Oklahoma, Public Service Company of	Depreciation
174.	2013	IL CC	13-0500	Nicor Gas Company	Depreciation
175.	2013	WY PSC	20000-427-EA-13	PacifiCorp	Depreciation
176.	2013	UT PSC	13-035-02	PacifiCorp	Depreciation
177.	2013	OR PUC	UM 1647	PacifiCorp	Depreciation
178.	2013	PA PUC	2013-2350509	Dubois, City of	Depreciation
179.	2014	IL CC	14-0224	North Shore Gas Company	Depreciation
180.	2014	FERC	ER140000	Duquesne Light Company	Depreciation
181.	2014	SD PUC	EL14-026	Black Hills Power Company	Depreciation
182.	2014	WY PSC	20002-91-ER-14	Black Hills Power Company	Depreciation
183.	2014	PA PUC	2014-2428304	Borough of Hanover – Municipal Water Works	Depreciation
184.	2014	PA PUC	2014-2406274	Columbia Gas of Pennsylvania	Depreciation
185.	2014	IL CC	14-0225	Peoples Gas Light and Coke Company	Depreciation
186.	2014	MO PSC	ER-2014-0258	Ameren Missouri	Depreciation
187.	2014	KS CC	14-BHCG-502-RTS	Black Hills Service Company	Depreciation
188.	2014	KS CC	14-BHCG-502-RTS	Black Hills Utility Holdings	Depreciation
189.	2014	KS CC	14-BHCG-502-RTS	Black Hills Kansas Gas	Depreciation
190.	2014	PA PUC	2014-2418872	Lancaster, City of – Bureau of Water	Depreciation
191.	2014	WV PSC	14-0701-E-D	First Energy – MonPower/PotomacEdison	Depreciation
192	2014	VA St CC	PUC-2014-00045	Aqua Virginia	Depreciation
193.	2014	VA St CC	PUE-2013	Virginia American Water Company	Depreciation
194.	2014	OK CC	PUD201400229	Oklahoma Gas and Electric Company	Depreciation
195.	2014	OR PUC	UM1679	Portland General Electric	Depreciation
196.	2014	IN URC	Cause No. 44576	Indianapolis Power & Light	Depreciation
197.	2014	MA DPU	DPU. 14-150	NSTAR Gas	Depreciation
198.	2014	CT PURA	14-05-06	Connecticut Light and Power	Depreciation
199.	2014	MO PSC	ER-2014-0370	Kansas City Power & Light	Depreciation

	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<u>Subject</u>
200.	2014	KY PSC	2014-00371	Kentucky Utilities Company	Depreciation
201.	2014	KY PSC	2014-00372	Louisville Gas and Electric Company	Depreciation
202.	2015	PA PUC	R-2015-2462723	United Water Pennsylvania Inc.	Depreciation
203.	2015	PA PUC	R-2015-2468056	NiSource - Columbia Gas of Pennsylvania	Depreciation
204.	2015	NY PSC	15-E-0283/15-G-0284	New York State Electric and Gas Corporation	Depreciation
205.	2015	NY PSC	15-E-0285/15-G-0286	Rochester Gas and Electric Corporation	Depreciation
206.	2015	MO PSC	WR-2015-0301/SR-2015-0302	Missouri American Water Company	Depreciation
207.	2015	OK CC	PUD 201500208	Oklahoma, Public Service Company of	Depreciation
208.	2015	WV PSC	15-0676-W-42T	West Virginia American Water Company	Depreciation
209.	2015	PA PUC	2015-2469275	PPL Electric Utilities	Depreciation
210.	2015	IN URC	Cause No. 44688	Northern Indiana Public Service Company	Depreciation
211.	2015	OH PSC	14-1929-EL-RDR	First Energy-Ohio Edison/Cleveland Electric/ Toledo Edison	Depreciation
212.	2015	NM PRC	15-00127-UT	El Paso Electric	Depreciation
213.	2015	TX PUC	PUC-44941; SOAH 473-15-5257	El Paso Electric	Depreciation
214.	2015	WI PSC	3270-DU-104	Madison Gas and Electric Company	Depreciation
215.	2015	OK CC	PUD 201500273	Oklahoma Gas and Electric	Depreciation
216.	2015	KY PSC	Doc. No. 2015-00418	Kentucky American Water Company	Depreciation
217.	2015	NC UC	Doc. No. G-5, Sub 565	Public Service Company of North Carolina	Depreciation
218.	2016	WA UTC	Docket UE-17	Puget Sound Energy	Depreciation
219.	2016	NY PSC	Case No. 16-W-0130	SUEZ Water New York, Inc.	Depreciation
220.	2016	MO PSC	ER-2016-0156	KCPL – Greater Missouri	Depreciation
221.	2016	WI PSC		Wisconsin Public Service Corporation	Depreciation
222.	2016	KY PSC	Case No. 2016-00026	Kentucky Utilities Company	Depreciation
223.	2016	KY PSC	Case No. 2016-00027	Louisville Gas and Electric Company	Depreciation
224.	2016	OH PUC	Case No. 16-0907-WW-AIR	Aqua Ohio	Depreciation
225.	2016	MD PSC	Case 9417	NiSource - Columbia Gas of Maryland	Depreciation
226.	2016	KY PSC	2016-00162	Columbia Gas of Kentucky	Depreciation
227.	2016	DE PSC	16-0649	Delmarva Power and Light Company – Electric	Depreciation
228.	2016	DE PSC	16-0650	Delmarva Power and Light Company – Gas	Depreciation
229.	2016	NY PSC	Case 16-G-0257	National Fuel Gas Distribution Corp – NY Div	Depreciation
230.	2016	PA PUC	R-2016-2537349	Metropolitan Edison Company	Depreciation
231.	2016	PA PUC	R-2016-2537352	Pennsylvania Electric Company	Depreciation
232.	2016	PA PUC	R-2016-2537355	Pennsylvania Power Company	Depreciation

Direct Testimony of John J. Spanos - Appendix A Y, cont. Page 15 of 22

	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<u>Subject</u>
233.	2016	PA PUC	R-2016-2537359	West Penn Power Company	Depreciation
234.	2016	PA PUC	R-2016-2529660	NiSource - Columbia Gas of PA	Depreciation
235.	2016	KY PSC	Case No. 2016-00063	Kentucky Utilities / Louisville Gas & Electric Co	Depreciation
236.	2016	MO PSC	ER-2016-0285	KCPL Missouri	Depreciation
237.	2016	AR PSC	16-052-U	Oklahoma Gas & Electric Co	Depreciation
238.	2016	PSCW	6680-DU-104	Wisconsin Power and Light	Depreciation
239.	2016	ID PUC	IPC-E-16-23	Idaho Power Company	Depreciation
240.	2016	OR PUC	UM1801	Idaho Power Company	Depreciation
241.	2016	ILL CC	16-	MidAmerican Energy Company	Depreciation
242.	2016	KY PSC	Case No. 2016-00370	Kentucky Utilities Company	Depreciation
243.	2016	KY PSC	Case No. 2016-00371	Louisville Gas and Electric Company	Depreciation
244.	2016	IN URC	Cause No. 45029	Indianapolis Power & Light	Depreciation
245.	2016	AL RC	U-16-081	Chugach Electric Association	Depreciation
246.	2017	MA DPU	D.P.U. 17-05	NSTAR Electric Company and	Depreciation
				Western Massachusetts Electric Company	
247.	2017	TX PUC	PUC-26831, SOAH 973-17-2686	El Paso Electric Company	Depreciation
248.	2017	WA UTC	UE-17033 and UG-170034	Puget Sound Energy	Depreciation
249.	2017	OH PUC	Case No. 17-0032-EL-AIR	Duke Energy Ohio	Depreciation
250.	2017	VA SCC	Case No. PUE-2016-00413	Virginia Natural Gas, Inc.	Depreciation
251.	2017	OK CC	Case No. PUD201700151	Public Service Company of Oklahoma	Depreciation
252.	2017	MD PSC	Case No. 9447	Columbia Gas of Maryland	Depreciation
253.	2017	NC UC	Docket No. E-2, Sub 1142	Duke Energy Progress	Depreciation
254.	2017	VA SCC	Case No. PUR-2017-00090	Dominion Virginia Electric and Power Company	Depreciation
255.	2017	FERC	ER17-1162	MidAmerican Energy Company	Depreciation
256.	2017	PA PUC	R-2017-2595853	Pennsylvania American Water Company	Depreciation
257.	2017	OR PUC	UM1809	Portland General Electric	Depreciation
258.	2017	FERC	ER17-217-000	Jersey Central Power & Light	Depreciation
259.	2017	FERC	ER17-211-000	Mid-Atlantic Interstate Transmission, LLC	Depreciation
260.	2017	MN PUC	Docket No. G007/D-17-442	Minnesota Energy Resources Corporation	Depreciation
261.	2017	IL CC	Docket No. 17-0124	Northern Illinois Gas Company	Depreciation
262.	2017	OR PUC	UM1808	Northwest Natural Gas Company	Depreciation
263.	2017	NY PSC	Case No. 17-W-0528	SUEZ Water Owego-Nichols	Depreciation
264.	2017	MO PSC	GR-2017-0215	Laclede Gas Company	Depreciation
265.	2017	MO PSC	GR-2017-0216	Missouri Gas Energy	Depreciation

Direct Testimony of John J. Spanos - Appendix A Y, cont. Page 16 of 22

	<u>Year</u>	<u>Jurisdiction</u>	Docket No.	<u>Client Utility</u>	<u>Subject</u>
266.	2017	ILL CC	Docket No. 17-0337	Illinois-American Water Company	Depreciation
267.	2017	FERC	Docket No. ER18-22-000	PPL Electric Utilities Corporation	Depreciation
268.	2017	IN URC	Cause No. 44988	Northern Indiana Public Service Company	Depreciation
269.	2017	NJ BPU	BPU Docket No. WR17090985	New Jersey American Water Company, Inc.	Depreciation
270.	2017	RI PUC	Docket No. 4800	SUEZ Water Rhode Island	Depreciation
271.	2017	OK CC	Cause No. PUD 201700496	Oklahoma Gas and Electric Company	Depreciation
272.	2017	NJ BPU	ER18010029 & GR18010030	Public Service Electric and Gas Company	Depreciation
273.	2017	NC Util Com.	Docket No. E-7, SUB 1146	Duke Energy Carolinas, LLC	Depreciation
274.	2017	KY PSC	Case No. 2017-00321	Duke Energy Kentucky, Inc.	Depreciation
275.	2017	MA DPU	D.P.U. 18-40	Berkshire Gas Company	Depreciation
276.	2018	IN IURC	Cause No. 44992	Indiana-American Water Company, Inc.	Depreciation
277.	2018	IN IURC	Cause No. 45029	Indianapolis Power and Light	Depreciation
278.	2018	NC Util Com.	Docket No. W-218, Sub 497	Aqua North Carolina, Inc.	Depreciation
279.	2018	PA PUC	Docket No. R-2018-2647577	NiSource - Columbia Gas of Pennsylvania, Inc.	Depreciation
280.	2018	OR PUC	Docket UM 1933	Avista Corporation	Depreciation
281.	2018	WA UTC	Docket No. UE-108167	Avista Corporation	Depreciation
282.	2018	ID PUC	AVU-E-18-03, AVU-G-18-02	Avista Corporation	Depreciation
283.	2018	IN URC	Cause No. 45039	Citizens Energy Group	Depreciation
284.	2018	FERC	Docket No. ER18-	Duke Energy Progress	Depreciation
285.	2018	PA PUC	Docket No. R-2018-3000124	Duquesne Light Company	Depreciation
286.	2018	MD PSC	Case No. 948	NiSource - Columbia Gas of Maryland	Depreciation
287.	2018	MA DPU	D.P.U. 18-45	NiSource - Columbia Gas of Massachusetts	Depreciation
288.	2018	OH PUC	Case No. 18-0299-GA-ALT	Vectren Energy Delivery of Ohio	Depreciation
289.	2018	PA PUC	Docket No. R-2018-3000834	SUEZ Water Pennsylvania Inc.	Depreciation
290.	2018	MD PSC	Case No. 9847	Maryland-American Water Company	Depreciation
291.	2018	PA PUC	Docket No. R-2018-3000019	The York Water Company	Depreciation
292.	2018	FERC	ER-18-2231-000	Duke Energy Carolinas, LLC	Depreciation
293.	2018	KY PSC	Case No. 2018-00261	Duke Energy Kentucky, Inc.	Depreciation
294.	2018	NJ BPU	BPU Docket No. WR18050593	SUEZ Water New Jersey	Depreciation
295.	2018	WA UTC	Docket No. UE-180778	PacifiCorp	Depreciation
296.	2018	UT PSC	Docket No. 18-035-36	PacifiCorp	Depreciation
297.	2018	OR PUC	Docket No. UM-1968	PacifiCorp	Depreciation
298.	2018	ID PUC	Case No. PAC-E-18-08	PacifiCorp	Depreciation
299.	2018	WY PSC	20000-539-EA-18	PacifiCorp	Depreciation
300.	2018	PA PUC	Docket No. R-2018-3003068	Aqua Pennsylvania, Inc.	Depreciation

Direct Testimony of John J. Spanos - Appendix A Y, cont. Page 17 of 22

	<u>Year</u>	<u>Jurisdiction</u>	Docket No.	<u>Client Utility</u>	<u>Subject</u>
301.	2018	IL CC	Docket No. 18-1467	Aqua Illinois, Inc.	Depreciation
302.	2018	KY PSC	Case No. 2018-00294	Louisville Gas & Electric Company	Depreciation
303.	2018	KY PSC	Case No. 2018-00295	Kentucky Utilities Company	Depreciation
304.	2018	IN URC	Cause No. 45159	Northern Indiana Public Service Company	Depreciation
305.	2018	VA SCC	Case No. PUR-2019-00175	Virginia American Water Company	Depreciation
306.	2019	PAPUC	Docket No. R-2018-3006818	Peoples Natural Gas Company, LLC	Depreciation
307.	2019	OK CC	Cause No. PUD201800140	Oklahoma Gas and Electric Company	Depreciation
308.	2019	MD PSC	Case No. 9490	FirstEnergy – Potomac Edison	Depreciation
309.	2019	SC PSC	Docket No. 2018-318-E	Duke Energy Progress	Depreciation
310.	2019	SC PSC	Docket No. 2018-319-E	Duke Energy Carolinas	Depreciation
311.	2019	DE PSC	DE 19-057	Public Service of New Hampshire	Depreciation
312.	2019	NY PSC	Case No. 19-W-0168 & 19-W-0269	SUEZ Water New York	Depreciation
313.	2019	PA PUC	Docket No. R-2019-3006904	Newtown Artesian Water Company	Depreciation
314.	2019	MO PSC	ER-2019-0335	Ameren Missouri	Depreciation
315.	2019	MO PSC	EC-2019-0200	KCP&L Greater Missouri Operations Company	Depreciation
316.	2019	MN DOC	G011/D-19-377	Minnesota Energy Resource Corp.	Depreciation
317.	2019	NY PSC	Case 19-E-0378 & 19-G-0379	New York State Electric and Gas Corporation	Depreciation
318.	2019	NY PSC	Case 19-E-0380 & 19-G-0381	Rochester Gas and Electric Corporation	Depreciation
319.	2019	WA UTC	Docket UE-190529 / UG-190530	Puget Sound Energy	Depreciation
320.	2019	PA PUC	Docket No. R-2019-3010955	City of Lancaster	Depreciation
321.	2019	IURC	Cause No. 45253	Duke Energy Indiana	Depreciation
322.	2019	KY PSC	Case No. 2019-00271	Duke Energy Kentucky, Inc.	Depreciation
323.	2019	OH PUC	Case No. 18-1720-GA-AIR	Northeast Ohio Natural Gas Corp	Depreciation
324.	2019	NC Util.	Docket No. E-2, Sub 1219	Duke Energy Carolinas	Depreciation
325.	2019	FERC	Docket No. ER20-277-000	Jersey Central Power & Light Company	Depreciation
326.	2019	MA DPU	D.P.U. 19-120	NSTAR Gas Company	Depreciation
327.	2019	SC PSC	Docket No. 2019-290-WS	Blue Granite Water Company	Depreciation
328.	2019	NC Util.	Docket No. E-2, Sub 1219	Duke Energy Progress	Depreciation
329.	2019	MD PSC	Case No. 9609	NiSource Columbia Gas of Maryland, Inc.	Depreciation
330.	2019	HI PUC	Docket No. 2019-0117	Young Brothers, LLC	Depreciation
331.	2020	NJ BPU	Docket No. ER20020146	Jersey Central Power & Light Company	Depreciation
332.	2020	PA PUC	Docket No. R-2020-3018835	NiSource - Columbia Gas of Pennsylvania, Inc.	Depreciation
333.	2020	PA PUC	Docket No. R-2020-3019369	Pennsylvania-American Water Company	Depreciation
334.	2020	PA PUC	Docket No. R-2020-3019371	Pennsylvania-American Water Company	Depreciation
335.	2020	MO PSC	GO-2018-0309, GO-2018-0310	Spire Missouri, Inc.	Depreciation
336.	2020	NM PRC	Case No. 20-00104-UT	El Paso Electric Company	Depreciation
337.	2020	MD PSC	Case No. 9644	Columbia Gas of Maryland, Inc.	Depreciation
338.	2020	MO PSC	GO-2018-0309, GO-2018-0310	Spire Missouri, Inc.	Depreciation

Direct Testimony of John J. Spanos - Appendix A ONY, cont. Page 18 of 22

	Year	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<u>Subject</u>
339.	2020	VA St CC	Case No. PUR-2020-00095	Virginia Natural Gas Company	Depreciation
340.	2020	SC PSC	Docket No. 2020-125-E	Dominion Energy South Carolina, Inc.	Depreciation
341.	2020	WV PSC	Case No. 20-0745-G-D	Hope Gas, Inc. d/b/a Dominion Energy West Virginia	Depreciation
342.	2020	VA St CC	Case No. PUR-2020-00106	Aqua Virginia, Inc.	Depreciation
343.	2020	PA PUC	Docket No. R-2020-3020256	City of Bethlehem – Bureau of Water	Depreciation
344.	2020	NE PSC	Docket No. NG-109	Black Hills Nebraska	Depreciation
345.	2020	NY PSC	Case No. 20-E-0428 & 20-G-0429	Central Hudson Gas & Electric Corporation	Depreciation
346.	2020	FERC	ER20-598	Duke Energy Indiana	Depreciation
347.	2020	FERC	ER20-855	Northern Indiana Public Service Company	Depreciation
348.	2020	OR PSC	UE 374	PacifiCorp	Depreciation
349.	2020	MD PSC	Case No. 9490 Phase II	Potomac Edison – Maryland	Depreciation
350.	2020	IN URC	Case No. 45447	Southern Indiana Gas and Electric Company	Depreciation
351.	2020	IN URC	IURC Cause No. 45468	Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery	Depreciation
352.	2020	KY PSC	Case No. 2020-00349	Kentucky Utilities Company	Depreciation
353.	2020	KY PSC	Case No. 2020-00350	Louisville Gas and Electric Company	Depreciation
354.	2020	FERC	Docket No. ER21- 000	South FirstEnergy Operating Companies	Depreciation
355.	2020	OH PUC	Case Nos 20-1651-EL-AIR, 20-	Dayton Power and Light Company	Depreciation
			1652-EL-AAM & 20-1653-EL-ATA		
356.	2020	OR PSC	UG 388	Northwest Natural Gas Company	Depreciation
357.	2020	MO PSC	Case No. GR-2021-0241	Ameren Missouri Gas	Depreciation
358.	2021	KY PSC	Case No. 2021-00103	East Kentucky Power Cooperative	Depreciation
359.	2021	MPUC	Docket No. 2021-00024	Bangor Natural Gas	Depreciation
360.	2021	PA PUC	Docket No. R-2021-3024296	Columbia Gas of Pennsylvania, Inc.	Depreciation
361.	2021	NC Util.	Doc. No. G-5, Sub 632	Public Service of North Carolina	Depreciation
362.	2021	MO PSC	ER-2021-0240	Ameren Missouri	Depreciation
363.	2021	PA PUC	Docket No. R-2021-3024750	Duquesne Light Company	Depreciation
364.	2021	KS PSC	21-BHCG-418-RTS	Black Hills Kansas Gas	Depreciation
365.	2021	KY PSC	Case No. 2021-00190	Duke Energy Kentucky	Depreciation
366.	2021	OR PSC	Docket UM 2152	Portland General Electric	Depreciation
367.	2021	ILL CC	Docket No. 20-0810	North Shore Gas Company	Depreciation
368.	2021	FERC	ER21-1939-000	Duke Energy Progress	Depreciation
369.	2021	FERC	ER21-1940-000	Duke Energy Carolina	Depreciation
370.	2021	KY PSC	Case No. 2021-00183	NiSource Columbia Gas of Kentucky	Depreciation
371.	2021	MD PSC	Case No. 9664	NiSource Columbia Gas of Maryland	Depreciation
372.	2021	OH PUC	Case No. 21-0596-ST-AIR	Aqua Ohio	Depreciation
373.	2021	PA PUC	Docket No. R-2021-3026116	Hanover Borough Municipal Water Works	Depreciation
374.	2021	OR PSC	UM-2180	Idaho Power Company	Depreciation
375.	2021	ID PUC	Case No. IPC-E-21-18	Idaho Power Company	Depreciation

Direct Testimony of John J. Spanos - Appendix A Y, cont. Page 19 of 22

	<u>Year</u>	<u>Jurisdiction</u>	Docket No.	<u>Client Utility</u>	<u>Subject</u>
376.	2021	WPSC	6690-DU-104	Wisconsin Public Service Company	Depreciation
377.	2021	PAPUC	Docket No. R-2021-3026116	Borough of Hanover	Depreciation
378.	2021	OH PUC	Case No. 21-637-GA-AIR;	NiSource Columbia Gas of Ohio	Depreciation
			Case No. 21-638-GA-ALT;		
			Case No. 21-639-GA-UNC;		
			Case No. 21-640-GA-AAM		
379.	2021	TX PUC	Texas PUC Docket No. 52195;	El Paso Electric	Depreciation
			SOHA Docket No. 473-21-2606		-
380.	2021	MO PSC	Case No. GR.2021-0108	Spire Missouri	Depreciation
381.	2021	WV PSC	Case No. 21-0215-WS-P	West Virginia American Water Company	Depreciation
382.	2021	FERC	ER21-2736	Duke Energy Carolinas	Depreciation
383.	2021	FERC	ER21-2737	Duke Energy Progress	Depreciation
384.	2021	IN URC	Cause #45621	Northern Indiana Public Service Company	Depreciation
385.	2021	PA PUC	Docket No. R-2021-3026682	City of Lancaster	Depreciation
386.	2021	OH PUC	Case No. 21-887-EL-AIR;	Duke Energy Ohio	Depreciation
			Case No. 21-888-EL-ATA;		
			Case No. 889-EI-AAM		
387.	2021	AK PSC	Docket No. 21-097-U	Black Hills Energy Arkansas, Inc.	Depreciation
388.	2021	OK CC	Cause No. PUD202100164	Oklahoma Gas & Electric	Depreciation
389.	2021	FERC	Case ER-22-392-001	El Paso Electric	Depreciation
390.	2021	FERC	Case ER-21-XXX	MidAmerican Electric	Depreciation
391.	2021	PA PUC	Docket Nos. R-2021-3027385,	Aqua Pennsylvania, Inc.	Depreciation
			R-2021-3027386	Aqua Pennsylvania Wastewater, Inc.	
392.	2022	FERC	Case ER-22-282-000	El Paso Electric	Depreciation
393.	2022	ILL CC	Docket No. 22-0154	MidAmerican Gas	Depreciation
394.	2022	MO PSC	Case No. ER-2022-0129	Evergy Metro	Depreciation
395.	2022	MO PSC	Case No. ER-2022-0130	Evergy Missouri West	Depreciation
396.	2022	PA PUC	Docket No. R-2022-3031211	NiSource Columbia Gas of Pennsylvania, Inc.	Depreciation
397.	2022	MA DPU	D.P.U. 22-20	The Berkshire Gas Company	Depreciation
398.	2022	PA PUC	R-2022-3031672; R-2022-3031673	Pennsylvania-American Water Company	Depreciation
399.	2022	SD PUC	Docket No. NG22-	MidAmerican Gas	Depreciation
400.	2022	MD PSC	Case No. 9680	NiSource Columbia Gas of Maryland	Depreciation
401.	2022	WYPSC	Docket No. 20003-214-ER-22	Black Hills Energy – Cheyenne Light, Fuel and Power	Depreciation
402.	2022	MA DPU	D.P.U. 22.22	NSTAR Electric Company d/b/a Eversource Energy	Depreciation
403. 404.	2022 2022	OR PUC	Docket No. W-218, Sub 573	Aqua North Carolina, Inc. Northwest Natural Gas	Depreciation
404.	2022	UK PUC	UM2213	NOT LIWEST NATURAL GAS	Depreciation

	<u>Year</u>	<u>Jurisdiction</u>	Docket No.	<u>Client Utility</u>	<u>Subject</u>
405.	2022	OR PUC	UM2214	Northwest Natural Gas	Depreciation
406.	2022	ME PUC	Docket No. 2022-00152	Central Maine Power	Depreciation
407.	2022	SC PSC	Docket No. 2022-254-E	Duke Energy Progress	Depreciation
408.	2022		Docket No. E-2, SUB 1300	Duke Energy Progress	Depreciation
409.	2022	IN URC	Cause #45772	Northern Indiana Public Service Company	Depreciation
410.	2022	PA PUC	R-2022-3031340	The York Water Company	Depreciation
411.	2022	PA PUC	R-2022-3032806	The York Water Company	Depreciation
412.	2022	PA PUC	R-2022-3031704	Borough of Ambler	Depreciation
413.	2022	MO PSC	ER-2022-0337	Ameren Missouri	Depreciation
414.	2022	OH PUC	Case No. 22-507-GA-AIR	Duke Energy Ohio	Depreciation
415.	2022	PA PUC	R-2022-3035730	National Fuel Gas Distribution Corporation – PA Division	Depreciation
416.	2022	NC Util Com	Docket No. E-22, Sub 493	Virginia Electric and Power Company	Depreciation
417.	2022	WY PSC	20003-214-ER-22	Cheyenne Light, Fuel and Power Company	Depreciation
418.	2022	NJ BPU	BPU Docket No. ER2303144	Jersey Central Power & Light Company	Depreciation
419.	2022	KY PSC	Case No. 2022-00372	Duke Energy Kentucky	Depreciation
420.	2022	TX PUC	SOAH Docket No. 473-23-04521	Aqua Texas, Inc.	Depreciation
421.	2022	NC Util Com	Docket No. E-7, Sub 1276	Duke Energy Carolinas, LLC	Depreciation
422.	2022	KY PSC	Case No. 2022-00432	Bluegrass Water	Depreciation
423.	2023	ILL CC	Docket No. 23-0069	The Peoples Gas Light and Coke Company	Depreciation
424.	2023	ILL CC	Docket No. 23-0068	North Shore Gas Company	Depreciation
425.	2023	WV PSC	Case No. 23-0030-E-D	Monongahela Power Company and The Potomac Edison	Depreciation
426.	2023	ID PUC	AVU-E-23-01; AVU-G-23-01	Avista Corporation	Depreciation
427.	2023	ILL CC	Docket No. 23-0066	Northern Illinois Gas Company d/b/a Nicor Gas Company	Depreciation
428.	2023	SC PSC	Docket No. 2023-70-G	Dominion Energy South Carolina, Inc.	Depreciation
429.	2023	FERC	Docket No. ER23-xxx-00	Duke Energy Ohio, Inc.	Depreciation
430.	2023	WY PSC	Docket No. 30036-78-GR-23	Black Hills Wyoming Gas Company d/b/a Black Hills Energy	Depreciation
431.	2023	MD PSC	Case No. 9695	The Potomac Edison Company	Depreciation
432.	2023	OR PUC	Case No. UM2277	Avista Corporation	Depreciation
433.	2023	FERC	Docket No. ER23-1629-000	PPL Electric Utilities	Depreciation
434.	2023	OH PUC	Case No. 23-0154-GA-AIR	Northeast Ohio Natural Gas Corporation	Depreciation
435.	2023	DE PSC	PSC Docket No. 23-0601	Artesian Water Company	Depreciation
436.	2023	CO PUC	No. 23AL-0231G	Black Hills Colorado d/b/a Black Hills Energy	Depreciation
437. 438.	2023 2023	NH PUC MD PSC	Docket No. DE 23-039	Granite State Electric d/b/a Liberty Utilities	Depreciation
438. 439.	2023	NY PSC	Case No. 9701 Case Nos. 23-E-0418; 23-G-0419	Columbia Gas of Maryland Central Hudson Gas and Electric	Depreciation Depreciation
439. 440.	2023	FERC	Docket No. ER23-xxx-000	Central Maine Power Company	Depreciation
441.	2023	SD PUC	Docket Number EL23-016	Northwestern Energy	Depreciation
	2020	00.00	Booker Humber EL25 010		

Direct Testimony of John J. Spanos - Appendix A Y, cont. Page 21 of 22

	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<u>Subject</u>
442.	2023	CT PURA	Docket No. 23-08-32	Connecticut Water Company	Depreciation
443.	2023	OH PUC	Case 23-0894-GA-AIR	The East Ohio Gas Company d/b/a Dominion Energy Ohio	Depreciation
444.	2023	IN URC	Cause No. 45911	Indianapolis Power & Light	Depreciation
445.	2023	IN URC	Cause No. 45967	Northern Indiana Public Service Company	Depreciation
446.	2023	PA PUC	Docket No. R-2023-3043189 and Docket No. R-2023-3043190	Pennsylvania-American Water Company	Depreciation
447.	2023	IN URC	Cause No. 45988	Citizens Energy Group	Depreciation
448.	2023	NY PSC	Case No. 23-G-0627	National Fuel Gas Distribution Corporation	Depreciation
449.	2023	IN URC	Cause No. 45990	Southern Indiana Gas and Electric Company d/b/a Centerpoint Energy Indiana South	Depreciation
450.	2023	PA PUC	Docket No. R-2023-3044549	Peoples Natural Gas Company LLC	Depreciation
451.	2023	OR PUC	Docket No. UM-2312	Northwest Natural Gas Company	Depreciation
452.	2023	AZ PCC	Docket No. WS-21182A-23-2092	Northwest Natural Water Company, LLC	Depreciation
453.	2023	SC PSC	Docket No. 2023-388-E	Duke Energy Carolinas	Depreciation
454.	2024	FERC	Docket No. ER24-768-000	Duke Energy Progress	Depreciation
455.	2024	FERC	Docket No. ER24-2057	Duke Energy Carolina	Depreciation
456.	2024	FERC	Docket No. SPP-0007	Evergy Metro, Inc. and Evergy Missouri West, Inc.	Depreciation
457.	2024	NJ BPU	Docket No. WR24010057	Aqua New Jersey, Inc.	Depreciation
458.	2024	ILL CC	Docket No. 24-0044	Aqua Illinois, Inc.	Depreciation
459.	2024	PA PUC	Docket No. R-2024-3046519	NiSource – Columbia Gas of Pennsylvania, Inc.	Depreciation
460.	2024	KY PSC	Case No. 2024-00092	NiSource – Columbia Gas of Kentucky, Inc.	Depreciation
461.	2024	VA SCC	Case No. PUR-2024-00030	NiSource – Columbia Gas of Virginia, Inc.	Depreciation
462.	2024	IA Util Bd	Docket No. RPU-2023-0002	Alliant - Interstate Power and Light Company	Depreciation
463.	2024	PA PUC	Docket No. R-2024-3047068	FirstEnergy Pennsylvania – Metropolitan Edison;	Depreciation
465.	2024	PA PUC	Docket No. R-2024-3046523	Duquesne Light Company	Depreciation
466.	2024	NCUC	Docket No. E-22, Sub 694	Dominion Energy North Carolina	Depreciation
467.	2024	IN URC	IURC Cause No. 46038	Duke Energy Indiana	Depreciation
468.	2024	NJ BPU	Docket Nos. ER23120924 and GF 23120925	Public Service Electric and Gas Company	Depreciation
469.	2024	CO PUC	Docket No. 24-AL-0275E	Black Hills Colorado Electric, LLC	Depreciation
470.	2024	OH PUC	Case No. 24-0468-EL-AIR,	FirstEnergy Ohio	Depreciation
			Case No. 24-0469-EL-ATA,		
			Case No. 24-0470-EL-AAM,		
			Case No. 24-0471-EL-UNC		
171	2024	SD PUC		Northwastern Energy	Doprosistica
471.			Docket No. NG24-005	Northwestern Energy	Depreciation
472.	2024	PA PUC	Docket No. R-2024-3047822	Aqua Pennsylvania, Inc	Depreciation

	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<u>Subject</u>
473. 474. 475. 476. 477. 478. 479. 480. 481.	2024 2024 2024 2024 2024 2024 2024 2024	PA PUC NH PUC VA SCC WV PSC MO PUC PA PUC PA PUC OH PUC MT PSC	Docket No. R-2024-3047824 Docket No. DE 24-070 Case No. PUR-2024-00048 Case No. 24-0678-G-D ER-2024-0319 Docket No. R-2024-3050208 Docket No. RP-24-1106-00 Case No. 24-0832-GA-AIR Docket 2024.05.053	Aqua Pennsylvania Wastewater, Inc Eversource Energy - Public Service of New Hampshire Virginia Natural Gas Company Hope Gas, Inc. Ameren Missouri Newtown Artesian Water Company Adelphia Gateway Centerpoint Energy Ohio Northwestern Energy	Depreciation Depreciation Depreciation Depreciation Depreciation Depreciation Depreciation Depreciation Depreciation Depreciation
482. 483.	2024 2024	MD PSC IN URC	Case No. 9754 IURC Cause No. 46120	NiSource – Columbia Gas of Maryland Northern Indiana Public Service Company LLC	Depreciation Depreciation

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 1 of 382



2023 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC AND COMMON PLANT AS OF DECEMBER 31, 2023

Prepared by:



KyPSC Case No. 2024-00354 Attachment JJS-1 Page 2 of 382

DUKE ENERGY KENTUCKY

Cincinnati, Ohio

2023 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC AND COMMON PLANT AS OF DECEMBER 31, 2023

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC Harrisburg, Pennsylvania

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 3 of 382



Gannett Fleming Valuation and Rate Consultants, LLC

Corporate Headquarters 207 Senate Avenue Camp Hill, PA 17011 P 717.763.7211 | F 717.763.8150

gannettfleming.com

November 12, 2024

Duke Energy Kentucky, Inc. 139 East Fourth Street Cincinnati, OH 45201-0960

Attention Michael O'Keeffe Director Asset Accounting

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the electric and common plant of Duke Energy Kentucky as of December 31, 2023. The attached report presents a description of the methods used in the estimation of depreciation, the summary of annual depreciation accrual rates, the statistical support for the life and net salvage estimates and the detailed tabulations of annual and accrued depreciation.

Respectfully submitted,

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

JOHN J. SPANOS President

MELISSA M. HOWARD Assistant Project Manager

JJS:mle

079381.000

TABLE OF CONTENTS

Executive Summary	
PART I. INTRODUCTION	
Scope	
Plan of Report	
Basis of the Study	
Depreciation	
Service Life and Net Salvage Estimates	

PART II. ESTIMATION OF SURVIVOR CURVES	-1
Survivor Curves	II-2
Iowa Type Curves	II-3
Retirement Rate Method of Analysis	II-9
Schedules of Annual Transactions in Plant Records	II-1C
Schedule of Plant Exposed to Retirement	II-13
Original Life Table	II-15
Smoothing the Original Survivor Curve	II-17

PART III. SERVICE LIFE CONSIDERATIONS	III-1
Field Trips	III-2
Service Life Analysis	III-3
Life Span Estimates	

PART IV. NET SALVAGE CONSIDERATIONS	IV-1
Net Salvage Analysis	IV-2
Net Salvage Considerations	

PART V. CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION	V
Group Depreciation Procedures	V
	V
	V
Average Service Life Procedure	V
Calculation of Annual and Accrued Amortization	V

PART VI. RESULTS OF STUDY	VI-1
Qualification of Results	VI-2
Description of Detailed Tabulations	VI-2

TABLE OF CONTENTS, cont

Table 1. Summary of Estimated Survivor Curve, Net Salvage Perce Original Cost, Book Depreciation Reserve and Calculated Annual Depreciation Accruals Related to	ent,
Electric Plant as of December 31, 2023	VI-4
PART VII. SERVICE LIFE STATISTICS	VII-1
PART VIII. NET SALVAGE STATISTICS	VIII-1
Table 2. Calculation of Terminal and Interim Retirements as a Percent of Total Retirements	VIII-2
Table 3. Calculation of Terminal Net Salvage	VIII-3
PART IX. DETAILED DEPRECIATION CALCULATIONS	IX-1

DUKE ENERGY KENTUCKY, INC.

DEPRECIATION STUDY

EXECUTIVE SUMMARY

Pursuant to Duke Energy Kentucky, Inc.'s ("Duke Energy Kentucky" or "Company") request, Gannett Fleming Valuation and Rate Consultants, LLC ("Gannett Fleming") conducted a depreciation study related to electric and common plant as of December 31, 2023. The purpose of this study was to determine the annual depreciation accrual rates and amounts for book and ratemaking purposes.

The depreciation rates are based on the straight line method using the average service life ("ASL") procedure and were applied on a remaining life basis. The calculations were based on attained ages and estimated average service life and forecasted net salvage characteristics for each depreciable group of assets.

Duke Energy Kentucky's accounting policy has not changed since the last depreciation study was prepared. However, there have been changes in plans of some assets as well as additions of capital investment in all plant categories. For transmission, distribution and general plant, the overall depreciation expense has increased which is the result of plant activity since the approved life and net salvage parameters from the last case were maintained. For generation assets, the probable retirement dates were changed from the last case and new solar facilities were added. Additionally, the survivor curves and weighted net salvage values were updated through 2023.

Gannett Fleming recommends the calculated annual depreciation accrual rates set forth herein apply specifically to electric and common plant in service as of December 31, 2023 as summarized by Table 1 of the study. Supporting analysis and calculations are provided within the study. The study results set forth an annual depreciation expense of \$78.4 million when applied to depreciable plant balances as of December 31, 2023. The results are summarized at the functional level as follows:

FUNCTION		RIGINAL COST AS OF CEMBER 31, 2023	PROPOSED RATE	PROPOSED EXPENSE	
Common Plant	\$	29,339,582.11	4.78	\$ 1,402,344	
Electric Plant					
Steam Production Plant	\$	954,057,985.89	4.32	\$41,173,928	
Other Production Plant		366,084,364.19	3.41	12,471,194	
Transmission Plant		134,268,068.96	2.21	2,966,788	
Distribution Plant		674,160,708.53	2.61	17,587,558	
General Plant		31,984,096.53	8.71	2,786,196	
Common Plant Reserve Amortization		-	-	(18,096)	
General Plant Reserve Amortization			-	7,436	
Total	<u>\$2</u>	2 <u>,189,894,806.21</u>	3.58	<u>\$78,377,348</u>	

SUMMARY OF ORIGINAL COST, ACCRUAL RATES AND AMOUNTS

PART I. INTRODUCTION

DUKE ENERGY KENTUCKY, INC. DEPRECIATION STUDY

PART I. INTRODUCTION

SCOPE

This report sets forth the results of the depreciation study for Duke Energy Kentucky, Inc. ("Company"), to determine the annual depreciation accrual rates and amounts for book purposes applicable to the original cost of electric and common plant as of December 31, 2023. The rates and amounts are based on the straight line remaining life method of depreciation. This report also describes the concepts, methods and judgments which underlie the recommended annual depreciation accrual rates related to electric and common plant in service as of December 31, 2023.

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 2023 for generation accounts and through 2021 for all other asset classes, 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 lives and net salvage estimates used for other electric companies.

PLAN OF REPORT

Part I, Introduction, contains statements with respect to the plan of the report, and the basis of the study. Part II, Estimation of Survivor Curves, presents descriptions of the considerations and the methods used in the service life and net salvage studies. Part III, Service Life Considerations, presents the factors and judgment utilized in the average service life analysis. Part IV, Net Salvage Considerations, presents the judgment utilized for the net salvage study. Part V, Calculation of Annual and Accrued Depreciation, describes the procedures used in the calculation of group depreciation. Part VI, Results of Study, presents summaries by depreciable group of annual depreciation accrual rates and amounts, as well as composite remaining lives. Part VII, Service Life Statistics presents the statistical analysis of service life estimates, Part VIII, Net Salvage Statistics sets forth the statistical indications of net salvage percents, and Part IX, Detailed Depreciation Calculations presents the detailed tabulations of annual depreciation.

BASIS OF THE STUDY

Depreciation

Depreciation, in public utility regulation, is 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 are known to be in current operation and against which the utility is not protected by insurance. Among causes to be given consideration are wear and tear, deterioration, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand, and the requirements of public authorities.

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 electric 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.

For most 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 Plant accounts, the annual depreciation is based on amortization accounting. Both types of calculations were based on original cost, attained ages, and estimates of service lives and net salvage.

The straight line method, average service life procedure is a commonly used depreciation calculation procedure that has been accepted in Kentucky. Amortization accounting is used for certain general plant accounts because of the disproportionate plant accounting effort required when compared to the minimal original cost of the large number of items in these accounts. An explanation of the calculation of annual and accrued amortization is presented beginning on page V-3 of the report.

Service Life and Net Salvage Estimates

The service life and net salvage estimates used in the depreciation and amortization calculations were based on informed judgment which incorporated a review of management's plans, policies and outlook, a general knowledge of the electric utility industry, and comparisons of the service life and net salvage estimates from our studies of other electric utilities. The use of survivor curves to reflect the expected dispersion of retirement provides a consistent method of estimating depreciation for electric plant. Iowa type survivor curves were used to depict the estimated survivor curves for the plant accounts not subject to amortization accounting.

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.

PART II. ESTIMATION OF SURVIVOR CURVES

PART II. ESTIMATION OF SURVIVOR CURVES

The calculation of annual depreciation based on the straight line method requires the estimation of survivor curves and the selection of group depreciation procedures. The estimation of survivor curves is discussed below and the development of net salvage is discussed in later sections of this report.

SURVIVOR CURVES

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.

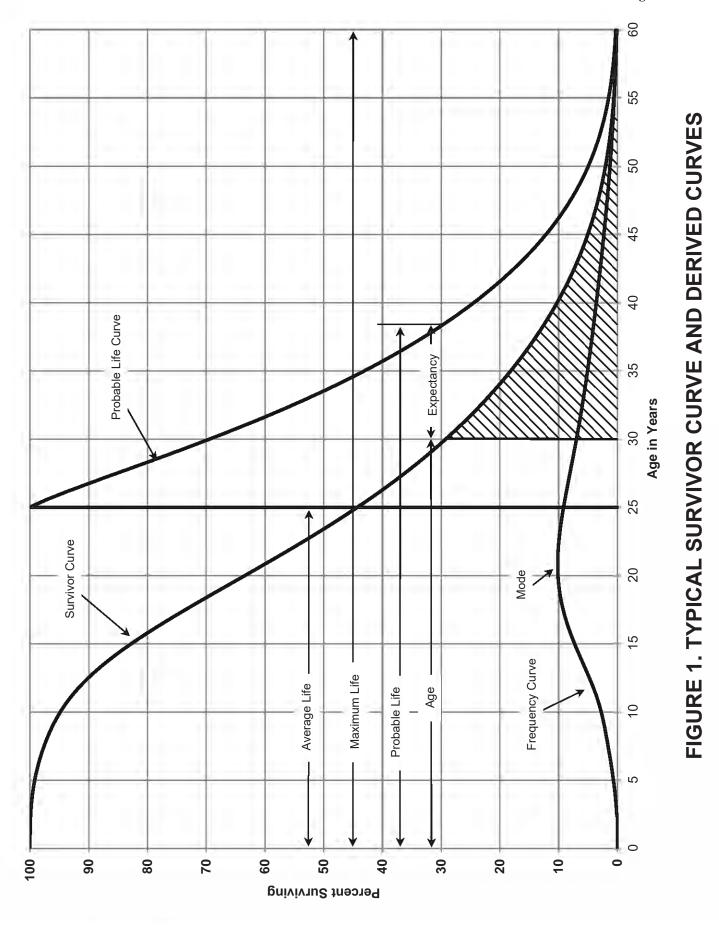
The survivor curve graphically depicts the amount of property existing at each age throughout the life of an original group. From the survivor curve, the average life of the group, the remaining life expectancy, the probable life, and the frequency curve can be calculated. In Figure 1, a typical smooth 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. For example, in Figure 1, the remaining life at age 30 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. It is derived by obtaining the differences between the amount of property surviving at the beginning and at the end of each interval.

This study has incorporated the use of lowa curves developed from a retirement rate analysis of historical retirement history. A discussion of the concepts of survivor curves and of the development of survivor curves using the retirement rate method is presented below.

Iowa Type Curves

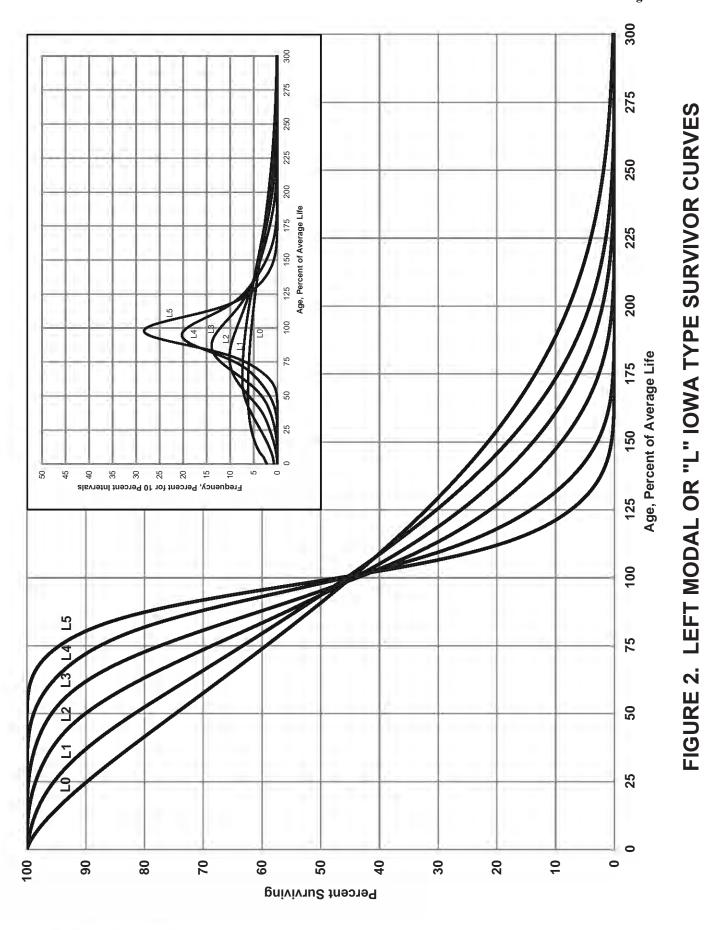
The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized survivor curves known as the lowa type curves. There are four families in the lowa system, labeled in accordance with the location of the modes of the retirements (or the portion of the frequency curve with the highest level of 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 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 numbers represent the relative heights of the modes of the frequency curves within each family. A higher number designates a higher mode curve.

The lowa curves were developed at the lowa 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.

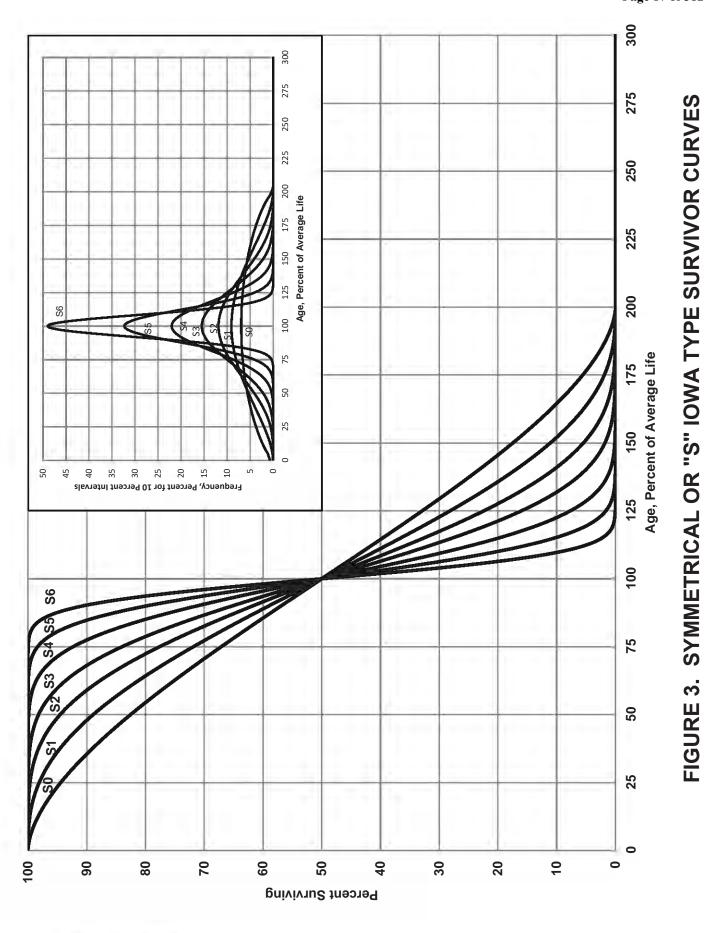


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KyPSC Case No. 2024-00354 Attachment JJS-1 Page 16 of 382

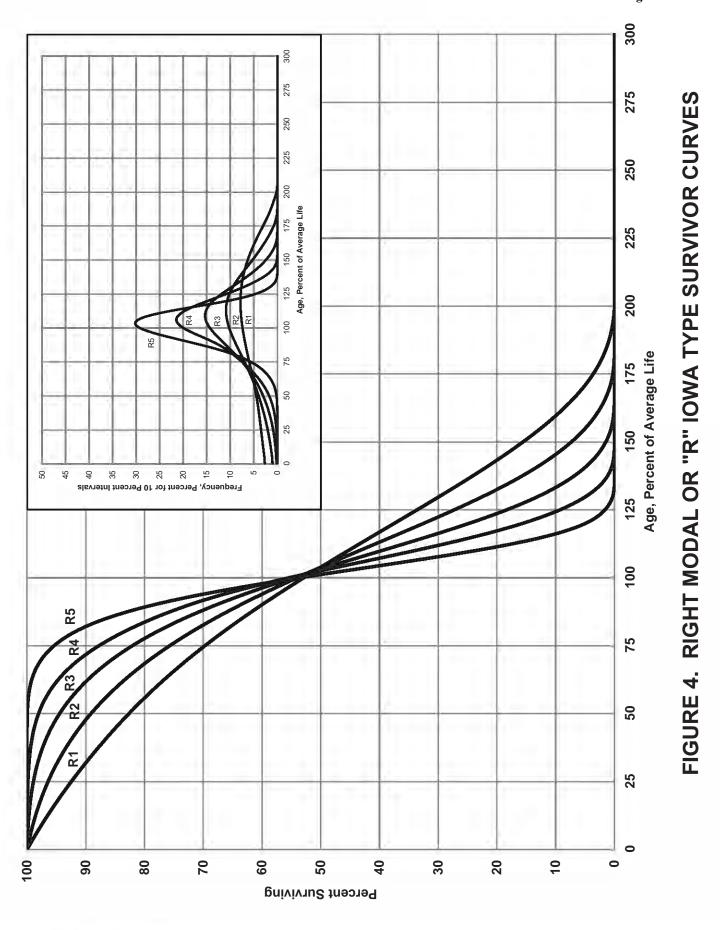


KyPSC Case No. 2024-00354 Attachment JJS-1 Page 17 of 382

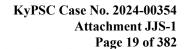


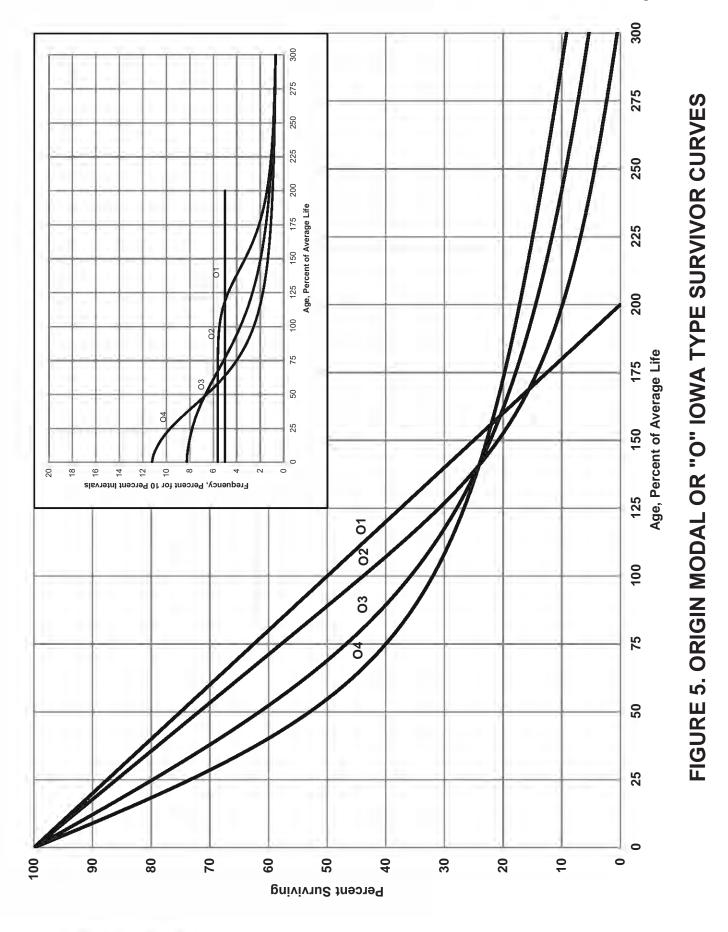
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KyPSC Case No. 2024-00354 Attachment JJS-1 Page 18 of 382



GANNETT FLEMING





These curve types have also been presented in subsequent Experiment Station bulletins and in the text, "Engineering Valuation and Depreciation."¹ In 1957, Frank V. B. Couch, Jr., an Iowa State College graduate student, submitted a thesis presenting his development of the fourth family consisting of the four O 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 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,"² "Engineering Valuation and Depreciation,"³ and "Depreciation Systems."⁴

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 beginning of the age intervals during the same period. The period of observation is referred to as the <u>experience band</u>. The band of years which represent the installation dates of the property exposed to retirement during the experience band is referred to as the <u>placement band</u>. 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.

¹Marston, Anson, Robley Winfrey and Jean C. Hempstead. Engineering Valuation and Depreciation, 2nd Edition. New York, McGraw-Hill Book Company. 1953.

²Winfrey, Robley, <u>Statistical Analyses of Industrial Property Retirements</u>. Iowa State College, Engineering Experiment Station, Bulletin 125. 1935.

³Marston, Anson, Robley Winfrey, and Jean C. Hempstead, Supra Note 1.

⁴Wolf, Frank K. and W. Chester Fitch. <u>Depreciation Systems</u>. 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 2014-2023 for which there were placements during the years 2009-2023. 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-11 and II-12. 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 2009 were retired in 2014. 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 $4\frac{1}{2}$ -5½ is the sum of the retirements entered on Schedule 1 immediately above the stair step line drawn on the table beginning with the 2014 retirements of 2009 installations and ending with the 2023 retirements of the 2018 installations. Thus, the total amount of 143 for age interval $4\frac{1}{2}$ -5½ equals the sum of:

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

SCHEDULE 1. RETIREMENTS FOR EACH YEAR 2014-2023	SUMMARIZED BY AGE INTERVAL		

Placement Band 2009-2023

	Age	Interval	(13)	131⁄2-141⁄2	12½-13½	111/2-121/2	10½-11½	9½-10½	81⁄2-91⁄2	71/2-81/2	61/2-71/2	51/2-61/2	41/2-51/2	31/2-41/2	21/2-31/2	11/2-21/2	1/2-11/2	0-1⁄2	
	Total During	<u>Age Interval</u>	(12)	26	44	64	83	93	105	113	124	131	143	146	150	151	153	80	1,606
		2023	(11)	26	19	18	17	20	20	20	19	19	20	23	25	25	24	13	308
		2022	(10)	25	22	22	16	19	16	18	19	19	19	22	22	23	11		273
		2021	(6)	24	21	21	15	17	15	16	17	17	17	20	20	11			231
Dollars		2020	(8)	23	20	19	14	16	14	15	16	16	16	18	6				196
Retirements, Thousands of Dollars	During Year	2019	(2)	16	18	17	13	14	13	14	15	15	14	œ					157
nents, Tho	Durinç	2018	(9)	14	16	16	11	13	12	13	13	13	7						128
Retirer		2017	(2)	13	15	14	11	12	1	12	12	9							106
		<u>2016</u>	(4)	12	13	13	10	1	10	1	9								86
		2015	(3)	11	12	12	6	10	6	2									68
		2014	(2)	10	11	11	ø	б	4										53
	Year	<u>Placed</u>	(1)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 22 of 382

Experience Band 2014-2023

Experience Band 2014-2023

Placement Band 2009-2023

			Acquisiti	Acquisitions, Transfers and Sales, Thousands of Dollars	sfers and {	Sales, Tho Voor	ousands c	of Dollars				
Vear					Duilig real	I Edi					Total During	Ane
<u>Placed</u> (1)	<u>2014</u> (2)	<u>2015</u> (3)	<u>2016</u> (4)	<u>2017</u> (5)	<u>2018</u> (6)	<u>2019</u> (7)	<u>2020</u> (8)	<u>2021</u> (9)	<u>2022</u> (10)	<u>2023</u> (11)	Age Interval (12)	Interval (13)
2009		ı	ı	ı	ı	I	60 ^a	ı		ı		13½-14½
2010	ı	ı	,	,	ı	ı	ı	ı	ı			121/2-131/2
2011	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı		111/2-121/2
2012	ı	ı			·	·	·	(5) ^b	ı		60	101/2-111/2
2013	ı	ı	,	ı	ı		·	6 ^a	ı	·		91⁄2-101⁄2
2014	ı	ı	·		ı	ı	ı	ı	ı		(2)	81⁄2-91⁄2
2015		ı	,		ı	ı	ı	ı	ı		9	71/2-81/2
2016			,	,	ı	ı	,	ı	ı			61/2-71/2
2017				,	ı	ı	ı	(12) ^b	ı			51/2-61/2
2018					ı	ı	ı	ı	22^{a}	ı		41/2-51/2
2019						·	·	(19) ^b	ı		10	31/2-41/2
2020							ı	ı	·			21/2-31/2
2021									·	(102) ^c	(121)	11/2-21/2
2022									ı	ı	1	1/2-11/2
2023												0-1⁄2
Total -		ı		'	ľ	·	60	(30)	22	(102)	(20)	
^a Transf ^b Transf ^c Sale w Parenth	^a Transfer Affecting Exposi ^b Transfer Affecting Exposi ^c Sale with Continued Use Parentheses Denote Credi	^a Transfer Affecting Exposures at Be ^b Transfer Affecting Exposures at En ^c Sale with Continued Use Parentheses Denote Credit Amount.	^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.	ng of Year ⁄ear								

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 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-14. The surviving plant at the beginning of each year from 2014 through 2023 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 <u>exposed</u> to retirement in this group <u>at the beginning of the year</u> in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the <u>beginning of the following year</u>. 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 accurse for the installation year 2019 are calculated in the following manner:

Exposures at age 0	= amount of addition	= \$750,000
Exposures at age $\frac{1}{2}$	= \$750,000 - \$ 8,000	= \$742,000
Exposures at age 11/2	2 = \$742,000 - \$18,000	= \$724,000
Exposures at age 21/2	2 = \$724,000 - \$20,000 - \$19,000	= \$685,000
Exposures at age 31/2	2 = \$685,000 - \$22,000	= \$663,000

1 2009-2023	Ade	Interval	(13)	13½-14½	121/2-131/2	111/2-121/2	10½-11½	9½-10½	81⁄2-91⁄2	71/2-81/2	61/2-71/2	51⁄2-61⁄2	41⁄2-51⁄2	31/2-41/2	21/2-31/2	11/2-21/2	1/2-11/2	0-1⁄2	
Placement Band 2009-2023	Total at Beginning of	Age Interval	(12)	167	323	531	823	1,097	1,503	1,952	2,463	3,057	3,789	4,332	4,955	5,719	6,579	7,490	44,780
		2023	(11)	167	131	162	226	261	316	356	412	482	609	663	799	926	1,069	1,220ª	7,799
		2022	(10)	192	153	184	242	280	332	374	431	501	628	685	821	949	1,080 ^a		6,852
	L	2021	(6)	216	174	205	262	297	347	390	448	530	623	724	841	960a			6,017
Jollars 1 of the Yea	2020	(8)	239	194	224	276	307	361	405	464	546	639	742	850 ^a				5,247	
	Exposures, Thousands of Dollars I Survivors at the Beginning of the	2019	(2)	195	212	241	289	321	374	419	479	561	653	750ª					4,494
	Exposures, Thousands of Dollars Survivors at the Beginning of the Year	2018	(9)	209	228	257	300	334	386	432	492	574	660 ^a						3,872
	Expos Annual Surv		(2)	222	243	271	311	346	397	444	504	580 ^a							3,318
		2016	(4)	234	256	284	321	357	407	455	510ª								2,824
2014-2023		2015	(3)	245	268	296	330	367	416	460 ^a									2,382
Experience Band 2014-2023		2014	(2)	255	279	307	338	376	420a										1,975
Experie	Year -	Placed -	(1)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total

GANNETT FLEMING

SCHEDULE 3. PLANT EXPOSED TO RETIREMENT JANUARY 1 OF EACH YEAR 2014-2023 SUMMARIZED BY AGE INTERVAL

Duke Energy Kentucky December 31, 2023

^aAdditions during the year

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 25 of 382

For the entire experience band 2014-2023, the total exposures at the beginning of an age interval are obtained by summing diagonally in a manner similar to the summing 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 $4\frac{1}{2}-5\frac{1}{2}$, 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-16, 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 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 4 ¹ / ₂	=	3,789,000			
Retirements from age $4\frac{1}{2}$ to $5\frac{1}{2}$	=	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 2014-2023

Placement Band 2009-2023

(Exposure and Retirement Amounts are in Thousands of Dollars)

Age at	Exposures at	Retirements	5 / /	. .	Percent Surviving at
Beginning of Interval	Beginning of Age Interval	During Age Interval	Retirement Ratio	Survivor Ratio	Beginning of Age Interval
(1)	(2)	(3)	(4)	(5)	(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	<u>44,780</u>	<u>1,606</u>			

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% 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 lowa 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 lowa 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 lowa 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 thet 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 lowa curve would be selected as the most representative of the plotted survivor characteristics of the group.

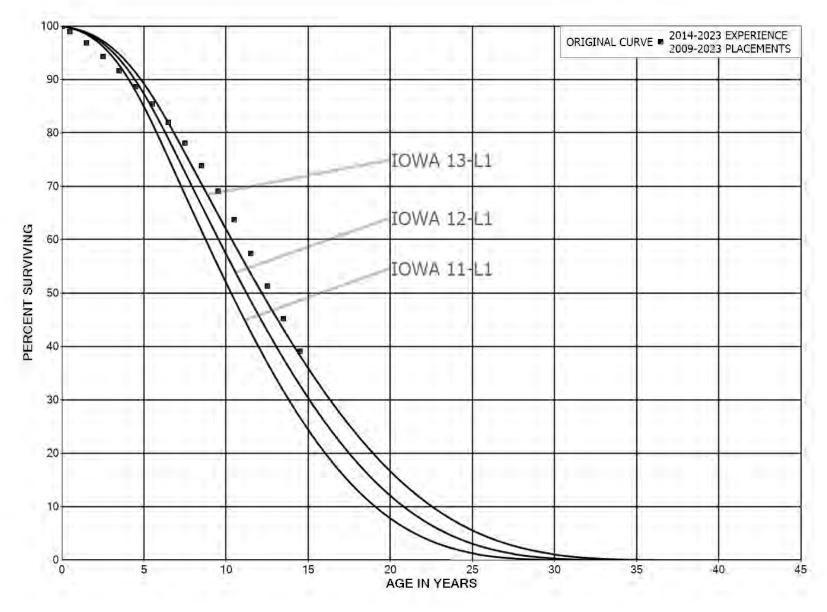


FIGURE 6. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

II-18

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 29 of 382

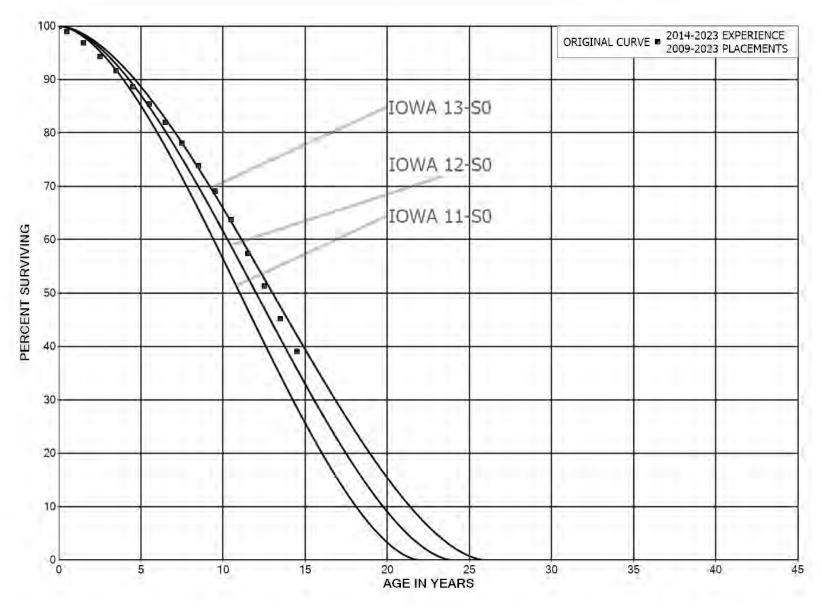


FIGURE 7. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN S0 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES

Duke Energy Kentucky December 31, 2023

II-19

GANNETT FLEMING

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 30 of 382

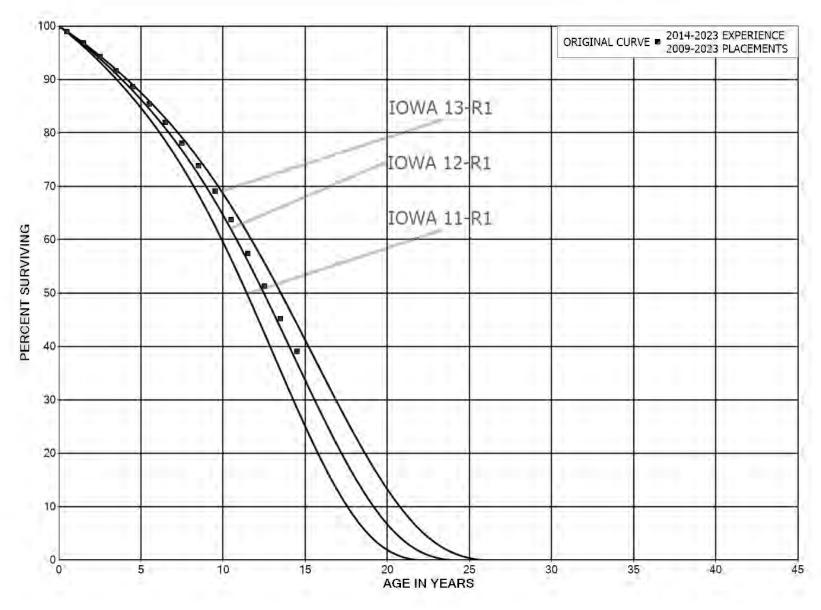


FIGURE 8. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN R1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES

II-20

GANNETT FLEMING

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 31 of 382

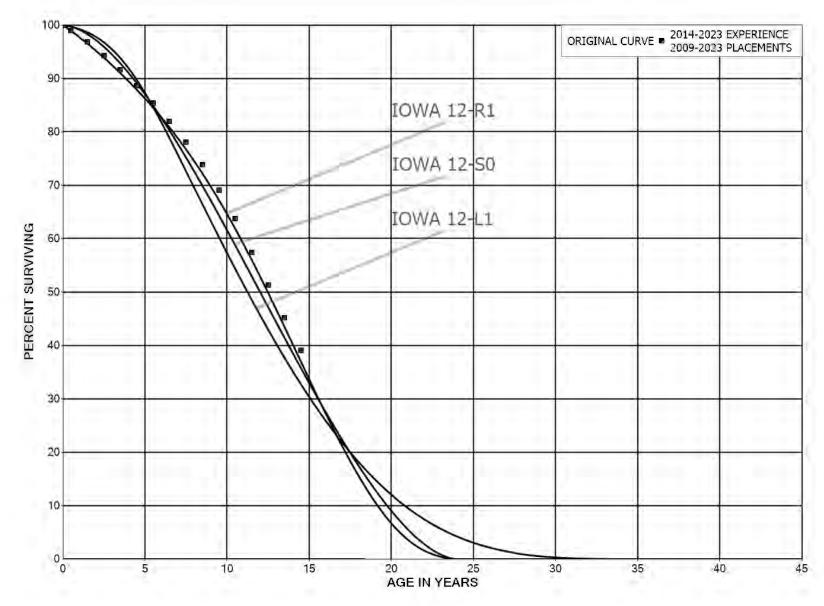


FIGURE 9. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1, S0 AND R1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 32 of 382

PART III. SERVICE LIFE CONSIDERATIONS

PART III. SERVICE LIFE CONSIDERATIONS

FIELD TRIPS

In order to be familiar with the operation of the Company and observe representative portions of the plant, field trips have been conducted. 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 retirements are obtained during field trips. This knowledge and information were incorporated in the interpretation and extrapolation of the statistical analyses.

The following is a list of the locations visited during the most recent field trips.

<u>November 7, 2022</u> Woodsdale Generating Station Woodsdale Substation East Bend Generating Plant

January 30, 2017 Donaldson Substation Constance Substation Crescent Substation Erlanger Operations Center East Bend Generating Plant

June 17-18, 2013 Miami Fort Generating Substation East Bend Generating Station Woodsdale Generating Station Crescent Substation Hebron Substation Richwood Substation Limaburg Substation

SERVICE LIFE ANALYSIS

The service life estimates were based on informed 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 many 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 71 percent of depreciable plant. Generally, the information external to the statistics led to little or 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 VII-2.

STEAM PRODUCTION PLANT

311.00	Structures and Improvements
312.00	Boiler Plant Equipment
314.00	Turbogenerator Units
315.00	Accessory Electric Equipment
316.00	Miscellaneous Power Plant Equipment

OTHER PRODUCTION PLANT

346.00 Miscellaneous Power Plant Equipment

TRANSMISSION PLANT

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

DISTRIBUTION PLANT

- 361.00 Structures and Improvements
- 362.00 Station Equipment
- 362.20 Station Equipment Major
- 364.00 Poles, Towers and Fixtures
- 365.00 Overhead Conductors and Devices

367.00	Underground Conductors and Devices
368.00	Line Transformers
368.20	Line Transformers – Customer
369.20	Services – Overhead
370.11	Meters and Metering Equipment
371.20	Company-Owned Outdoor Lighting
373.10	Street Lighting – Overhead
373.20	Street Lighting – Boulevard
373.30	Street Lighting – Customer Poles
GENERAL PLA	NT

392.00	Transportation Equipment
392.10	Transportation Equipment – Trailers
396.00	Power Operated Equipment

The transmission, distribution and general plant life analysis was the same analysis that was performed and approved in the last case. Account 364.00, Poles, Towers and Fixtures, and Account 365.00, Overhead Conductors and Devices are used to illustrate the manner in which the study was conducted for the groups in the preceding list. Account 364.00 represents 4 percent, and Account 365.00 represents 7 percent of the total depreciable plant. Aged plant accounting data have been compiled for the years 1956 through 2021. 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 for Account 364.00, Poles, Towers and Fixtures, is the 55-R0.5 and is based on the statistical indication for the period 1956 through 2021. The 55-R0.5 is an excellent fit of the significant portion of the original survivor curve as set forth on page VII-101 consistent with management outlook for a continuation of historical experience, and at the upper end of the typical service life range of 40 to 55 years for distribution poles and fixtures. The previous estimate for this account was a 54-R0.5 survivor curve.

The survivor curve estimate for Account 365.00, Overhead Conductors and Devices, is based on the statistical indications for the period 1956-2021 and 1992-2021. The Iowa 53-O1 is an excellent fit of the original survivor curve. The 53 year service life is within the typical service life range of 40 to 55 years for conductors. The 53-year life reflects the Company's continued practices of steady retirements for all vintages. The previous estimate was an Iowa 52-O1 survivor curve.

Life Span Estimates

The life span technique was used for the Company's power production accounts, as well as major structures in Account 190.00. The life span procedure is appropriate for these accounts since many of the assets within the plant will be retired concurrently. Probable retirement dates were estimated for each generating facility and structure. Life spans for each steam and other production plant 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, and the estimate of the operating partner, if applicable.

The depreciable life span estimate for steam, base-load units at East Bend is 57 years. The typical range of life spans for such units in the past has been 50 to 65 years, however, recent life expectations have been for less than 50 years. This life span represents the expected depreciable life of the facility under its current configuration. Future capital expenditures can extend a facility's depreciable life, however, such changes to depreciable life would not be prudent until the capital expenditures are actually put into plant in service. A life span of 48 years was estimated for the combustion turbines at Woodsdale. Life span estimates are typically 35 to 45 years for combustion turbines which are used primarily as peaking units, however these units have had upgrades to extend the overall life. The life span for solar units is 30 years.

The life span and probable retirement dates used for steam and other production plants are as follows:

Depreciable Group	Major Year in Service	Depreciable <u>Life Date</u>	<u>Depreciable</u> <u>Life Span</u>
Steam Production Plant East Bend	1981	2038	57
Other Production Plant			
Woodsdale	1992, 2017	2040	48,23
Crittenden	2017	2047	30
Walton	2017	2047	30
Aero	2023	2053	30

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

Similar studies were performed for the remaining plant accounts. Each of the judgments represented a consideration of statistical analyses of aged plant activity, management's outlook for the future, and the typical range of lives used by other electric companies.

The selected amortization periods for other General Plant accounts are described in the section "Calculated Annual and Accrued Amortization."

PART IV. NET SALVAGE CONSIDERATIONS

PART IV. NET SALVAGE CONSIDERATIONS

NET SALVAGE ANALYSIS

The estimates of net salvage by account were based in part on historical data compiled for the years 1990 through 2021 for transmission, distribution and general plant which are the same analysis that was approved in the last case. The weighted net salvage analysis for generation assets was updated through 2023. Cost of removal and gross 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 gross salvage data, expectations with respect to future removal requirements and markets for retired equipment and materials.

The analyses of historical cost of removal and gross 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 1990 through 2021 for transmission, distribution and general plant contributed significantly toward the net salvage estimates for 19 plant accounts, representing 30 percent of the depreciable plant. Additionally, statistical analyses of historical data through 2023 for generation plant contributed toward the net salvage estimates for 9 plant accounts, representing 45 percent of the depreciation plant, as follows:

COMMON PLANT

190.00 Structures and Improvements

STEAM PRODUCTION PLANT

- 311.00 Structures and Improvements
- 312.00 Boiler Plant Equipment
- 314.00 Turbogenerator Units
- 315.00 Accessory Electric Equipment
- 316.00 Miscellaneous Power Plant Equipment

OTHER PRODUCTION PLANT

- 341.00 Structures and Improvements
- 342.00 Fuel Holders, Producers and Accessories
- 345.00 Accessory Electric Equipment
- 346.00 Miscellaneous Power Plant Equipment

TRANSMISSION PLANT

- 353.00 Station Equipment
- 353.20 Station Equipment Major
- 355.00 Poles and Fixtures
- 356.00 Overhead Conductors and Devices

DISTRIBUTION PLANT

- 362.00 Station Equipment
- 362.20 Station Equipment Major
- 364.00 Poles, Towers and Fixtures
- 365.00 Overhead Conductors and Devices
- 367.00 Underground Conductors and Devices
- 368.00 Line Transformers
- 368.20 Line Transformers Customer
- 369.10 Services Underground
- 369.20 Services Overhead
- 370.11 Meters and Metering Equipment
- 373.10 Street Lighting Overhead
- 373.20 Street Lighting Boulevard
- 373.30 Street Lighting Customer Poles

GENERAL PLANT

392.10 Transportation Equipment - Trailers

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 1990 through 2021 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 1990-1992 through 2019-2021 periods were computed to smooth the annual amounts.

Cost of removal was high during the early 1990s and in the years 1997, 2003, 2005, 2010, 2018 and 2021. The high removal cost in the early 1990s related to practices during that time. The high removal in 2003 and 2005 related to location of the assets. The high cost of removal in 2010 related to the high labor needed to remove assets due to the events of the flood. The high removal in 2018 and 2021 related to the high labor needed to the high labor needed to replace conductor. Cost of removal for the most recent five years averaged 81 percent.

Gross salvage has diminished drastically since 1999. The most recent five-year average of 1 percent gross salvage reflects recent trends of minimal salvage value for conductor.

The net salvage percent based on the overall period 1990 through 2021 is 43 percent negative net salvage. The most common range of estimates made by other electric companies for overhead conductor is negative 20 to negative 50 percent. The net salvage estimate for overhead conductor is negative 40 percent, is within the range of estimates for other electric companies, reflects the trend to higher cost of removal and reflects the overall experience for negative net salvage, but does not consider all of the higher cost of removal amounts to be common.

The overall net salvage estimates for the Company's production facilities, for which the life span method is used, is based on estimates of both final net salvage and interim net salvage. Final net salvage is the net salvage experienced at the end of a production plant's life span. Interim net salvage is the net salvage experienced for interim retirements that occur prior to the final retirement of the plant. The final net salvage estimates in the study were based on decommissioning analyses performed by various engineering organizations. The interim net salvage estimates were based in part on analysis of historical interim retirement and net salvage data. Based on informed judgment that incorporated these interim net salvage analyses for each plant account, an interim net salvage estimate of negative 20 percent was used for steam plant accounts, a negative 7 percent estimate was used for other production plant and a negative 5 percent for solar production plant accounts.

The interim survivor curve estimates for each account and production facility were used to calculate the percentage of plant expected to be retired as interim retirements and final retirements. These are shown on Table 2 in the Net Salvage Statistics section on page VIII-2. These percentages were used to determine the weighted net salvage estimate for each account and production facility based on the interim and final net salvage estimates. These calculations, as well as the estimated final net salvage amounts and interim net salvage percents, are shown on Table 2 of the Net Salvage Statistics section on page VIII-2. The calculation of final (terminal) net salvage by location is presented on Table 3 on page VIII-3.

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

Generally, the net salvage estimates for the general plant accounts were zero percent, consistent with amortization accounting.

PART V. CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

PART V. CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

GROUP DEPRECIATION PROCEDURES

A group procedure for depreciation is appropriate when considering more than a single item of property. Normally 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. In the average service life procedure, the rate of annual depreciation is based on the average life or average remaining life of the group, and this rate is applied to the surviving balances of the group's cost. A characteristic of this procedure is that the cost of plant retired prior to average life is not fully recouped at the time of retirement, whereas the cost of plant retired subsequent to average life is more than fully recouped. Over the entire life cycle, the portion of cost not recouped prior to average life is balanced by the cost recouped subsequent to average life.

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:

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

Remaining Life Annual Accruals

For the purpose of calculating remaining life accruals as of December 31, 2023, 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, 2023, 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 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 period and service lives used by other utilities, and the service life estimates previously used for the asset under depreciation accounting.

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

	<u>Account</u>	Amortization Period, <u>Years</u>
COMMON PLANT		
191.00	Office Furniture and Equipment	20
191.10	Electric Data Processing	5
194.00	Tools, Shop and Garage Equipment	25
197.00	Communication Equipment	15
198.00	Miscellaneous Equipment	15
ELECTRIC PLANT		
391.00	Office Furniture and Equipment	20
391.10	Electric Data Processing	5
394.00		25
397.00	Communication Equipment	15

For the purpose of calculating annual amortization amounts as of December 31, 2023, the book depreciation reserve for each plant account or subaccount is assigned or allocated to vintages. The book reserve assigned to vintages with an age greater than the amortization period is equal to the vintage's original cost. The remaining book 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 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 VI. RESULTS OF STUDY

PART VI. RESULTS OF STUDY

QUALIFICATION OF RESULTS

The calculated annual and accrued depreciation 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 net 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 and common plant in service as of December 31, 2023. For most plant accounts, the application of such rates to future balances that reflect additions subsequent to December 31, 2023, is reasonable for a period of three to five years.

DESCRIPTION OF DETAILED TABULATIONS

Table 1 sets forth a summary of the results of the study as applied to the original cost of electric and common plant as of December 31, 2023. These results are presented on pages VI-4 through VI-6 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 and common plant.

The service life estimates were based on judgment that incorporated statistical analysis of retirement data, discussions with management and consideration of estimates made for other electric utilities. The results of the statistical analysis of service life are presented in the section beginning on page VII-2, within the supporting documents of this report.

For each depreciable group analyzed by the retirement rate method, a chart depicting the original and estimated survivor curves followed by a tabular presentation of the original life table(s) plotted on the chart. The survivor curves estimated for the depreciable groups are shown as dark smooth curves on the charts. Each smooth survivor curve is denoted by a numeral followed by the curve type designation. The numeral used is the average life derived from the entire curve from 100 percent to zero percent surviving. The titles of the chart indicate the group, the symbol used to plot the points of the original life table, and the experience and placement bands of the life tables which were plotted. The experience band indicates the range of years for which retirements were used to develop the stub survivor curve. The placements indicate, for the related experience band, the range of years of installations which appear in the experience.

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

The tables of the calculated annual depreciation applicable to depreciable assets as of December 31, 2023 are presented in account sequence starting on page IX-2 of the supporting documents. The tables indicate the estimated survivor curve and net 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.

DUKE ENERGY KENTUCKY TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2023	
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														I age t	
COMPOSITE REMAINING LIFE (10)=(7)/(8)	36.6 17.4 25.0	16.4 3.5 9.8 7.5	19.7	4 4 7 0 0 0 1 4 4 7 0 0 0 0 1 4 4 4 1 4 1 4 1 4 1 4 1 4 1 4	14.0	15.8	27.4	15.5 13.9 13.4	17.6 17.6 23.5	14.5	20.1 20.1 26.1	15.0	14.8	69.8 61.0 22.3 48.7 51.7 81.3 61.3 61.3	45.8
TED 2RUAL RATE (9)=(8)/(5)	2.95 2.63 4.17	5.00 20.00 4.00 6.67 6.67	4.78	5.41 3.87 4.18 5.24 4.21	4.32	1.74	4.08	5.93 6.67 2.76	5.23 5.29 4.76	2.67	4.80 4.85 4.30	2.80	3.41	1.30 1.76 2.23 2.50 2.45 2.45 2.23	2.21
CALCULATED ANNUAL ACCRUAL AMOUNT RATE (8) (9)=(8)/(5)	341,764 534,624 3.260 879,648	78,018 1,960 4,557 431,807 6,354	1,402,344	10,142,401 21,812,639 381,322 6,221,832 1,582,869 1,055,865	41,173,928	638,975	<u>58,911</u> 58,911	3,646,496 701,211 5,900,931	233,959 317,600 38,478 590,037	529,617	33,007 50,295 164,512 247,814	157,202	12,471,194	119,625 106,127 682,875 682,875 241,163 203,280 203,280 203,469 1,028,938 334,737 41,574	2,966,788
FUTURE ACCRUALS (7)	12,507,948 9,323,209 132,150 21,963,307	1,276,724 6,861 47,614 47,405 47,405	27,562,737	149,066,246 305,701,367 3,661,244 80,182,238 22,802,885 14,913,781	576,327,761	10,085,806	1,615,928 1,615,928	56,695,871 9,768,482 79,223,451	4,108,315 5,577,054 905,004 10,590,373	7,676,862	664,761 1,012,947 4,297,042 5,974,750	2,363,179	183,994,702	8,345,458 6,471,119 28,892,243 28,892,243 28,473,938 9,891,165 5,793,333 5,793,333 5,793,333 5,2665,355 15,728,719 2,547,109	135,808,439
BOOK DEPRECIATION RESERVE (6)	217,951 1,006,857 4,050 1,228,858	283,644 2,937 66,236 2,255,652 47,896	3,885,223	57,208,047 314,969,264 4,914,052 50,324,279 32,168 32,168 12,084,713	472,278,494	29,538,890	29,703 29,703	9,686,255 1,578,034 151,533,994	1,213,704 1,629,864 <u>16,991</u> 2,860,559	13,775,207	153,609 231,670 66,182 451,461	3,699,841	213,153,944	844,506 466,883 4,828,973 5,727,67 5,727,333 2,702,333 2,942,651 1,841,615 3,013,865 3,013,865 164,395	21,632,717
ORIGINAL COST AS OF DECEMBER 31, 2023 (5)	11,568,999,57 9,390,969,57 123,818,00 21,083,787,08	1,560,367.88 9,798.43 113,849,90 6,476,478.02 95,300.80	29,339,582.11	187, 522, 084, 38 564, 246, 027, 33 8, 575, 295, 58 118, 642, 288, 46 49, 973, 568, 19 25, 098, 530, 37	954,057,985.89	36,689,533.13	1,443,536.06 1,443,536.06	61,464,931.99 10,506,033.71 213,664,301.34	4,472,284,81 6,005,765,45 808,767.37 11,286,817.63	19,863,026.64	687,705.87 1,037,180.86 3,827,389.27 5,552,276.00	5,613,907.69	366,084,364.19	9,189,963,91 6,033,045,57 30,655,651,07 9,655,651,07 9,655,651,07 9,637,631,67 11,448,854,29 7,669,076,50 41,928,438,79 14,993,323,44 14,993,323,44 14,993,323,44	134,268,068.96
NET SALVAGE PERCENT (4)	(10) (10)			00000000000000000000000000000000000000		(8)	(14)	(8) (8) (8) (8)	(19) (20) (14)	(8)	(19) (20) (14)	(8)		0 (3 (3 (3 (3 (3 (3 (3 (3 (3 (3	
SURVIVOR CURVE (3)	75-R0.5 * 75-R0.5 * 45-R1.5	20-SQ 5-SQ 25-SQ 15-SQ 15-SQ		65-S1 * 50-S0 * 15-R3 * 35-S0.5 * 55-S0 *		60-R4 *	35-R3 *	40-S1.5 * 25-S1 * 38-S0.5 *	25-S2.5 * 25-S2.5 * 25-S2.5 *	45-S1 *	30-S2.5 * 30-S2.5 * 30-S2.5 *	45-R1.5 *		75.R4 70.R2.5 50.R1 50.R3 60.R2.5 60.R2.5 60.R2.5 55.R1 55.R1 65.R3	
PROBABLE RETIREMENT DATE (2)	06-2065 06-2042			12-2038 12-2038 12-2038 12-2038 12-2038 12-2038		06-2040	06-2053	06-2040 06-2040 06-2040	06-2047 06-2047 06-2053	06-2040	06-2047 06-2047 06-2053	06-2040			
ACCOUNT (1)	COMMON PLANT STRUCTURES AND IMPROVEMENTS ERLANGER OPERATIONS CENTER KENTUCKY SERVICE BUILDING - 19TH AND AUGUSTINE MINOR STRUCTURES TOTAL STRUCTURES AND MPROVEMENTS	OFFICE FURNITURE AND EQUIPMENT ELECTRONIC DATA PROCESSING TOOLS, SHOP AND GARAGE EQUIPMENT OCMUNICATION EQUIPMENT MISCELLANEOUS EQUIPMENT	TOTAL COMMON PLANT ELECTRIC PLANT	STEAM PRODUCTION PLANT STRUCTURES AND IMPROVEMENTS BOILER PLANT EQUIPMENT BOILER PLANT EQUIPMENT - SCR CATALYST TURBOGENERATOR UNITS ACCESSORY ELECTRIC EQUIPMENT MISCELLANEOUS POWER PLANT EQUIPMENT	TOTAL STEAM PRODUCTION PLANT	OTHER PRODUCTION PLANT STRUCTURES AND IMPROVEMENTS STRUCTURES AND IMPROVEMENTS STATE			GENERATIONS - SOLAR CRITTENDEN MALTON AERO TOTAL GENERATORS - SOLAR		ACCESSORY ELECTRIC EQUIPMENT - SOLAR CRITTENDEN WALTON AERO TOTAL ACCESSORY ELECTRIC EQUIPMENT - SOLAR	MISCELLANEOUS POWER PLANT EQUIPMENT	TOTAL OTHER PRODUCTION PLANT	TRANSMISSION PLANT RIGHTS OF WAY STRUCTURES AND IMPROVEMENTS STATION EQUIPMENT STATION EQUIPMENT STATI	TOTAL TRANSMISSION PLANT
	190.00	191.00 191.10 194.00 197.00 198.00		311.00 312.00 312.30 314.00 315.00 316.00		341.00 341.60	00.140	342.00 343.00 344.00	344.00	345.00	345.00	346.00		350.10 352.00 353.00 353.10 353.20 355.00 355.00 356.00 356.10	

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 51 of 382

			1	rag
	COMPOSITE REMAINING LIFE (10)=(7)(8)	44 0 63 0 72 1 64 1 75 1 84 1 85 1 85 1 85 1 85 1 85 1 85 1 85 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	26.9 9.5 3.0 2.7 2.7 2.0 7 2.0 7 2.0 7	
	.TED CRUAL RATE (9)=(8)/(5)	071 177 177 177 177 177 177 177 150 150 150 150 156 1365 1365 1365 1365 1365 1365 1365	2088 2000 111 1371 555 555 555 555 555 555 555 555 555 5	3.58
	CALCULATED ANNUAL ACCRUAL AMOUNT RATE (8) (9)=(8)(5)	34,112 57,387 57,387 57,387 3067,901 3824,555 1,938,856 1,5324 77,119 308,416 1,531 1,5324 1,5324 1,5324 1,5324 1,552 1,552 1,555 1,	4,930 4,930 5,557 3,5507 3,5507 3,5507 1,174,338 146,523 146,523 305 1,381304 76,985,664 76,985,664 76,985,664 76,985,664 76,985,664 76,985,664 76,985,664 76,985,664 77,097 (7,127)	78,377,348
) CALCULATED	FUTURE ACCRUALS (7)	1,501,266 3,616,673 8,2,690,926 82,290,926 87,982,397 87,982,397 7,360,025 147,555,203 177,555,203 7,360,463 4,865,466 4,865,446 4,44,435 1,444,356 1,825,436 1,825,436 1,233,284 1,423,57 1,293,324 5,570,119,251 6,70,119,251	110014 314151 3730,738 48,416 2,817,573 1,744 16,265,360 1,590,029,086 1,590,029,086	1,617,591,823
ECIATION RESERVE ANE BER 31, 2023	BOOK DEPRECIATION RESERVE (6)	3,280,744 209,120 209,120 30,555 37,116,816 776,159 776,159 20,57119 280,044 11,129,5110	52,862 57,047 57,047 22,140,436 44,55,502 44,55,502 4,455,502 4,455,502 4,456 8,208,094 902,315,744 902,315,744 902,315,744 902,315,744 902,315,744 902,315,744 90,481 (130,028) (38,018) (33,01	906,254,273
άΥ INAL COST, BOOK DEPR IC PLANT AS OF DECEME	ORIGINAL COST AS OF DECEMBER 31, 2023 (5)	4,782,010,22 3,226,794,36 87,287,630,02 76,000,583,02 76,000,582,97 153,322,870,92 153,322,870,92 153,322,870,92 153,322,870,92 153,322,870,92 153,322,870,92 153,323,158,73 16,124 13,115,496,55 16,124 13,115,496 18,603,013,168 17,1687,39 9,1477,39 9,1477,38 9,1477,48 9,1477,48 9,1477,48 9,14777,48 9,1477,48 9,1477,48 9,1477,48 9,1477,	165.341.66 371.197.64 5.871.173.79 272.046.39 3.663.074.89 11.770.00 20.705.182.30 31.944.096.53 2,160,555,724.10 2,160,555,724.10	2,189,894,806.21
E ENERGY KENTUCI GE PERCENT, ORIG LATED TO ELECTR	NET SALVAGE PERCENT (4)	0 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1	9000000	
DUKE RVE, NET SALVA N ACCRUALS RE	SURVIVOR CURVE (3)	75-R4 70-R2.5 92-R0.5 55-R0.5 55-R0.5 56-R2 66-R2 66-R2 66-R3 66-R3 66-R1 16-R3 66-R1 11-R2 11-R2 11-R2 226-80.5 65-R1.5 11-R2 11-R2 55-R1.5 5	20.50 5.50 20.72.53 20.72.55 25.50 15.50 15.50	
red survivor cui Ual depreciatio	PROBABLE RETIREMENT DATE (2)			
DUKE ENERGY KENTUCKY TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2023	ACCOUNT (1)	BISTRIBUTION PLANT BISTRIBUTION PLANT BISTRIBUTION PCWAT BISTRIBUTION FOUNDER BISTRUCTURES AND IMPROVEMENTS BISTON ECUIPMENT ALORE STATION ECUIPMENT BISTON EVERTEAD OVERTHEAD CONDUCTORS AND DEVICES OVERTHEAD CONDUCTORS AND DEVICES BISTON UNDERGROUND CONDUCTORS AND DEVICES BISTON UNDERGROUND CONDUCTORS AND DEVICES BISTON UNDERGROUND CONDUCTORS AND DEVICES BISTON UNDERGROUND CONDUCTORS AND DEVICES BISTON INFERGROUND BISTON ERENCES - UNDERGROUND BISTON ERENCES - OVERTEAD BISTON BISTONERS PREMISES - AREA LIGHTING BITTON BISTONERS PREMISES - AREA LIGHTING BISTON BISTONERS PREMISES BISTONERS AND METERING EQUIPMENT BISTONER AND	 30000 STRUCTURES AND IMPROVEMENTS 30100 OFFICE FURNITURES AND EQUIPMENT 30110 ELECTRONIC DATA PROCESSING 30200 TRANSPORTATION EQUIPMENT 30210 TRANSPORTATION EQUIPMENT 30210 TRANSPORTATION EQUIPMENT 30200 TOTAL ELECTRIC PLANT 10110 OFFICE FURNITURE AND EQUIPMENT 10111 OFFICE FURNITURE AND EQUIPMENT 10111 ELECTRONIC DATA PROCESSING 30100 OFFICE FURNITURE AND EQUIPMENT 30100 O	TOTAL DEPRECIABLE PLANT
		365 365 365 365 365 365 365 365 365 365	390 399 399 399 399 399 199 199 199 199 399 3	

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 52 of 382

	CALCULATED COMPOSITE ANNUAL ACCRUAL REMAINING AMOUNT RATE LIFE (8) (9)=(8)(5) (10)=(7)/(8)					78,377,348
ND CALCULATED	FUTURE ACCRUALS (7)					1,617,591,823
RECIATION RESERVE AN 3ER 31, 2023	BOOK DEPRECIATION RESERVE (6)	101,423	101,423	22,383,060 14,180,043 1,512,371 3,228,090 791,504 3,677	42,098,814	948,454,509
DUKE ENERGY KENTUCKY URVVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION R JEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2023	ORIGINAL COST AS OF DECEMBER 31, 2023 (5)	1,041,678,45 7,046,983,56 89,131,026,10 2,258,588,39 42,831,77 308,628,15 16,800,332,64 1,486,981,64	118,517,080.70	22,425,004,17 20,017,504,31 2,016,638,18 5,322,649,36 5,322,649,36 7,124,180,74 7,124,180,74	56,905,976.76	2,365,317,863.67
DUKE ENERGY KENTUCKY ALVAGE PERCENT, ORIGIN LS RELATED TO ELECTRIC	NET SALVAGE PERCENT (4)					
DUKE JRVE, NET SALVA ON ACCRUALS RE	SURVIVOR CURVE (3)					
DUKE ENERGY KENTUCKY TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2023	PROBABLE RETIREMENT DATE (2)					
TABLE 1. S	ACCOUNT (1)	NONDEPRECIABLE PLANT 189.00 LAND 317.00 ARO 317.00 ARO 347.00 ARO 347.60 ARO 360.00 LAND 360.00 LAND 399.10 ARO	TOTAL NONDEPRECIABLE PLANT	ACCOUNTS NOT STUDIED 103.00 MISCELLANEOUS INTANGIBLE PLANT 303.00 MISCELLANEOUS INTANGIBLE PLANT 303.03 MISCELLANEOUS INTANGIBLE PLANT - 3 YR 303.10 MISCELLANEOUS INTANGIBLE PLANT - 10 YR 303.15 MISCELLANEOUS INTANGIBLE PLANT - 15 YR 340.10 RIGHTS OF WAY	TOTAL ACCOUNTS NOT STUDIED	TOTAL COMMON AND ELECTRIC PLANT

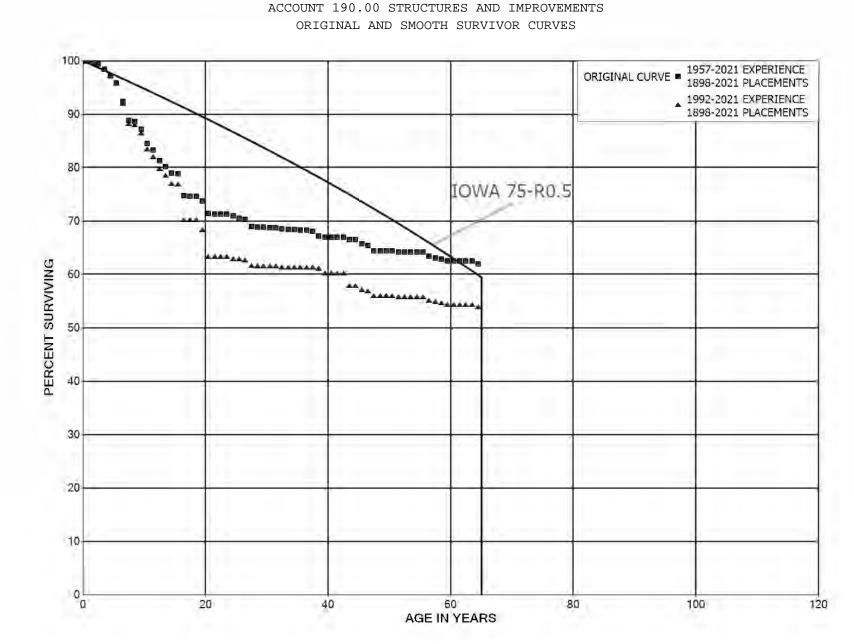
* CURVE SHOWN IS INTERIM SURVIVOR CURVE. EACH FACILITY IN THE ACCOUNT IS ASSIGNED AN INDIVIDUAL PROBABLE RETIREMENT YEAR.

NOTE: NEW ADDITIONS TO LIMESTONE CONVERSION PROJECT WILL HAVE THE FOLLOWING RATES:

	RATE 6.90 6.90	RATE 10.74 10.74	RATE 10.63 10.63
ACCRUAL 7.03% 7.22% 7.11% 7.19%	ACCOUNT 348.00 351.00 363.00	ACCOUNT 370.70 394.70	ACCOUNT 371.70 394.72
0 STRUCTURES AND IMPROVEMENTS 00 BOLIER TROUPMENT 00 TURBOGENERATOR UNITS 00 ACCESSORY ELECTRIC EQUIPMENT 00 MISCELLANEOUS POWER PLANT EQUIPMENT	ACCRUAL RATES FOR NEW BATTERY STORAGE ASSETS BASED ON A 15-L3 SURVIVOR CURVE AND 0% NET SALVAGE WILL BE AS FOLLOWS:	ACCRUAL RATES FOR NEW EV CHARGING ASSETS BASED ON A 10-S3 SURVIVOR CURVE AND NEGATIVE 2% NET SALVAGE WILL BE AS FOLLOWS:	ACCRUAL RATES FOR NEW EV CHARGING LEVEL 2 ASSETS BASED ON A 10-54 SURVIVOR CURVE AND NEGATIVE 1% NET SALVAGE WILL BE AS FOLLOWS:
311.00 312.00 314.00 315.00 316.00			

GANNETT FLEMING

PART VII. SERVICE LIFE STATISTICS



GANNETT FLEMING

VII-2

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 55 of 382

ACCOUNT 190.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1898-2021

EXPERIENCE BAND 1957-2021

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5	48,165,007 47,841,075 47,185,587 44,251,353 19,058,246 18,759,678 18,298,572 17,546,697 16,278,590	21,512 128,378 116,688 448,310 242,265 256,134 666,073 667,753 49,853	0.0004 0.0027 0.0025 0.0101 0.0127 0.0137 0.0364 0.0381 0.0031	0.9996 0.9973 0.9975 0.9899 0.9873 0.9863 0.9636 0.9619 0.9969	100.00 99.96 99.69 99.44 98.43 97.18 95.86 92.37 88.85
8.5	16,132,094	249,625	0.0155	0.9845	88.58
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5 19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5	14,556,334 13,745,055 13,201,702 10,566,668 8,114,325 7,808,793 4,279,277 3,007,253 2,985,624 2,926,037 2,880,168 2,675,541 2,456,223 2,436,977 2,378,116 2,367,259 2,331,946 2,063,477	446,286 202,591 318,454 141,837 122,118 10,540 223,258 4,204 1,806 34,678 91,397 3,253 1,237 10,857 14,079 6,810 46,009 3,518	0.0307 0.0147 0.0241 0.0134 0.0150 0.0013 0.0522 0.0014 0.0006 0.0119 0.0317 0.0012 0.0005 0.0005 0.0005 0.0005 0.0029 0.0199 0.017	0.9693 0.9853 0.9759 0.9866 0.9850 0.9987 0.9478 0.9986 0.9994 0.99881 0.9683 0.9988 0.9995 1.0000 0.9954 0.9954 0.9941 0.9971 0.9801 0.9801 0.9983	87.21 84.53 83.29 81.28 80.19 78.98 78.87 74.76 74.66 74.61 73.73 71.30 71.26 71.26 70.94 70.52 70.31 68.91
28.5 29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	2,000,092 1,941,245 1,900,965 1,897,018 1,855,692 840,872 828,420 826,618 801,820 756,863 733,301	2,254 607 6,025 2,552 1,358 2,604 9,526 2,609	0.0000 0.0012 0.0003 0.0032 0.0014 0.0000 0.0016 0.0000 0.0032 0.0126 0.0036	1.0000 0.9988 0.9997 0.9968 0.9986 1.0000 0.9984 1.0000 0.9968 0.9874 0.9964	68.79 68.79 68.71 68.69 68.47 68.38 68.38 68.27 68.27 68.05 67.19

EXPERIENCE BAND 1957-2021

DUKE ENERGY KENTUCKY

ACCOUNT 190.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1898-2021

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE RETMT SURV BEGIN OF INTERVAL AGE INTERVAL INTERVAL INTERVAL RATIO RATIO 39.5 718,175 154 0.0002 0.9998 66.95 40.5 684,827 0.0000 1.0000 66.94 41.5 673,267 66.94 0.0000 1.0000 42.5 633,328 3,870 0.0061 0.9939 66.94 43.5 66.53 605,832 0.0000 1.0000 44.5 604,857 66.53 7,453 0.0123 0.9877 45.5 65.71 597,067 2,847 0.0048 0.9952 46.5 587,900 0.0147 65.39 8,622 0.9853 47.5 572,640 0.0000 64.43 1.0000 48.5 64.43 564,055 0.0000 1.0000 0.9989 49.5 596 559,421 0.0011 64.43 50.5 558,825 1,586 0.0028 0.9972 64.37 51.5 0.0000 64.18 555,313 1.0000 52.5 550,976 0.0000 64.18 1.0000 53.5 64.18 550,976 0.0000 1.0000 54.5 542,787 0.0000 1.0000 64.18 55.5 542,309 6,779 0.0125 0.9875 64.18 56.5 2,420 0.0045 533,120 0.9955 63.38 2,327 57.5 529,040 0.0044 0.9956 63.09 546,992 2,650 0.0048 62.82 58.5 0.9952 59.5 544,342 0.0000 1.0000 62.51 60.5 540,581 0.0000 1.0000 62.51 0.0000 1.0000 61.5 540,581 62.51 62.5 538,676 0.0000 1.0000 62.51 63.5 538,585 4,629 0.0086 0.9914 62.51 1.0000 64.5 532,475 0.0000 61.97 532,162 65.5 108,533 0.2039 0.7961 61.97 66.5 423,507 0.0000 1.0000 49.33 67.5 423,507 7,703 0.0182 0.9818 49.33 68.5 410,814 0.0000 1.0000 48.44 48.44 69.5 410,814 0.0000 1.0000 70.5 410,204 48.44 860 0.0021 0.9979 71.5 406,511 155,638 0.3829 0.6171 48.34 72.5 242,999 0.0000 1.0000 29.83 73.5 242,999 29.83 7,328 0.0302 0.9698 74.5 20,494 0.0000 1.0000 28.93 20,494 75.5 185 0.0090 0.9910 28.93 76.5 20,309 0.0000 1.0000 28.67 77.5 20,309 28.67 0.0000 1.0000

20,309

78.5

0.0000

1.0000

28.67

EXPERIENCE BAND 1957-2021

DUKE ENERGY KENTUCKY

ACCOUNT 190.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1898-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 87.5 88.5	20,309 20,309 20,280 20,280 20,280 20,280 20,280 20,280 20,280 20,280 20,280		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	28.67 28.67 28.67 28.67 28.67 28.67 28.67 28.67 28.67 28.67
88.5 90.5 91.5 92.5 93.5 94.5 95.5 96.5 97.5 98.5	20,280 20,280 20,280 20,280 20,280 20,280 20,280 20,280 20,280 20,280 20,280 20,280		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	28.67 28.67 28.67 28.67 28.67 28.67 28.67 28.67 28.67 28.67 28.67 28.67
99.5 100.5 101.5 102.5 103.5 104.5 105.5 106.5	20,280 20,280 20,280 20,280 20,280 20,280 20,280 20,280		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	28.67 28.67 28.67 28.67 28.67 28.67 28.67 28.67 28.67

ACCOUNT 190.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1898-2021

EXPERIENCE BAND 1992-2021

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	42,221,568	21,512	0.0005	0.9995	100.00
0.5	46,098,546	128,378	0.0028	0.9972	99.95
1.5	45,629,690	116,688	0.0026	0.9974	99.67
2.5	42,737,560	447,798	0.0105	0.9895	99.42
3.5	17,545,000	238,115	0.0136	0.9864	98.37
4.5	17,270,610	253,599	0.0147	0.9853	97.04
5.5	16,812,341	656,130	0.0390	0.9610	95.61
6.5	16,103,330	665,865	0.0413	0.9587	91.88
7.5	14,906,024	49,853	0.0033	0.9967	88.08
8.5	14,780,873	249,465	0.0169	0.9831	87.79
9.5	12,629,096	445,641	0.0353	0.9647	86.31
10.5	11,889,083	202,154	0.0170	0.9830	83.26
11.5	11,357,726	316,118	0.0278	0.9722	81.85
12.5	8,824,118	131,434	0.0149	0.9851	79.57
13.5	6,407,183	122,118	0.0191	0.9809	78.38
14.5	6,102,627	9,127	0.0015	0.9985	76.89
15.5	2,574,860	223,258	0.0867	0.9133	76.77
16.5	1,311,044		0.0000	1.0000	70.12
17.5	1,300,738	1,376	0.0011	0.9989	70.12
18.5	1,250,167	34,215	0.0274	0.9726	70.04
19.5	1,215,637	87,826	0.0722	0.9278	68.13
20.5	2,033,351	1,500	0.0007	0.9993	63.20
21.5	1,817,711		0.0000	1.0000	63.16
22.5	1,805,299		0.0000	1.0000	63.16
23.5	1,746,438	10,857	0.0062	0.9938	63.16
24.5	1,747,152		0.0000	1.0000	62.76
25.5	1,726,397	5,766	0.0033	0.9967	62.76
26.5	1,709,173	29,128	0.0170	0.9830	62.56
27.5	1,479,923	1,888	0.0013	0.9987	61.49
28.5	1,418,169		0.0000	1.0000	61.41
29.5	1,359,322		0.0000	1.0000	61.41
30.5	1,325,057		0.0000	1.0000	61.41
31.5	1,321,717	5,595	0.0042	0.9958	61.41
32.5	1,282,726		0.0000	1.0000	61.15
33.5	270,548		0.0000	1.0000	61.15
34.5	259,577		0.0000	1.0000	61.15
35.5	259,447		0.0000	1.0000	61.15
36.5	234,771		0.0000	1.0000	61.15
37.5	192,417	773	0.0040	0.9960	61.15
38.5	187,063	2,609	0.0139	0.9861	60.90

ACCOUNT 190.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1898-2021

EXPERIENCE BAND 1992-2021

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 45.5 46.5 47.5	171,937 139,354 130,905 98,841 71,345 603,618 595,828 586,661 571,401	3,870 7,453 2,847 8,622	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0392\\ 0.0000\\ 0.0123\\ 0.0048\\ 0.0147\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 0.9608 1.0000 0.9877 0.9952 0.9853 1.0000	60.06 60.06 60.06 57.70 57.70 56.99 56.72 55.89
48.5 49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5	562,816 558,182 557,586 554,074 550,976 550,976 542,787 542,309 533,120 529,040	596 1,586 6,779 2,420 2,327	0.0011 0.0028 0.0000 0.0000 0.0000 0.0000 0.0125 0.0045 0.0044	1.0000 0.9989 0.9972 1.0000 1.0000 1.0000 0.9875 0.9955 0.9956	55.89 55.89 55.67 55.67 55.67 55.67 55.67 54.97 54.72
58.5 59.5 60.5 61.5 62.5 63.5 64.5 65.5 65.5 66.5 67.5 68.5	526,712 524,062 520,301 518,396 518,305 512,195 511,882 403,227 403,227 390,535	2,650 4,629 108,533 7,703	0.0050 0.0000 0.0000 0.0000 0.0089 0.0000 0.2120 0.0000 0.0191 0.0000	0.9950 1.0000 1.0000 1.0000 0.9911 1.0000 0.7880 1.0000 0.9809 1.0000	54.48 54.21 54.21 54.21 54.21 54.21 53.72 53.72 42.33 42.33 41.52
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	390,535 389,924 386,231 222,719 222,719 214 214 29 29 29 29	860 155,638 7,328 185	0.0000 0.0022 0.4030 0.0000 0.0329 0.0000 0.8626 0.0000 0.0000 0.0000	1.0000 0.9978 0.5970 1.0000 0.9671 1.0000 0.1374 1.0000 1.0000 1.0000	41.52 41.52 41.43 24.74 24.74 23.92 23.92 3.29 3.29 3.29 3.29

EXPERIENCE BAND 1992-2021

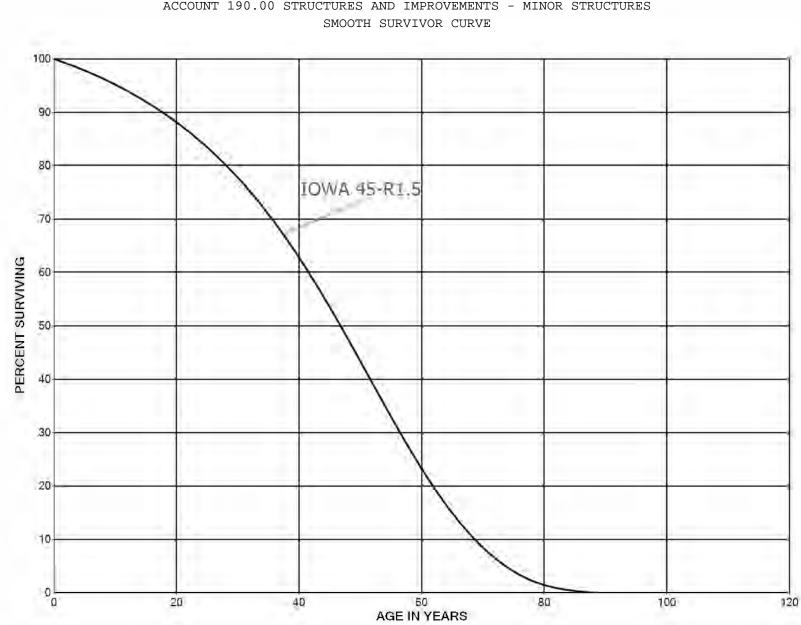
DUKE ENERGY KENTUCKY

ACCOUNT 190.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT	BAND	1898-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 87.5 88.5	29 29 29		0.0000 0.0000 0.0000	1.0000 1.0000 1.0000	3.29 3.29 3.29 3.29
89.5 90.5 91.5 92.5 93.5 94.5 95.5 96.5 97.5 98.5	20,280 20,280 20,280 20,280 20,280 20,280 20,280		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000		
99.5 100.5 101.5 102.5 103.5 104.5 105.5 106.5	20,280 20,280 20,280 20,280 20,280 20,280 20,280 20,280		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$		



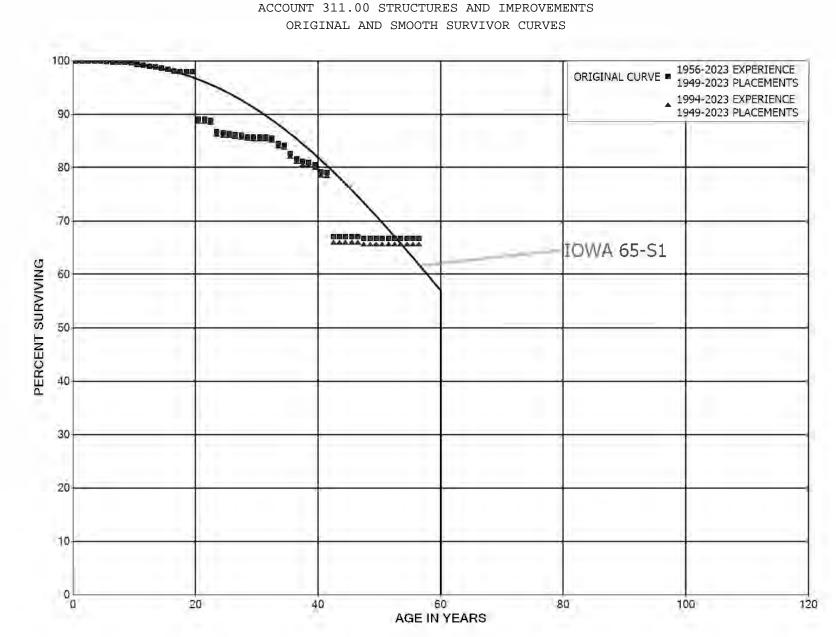
DUKE ENERGY KENTUCKY ACCOUNT 190.00 STRUCTURES AND IMPROVEMENTS - MINOR STRUCTURES

Duke Energy Kentucky December 31, 2023

VII-9

GANNETT FLEMING

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 62 of 382



KyPSC Case No. 2024-00354 Attachment JJS-1 Page 63 of 382

Duke Energy Kentucky December 31, 2023

ACCOUNT 311.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2023

EXPERIENCE BAND 1956-2023

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	201,482,844 198,610,292 198,359,015 197,047,856 176,592,993 132,644,218 119,427,121 77,065,136 65,702,165 45,927,310	40,813 1,953 132,916 44,210 117,932 15,572 9,553 50,979	0.0000 0.0002 0.0000 0.0008 0.0003 0.0010 0.0002 0.0001 0.0011	1.0000 1.0000 0.9998 1.0000 0.9992 0.9997 0.9990 0.9998 0.9999 0.9989	100.00 100.00 99.98 99.98 99.90 99.87 99.77 99.75 99.74
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	45,158,300 43,735,628 42,861,248 42,500,077 42,122,400 41,564,859 41,311,867 40,521,820 37,403,674 37,169,536	176,574 3,914 113,550 33,929 119,400 91,810 146,301 19,855 31,027 5,711	0.0039 0.0001 0.0026 0.0008 0.0028 0.0022 0.0035 0.0005 0.0008 0.0008	0.9961 0.9999 0.9974 0.9992 0.9972 0.9978 0.9965 0.9995 0.9992 0.9998	99.63 99.24 99.23 98.96 98.89 98.61 98.39 98.04 97.99 97.91
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	36,937,813 33,525,394 33,664,011 33,338,889 32,295,811 29,141,748 28,889,956 28,758,948 27,654,056 27,578,200	3,333,025 88,923 804,210 76,666 32,589 65,393 56,871 75,856 10,641	0.0902 0.0000 0.026 0.0241 0.0024 0.0011 0.0023 0.0020 0.0027 0.0004	0.9098 1.0000 0.9974 0.9759 0.9976 0.9989 0.9977 0.9980 0.9973 0.9996	97.89 89.06 89.06 88.83 86.68 86.48 86.38 86.19 86.01 85.78
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	27,331,852 27,224,893 27,008,049 26,914,362 26,325,492 26,393,173 25,901,056 25,555,021 25,344,505 24,961,679	2,324 65,052 340,121 90,264 484,199 316,147 150,676 59,081 125,086	$\begin{array}{c} 0.0000\\ 0.0001\\ 0.0024\\ 0.0126\\ 0.0034\\ 0.0183\\ 0.0122\\ 0.0059\\ 0.0023\\ 0.0050\end{array}$	1.0000 0.9999 0.9976 0.9874 0.9966 0.9817 0.9878 0.9941 0.9977 0.9950	85.75 85.75 85.74 85.53 84.45 84.16 82.62 81.61 81.13 80.94

ACCOUNT 311.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2023

EXPERIENCE BAND 1956-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
NIERVAL 39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 47.5 48.5 49.5 50.5 51.5 52.5 53.5 54.5 55.5	AGE INTERVAL 24,835,635 24,331,622 24,111,381 1,165,911 1,071,133 1,024,884 1,024,884 1,024,884 3,891,211 3,872,956 3,731,896 3,731,896 3,722,507 2,856,501 2,856,501 2,856,501 2,856,501 2,856,501 2,856,501	431,783 29,048 3,666,749 18,254	RATIO 0.0174 0.0012 0.1521 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	RATIO 0.9826 0.9988 0.8479 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	80.53 79.13 79.04 67.02 67.02 67.02 67.02 67.02 66.70 66.70 66.70 66.70 66.70 66.70 66.70 66.70 66.70 66.70 66.70 66.70 66.70 66.70
56.5					66.70

EXPERIENCE BAND 1994-2023

DUKE ENERGY KENTUCKY

ACCOUNT 311.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2023

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE RETMT SURV BEGIN OF AGE INTERVAL INTERVAL INTERVAL RATIO RATIO INTERVAL 0.0 171,407,323 0.0000 1.0000 100.00 0.5 168,562,105 0.0000 1.0000 100.00 1.5 168,625,438 0.0000 1.0000 100.00 2.5 167,527,557 0.0000 1.0000 100.00 3.5 147,958,579 88,661 0.0006 0.9994 100.00 4.5 103,991,577 39,263 0.0004 0.9996 99.94 90,770,039 5.5 0.0000 1.0000 99.90 47,677,197 99.90 6.5 0.0000 1.0000 7.5 0.0000 99.90 36,471,418 1.0000 8.5 16,706,116 0.0000 1.0000 99.90 9.5 16,698,534 128,174 0.0077 0.9923 99.90 10.5 15,324,262 0.0000 1.0000 99.14 99.14 11.5 14,513,187 20,078 0.0014 0.9986 99.00 12.5 33,929 0.9991 39,202,141 0.0009 13.5 119,400 98.91 39,083,771 0.0031 0.9969 14.5 38,534,160 85,426 0.0022 0.9978 98.61 0.9963 15.5 38,287,553 140,579 0.0037 98.39 16.5 37,885,157 19,855 0.0005 0.9995 98.03 17.5 34,767,011 31,027 0.0009 0.9991 97.98 34,752,076 0.0000 18.5 1.0000 97.89 19.5 34,551,180 3,331,025 0.0964 0.9036 97.89 1.0000 20.5 32,200,945 0.0000 88.45 76,044 21.5 32,339,562 0.0024 0.9976 88.45 22.5 32,054,040 792,005 0.0247 0.9753 88.25 23.5 31,023,168 76,666 0.0025 0.9975 86.07 85.85 27,869,105 4,329 0.0002 24.5 0.9998 25.5 27,666,963 57,318 0.0021 0.9979 85.84 26.5 27,544,030 56,871 0.0021 0.9979 85.66 27.5 26,439,138 71,056 0.0027 0.9973 85.49 0.0004 28.5 26,368,320 10,641 0.9996 85.26 1.0000 29.5 26,126,161 0.0000 85.22 30.5 26,022,095 0.0000 1.0000 85.22 31.5 25,882,535 65,052 0.0025 85.22 0.9975 32.5 25,789,806 340,121 0.0132 0.9868 85.01 25,241,951 33.5 90,264 0.0036 0.9964 83.89 34.5 25,309,632 484,199 0.0191 0.9809 83.59 35.5 24,819,441 316,147 0.0127 0.9873 81.99 36.5 24,486,279 80.94 150,676 0.0062 0.9938 37.5 24,322,012 59,081 0.0024 0.9976 80.44 38.5 23,939,186 125,086 80.25 0.0052 0.9948

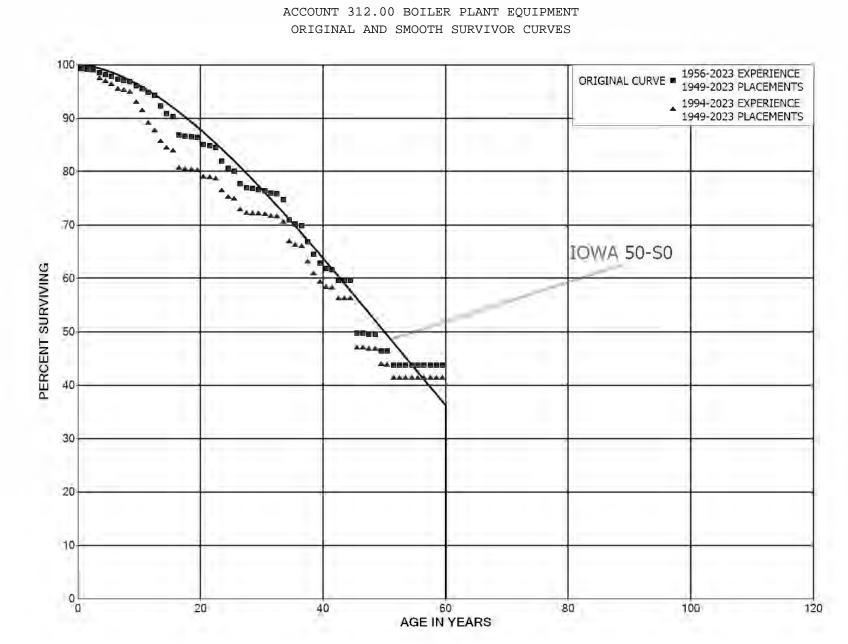
ACCOUNT 311.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2023

EXPERIENCE BAND 1994-2023

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 45.5 45.5 46.5 47.5 48.5 49.5 50.5 51.5 52.5 53.5	AGE INTERVAL 23,821,571 23,317,558 23,097,317 292,907 207,518 1,024,884 1,024,884 1,024,884 3,891,211 3,872,956 3,872,956 3,731,896 3,722,507 2,856,501 2,856,501 2,856,501	431,783 29,048 3,666,749 18,254	RAIIO 0.0181 0.0012 0.1588 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	RATIO 0.9819 0.9988 0.8412 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	79.83 78.38 78.28 65.86 65.86 65.86 65.86 65.86 65.55 65.55 65.55 65.55 65.55 65.55 65.55
54.5 55.5 56.5	2,856,501 2,856,501 2,856,501		0.0000 0.0000	1.0000 1.0000	65.55 65.55 65.55



GANNETT FLEMING

VII-15

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 68 of 382

ACCOUNT 312.00 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2023

EXPERIENCE BAND 1956-2023

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	812,868,592	3,962,738	0.0049	0.9951	100.00
0.5	790,865,161	497,088	0.0006	0.9994	99.51
1.5	780,976,489	810,299	0.0010	0.9990	99.45
2.5	769,075,406	6,346,643	0.0083	0.9917	99.35
3.5	738,898,366	2,839,560	0.0038	0.9962	98.53
4.5	790,648,657	2,608,922	0.0033	0.9967	98.15
5.5	695,254,848	4,157,581	0.0060	0.9940	97.82
6.5	688,894,994	1,090,366	0.0016	0.9984	97.24
7.5	665,090,697	2,058,529	0.0031	0.9969	97.09
8.5	525,529,282	3,890,065	0.0074	0.9926	96.79
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5 19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5	483,935,278 475,269,440 462,869,402 463,614,672 467,027,899 460,576,724 455,107,032 437,593,476 433,758,629 431,890,873 429,388,756 419,913,665 237,844,938 237,279,202 214,552,533 205,673,603 196,430,329 192,293,361	2,854,927 3,537,260 2,603,759 9,957,370 6,952,330 3,112,957 16,979,222 1,481,392 497,315 639,397 6,636,543 1,096,712 843,373 7,032,740 3,637,189 1,376,257 5,657,069 1,920,224	0.0059 0.0074 0.0056 0.0215 0.0149 0.0068 0.0373 0.0034 0.0011 0.0015 0.0155 0.0155 0.0026 0.0035 0.0296 0.0170 0.0067 0.0288 0.0100	0.9941 0.9926 0.9944 0.9785 0.9851 0.9932 0.9966 0.9989 0.9985 0.9985 0.9845 0.9974 0.9965 0.9974 0.9965 0.9704 0.9830 0.9933 0.9712 0.9900	96.07 95.50 94.79 94.26 92.23 90.86 90.25 86.88 86.59 86.49 86.36 85.02 84.80 84.50 84.50 82.00 80.61 80.07 77.76
27.5	189,510,259	300,962	0.0016	0.9984	76.98
28.5	188,778,602	481,406		0.9974	76.86
29.5	183,529,296	757,358	0.0041	0.9959	76.67
30.5	181,829,190	1,003,588	0.0055	0.9945	76.35
31.5	178,778,446	336,048	0.0019	0.9981	75.93
32.5	178,013,426	2,411,706	0.0135	0.9865	75.79
33.5	174,725,777	9,033,838	0.0517	0.9483	74.76
34.5	165,428,530	1,671,821	0.0101	0.9899	70.89
35.5	163,450,118	750,166	0.0046	0.9954	70.18
36.5	161,971,877	6,898,540	0.0426	0.9574	69.85
37.5	143,219,167	5,150,040	0.0360	0.9640	66.88
38.5	136,965,245	3,398,921	0.0248	0.9752	64.47

EXPERIENCE BAND 1956-2023

DUKE ENERGY KENTUCKY

ACCOUNT 312.00 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2023

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 45.5	132,499,192 129,185,256 128,799,788 718,842 717,326 736,028 622,964	2,285,410 346,960 4,306,003 121,386	0.0172 0.0027 0.0334 0.0000 0.0000 0.1649 0.0000	0.9828 0.9973 0.9666 1.0000 1.0000 0.8351 1.0000	62.87 61.79 61.62 59.56 59.56 59.56 49.74
46.5 47.5 48.5	7,768,311 7,740,040 7,740,040	28,271 489,192	0.0036 0.0000 0.0632	0.9964 1.0000 0.9368	49.74 49.56 49.56
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	7,243,949 7,163,659 6,718,498 6,690,518 6,665,564 6,630,890 6,622,569 6,734 192,340 192,340	9,310 403,713 6,702	0.0013 0.0564 0.0000 0.0010 0.0010 0.0000 0.0000 0.0000 0.0000 0.0000	0.9987 0.9436 1.0000 1.0000 0.9990 1.0000 1.0000 1.0000 1.0000 1.0000	46.43 46.37 43.75 43.75 43.75 43.71 43.71 43.71 43.71 43.71 43.71
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5	192,340 192,340 192,340 185,606 185,606 185,606 185,606 185,606		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	$\begin{array}{c} 43.71 \\ 43.71 \\ 43.71 \\ 43.71 \\ 43.71 \\ 43.71 \\ 43.71 \\ 43.71 \\ 43.71 \\ 43.71 \\ 43.71 \\ 43.71 \end{array}$

ACCOUNT 312.00 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2023

EXPERIENCE BAND 1994-2023

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	436,156,443	3,962,738	0.0091	0.9909	100.00
0.5	429,288,629	376,676	0.0009	0.9991	99.09
1.5	422,238,207	738,866	0.0017	0.9983	99.00
2.5	411,673,650	5,985,346	0.0145	0.9855	98.83
3.5	382,854,983	2,282,334	0.0060	0.9940	97.39
4.5	436,762,814	2,420,685	0.0055	0.9945	96.81
5.5	341,893,034	3,185,903	0.0093	0.9907	96.28
6.5	337,733,183	793,479	0.0023	0.9977	95.38
7.5	314,476,616	1,214,788	0.0039	0.9961	95.16
8.5	176,051,723	3,343,505	0.0190	0.9810	94.79
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5 19.5	135,864,979 127,748,681 116,959,384 434,030,975 452,177,367 445,997,776 441,662,529 424,395,528 421,534,084 425,813,706 423,633,845	2,369,387 3,192,106 1,933,037 9,662,363 6,801,239 2,945,014 16,732,668 1,438,156 175,514 582,526 6,572,360	0.0174 0.0250 0.0165 0.0223 0.0150 0.0066 0.0379 0.0034 0.0004 0.0014 0.0155	0.9826 0.9750 0.9835 0.9777 0.9850 0.9934 0.9621 0.9966 0.9996 0.9986	92.99 91.37 89.08 87.61 85.66 84.37 83.82 80.64 80.37 80.33 80.22
20.5	414,237,956	1,024,185	0.0025	0.9975	78.98
21.5	232,288,483	541,411	0.0023	0.9977	78.78
22.5	232,026,756	6,531,864	0.0282	0.9718	78.60
23.5	209,810,525	3,211,280	0.0153	0.9847	76.39
24.5	201,357,505	1,119,095	0.0056	0.9944	75.22
25.5	192,373,073	5,065,185	0.0263	0.9737	74.80
26.5	188,831,643	1,815,544	0.0096	0.9904	72.83
27.5	186,168,802	162,836	0.0009	0.9991	72.13
28.5	185,575,270	101,377	0.0005	0.9995	72.07
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	180,710,085 179,544,358 177,062,073 176,438,274 174,718,542 165,421,295 163,442,883 161,964,642 143,211,932 136,958,010	223,372 862,364 196,047 2,411,706 9,033,838 1,671,821 750,166 6,898,540 5,150,040 3,398,921	0.0012 0.0048 0.0011 0.0137 0.0517 0.0101 0.0046 0.0426 0.0360 0.0248	0.9988 0.9952 0.9989 0.9863 0.9483 0.9899 0.9954 0.9574 0.9574 0.9640 0.9752	72.03 71.94 71.59 71.51 70.54 66.89 66.21 65.91 63.10 60.83

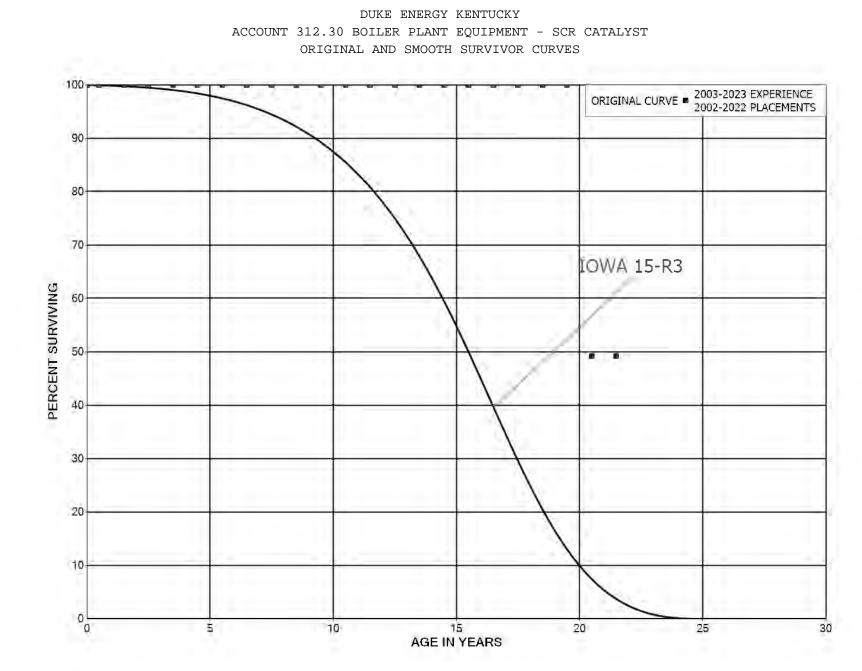
ACCOUNT 312.00 BOILER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

EXPERIENCE BAND 1994-2023

PLACEMENT BAND 1949-2023

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 45.5 46.5 47.5	132,491,957 129,178,021 128,792,553 711,607 710,403 736,028 622,964 7,768,311 7,740,040	2,285,410 346,960 4,306,003 121,386 28,271	0.0172 0.0027 0.0334 0.0000 0.0000 0.1649 0.0000 0.0036 0.0000	0.9828 0.9973 0.9666 1.0000 1.0000 0.8351 1.0000 0.9964 1.0000	59.32 58.30 58.14 56.20 56.20 56.20 46.93 46.93 46.76
47.5	7,740,040	489,192	0.0632	0.9368	46.76
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	7,243,949 7,163,659 6,718,498 6,690,518 6,665,564 6,630,890 6,622,569 6,734 192,340 192,340	9,310 403,713 6,702	0.0013 0.0564 0.0000 0.0010 0.0010 0.0000 0.0000 0.0000 0.0000 0.0000	0.9987 0.9436 1.0000 1.0000 0.9990 1.0000 1.0000 1.0000 1.0000 1.0000	43.80 43.75 41.28 41.28 41.28 41.24 41.24 41.24 41.24 41.24 41.24
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5	192,340 192,340 192,340 185,606 185,606 185,606 185,606 185,606		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	41.24 41.24 41.24 41.24 41.24 41.24 41.24 41.24 41.24 41.24



GANNETT FLEMING

VII-20

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 73 of 382

EXPERIENCE BAND 2003-2023

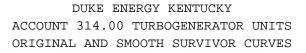
DUKE ENERGY KENTUCKY

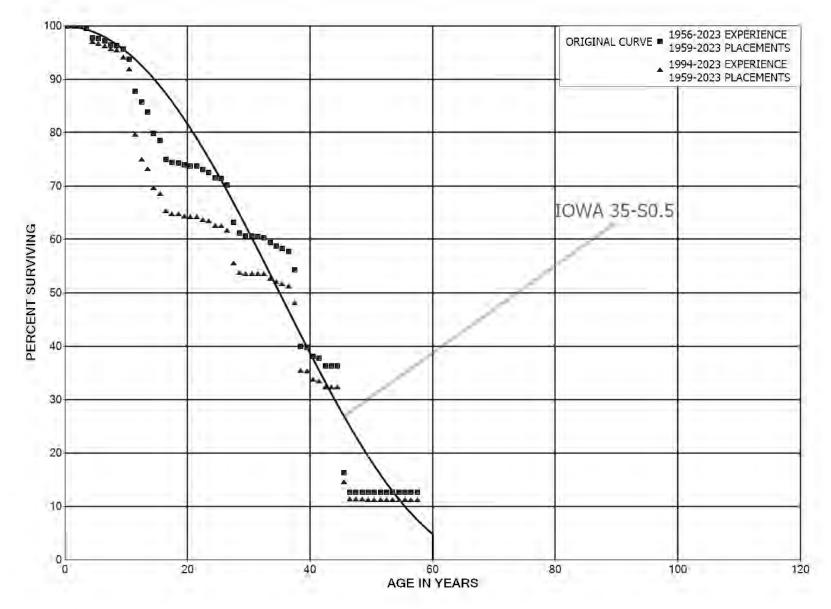
ACCOUNT 312.30 BOILER PLANT EQUIPMENT - SCR CATALYST

ORIGINAL LIFE TABLE

PLACEMENT BAND 2002-2022

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	7,478,903 9,709,395 7,984,158 7,984,158 7,984,158 5,420,680 5,420,680 5,420,680 5,420,680 5,420,680 2,766,750		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	2,766,750 2,230,486 2,230,486 2,230,486 2,230,486 2,230,486 2,230,486 2,230,486 2,230,486 2,230,486 2,230,486 2,230,486		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00
19.5 20.5 21.5	2,230,486 1,096,393	1,134,093	0.5085 0.0000	0.4915 1.0000	100.00 49.15 49.15





GANNETT FLEMING

VII-22

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 75 of 382

EXPERIENCE BAND 1956-2023

DUKE ENERGY KENTUCKY

ACCOUNT 314.00 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1959-2023

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	138,383,223 136,240,546 136,820,003 118,061,234 113,030,171 109,491,047 96,113,869 95,470,356 96,043,416 65,808,279	95,283 517,413 1,946,490 215,688 371,576 755,841 175,792 444,556	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0007\\ 0.0044\\ 0.0172\\ 0.0020\\ 0.0039\\ 0.0079\\ 0.0018\\ 0.0068\end{array}$	1.0000 1.0000 0.9993 0.9956 0.9828 0.9980 0.9961 0.9921 0.9982 0.9932	100.00 100.00 99.93 99.49 97.78 97.59 97.21 96.44 96.26
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	63,508,454 60,802,378 55,924,792 54,109,711 54,192,640 51,070,384 50,376,564 48,173,381 45,913,532 38,903,569	1,220,675 3,933,990 1,274,241 1,211,449 2,588,722 821,340 2,277,553 348,038 67,638 215,506	0.0192 0.0647 0.0228 0.0224 0.0478 0.0161 0.0452 0.0072 0.0015 0.0055	0.9808 0.9353 0.9772 0.9776 0.9522 0.9839 0.9548 0.9928 0.9928 0.9985 0.9945	95.61 93.78 87.71 85.71 83.79 79.79 78.50 74.96 74.41 74.30
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	38,958,956 39,924,899 60,426,339 59,621,798 57,003,311 56,082,390 56,008,478 54,942,838 49,312,062 47,774,582	60,185 15,419 519,882 516,998 786,467 52,928 969,163 5,524,472 1,562,503 380,242	0.0015 0.0004 0.0086 0.0138 0.0109 0.0173 0.1005 0.0317 0.0080	0.9985 0.9996 0.9914 0.9913 0.9862 0.9991 0.9827 0.8995 0.9683 0.9920	73.89 73.78 73.75 73.12 72.48 71.48 71.41 70.18 63.12 61.12
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	47,305,584 46,953,991 46,180,499 45,849,288 44,960,647 44,368,716 44,059,256 43,025,707 39,961,402 18,132,452	84,460 151,481 741,411 493,479 313,200 397,184 2,600,400 10,549,780 82,313	0.0000 0.0018 0.0033 0.0162 0.0110 0.0071 0.0090 0.0604 0.2640 0.0045	1.0000 0.9982 0.9967 0.9838 0.9890 0.9929 0.9910 0.9396 0.7360 0.9955	60.64 60.53 60.33 59.35 58.70 58.29 57.76 54.27 39.94

ACCOUNT 314.00 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE, CONT.

EXPERIENCE BAND 1956-2023

PLACEMENT BAND 1959-2023

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 45.5 46.5 47.5 48.5	18,039,932 17,250,588 17,017,082 95,647 93,070 94,614 40,605 5,960,098 5,980,790 5,980,790	768,913 165,224 615,439 52,089 9,199 29,921	0.0426 0.0096 0.0362 0.0000 0.5505 0.2265 0.0000 0.0000 0.0000 0.0050	0.9574 0.9904 0.9638 1.0000 1.0000 0.4495 0.7735 1.0000 1.0000 0.9950	39.76 38.07 37.70 36.34 36.34 16.33 12.63 12.63 12.63 12.63
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5	5,950,869 5,950,869 5,950,869 5,929,295 5,921,007 5,919,463 5,919,463 20,692		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	12.53 12.57 12.57 12.57 12.57 12.57 12.57 12.57 12.57 12.57 12.57

ACCOUNT 314.00 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1959-2023

EXPERIENCE BAND 1994-2023

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	101,777,621 99,659,496 100,376,670 81,617,901 76,900,474 73,362,052 59,985,778 59,532,297 60,744,562 30,546,429	95,283 457,193 1,945,789 214,783 330,967 325,702 138,790 434,918	0.0000 0.0009 0.0056 0.0253 0.0029 0.0055 0.0055 0.0023 0.0142	1.0000 1.0000 0.9991 0.9944 0.9747 0.9971 0.9945 0.9945 0.9945 0.9977 0.9858	100.00 100.00 99.91 99.35 96.83 96.55 96.02 95.49 95.27
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	28,256,241 26,117,398 21,691,848 51,808,954 51,900,194 48,783,225 48,206,770 46,012,489 43,756,130 36,760,356	653,443 3,481,954 1,270,931 1,203,139 2,583,434 792,066 2,268,651 344,547 53,449 212,006	0.0231 0.1333 0.0586 0.0232 0.0498 0.0162 0.0471 0.0075 0.0012 0.0058	0.9769 0.8667 0.9414 0.9768 0.9502 0.9838 0.9529 0.9925 0.9925 0.9988 0.9942	93.92 91.74 79.51 74.85 73.12 69.48 68.35 65.13 64.64 64.56
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	36,824,024 37,789,968 58,304,707 57,500,166 55,233,401 54,328,087 54,254,393 53,378,999 48,008,514 46,479,190	60,185 2,120 519,882 165,277 776,958 52,710 778,917 5,264,181 1,560,339 151,662	0.0016 0.0001 0.0029 0.0141 0.0010 0.0144 0.0986 0.0325 0.0033	0.9984 0.9999 0.9911 0.9971 0.9859 0.9990 0.9856 0.9014 0.9675 0.9967	64.19 64.09 64.08 63.51 63.33 62.44 62.38 61.48 55.42 53.62
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	46,238,773 45,887,180 45,202,484 44,962,138 44,941,226 44,368,716 44,059,256 43,025,707 39,961,402 18,132,452	11,696 60,616 741,411 493,479 313,200 397,184 2,600,400 10,549,780 82,313	0.0000 0.0003 0.0013 0.0165 0.0110 0.0071 0.0090 0.0604 0.2640 0.0045	1.0000 0.9997 0.9987 0.9835 0.9890 0.9929 0.9910 0.9396 0.7360 0.9955	53.44 53.43 53.36 52.48 51.90 51.54 51.07 47.98 35.32

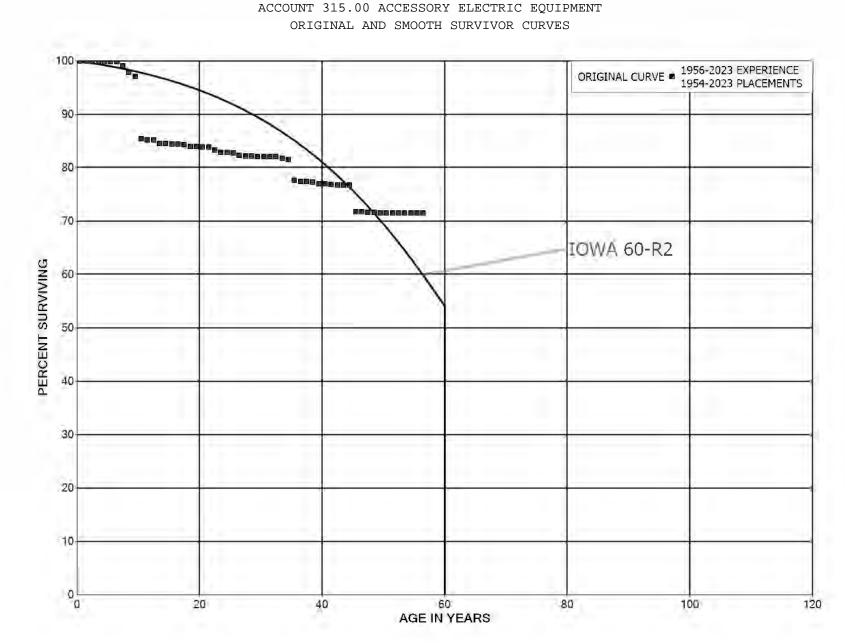
ACCOUNT 314.00 TURBOGENERATOR UNITS

ORIGINAL LIFE TABLE, CONT.

EXPERIENCE BAND 1994-2023

PLACEMENT BAND 1959-2023

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 45.5 46.5 47.5	18,039,932 17,250,588 17,017,082 95,647 93,070 94,614 40,605 5,960,098 5,980,790	768,913 165,224 615,439 52,089 9,199	0.0426 0.0096 0.0362 0.0000 0.5505 0.2265 0.0000 0.0000 0.0000	0.9574 0.9904 0.9638 1.0000 1.0000 0.4495 0.7735 1.0000 1.0000	35.16 33.66 33.34 32.13 32.13 32.13 14.44 11.17 11.17
48.5 49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5	5,980,790 5,950,869 5,950,869 5,950,869 5,929,295 5,921,007 5,919,463 5,919,463 20,692	29,921	0.0050 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0.9950 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	11.17 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11



GANNETT FLEMING

VII-27

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 80 of 382

ACCOUNT 315.00 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1954-2023

EXPERIENCE BAND 1956-2023

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	57,127,892		0.0000	1.0000	100.00
0.5	56,936,435		0.0000	1.0000	100.00
1.5	56,701,531	72,673	0.0013	0.9987	100.00
2.5	51,883,956	873	0.0000	1.0000	99.87
3.5	51,883,083	11,039	0.0002	0.9998	99.87
4.5	51,854,889	2,705	0.0001	0.9999	99.85
5.5	51,139,453	27,580	0.0005	0.9995	99.84
6.5	46,965,983	324,685	0.0069	0.9931	99.79
7.5	45,241,447	584,342	0.0129	0.9871	99.10
8.5	32,587,844	245,238	0.0075	0.9925	97.82
9.5	32,182,634	3,892,566	0.1210	0.8790	97.08
10.5	27,804,587	59,048	0.0021	0.9979	85.34
11.5	27,063,604	5,988	0.0002	0.9998	85.16
12.5	26,490,143	195,206	0.0074	0.9926	85.14
13.5	25,986,388		0.0000	1.0000	84.51
14.5	26,687,899	38,447	0.0014	0.9986	84.51
15.5	26,649,452	13,543	0.0005	0.9995	84.39
16.5	26,671,994	8,637	0.0003	0.9997	84.35
17.5	26,727,595	116,410	0.0044	0.9956	84.32
18.5	26,143,995		0.0000	1.0000	83.95
19.5	26,089,348	25,718	0.0010	0.9990	83.95
20.5	26,078,322	665	0.0000	1.0000	83.87
21.5	26,042,526	183,946	0.0071	0.9929	83.87
22.5	25,639,704	126,423	0.0049	0.9951	83.28
23.5	25,617,926		0.0000	1.0000	82.87
24.5	25,374,948	40,813	0.0016	0.9984	82.87
25.5	24,621,853	141,443	0.0057	0.9943	82.73
26.5	25,161,096	20,346	0.0008	0.9992	82.26
27.5	25,102,639	4,796	0.0002	0.9998	82.19
28.5	25,087,600	22,125	0.0009	0.9991	82.18
29.5	25,067,888	11,117	0.0004	0.9996	82.10
30.5	25,056,771	139	0.0000	1.0000	82.07
31.5	24,779,195	7,102	0.0003	0.9997	82.07
32.5	24,960,764	98,570	0.0039	0.9961	82.04
33.5	24,689,329	51,968	0.0021	0.9979	81.72
34.5	24,616,443	1,186,967	0.0482	0.9518	81.55
35.5	23,520,105	65,456	0.0028	0.9972	77.62
36.5	23,437,080	4,304	0.0002	0.9998	77.40
37.5	23,487,092	36,827	0.0016	0.9984	77.38
38.5	23,440,369	90,128	0.0038	0.9962	77.26

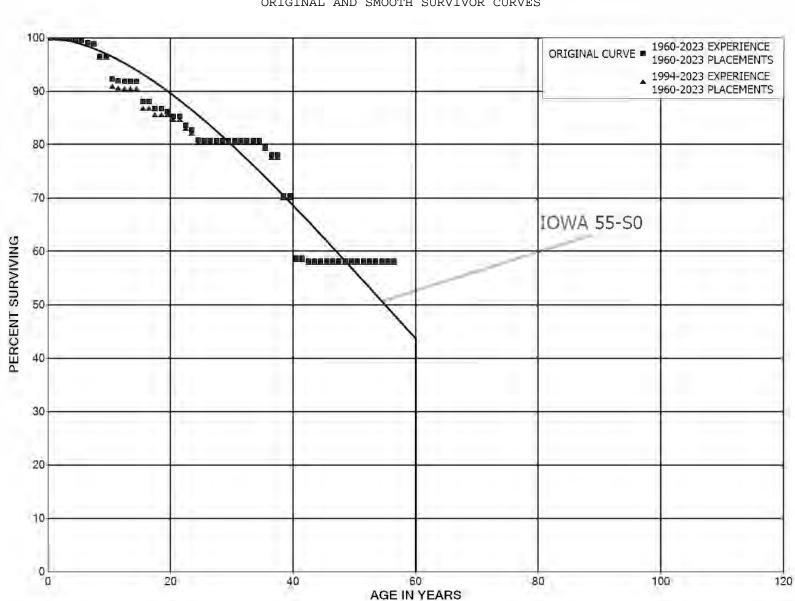
ACCOUNT 315.00 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1954-2023

EXPERIENCE BAND 1956-2023

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	22,894,938 23,033,062	16,260 29,587	0.0007 0.0013	0.9993 0.9987	76.97 76.91
41.5	22,719,711	22,891	0.0013	0.9990	76.81
42.5	1,321,044	,	0.0000	1.0000	76.74
43.5	832,561		0.0000	1.0000	76.74
44.5	719,226	46,986	0.0653	0.9347	76.74
45.5	532,365		0.0000	1.0000	71.72
46.5	1,878,730	2,920	0.0016	0.9984	71.72
47.5	1,739,039		0.0000	1.0000	71.61
48.5	1,724,884	3,434	0.0020	0.9980	71.61
49.5	1,718,539		0.0000	1.0000	71.47
50.5	1,515,221		0.0000	1.0000	71.47
51.5	1,509,812		0.0000	1.0000	71.47
52.5	1,468,050		0.0000	1.0000	71.47
53.5	1,416,843		0.0000	1.0000	71.47
54.5	1,374,188		0.0000	1.0000	71.47
55.5	1,370,346		0.0000	1.0000	71.47
56.5					71.47



DUKE ENERGY KENTUCKY ACCOUNT 316.00 MISCELLANEOUS POWER PLANT EQUIPMENT ORIGINAL AND SMOOTH SURVIVOR CURVES

> KyPSC Case No. 2024-00354 Attachment JJS-1 Page 83 of 382

VII-30

GANNETT FLEMING

Duke Energy Kentucky December 31, 2023

ACCOUNT 316.00 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2023

EXPERIENCE BAND 1960-2023

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	24,208,520 23,686,781 23,376,419 23,675,664 23,870,520 23,722,244 23,198,449 21,476,665 20,376,040 14,445,078	1,598 37,703 31,985 24,717 22,554 97,415 44,631 488,622 10,612	0.0000 0.001 0.0016 0.0014 0.0010 0.0010 0.0042 0.0021 0.0240 0.0007	1.0000 0.9999 0.9984 0.9986 0.9990 0.9990 0.9958 0.9979 0.9760 0.9993	100.00 100.00 99.99 99.83 99.70 99.59 99.50 99.08 98.88 98.88 96.50
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5 19.5 20.5	14,076,038 13,233,061 12,345,025 10,976,668 10,205,550 9,609,505 9,754,278 9,077,179 6,540,099 6,365,902 6,376,037	613,513 38,952 15,961 1,929 1,504 417,184 71 145,587 46,577 61,460	0.0436 0.0029 0.0013 0.0002 0.0001 0.0409 0.0000 0.0149 0.0000 0.0071 0.0097 0.0000	0.9564 0.9971 0.9987 0.9998 0.9591 1.0000 0.9851 1.0000 0.9929 0.9903 1.0000	96.43 92.23 91.96 91.84 91.82 91.81 88.06 88.06 86.74 86.74 86.13 85.29
20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5 29.5	6,196,692 5,897,693 5,859,428 5,321,177 5,313,266 5,205,097 5,198,486 5,177,813 4,960,811	125,212 61,119 130,411 7,911	0.0202 0.0104 0.0223 0.0015 0.0000 0.0000 0.0000 0.0000 0.0000	0.9798 0.9896 0.9777 0.9985 1.0000 1.0000 1.0000 1.0000	85.29 85.29 83.57 82.70 80.86 80.74 80.74 80.74 80.74 80.74
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	4,900,811 4,911,454 4,769,951 4,349,842 4,241,363 4,081,051 3,944,769 3,741,687 3,628,624 3,174,268	54,585 81,430 353,290	0.0000 0.0000 0.0000 0.0000 0.0134 0.0206 0.0000 0.0974 0.0000	1.0000 1.0000 1.0000 1.0000 0.9866 0.9794 1.0000 0.9026 1.0000	80.74 80.74 80.74 80.74 80.74 80.74 79.66 78.02 78.02 70.42

ACCOUNT 316.00 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

EXPERIENCE BAND 1960-2023

PLACEMENT BAND 1960-2023

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 45.5 46.5 47.5	3,016,714 2,403,604 2,168,225 12,705 12,705 12,705 12,705 27,336 27,336	499,348 21,006	0.1655 0.0000 0.0097 0.0000 0.0000 0.0000 0.0000 0.0000	0.8345 1.0000 0.9903 1.0000 1.0000 1.0000 1.0000 1.0000	70.42 58.77 58.77 58.20 58.20 58.20 58.20 58.20 58.20 58.20 58.20
48.5 49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5	27,336 27,336 27,336 27,336 27,336 27,336 27,336 27,336 27,336		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	58.20 58.20 58.20 58.20 58.20 58.20 58.20 58.20 58.20 58.20 58.20

ACCOUNT 316.00 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2023

EXPERIENCE BAND 1994-2023

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	20,615,724 20,093,985 19,785,221 20,088,845 20,298,636 20,162,636 19,651,109 17,936,458 16,836,311 10,936,555	33,325 29,490 12,440 10,287 90,281 44,153 459,192	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0017\\ 0.0015\\ 0.0006\\ 0.0005\\ 0.0046\\ 0.0025\\ 0.0273\\ 0.0000\end{array}$	1.0000 1.0000 0.9983 0.9985 0.9994 0.9995 0.9954 0.9975 0.9727 1.0000	100.00 100.00 99.83 99.69 99.62 99.57 99.12 98.87 96.18
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	10,584,430 9,771,540 8,942,781 10,405,833 10,827,645 10,129,372 9,536,081 9,680,925 9,009,985 6,472,906	595,460 38,069 10,556 414,430 139,428	0.0563 0.0039 0.0012 0.0000 0.0409 0.0000 0.0144 0.0000 0.0000 0.0000	0.9437 0.9961 0.9988 1.0000 1.0000 0.9591 1.0000 0.9856 1.0000 1.0000	96.18 90.76 90.41 90.30 90.30 90.30 86.61 86.61 85.36 85.36
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	6,345,286 6,355,421 6,176,076 5,877,077 5,838,812 5,300,561 5,192,391 5,185,780 5,165,108	61,460 125,212 61,119 130,411	0.0097 0.0203 0.0104 0.0223 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0.9903 1.0000 0.9797 0.9896 0.9777 1.0000 1.0000 1.0000 1.0000 1.0000	85.36 84.54 84.54 82.82 81.96 80.13 80.13 80.13 80.13 80.13
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	4,948,105 4,898,749 4,757,246 4,337,137 4,241,363 4,081,051 3,944,769 3,741,687 3,628,624 3,174,268	54,585 81,430 353,290	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0134\\ 0.0206\\ 0.0000\\ 0.0974\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 1.0000 0.9866 0.9794 1.0000 0.9026 1.0000	80.13 80.13 80.13 80.13 80.13 80.13 79.06 77.43 77.43 69.89

ACCOUNT 316.00 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

EXPERIENCE BAND 1994-2023

PLACEMENT BAND 1960-2023

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 45.5 46.5 47.5	3,016,714 2,403,604 2,168,225 12,705 12,705 12,705 12,705 27,336 27,336	499,348 21,006	0.1655 0.0000 0.0097 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0.8345 1.0000 0.9903 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	69.89 58.32 58.32 57.75 57.75 57.75 57.75 57.75 57.75 57.75
48.5 49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5	27,336 27,336 27,336 27,336 27,336 27,336 27,336 27,336 27,336		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	57.75 57.75 57.75 57.75 57.75 57.75 57.75 57.75 57.75 57.75 57.75



KyPSC Case No. 2024-00354 Attachment JJS-1 Page 88 of 382

EXPERIENCE BAND 2000-2023

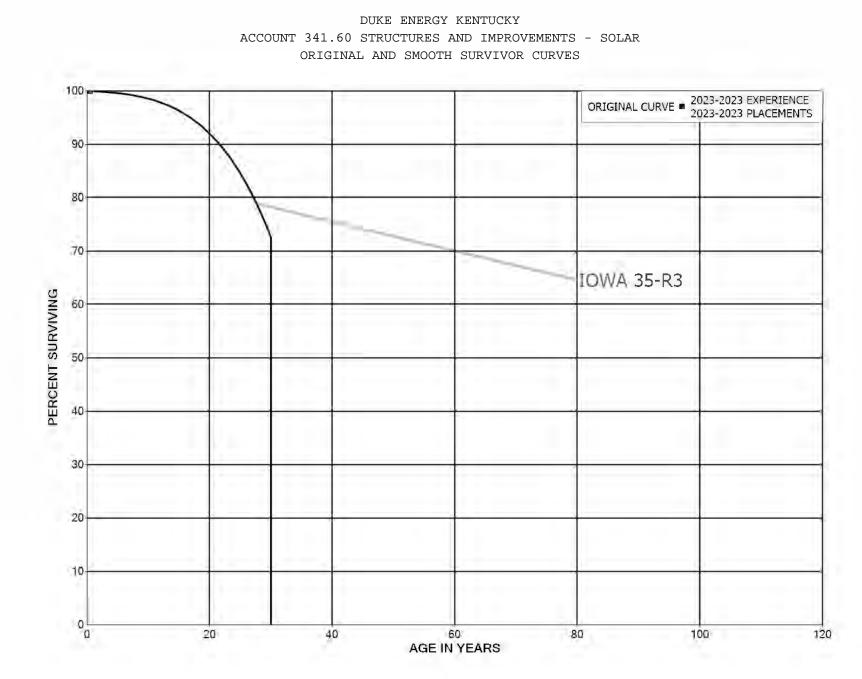
DUKE ENERGY KENTUCKY

ACCOUNT 341.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1991-2022

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	3,540,742 3,665,806 3,141,278 3,141,635 3,072,248 2,853,056 2,820,660 2,820,303 36,308,493 36,236,878		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	35,210,185 34,994,068 34,827,724 33,846,174 33,846,174 33,846,174 33,806,654 33,706,457 33,685,738 33,670,118	10,618 22,463 6,963 15,621	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0003\\ 0.0007\\ 0.0002\\ 0.0005\\ 0.0005\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 1.0000 0.9997 0.9993 0.9998 0.9995 1.0000	100.00 100.00 100.00 100.00 100.00 99.97 99.90 99.88 99.84
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	33,670,118 33,670,118 33,670,118 33,594,134 33,594,134 33,594,134 33,422,077 33,422,077 33,407,776 33,228,704	75,984 172,057 14,301 150,447 10,444	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0023\\ 0.0000\\ 0.0000\\ 0.0051\\ 0.0000\\ 0.0004\\ 0.0045\\ 0.0003 \end{array}$	1.0000 1.0000 0.9977 1.0000 1.0000 0.9949 1.0000 0.9996 0.9955 0.9997	99.84 99.84 99.61 99.61 99.61 99.10 99.10 99.06 98.61
29.5 30.5 31.5 32.5	33,185,989 33,176,250 6,687	9,739 85,823	0.0003 0.0026 0.0000	0.9997 0.9974 1.0000	98.58 98.55 98.30 98.30



GANNETT FLEMING

VII-37

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 90 of 382

EXPERIENCE BAND 2023-2023

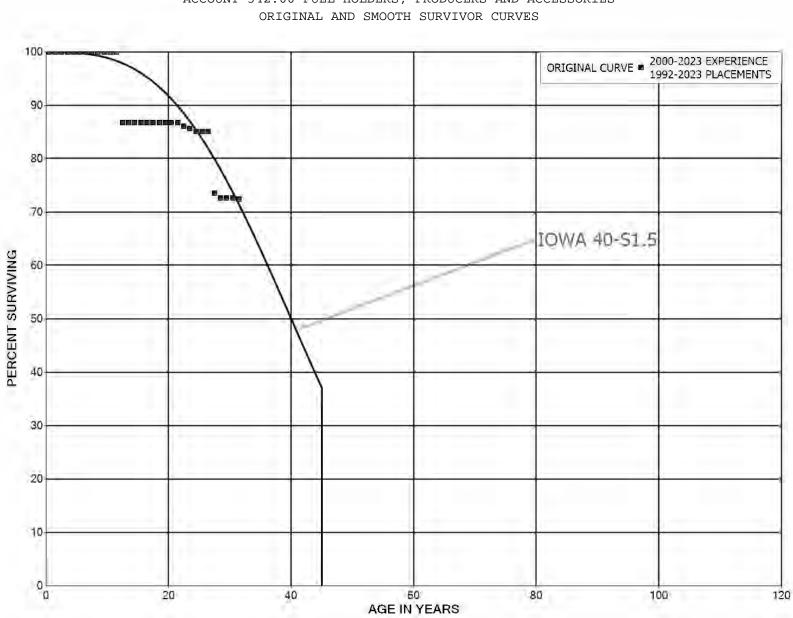
DUKE ENERGY KENTUCKY

ACCOUNT 341.60 STRUCTURES AND IMPROVEMENTS - SOLAR

ORIGINAL LIFE TABLE

PLACEMENT	BAND	2023-2023

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 0.5	1,443,536		0.0000	1.0000	100.00 100.00



DUKE ENERGY KENTUCKY ACCOUNT 342.00 FUEL HOLDERS, PRODUCERS AND ACCESSORIES ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

VII-39

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 92 of 382

EXPERIENCE BAND 2000-2023

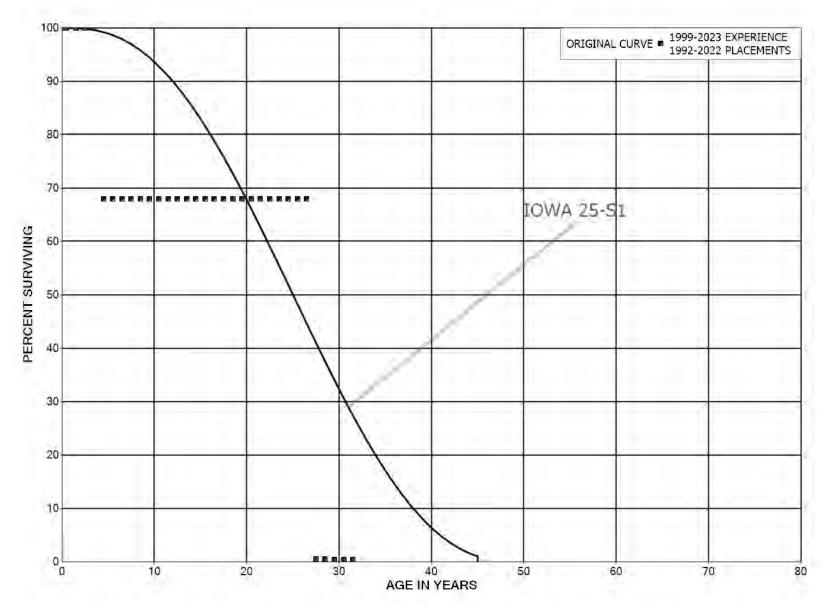
DUKE ENERGY KENTUCKY

ACCOUNT 342.00 FUEL HOLDERS, PRODUCERS AND ACCESSORIES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1992-2023

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 0.5 1.5	54,796,982 54,539,743 54,557,970	178	0.0000 0.0000 0.0000	1.0000 1.0000 1.0000	100.00 100.00 100.00
2.5 3.5 4.5	54,555,131 54,319,348 773,030	154	0.0000 0.0000 0.0000	1.0000 1.0000 1.0000	100.00 100.00 100.00
5.5 6.5 7.5 8.5	803,528 634,948 1,016,204 1,016,204	434	0.0005 0.0000 0.0000 0.0000	0.9995 1.0000 1.0000 1.0000	100.00 99.95 99.95 99.95
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	580,364 664,061 321,684 279,281 279,281 15,523,741 15,523,741 15,523,741 15,523,682 15,523,682	42,403 59 62	0.0000 0.0000 0.1318 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 0.8682 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	99.95 99.95 86.77 86.77 86.77 86.77 86.77 86.77 86.77 86.77
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	15,523,620 15,523,620 15,523,620 15,347,503 15,263,764 15,135,139 15,135,139 15,119,194 6,658,605 6,519,958	120,530 83,738 92,620 15,945 2,054,051 73,342	0.0000 0.0078 0.0055 0.0061 0.0000 0.0011 0.1359 0.0110 0.0000	1.0000 1.0000 0.9922 0.9945 0.9939 1.0000 0.9989 0.8641 0.9890 1.0000	86.77 86.77 86.10 85.63 85.11 85.11 85.02 73.47 72.66
29.5 30.5 31.5	6,519,958 6,519,958	25,095	0.0000 0.0038	1.0000 0.9962	72.66 72.66 72.38



KyPSC Case No. 2024-00354 Attachment JJS-1 Page 94 of 382

GANNETT FLEMING

VII-41

Duke Energy Kentucky December 31, 2023

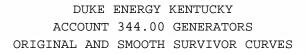
DUKE ENERGY KENTUCKY

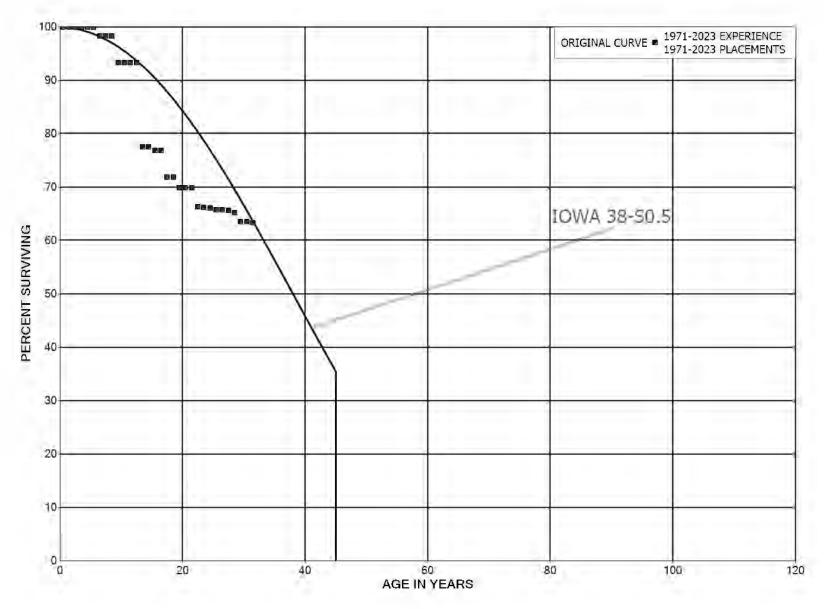
ACCOUNT 343.00 PRIME MOVERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1992-2022

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	19,368,359 17,369,893 15,944,682 13,443,526 13,421,031 7,390,088 7,386,004 4,825,415 4,038,837 4,038,837	4,308,670	0.0000 0.0000 0.0000 0.3210 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 0.6790 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 67.90 67.90 67.90 67.90 67.90 67.90
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	4,038,837 4,038,837 4,038,837 4,038,837 4,038,837 4,038,837 4,038,837 4,038,837 4,038,837 4,038,837 4,038,837 4,038,837		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	67.90 67.90 67.90 67.90 67.90 67.90 67.90 67.90 67.90 67.90
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	4,038,837 4,038,837 4,038,837 4,038,837 4,038,837 4,038,837 4,038,837 4,038,837 4,038,837 31,695 31,695	4,007,142 9,350	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.9922 0.0000 0.2950	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.0078 1.0000 0.7050	67.90 67.90 67.90 67.90 67.90 67.90 67.90 0.53 0.53
29.5 30.5 31.5	22,345 22,345		0.0000 0.0000	1.0000 1.0000	0.38 0.38 0.38





GANNETT FLEMING

VII-43

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 96 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 344.00 GENERATORS

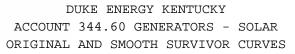
ORIGINAL LIFE TABLE

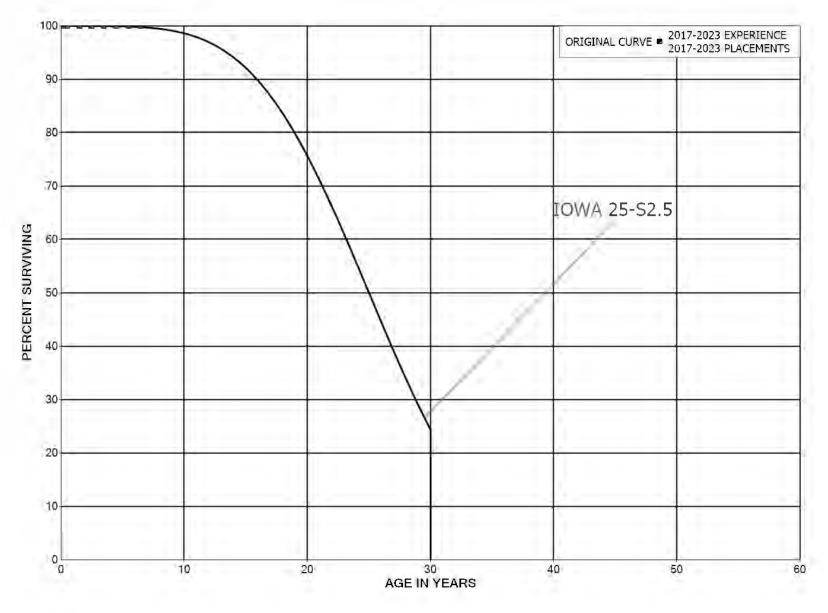
PLACEMENT BAND 1971-2023

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	118,654,807 117,863,940 119,277,617 116,820,163 117,260,597 110,723,560 127,757,740 127,935,233 128,090,485 108,965,056	5,187 77,342 2,043,080 79,800 5,555,634	0.0000 0.0000 0.0000 0.0000 0.0007 0.0160 0.0000 0.0006 0.0510	1.0000 1.0000 1.0000 1.0000 0.9993 0.9840 1.0000 0.9994 0.9490	100.00 100.00 100.00 100.00 100.00 99.93 98.33 98.33 98.33 98.27
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	127,581,097 90,616,290 82,237,283 73,880,292 53,464,031 192,254,769 190,288,277 190,024,053 166,751,514 156,268,184	12,455,990 1,665,378 94,023 12,438,888 22,233 4,234,129	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.1686\\ 0.0000\\ 0.0087\\ 0.0005\\ 0.0655\\ 0.0001\\ 0.0271 \end{array}$	1.0000 1.0000 0.8314 1.0000 0.9913 0.9995 0.9345 0.9999 0.9729	93.26 93.26 93.26 93.26 77.53 77.53 76.86 76.82 71.80 71.79
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	152,020,406 151,554,336 151,554,336 131,414,899 128,988,660 128,436,218 127,843,649 127,843,649 123,438,901 122,647,886	44,564 7,587,726 249,396 262,865 592,569 290,845 746,944 3,178,547	$\begin{array}{c} 0.0003\\ 0.0000\\ 0.0501\\ 0.0019\\ 0.0020\\ 0.0046\\ 0.0000\\ 0.0023\\ 0.0061\\ 0.0259\end{array}$	0.9997 1.0000 0.9499 0.9981 0.9980 0.9954 1.0000 0.9977 0.9939 0.9741	69.84 69.82 69.82 66.32 66.20 66.06 65.76 65.76 65.61 65.21
29.5 30.5 31.5	119,469,339 119,469,339	373,878	0.0000 0.0031	1.0000 0.9969	63.52 63.52 63.32









KyPSC Case No. 2024-00354 Attachment JJS-1 Page 98 of 382

EXPERIENCE BAND 2017-2023

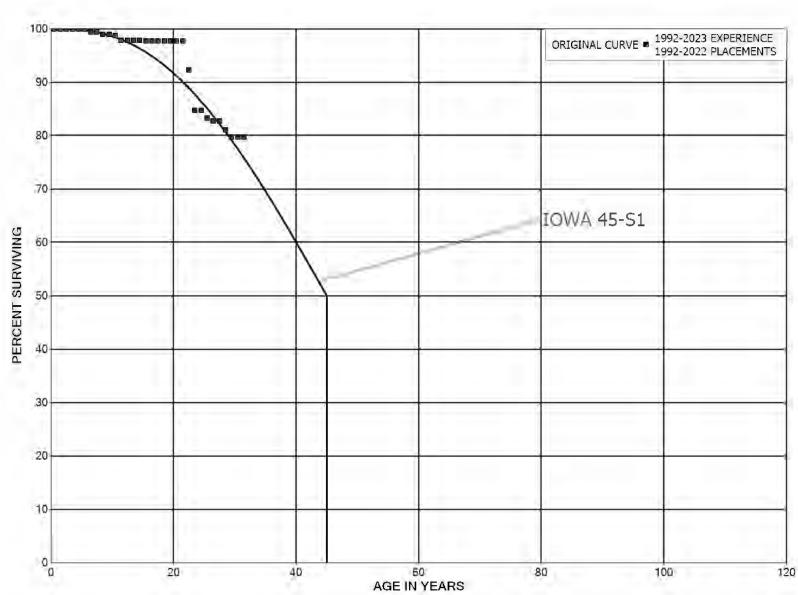
DUKE ENERGY KENTUCKY

ACCOUNT 344.60 GENERATORS - SOLAR

ORIGINAL LIFE TABLE

PLACEMENT BAND 2017-2023

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5	11,286,818 10,478,050 10,478,050 10,478,050 10,478,050 10,478,050 10,478,050		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00



DUKE ENERGY KENTUCKY ACCOUNT 345.00 ACCESSORY ELECTRIC EQUIPMENT ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

VII-47

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 100 of 382

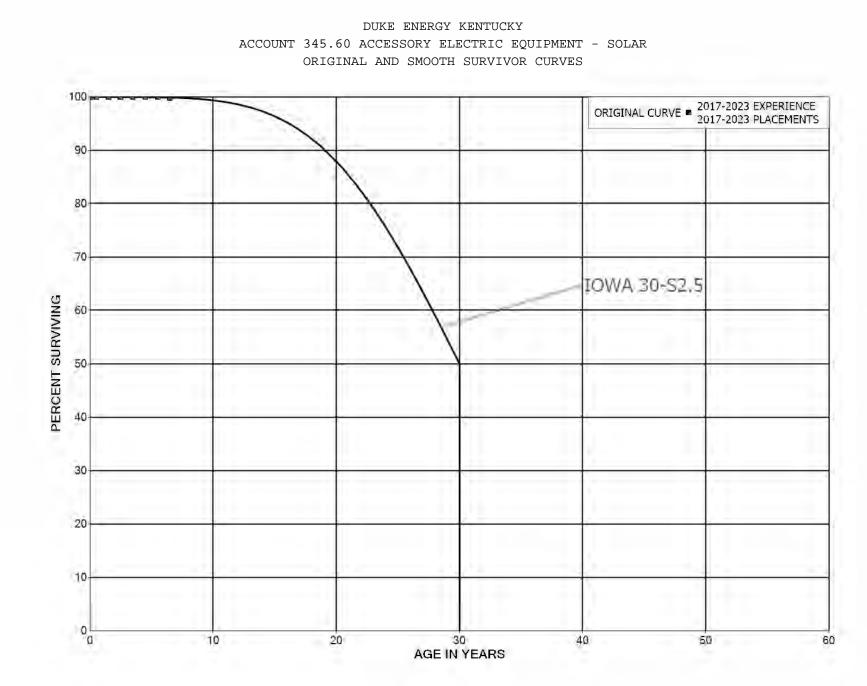
DUKE ENERGY KENTUCKY

ACCOUNT 345.00 ACCESSORY ELECTRIC EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1992-2022

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5	8,251,139 8,251,139 8,235,312 7,630,698 7,630,698 7,145,095 6,924,267 6,628,894 6,514,285	45,150 24,565	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0065 0.0000 0.0038	1.0000 1.0000 1.0000 1.0000 1.0000 0.9935 1.0000 0.9962	100.00 100.00 100.00 100.00 100.00 100.00 99.35 99.35
8.5 9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	5,659,275 5,385,831 5,371,170 3,147,418 129,477 129,477 16,883,189 16,870,756 16,862,708 16,854,091 16,854,091	11,702 52,428 6,651	0.0000 0.0022 0.0098 0.0000 0.0000 0.0000 0.0004 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 0.9978 0.9902 1.0000 1.0000 1.0000 0.9996 1.0000 1.0000 1.0000 1.0000	98.97 98.97 98.76 97.79 97.79 97.79 97.79 97.76 97.76 97.76 97.76
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	16,854,091 16,854,091 16,799,475 15,856,079 14,536,420 14,534,201 14,299,547 14,198,766 12,591,603 12,344,271	11,907 937,109 1,296,543 234,654 100,781 247,331 216,055	0.0000 0.0558 0.0818 0.0000 0.0161 0.0070 0.0000 0.0196 0.0175	1.0000 0.9993 0.9442 0.9182 1.0000 0.9839 0.9930 1.0000 0.9804 0.9825	97.76 97.69 92.24 84.70 84.70 83.33 82.74 82.74 81.12
29.5 30.5 31.5	12,128,217 12,128,217		0.0000 0.0000	1.0000 1.0000	79.70 79.70 79.70



SANNETT FLEMING

VII-49

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 102 of 382

EXPERIENCE BAND 2017-2023

DUKE ENERGY KENTUCKY

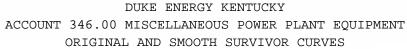
ACCOUNT 345.60 ACCESSORY ELECTRIC EQUIPMENT - SOLAR

ORIGINAL LIFE TABLE

PLACEMENT BAND 2017-2023

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5	5,557,085 1,729,695 1,729,695 1,729,695 1,729,695 1,729,695 1,729,695 1,729,695	4,809	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0028	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.9972	100.00 100.00 100.00 100.00 100.00 100.00 100.00 99.72





KyPSC Case No. 2024-00354 Attachment JJS-1 Page 104 of 382

ACCOUNT 346.00 MISCELLANEOUS POWER PLANT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1978-2023

EXPERIENCE BAND 1978-2023

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	2,985,546 2,257,725 1,753,494 1,751,650 1,813,438 1,804,002 2,172,219 1,878,680 2,156,311 1,999,845	37 12 200 80 162 23,751 16,311 218 56,302 67,368	0.0000 0.0001 0.0001 0.0001 0.0132 0.0075 0.0001 0.0261 0.0337	1.0000 1.0000 0.9999 1.0000 0.9999 0.9868 0.9925 0.9999 0.9739 0.9663	100.00 100.00 99.99 99.98 99.97 98.66 97.92 97.90 95.35
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5 19.5 20.5	1,722,094 1,623,436 1,579,531 1,399,842 1,421,915 3,854,909 3,702,758 3,619,629 3,487,339 3,466,341 3,466,024 3,457,367 2,417,879	70 42,546 40 65,934 5 48,385 20,998 317 8 32,922 2	0.0000 0.0262 0.0000 0.0000 0.0171 0.0000 0.0134 0.0060 0.0001 0.0000 0.0095	1.0000 0.9738 1.0000 1.0000 0.9829 1.0000 0.9866 0.9940 0.9999 1.0000 0.9905	92.14 92.13 89.72 89.72 89.72 89.72 88.18 88.18 87.00 86.48 86.47 86.47
21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5 29.5	3,417,879 3,077,884 2,957,406 2,468,529 2,415,861 2,412,045 2,392,556 2,328,134 2,227,725	2 3 45,998 41,675 1,618 17,054 59,995	0.0000 0.0000 0.0156 0.0169 0.0007 0.0071 0.0251 0.0000 0.0000	1.0000 1.0000 0.9844 0.9931 0.9993 0.9929 0.9749 1.0000 1.0000	85.65 85.65 84.32 82.89 82.84 82.25 80.19 80.19
30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	2,227,723 2,193,331 11,392 3,873 750 750 704 704 408 408	0 46 295 0	0.0000 0.0000 0.0000 0.0000 0.0616 0.0000 0.4197 0.0001 0.0001 0.0000	1.0000 1.0000 1.0000 1.0000 0.9384 1.0000 0.5803 0.9999 1.0000	80.19 80.19 80.19 80.19 80.19 75.25 75.25 43.66 43.66

DUKE ENERGY KENTUCKY

ACCOUNT 346.00 MISCELLANEOUS POWER PLANT EQUIPMENT

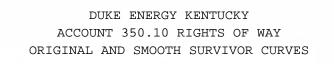
ORIGINAL LIFE TABLE, CONT.

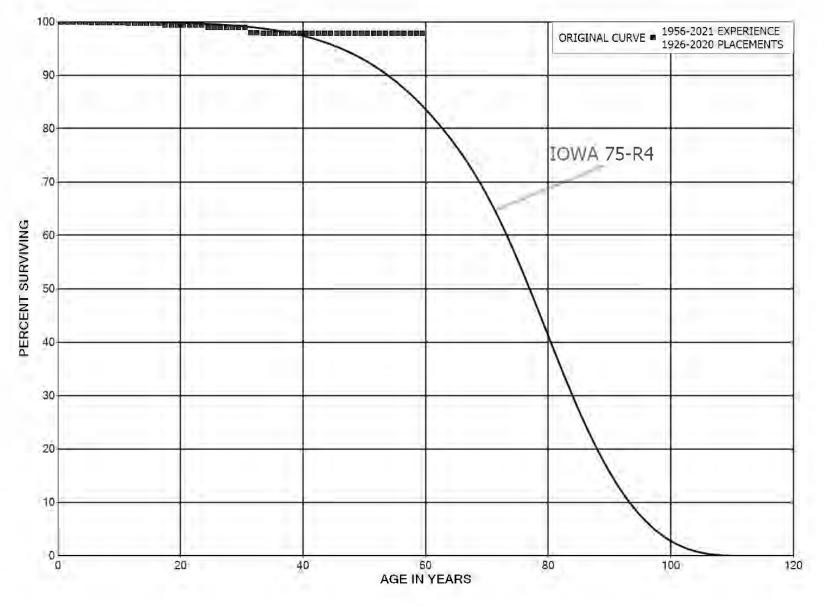
PLACEMENT BAND 1978-2023

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	408 329 329	79 329	0.1946 0.0000 1.0000	0.8054 1.0000	43.66 35.16 35.16









KyPSC Case No. 2024-00354 Attachment JJS-1 Page 107 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 350.10 RIGHTS OF WAY

ORIGINAL LIFE TABLE

PLACEMENT BAND 1926-2020

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	2,164,457 2,163,045 1,758,905 1,753,504 1,637,618 1,644,147 1,640,837 1,635,420 1,635,420 1,635,420	33 3,357	0.0000 0.0000 0.0000 0.0000 0.0020 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 0.9980 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 100.00 99.79 99.79 99.79 99.79
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	1,427,369 1,427,369 1,332,416 1,333,557 1,333,557 1,235,571 1,107,934 1,107,934 1,124,840 1,124,546	793 175 3,189	0.0000 0.0006 0.0001 0.0000 0.0000 0.0000 0.0000 0.0029 0.0000 0.0000	1.0000 0.9994 0.9999 1.0000 1.0000 1.0000 1.0000 0.9971 1.0000 1.0000	99.79 99.79 99.74 99.73 99.73 99.73 99.73 99.73 99.73 99.73 99.44
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	1,124,546 978,865 978,742 978,631 978,303 974,603 974,603 968,075 968,075 968,237	123 112 327 3,700	$\begin{array}{c} 0.0000\\ 0.0001\\ 0.0001\\ 0.0003\\ 0.0038\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 0.9999 0.9999 0.9997 0.9962 1.0000 1.0000 1.0000 1.0000 1.0000	99.44 99.44 99.43 99.41 99.38 99.01 99.01 99.01 99.01 99.01 99.01
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	964,645 964,645 954,136 947,078 927,841 926,484 926,484 926,484 926,484 926,484	10,509 940	$\begin{array}{c} 0.0000\\ 0.0109\\ 0.0000\\ 0.0010\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 0.9891 1.0000 0.9990 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	99.01 99.01 97.93 97.93 97.83 97.83 97.83 97.83 97.83 97.83 97.83

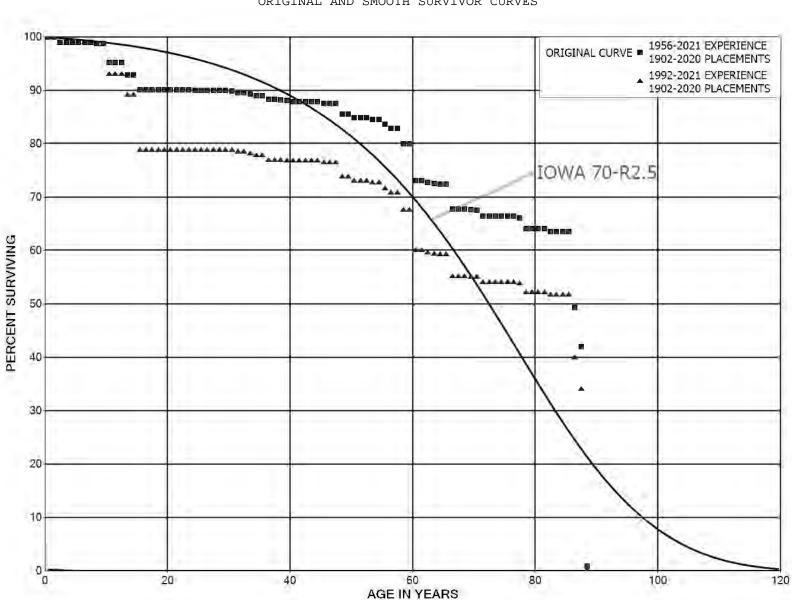
DUKE ENERGY KENTUCKY

ACCOUNT 350.10 RIGHTS OF WAY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1926-2020

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 43.5 45.5 46.5 47.5 48.5	530,434 444,769 444,769 444,769 444,769 444,494 429,896 428,318 401,996 367,219		$\begin{array}{c} 0.0000\\ 0.000\\ 0.$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	97.83 97.83 97.83 97.83 97.83 97.83 97.83 97.83 97.83 97.83 97.83
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	342,046 332,988 332,543 331,452 326,696 240,382 236,536 161,261 161,261 139,172		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	97.83 97.83 97.83 97.83 97.83 97.83 97.83 97.83 97.83 97.83 97.83
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	138,937 88,889 86,533 84,571 4,762 4,399 1,695 1,695 1,695 1,695		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ \end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	97.83 97.83 97.83 97.83 97.83 97.83 97.83 97.83 97.83 97.83 97.83
69.5 70.5 71.5	1,695 1,695		0.0000 0.0000	1.0000 1.0000	97.83 97.83 97.83



DUKE ENERGY KENTUCKY ACCOUNTS 352.00 AND 361.00 STRUCTURES AND IMPROVEMENTS ORIGINAL AND SMOOTH SURVIVOR CURVES

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 110 of 382

DUKE ENERGY KENTUCKY

ACCOUNTS 352.00 AND 361.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1902-2020

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	7,487,469 7,567,287 3,063,085 3,044,009 3,038,219 3,037,521 3,021,984 2,647,069 1,957,583 1,679,820	6 30,890 379 698 51 6 4,568	0.0000 0.0101 0.0001 0.0002 0.0000 0.0000 0.0000 0.0000 0.0023 0.0000	1.0000 1.0000 0.9899 0.9999 0.9998 1.0000 1.0000 1.0000 0.9977 1.0000	100.00 100.00 98.99 98.98 98.96 98.95 98.95 98.95 98.95 98.95 98.72
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	1,328,435 1,274,959 1,257,657 1,260,385 1,090,994 661,250 517,598 558,894 558,894 558,894	47,444 10 31,741 19,258	0.0357 0.0000 0.0252 0.0000 0.0291 0.0000 0.0000 0.0000 0.0000 0.0000	0.9643 1.0000 1.0000 0.9748 1.0000 0.9709 1.0000 1.0000 1.0000 1.0000	98.72 95.20 95.20 95.20 92.80 92.80 90.10 90.10 90.10
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	558,894 558,894 558,894 558,894 558,894 557,782 557,782 607,053 612,536 602,592	1,112	0.0000 0.0000 0.0000 0.0020 0.0020 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 0.9980 1.0000 1.0000 1.0000 1.0000 1.0000	90.10 90.10 90.10 90.10 90.10 89.92 89.92 89.92 89.92 89.92 89.92
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	602,592 614,012 611,498 611,414 609,686 607,965 607,965 603,448 603,448 602,713	354 2,513 84 1,728 1,721 4,517 734 808	0.0006 0.0041 0.0001 0.0028 0.0028 0.0000 0.0074 0.0000 0.0012 0.0013	0.9994 0.9959 0.9999 0.9972 0.9972 1.0000 0.9926 1.0000 0.9988 0.9987	89.92 89.86 89.50 89.48 89.23 88.98 88.98 88.98 88.32 88.32 88.32 88.21

DUKE ENERGY KENTUCKY

ACCOUNTS 352.00 AND 361.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1902-2020

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE RETMT SURV BEGIN OF INTERVAL AGE INTERVAL INTERVAL INTERVAL RATIO RATIO 39.5 601,906 1,389 0.0023 0.9977 88.09 40.5 600,516 0.0000 1.0000 87.89 41.5 308 600,516 0.0005 0.9995 87.89 42.5 600,208 0 0.0000 1.0000 87.84 43.5 600,208 361 0.0006 0.9994 87.84 44.5 599,847 1,717 0.0029 0.9971 87.79 45.5 0.0000 451,823 1.0000 87.54 46.5 451,731 0.0000 87.54 1.0000 47.5 361,651 8,595 0.0238 0.9762 87.54 48.5 353,056 3 0.0000 1.0000 85.46 49.5 353,053 2,388 0.0068 0.9932 85.46 50.5 348,637 139 0.0004 0.9996 84.88 51.5 0.0001 84.85 348,498 24 0.9999 1,231 52.5 345,934 0.0036 84.84 0.9964 53.5 343,702 2 0.0000 84.54 1.0000 3,728 54.5 341,088 0.0109 0.9891 84.54 55.5 337,360 2,969 0.0088 0.9912 83.62 56.5 0.0000 82.88 333,161 1.0000 57.5 330,721 11,652 0.0352 0.9648 82.88 319,070 0.0000 58.5 1.0000 79.96 59.5 319,070 27,426 0.0860 0.9140 79.96 60.5 291,644 25 0.0001 0.9999 73.09 61.5 1,049 0.9952 219,637 0.0048 73.08 62.5 218,588 787 0.0036 0.9964 72.73 63.5 168,298 272 0.0016 0.9984 72.47 64.5 168,026 0 0.0000 1.0000 72.35 10,713 65.5 168,026 0.0638 0.9362 72.35 66.5 107,726 0.0000 1.0000 67.74 67.5 107,726 0.0000 1.0000 67.74 68.5 129 0.0012 0.9988 67.74 107,639 197 69.5 107,510 0.0018 0.9982 67.66 70.5 107,313 1,876 67.53 0.0175 0.9825 71.5 105,437 0.0000 1.0000 66.35 1 72.5 105,437 0.0000 1.0000 66.35 0.0000 73.5 66.35 105,437 1.0000 74.5 105,437 0.0000 1.0000 66.35 75.5 104,947 1 0.0000 1.0000 66.35 76.5 104,945 475 0.0045 66.35 0.9955

104,471

101,402

77.5

78.5

3,068

29

0.0294

0.0003

0.9706

0.9997

66.05

64.11

DUKE ENERGY KENTUCKY

ACCOUNTS 352.00 AND 361.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1902-2020

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
79.5	99,930		0.0000	1.0000	64.09
80.5	99,930		0.0000	1.0000	64.09
81.5	99,930	967	0.0097	0.9903	64.09
82.5	70,771		0.0000	1.0000	63.47
83.5	70,771		0.0000	1.0000	63.47
84.5	70,771		0.0000	1.0000	63.47
85.5	70,771	15,864	0.2242	0.7758	63.47
86.5	54,907	8,081	0.1472	0.8528	49.25
87.5	46,826	45,915	0.9806	0.0194	42.00
88.5	911		0.0000	1.0000	0.82
89.5	911		0.0000	1.0000	0.82
90.5	911		0.0000	1.0000	0.82
91.5	911		0.0000	1.0000	0.82
92.5	911		0.0000	1.0000	0.82
93.5	911		0.0000	1.0000	0.82
94.5	911		0.0000	1.0000	0.82
95.5	911		0.0000	1.0000	0.82
96.5	911		0.0000		
90.5	911 911		0.0000	1.0000 1.0000	0.82 0.82
98.5	911		0.0000	1.0000	0.82
99.5	911		0.0000	1.0000	0.82
100.5	911		0.0000	1.0000	0.82
101.5	911		0.0000	1.0000	0.82
102.5	911		0.0000	1.0000	0.82
103.5	911		0.0000	1.0000	0.82
104.5	911		0.0000	1.0000	0.82
105.5	911		0.0000	1.0000	0.82
106.5	911		0.0000	1.0000	0.82
107.5	911		0.0000	1.0000	0.82
108.5	911	911	1.0000		0.82
100 5					

109.5

ACCOUNTS 352.00 AND 361.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

1902-2020

EXPERIENCE BAND 1992-2021

PLACEMENT	BAND	1902-2020

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	7,069,055 7,069,049 2,583,180 2,554,222 2,548,131 2,547,433 2,531,624 2,156,709 1,467,223 1,189,486	6 28,958 379 698 51 6 4,542	0.0000 0.0112 0.0001 0.0003 0.0000 0.0000 0.0000 0.0031 0.0000	1.0000 1.0000 0.9888 0.9999 0.9997 1.0000 1.0000 1.0000 0.9969 1.0000	100.00 100.00 98.88 98.86 98.84 98.84 98.84 98.84 98.83 98.53
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	837,610 784,135 766,832 766,832 595,867 166,124 169,478 169,571 263,891 263,891	47,444 10 31,741 19,258	0.0566 0.0000 0.0414 0.0000 0.1159 0.0000 0.0000 0.0000 0.0000 0.0000	0.9434 1.0000 1.0000 0.9586 1.0000 0.8841 1.0000 1.0000 1.0000 1.0000	98.53 92.95 92.95 92.95 89.10 89.10 78.77 78.77 78.77 78.77
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	263,891 265,919 265,919 272,760 274,672 279,521 279,521 284,201 286,644 264,647		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	78.77 78.77 78.77 78.77 78.77 78.77 78.77 78.77 78.77 78.77 78.77
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	268,375 268,375 339,181 339,181 396,253 394,531 394,531 467,961 468,886 480,674	1,175 1,728 1,721 4,462 729	0.0000 0.0044 0.0000 0.0051 0.0043 0.0000 0.0113 0.0000 0.0000 0.0015	1.0000 0.9956 1.0000 0.9949 0.9957 1.0000 0.9887 1.0000 1.0000 0.9985	78.77 78.77 78.43 78.43 78.03 77.69 77.69 76.81 76.81 76.81

DUKE ENERGY KENTUCKY

ACCOUNTS 352.00 AND 361.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1902-2020

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE RETMT SURV BEGIN OF INTERVAL AGE INTERVAL INTERVAL INTERVAL RATIO RATIO 39.5 480,246 0.0000 1.0000 76.69 40.5 480,246 0.0000 1.0000 76.69 41.5 480,518 76.69 0.0000 1.0000 42.5 480,518 0 0.0000 1.0000 76.69 43.5 480,518 91 0.0002 0.9998 76.69 44.5 76.68 480,427 1,717 0.0036 0.9964 45.5 76.40 332,893 0.0000 1.0000 46.5 332,801 0.0000 76.40 1.0000 0.9646 47.5 242,721 8,595 0.0354 76.40 48.5 236,854 3 0.0000 1.0000 73.70 49.5 0.9900 238,425 2,388 0.0100 73.70 50.5 234,009 139 0.0006 0.9994 72.96 51.5 0.0001 0.9999 72.92 234,345 24 1,231 52.5 0.0045 72.91 271,643 0.9955 53.5 268,501 2 0.0000 72.58 1.0000 3,728 54.5 265,887 0.0140 0.9860 72.58 55.5 262,160 2,969 0.0113 0.9887 71.56 56.5 0.0000 257,960 1.0000 70.75 57.5 255,520 11,652 0.0456 0.9544 70.75 243,869 0.0000 58.5 1.0000 67.52 59.5 243,869 27,426 0.1125 0.8875 67.52 60.5 216,443 25 0.0001 0.9999 59.93 61.5 1,049 59.92 144,437 0.0073 0.9927 62.5 190,270 787 0.0041 0.9959 59.49 145,375 63.5 272 0.0019 0.9981 59.24 64.5 156,253 0 0.0000 1.0000 59.13 10,713 65.5 156,253 0.0686 0.9314 59.13 66.5 106,816 0.0000 1.0000 55.08 67.5 106,816 0.0000 1.0000 55.08 68.5 106,729 129 0.0012 0.9988 55.08 197 69.5 106,600 0.0018 0.9982 55.01 70.5 1,876 54.91 106,403 0.0176 0.9824 71.5 104,527 0.0000 1.0000 53.94 1 72.5 104,526 0.0000 1.0000 53.94 0.0000 73.5 104,526 53.94 1.0000 74.5 104,526 0.0000 1.0000 53.94 75.5 104,036 1 0.0000 1.0000 53.94 76.5 475 0.0046 0.9954 53.94 104,035 77.5 3,068 53.69 103,560 0.0296 0.9704 78.5 100,492 29 0.0003 0.9997 52.10

DUKE ENERGY KENTUCKY

ACCOUNTS 352.00 AND 361.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1902-2020

AGE AT

79.5

80.5

81.5

82.5

83.5

84.5

85.5

86.5

87.5

88.5 89.5

90.5

91.5

92.5

93.5

94.5

95.5

96.5

97.5

98.5

99.5

100.5

101.5

102.5

103.5

104.5

105.5

106.5

107.5

108.5

109.5

911

911

911

911

911

911

911

EXPOSURES AT RETIREMENTS PCT SURV BEGINNING OF BEGIN OF DURING AGE RETMT SURV BEGIN OF INTERVAL AGE INTERVAL INTERVAL INTERVAL RATIO RATIO 99,020 0.0000 1.0000 52.09 99,020 0.0000 1.0000 52.09 99,020 967 0.0098 0.9902 52.09 69,861 0.0000 1.0000 51.58 69,861 0.0000 1.0000 51.58 69,861 0.0000 1.0000 51.58 69,861 15,864 0.2271 0.7729 51.58 53,997 8,081 0.1497 0.8503 39.87 45,915 45,915 1.0000 33.90 911 0.0000 911 0.0000 911 0.0000 911 0.0000 911 0.0000 911 0.0000 911 0.0000 911 0.0000 911 0.0000 911 0.0000 911 0.0000 0.0000 911 911 0.0000

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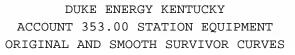
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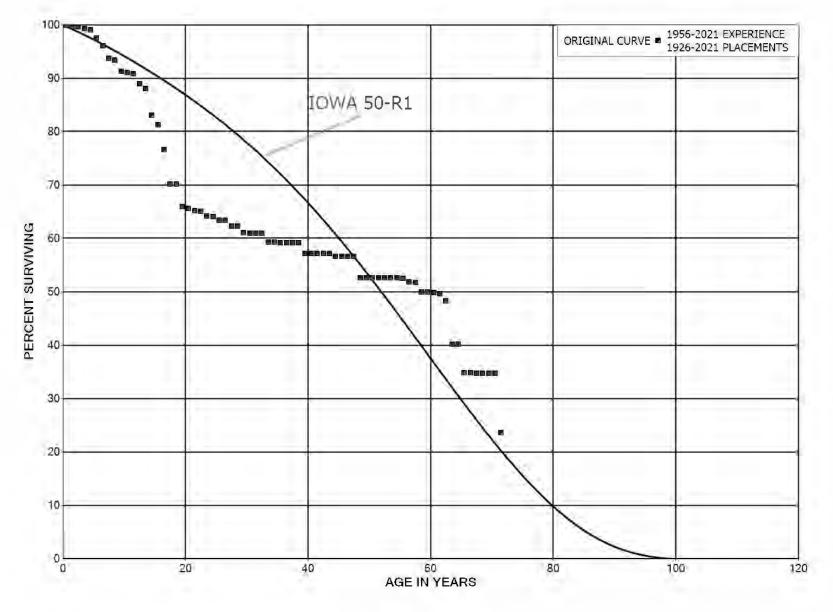
1.0000

911









KyPSC Case No. 2024-00354 Attachment JJS-1 Page 117 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 353.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1926-2021

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE SURV BEGIN OF RETMT AGE INTERVAL INTERVAL INTERVAL RATIO RATIO INTERVAL 0.0 37,289,788 0.0000 1.0000 100.00 0.5 35,066,371 122,677 0.0035 0.9965 100.00 1.5 24,136,951 14,457 0.0006 99.65 0.9994 2.5 20,046,453 57,116 0.0028 0.9972 99.59 3.5 18,413,068 46,362 0.0025 0.9975 99.31 4.5 16,980,137 258,560 0.0152 99.06 0.9848 5.5 16,706,726 252,276 0.0151 0.9849 97.55 14,291,742 357,552 6.5 0.0250 0.9750 96.08 7.5 12,632,412 93.67 36,861 0.0029 0.9971 8.5 12,426,527 275,948 0.0222 0.9778 93.40 11,607,976 9.5 27,860 0.0024 0.9976 91.32 10.5 11,580,116 35,697 0.0031 0.9969 91.11 90.82 11.5 11,532,683 245,565 0.0213 0.9787 12.5 0.9903 88.89 11,269,097 109,868 0.0097 13.5 11,181,003 632,500 0.0566 0.9434 88.02 14.5 7,953,967 169,828 0.9786 83.04 0.0214 0.9421 15.5 7,295,027 422,145 0.0579 81.27 16.5 6,808,237 569,852 0.0837 0.9163 76.57 17.5 6,195,021 3,008 0.0005 0.9995 70.16 307,986 18.5 5,148,561 0.0598 0.9402 70.13 19.5 4,109,298 20,309 0.0049 0.9951 65.93 20.5 4,089,214 25,188 0.0062 0.9938 65.60 3,345,631 21.5 8,434 0.0025 0.9975 65.20 22.5 3,332,495 45,512 0.0137 0.9863 65.04 23.5 3,183,199 4,924 0.0015 0.9985 64.15 3,178,274 29,947 64.05 24.5 0.0094 0.9906 25.5 3,116,605 3,507 0.0011 0.9989 63.45 26.5 2,595,324 0.0177 46,020 0.9823 63.37 62.25 27.5 2,549,304 0.0000 1.0000 2,549,304 28.5 50,135 0.0197 0.9803 62.25 29.5 1,720,591 1,050 0.0006 0.9994 61.03 30.5 1,575,034 0.0000 1.0000 60.99 31.5 1,575,034 68 0.0000 1.0000 60.99 32.5 1,574,966 45,260 0.0287 0.9713 60.99 33.5 1,529,706 0.0000 1.0000 59.23 34.5 1,529,706 1,228 0.0008 0.9992 59.23 35.5 1,511,840 173 0.0001 0.9999 59.19 36.5 1,443,042 0.0000 59.18 1.0000 37.5 1,443,042 0.0000 1.0000 59.18 38.5 1,143,910 38,077 0.0333 59.18 0.9667

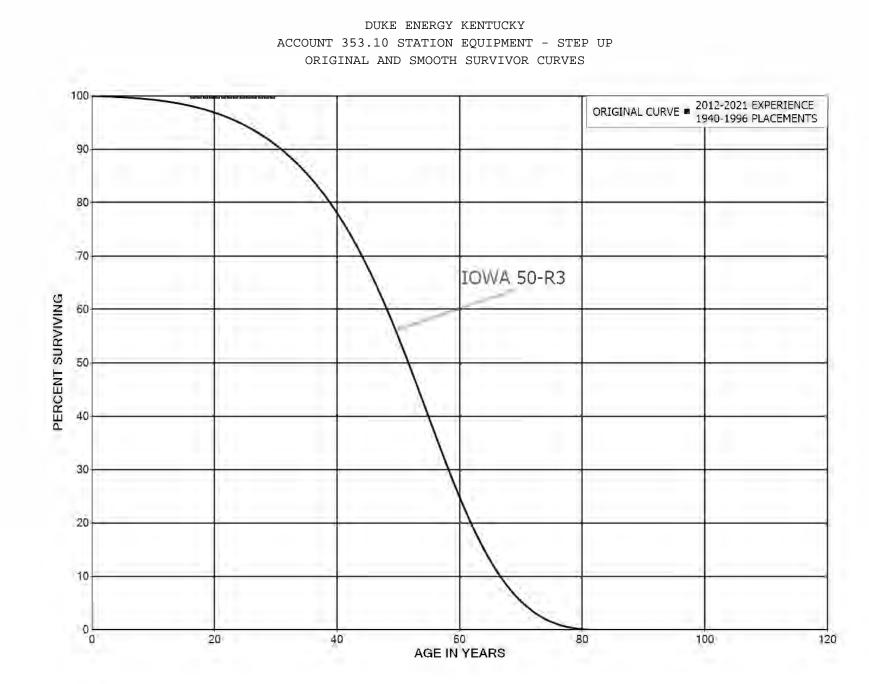
DUKE ENERGY KENTUCKY

ACCOUNT 353.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1926-2021

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 45.5 46.5 47.5 48.5	1,164,309 1,164,301 1,164,301 1,158,527 1,156,706 1,146,572 807,980 805,326 804,722 711,840	7 1,389 11 10,134 179 197 56,271	0.0000 0.0012 0.0000 0.0088 0.0002 0.0000 0.0002 0.0699 0.0000	1.0000 1.0000 0.9988 1.0000 0.9912 0.9998 1.0000 0.9998 0.9301 1.0000	57.21 57.21 57.14 57.14 56.64 56.63 56.63 56.63 56.62 52.66
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	711,840 663,792 663,790 663,778 658,985 658,656 655,680 450,548 450,200 434,769	16 1 12 808 1,582 8,238 348 15,431	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0012\\ 0.0000\\ 0.0024\\ 0.0126\\ 0.0008\\ 0.0343\\ 0.0000\end{array}$	1.0000 1.0000 0.9988 1.0000 0.9976 0.9874 0.9992 0.9657 1.0000	52.66 52.66 52.66 52.59 52.59 52.47 51.81 51.77 49.99
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	434,769 430,752 363,236 353,743 28,471 28,471 22,807 20,786 20,745 20,745	1,537 1,556 9,493 59,920 3,805 41	0.0035 0.0261 0.1694 0.0000 0.1336 0.0000 0.0019 0.0000 0.0000	0.9965 0.9964 0.9739 0.8306 1.0000 0.8664 1.0000 0.9981 1.0000 1.0000	49.99 49.81 49.64 48.34 40.15 40.15 34.78 34.78 34.72 34.72
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	20,745 10,878 7,397 7,397 7,397 7,397 7,397 3,307 3,307 3,307	3,481 4,090	0.0000 0.3200 0.0000 0.0000 0.5529 0.0000 0.0000 0.0000 0.0000	1.0000 0.6800 1.0000 1.0000 0.4471 1.0000 1.0000 1.0000	34.72 34.72 23.61 23.61 23.61 10.55 10.55 10.55 10.55



GANNETT FLEMING

VII-67

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 120 of 382

ACCOUNT 353.10 STATION EQUIPMENT - STEP UP

ORIGINAL LIFE TABLE

PLACEMENT E	BAND 1940-1996		EXPEF	RIENCE BAN	D 2012-2021
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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5					
9.5 10.5 11.5 12.5 13.5 14.5 15.5					
16.5 17.5 18.5	968,381 968,381 968,381		0.0000 0.0000 0.0000	1.0000 1.0000 1.0000	100.00 100.00 100.00
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	968,381 9,373,634 9,373,634 9,373,634 9,373,634 9,373,634 9,373,634 8,405,253 8,405,253 8,405,253 8,405,253		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	100.00100.00100.00100.00100.00100.00100.00100.00100.00
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	22,193 22,193 22,193 36,091 29,659 29,659 35,928	22,193 13,897	0.0000 0.0000 0.6149 0.0000 0.0000 0.3868		100.00

ACCOUNT 353.10 STATION EQUIPMENT - STEP UP

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1940-1996

EXPERIENCE BAND 2012-2021 AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF BEGIN OF DURING AGE RETMT SURV INTERVAL AGE INTERVAL INTERVAL RATIO RATIO INTERVAL 39.5 22,031 15,762 0.7155 40.5 6,269 0.0000 41.5 6,269 6,269 1.0000 42.5 43.5 5,339 0.0000 44.5 5,339 0.0000 45.5 5,339 0.0000 46.5 5,339 5,339 1.0000 47.5 48.5 49.5 50.5 51.5 52.5 16,550 0.0000 53.5 16,550 0.0000 54.5 16,550 0.0000 55.5 16,550 1.0000 16,550 56.5 57.5 900 0.0000 58.5 900 0.0000 59.5 900 0.0000 60.5 900 1.0000 900 61.5 62.5 63.5 18,783 0.0000 18,783 64.5 0.0000 18,783 0.0000 65.5 18,783 66.5 18,783 1.0000 67.5 68.5 69.5 70.5 71.5 561 0.0000 72.5 6,628 0.0000 73.5 0.0000 6,628

74.5

75.5

76.5

6,628

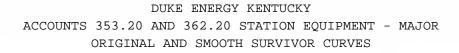
6,067

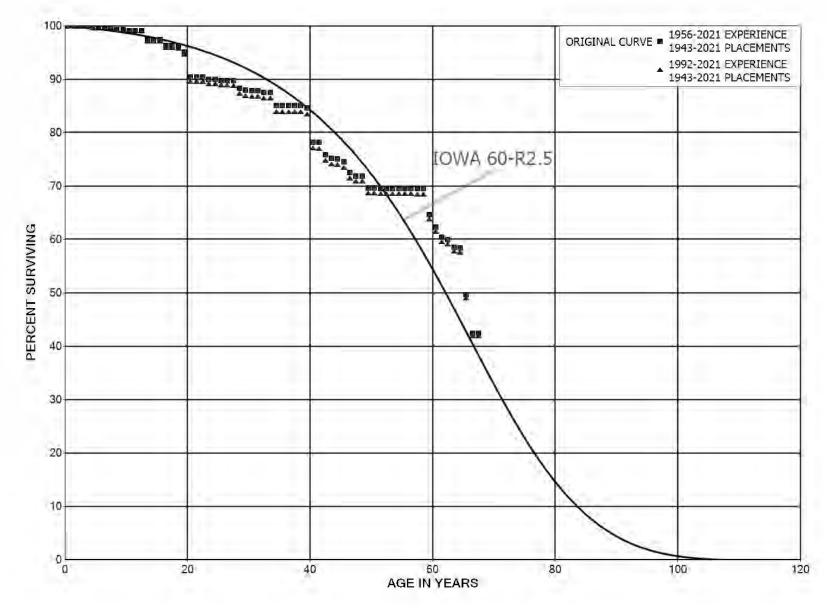
561

6,067

0.0847

1.0000





KyPSC Case No. 2024-00354 Attachment JJS-1 Page 123 of 382

GANNETT FLEMING

DUKE ENERGY KENTUCKY

ACCOUNTS 353.20 AND 362.20 STATION EQUIPMENT - MAJOR

ORIGINAL LIFE TABLE

PLACEMENT BAND 1943-2021

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	55,289,845		0.0000	1.0000	100.00
0.5	52,451,433		0.0000	1.0000	100.00
1.5	42,787,415		0.0000	1.0000	100.00
2.5	35,498,353		0.0000	1.0000	100.00
3.5	31,757,267	127,686	0.0040	0.9960	100.00
4.5	31,786,883		0.0000	1.0000	99.60
5.5	31,814,998		0.0000	1.0000	99.60
6.5	30,356,961		0.0000	1.0000	99.60
7.5	29,098,250	101,291	0.0035	0.9965	99.60
8.5	28,996,959		0.0000	1.0000	99.25
9.5	29,588,560	40,579	0.0014	0.9986	99.25
10.5	29,465,724		0.0000	1.0000	99.12
11.5	27,429,430		0.0000	1.0000	99.12
12.5	26,535,511	462,540	0.0174	0.9826	99.12
13.5	24,142,809		0.0000	1.0000	97.39
14.5	20,994,667		0.0000	1.0000	97.39
15.5 16.5 17.5	19,402,549 18,021,641 17,077,810	227,166 16,975	0.0117 0.0000 0.0010	0.9883 1.0000 0.9990	97.39 96.25 96.25
18.5	15,421,990	175,470	0.0114	0.9886	96.15
19.5	13,955,943	683,187		0.9510	95.06
20.5 21.5 22.5	9,854,448 8,361,574 8,356,863	4,710 35,635	0.0000 0.0006 0.0043	1.0000 0.9994 0.9957	90.40 90.40 90.35
23.5 24.5 25.5	8,321,228 8,321,228 8,302,942	18,286 1,292	0.0000 0.0022 0.0002	1.0000 0.9978 0.9998	89.97 89.97 89.77
26.5	8,090,099	5,925	0.0007	0.9993	89.76
27.5	8,084,174	124,760	0.0154	0.9846	89.69
28.5	7,019,778	30,269	0.0043	0.9957	88.31
29.5 30.5 31.5	6,477,943 5,368,781 5,334,412	9,017 19,543	0.0014 0.0000 0.0037	0.9986 1.0000 0.9963	87.93 87.80 87.80
32.5 33.5 34.5 35.5	5,213,735 5,129,934 4,952,914 4,910,944	141,294 1,471	0.0000 0.0275 0.0000 0.0003	1.0000 0.9725 1.0000 0.9997	87.48 87.48 85.07 85.07
36.5 37.5 38.5	4,857,516 4,456,388 3,661,425	949 19,241	0.0000 0.0002 0.0053	1.0000 0.9998 0.9947	85.05 85.05 85.03

DUKE ENERGY KENTUCKY

ACCOUNTS 353.20 AND 362.20 STATION EQUIPMENT - MAJOR

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1943-2021

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 45.5 46.5 47.5 48.5	3,464,818 3,051,702 2,938,371 2,741,867 2,693,335 2,293,324 1,630,404 1,586,052 1,436,124 1,386,888	262,739 1,614 87,764 22,285 3,773 17,444 44,352 13,357 43,524	0.0758 0.0005 0.0299 0.0081 0.0014 0.0076 0.0272 0.0084 0.0000 0.0314	0.9242 0.9995 0.9701 0.9919 0.9986 0.9924 0.9728 0.9916 1.0000 0.9686	84.58 78.17 78.13 75.79 75.18 75.07 74.50 72.47 71.86 71.86
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	1,317,782 1,116,655 1,328,637 1,230,152 1,230,152 1,214,340 943,626 878,585 757,295 746,864	197 1,514 366 323 51,545	$\begin{array}{c} 0.0001 \\ 0.0014 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0003 \\ 0.0000 \\ 0.0004 \\ 0.0000 \\ 0.0690 \end{array}$	0.9999 0.9986 1.0000 1.0000 0.9997 1.0000 0.9996 1.0000 0.9310	69.61 69.60 69.50 69.50 69.50 69.48 69.48 69.48 69.46 69.46
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	691,223 666,211 625,892 621,591 345,876 344,725 293,143 244,561 21,699 21,699	25,012 21,159 4,301 14,414 1,151 51,583 42,430	0.0362 0.0318 0.0069 0.0232 0.0033 0.1496 0.1447 0.0000 0.0000 0.0000	0.9638 0.9682 0.9931 0.9768 0.9967 0.8504 0.8553 1.0000 1.0000 1.0000	64.66 62.32 60.34 59.93 58.54 58.35 49.61 42.43 42.43 42.43
69.5 70.5 71.5 72.5	21,699 21,699 10,864	10,864	0.0000 0.0000 1.0000	1.0000 1.0000	42.43 42.43 42.43

DUKE ENERGY KENTUCKY

ACCOUNTS 353.20 AND 362.20 STATION EQUIPMENT - MAJOR

ORIGINAL LIFE TABLE

PLACEMENT BAND 1943-2021

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 0.5 1.5 2.5	48,059,482 46,194,525 36,564,876 29,275,813		0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00
3.5 4.5 5.5 6.5	25, 618, 528 25, 797, 960 25, 856, 060 24, 520, 703	127,686	0.0050 0.0000 0.0000 0.0000	0.9950 1.0000 1.0000 1.0000	100.00 99.50 99.50 99.50
7.5 8.5	23,673,598 25,060,730	101,291	0.0043 0.0000	0.9957 1.0000	99.50 99.08
9.5 10.5 11.5	26,035,660 26,162,525 24,518,974	40,579	0.0016 0.0000 0.0000	0.9984 1.0000 1.0000	99.08 98.92 98.92
12.5 13.5 14.5	23,813,368 21,446,913 18,705,034	462,540	0.0194 0.0000 0.0000	0.9806 1.0000 1.0000	98.92 97.00 97.00
15.5 16.5 17.5	17,774,314 16,393,407 15,724,916 14,137,875	227,166 16,975	0.0128 0.0000 0.0011	0.9872 1.0000 0.9989 0.9876	97.00 95.76 95.76
18.5 19.5 20.5	12,730,802 8,859,490	175,470 683,187	0.0124 0.0537 0.0000	0.9463	95.66 94.47 89.40
21.5 22.5 23.5	7,375,982 7,470,128 7,434,493	4,710 35,635	0.0006 0.0048 0.0000	0.9994 0.9952 1.0000	89.40 89.34 88.92
24.5 25.5 26.5 27.5 28.5	7,450,305 7,526,271 7,395,036 7,441,292 6,403,769	18,286 1,292 5,925 124,760 30,269	0.0025 0.0002 0.0008 0.0168 0.0047	0.9975 0.9998 0.9992 0.9832 0.9953	88.92 88.70 88.68 88.61 87.13
29.5 30.5 31.5 32.5	5,917,576 4,808,413 4,814,363 4,694,052	9,017 19,543	0.0015 0.0000 0.0041 0.0000	0.9985 1.0000 0.9959 1.0000	86.71 86.58 86.58 86.23
33.5 34.5 35.5 36.5	4,963,350 4,786,329 4,757,103 4,830,366	141,294 1,471	0.0285 0.0000 0.0003 0.0000	0.9715 1.0000 0.9997 1.0000	86.23 83.78 83.78 83.78 83.75
37.5 38.5	4,830,380 4,429,238 3,634,275	949 19,241	0.0002	0.9998	83.75 83.75 83.73

DUKE ENERGY KENTUCKY

ACCOUNTS 353.20 AND 362.20 STATION EQUIPMENT - MAJOR

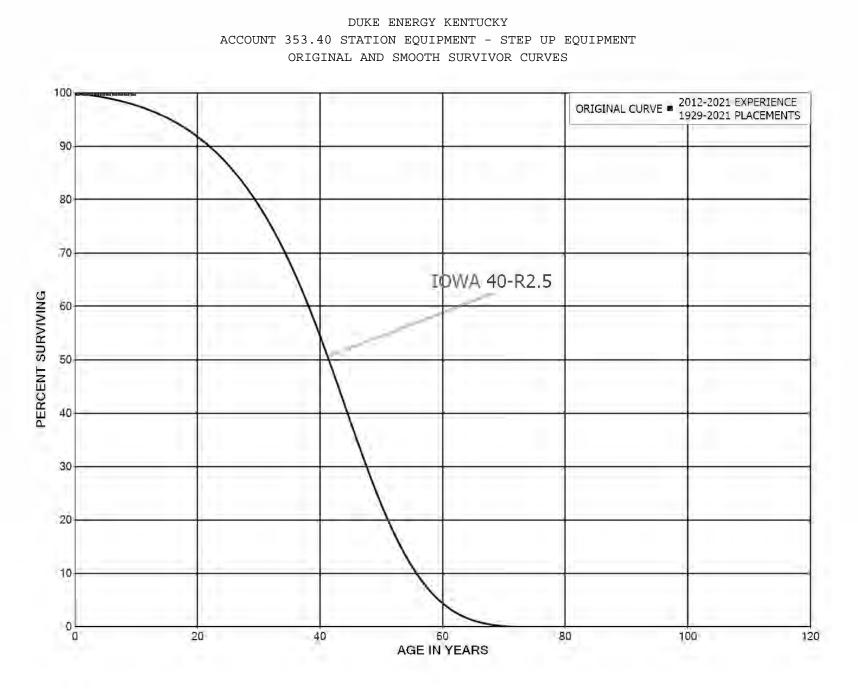
ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1943-2021

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE RETMT SURV BEGIN OF INTERVAL AGE INTERVAL INTERVAL INTERVAL RATIO RATIO 39.5 3,437,668 262,739 0.0764 0.9236 83.29 40.5 3,028,853 1,614 0.0005 0.9995 76.92 87,764 2,927,506 76.88 41.5 0.0300 0.9700 42.5 2,731,003 22,285 0.0082 0.9918 74.58 2,682,470 3,773 43.5 0.0014 0.9986 73.97 44.5 2,282,460 73.87 17,444 0.0076 0.9924 1,619,539 73.30 45.5 44,352 0.0274 0.9726 46.5 1,575,187 0.0085 0.9915 71.29 13,357 47.5 1,425,259 0.0000 1.0000 70.69 48.5 1,386,888 43,524 0.0314 0.9686 70.69 0.9999 49.5 197 1,317,782 0.0001 68.47 50.5 1,116,655 1,514 0.0014 0.9986 68.46 51.5 1,328,637 0.0000 68.37 1.0000 52.5 1,230,152 0.0000 68.37 1.0000 53.5 1,230,152 0.0000 68.37 1.0000 54.5 1,214,340 366 0.0003 0.9997 68.37 55.5 943,626 0.0000 1.0000 68.35 56.5 878,585 0.0004 323 0.9996 68.35 57.5 757,295 0.0000 1.0000 68.32 746,864 51,545 0.0690 58.5 0.9310 68.32 59.5 691,223 25,012 0.0362 0.9638 63.61 666,211 60.5 21,159 0.0318 0.9682 61.30 4,301 61.5 625,892 0.0069 0.9931 59.36 62.5 621,591 14,414 0.0232 0.9768 58.95 63.5 345,876 1,151 0.0033 0.9967 57.58 57.39 64.5 344,725 51,583 0.1496 0.8504 65.5 293,143 42,430 0.1447 0.8553 48.80 66.5 244,561 0.0000 1.0000 41.74 67.5 21,699 0.0000 1.0000 41.74 21,699 1.0000 68.5 0.0000 41.74 41.74 69.5 21,699 0.0000 1.0000 21,699 41.74 70.5 0.0000 1.0000 71.5 10,864 10,864 1.0000 41.74 72.5







KyPSC Case No. 2024-00354 Attachment JJS-1 Page 128 of 382

EXPERIENCE BAND 2012-2021

DUKE ENERGY KENTUCKY

ACCOUNT 353.40 STATION EQUIPMENT - STEP UP EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1929-2021

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	6,453,325 5,838,602 5,838,602 5,838,602 5,838,602 5,838,602 5,838,602 5,838,602 5,838,602 5,838,602 5,838,602 5,838,602		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5					100.00
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	1,218,688 1,218,688 1,218,688 1,218,688 1,218,688 1,218,688 1,218,688 1,218,688 1,218,688		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$		
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5					

38.5

ACCOUNT 353.40 STATION EQUIPMENT - STEP UP EQUIPMENT

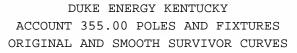
ORIGINAL LIFE TABLE, CONT.

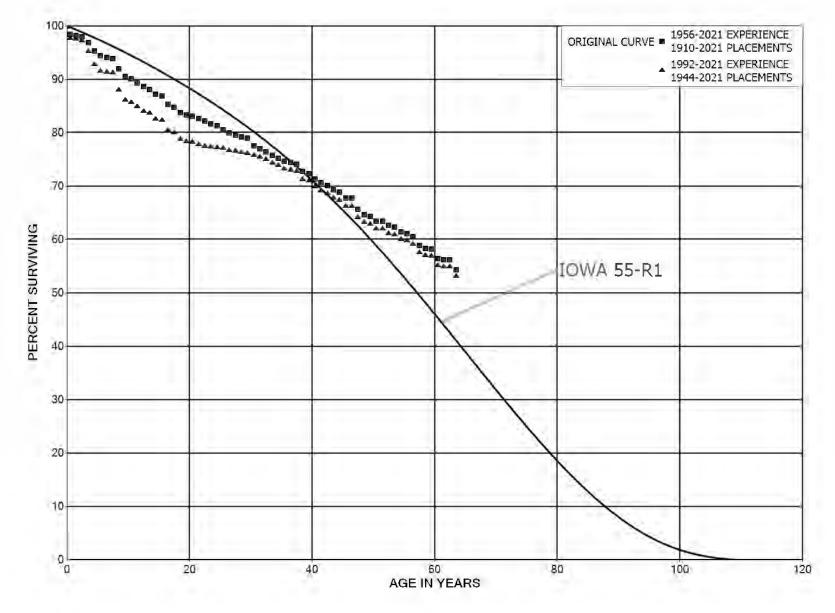
PLACEMENT E	BAND 1929-2021		EXPER	IENCE BAN	D 2012-2021
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5	42,134 42,134 42,134		0.0000 0.0000 0.0000		
42.5 43.5 44.5 45.5 46.5 47.5	42,134	42,134	1.0000		
48.5 49.5 50.5 51.5 52.5	436,903		0.0000		
53.5 54.5 55.5 56.5 57.5 58.5	436,903 436,903 436,903	436,903	0.0000 0.0000 1.0000		
59.5 60.5 61.5 62.5	000.044		0.0000		
63.5 64.5 65.5 66.5 67.5 68.5	233,844 233,844 233,844 235,505 1,661 1,661	233,844	0.0000 0.0000 0.9929 0.0000 0.0000		
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	1,661	1,661	1.0000		

ACCOUNT 353.40 STATION EQUIPMENT - STEP UP EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT	BAND 1929-2021		EXPER	IENCE BAN	D 2012-2021
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5					
83.5 84.5 85.5 86.5	63,751 63,751 63,751 63,751 63,751	63,751	0.0000 0.0000 0.0000 1.0000		
87.5					





KyPSC Case No. 2024-00354 Attachment JJS-1 Page 132 of 382

GANNETT FLEMING

DUKE ENERGY KENTUCKY

ACCOUNT 355.00 POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1910-2021

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	20,925,502	338,952	0.0162	0.9838	100.00
0.5	16,868,677	29,258	0.0017	0.9983	98.38
1.5	14,754,478	31,552	0.0021	0.9979	98.21
2.5	13,091,835	154,660	0.0118	0.9882	98.00
3.5	12,231,101	201,657	0.0165	0.9835	96.84
4.5	11,318,704	103,081	0.0091	0.9909	95.25
5.5	10,820,829	31,155	0.0029	0.9971	94.38
6.5	10,510,076	24,723	0.0024	0.9976	94.11
7.5	10,225,636	206,866	0.0202	0.9798	93.88
8.5	8,814,236	140,341	0.0159	0.9841	91.99
9.5	7,925,873	42,369	0.0053	0.9947	90.52
10.5	7,757,685	62,348	0.0080	0.9920	90.04
11.5	7,085,566	55,186	0.0078	0.9922	89.31
12.5	6,859,598	40,897	0.0060	0.9940	88.62
13.5	6,660,076	69,487	0.0104	0.9896	88.09
14.5	5,894,304	20,793	0.0035	0.9965	87.17
15.5	5,807,231	106,320	0.0183	0.9817	86.86
16.5	5,509,127	38,553	0.0070	0.9930	85.27
17.5	5,041,878	56,956	0.0113	0.9887	84.68
18.5	4,707,988	25,408	0.0054	0.9946	83.72
19.5	4,277,206	12,139	0.0028	0.9972	83.27
20.5	4,252,455	23,763	0.0056	0.9944	83.03
21.5	4,190,818	22,064	0.0053	0.9947	82.57
22.5	4,069,159	24,800	0.0061	0.9939	82.13
23.5	3,995,939	15,490	0.0039	0.9961	81.63
24.5	3,814,129	39,974	0.0105	0.9895	81.32
25.5	3,714,587	24,850	0.0067	0.9933	80.46
26.5	3,431,747	17,189	0.0050	0.9950	79.92
27.5	3,308,840	13,454	0.0041	0.9959	79.52
28.5	3,170,014	10,603	0.0033	0.9967	79.20
29.5	2,953,684	55,394	0.0188	0.9812	78.94
30.5	2,818,261	17,971	0.0064	0.9936	77.46
31.5	2,734,578	20,276	0.0074	0.9926	76.96
32.5	2,684,362	24,981	0.0093	0.9907	76.39
33.5	2,302,198	13,797	0.0060	0.9940	75.68
34.5	2,233,043	17,850	0.0080	0.9920	75.23
35.5	2,205,680	7,001	0.0032	0.9968	74.63
36.5	2,139,972	7,737	0.0036	0.9964	74.39
37.5	2,118,181 1,630,693	39,256 9,444	0.0185	0.9815 0.9942	74.12 72.75

DUKE ENERGY KENTUCKY

ACCOUNT 355.00 POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1910-2021

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 45.5 46.5 47.5 48.5	1,435,191 1,218,417 1,182,869 1,149,956 1,134,021 1,115,927 1,013,404 979,750 732,652 579,515	20,946 11,505 8,426 12,637 8,493 17,237 639 30,846 10,351 2,946	0.0146 0.0094 0.0071 0.0110 0.0075 0.0154 0.0006 0.0315 0.0141 0.0051	0.9854 0.9906 0.9929 0.9890 0.9925 0.9846 0.9994 0.9685 0.9859 0.9859	72.32 71.27 70.60 70.09 69.32 68.80 67.74 67.70 65.57 64.64
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	552,077 436,241 421,019 394,703 392,875 380,423 366,119 325,367 169,698 159,233	7,451 551 5,334 1,651 5,940 1,490 3,720 8,774 1,627 226	0.0135 0.0013 0.0127 0.0042 0.0151 0.0039 0.0102 0.0270 0.0096 0.0014	0.9865 0.9987 0.9873 0.9958 0.9849 0.9961 0.9898 0.9730 0.9904 0.9986	64.31 63.44 63.36 62.56 62.30 61.36 61.12 60.50 58.87 58.30
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	158,376 117,792 117,360 117,333 113,571 113,571 113,571 113,571 113,571 113,571	5,091 433 27 3,762 4	0.0321 0.0037 0.0002 0.0321 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0.9679 0.9963 0.9998 0.9679 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	58.22 56.35 56.14 56.13 54.33 54.33 54.33 54.33 54.33 54.33 54.33 54.33 54.33
69.5 70.5 71.5 72.5 73.5 74.5 75.5	113,567 113,567 113,497 12 12 12	69 113,351	0.0000 0.0006 0.9987 0.0000 0.0000 0.0000	1.0000 0.9994 0.0013 1.0000 1.0000 1.0000	54.33 54.33 54.29 0.07 0.07 0.07 0.07

DUKE ENERGY KENTUCKY

ACCOUNT 355.00 POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1944-2021

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5	14,452,159 10,515,843 8,935,480 7,411,324 7,515,600 6,633,616 6,108,672 5,779,111 5,522,864	338,952 19,886 29,631 148,516 195,762 90,189 10,481 10,521 194,647	0.0235 0.0019 0.0200 0.0260 0.0136 0.0017 0.0018 0.0352	0.9765 0.9981 0.9967 0.9800 0.9740 0.9864 0.9983 0.9982 0.9648	100.00 97.65 97.47 97.15 95.20 92.72 91.46 91.30 91.14
8.5 9.5	5,699,025 5,290,068	119,603 30,430	0.0210	0.9790	87.92 86.08
10.5	5,407,959	48,267	0.0089	0.9911	85.58
11.5	4,989,981	47,903	0.0096	0.9904	84.82
12.5	4,837,781	20,776	0.0043	0.9957	84.01
13.5	4,662,128	62,715	0.0135	0.9865	83.65
14.5	3,917,908	9,044	0.0023	0.9977	82.52
15.5	4,028,015	95,845	0.0238	0.9762	82.33
16.5	3,786,234	19,979	0.0053	0.9947	80.37
17.5	3,377,828	49,618	0.0147	0.9853	79.95
18.5	3,218,457	18,534	0.0058	0.9942	78.77
19.5	3,175,509	3,788	0.0012	0.9988	78.32
20.5	3,289,086	19,946	0.0061	0.9939	78.23
21.5	3,237,907	13,637	0.0042	0.9958	77.75
22.5	3,152,475	7,305	0.0023	0.9977	77.42
23.5	3,097,634	4,588	0.0015	0.9985	77.24
23.5 24.5 25.5 26.5 27.5 28.5	2,942,312 2,895,338 2,669,718 2,765,008 2,673,123	3,085 15,725 5,602 6,865 6,194	0.0010 0.0054 0.0021 0.0025 0.0023	0.9990 0.9946 0.9979 0.9975 0.9977	77.13 77.05 76.63 76.47 76.28
29.5	2,441,353	11,040	0.0045	0.9955	76.10
30.5	2,414,865	13,340	0.0055	0.9945	75.76
31.5	2,343,805	13,484	0.0058	0.9942	75.34
32.5	2,302,947	19,292	0.0084	0.9916	74.91
33.5	1,963,636	12,177	0.0062	0.9938	74.28
34.5	1,914,957	17,302	0.0090	0.9910	73.82
35.5	1,890,178	5,779	0.0031	0.9969	73.15
36.5	1,831,504	4,497	0.0025	0.9975	72.93
37.5	1,813,005	39,160	0.0216	0.9784	72.75
38.5	1,325,815	4,526	0.0034	0.9966	71.18

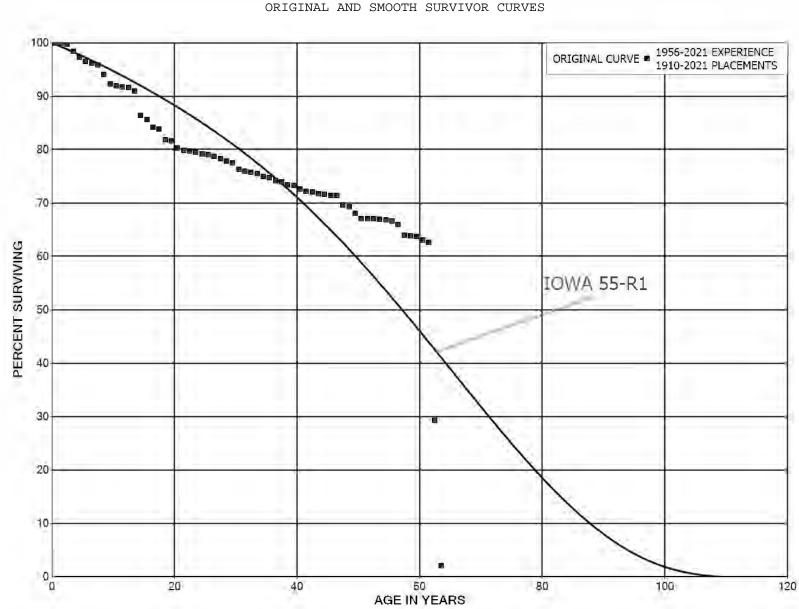
DUKE ENERGY KENTUCKY

ACCOUNT 355.00 POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1944-2021

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 45.5 46.5 47.5 48.5	1,311,523 1,094,813 1,059,652 1,140,320 1,124,393 1,106,419 1,003,913 970,259 723,319 570,182	20,881 11,505 8,334 12,628 8,414 17,237 639 30,711 10,351 2,946	0.0159 0.0105 0.0079 0.0111 0.0075 0.0156 0.0006 0.0317 0.0143 0.0052	0.9841 0.9895 0.9921 0.9889 0.9925 0.9844 0.9994 0.9683 0.9857 0.9948	70.93 69.81 69.07 68.53 67.77 67.26 66.21 66.17 64.08 63.16
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	542,744 426,909 420,846 394,678 392,851 380,398 366,119 325,367 169,698 159,233	7,451 551 5,334 1,651 5,940 1,490 3,720 8,774 1,627 226	0.0137 0.0013 0.0127 0.0042 0.0151 0.0039 0.0102 0.0270 0.0096 0.0014	0.9863 0.9987 0.9873 0.9958 0.9849 0.9961 0.9898 0.9730 0.9904 0.9986	62.83 61.97 61.89 61.11 60.85 59.93 59.70 59.09 57.50 56.95
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	158,376 117,792 117,360 117,333 113,571 113,571 113,571 113,571 113,571 113,571	5,091 433 27 3,762 4	0.0321 0.0037 0.0002 0.0321 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0.9679 0.9963 0.9998 0.9679 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	56.87 55.04 54.84 54.82 53.06 53.06 53.06 53.06 53.06 53.06 53.06
69.5 70.5 71.5 72.5 73.5 74.5 75.5	113,567 113,567 113,497 12 12 12	69 113,351	0.0000 0.0006 0.9987 0.0000 0.0000 0.0000	1.0000 0.9994 0.0013 1.0000 1.0000 1.0000	53.06 53.06 53.03 0.07 0.07 0.07 0.07



DUKE ENERGY KENTUCKY ACCOUNT 356.00 OVERHEAD CONDUCTORS AND DEVICES ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

VII-84

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 137 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 356.00 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1910-2021

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE SURV BEGIN OF RETMT INTERVAL AGE INTERVAL INTERVAL RATIO RATIO INTERVAL 0.0 15,428,880 203 0.0000 1.0000 100.00 0.5 13,359,139 2,071 0.0002 0.9998 100.00 10,563,154 1.5 23,452 0.0022 99.98 0.9978 2.5 9,062,794 127,684 0.0141 0.9859 99.76 8,488,839 3.5 96,474 0.0114 0.9886 98.36 97.24 4.5 8,416,506 68,155 0.0081 0.9919 5.5 7,934,862 21,379 0.0027 0.9973 96.45 96.19 6.5 7,700,020 31,300 0.0041 0.9959 7.5 141,547 95.80 7,638,664 0.0185 0.9815 8.5 7,165,375 136,528 0.0191 0.9809 94.02 9.5 6,764,891 24,412 0.0036 0.9964 92.23 10.5 6,623,900 16,121 0.0024 0.9976 91.90 91.68 11.5 6,255,708 7,887 0.0013 0.9987 12.5 91.56 6,124,290 40,288 0.0066 0.9934 13.5 303,571 90.96 6,053,345 0.0501 0.9499 14.5 5,029,062 45,067 0.0090 0.9910 86.40 0.9825 15.5 4,913,540 85,945 0.0175 85.62 16.5 4,773,694 15,662 0.0033 0.9967 84.13 17.5 4,626,079 112,606 0.0243 0.9757 83.85 18.5 4,242,005 8,742 0.0021 0.9979 81.81 19.5 4,157,296 67,787 0.9837 81.64 0.0163 20.5 4,041,654 25,261 0.0063 0.9937 80.31 3,945,276 1,659 21.5 0.0004 0.9996 79.81 22.5 3,829,562 10,912 0.0028 0.9972 79.77 23.5 3,816,394 17,535 0.0046 0.9954 79.55 3,694,550 4,824 0.0013 24.5 0.9987 79.18 25.5 3,617,967 14,453 0.0040 0.9960 79.08 26.5 20,369 0.0060 78.76 3,384,384 0.9940 27.5 3,338,292 20,042 0.0060 0.9940 78.29 3,266,684 77.82 28.5 10,876 0.0033 0.9967 77.56 0.9839 29.5 2,933,184 47,277 0.0161 30.5 2,845,446 15,150 0.0053 0.9947 76.31 31.5 2,765,115 75.90 4,992 0.0018 0.9982 2,760,122 32.5 0.0041 0.9959 75.76 11,199 75.46 33.5 2,346,679 15,579 0.0066 0.9934 34.5 2,328,476 6,905 0.0030 0.9970 74.96 35.5 2,318,196 17,289 0.0075 0.9925 74.73 36.5 74.18 2,188,868 5,245 0.0024 0.9976 37.5 2,182,967 18,561 0.0085 0.9915 74.00 38.5 1,579,084 0.0009 73.37 1,481 0.9991

ACCOUNT 356.00 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1910-2021

EXPERIENCE BAND 1956-2021

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 45.5 46.5 47.5 48.5	1,468,159 1,227,438 1,208,329 1,200,078 1,194,292 1,170,945 1,067,672 1,045,606 855,953 721,746	13,580 8,363 1,425 5,786 1,155 3,267 1,273 25,691 4,380 12,265	0.0092 0.0068 0.0012 0.0048 0.0010 0.0028 0.0012 0.0246 0.0051 0.0170	0.9908 0.9932 0.9988 0.9952 0.9990 0.9972 0.9988 0.9754 0.9949 0.9830	73.30 72.62 72.13 72.04 71.70 71.63 71.43 71.34 69.59 69.23
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5 59.5 60.5 61.5	700,302 614,528 613,348 581,084 580,649 572,536 550,660 480,070 379,646 367,525 366,511 285,255 266,864	9,677 117 657 346 1,070 2,534 4,742 14,562 1,188 196 4,161 1,941 142,034	0.0138 0.0002 0.0011 0.0006 0.0018 0.0044 0.0086 0.0303 0.0031 0.0005 0.0114 0.0068 0.5322	0.9862 0.9998 0.9994 0.9994 0.9982 0.9956 0.9914 0.9697 0.9969 0.9995 0.9995 0.9886 0.9932 0.4678	68.06 67.11 67.03 66.99 66.87 66.57 66.00 64.00 63.80 63.76 63.04 62.61
62.5 63.5 64.5 65.5 66.5 67.5 68.5 69.5 70.5	117,665 8,376 8,340 8,323 8,112 8,112 8,112 8,112 8,111	142,034 109,288 37 16 212 1 17	0.9288 0.0044 0.0019 0.0254 0.0000 0.0000 0.0001 0.0020	0.0712 0.9956 0.9981 0.9746 1.0000 1.0000 0.9999 0.9980	29.29 2.08 2.08 2.07 2.02 2.02 2.02 2.02 2.02
70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	8,094 8,094 7,981 7,981 7,981 7,981 7,981 7,981 7,981	113	0.0000 0.0139 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 0.9861 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	2.01 2.01 1.99 1.99 1.99 1.99 1.99 1.99

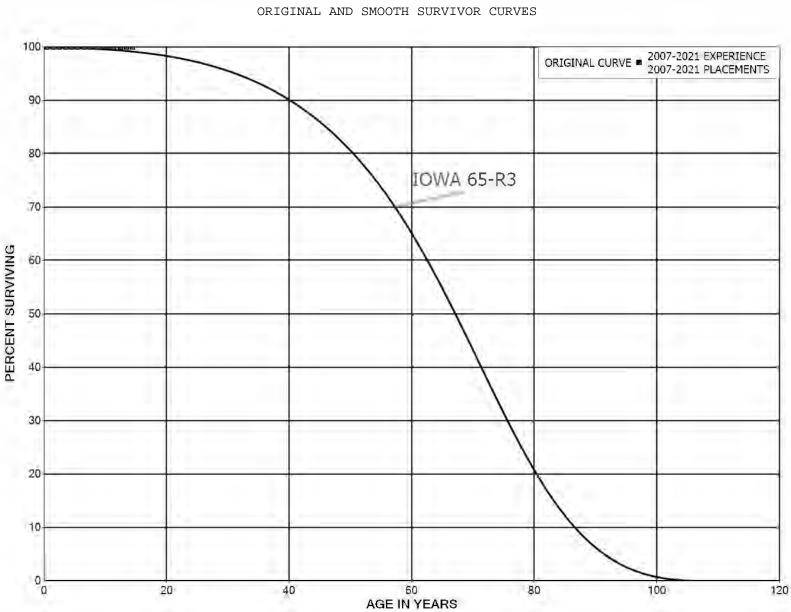
DUKE ENERGY KENTUCKY

ACCOUNT 356.00 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1910-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 87.5 88.5	7,981 6,098 6,098 6,098 6,098 6,098 6,098 6,098 6,098 6,098 6,098	1,883	0.2359 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0045	0.7641 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.9955	1.99 1.52 1.52 1.52 1.52 1.52 1.52 1.52 1.52
89.5 90.5 91.5 92.5 93.5 94.5 95.5 96.5	6,071 6,071 6,071 6,071 6,071 6,021 6,021	0 50 6,021	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0082\\ 0.0000\\ 1.0000\\ \end{array}$	1.0000 1.0000 1.0000 1.0000 0.9918 1.0000	1.51 1.51 1.51 1.51 1.51 1.50 1.50



DUKE ENERGY KENTUCKY ACCOUNT 356.10 OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

VII-88

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 141 of 382

EXPERIENCE BAND 2007-2021

DUKE ENERGY KENTUCKY

ACCOUNT 356.10 OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY

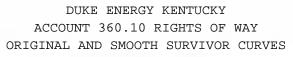
ORIGINAL LIFE TABLE

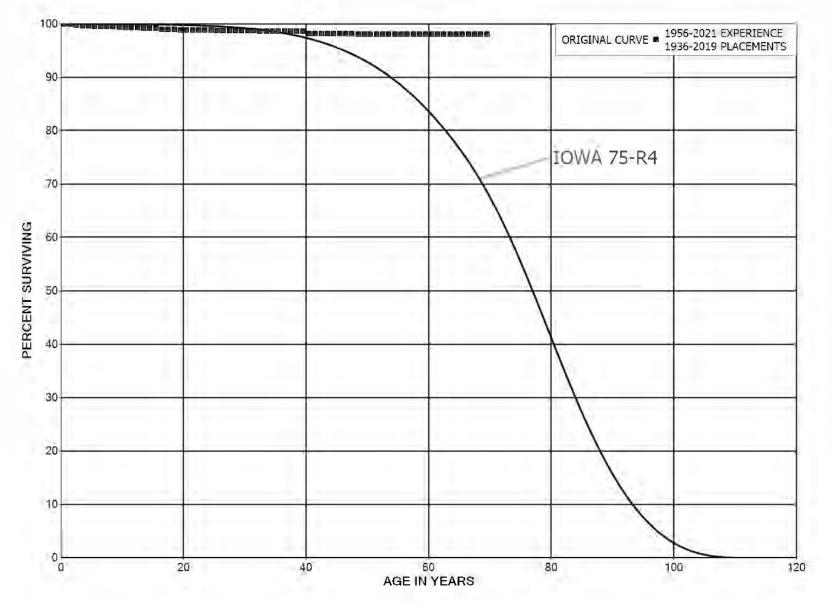
PLACEMENT BAND 2007-2021

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	1,841,853 1,187,047 914,774 752,634 457,190 180,619 156,913 128,082 99,459 81,625		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ \end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00
9.5 10.5 11.5 12.5 13.5 14.5	36,897 19,605 11,603 4,953 4,274		0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 100.00 100.00









KyPSC Case No. 2024-00354 Attachment JJS-1 Page 143 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 360.10 RIGHTS OF WAY

ORIGINAL LIFE TABLE

PLACEMENT BAND 1936-2019

					0 1930 2021
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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	4,462,878 4,473,783 4,482,503 4,464,805 4,465,663 4,452,400 4,450,230 4,458,828 4,460,938 4,461,793	948 10,790 3,382 1,615 3,935 209 1,239 980 2,431	$\begin{array}{c} 0.0000\\ 0.0002\\ 0.0024\\ 0.0008\\ 0.0004\\ 0.0009\\ 0.0000\\ 0.0003\\ 0.0002\\ 0.0005 \end{array}$	1.0000 0.9998 0.9976 0.9992 0.9996 0.9991 1.0000 0.9997 0.9998 0.9995	100.00 100.00 99.98 99.74 99.66 99.63 99.54 99.53 99.51 99.48
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	4,460,165 4,455,301 4,453,646 4,457,196 4,460,869 4,462,304 4,463,714 4,456,083 4,459,147 4,478,172	5,195 2,117 1,347 1,492 139 1,621 8,197 1,492 2,116 1,091	0.0012 0.0003 0.0003 0.0000 0.0004 0.0018 0.0003 0.0005 0.0002	0.9988 0.9995 0.9997 0.9997 1.0000 0.9996 0.9998 0.9997 0.9995 0.9998	99.43 99.31 99.27 99.24 99.20 99.20 99.16 98.98 98.95 98.90
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	4,477,113 4,475,953 4,457,596 4,457,208 4,456,098 4,454,563 4,387,134 4,208,005 4,064,567 3,897,532	1,160 79 388 1,110 1,535 650 179 554 410 750	0.0003 0.0001 0.0002 0.0003 0.0001 0.0001 0.0001 0.0001 0.0002	0.9997 1.0000 0.9999 0.9998 0.9997 0.9999 1.0000 0.9999 0.9999 0.9998	98.88 98.85 98.85 98.84 98.82 98.78 98.77 98.77 98.75 98.74
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	3,689,846 3,404,863 3,166,164 2,891,550 2,728,964 2,354,371 2,127,030 1,904,533 1,763,777 1,525,354	883 344 1,255 323 411 459 268 139 113 143	0.0002 0.0001 0.0004 0.0001 0.0002 0.0002 0.0001 0.0001 0.0001 0.0001	0.9998 0.9999 0.9996 0.9999 0.9998 0.9998 0.9999 0.9999 0.9999	98.72 98.70 98.69 98.65 98.64 98.62 98.61 98.59 98.59 98.59 98.58

ACCOUNT 360.10 RIGHTS OF WAY

ORIGINAL LIFE TABLE, CONT.

EXPERIENCE BAND 1956-2021

PLACEMENT BAND 1936-2019

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 45.5 46.5 47.5 48.5	1,410,381 1,280,357 1,159,892 1,088,710 1,026,278 973,665 898,113 836,224 695,418 617,157	6,052 8 54 121 10 1 84	0.0043 0.0000 0.0001 0.0000 0.0000 0.0000 0.0000 0.0000 0.0001 0.0000	0.9957 1.0000 1.0000 0.9999 1.0000 1.0000 1.0000 1.0000 0.9999 1.0000	98.57 98.15 98.15 98.14 98.13 98.13 98.13 98.13 98.13 98.13 98.13
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	549,585 503,848 456,732 425,713 391,103 353,432 324,863 277,780 256,470 232,867	10 26 12 14	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0001 0.0000 0.0001 0.0001 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 0.9999 1.0000 0.9999 1.0000	98.12 98.12 98.12 98.12 98.12 98.12 98.12 98.12 98.12 98.11 98.10 98.10
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	202,801 166,838 149,610 138,012 123,907 110,002 95,957 91,197 81,694 79,091		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	98.10 98.10 98.10 98.10 98.10 98.10 98.10 98.10 98.10 98.10
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	66,364 58,017 56,279 47,603 44,254 42,454 41,672 41,342 40,879 35,982		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	98.10 98.10 98.10 98.10 98.10 98.10 98.10 98.10 98.10 98.10

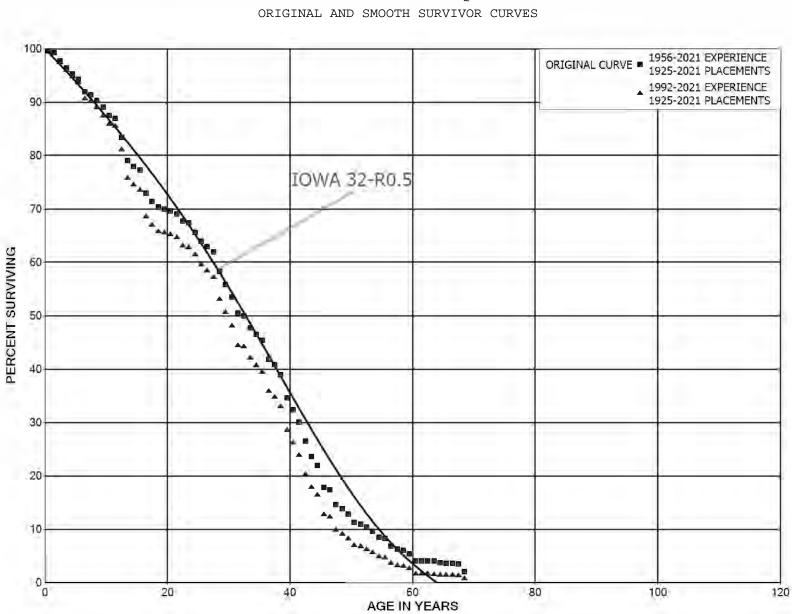
DUKE ENERGY KENTUCKY

ACCOUNT 360.10 RIGHTS OF WAY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1936-2019

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5	30,818 29,244 26,213 25,646		0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000	98.10 98.10 98.10 98.10
82.5 83.5 84.5	21,091		0.0000	1.0000	98.10 98.10 98.10



DUKE ENERGY KENTUCKY ACCOUNT 362.00 STATION EQUIPMENT DRIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

VII-94

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 147 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 362.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1925-2021

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE SURV BEGIN OF RETMT AGE INTERVAL INTERVAL INTERVAL RATIO RATIO INTERVAL 0.0 92,572,076 370,036 0.0040 0.9960 100.00 0.5 88,429,127 236,593 0.0027 0.9973 99.60 1.5 74,733,681 1,211,495 99.33 0.0162 0.9838 2.5 54,970,504 751,839 0.0137 0.9863 97.72 3.5 46,723,275 528,294 0.0113 0.9887 96.39 95.30 4.5 43,110,128 469,307 0.0109 0.9891 5.5 40,038,801 990,543 0.0247 0.9753 94.26 91.93 6.5 37,591,972 201,642 0.0054 0.9946 435,681 7.5 91.43 34,547,654 0.0126 0.9874 8.5 31,203,755 422,639 0.0135 0.9865 90.28 29,055,996 9.5 506,954 0.0174 0.9826 89.06 10.5 28,330,191 178,029 0.0063 0.9937 87.50 11.5 28,094,916 1,139,050 0.0405 0.9595 86.95 12.5 26,757,056 1,406,697 0.0526 0.9474 83.43 13.5 79.04 24,559,042 321,376 0.0131 0.9869 14.5 23,285,668 225,530 0.0097 78.01 0.9903 15.5 21,621,175 1,202,105 0.9444 77.25 0.0556 425,883 16.5 19,542,511 0.0218 0.9782 72.96 17.5 18,200,035 252,790 0.0139 0.9861 71.37 112,524 18.5 17,020,298 0.0066 0.9934 70.38 19.5 16,018,168 72,458 0.9955 69.91 0.0045 0.9921 116,124 69.60 20.5 14,653,701 0.0079 21.5 14,536,079 280,076 0.0193 0.9807 69.04 22.5 14,231,793 67,275 0.0047 0.9953 67.71 375,544 23.5 14,165,983 0.0265 0.9735 67.39 13,694,562 337,963 65.61 24.5 0.0247 0.9753 25.5 13,490,987 221,904 0.0164 0.9836 63.99 26.5 12,641,298 198,619 0.0157 0.9843 62.94 27.5 12,440,646 737,172 0.0593 0.9407 61.95 457,680 28.5 11,117,276 0.0412 0.9588 58.28 29.5 9,982,209 424,119 0.0425 0.9575 55.88 9,225,795 30.5 525,702 0.0570 0.9430 53.50 31.5 8,700,093 93,289 50.45 0.0107 0.9893 0.0428 49.91 32.5 8,606,804 368,497 0.9572 33.5 7,917,809 211,349 0.0267 0.9733 47.78 34.5 7,704,068 175,689 0.0228 0.9772 46.50 35.5 7,514,736 592,619 0.0789 0.9211 45.44 36.5 176,078 41.86 6,850,048 0.0257 0.9743 37.5 6,505,483 284,129 0.0437 0.9563 40.78 38.5 39.00

6,114,849

683,850

0.1118

0.8882

ACCOUNT 362.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1925-2021

EXPERIENCE BAND 1956-2021

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	5,153,936	339,851	0.0659	0.9341	34.64
40.5	4,807,794	335,849	0.0699	0.9301	32.35
41.5	4,465,005	532,369	0.1192	0.8808	30.09
42.5	3,927,952	423,616	0.1078	0.8922	26.51
43.5	3,504,337	253,057	0.0722	0.9278	23.65
44.5	3,244,998	602,743	0.1857	0.8143	21.94
45.5	2,452,507	67,695	0.0276	0.9724	17.86
46.5	2,384,784	371,860	0.1559	0.8441	17.37
47.5	2,012,348	120,772	0.0600	0.9400	14.66
48.5	1,891,576	130,690	0.0691	0.9309	13.78
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5 59.5 60.5 61.5 62.5 63.5	1,759,178 1,548,023 1,491,432 1,412,909 1,309,538 1,161,007 1,123,246 926,844 764,435 742,220 661,667 498,318 476,645 475,528 469,389	204,432 53,735 76,997 103,371 145,494 37,007 196,403 74,590 22,215 80,554 163,349 95 1,117 6,139 38,084	0.1162 0.0347 0.0516 0.0732 0.1111 0.0319 0.1749 0.0805 0.0291 0.1085 0.2469 0.0002 0.0023 0.0129 0.0811	0.8838 0.9653 0.9484 0.9268 0.8889 0.9681 0.8251 0.9195 0.9709 0.8915 0.7531 0.9998 0.9977 0.9871 0.9871 0.9189	12.83 11.34 10.95 10.38 9.62 8.55 8.28 6.83 6.28 6.10 5.44 4.10 4.09 4.08 4.03
64.5	431,306	8,926	0.0207	0.9793	3.70
65.5	422,379	3,414	0.0081	0.9919	3.63
66.5	418,965	9,663	0.0231	0.9769	3.60
67.5	409,302	169,540	0.4142	0.5858	3.52
68.5	239,762	18,153	0.0757	0.9243	2.06
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	219,681 212,774 103,260 100,325 95,335 95,335 95,296 95,223 93,632 93,632	6,907 109,514 2,935 4,990 40 73 1,590	0.0314 0.5147 0.0284 0.0497 0.0000 0.0004 0.0008 0.0167 0.0000 0.0000	0.9686 0.4853 0.9716 0.9503 1.0000 0.9996 0.9992 0.9833 1.0000 1.0000	1.90 1.84 0.89 0.87 0.83 0.83 0.83 0.83 0.83 0.81 0.81

ACCOUNT 362.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

EXPERIENCE BAND 1956-2021

PLACEMENT BAND 1925-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5	93,632 87,198	6,434	0.0687 0.0000	0.9313 1.0000	0.81 0.76
81.5 82.5 83.5	87,198 86,328 86,328	870	0.0100 0.0000 0.0000	0.9900 1.0000 1.0000	0.76 0.75 0.75
84.5 85.5	86,328 34,803	51,525	0.5969	0.4031 1.0000	0.75
86.5 87.5	34,803	34,803	1.0000		0.30

ACCOUNT 362.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1925-2021

EXPERIENCE BAND 1992-2021

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	81,961,403	370,031	0.0045	0.9955	100.00
0.5	79,210,047	233,327	0.0029	0.9971	99.55
1.5	65,335,217	1,205,891	0.0185	0.9815	99.26
2.5	45,486,639	668,812	0.0147	0.9853	97.42
3.5	37,926,826	480,352	0.0127	0.9873	95.99
4.5	34,366,108	434,216	0.0126	0.9874	94.78
5.5	31,256,990	976,324	0.0312	0.9688	93.58
6.5	28,463,166	141,669	0.0050	0.9950	90.65
7.5	25,813,519	358,088	0.0139	0.9861	90.20
8.5	23,167,816	396,741	0.0171	0.9829	88.95
9.5	21,417,705	395,682	0.0185	0.9815	87.43
10.5	21,040,175	80,986	0.0038	0.9962	85.81
11.5	21,350,276	1,104,655	0.0517	0.9483	85.48
12.5	20,300,939	1,348,306	0.0664	0.9336	81.06
13.5	18,147,212	290,722	0.0160	0.9840	75.68
14.5	17,432,989	212,482	0.0122	0.9878	74.46
15.5	17,097,764	1,167,424	0.0683	0.9317	73.56
16.5	15,052,060	360,623	0.0240	0.9760	68.53
17.5	13,883,658	232,559	0.0168	0.9832	66.89
18.5	12,883,582	44,945	0.0035	0.9965	65.77
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	12,023,253 11,112,486 11,068,758 10,930,056 10,878,305 10,603,105 10,515,906 9,696,670 9,896,497 8,561,629	67,012 86,907 267,195 63,292 237,892 324,394 189,626 197,320 715,868 404,563	0.0056 0.0241 0.0258 0.0219 0.0306 0.0180 0.0203 0.0723 0.0473	0.9944 0.9922 0.9759 0.9942 0.9781 0.9694 0.9820 0.9797 0.9277 0.9277	65.54 65.18 64.67 63.11 62.74 61.37 59.49 58.42 57.23 53.09
29.5	7,589,079	379,791	0.0500	0.9500	50.58
30.5	6,926,617	524,852	0.0758	0.9242	48.05
31.5	6,527,014	37,523	0.0057	0.9943	44.41
32.5	6,588,251	313,683	0.0476	0.9524	44.15
33.5	6,123,757	209,421	0.0342	0.9658	42.05
34.5	6,012,765	172,857	0.0287	0.9713	40.61
35.5	5,959,781	551,746	0.0926	0.9074	39.45
36.5	5,448,303	169,619	0.0311	0.9689	35.79
37.5	5,331,208	267,672	0.0502	0.9498	34.68
38.5	4,969,904	675,693	0.1360	0.8640	32.94

ACCOUNT 362.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1925-2021

EXPERIENCE BAND 1992-2021

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	4,144,998	339,851	0.0820	0.9180	28.46
40.5	3,870,580	334,166	0.0863	0.9137	26.13
41.5	3,560,880	528,093	0.1483	0.8517	23.87
42.5	3,375,301	417,724	0.1238	0.8762	20.33
43.5	2,958,181	242,638	0.0820	0.9180	17.81
44.5	2,709,295	601,008	0.2218	0.7782	16.35
45.5	1,926,438	67,614	0.0351	0.9649	12.73
46.5	1,859,453	370,413	0.1992	0.8008	12.28
47.5	1,509,969	120,694	0.0799	0.9201	9.83
48.5 49.5	1,390,645 1,271,555 1,149,089	129,763 185,995	0.0933	0.9067	9.05 8.20 7.00
50.5 51.5 52.5 53.5	1,092,498 1,015,759 1,067,808	53,735 76,997 103,371 145,494	0.0468 0.0705 0.1018 0.1363	0.9532 0.9295 0.8982 0.8637	7.00 6.68 6.21 5.57
54.5	919,278	37,007	0.0403	0.9597	4.81
55.5	881,517	196,403	0.2228	0.7772	4.62
56.5	685,114	74,590	0.1089	0.8911	3.59
57.5	522,706	22,215	0.0425	0.9575	3.20
58.5	500,491	80,554	0.1609	0.8391	3.06
59.5	419,937	163,349	0.3890	0.6110	2.57
60.5	256,589	95	0.0004	0.9996	1.57
61.5	356,548	1,117	0.0031	0.9969	1.57
62.5	388,982	6,139	0.0158	0.9842	1.57
63.5	382,844	38,084	0.0995	0.9005	1.54
64.5	379,563	8,926	0.0235	0.9765	1.39
65.5	422,161	3,414	0.0081	0.9919	1.35
66.5	418,965	9,663	0.0231	0.9769	1.34
67.5	409,302	169,540	0.4142	0.5858	1.31
68.5	239,762	18,153	0.0757	0.9243	0.77
69.5	219,681	6,907	0.0314	0.9686	0.71
70.5 71.5 72.5 73.5 74.5	212,774 103,260 100,325 95,335 95,335	109,514 2,935 4,990 40	0.5147 0.0284 0.0497 0.0000 0.0004	0.4853 0.9716 0.9503 1.0000 0.9996	0.69 0.33 0.32 0.31 0.31
75.5 76.5 77.5 78.5	95,333 95,296 95,223 93,632 93,632	40 73 1,590	0.0004 0.0008 0.0167 0.0000 0.0000	0.9992 0.9833 1.0000 1.0000	0.31 0.31 0.30 0.30

ACCOUNT 362.00 STATION EQUIPMENT

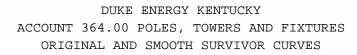
ORIGINAL LIFE TABLE, CONT.

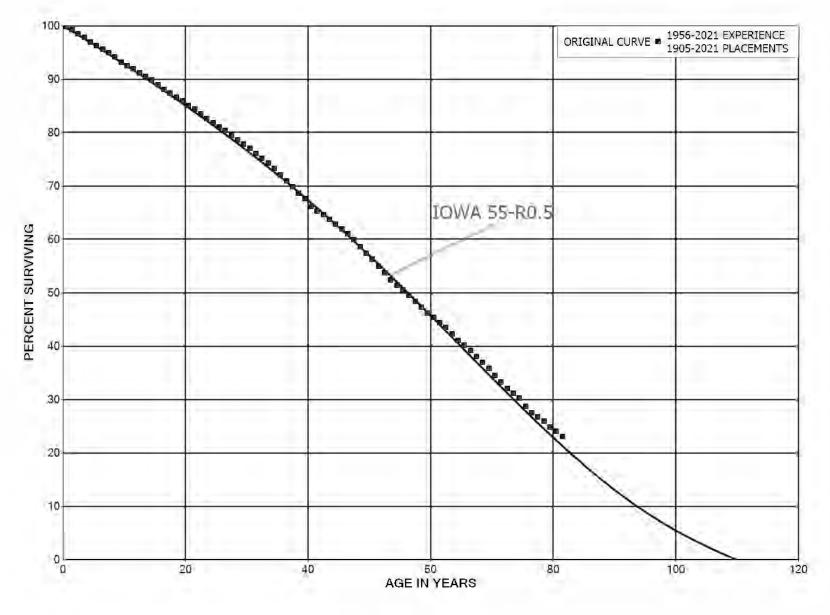
EXPERIENCE BAND 1992-2021

PLACEMENT BAND 1925-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	93,632	6,434	0.0687	0.9313	0.30
80.5	87,198		0.0000	1.0000	0.28
81.5	87,198	870	0.0100	0.9900	0.28
82.5	86,328		0.0000	1.0000	0.28
83.5	86,328		0.0000	1.0000	0.28
84.5 85.5 86.5 87.5	86,328 34,803 34,803	51,525 34,803	0.5969 0.0000 1.0000	0.4031 1.0000	0.28 0.11 0.11







KyPSC Case No. 2024-00354 Attachment JJS-1 Page 154 of 382

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1905-2021

EXPERIENCE BAND 1956-2021

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5	102,224,402 88,980,239 84,973,640 78,889,196 71,582,543 65,773,396 62,187,129 57,869,356 54,983,535	142,825 521,089 642,327 588,051 584,334 469,618 475,547 406,064 436,934 505,319	0.0014 0.0059 0.0076 0.0075 0.0082 0.0071 0.0076 0.0070 0.0079	0.9986 0.9941 0.9924 0.9925 0.9918 0.9929 0.9924 0.9930 0.9921	100.00 99.86 99.28 98.53 97.79 96.99 96.30 95.56 94.89
8.5 9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	52,201,495 49,321,460 48,274,780 46,787,114 44,721,272 44,472,710 42,953,908 40,982,355 39,370,982 38,331,506 37,202,255	366,910 301,540 412,098 322,005 346,334 393,521 403,511 326,504 306,696 319,279	0.0097 0.0074 0.0062 0.0088 0.0072 0.0078 0.0092 0.0098 0.0083 0.0080 0.0080	0.9903 0.9926 0.9938 0.9912 0.9928 0.9922 0.9908 0.9902 0.9917 0.9920 0.9914	94.14 93.23 92.53 91.96 91.15 90.49 89.79 88.96 88.09 87.36 86.66
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	36,788,972 35,803,568 34,523,966 32,945,816 31,170,798 29,779,675 28,187,361 26,315,648 24,264,710 22,297,255	347,014 317,610 333,854 359,305 294,642 267,614 262,143 280,204 253,196 233,779	0.0094 0.0089 0.0097 0.0109 0.0095 0.0090 0.0093 0.0106 0.0104 0.0105	0.9906 0.9911 0.9903 0.9891 0.9905 0.9910 0.9910 0.9894 0.9896 0.9895	85.91 85.10 84.35 83.53 82.62 81.84 81.10 80.35 79.50 78.67
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	20,437,357 18,865,181 17,649,127 15,723,946 14,820,352 13,511,992 12,533,043 11,619,162 10,827,746 9,961,785	213,528 223,116 225,484 168,285 219,607 212,053 208,018 180,742 190,261 141,224	0.0104 0.0118 0.0128 0.0107 0.0148 0.0157 0.0166 0.0156 0.0176 0.0142	0.9896 0.9882 0.9872 0.9893 0.9852 0.9843 0.9834 0.9834 0.9824 0.9824 0.9858	77.84 77.03 76.12 75.14 74.34 73.24 72.09 70.89 69.79 68.56

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021

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	9,166,390	188,255	0.0205	0.9795	67.59
40.5	8,242,729	112,750	0.0137	0.9863	66.20
41.5	7,268,629	81,570	0.0112	0.9888	65.30
42.5	6,611,106	85,527	0.0129	0.9871	64.56
43.5	6,088,224	80,455	0.0132	0.9868	63.73
44.5	5,585,891	78,681	0.0141	0.9859	62.89
45.5	5,242,588	76,774	0.0146	0.9854	62.00
46.5	4,913,213	92,350	0.0188	0.9812	61.09
47.5	4,539,220	102,301	0.0225	0.9775	59.95
48.5	4,027,314	85,933	0.0213	0.9787	58.59
49.5	3,623,128	69,283	0.0191	0.9809	57.34
50.5	3,313,765	75,945	0.0229	0.9771	56.25
51.5	3,003,184	69,950	0.0233	0.9767	54.96
52.5	2,737,473	65,938	0.0241	0.9759	53.68
53.5	2,483,898	46,465	0.0187	0.9813	52.39
54.5	2,290,547	42,184	0.0184	0.9816	51.41
55.5	2,108,680	41,466	0.0197	0.9803	50.46
56.5	1,912,087	39,506	0.0207	0.9793	49.47
57.5	1,712,038	42,136	0.0246	0.9754	48.44
58.5	1,577,452	35,218	0.0223	0.9777	47.25
59.5	1,447,861	26,185	0.0181	0.9819	46.20
60.5 61.5 62.5	1,291,424 1,179,141 1,054,440	27,174 23,929 30,024 25,822	0.0210 0.0203 0.0285 0.0276	0.9790 0.9797 0.9715	45.36 44.41 43.51
63.5 64.5 65.5 66.5	935,039 824,294 732,785 630,882	25,822 19,423 16,912 18,617	0.0236 0.0231 0.0295	0.9724 0.9764 0.9769 0.9705	42.27 41.10 40.13 39.21
67.5	547,699	14,983	0.0274	0.9726	38.05
68.5	471,657	15,368	0.0326	0.9674	37.01
69.5	393,010	14,010	0.0356	0.9644	35.80
70.5	333,814	11,550	0.0346	0.9654	34.53
71.5	283,179	11,104	0.0392	0.9608	33.33
72.5	244,120	6,312	0.0259	0.9741	32.02
73.5	220,886	6,152	0.0279	0.9721	31.20
74.5	196,716	10,496	0.0534	0.9466	30.33
75.5	178,637	7,290	0.0408	0.9592	28.71
76.5	161,559	4,572	0.0283	0.9717	27.54
77.5	152,017	4,381	0.0288	0.9712	26.76
78.5	144,855	6,443	0.0445	0.9555	25.99

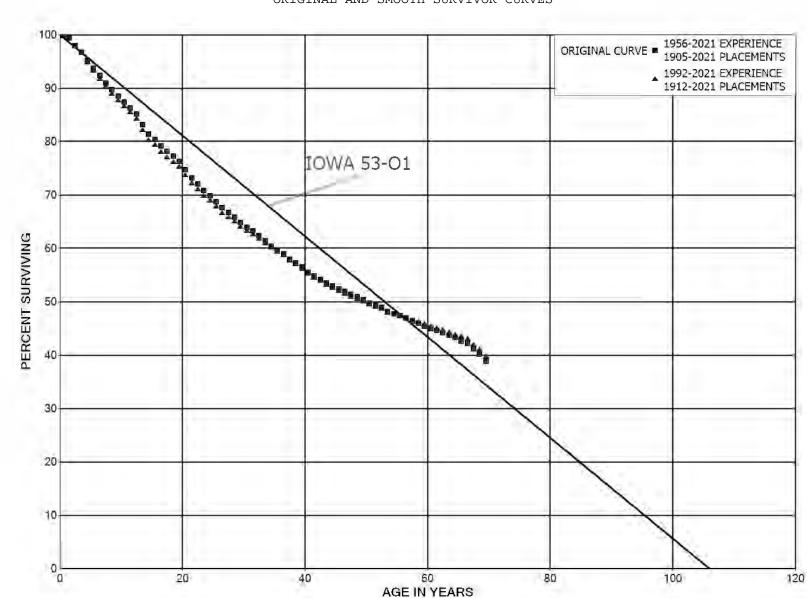
DUKE ENERGY KENTUCKY

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 87.5 88.5	125,382 112,799 98,278 87,441 74,888 63,792 56,733 45,250 32,574 19,862	4,125 4,207 4,916 5,169 4,598 5,344 5,910 6,708 7,643 4,988	0.0329 0.0373 0.0500 0.0591 0.0614 0.0838 0.1042 0.1482 0.2346 0.2511	0.9671 0.9500 0.9409 0.9386 0.9162 0.8958 0.8518 0.7654 0.7489	24.83 24.01 23.12 21.96 20.66 19.39 17.77 15.92 13.56 10.38
89.5 90.5 91.5 92.5 93.5 94.5 95.5 96.5 97.5 98.5	19,882 12,600 6,383 4,369 2,989 2,162 1,648 1,245 475 316 274	2,310 961 560 276 173 68 106 81 6 33	0.2311 0.1833 0.1505 0.1283 0.0925 0.0801 0.0416 0.0855 0.1704 0.0174 0.1194	0.7489 0.8167 0.8495 0.8717 0.9075 0.9199 0.9584 0.9145 0.8296 0.9826 0.9826 0.8806	7.77 6.35 5.39 4.70 4.27 3.92 3.76 3.44 2.85 2.80
99.5 100.5 101.5 102.5 103.5 104.5 105.5 106.5	201 158 110 65 47 25 22	8 48 24 0 3	0.0376 0.3022 0.2217 0.0005 0.0000 0.1279 0.0000	0.9624 0.6978 0.7783 0.9995 1.0000 0.8721 1.0000	2.47 2.38 1.66 1.29 1.29 1.29 1.12 1.12



DUKE ENERGY KENTUCKY ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 158 of 382

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1905-2021

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	162,501,710	225,648	0.0014	0.9986	100.00
0.5	146,402,337	692,684	0.0047	0.9953	99.86
1.5	139,665,258	2,007,088	0.0144	0.9856	99.39
2.5	133,622,342	1,639,471	0.0123	0.9877	97.96
3.5	131,497,152	2,119,300	0.0161	0.9839	96.76
4.5	126,748,047	1,895,908	0.0150	0.9850	95.20
5.5	121,928,943	1,858,226	0.0152	0.9848	93.78
6.5	114,742,577	1,707,908	0.0149	0.9851	92.35
7.5	110,541,196	1,506,227	0.0136	0.9864	90.97
8.5	104,469,761	1,386,418	0.0133	0.9864	89.73
9.5	94,097,151	1,220,637	0.0130	0.9870	88.54
10.5	91,736,985	1,159,434	0.0126	0.9874	87.39
11.5	85,129,900	1,139,125	0.0134	0.9866	86.29
12.5	81,251,381	1,896,121	0.0233	0.9767	85.13
13.5	77,971,053	1,634,361	0.0210	0.9790	83.15
14.5	73,028,228	872,828	0.0120	0.9880	81.40
15.5	66,317,312	1,039,536	0.0157	0.9843	80.43
16.5	62,525,224	749,294	0.0120	0.9880	79.17
17.5	57,168,000	697,264	0.0122	0.9878	78.22
18.5	51,260,694	651,493	0.0127	0.9873	77.27
19.5	50,348,343	1,030,595	0.0205	0.9795	76.29
20.5	47,302,683	968,377	0.0205	0.9795	74.72
21.5	41,831,803	628,235	0.0150	0.9850	73.19
22.5	40,008,607	710,544	0.0178	0.9822	72.09
23.5	37,454,770	505,129	0.0135	0.9865	70.81
24.5	36,033,166	562,580	0.0156	0.9844	69.86
25.5	34,235,756	578,488	0.0169	0.9831	68.77
26.5	31,744,897	436,787	0.0138	0.9862	67.61
27.5	28,107,723	372,870	0.0133	0.9867	66.68
28.5	25,849,595	390,760	0.0151	0.9849	65.79
29.5	23,453,378	294,772	0.0126	0.9874	64.80
30.5	21,493,639	242,306	0.0113	0.9887	63.98
31.5	19,987,240	289,771	0.0145	0.9855	63.26
32.5	17,519,877	257,428	0.0147	0.9853	62.34
33.5	16,526,830	271,326	0.0164	0.9836	61.43
34.5	15,036,312	227,600	0.0151	0.9849	60.42
35.5	13,901,293	141,933	0.0102	0.9898	59.51
36.5	12,891,149	202,850	0.0157	0.9843	58.90
37.5	12,105,883	149,054	0.0123	0.9877	57.97
38.5	11,003,491	153,775	0.0140	0.9860	57.26

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021

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	10,266,083	169,576	0.0165	0.9835	56.46
40.5	9,638,512	123,895	0.0129	0.9871	55.52
41.5	8,690,127	92,347	0.0106	0.9894	54.81
42.5	7,946,933	98,400	0.0124	0.9876	54.23
43.5	7,552,647	82,981	0.0110	0.9890	53.56
44.5	7,151,341	76,211	0.0107	0.9893	52.97
45.5	6,728,894	65,680	0.0098	0.9902	52.40
46.5	6,237,957	61,386	0.0098	0.9902	51.89
47.5	5,628,217	45,807	0.0081	0.9919	51.38
48.5	4,931,595	59,101	0.0120	0.9880	50.96
49.5	4,508,883	53,029	0.0118	0.9882	50.35
50.5	4,042,438	30,423	0.0075	0.9925	49.76
51.5	3,595,985	34,259	0.0095	0.9905	49.39
52.5	3,354,598	47,636	0.0142	0.9858	48.92
53.5	3,069,565	28,094	0.0092	0.9908	48.22
54.5	2,833,851	22,865	0.0081	0.9919	47.78
55.5	2,519,279	23,707	0.0094	0.9906	47.39
56.5	2,233,193	26,326	0.0118	0.9882	46.95
57.5	1,936,329	17,232	0.0089	0.9911	46.39
58.5	1,724,148	21,459	0.0124	0.9876	45.98
59.5	1,527,992	15,566	$\begin{array}{c} 0.0102 \\ 0.0082 \\ 0.0092 \\ 0.0105 \\ 0.0089 \\ 0.0159 \\ 0.0159 \\ 0.0093 \\ 0.0260 \\ 0.0234 \\ 0.0319 \end{array}$	0.9898	45.41
60.5	1,333,029	10,988		0.9918	44.95
61.5	1,229,308	11,331		0.9908	44.58
62.5	1,144,749	11,996		0.9895	44.17
63.5	1,040,013	9,257		0.9911	43.70
64.5	949,702	15,108		0.9841	43.31
65.5	851,749	7,899		0.9907	42.62
66.5	764,720	19,904		0.9740	42.23
67.5	648,665	15,198		0.9766	41.13
68.5	592,531	18,906		0.9681	40.17
69.5	472,291	5,263	0.0111	0.9889	38.88
70.5	415,174	3,296	0.0079	0.9921	38.45
71.5	335,856	1,304	0.0039	0.9961	38.15
72.5	302,189	1,980	0.0066	0.9934	38.00
73.5	284,997	1,845	0.0065	0.9935	37.75
74.5	257,358	2,168	0.0084	0.9916	37.51
75.5	246,591	5,698	0.0231	0.9769	37.19
76.5	237,182	652	0.0027	0.9973	36.33
77.5	235,805	1,102	0.0047	0.9953	36.23
78.5	229,427	1,716	0.0075	0.9925	36.06

DUKE ENERGY KENTUCKY

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
79.5	218,644	7,302	0.0334	0.9666	35.79
80.5	200,869	1,706	0.0085	0.9915	34.60
81.5	198,707	1,677	0.0084	0.9916	34.30
82.5	188,229	1,296	0.0069	0.9931	34.01
83.5	170,703	564	0.0033	0.9967	33.78
84.5	170,140	1,869	0.0110	0.9890	33.67
85.5	168,271	3,280	0.0195	0.9805	33.30
86.5	165,724	2,522	0.0152	0.9848	32.65
87.5	163,893	7,463	0.0455	0.9545	32.15
88.5	156,430	9,379	0.0600	0.9400	30.69
89.5	146,911	1,735	0.0118	0.9882	28.85
90.5	145,176	13,545	0.0933	0.9067	28.51
91.5	131,631	1,817	0.0138	0.9862	25.85
92.5	129,814	6,337	0.0138	0.9512	25.49
	,				
93.5	123,477	2,848	0.0231	0.9769	24.25
94.5	120,609	6,571	0.0545	0.9455	23.69
95.5	114,036	11,805	0.1035	0.8965	22.40
96.5					20.08

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1912-2021

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	133,234,370	191,935	0.0014	0.9986	100.00
0.5	119,506,774	557,222	0.0047	0.9953	99.86
1.5	114,333,444	1,890,484	0.0165	0.9835	99.39
2.5	111,279,365	1,427,775	0.0128	0.9872	97.75
3.5	110,278,220	1,990,691	0.0181	0.9819	96.49
4.5	107,079,260	1,770,066	0.0165	0.9835	94.75
5.5	103,426,131	1,725,296	0.0167	0.9833	93.18
6.5	97,568,792	1,582,573	0.0162	0.9838	91.63
7.5	94,314,046	1,327,260	0.0141	0.9859	90.14
8.5	89,548,657	1,236,219	0.0138	0.9862	88.88
9.5	80,216,828	1,039,450	0.0130	0.9870	87.65
10.5	78,693,235	1,008,216	0.0128	0.9872	86.51
11.5	73,344,790	1,016,842	0.0139	0.9861	85.40
12.5	70,421,443	1,791,290	0.0254	0.9746	84.22
13.5	67,591,048	1,526,175	0.0226	0.9774	82.08
14.5	63,175,134	778,864	0.0123	0.9877	80.22
15.5	57,017,693	948,898	0.0166	0.9834	79.24
16.5	53,822,832	641,464	0.0119	0.9881	77.92
17.5	49,093,114	585,680	0.0119	0.9881	76.99
18.5	44,133,264	525,476	0.0119	0.9881	76.07
19.5	43,857,724	885,693	0.0202	0.9798	75.16
20.5	41,584,813	882,312	0.0212	0.9788	73.65
21.5	36,774,251	562,232	0.0153	0.9847	72.08
22.5	35,310,064	630,549	0.0179	0.9821	70.98
23.5	33,147,284	442,993	0.0134	0.9866	69.71
24.5	32,063,612	508,179	0.0158	0.9842	68.78
25.5	30,692,473	524,203	0.0171	0.9829	67.69
26.5	28,587,984	362,916	0.0127	0.9873	66.54
27.5	25,333,889	307,519	0.0121	0.9879	65.69
28.5	23,359,687	343,324	0.0147	0.9853	64.89
29.5	21,245,971	250,362	0.0118	0.9882	63.94
30.5	19,311,891	206,592	0.0107	0.9893	63.19
31.5	17,972,893	236,432	0.0132	0.9868	62.51
32.5	15,677,438	204,844	0.0131	0.9869	61.69
33.5	14,915,613	203,228	0.0136	0.9864	60.88
34.5	13,605,086	181,873	0.0134	0.9866	60.05
35.5	12,627,746	131,618	0.0104	0.9896	59.25
36.5	11,745,923	194,767	0.0166	0.9834	58.63
37.5	11,106,637	135,157	0.0122	0.9878	57.66
38.5	10,084,922	150,542	0.0149	0.9851	56.96

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1912-2021

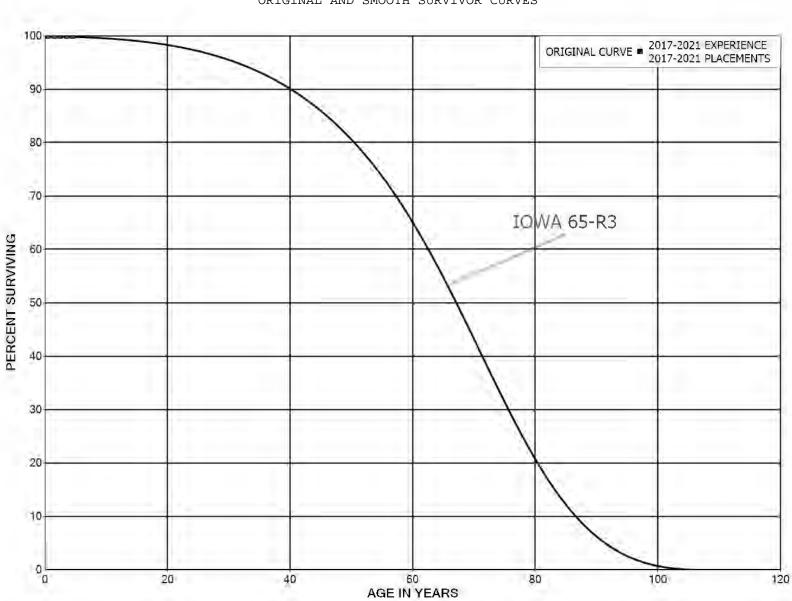
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	9,502,865	164,200	0.0173	0.9827	56.11
40.5	8,958,731	122,453	0.0137	0.9863	55.14
41.5	8,116,797	89,689	0.0110	0.9890	54.39
42.5	7,417,923	95,891	0.0129	0.9871	53.78
43.5	7,047,491	80,673	0.0114	0.9886	53.09
44.5	6,690,160	75,130	0.0112	0.9888	52.48
45.5	6,283,833	65,119	0.0104	0.9896	51.89
46.5	5,799,349	60,832	0.0105	0.9895	51.35
47.5	5,191,509	45,205	0.0087	0.9895	50.82
48.5	4,503,140	40,274	0.0089	0.9911	50.37
49.5	4,129,830	46,520	0.0113	0.9887	49.92
50.5	3,682,395	27,183	0.0074	0.9926	49.36
51.5	3,240,099	27,393	0.0085	0.9915	49.00
52.5	3,016,159	43,279	0.0143	0.9857	48.58
53.5	2,762,579	19,762	0.0072	0.9928	47.88
54.5	2,535,197	18,593	0.0073	0.9927	47.54
55.5	2,224,898	16,315	0.0073	0.9927	47.19
56.5	1,946,203	15,187	0.0078	0.9922	46.85
57.5	1,660,478	11,174	0.0067	0.9933	46.48
58.5	1,454,355	14,097	0.0097	0.9903	46.17
59.5	1,265,739	12,227	0.0097	0.9903	45.72
60.5	1,074,114	8,060	0.0075	0.9925	45.28
61.5	973,321	8,217	0.0084	0.9916	44.94
62.5	891,876	7,107	0.0080	0.9920	44.56
63.5	811,618	9,257	0.0114	0.9886	44.21
64.5	721,337	4,919	0.0068	0.9932	43.70
65.5	633,573	5,967	0.0094	0.9906	43.40
66.5	764,538	19,904	0.0260	0.9740	42.99
67.5	648,483	15,027	0.0232	0.9768	41.88
68.5	592,521	18,906	0.0319	0.9681	40.90
69.5	472,281	5,263	0.0111	0.9889	39.60
70.5	415,164	3,296	0.0079	0.9921	39.16
71.5	335,846	1,304	0.0039	0.9961	38.85
72.5	302,179	1,980	0.0066	0.9934	38.70
73.5	284,987	1,845	0.0065	0.9935	38.44
74.5	257,348	2,168	0.0084	0.9916	38.19
75.5	246,581	5,698	0.0231	0.9769	37.87
76.5	237,171	652	0.0027	0.9973	37.00
77.5	235,795	1,091	0.0046	0.9954	36.90
78.5	229,427	1,716	0.0075	0.9925	36.72

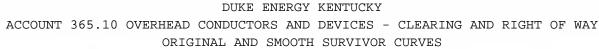
DUKE ENERGY KENTUCKY

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 87.5 88.5	218,644 200,869 198,707 188,229 170,703 170,140 168,271 165,724 163,893 156,430	7,302 1,706 1,677 1,296 564 1,869 3,280 2,522 7,463 9,379	0.0334 0.0085 0.0084 0.0069 0.0033 0.0110 0.0195 0.0152 0.0455 0.0600	0.9666 0.9915 0.9916 0.9931 0.9967 0.9890 0.9805 0.9848 0.9545 0.9400	36.45 35.23 34.93 34.64 34.40 34.29 33.91 33.25 32.74 31.25
89.5 90.5 91.5 92.5 93.5 94.5 95.5 96.5	146,911 145,176 131,631 129,814 123,477 120,609 114,036	1,735 13,545 1,817 6,337 2,848 6,571 11,805	0.0118 0.0933 0.0138 0.0488 0.0231 0.0545 0.1035	0.9882 0.9067 0.9862 0.9512 0.9769 0.9455 0.8965	29.38 29.03 26.32 25.96 24.69 24.12 22.81 20.45





Duke Energy Kentucky December 31, 2023

GANNETT FLEMING

EXPERIENCE BAND 2017-2021

DUKE ENERGY KENTUCKY

ACCOUNT 365.10 OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY

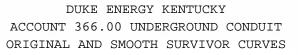
ORIGINAL LIFE TABLE

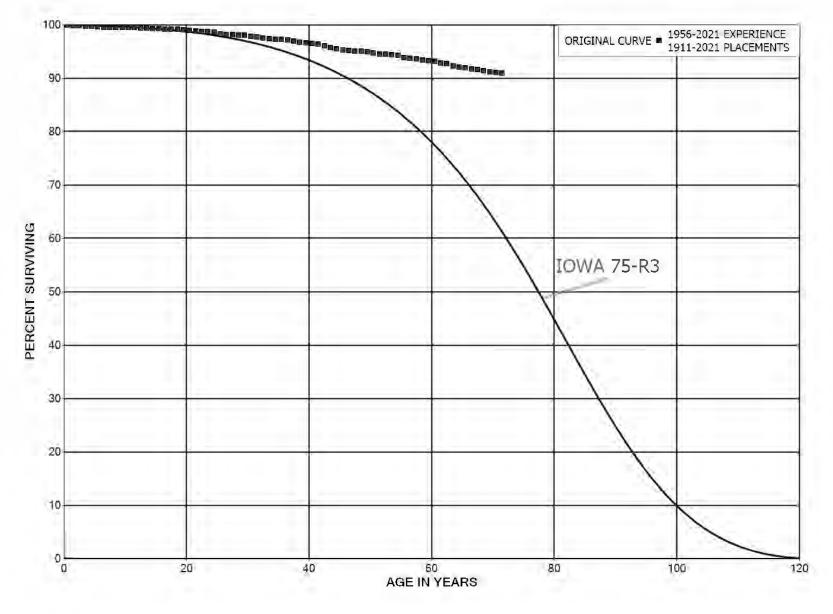
PLACEMENT BAND 2017-2021

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 0.5 1.5 2.5 3.5	7,177,612 5,467,671 5,183,262 4,456,060		0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00
3.5 4.5	4,136,476		0.0000	1.0000	100.00 100.00









KyPSC Case No. 2024-00354 Attachment JJS-1 Page 167 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 366.00 UNDERGROUND CONDUIT

ORIGINAL LIFE TABLE

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	42,816,832 41,016,704 29,065,071 23,655,994 21,098,172 18,510,244 18,265,174 17,679,076 16,924,404 16,636,230	2,984 55,743 3,693 23,300 15,870 5,544 16,525 8,186 1,528 2,147	0.0001 0.0014 0.0001 0.0010 0.0008 0.0003 0.0009 0.0005 0.0001 0.0001	0.9999 0.9986 0.9999 0.9990 0.9992 0.9997 0.9991 0.9995 0.9999 0.9999	100.00 99.99 99.86 99.84 99.75 99.67 99.64 99.55 99.50 99.50
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5 19.5 20.5 21.5 22.5 23.5	16,203,887 15,893,834 15,583,833 15,273,060 15,066,337 14,543,691 14,080,619 13,699,313 13,488,954 10,429,672 10,338,701 10,180,151 9,765,810 7,970,785 7,130,241	1,926 2,071 1,718 10,160 6,776 12,435 4,494 4,997 5,119 11,720 8,057 12,725 5,794 8,413 5,552	0.0001 0.0001 0.0001 0.0007 0.0004 0.0009 0.0003 0.0004 0.0004 0.0004 0.0011 0.0008 0.0012 0.0006 0.0011 0.0008	0.9999 0.9999 0.9999 0.9993 0.9996 0.9991 0.9997 0.9996 0.9996 0.9996 0.9998 0.9989 0.9988 0.9994 0.9989 0.9992	99.48 99.47 99.46 99.45 99.38 99.34 99.25 99.22 99.18 99.15 99.03 98.96 98.83 98.78 98.67
24.5 25.5 26.5 27.5 28.5	6,253,928 5,453,388 4,631,142 3,568,578 2,733,769	21,593 4,069 819 1,614 1,807	0.0035 0.0007 0.0002 0.0005 0.0007	0.9992 0.9965 0.9993 0.9998 0.9995 0.9993	98.67 98.59 98.25 98.18 98.16 98.12
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	2,112,079 2,047,604 1,879,659 1,707,011 1,575,700 1,556,716 1,503,665 1,495,503 1,392,200 1,371,862	5,615 1,102 3,835 1,855 1,759 298 2,153 3,023 2,759 1,934	0.0027 0.0005 0.0020 0.0011 0.0011 0.0002 0.0014 0.0020 0.0020 0.0014	0.9973 0.9995 0.9980 0.9989 0.9989 0.9998 0.9986 0.9980 0.9980 0.9986	98.05 97.79 97.74 97.54 97.44 97.33 97.31 97.17 96.97 96.78

DUKE ENERGY KENTUCKY

ACCOUNT 366.00 UNDERGROUND CONDUIT

ORIGINAL LIFE TABLE, CONT.

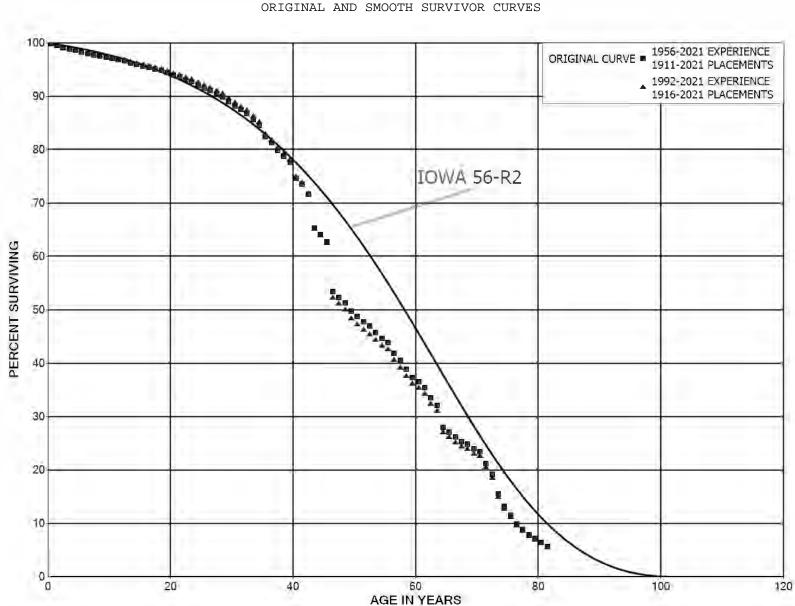
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 47.5 48.5	1,331,519 1,329,714 1,199,683 1,192,334 1,181,875 1,147,022 966,302 759,601 682,114 561,878	2,552 1,523 3,711 4,195 2,362 3,145 534 868 560 442	0.0019 0.0011 0.0031 0.0035 0.0020 0.0027 0.0006 0.0011 0.0008 0.0008	0.9981 0.9989 0.9969 0.9965 0.9980 0.9973 0.9994 0.9989 0.9992 0.9992	96.64 96.35 96.05 95.71 95.52 95.26 95.21 95.10 95.02
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	539,818 453,657 417,510 394,435 393,885 385,072 382,506 368,153 362,292 281,981	1,367 762 413 414 421 1,567 563 435 871 408	0.0025 0.0017 0.0010 0.0011 0.0011 0.0041 0.0015 0.0012 0.0024 0.0014	0.9975 0.9983 0.9990 0.9989 0.9989 0.9959 0.9985 0.9985 0.9988 0.9976 0.9986	94.94 94.70 94.54 94.45 94.35 94.25 93.87 93.73 93.62 93.39
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	270,139 251,030 249,271 245,192 234,744 227,883 218,933 195,047 191,209 187,540	388 647 448 1,102 673 270 563 179 460 503	0.0014 0.0026 0.0018 0.0045 0.0029 0.0012 0.0026 0.0009 0.0024 0.0027	0.9986 0.9974 0.9982 0.9955 0.9971 0.9988 0.9974 0.9991 0.9976 0.9973	93.26 93.12 92.88 92.72 92.30 92.04 91.93 91.69 91.61 91.39
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	175,642 170,364 151,138 138,063 134,534 131,190 128,556 126,593 125,733 120,903	174 297 572 3,395 1,100 2,634 1,003 595 2,944 110	0.0010 0.0017 0.0038 0.0246 0.0082 0.0201 0.0078 0.0047 0.0234 0.0009	0.9990 0.9983 0.9962 0.9754 0.9918 0.9799 0.9922 0.9953 0.9766 0.9991	91.14 91.05 90.89 90.55 88.32 87.60 85.84 85.17 84.77 82.79

DUKE ENERGY KENTUCKY

ACCOUNT 366.00 UNDERGROUND CONDUIT

ORIGINAL LIFE TABLE, CONT.

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 87.5 88.5	118,779 107,999 62,629 61,128 37,790 36,634 36,281 34,395 33,101 32,785	1,748 213 1,500 661 1,065 353 432 1,261 92 709	0.0147 0.0020 0.0239 0.0108 0.0282 0.0096 0.0119 0.0367 0.0028 0.0216	0.9853 0.9980 0.9761 0.9892 0.9718 0.9904 0.9881 0.9633 0.9972 0.9784	82.71 81.49 81.33 79.38 78.53 76.31 75.58 74.68 71.94 71.74
89.5 90.5 91.5 92.5 93.5 94.5 95.5 96.5 97.5 98.5	29,320 17,597 16,892 9,822 9,498 7,818 6,354 6,341 6,046 1,354	1,241 514 168 98 25 837 13 225 95 15	0.0210 0.0423 0.0292 0.0099 0.0100 0.0026 0.1071 0.0020 0.0355 0.0157 0.0114	0.9577 0.9708 0.9901 0.9900 0.9974 0.8929 0.9980 0.9645 0.9843 0.9886	70.19 67.22 65.26 64.61 63.96 63.80 56.97 56.85 54.83 53.97
99.5 100.5 101.5 102.5 103.5 104.5 105.5 106.5 107.5 108.5	1,338 1,328 1,218 803 749 735 242 242 242 88 87	10 2 414 54 14 9 154 1	0.0074 0.0018 0.3403 0.0672 0.0186 0.0124 0.0000 0.6368 0.0138 0.0000	0.9926 0.9982 0.6597 0.9328 0.9814 0.9876 1.0000 0.3632 0.9862 1.0000	53.36 52.96 52.86 34.88 32.53 31.93 31.53 31.53 11.45 11.29
109.5 110.5	87		0.0000	1.0000	11.29 11.29



DUKE ENERGY KENTUCKY ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

VII-118

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 171 of 382

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1911-2021

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	81,387,085	122,832	0.0015	0.9985	100.00
0.5	70,067,636	260,908	0.0037	0.9963	99.85
1.5	64,375,042	262,196	0.0041	0.9959	99.48
2.5	64,292,027	140,935	0.0022	0.9978	99.07
3.5	60,152,565	163,456	0.0027	0.9973	98.85
4.5	58,141,196	175,206	0.0030	0.9970	98.59
5.5	56,650,562	163,772	0.0029	0.9971	98.29
6.5	54,734,808	131,044	0.0024	0.9976	98.01
7.5	53,351,381	143,483	0.0027	0.9973	97.77
8.5	52,502,220	147,242	0.0028	0.9972	97.51
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	49,322,892 48,802,611 46,787,477 43,895,121 41,914,098 39,618,438 36,789,578 32,689,739 30,886,720 28,308,595	79,941 125,837 128,520 163,479 129,178 112,020 93,766 105,041 94,338 109,287	0.0016 0.0027 0.0037 0.0031 0.0028 0.0025 0.0032 0.0031 0.0031 0.0039	0.9984 0.9974 0.9973 0.9963 0.9969 0.9972 0.9975 0.9968 0.9969 0.9961	97.23 97.08 96.83 96.56 96.20 95.90 95.63 95.39 95.08 95.08 94.79
19.5	27,623,619	150,623	0.0055	0.9945	94.43
20.5	25,504,227	93,478	0.0037	0.9963	93.91
21.5	22,799,055	115,669	0.0051	0.9949	93.57
22.5	20,438,467	90,120	0.0044	0.9956	93.09
23.5	19,620,778	122,753	0.0063	0.9937	92.68
24.5	18,409,331	108,494	0.0059	0.9941	92.10
25.5	17,637,652	97,621	0.0055	0.9945	91.56
26.5	16,826,014	103,886	0.0062	0.9938	91.05
27.5	15,666,457	120,572	0.0077	0.9923	90.49
28.5	13,944,151	132,898	0.0095	0.9905	89.79
29.5	12,808,422	117,094	0.0091	0.9909	88.94
30.5	11,681,554	89,028	0.0076	0.9924	88.13
31.5	10,425,441	88,074	0.0084	0.9916	87.45
32.5	9,110,509	113,185	0.0124	0.9876	86.71
33.5	8,074,128	102,534	0.0127	0.9873	85.64
34.5	6,803,638	175,561	0.0258	0.9742	84.55
35.5	6,044,990	82,928	0.0137	0.9863	82.37
36.5	5,464,753	91,237	0.0167	0.9833	81.24
37.5	4,845,123	68,929	0.0142	0.9858	79.88
38.5	4,378,566	61,408	0.0140	0.9860	78.75

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1911-2021

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	4,076,193	159,012	0.0390	0.9610	77.64
40.5	3,675,974	52,341	0.0142	0.9858	74.61
41.5	3,213,573	85,053	0.0265	0.9735	73.55
42.5	2,671,935	236,656	0.0886	0.9114	71.60
43.5	2,234,444	39,828	0.0178	0.9822	65.26
44.5	1,809,806	37,625	0.0208	0.9792	64.10
45.5	1,488,326	222,606	0.1496	0.8504	62.77
46.5	1,104,881	22,420	0.0203	0.9797	53.38
47.5	907,016	18,039	0.0199	0.9801	52.29
48.5	777,618	22,779	0.0293	0.9707	51.25
49.5	683,621	14,315	0.0209	0.9791	49.75
50.5	595,729	12,054	0.0202	0.9798	48.71
51.5	526,897	9,118	0.0173	0.9827	47.73
52.5	501,858	12,035	0.0240	0.9760	46.90
53.5	479,836	11,835	0.0247	0.9753	45.78
54.5	455,790	7,726	0.0170	0.9830	44.65
55.5	439,251	20,595	0.0469	0.9531	43.89
56.5	399,277	13,062	0.0327	0.9673	41.83
57.5	361,332	14,923	0.0413	0.9587	40.46
58.5	311,219	11,922	0.0383	0.9617	38.79
59.5	294,118	6,184	0.0210	0.9790	37.31
60.5	278,492	8,429	0.0303	0.9697	36.52
61.5	263,872	14,057	0.0533	0.9467	35.42
62.5	240,089	10,121	0.0422	0.9578	33.53
63.5	228,529	29,331	0.1283	0.8717	32.12
64.5	194,384	6,117	0.0315	0.9685	27.99
65.5	178,414	6,496	0.0364	0.9636	27.11
66.5	145,107	4,524	0.0312	0.9688	26.13
67.5	137,767	2,374	0.0172	0.9828	25.31
68.5	134,359	5,020	0.0374	0.9828	24.88
69.5	128,829	2,690	0.0209	0.9791	23.95
70.5	123,770	11,779	0.0952	0.9048	23.45
71.5	99,890	9,633	0.0964	0.9036	21.21
72.5	86,195	16,674	0.1934	0.8066	19.17
73.5	69,521	10,170	0.1463	0.8537	15.46
74.5	58,372	7,573	0.1297	0.8703	13.20
75.5	50,799	7,181	0.1414	0.8586	11.49
76.5	43,446	4,584	0.1055	0.8945	9.86
77.5	38,862	4,452	0.1145	0.8855	8.82
78.5	34,347	2,842	0.0827	0.9173	7.81

DUKE ENERGY KENTUCKY

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
79.5	31,419	3,216	0.1024	0.8976	7.17
80.5	27,998	3,507	0.1253	0.8747	6.43
81.5	9,916	1,322	0.1333	0.8667	5.63
82.5	8,447	1,227	0.1452	0.8548	4.88
83.5	4,633	910	0.1964	0.8036	4.17
84.5	3,682	549	0.1492	0.8508	3.35
85.5	3,132	452	0.1443	0.8557	2.85
86.5	2,662	332	0.1245	0.8755	2.44
87.5	2,331	493	0.2116	0.7884	2.13
88.5	1,813	366	0.2020	0.7980	1.68
89.5	1,426	515	0.3611	0.6389	1.34
90.5	835	138	0.1650	0.8350	0.86
91.5	697	124	0.1772	0.8228	0.72
92.5	448	82	0.1832	0.8168	0.59
93.5	366	42	0.1159	0.8841	0.48
94.5	317	103	0.3230	0.6770	0.43
95.5	205	66	0.3245	0.6755	0.29
96.5	138	74	0.5347	0.4653	0.19
97.5	64	32	0.4923	0.5077	0.09
98.5	16	8	0.5003	0.4997	0.05
99.5	8	4	0.5330	0.4670	0.02
100.5	4	2	0.4266	0.5734	0.01
101.5	2	1	0.5024	0.4976	0.01
102.5	1	1	0.5049	0.4951	0.00
103.5	1		0.0000	1.0000	0.00
104.5	1	1	1.0000		0.00
105.5					

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1916-2021

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	67,412,847	121,351	0.0018	0.9982	100.00
0.5	57,080,928	220,722	0.0039	0.9961	99.82
1.5	52,731,255	231,496	0.0044	0.9956	99.43
2.5	54,053,417	103,990	0.0019	0.9981	99.00
3.5	50,995,362	132,959	0.0026	0.9974	98.81
4.5	50,348,679	139,172	0.0028	0.9972	98.55
5.5	49,506,993	116,741	0.0024	0.9976	98.28
6.5	48,182,246	104,831	0.0022	0.9978	98.05
7.5	47,560,983	121,991	0.0026	0.9974	97.83
8.5	47,193,263	133,846	0.0028	0.9974	97.58
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	44,309,993 44,120,161 42,611,048 40,441,887 38,781,734 37,044,656 34,745,114 30,869,996 29,330,581 27,185,879	63,791 116,385 97,258 120,661 112,951 99,462 86,503 98,054 88,671 105,169	0.0014 0.0023 0.0030 0.0029 0.0027 0.0025 0.0032 0.0030 0.0039	0.9986 0.9974 0.9977 0.9970 0.9971 0.9973 0.9975 0.9968 0.9970 0.9961	97.30 97.16 96.91 96.69 96.40 96.12 95.86 95.62 95.32 95.03
19.5	26,624,120	138,804	0.0052	0.9948	94.66
20.5	24,625,540	84,039	0.0034	0.9966	94.17
21.5	22,018,881	105,206	0.0048	0.9952	93.85
22.5	19,698,168	74,500	0.0038	0.9962	93.40
23.5	18,917,284	114,342	0.0060	0.9940	93.04
24.5	17,736,838	93,968	0.0053	0.9947	92.48
25.5	16,995,005	93,857	0.0055	0.9945	91.99
26.5	16,212,814	91,805	0.0057	0.9943	91.48
27.5	15,103,965	98,122	0.0065	0.9935	90.97
28.5	13,488,201	127,999	0.0095	0.9905	90.38
29.5	12,364,621	112,733	0.0091	0.9909	89.52
30.5	11,261,762	88,040	0.0078	0.9922	88.70
31.5	10,018,555	84,388	0.0084	0.9916	88.01
32.5	8,722,944	107,795	0.0124	0.9876	87.27
33.5	7,695,847	100,739	0.0131	0.9869	86.19
34.5	6,440,440	166,487	0.0259	0.9741	85.06
35.5	5,712,962	81,945	0.0143	0.9857	82.86
36.5	5,240,943	89,360	0.0171	0.9829	81.67
37.5	4,629,713	67,214	0.0145	0.9855	80.28
38.5	4,167,249	54,235	0.0130	0.9870	79.11

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1916-2021

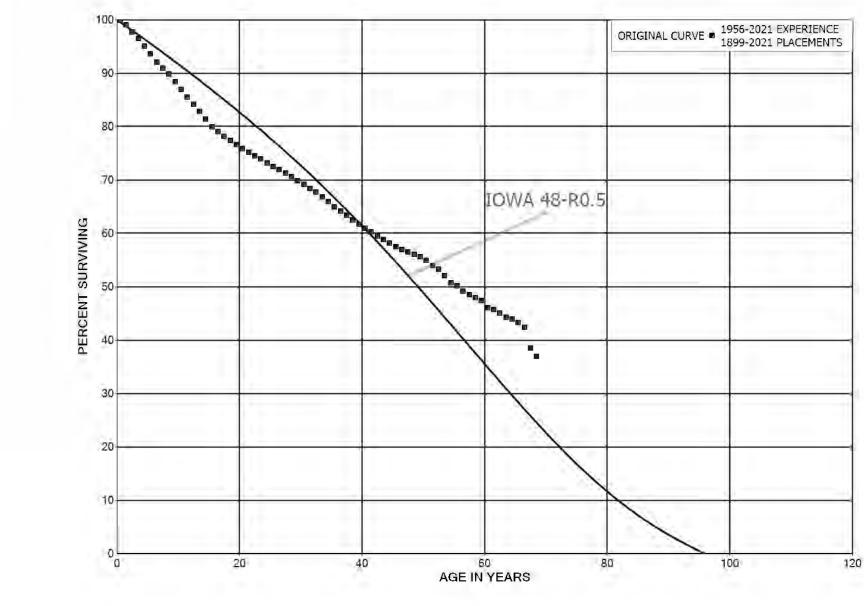
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,878,836	158,947	0.0410	0.9590	78.09
40.5	3,488,226	51,569	0.0148	0.9852	74.89
41.5	3,062,584	84,993	0.0278	0.9722	73.78
42.5	2,537,686	236,526	0.0932	0.9068	71.73
43.5	2,100,325	39,585	0.0188	0.9812	65.05
44.5	1,678,736	37,321	0.0222	0.9778	63.82
45.5	1,357,560	222,492	0.1639	0.8361	62.40
46.5	975,486	19,783	0.0203	0.9797	52.17
47.5	780,257	17,157	0.0220	0.9780	51.12
48.5	652,036	22,518	0.0345	0.9655	49.99
49.5	560,143	12,622	0.0225	0.9775	48.26
50.5	475,067	10,490	0.0221	0.9779	47.18
51.5	493,920	9,038	0.0183	0.9817	46.14
52.5	470,028	10,304	0.0219	0.9781	45.29
53.5	470,181	11,493	0.0244	0.9756	44.30
54.5	446,840	7,577	0.0170	0.9830	43.22
55.5	430,529	20,534	0.0477	0.9523	42.48
56.5	390,808	13,062	0.0334	0.9666	40.46
57.5	352,862	14,697	0.0417	0.9583	39.10
58.5	303,299	11,752	0.0387	0.9613	37.48
59.5	286,695	6,184	0.0216	0.9784	36.02
60.5	272,273	8,429	0.0310	0.9690	35.25
61.5	257,654	14,057	0.0546	0.9454	34.16
62.5	237,070	10,121	0.0427	0.9573	32.29
63.5	225,511	29,331	0.1301	0.8699	30.91
64.5	191,576	6,117	0.0319	0.9681	26.89
65.5	175,990	6,496	0.0369	0.9631	26.03
66.5	142,683	4,524	0.0317	0.9683	25.07
67.5	135,342	2,374	0.0175	0.9825	24.28
68.5	133,653	5,020	0.0376	0.9624	23.85
69.5	128,147	2,690	0.0210	0.9790	22.96
70.5	123,088	11,373	0.0924	0.9076	22.47
71.5	99,614	9,633	0.0967	0.9033	20.40
72.5	85,919	16,674	0.1941	0.8059	18.43
73.5	69,245	10,170	0.1469	0.8531	14.85
74.5	58,096	7,573	0.1303	0.8697	12.67
75.5	50,799	7,181	0.1414	0.8586	11.02
76.5	43,446	4,584	0.1055	0.8945	9.46
77.5	38,862	4,452	0.1145	0.8855	8.46
78.5	34,347	2,842	0.0827	0.9173	7.49

DUKE ENERGY KENTUCKY

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 87.5 88.5	31,419 27,998 9,916 8,447 4,633 3,682 3,132 2,662 2,331	3,216 3,507 1,322 1,227 910 549 452 332 493 366	0.1024 0.1253 0.1333 0.1452 0.1964 0.1492 0.1443 0.1245 0.2116 0.2020	0.8976 0.8747 0.8667 0.8548 0.8036 0.8508 0.8557 0.8557 0.8755 0.7884 0.7980	6.87 6.17 5.40 4.68 4.00 3.21 2.73 2.34 2.05 1.61
88.5 90.5 91.5 92.5 93.5 94.5 95.5 96.5 97.5 98.5	1,813 1,426 835 697 448 366 317 205 138 64 16	515 138 124 82 42 103 66 74 32 8	0.2020 0.3611 0.1650 0.1772 0.1832 0.1159 0.3230 0.3245 0.5347 0.4923 0.5003	0.7980 0.6389 0.8350 0.8228 0.8168 0.8841 0.6770 0.6755 0.4653 0.5077 0.4997	1.81 1.29 0.82 0.69 0.57 0.46 0.41 0.28 0.19 0.09 0.04
99.5 100.5 101.5 102.5 103.5 104.5 105.5	8 4 2 1 1 1	4 2 1 1	0.5330 0.4266 0.5024 0.5049 0.0000 1.0000	0.4670 0.5734 0.4976 0.4951 1.0000	0.02 0.01 0.01 0.00 0.00 0.00



DUKE ENERGY KENTUCKY ACCOUNT 368.00 LINE TRANSFORMERS ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

VII-125

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 178 of 382

ACCOUNT 368.00 LINE TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1899-2021

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	93,972,484	89,206	0.0009	0.9991	100.00
0.5	82,096,636	649,664	0.0079	0.9921	99.91
1.5	84,148,256	1,153,060	0.0137	0.9863	99.11
2.5	84,108,487	1,116,645	0.0133	0.9867	97.76
3.5	82,151,547	1,206,184	0.0147	0.9853	96.46
4.5	79,128,792	1,143,851	0.0145	0.9855	95.04
5.5	76,200,650	1,347,783	0.0177	0.9823	93.67
6.5	72,172,091	850,417	0.0118	0.9882	92.01
7.5	68,499,211	861,056	0.0126	0.9874	90.93
8.5	66,160,556	1,063,305	0.0161	0.9839	89.78
9.5	63,196,619	1,002,829	0.0159	0.9841	88.34
10.5	62,142,274	1,025,623	0.0165	0.9835	86.94
11.5	59,390,695	929,791	0.0157	0.9843	85.50
12.5	56,835,832	921,186	0.0162	0.9838	84.17
13.5	54,755,377	905,264	0.0165	0.9835	82.80
14.5	51,989,434	932,325	0.0179	0.9821	81.43
15.5	49,792,037	579,367	0.0116	0.9884	79.97
16.5	48,165,520	502,890	0.0104	0.9896	79.04
17.5	46,061,491	493,104	0.0107	0.9893	78.22
18.5	44,304,025	452,723	0.0102	0.9898	77.38
19.5	43,090,944	443,754	0.0103	0.9897	76.59
20.5	41,976,774	362,840	0.0086	0.9914	75.80
21.5	40,264,523	326,182	0.0081	0.9919	75.14
22.5	38,393,857	329,184	0.0086	0.9914	74.54
23.5	36,413,254	368,767	0.0101	0.9899	73.90
24.5	34,091,497	291,769	0.0086	0.9914	73.15
25.5	32,521,364	278,183	0.0086	0.9914	72.52
26.5	30,905,263	282,072	0.0091	0.9909	71.90
27.5	28,183,475	264,030	0.0094	0.9906	71.25
28.5	26,021,314	258,210	0.0099	0.9901	70.58
29.5	24,321,180	247,956	0.0102	0.9898	69.88
30.5	22,149,305	234,347	0.0106	0.9894	69.17
31.5	19,968,182	217,037	0.0109	0.9891	68.43
32.5	17,793,032	235,568	0.0132	0.9868	67.69
33.5	15,604,301	199,941	0.0128	0.9872	66.79
34.5	14,271,617	205,059	0.0144	0.9856	65.94
35.5	13,031,394	155,325	0.0119	0.9881	64.99
36.5	11,840,357	159,663	0.0135	0.9865	64.22
37.5	10,714,243	147,056	0.0137	0.9863	63.35
38.5	9,516,603	116,802	0.0123	0.9877	62.48

ACCOUNT 368.00 LINE TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1899-2021

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 45.5 46.5	8,817,002 7,883,651 7,152,301 6,473,016 5,771,555 5,230,724 4,855,944 4,412,945 3,722,934	113,847 83,898 86,554 77,941 67,781 57,170 47,182 30,985 33,036	0.0129 0.0106 0.0121 0.0120 0.0117 0.0109 0.0097 0.0070 0.0089	0.9871 0.9894 0.9879 0.9880 0.9883 0.9891 0.9903 0.9930 0.9911	61.71 60.92 60.27 59.54 58.82 58.13 57.50 56.94 56.54
47.5 48.5	3,114,277	25,556	0.0089	0.9911 0.9918	56.04
49.5 50.5 51.5 52.5 53.5 54.5 56.5 57.5 58.5 59.5 61.5 62.5 61.5 62.5 64.5 64.5 65.5 64.5 64.5 65.5 64.5 65.5 64.5 65.5 64.5 65.5 64.5 65.5 64.5 65.5 64.5 65.5 64.5 65.5 64.5 65.5 64.5 65.5 64.5 65.5 64.5	2,604,664 2,133,819 1,698,314 1,379,055 1,137,165 1,008,217 819,567 697,467 544,563 473,534 423,029 365,207 323,162 275,721 239,814 226,743 177,537 137,663 111,277 101,695	30,105 36,431 23,477 32,009 27,385 11,277 16,959 8,699 6,298 5,498 12,175 2,852 4,720 4,675 1,642 3,309 3,787 12,745 4,387 698	0.0116 0.0171 0.0138 0.0232 0.0241 0.0112 0.0207 0.0125 0.0116 0.0116 0.0288 0.0116 0.0288 0.0078 0.0146 0.0170 0.0068 0.0146 0.0213 0.0926 0.0394 0.0069	0.9884 0.9829 0.9862 0.9768 0.9759 0.9888 0.9793 0.9875 0.9884 0.9884 0.9712 0.9922 0.9854 0.9830 0.9932 0.9854 0.9932 0.9854 0.9787 0.9074 0.9074 0.9606 0.9931	55.58 54.93 54.00 53.25 52.01 50.76 50.19 49.15 48.54 47.98 47.42 46.06 45.70 45.03 44.27 43.96 43.32 42.40 38.47 36.96
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	90,980 73,933 65,533 61,668 59,525 56,728 56,227 55,608 55,608 55,560	1,770 3,115 468 231 508 251 134 0 48 189	0.0195 0.0421 0.0071 0.0037 0.0085 0.0044 0.0024 0.0000 0.0009 0.0034	0.9805 0.9579 0.9929 0.9963 0.9915 0.9956 0.9976 1.0000 0.9991 0.9966	36.70 35.99 34.47 34.23 34.10 33.81 33.66 33.58 33.58 33.58 33.55

DUKE ENERGY KENTUCKY

ACCOUNT 368.00 LINE TRANSFORMERS

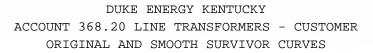
ORIGINAL LIFE TABLE, CONT.

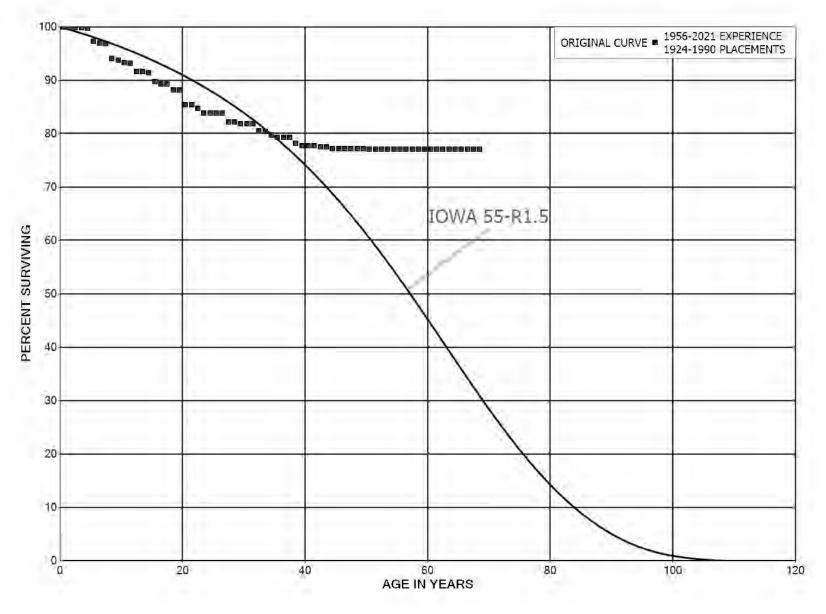
PLACEMENT BAND 1899-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 87.5 88.5	55,206 52,806 49,977 49,731 49,581 47,310 45,645 45,298 44,607 44,424	1,207 509 123 36 13 201 0 0	0.0219 0.0096 0.0025 0.0007 0.0003 0.0043 0.0000 0.0000 0.0000 0.0000	0.9781 0.9904 0.9975 0.9993 0.9997 0.9957 1.0000 1.0000 1.0000 1.0000	33.43 32.70 32.39 32.31 32.28 32.28 32.14 32.14 32.14 32.14
89.5 90.5 91.5 92.5 93.5 94.5 95.5 96.5 97.5 98.5	45,801 43,851 43,665 43,485 43,304 44,781 43,523 42,863 42,863 42,618	1,950 62 0 97 1,010 0 82 49	0.0426 0.0014 0.0000 0.0022 0.0226 0.0226 0.0000 0.0000 0.0019 0.0011	0.9574 0.9986 1.0000 1.0000 0.9978 0.9774 1.0000 1.0000 0.9981 0.9989	32.14 30.77 30.73 30.73 30.73 30.66 29.97 29.97 29.97 29.91
99.5 100.5 101.5 102.5 103.5 104.5 105.5 106.5 107.5 108.5	41,965 41,847 40,956 40,956 40,956 40,917 40,824 40,824 40,824 40,823	151 0 0	0.0000 0.0036 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 0.9964 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	29.88 29.77 29.77 29.77 29.77 29.77 29.77 29.77 29.77 29.77
109.5 110.5 111.5 112.5 113.5 114.5 115.5 116.5 117.5 118.5	40,823 40,823 39,891 39,891 39,891 39,891 39,891 39,891 39,891 39,891		$\begin{array}{c} 0.0000\\ 0.000\\$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	29.77 29.77 29.77 29.77 29.77 29.77 29.77 29.77 29.77 29.77
119.5 120.5	39,891	8,308	0.2083	0.7917	29.77 23.57









KyPSC Case No. 2024-00354 Attachment JJS-1 Page 182 of 382

ACCOUNT 368.20 LINE TRANSFORMERS - CUSTOMER

ORIGINAL LIFE TABLE

EXPERIENCE BAND 1956-2021

PLACEMENT BAND 1924-1990

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 0.5 1.5	267,971 277,289 290,361	442 139	0.0000 0.0016 0.0005	1.0000 0.9984 0.9995	100.00 100.00 99.84
2.5	320,097	17	0.0001	0.9999	99.79
3.5	323,303	92	0.0003	0.9997	99.79
4.5	334,199	8,295	0.0248	0.9752	99.76
5.5	331,764	1,266	0.0038	0.9962	97.28
6.5	339,385	339	0.0010	0.9990	96.91
7.5	345,628	9,890	0.0286	0.9714	96.82
8.5	338,039	1,100	0.0033	0.9967	94.04
9.5	340,268	1,484	0.0044	0.9956	93.74
10.5	340,703	393	0.0012	0.9988	93.33
11.5	340,310	5,669	0.0167	0.9833	93.22
12.5	334,708		0.0000	1.0000	91.67
13.5	334,719	811	0.0024	0.9976	91.67
14.5	335,744	6,359	0.0189	0.9811	91.45
15.5	329,385	1,561	0.0047	0.9953	89.72
16.5	330,701	2.056	0.0000	1.0000	89.29
17.5	330,703	3,956	0.0120	0.9880	89.29
18.5	326,748		0.0000	1.0000	88.22
19.5	326,748	10,565	0.0323	0.9677	88.22
20.5	321,257		0.0000	1.0000	85.37
21.5	321,826	2,358	0.0073	0.9927	85.37
22.5	319,469	3,363	0.0105	0.9895	84.74
23.5	317,846	64	0.0002	0.9998	83.85
24.5	322,183	52	0.0002	0.9998	83.84
25.5	312,484	C 10C	0.0000	1.0000	83.82
26.5	309,240	6,196	0.0200	0.9800	83.82
27.5 28.5	303,216 303,880	67 1,029	0.0002 0.0034	0.9998 0.9966	82.14 82.12
20.5	303,880	1,029		0.9900	02.12
29.5	302,352		0.0000	1.0000	81.85
30.5	301,651		0.0000	1.0000	81.85
31.5	279,307	4,497	0.0161	0.9839	81.85
32.5	273,717	444		0.9984	80.53
33.5	273,274	2,405	0.0088	0.9912	80.40
34.5	270,868	1,404	0.0052	0.9948	79.69
35.5	262,259		0.0000	1.0000	79.28
36.5	262,259	~ 4.2.5	0.0000	1.0000	79.28
37.5	256,304	3,431	0.0134	0.9866	79.28
38.5	252,873	1,452	0.0057	0.9943	78.22

DUKE ENERGY KENTUCKY

ACCOUNT 368.20 LINE TRANSFORMERS - CUSTOMER

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1924-1990

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 45.5 46.5 47.5 48.5	247,188 247,188 247,188 246,237 230,046 218,115 194,983 189,770 187,529 181,396	951 731	0.0000 0.0008 0.0038 0.0000 0.0032 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 0.9962 1.0000 0.9968 1.0000 1.0000 1.0000 1.0000 1.0000	77.77 77.77 77.47 77.47 77.22 77.22 77.22 77.22 77.22 77.22
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	176,874 152,988 148,207 122,917 96,040 93,899 87,129 82,013 77,620 63,369	420	0.0024 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0.9976 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	77.22 77.04 77.04 77.04 77.04 77.04 77.04 77.04 77.04 77.04 77.04
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	59,386 54,156 54,156 51,285 51,071 48,638 21,685 21,103 19,545 18,092		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	77.04 77.04 77.04 77.04 77.04 77.04 77.04 77.04 77.04 77.04
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	18,043 12,088 11,671 7,814 7,413 5,113 1,783 18 18 18		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	77.04 77.04 77.04 77.04 77.04 77.04 77.04 77.04 77.04 77.04 77.04

DUKE ENERGY KENTUCKY

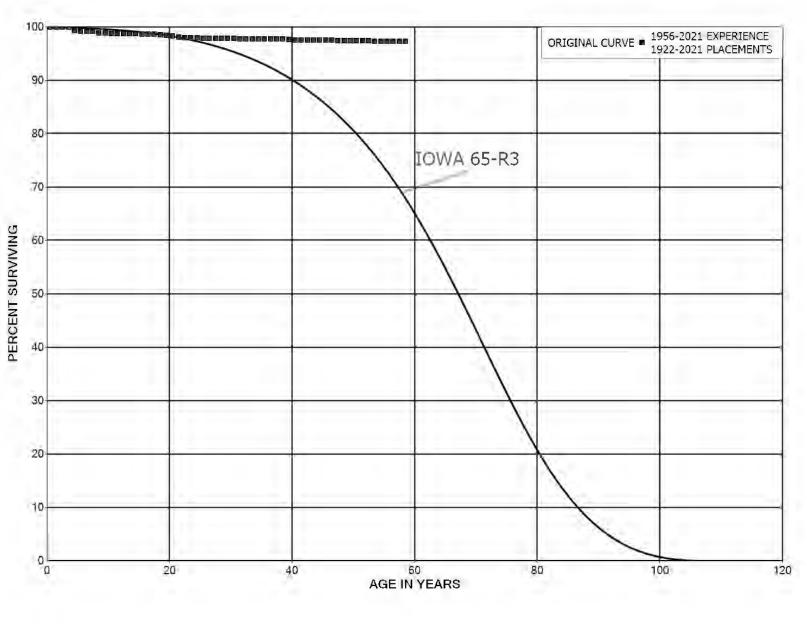
ACCOUNT 368.20 LINE TRANSFORMERS - CUSTOMER

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1924-1990

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	5		0.0000	1.0000	77.04
80.5	4		0.0000	1.0000	77.04
81.5	4		0.0000	1.0000	77.04
82.5	4		0.0000	1.0000	77.04
83.5	1		0.0000	1.0000	77.04
84.5					77.04





DUKE ENERGY KENTUCKY ACCOUNT 369.10 SERVICES - UNDERGROUND ORIGINAL AND SMOOTH SURVIVOR CURVES

> KyPSC Case No. 2024-00354 Attachment JJS-1 Page 186 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 369.10 SERVICES - UNDERGROUND

ORIGINAL LIFE TABLE

PLACEMENT BAND 1922-2021

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 0.5 1.5	2,741,993 2,561,514 2,447,296	619	0.0000 0.0002 0.0000	1.0000 0.9998 1.0000	100.00 100.00 99.98
2.5 3.5	2,473,062 2,462,536	665 17,691	0.0003	0.9997 0.9928	99.98 99.95
4.5	2,437,762 2,440,444	677 431	0.0003	0.9997 0.9998	99.23 99.20
6.5 7.5 8.5	2,421,113 440,170 439,161	1,602 1,295 156	0.0007 0.0029 0.0004	0.9993 0.9971 0.9996	99.19 99.12 98.83
9.5	439,118	82	0.0002	0.9998	98.79
10.5 11.5 12.5	439,091 439,040 438,120	59	0.0001 0.0000 0.0000	0.9999 1.0000 1.0000	98.77 98.76 98.76
13.5 14.5	438,571 438,030	319 98	0.0007	0.9993 0.9998	98.76 98.69
15.5 16.5 17.5	437,313 437,035 436,956	163 120 376	0.0004 0.0003 0.0009	0.9996 0.9997 0.9991	98.67 98.63 98.60
18.5	126,373	229	0.0018	0.9982	98.52
19.5 20.5 21.5	126,280 126,227 125,870	53 357 53	0.0004 0.0028 0.0004	0.9996 0.9972 0.9996	98.34 98.30 98.02
22.5 23.5 24.5	124,552 124,501 124,501	51 85	0.0004 0.0000 0.0007	0.9996 1.0000 0.9993	97.98 97.94 97.94
25.5 26.5	124,415 124,438	0.2	0.0000	1.0000 1.0000	97.87 97.87
27.5 28.5	124,438 124,415	23 85	0.0002 0.0007	0.9998 0.9993	97.87 97.85
29.5 30.5 31.5	124,330 124,324 124,282	6 42	0.0000 0.0003 0.0000	1.0000 0.9997 1.0000	97.79 97.78 97.75
32.5 33.5 34.5	124,568 124,574 122,506	3 9	0.0000 0.0001 0.0000	1.0000 0.9999 1.0000	97.75 97.75 97.74
35.5 36.5 37.5 38.5	122,506 122,506 122,487 122,442	19 45 74	0.0000 0.0002 0.0004 0.0006	1.0000 0.9998 0.9996 0.9994	97.74 97.74 97.73 97.69
		, 1	0.0000	0.///1	21.02

ACCOUNT 369.10 SERVICES - UNDERGROUND

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1922-2021

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	122,368 122,186 122,186 122,186 122,186 122,186	182	0.0015 0.0000 0.0000 0.0000 0.0000	0.9985 1.0000 1.0000 1.0000 1.0000	97.63 97.49 97.49 97.49 97.49 97.49
44.5 45.5 46.5	121,316 120,746 120,264	42 57	0.0003 0.0000 0.0005	0.9997 1.0000 0.9995	97.49 97.45 97.45
47.5 48.5	120,207 119,432		0.0000	1.0000	97.41 97.41
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	118,804 115,334 104,256 87,748 81,294 72,698 61,883 56,880 49,390 39,566	85 0	0.0000 0.0000 0.0010 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 0.9990 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	97.41 97.41 97.41 97.31 97.31 97.31 97.31 97.31 97.31 97.31 97.31
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	35,515 30,520 28,772 26,556 22,165 20,422 15,169 9,481 9,478 7,380	0 1	$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0001\\ 0.0001\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.9999 1.0000	97.31 97.31 97.31 97.31 97.31 97.31 97.31 97.31 97.31 97.30
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	7,218 6,255 3,532 2,821 2,788 2,787 2,674 2,619 2,611 2,571		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	97.30 97.30 97.30 97.30 97.30 97.30 97.30 97.30 97.30 97.30

DUKE ENERGY KENTUCKY

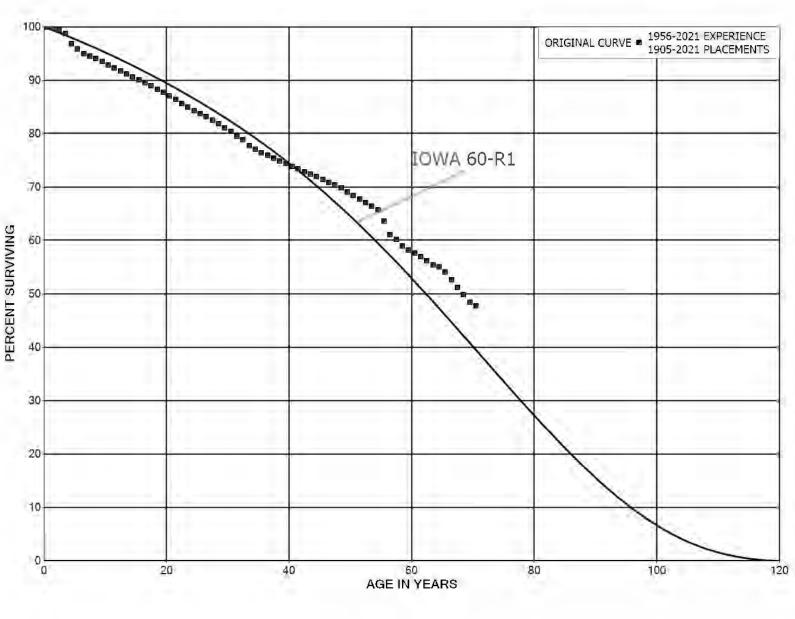
ACCOUNT 369.10 SERVICES - UNDERGROUND

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1922-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	2,491		0.0000	1.0000	97.30
80.5	2,430		0.0000	1.0000	97.30
81.5	2,388		0.0000	1.0000	97.30
82.5	2,388		0.0000	1.0000	97.30
83.5	2,103		0.0000	1.0000	97.30
84.5					97.30





DUKE ENERGY KENTUCKY ACCOUNT 369.20 SERVICES - OVERHEAD ORIGINAL AND SMOOTH SURVIVOR CURVES

> KyPSC Case No. 2024-00354 Attachment JJS-1 Page 190 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 369.20 SERVICES - OVERHEAD

ORIGINAL LIFE TABLE

PLACEMENT BAND 1905-2021

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE SURV BEGIN OF RETMT INTERVAL AGE INTERVAL INTERVAL RATIO RATIO INTERVAL 0.0 22,988,836 14,257 0.0006 0.9994 100.00 0.5 19,433,482 49,506 0.0025 0.9975 99.94 18,709,948 1.5 60,140 0.0032 99.68 0.9968 2.5 19,683,797 133,467 0.0068 0.9932 99.36 19,198,976 3.5 367,892 0.0192 0.9808 98.69 4.5 18,308,980 187,794 0.0103 0.9897 96.80 5.5 17,665,629 147,704 0.0084 0.9916 95.81 79,386 15,902,707 95.00 6.5 0.0050 0.9950 7.5 15,727,493 94.53 81,840 0.0052 0.9948 8.5 14,429,917 88,467 0.0061 0.9939 94.04 9.5 13,705,963 89,295 0.0065 0.9935 93.46 10.5 13,600,389 78,254 0.0058 0.9942 92.85 85,585 92.32 11.5 13,222,693 0.0065 0.9935 75,738 12.5 91.72 12,522,178 0.0060 0.9940 71,344 13.5 91.17 11,938,604 0.0060 0.9940 14.5 11,419,083 68,456 0.0060 0.9940 90.62 0.9939 15.5 10,809,015 66,449 0.0061 90.08 16.5 68,663 89.52 10,471,954 0.0066 0.9934 17.5 10,269,003 71,522 0.0070 0.9930 88.94 64,882 18.5 9,271,178 0.0070 0.9930 88.32 19.5 9,206,312 68,882 0.0075 0.9925 87.70 20.5 9,134,168 72,522 0.0079 0.9921 87.04 69,794 21.5 8,551,689 0.0082 0.9918 86.35 22.5 8,276,291 63,212 0.0076 0.9924 85.65 23.5 7,963,200 63,845 0.0080 0.9920 84.99 7,614,962 53,075 84.31 24.5 0.0070 0.9930 7,161,261 25.5 49,632 0.0069 0.9931 83.72 26.5 6,823,372 54,248 0.0080 83.14 0.9920 27.5 6,509,888 52,949 0.0081 0.9919 82.48 6,167,901 53,018 0.0086 81.81 28.5 0.9914 29.5 5,821,036 55,140 0.0095 0.9905 81.11 55,843 30.5 5,623,838 0.0099 0.9901 80.34 31.5 5,329,106 46,500 79.54 0.0087 0.9913 32.5 5,037,339 69,442 0.9862 78.85 0.0138 4,706,432 77.76 33.5 44,087 0.0094 0.9906 34.5 4,376,367 34,126 0.0078 0.9922 77.03 35.5 4,059,324 27,595 0.0068 0.9932 76.43 36.5 3,782,958 26,812 75.91 0.0071 0.9929 37.5 3,452,492 23,788 0.0069 0.9931 75.38 38.5 3,214,076 20,715 0.9936 74.86 0.0064

ACCOUNT 369.20 SERVICES - OVERHEAD

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1905-2021

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	2,980,170	20,199	0.0068	0.9932	74.37
40.5	2,717,102	19,291	0.0071	0.9929	73.87
41.5	2,497,904	16,721	0.0067	0.9933	73.34
42.5	2,281,783	14,413	0.0063	0.9937	72.85
43.5	2,068,578	13,497	0.0065	0.9935	72.39
44.5	1,888,633	13,101	0.0069	0.9931	71.92
45.5	1,725,340	13,363	0.0077	0.9923	71.42
46.5	1,555,791	11,256	0.0072	0.9928	70.87
47.5	1,388,408	9,597	0.0069	0.9931	70.36
48.5	1,269,863	13,930	0.0110	0.9890	69.87
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	1,141,897 1,021,130 925,960 832,163 758,825 675,410 591,773 512,315 455,178 397,634	11,089 10,152 9,132 8,573 8,230 21,383 23,074 7,461 9,234 5,267	0.0097 0.0099 0.0103 0.0108 0.0317 0.0390 0.0146 0.0203 0.0132	0.9903 0.9901 0.9901 0.9897 0.9892 0.9683 0.9610 0.9854 0.9797 0.9868	69.10 68.43 67.75 67.08 66.39 65.67 63.59 61.11 60.22 59.00
59.5	343,687	3,705	0.0108	0.9892	58.22
60.5	288,873	2,969	0.0103	0.9897	57.59
61.5	237,675	3,286	0.0138	0.9862	57.00
62.5	193,615	2,885	0.0149	0.9851	56.21
63.5	156,059	794	0.0051	0.9949	55.38
64.5	127,531	2,459	0.0193	0.9807	55.09
65.5	106,159	2,722	0.0256	0.9744	54.03
66.5	102,921	2,808	0.0273	0.9727	52.65
67.5	92,260	2,453	0.0266	0.9734	51.21
68.5	81,110	2,313	0.0285	0.9715	49.85
69.5	69,607	1,087	0.0156	0.9844	48.43
70.5	62,303	913	0.0147	0.9853	47.67
71.5	54,598	168	0.0031	0.9969	46.97
72.5	48,780	228	0.0047	0.9953	46.83
73.5	43,873	162	0.0037	0.9963	46.61
74.5	40,418	242	0.0060	0.9940	46.44
75.5	37,918	1,005	0.0265	0.9735	46.16
76.5	35,862	149	0.0042	0.9958	44.94
77.5	34,743	311	0.0089	0.9911	44.75
78.5	33,429	977	0.0292	0.9708	44.35

EXPERIENCE BAND 1956-2021

ACCOUNT 369.20 SERVICES - OVERHEAD

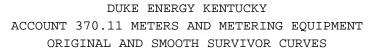
ORIGINAL LIFE TABLE, CONT.

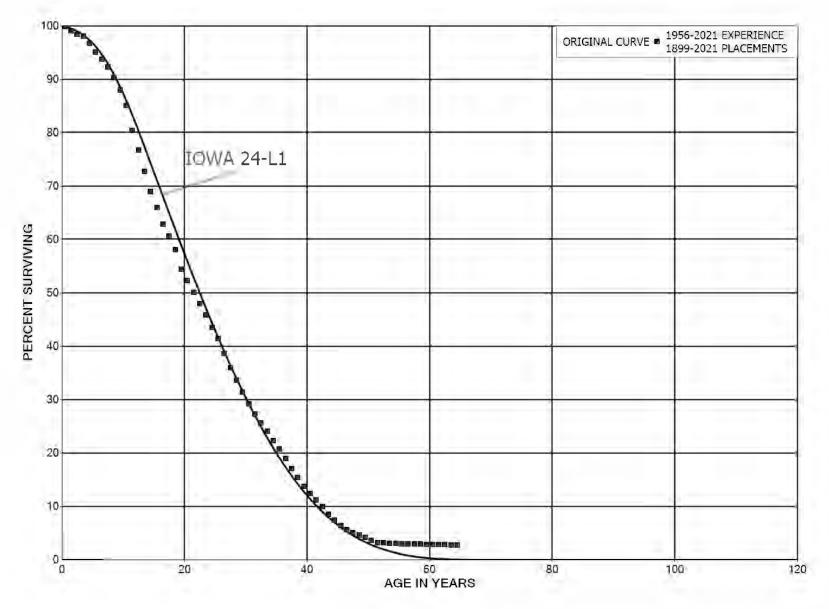
EXPERIENCE BAND 1956-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	31,725	977	0.0308	0.9692	43.05
80.5	29,330	334	0.0114	0.9886	41.73
81.5	27,777	368	0.0132	0.9868	41.25
82.5	26,245	359	0.0137	0.9863	40.71
83.5	25,373	207	0.0081	0.9919	40.15
84.5	25,166		0.0000	1.0000	39.82
85.5	25,166	138	0.0055	0.9945	39.82
86.5	25,029	44	0.0018	0.9982	39.60
87.5	24,985	56	0.0023	0.9977	39.54
88.5	24,928	5,211	0.2090	0.7910	39.45
89.5	19,718	895	0.0454	0.9546	31.20
90.5	18,823	1,282	0.0681	0.9319	29.79
91.5	17,541	1,095	0.0624	0.9376	27.76
92.5	16,446	757	0.0460	0.9540	26.02
93.5	15,689	982	0.0626	0.9374	24.83
94.5	14,707	726	0.0493	0.9507	23.27
95.5	13,982	715	0.0511	0.9489	22.12
96.5	13,902	715	0.0011	0.9109	20.99
20.5					20.77









KyPSC Case No. 2024-00354 Attachment JJS-1 Page 194 of 382

ACCOUNT 370.11 METERS AND METERING EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1899-2021

EXPERIENCE BAND 1956-2021

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	23,484,177 23,307,289 23,101,676 22,617,251 22,535,204 22,381,583 21,905,900 21,043,447 20,194,531 22,085,881	47,056 166,768 148,502 93,805 307,701 375,863 323,625 323,673 418,206	0.0020 0.0072 0.0064 0.0041 0.0137 0.0168 0.0148 0.0154 0.0207 0.0264	0.9980 0.9928 0.9936 0.9959 0.9863 0.9832 0.9852 0.9846 0.9793 0.9736	100.00 99.80 99.09 98.45 98.04 96.70 95.08 93.67 92.23 90.32
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	21,458,882 18,133,282 17,027,754 16,218,795 15,004,166 13,714,568 12,856,782 12,001,448 11,346,136 10,519,896	583,765 689,370 1,014,244 757,522 860,370 775,054 604,525 599,424 422,669 485,091 663,404	0.0321 0.0559 0.0445 0.0530 0.0517 0.0441 0.0466 0.0352 0.0428 0.0631	0.9679 0.9441 0.9555 0.9470 0.9483 0.9559 0.9534 0.9648 0.9572 0.9369	87.93 85.11 80.35 76.77 72.70 68.95 65.91 62.83 60.62 58.03
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	9,833,280 8,884,980 7,923,324 7,375,386 6,810,280 6,250,387 5,681,259 5,071,029 4,506,903 4,001,965	370,148 378,118 338,548 333,622 332,998 306,157 379,167 353,564 291,147 271,183	0.0376 0.0426 0.0427 0.0452 0.0489 0.0490 0.0667 0.0697 0.0646 0.0678	0.9624 0.9574 0.9573 0.9548 0.9511 0.9510 0.9333 0.9303 0.9354 0.9322	54.37 52.32 50.10 47.96 45.79 43.55 41.42 38.65 35.96 33.63
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	3,568,060 3,204,116 2,870,961 2,635,020 2,427,981 2,193,381 1,969,041 1,746,705 1,528,165 1,316,473	243,384 213,509 175,641 158,208 178,117 153,226 166,021 174,065 156,713 139,413	0.0682 0.0666 0.0612 0.0600 0.0734 0.0699 0.0843 0.0997 0.1025 0.1059	0.9318 0.9334 0.9388 0.9400 0.9266 0.9301 0.9157 0.9003 0.8975 0.8941	31.35 29.22 27.27 25.60 24.06 22.30 20.74 18.99 17.10 15.35

ACCOUNT 370.11 METERS AND METERING EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1899-2021

EXPERIENCE BAND 1956-2021

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 43.5 44.5 45.5 46.5 47.5 48.5	1,144,425 998,161 865,719 747,272 625,479 528,923 454,223 395,117 335,618 291,106	114,508 94,098 97,534 108,675 82,921 67,334 53,336 38,076 32,295 30,549	0.1001 0.0943 0.1127 0.1454 0.1326 0.1273 0.1174 0.0964 0.0962 0.1049	0.8999 0.9057 0.8873 0.8546 0.8674 0.8727 0.8826 0.9036 0.9038 0.8951	13.7212.3511.189.928.487.366.425.675.124.63
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5 59.5	245,688 205,522 173,397 158,231 142,016 132,657 121,783 118,844 110,753 105,173 99,048	32,082 23,387 3,841 2,960 1,670 1,152 839 1,725 872 1,129 734	0.1306 0.1138 0.0221 0.0187 0.0118 0.0087 0.0069 0.0145 0.0079 0.0107	0.8694 0.8862 0.9779 0.9813 0.9882 0.9913 0.9931 0.9855 0.9921 0.9893 0.9893	4.14 3.60 3.19 3.12 3.06 3.03 3.00 2.98 2.94 2.91 2.88
60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	90,413 81,726 75,130 69,678 59,117 53,477 49,222 45,716 39,131	1,134 1,247 1,157 614 193 295 274 124 315	0.0125 0.0153 0.0154 0.0088 0.0033 0.0055 0.0056 0.0027 0.0081	0.9875 0.9847 0.9846 0.9912 0.9967 0.9945 0.9944 0.9973 0.9919	2.86 2.82 2.78 2.74 2.71 2.71 2.69 2.68 2.67
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	33,775 31,443 26,848 24,220 21,191 16,892 16,037 15,763 15,324 15,119	315 1,280 582 17 9 35	0.0093 0.0407 0.0217 0.0007 0.0004 0.0020 0.0000 0.0000 0.0000 0.0000 0.0000	0.9907 0.9593 0.9783 0.9993 0.9996 0.9980 1.0000 1.0000 1.0000 1.0000	2.65 2.62 2.52 2.46 2.46 2.46 2.45 2.45 2.45 2.45 2.45

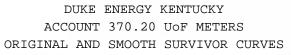
DUKE ENERGY KENTUCKY

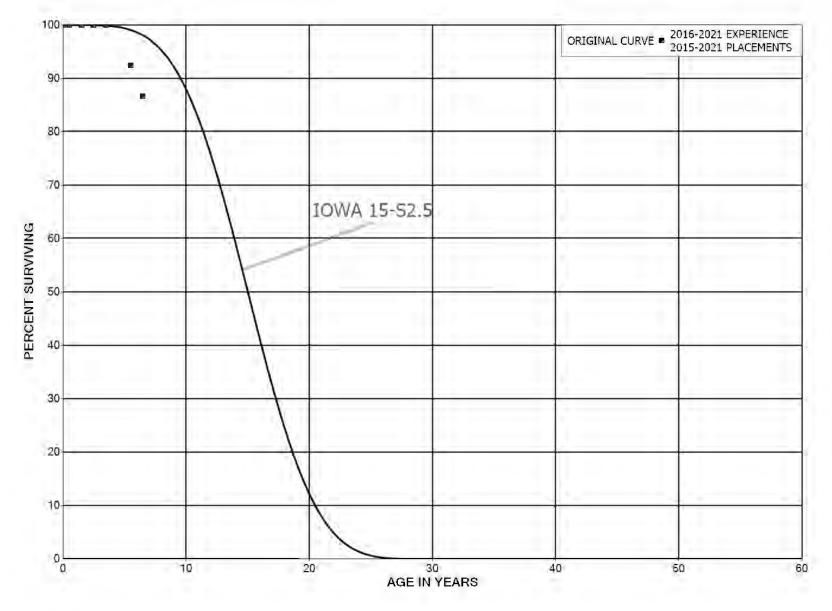
ACCOUNT 370.11 METERS AND METERING EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1899-2021

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
79.5	13,846	30	0.0022	0.9978	2.45
80.5	11,699	50	0.0000	1.0000	2.45
81.5	10,940		0.0000	1.0000	2.45
82.5	9,753	33	0.0034	0.9966	2.45
83.5	9,753	22	0.00034	1.0000	2.45
84.5	8,246		0.0000	1.0000	2.44
85.5	7,347		0.0000	1.0000	2.44
86.5	7,106		0.0000	1.0000	2.44
87.5	6,756		0.0000	1.0000	2.44
88.5	6,730		0.0000	1.0000	2.44
89.5	6,730		0.0000	1.0000	2.44
90.5	5,893		0.0000	1.0000	2.44
91.5	5,191		0.0000	1.0000	2.44
92.5	3,711		0.0000	1.0000	2.44
93.5	2,952		0.0000	1.0000	2.44
94.5	2,036		0.0000	1.0000	2.44
95.5	1,642		0.0000	1.0000	2.44
96.5	1,046		0.0000	1.0000	2.44
97.5	708		0.0000	1.0000	2.44
98.5	304		0.0000	1.0000	2.44
99.5	158		0.0000	1.0000	2.44
100.5	125		0.0000	1.0000	2.44
101.5	100		0.0000	2.0000	2.44
- · · · ·					2.11





KyPSC Case No. 2024-00354 Attachment JJS-1 Page 198 of 382

GANNETT FLEMING

VII-145

Duke Energy Kentucky December 31, 2023

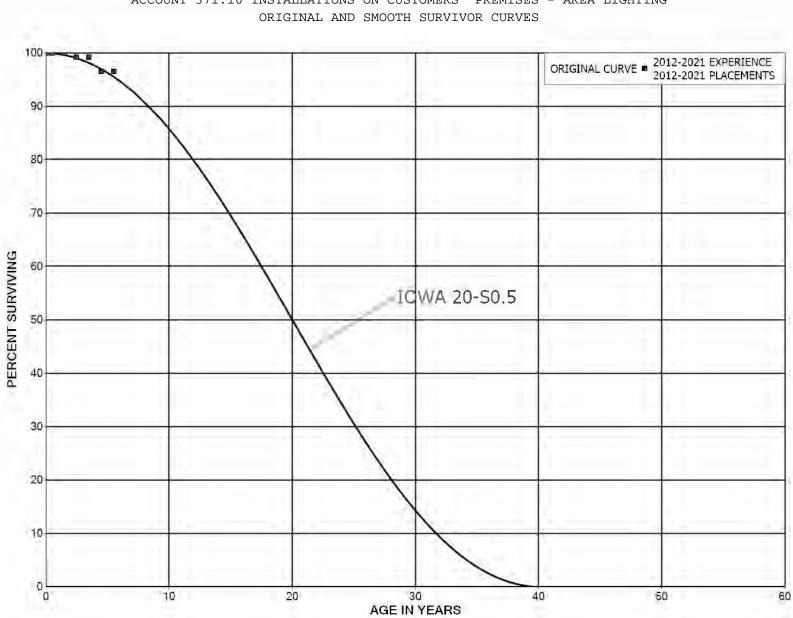
DUKE ENERGY KENTUCKY

ACCOUNT 370.20 UOF METERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 2015-2021

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5	25,448,878 25,131,585 25,058,490 511,283 510,419 510,419 208,337	38,889 12,963	0.0000 0.0000 0.0000 0.0000 0.0000 0.0762 0.0622	1.0000 1.0000 1.0000 1.0000 1.0000 0.9238 0.9378	100.00 100.00 100.00 100.00 100.00 92.38 86.63



DUKE ENERGY KENTUCKY ACCOUNT 371.10 INSTALLATIONS ON CUSTOMERS' PREMISES - AREA LIGHTING

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 200 of 382

VII-147

Duke Energy Kentucky December 31, 2023

GANNETT FLEMING

EXPERIENCE BAND 2012-2021

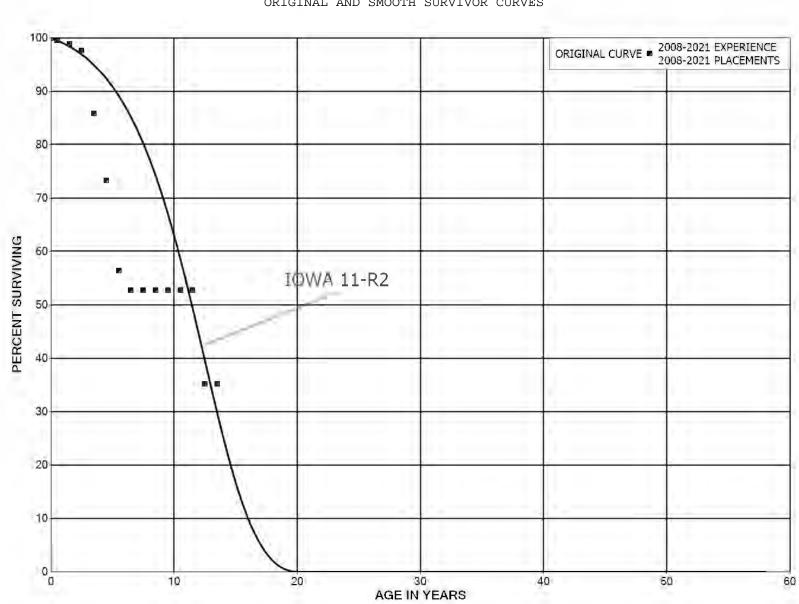
DUKE ENERGY KENTUCKY

ACCOUNT 371.10 INSTALLATIONS ON CUSTOMERS' PREMISES - AREA LIGHTING

ORIGINAL LIFE TABLE

PLACEMENT BAND 2012-2021

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 0.5 1.5 2.5 3.5 4.5 5.5	181,546 167,757 151,778 98,501 71,758 0	1,222 1,943	0.0000 0.0000 0.0080 0.0000 0.0271 0.0000	1.0000 1.0000 0.9920 1.0000 0.9729 1.0000	100.00 100.00 100.00 99.20 99.20 96.51 96.51



DUKE ENERGY KENTUCKY ACCOUNT 371.20 COMPANY-OWNED OUTDOOR LIGHTING ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

VII-149

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 202 of 382

EXPERIENCE BAND 2008-2021

DUKE ENERGY KENTUCKY

ACCOUNT 371.20 COMPANY-OWNED OUTDOOR LIGHTING

ORIGINAL LIFE TABLE

PLACEMENT BAND 2008-2021

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5 9.5 10.5 11.5	962,912 758,069 533,651 381,670 320,625 310,295 102,750 813 813 813 813 813 813 813	5,104 4,549 7,076 45,792 47,040 71,665 6,613	0.1200 0.1467 0.2310 0.0644 0.0000 0.0000 0.0000 0.0000 0.0000 0.3333	0.9947 0.9940 0.9867 0.8800 0.8533 0.7690 0.9356 1.0000 1.0000 1.0000 1.0000 1.0000	$100.00 \\ 99.47 \\ 98.87 \\ 97.56 \\ 85.86 \\ 73.26 \\ 56.34 \\ 52.71 \\ 52.$
12.5 13.5	542		0.0000	1.0000	35.14 35.14



GANNETT FLEMING

VII-151

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 204 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 372.00 LEASED PROPERTY ON CUSTOMERS' PREMISES

ORIGINAL LIFE TABLE

PLACEMENT	BAND 1909-1909		EAPEN	LENCE DAN	D 1994-2021
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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5					
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5					
19.5 20.5 21.5 22.5 23.5 24.5					
25.5 26.5 27.5 28.5	9,647 9,647 9,647 9,647 9,647		0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5	9,647 9,647 9,647 9,647 9,647 9,647 9,647 9,647 9,647		$\begin{array}{c} 0.0000\\ 0.000\\ 0$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00

9,647

38.5

PLACEMENT BAND 1969-1969

0.0000 1.0000

100.00

DUKE ENERGY KENTUCKY

ACCOUNT 372.00 LEASED PROPERTY ON CUSTOMERS' PREMISES

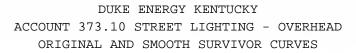
ORIGINAL LIFE TABLE, CONT.

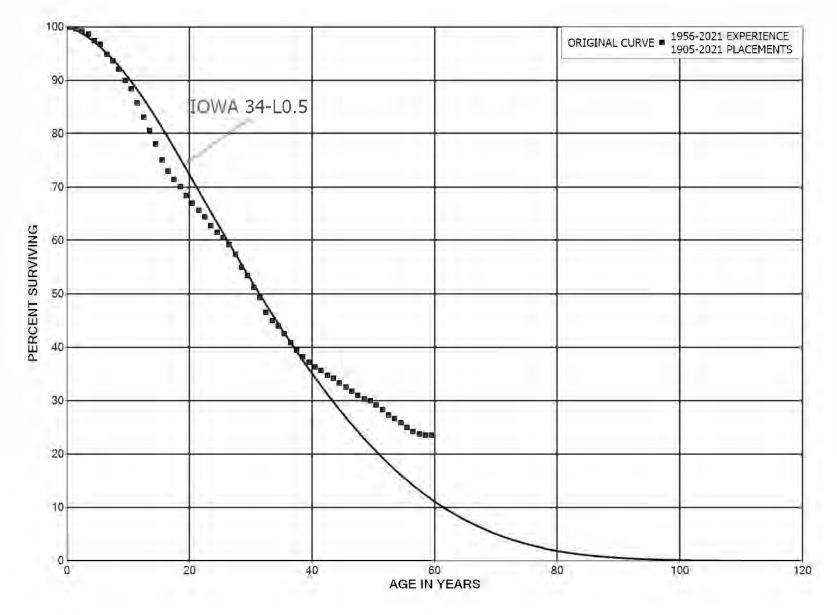
PLACEMENT BAND 1969-1969

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 45.5 46.5 47.5 48.5 49.5 50.5 51.5	9,647 9,647 9,647 9,647 9,647 9,647 9,647 9,647 9,647 9,647 9,647 9,647 9,647 9,647		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00
52.5					100.00









KyPSC Case No. 2024-00354 Attachment JJS-1 Page 207 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 373.10 STREET LIGHTING - OVERHEAD

ORIGINAL LIFE TABLE

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	5,496,142	3,439	0.0006	0.9994	100.00
0.5	5,462,009	19,678	0.0036	0.9964	99.94
1.5	5,415,892	20,946	0.0039	0.9961	99.58
2.5	5,076,163	30,965	0.0061	0.9939	99.19
3.5	5,045,219	58,580	0.0116	0.9884	98.59
4.5	4,559,930	32,808	0.0072	0.9928	97.44
5.5	4,525,283	90,515	0.0200	0.9800	96.74
6.5	4,154,543	50,973	0.0123	0.9877	94.81
7.5	4,115,548	68,926	0.0167	0.9833	93.64
8.5	4,060,934	95,920	0.0236	0.9764	92.07
9.5	3,939,750	67,778	0.0172	0.9828	89.90
10.5	3,877,574	113,239	0.0292	0.9708	88.35
11.5	3,759,403	119,850	0.0319	0.9681	85.77
12.5	3,608,597	105,943	0.0294	0.9706	83.04
13.5	3,502,672	108,714	0.0310	0.9690	80.60
14.5	3,348,244	130,577	0.0390	0.9610	78.10
15.5	3,190,820	88,546	0.0278	0.9722	75.05
16.5	3,054,177	66,939	0.0219	0.9781	72.97
17.5	2,873,507	53,307	0.0186	0.9814	71.37
18.5	2,820,200	68,103	0.0241	0.9759	70.05
19.5	2,748,079	54,892	0.0200	0.9800	68.36
20.5	2,665,144	54,886	0.0206	0.9794	66.99
21.5	2,510,917	45,364	0.0181	0.9819	65.61
22.5	2,320,808	59,794	0.0258	0.9742	64.43
23.5	2,154,506	41,465	0.0192	0.9808	62.77
24.5	2,032,248	34,857	0.0172	0.9828	61.56
25.5	1,951,855	44,353	0.0227	0.9773	60.50
26.5	1,845,120	52,604	0.0285	0.9715	59.13
27.5	1,725,230	74,208	0.0430	0.9570	57.44
28.5	1,578,559	45,108	0.0286	0.9714	54.97
29.5	1,496,105	62,901	0.0420	0.9580	53.40
30.5	1,429,557	51,550	0.0361	0.9639	51.15
31.5	1,339,900	75,915	0.0567	0.9433	49.31
32.5	1,200,836	38,936	0.0324	0.9676	46.52
33.5	1,139,565	25,950	0.0228	0.9772	45.01
34.5	1,097,667	36,662	0.0334	0.9666	43.98
35.5	1,029,460	41,260	0.0401	0.9599	42.51
36.5	944,859	31,947	0.0338	0.9662	40.81
37.5	900,436	29,632	0.0329	0.9671	39.43
38.5	858,366	21,728	0.0253	0.9747	38.13

DUKE ENERGY KENTUCKY

ACCOUNT 373.10 STREET LIGHTING - OVERHEAD

ORIGINAL LIFE TABLE, CONT.

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 45.5 46.5 47.5 48.5	824,905 784,833 728,979 681,052 650,002 621,065 598,300 561,810 532,142 478,070	19,627 15,104 17,202 11,894 15,845 14,252 15,655 12,539 11,072 6,006	0.0238 0.0192 0.0236 0.0175 0.0244 0.0229 0.0262 0.0223 0.0208 0.0126	0.9762 0.9808 0.9764 0.9825 0.9756 0.9771 0.9738 0.9777 0.9792 0.9874	37.17 36.28 35.58 34.75 34.14 33.31 32.54 31.69 30.98 30.34
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	435,206 376,718 314,661 253,654 235,002 202,488 156,142 104,842 85,943 64,750	10,690 12,173 11,226 5,919 7,103 6,522 4,878 1,976 807 19	0.0246 0.0323 0.0357 0.0233 0.0302 0.0322 0.0312 0.0188 0.0094 0.0003	0.9754 0.9677 0.9643 0.9767 0.9698 0.9678 0.9688 0.9812 0.9906 0.9997	29.96 29.22 28.28 27.27 26.63 25.83 25.00 24.21 23.76 23.54
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	44,398 25,112 17,271 12,756 11,142 10,603 8,620 7,848 7,426 6,984	282 138 28 435 648 348 249 178 248	0.0064 0.0055 0.0016 0.0341 0.0000 0.0611 0.0404 0.0317 0.0239 0.0355	0.9936 0.9945 0.9984 0.9659 1.0000 0.9389 0.9596 0.9683 0.9761 0.9645	23.53 23.38 23.25 23.21 22.42 21.05 20.20 19.56 19.09
69.5 70.5 71.5 72.5 73.5 74.5 75.5 76.5 77.5 78.5	6,425 6,269 6,211 5,660 5,566 4,277 4,137 3,517 3,494 3,484	11 2 346 38 544 2	0.0017 0.0003 0.0557 0.0000 0.0000 0.0089 0.1314 0.0005 0.0000 0.0000	0.9983 0.9997 0.9443 1.0000 1.0000 0.9911 0.8686 0.9995 1.0000 1.0000	18.41 18.38 17.35 17.35 17.35 17.20 14.94 14.93 14.93

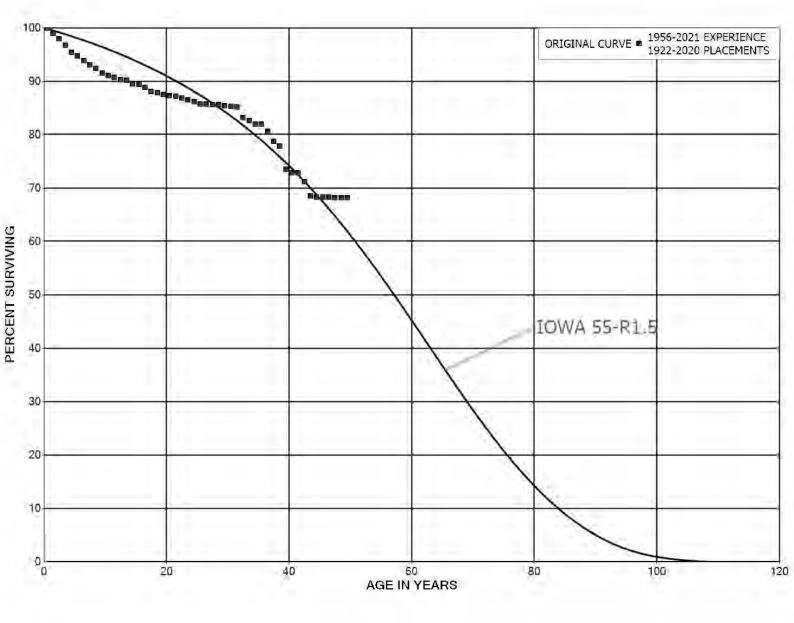
DUKE ENERGY KENTUCKY

ACCOUNT 373.10 STREET LIGHTING - OVERHEAD

ORIGINAL LIFE TABLE, CONT.

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 87.5 88.5	3,459 3,080 2,965 2,939 2,768 2,744 2,744 2,744 2,744 2,744	24	0.0000 0.0000 0.0000 0.0000 0.0088 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 0.9912 1.0000 1.0000 1.0000 1.0000 1.0000	14.9314.9314.9314.9314.9314.8014.8014.8014.8014.8014.80
89.5 90.5 91.5 92.5 93.5 94.5 95.5 96.5 97.5 98.5	2,744 2,588 2,032 1,967 1,967 1,964 1,964 79 79 79	156 556 65	0.0567 0.2150 0.0319 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0.9433 0.7850 0.9681 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	14.80 13.96 10.96 10.61 10.61 10.61 10.61 10.61 10.61 10.61
99.5 100.5 101.5 102.5 103.5 104.5 105.5 106.5 107.5 108.5	79 79 79 79 79 79 79 79 79 79		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	10.61 10.61 10.61 10.61 10.61 10.61 10.61 10.61 10.61
109.5 110.5 111.5	79 79		0.0000 0.0000	1.0000 1.0000	10.61 10.61 10.61





DUKE ENERGY KENTUCKY ACCOUNT 373.20 STREET LIGHTING - BOULEVARD ORIGINAL AND SMOOTH SURVIVOR CURVES

> KyPSC Case No. 2024-00354 Attachment JJS-1 Page 211 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 373.20 STREET LIGHTING - BOULEVARD

ORIGINAL LIFE TABLE

PLACEMENT BAND 1922-2020

AGE AT EXPOSURES AT RETIREMENTS PCT SURV BEGIN OF BEGINNING OF DURING AGE RETMT SURV BEGIN OF AGE INTERVAL INTERVAL INTERVAL INTERVAL RATIO RATIO 0.0 3,544,374 0.0000 1.0000 100.00 0.5 3,529,753 37,981 0.0108 0.9892 100.00 1.5 3,509,488 32,481 0.0093 0.9907 98.92 45,238 2.5 3,475,412 0.0130 0.9870 98.01 3.5 3,439,330 48,647 0.0141 0.9859 96.73 4.5 95.36 3,637,131 24,760 0.0068 0.9932 5.5 3,613,011 32,820 0.0091 0.9909 94.72 3,580,191 29,254 6.5 0.0082 0.9918 93.85 27,082 0.9924 7.5 93.09 3,550,937 0.0076 8.5 3,523,935 33,170 0.0094 0.9906 92.38 9.5 3,465,720 18,029 0.0052 0.9948 91.51 10.5 3,448,110 12,193 0.0035 0.9965 91.03 90.71 11.5 3,402,539 15,473 0.0045 0.9955 12.5 90.30 3,332,081 2,703 0.0008 0.9992 13.5 3,329,479 90.22 24,624 0.0074 0.9926 14.5 3,266,454 6,565 0.0020 0.9980 89.56 15.5 3,059,432 19,123 0.0063 0.9937 89.38 16.5 2,677,039 24,337 0.0091 0.9909 88.82 17.5 2,266,229 5,151 0.0023 0.9977 88.01 0.0034 18.5 2,261,226 7,580 0.9966 87.81 19.5 2,221,640 5,292 0.0024 0.9976 87.52 20.5 2,203,147 4,667 0.0021 0.9979 87.31 7,078 2,063,180 21.5 0.0034 0.9966 87.12 22.5 1,428,593 4,466 0.0031 0.9969 86.82 23.5 1,280,043 5,340 0.0042 0.9958 86.55 1,139,464 5,783 0.0051 86.19 24.5 0.9949 25.5 1,034,277 365 0.0004 0.9996 85.75 26.5 927,462 632 0.0007 0.9993 85.72 27.5 840,354 381 0.0005 0.9995 85.67 768,140 2,385 0.0031 28.5 0.9969 85.63 29.5 659,357 592 0.0009 0.9991 85.36 30.5 611,642 825 0.0013 0.9987 85.28 31.5 478,850 11,149 0.0233 0.9767 85.17 2,639 32.5 383,308 0.0069 0.9931 83.19 33.5 310,222 2,394 0.0077 0.9923 82.61 34.5 249,662 166 0.0007 0.9993 81.98 35.5 228,434 3,653 0.0160 0.9840 81.92 36.5 186,687 4,418 80.61 0.0237 0.9763 37.5 169,392 1,816 0.0107 0.9893 78.70 165,168 38.5 9,291 0.9437 77.86 0.0563

DUKE ENERGY KENTUCKY

ACCOUNT 373.20 STREET LIGHTING - BOULEVARD

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1922-2020

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 45.5 46.5	145,092 131,047 114,321 98,432 79,973 72,094 64,767 60,249	1,257 2,668 3,704 159 124	0.0087 0.0000 0.0233 0.0376 0.0020 0.0000 0.0000 0.0001	0.9913 1.0000 0.9767 0.9624 0.9980 1.0000 1.0000 0.9979	73.48 72.84 72.84 71.14 68.47 68.33 68.33 68.33
47.5 48.5	41,524 27,899		0.0000 0.0000	1.0000 1.0000	68.19 68.19
49.5 50.5 51.5 52.5 53.5	26,317 25,947 25,546 25,546 25,546	370	0.0141 0.0000 0.0000 0.0000 0.0000	0.9859 1.0000 1.0000 1.0000 1.0000	68.19 67.23 67.23 67.23 67.23
54.5 55.5 56.5 57.5 58.5	25,546 25,545 20,627 20,627 20,373	2	0.0001 0.0000 0.0000 0.0000 0.0000	0.9999 1.0000 1.0000 1.0000 1.0000	67.23 67.23 67.23 67.23 67.23
59.5 60.5 61.5 62.5 63.5	20,100 20,071 20,050 19,756 19,247		0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000	67.23 67.23 67.23 67.23 67.23
64.5 65.5 66.5 67.5 68.5	19,247 18,667 18,305 18,134 18,134	14 71	0.0007 0.0000 0.0000 0.0000 0.0039	0.9993 1.0000 1.0000 1.0000 0.9961	67.23 67.18 67.18 67.18 67.18
69.5 70.5 71.5	17,949 16,587 16,416	104 242	0.0058 0.0000 0.0147	0.9942 1.0000 0.9853	66.91 66.53 66.53
72.5 73.5 74.5 75.5 76.5 77.5	16,174 16,174 16,174 16,174 16,131 16,131	43	0.0000 0.0000 0.0027 0.0000 0.0000 0.0000	1.0000 1.0000 0.9973 1.0000 1.0000	65.55 65.55 65.55 65.55 65.37 65.37
78.5	15,848	106	0.0067	0.9933	65.37

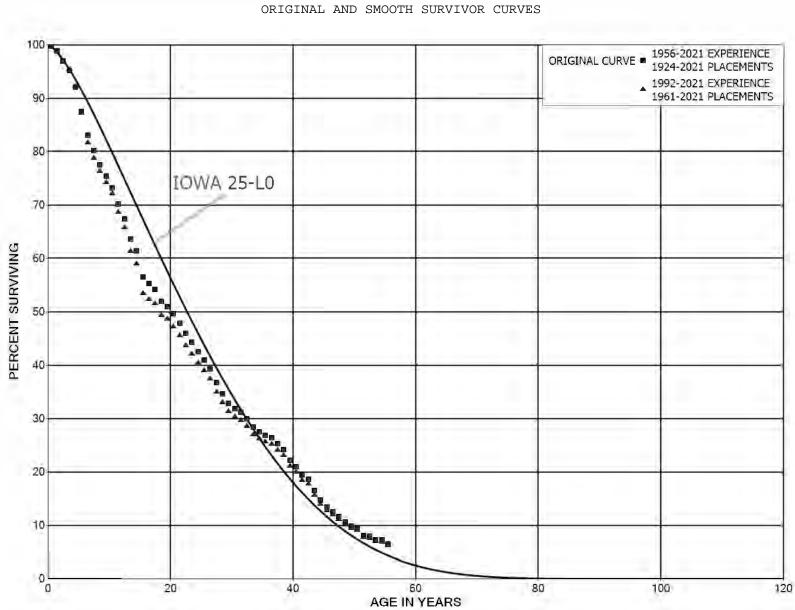
DUKE ENERGY KENTUCKY

ACCOUNT 373.20 STREET LIGHTING - BOULEVARD

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1922-2020

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5 80.5 81.5 82.5 83.5 84.5 85.5 86.5 87.5 88.5	15,715 14,266 14,266 14,202 13,911 13,764 13,710 13,710 13,710 13,356		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	64.93 64.93 64.93 64.93 64.93 64.93 64.93 64.93 64.93 64.93 64.93
89.5 90.5 91.5 92.5 93.5 94.5 95.5 96.5 97.5 98.5	12,753 10,977 10,923 7,199 5,747 3,751 3,751 3,751 3,751 3,751 269		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ \end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	64.93 64.93 64.93 64.93 64.93 64.93 64.93 64.93 64.93 64.93 64.93 64.93 64.93
99.5					64.93



DUKE ENERGY KENTUCKY ACCOUNT 373.30 STREET LIGHTING - CUSTOMER POLES ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

VII-162

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 215 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 373.30 STREET LIGHTING - CUSTOMER POLES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1924-2021

-				-	
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	6,358,895	14,151	0.0022	0.9978	100.00
0.5	5,941,139	56,658	0.0095	0.9905	99.78
1.5	5,415,872	105,554	0.0195	0.9805	98.83
2.5	4,863,544	89,012	0.0183	0.9817	96.90
3.5	4,541,756	145,421	0.0320	0.9680	95.13
4.5	4,223,089	207,416	0.0491	0.9509	92.08
5.5	3,101,443	157,673	0.0508	0.9492	87.56
6.5	2,852,848	99,087	0.0347	0.9653	83.11
7.5	2,753,744	91,694	0.0333	0.9667	80.22
8.5	2,622,508	72,545	0.0277	0.9723	77.55
9.5	2,511,459	73,159	0.0291	0.9709	75.40
10.5	2,430,666	101,789	0.0419	0.9581	73.21
11.5	2,324,698	89,860	0.0387	0.9613	70.14
12.5	2,214,392	124,600	0.0563	0.9437	67.43
13.5	2,054,779	73,759	0.0359	0.9641	63.64
14.5	1,949,777	152,702	0.0783	0.9217	61.35
15.5	1,759,979	40,323	0.0229	0.9771	56.55
16.5	1,698,781	32,764	0.0193	0.9807	55.25
17.5	1,462,094	60,030	0.0411	0.9589	54.19
18.5	1,401,921	25,673	0.0183	0.9817	51.96
19.5	1,375,895	39,080	0.0284	0.9716	51.01
20.5	1,314,930	44,383	0.0338	0.9662	49.56
21.5	1,264,602	51,853	0.0410	0.9590	47.89
22.5	1,190,336	41,877	0.0352	0.9648	45.92
23.5	1,116,803	45,553	0.0408	0.9592	44.31
24.5	1,042,167	37,065	0.0356	0.9644	42.50
25.5	970,716	40,752	0.0420	0.9580	40.99
26.5	894,750	56,788	0.0635	0.9365	39.27
27.5	810,937	47,157	0.0582	0.9418	36.78
28.5	735,450	38,661	0.0526	0.9474	34.64
29.5	669,046	19,679	0.0294	0.9706	32.82
30.5	621,173	14,139	0.0228	0.9772	31.85
31.5	584,072	23,193	0.0397	0.9603	31.13
32.5	547,852	28,357	0.0518	0.9482	29.89
33.5	507,473	15,428	0.0304	0.9696	28.34
34.5	488,877	10,612	0.0217	0.9783	27.48
35.5	471,526	8,090	0.0172	0.9828	26.89
36.5	456,553	19,081	0.0418	0.9582	26.42
37.5	428,139	18,545	0.0433	0.9567	25.32
38.5	398,287	33,691	0.0846	0.9154	24.22

DUKE ENERGY KENTUCKY

ACCOUNT 373.30 STREET LIGHTING - CUSTOMER POLES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1924-2021

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
INTERVAL 39.5 40.5 41.5 42.5 43.5 44.5 45.5 46.5 47.5 48.5 49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5 59.5	AGE INTERVAL 348,588 307,992 261,321 224,517 181,589 152,582 128,780 111,752 94,536 78,826 66,072 54,093 40,813 32,810 23,640 19,858 12,080 7,415 3,666 884 128	INTERVAL 18,362 23,930 10,794 25,628 19,123 14,182 8,142 8,308 7,978 5,333 2,710 7,771 964 2,467 303 2,000	RATIO 0.0527 0.0777 0.0413 0.1141 0.1053 0.0929 0.0632 0.0743 0.0844 0.0677 0.0410 0.1437 0.0236 0.0752 0.0128 0.1007 0.0000 0.0000 0.0000 0.0000	0.9473 0.9223 0.9587 0.8859 0.8947 0.9071 0.9368 0.9257	INTERVAL 22.17 21.01 19.37 18.57 16.45 14.72 13.35 12.51 11.58 10.60 9.88 9.48 8.12 7.93 7.33 7.24 6.51 6.51 6.51 6.51 6.51
60.5 61.5 62.5 63.5	128 128 128 128	128	0.0000 0.0000 1.0000	1.0000 1.0000	6.51 6.51 6.51

ACCOUNT 373.30 STREET LIGHTING - CUSTOMER POLES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1961-2021

EXPERIENCE BAND 1992-2021

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV
BEGIN OF INTERVAL	BEGINNING OF AGE INTERVAL	DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	BEGIN OF INTERVAL
TNIEKVAL	AGE INIERVAL	INIERVAL	RAIIO	RAIIO	TNIERVAL
0.0	4,807,167	7,888	0.0016	0.9984	100.00
0.5	4,480,218	43,538	0.0097	0.9903	99.84
1.5	4,044,435	77,783	0.0192	0.9808	98.87
2.5	3,562,558	57,798	0.0162	0.9838	96.96
3.5	3,308,248	112,161	0.0339	0.9661	95.39
4.5	3,058,401	164,452	0.0538	0.9462	92.16
5.5	2,023,278	128,551	0.0635	0.9365	87.20
6.5	1,835,898	65,066	0.0354	0.9646	81.66
7.5	1,800,305	57,414	0.0319	0.9681	78.77
8.5	1,724,174	45,963	0.0267	0.9733	76.26
9.5	1,695,899	48,737	0.0287	0.9713	74.22
10.5	1,693,207	80,897	0.0478	0.9522	72.09
11.5	1,703,355	72,842	0.0428	0.9572	68.65
12.5	1,684,107	112,214	0.0666	0.9334	65.71
13.5	1,589,499	60,589	0.0381	0.9619	61.33
14.5	1,527,103	143,800	0.0942	0.9058	58.99
15.5	1,398,191	29,855	0.0214	0.9786	53.44
16.5	1,385,500	20,431	0.0147	0.9853	52.30
17.5	1,208,890	51,593	0.0427	0.9573	51.53
18.5	1,190,654	18,465	0.0155	0.9845	49.33
19.5	1,191,640	34,351	0.0288	0.9712	48.56
20.5	1,158,870	39,859	0.0344	0.9656	47.16
21.5	1,134,455	47,112	0.0415	0.9585	45.54
22.5	1,087,158	38,612	0.0355	0.9645	43.65
23.5	1,045,223	41,971	0.0402	0.9598	42.10
24.5	983,188	34,596	0.0352	0.9648	40.41
25.5	929,547	38,635	0.0416	0.9584	38.99
26.5	866,527	55,631	0.0642	0.9358	37.37
27.5	796,867	46,958	0.0589	0.9411	34.97
28.5	729,834	37,110	0.0508	0.9492	32.91
29.5	666,781	19,679	0.0295	0.9705	31.23
30.5	620,957	14,139	0.0228	0.9772	30.31
31.5	583,728	22,976	0.0394	0.9606	29.62
32.5	547,724	28,357	0.0518	0.9482	28.46
33.5	507,345	15,428	0.0304	0.9696	26.98
34.5	488,749	10,612	0.0217	0.9783	26.16
35.5	471,397	8,090	0.0172	0.9828	25.59
36.5	456,425	19,081	0.0418	0.9582	25.15
37.5	428,011	18,545	0.0433	0.9567	24.10
38.5	398,159	33,691	0.0846	0.9154	23.06

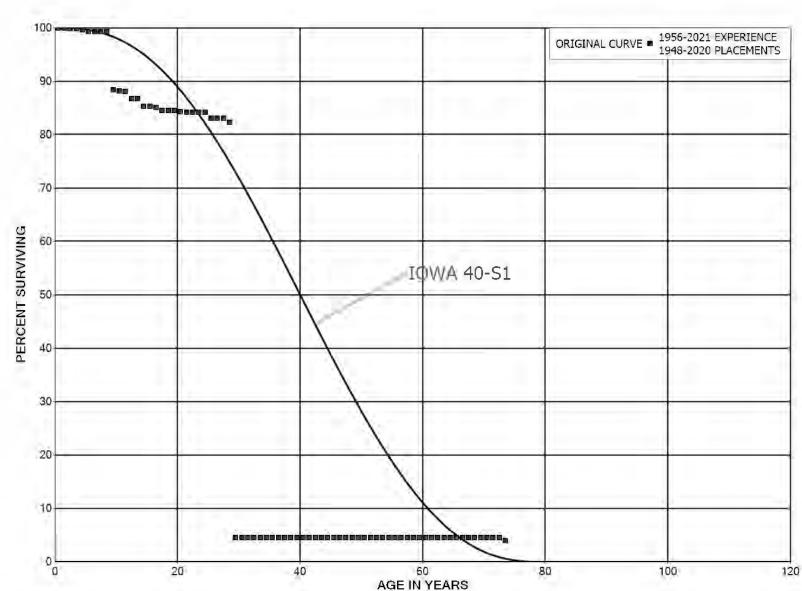
DUKE ENERGY KENTUCKY

ACCOUNT 373.30 STREET LIGHTING - CUSTOMER POLES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1961-2021

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 45.5 46.5 47.5 48.5 49.5 51.5 51.5 52.5 53.5 54.5 54.5 55.5 56.5 57.5 58.5	348,460 307,864 261,193 224,389 181,461 152,454 128,652 111,624 94,408 78,698 65,944 53,965 40,685 32,682 23,512 19,729 11,952 7,286 3,538 756	$18,362 \\23,930 \\10,794 \\25,628 \\19,123 \\14,182 \\8,142 \\8,308 \\7,978 \\5,333 \\2,710 \\7,771 \\964 \\2,467 \\303 \\2,000$	0.0527 0.0777 0.0413 0.1142 0.1054 0.0930 0.0633 0.0744 0.0845 0.0678 0.0411 0.1440 0.0237 0.0755 0.0129 0.1014 0.0000 0.0000 0.0000 0.0000	0.9473 0.9223 0.9587 0.8858 0.8946 0.9070 0.9367 0.9256 0.9155 0.9322 0.9589 0.8560 0.9763 0.9245 0.9871 0.8986 1.0000 1.0000 1.0000	$\begin{array}{c} 21.11\\ 20.00\\ 18.44\\ 17.68\\ 15.66\\ 14.01\\ 12.71\\ 11.90\\ 11.02\\ 10.09\\ \hline 9.40\\ 9.02\\ 7.72\\ 7.53\\ 6.97\\ 6.88\\ 6.18\\$
59.5	750		0.0000	1.0000	6.18



DUKE ENERGY KENTUCKY ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

VII-167

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 220 of 382

DUKE ENERGY KENTUCKY

ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1948-2020

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	559,930		0.0000	1.0000	100.00
0.5	559,930		0.0000	1.0000	100.00
1.5	538,072	885	0.0016	0.9984	100.00
2.5	537,235		0.0000	1.0000	99.84
3.5	543,078	1,460	0.0027	0.9973	99.84
4.5	541,946	1,349	0.0025	0.9975	99.57
5.5	487,717		0.0000	1.0000	99.32
6.5	487,717		0.0000	1.0000	99.32
7.5	505,837		0.0000	1.0000	99.32
8.5	505,837	55,847	0.1104	0.8896	99.32
9.5	449,990	916	0.0020	0.9980	88.35
10.5	449,074	759	0.0017	0.9983	88.17
11.5	419,513	6,356	0.0152	0.9848	88.03
12.5	413,157		0.0000	1.0000	86.69
13.5	353,921	5,843	0.0165	0.9835	86.69
14.5	307,419		0.0000	1.0000	85.26
15.5	307,419	588	0.0019	0.9981	85.26
16.5	306,831	2,160	0.0070	0.9930	85.10
17.5	304,670		0.0000	1.0000	84.50
18.5	304,670		0.0000	1.0000	84.50
19.5	304,670	760	0.0025	0.9975	84.50
20.5	303,911	459	0.0015	0.9985	84.29
21.5	303,451		0.0000	1.0000	84.16
22.5	303,451		0.0000	1.0000	84.16
23.5	303,451		0.0000	1.0000	84.16
24.5	303,451	3,764	0.0124	0.9876	84.16
25.5	299,687		0.0000	1.0000	83.12
26.5	299,687	0.005	0.0000	1.0000	83.12
27.5	299,687	2,935	0.0098	0.9902	83.12
28.5	296,752	280,465	0.9451	0.0549	82.30
29.5	16,286		0.0000	1.0000	4.52
30.5	16,286		0.0000	1.0000	4.52
31.5	16,286		0.0000	1.0000	4.52
32.5	16,286		0.0000	1.0000	4.52
33.5	16,286		0.0000	1.0000	4.52
34.5	16,286		0.0000	1.0000	4.52
35.5	16,286		0.0000	1.0000	4.52
36.5	16,286		0.0000	1.0000	4.52
37.5	16,286		0.0000	1.0000	4.52
38.5	16,286		0.0000	1.0000	4.52

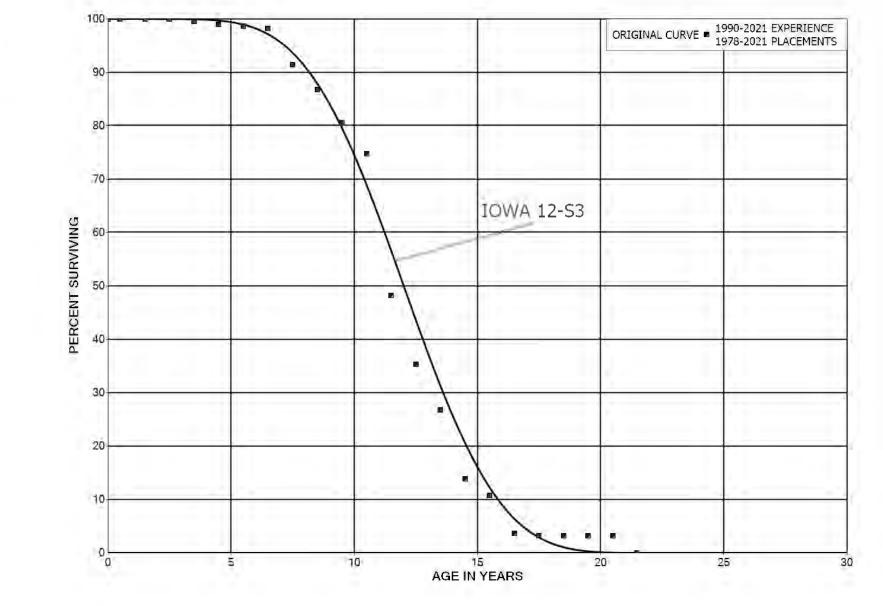
ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1948-2020

EXPERIENCE	BAND	1956-2021
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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 45.5 46.5 47.5 48.5	16,286 16,286 16,286 16,286 16,286 12,989 12,989 12,989 12,989 12,989		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52
49.5 50.5 51.5 52.5 53.5 54.5 55.5 56.5 57.5 58.5	12,989 12,989 12,989 12,989 12,989 12,989 12,989 12,989 12,989 12,989		$\begin{array}{c} 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\\ 0.0000\end{array}$	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	$\begin{array}{r} 4.52\\ 4.52\\ 4.52\\ 4.52\\ 4.52\\ 4.52\\ 4.52\\ 4.52\\ 4.52\\ 4.52\\ 4.52\\ 4.52\\ 4.52\\ 4.52\\ 4.52\end{array}$
59.5 60.5 61.5 62.5 63.5 64.5 65.5 66.5 67.5 68.5	12,989 12,989 12,989 12,989 12,989 12,989 12,989 12,989 12,989 12,989		0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52 4.52
69.5 70.5 71.5 72.5 73.5	12,989 12,661 12,661 12,661	1,698	0.0000 0.0000 0.0000 0.1341	1.0000 1.0000 1.0000 0.8659	4.52 4.52 4.52 4.52 3.91



DUKE ENERGY KENTUCKY ACCOUNT 392.00 TRANSPORTATION EQUIPMENT ORIGINAL AND SMOOTH SURVIVOR CURVES

GANNETT FLEMING

VII-170

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 223 of 382

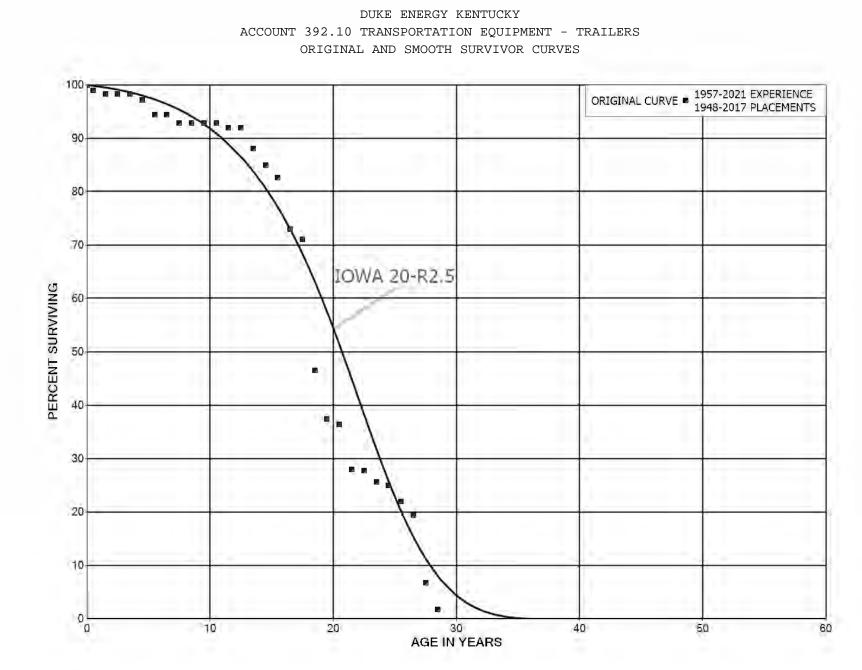
DUKE ENERGY KENTUCKY

ACCOUNT 392.00 TRANSPORTATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1978-2021

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	3,206,740 3,199,118 2,603,469 2,940,163 3,040,364 3,460,791 3,641,621 3,578,272 3,775,103 4,128,747	16,029 16,752 10,972 15,415 246,789 192,801 297,268	0.0000 0.0000 0.0055 0.0055 0.0032 0.0042 0.0690 0.0511 0.0720	1.0000 1.0000 0.9945 0.9945 0.9968 0.9958 0.9310 0.9489 0.9280	100.00 100.00 100.00 99.45 98.91 98.59 98.18 91.40 86.74
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	4,459,194 4,060,888 2,746,695 2,036,275 1,538,365 800,263 619,460 206,462 185,235 185,235	321,061 1,441,390 732,153 497,909 738,102 180,803 412,999 21,227	0.0720 0.3549 0.2666 0.2445 0.4798 0.2259 0.6667 0.1028 0.0000 0.0000	0.9280 0.6451 0.7334 0.7555 0.5202 0.7741 0.3333 0.8972 1.0000 1.0000	80.49 74.70 48.18 35.34 26.70 13.89 10.75 3.58 3.21 3.21
19.5 20.5 21.5	185,235 185,235	185,235	0.0000 1.0000	1.0000	3.21 3.21



GANNETT FLEMING

VII-172

Duke Energy Kentucky December 31, 2023

KyPSC Case No. 2024-00354 Attachment JJS-1 Page 225 of 382

ACCOUNT 392.10 TRANSPORTATION EQUIPMENT - TRAILERS

ORIGINAL LIFE TABLE

EXPERIENCE BAND 1957-2021

PLACEMENT BAND 1948-2017

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5	479,782 474,662 471,814 471,814 506,204 501,053 392,625 401,173	5,120 2,848 5,805 14,690 6,574	0.0107 0.0060 0.0000 0.0115 0.0293 0.0000 0.0164	0.9893 0.9940 1.0000 1.0000 0.9885 0.9707 1.0000 0.9836	100.00 98.93 98.34 98.34 97.21 94.36 94.36
7.5 8.5	394,599 395,004		0.0000 0.0000	1.0000 1.0000	92.82 92.82
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5 19.5 20.5 21.5 23.5 24.5 25.5 26.5 27.5 28.5	395,004 395,004 391,552 391,552 374,619 361,746 259,621 202,821 197,612 114,961 92,448 68,439 46,549 30,554 28,218 27,485 24,229 21,350 7,383 1,894	3,452 16,932 12,873 10,102 30,566 5,209 68,373 22,513 2,246 16,052 259 2,336 733 3,256 2,879 13,967 5,489 553	0.0000 0.0087 0.0000 0.0432 0.0344 0.0279 0.1177 0.0257 0.3460 0.1958 0.0243 0.2345 0.0243 0.2345 0.056 0.0765 0.0260 0.1185 0.1185 0.1188 0.6542 0.7434 0.2920	1.0000 0.9913 1.0000 0.9568 0.9656 0.9721 0.8823 0.9743 0.6540 0.8042 0.9757 0.7655 0.9944 0.9235 0.9740 0.8815 0.8812 0.8812 0.3458 0.2566 0.7080	$\begin{array}{c} 92.82\\ 92.82\\ 92.00\\ 92.00\\ 88.03\\ 85.00\\ 82.63\\ 72.90\\ 71.03\\ 46.45\\ 37.36\\ 36.45\\ 27.90\\ 27.74\\ 25.62\\ 24.96\\ 22.00\\ 19.39\\ 6.70\\ 1.72\\ \end{array}$
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	1,341 1,341 1,341 1,341 735 735 735 735 735 735 735 735	606	0.0000 0.0000 0.4517 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	1.0000 1.0000 0.5483 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	1.22 1.22 1.22 1.22 0.67 0.67 0.67 0.67 0.67 0.67

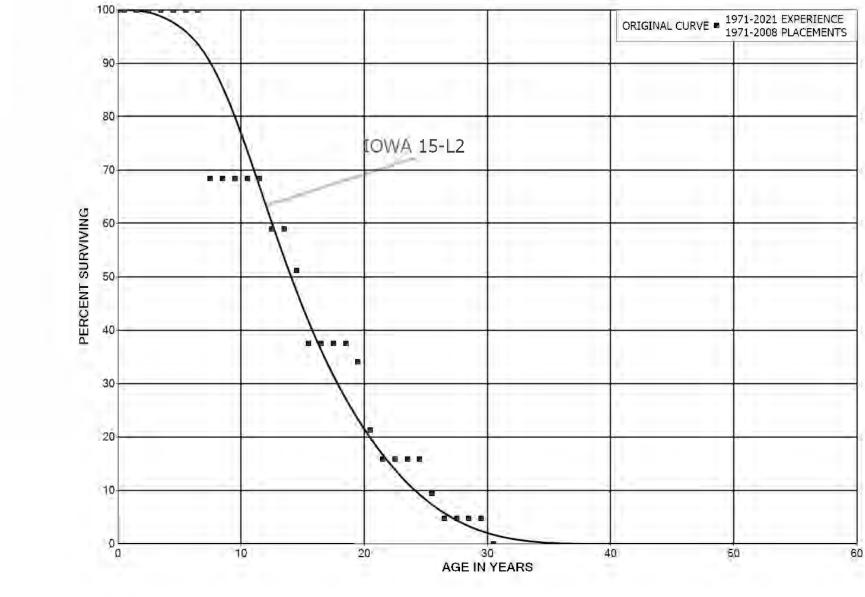
ACCOUNT 392.10 TRANSPORTATION EQUIPMENT - TRAILERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1948-2017

EXPERIENCE BAND 1957-2021

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	735 735 735 735 735 735	560	0.0000 0.0000 0.0000 0.0000 0.7621	1.0000 1.0000 1.0000 1.0000 0.2379	0.67 0.67 0.67 0.67 0.67 0.67
44.5 45.5 46.5	175 175	175	0.0000 1.0000	1.0000	0.16 0.16



DUKE ENERGY KENTUCKY ACCOUNT 396.00 POWER OPERATED EQUIPMENT ORIGINAL AND SMOOTH SURVIVOR CURVES



VII-175

Duke Energy Kentucky December 31, 2023

GANNETT FLEMING

EXPERIENCE BAND 1971-2021

DUKE ENERGY KENTUCKY

ACCOUNT 396.00 POWER OPERATED EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1971-2008

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 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5	126,051 126,051 185,500 185,500 185,500 185,500 221,774 230,837 157,846	72,991	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.3162 0.0000	1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.6838 1.0000	100.00 100.00 100.00 100.00 100.00 100.00 100.00 68.38
8.5 9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	157,846 157,846 190,933 190,933 164,577 152,807 132,617 97,310 97,310 97,310 97,310	26,356 20,191 35,307 9,064	0.0000 0.0000 0.1380 0.0000 0.1321 0.2662 0.0000 0.0000 0.0000 0.0000 0.0931	1.0000 1.0000 0.8620 1.0000 0.8679 0.7338 1.0000 1.0000 1.0000 0.9069	68.38 68.38 68.38 58.94 51.15 37.53 37.53 37.53 37.53
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	88,246 55,159 41,175 41,175 41,175 41,175 24,232 12,188 12,188 12,188	33,087 13,984 16,943 12,045	$\begin{array}{c} 0.3749 \\ 0.2535 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.4115 \\ 0.4970 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \\ 0.0000 \end{array}$	0.6251 0.7465 1.0000 1.0000 0.5885 0.5030 1.0000 1.0000 1.0000	34.04 21.28 15.88 15.88 15.88 15.88 9.35 4.70 4.70 4.70
29.5 30.5	12,188	12,188	1.0000		4.70

PART VIII. NET SALVAGE STATISTICS

TABLE 2. CALCULATION OF TERMINAL AND INTERIM RETIREMENTS AS A PERCENT OF TOTAL RETIREMENTS

	TERMINAL RETIREMENTS				ITERIM RETIREMEN	ITS	TOTAL		ESTIMATED
LOCATION (1)	RETIREMENTS (\$) (2)	NET SALVAGE (%) (3)	NET SALVAGE (\$) (4)=-(3)*(2)	RETIREMENTS (\$) (5)	NET SALVAGE (%) (6)	NET SALVAGE (\$) (7)=-(5)x(6)	NET SALVAGE (\$) (8)=(4)+(7)	ORIGINAL 	NET SALVAGE (%) (10)=-(8)/(9)
STEAM PRODUCTION EAST BEND	792,417,386	(8)	63,393,391	153,065,304	(20)	30,879,087	94,272,478	945,482,690	(10)
OTHER PRODUCTION WOODSDALE	234,547,028	(8)	18,763,762	113,254,707	(9)	10,457,042	29,220,805	347,801,735	(8)
SOLAR PRODUCTION CRITTENDEN WALTON AERO	1,553,690 2,145,923 3,285,610	(50) (52) (20)	776,845 1,115,880 657,122	3,606,301 4,897,024 2,794,082	(6) (6) (6)	212,074 287,977 164,310	988,919 1,403,857 821,433	5,159,991 7,042,946 6,079,693	(19) (20) (14)

TABLE 3. CALCULATION OF TERMINAL NET SALVAGE

<u>UNIT</u> (1)	ESTIMATED RETIREMENT YEAR (2)	TOTAL DECOMMISSIONING <u>COSTS</u> (4)	TOTAL ESCALATED DECOMMISSIONING <u>COSTS</u> (5)	ESTIMATED TERMINAL <u>RETIREMENTS</u> (6)	TERMINAL NET <u>SALVAGE (%)</u> (7)=(5)/(6)
STEAM PRODUCTION EAST BEND	2038	(38,715,000)	(58,909,451)	(792,417,386)	(8)
OTHER PRODUCTION WOODSDALE	2040	(11,327,000)	(18,107,911)	(234,547,028)	(8)
SOLAR PRODUCTION CRITTENDEN WALTON AERO	2047 2047 2053	(412,300) (586,200) (305,407)	(783,491) (1,113,952) (673,044)	(1,553,690) (2,145,923) (3,285,610)	(50) (52) (20)

ACCOUNT 190.00 STRUCTURES AND IMPROVEMENTS

	REGULAR	COST OF REMOVAL	DOM	GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990		204,571				204,571-	
1991	10,904	93,952	862	156	1	93,796-	
1992	44,601	33,254	75		0	33,254-	75-
1993	3,829	2,179	57		0	2,179-	57-
1994	8,622	107,169			0	107,169-	
1995		46,859				46,859-	
1996	20,300	22,697	112		0	22,697-	112-
1997							
1998	236,952	1,816	1		0	1,816-	1-
1999							
2000							
2001							
2002	466,414	124,993	27		0	124,993-	
2003	360,388	117,298	33		0	117,298-	
2004	1,563,054	14,188	1		0	14,188-	1-
2005	67,932	23,891	35		0	23,891-	35-
2006	5,259	7,978	152		0	7,978-	152-
2007	0.5						
2008	95		0		0		0
2009							
2010	2 604	104 500			0	104 500	
2011	3,604	184,588	0		0	184,588-	0
2012	32,273 140,504	E1 E00	0 37		0	E1 E00	0 37-
2013 2014	60,096	51,500 15,414	37 26		0 0	51,500- 15,414-	26-
2014	433,044	75,712	17		0	75,712-	20- 17-
2015	23,642	2,850	12		0	2,850-	12-
2010	23,042	2,000	12		0	2,050	12
2018	83,765	8,487	10		0	8,487-	10-
2019	1,875,000	29,304	2		0	29,304-	2-
2020	256,919-	20,501	0		0	27,501	0
2021	259,035	109,663	42		0	109,663-	42-
		,			-	,	
TOTAL	5,442,394	1,278,361	23	156	0	1,278,204-	23-
THREE-YE.	AR MOVING AVERAG	ES					
90-92	18,502	110,592	598	52	0	110,540-	597-
91-93	19,778	43,128	218	52	0	43,076-	
92-94	19,017	47,534	250	52	0	47,534-	
93-95	4,150	52,069	200		0	52,069-	100
94-96	9,641		611		0	58,908-	611-
	- / • · · ·	56,500	~		Ŭ	20,200	~

ACCOUNT 190.00 STRUCTURES AND IMPROVEMENTS

	REGULAR	COST OF REMOVAL		GROSS SALVAGE	NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT PCT		PCT
THREE-YE	AR MOVING AVERAGE	ES				
95-97	6,767	23,185	343	C	23,185-	343-
96-98	85,751	8,171	10	C	8,171-	10-
97-99	78,984	605	1	C	605-	1-
98-00	78,984	605	1	C	605-	1-
99-01						
00-02	155,471	41,664	27	C	41,664-	27-
01-03	275,601	80,764	29	C	80,764-	29-
02 - 04	796,619	85,493	11	C	85,493-	11-
03-05	663,791	51,792	8	C	51,792-	8 -
04-06	545,415	15,352	3	C	15,352-	3 -
05-07	24,397	10,623	44	C	10,623-	44-
06-08	1,785	2,659	149	C	2,659-	149-
07-09	32		0	C		0
08-10	32		0	C		0
09-11	1,201	61,529		C	61,529-	
10-12	11,959	61,529	514	C	61,529-	514-
11-13	58,794	78,696	134	C	78,696-	134-
12-14	77,624	22,305	29	C	22,305-	29-
13-15	211,215	47,542	23	C	47,542-	23-
14-16	172,260	31,325	18	C	31,325-	18-
15-17	152,228	26,187	17	C	26,187-	17-
16-18	35,802	3,779	11	C	3,779-	11-
17-19	652,922	12,597	2	C	12,597-	2-
18-20	567,282	12,597	2	C	12,597-	2-
19-21	625,705	46,322	7	C	46,322-	7 -
FIVE-YEA	R AVERAGE					
17-21	392,176	29,491	8	C	29,491-	8 -

ACCOUNT 311.00 STRUCTURES AND IMPROVEMENTS

XE ND	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	DOT
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1991	42,371		0		0		0
1992	2,324		0		0		0
1993	106,507		0		0		0
1994	69,982		0		0		0
1995	93,406		0		0		0
1996							
1997	23,706		0		0		0
1998	1,522		0		0		0
1999	30,871		0		0		0
2000							
2001							
2002							
2003	139,027		0		0		0
2004							
2005	35,327		0		0		0
2006	4,577	698	15		0	698-	15-
2007	103,253	4,811	5		0	4,811-	5-
2008	52,248	29,431	56		0	29,431-	
2009	164,778	38,462	23		0	38,462-	23-
2010	205,463		0		0		0
2011	133,143	1	0	1 1 5 0	0		0
2012	137,116	1,729	1	1,178	1	551-	0
2013	208,790	4,535	2	982	0	3,553-	2-
2014	95,194	84,571	89	184-	0	84,754-	
2015	238,901	34,324	14	1-	0	34,325-	14-
2016	304,327	68,004	22	C 0	0	68,004-	22-
2017	188,595	68,577	36	68-	0	68,645-	36-
2018	32,838	300,424	915	7 (2)	0	300,424-	
2019	3,011,340	207,110	7	7,633	0	199,477- 429,629-	7-
2020	1,087,121-	430,155	40-	527	0		40
2021 2022	2,092,566 2,005,275	61,318 30,750	3 2		0 0	61,318- 30,750-	3- 2-
2022	2,504,444	71,179	∠ 3		0	71,179-	2- 3-
2025	2,504,444	/1,1/9	2		0	/1,1/9-	5-
TOTAL	10,940,772	1,436,077	13	10,067	0	1,426,010-	13-
THREE-YE.	AR MOVING AVERAGE	IS					
91-93	50,401		0		0		0
92-94	59,604		0		0		0
93-95	89,965		0		0		0
94-96	54,463		0		0		0
	51,105		U		0		0

ACCOUNT 311.00 STRUCTURES AND IMPROVEMENTS

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT		PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGE	IS					
95-97	39,038		0		0		0
96-98	8,410		0		0		0
97-99	18,700		0		0		0
98-00	10,798		0		0		0
99-01	10,290		0		0		0
00-02							
01-03	46,342		0		0		0
02-04	46,342		0		0		0
03-05	58,118		0		0		0
04-06	13,301	233	2		0	233-	2-
05-07	47,719	1,836	4		0	1,836-	4-
06-08	53,359	11,647	22		0	11,647-	22-
07-09	106,760	24,235	23		0	24,235-	23-
08-10	140,830	22,631	16		0	22,631-	16-
09-11	167,795	12,821	8		0	12,821-	8 -
10-12	158,574	576	0	393	0	184-	0
11-13	159,683	2,088	1	720	0	1,368-	1-
12-14	147,033	30,278	21	659	0	29,619-	20-
13-15	180,962	41,143	23	266	0	40,877-	23-
14-16	212,808	62,299	29	62-	0	62,361-	29-
15-17	243,941	56,968	23	23-	0	56,991-	23-
16-18	175,253	145,668	83	23-	0	145,691-	83-
17-19	1,077,591	192,037	18	2,522	0	189,516-	18-
18-20	652,352	312,563	48	2,720	0	309,844-	47-
19-21	1,338,928	232,861	17	2,720	0	230,141-	17-
20-22	1,003,573	174,074	17	176	0	173,899-	17-
21-23	2,200,762	54,415	2		0	54,415-	2-
FIVE-YEA	R AVERAGE						
19-23	1,705,301	160,102	9	1,632	0	158,470-	9-

ACCOUNT 312.00 BOILER PLANT EQUIPMENT

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	422,833		0		0		0
1991	1,469,830		0		0		0
1992	1,290,307		0		0		0
1993	707,064		0		0		0
1994	861,329		0		0		0
1995	2,682,145		0		0		0
1996	32,885		0		0		0
1997	161,263		0		0		0
1998	758,949		0		0		0
1999	1,804,001		0		0		0
2000							
2001							
2002							
2003	7,226,804	1,220,923	17	54,200	1	1,166,723-	16-
2004	2,486,903		0		0		0
2005	3,191,937		0		0		0
2006	240,430	40,960	17		0	40,960-	17-
2007	5,469,792	73,271	1		0	73,271-	1-
2008	3,572,224	80,159	2		0	80,159-	2-
2009	924,041	191,354	21		0	191,354-	21-
2010	1,212,900	79,959	7	87,500	7	7,541	1
2011	1,109,358	42,153	4	1,937	0	40,215-	4 -
2012	4,914,871	14,746	0	4,744	0	10,001-	0
2013	1,819,921	2,704	0	2,682	0	22-	0
2014	13,802,178	883,055	6	32,201-	0	915,256-	7-
2015	4,903,758	3,524,212	72	80,135	2	3,444,077-	70-
2016	1,402,060	559,727	40	11,773	1	547,954-	39-
2017	2,128,162	912,244	43	46,736	2	865,508-	41-
2018	2,473,840	12,951,712	524	71,725	3	12,879,987-	
2019	12,081,941	3,814,760	32	79,482	1	3,735,278-	31-
2020	16,118,391	8,017,882	50	43,786	0	7,974,095-	49-
2021	19,256,090	1,759,208	9	31,623	0	1,727,585-	9 -
2022	4,361,523	402,638	9	38,672	1	363,966-	8 -
2023	5,007,778	384,634	8		0	384,634-	8 -
TOTAL	123,895,506	34,956,301	28	522,796	0	34,433,505-	28-
THREE-YE	AR MOVING AVERAG	JES					
90-92	1,060,990		0		0		0
91-93	1,155,734		0		0		0
92-94	952,900		0		0		0

ACCOUNT 312.00 BOILER PLANT EQUIPMENT

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGES	3					
93-95	1,416,846		0		0		0
94-96	1,192,120		0		0		0
95-97	958,764		0		0		0
96-98	317,699		0		0		0
97-99	908,071		0		0		0
98-00	854,316		0		0		0
99-01	601,334		0		0		0
00-02							
01-03	2,408,935	406,974	17	18,067	1	388,908-	16-
02 - 04	3,237,902	406,974	13	18,067	1	388,908-	12-
03-05	4,301,881	406,974	9	18,067	0	388,908-	9 –
04-06	1,973,090	13,653	1		0	13,653-	1-
05-07	2,967,386	38,077	1		0	38,077-	1-
06-08	3,094,149	64,797	2		0	64,797-	2-
07-09	3,322,019	114,928	3		0	114,928-	3 -
08-10	1,903,055	117,158	б	29,167	2	87,991-	5-
09-11	1,082,099	104,489	10	29,812	3	74,676-	7 -
10-12	2,412,376	45,619	2	31,394	1	14,225-	1-
11-13	2,614,716	19,868	1	3,121	0	16,746-	1-
12-14	6,845,657	300,168	4	8,258-	0	308,426-	5-
13-15	6,841,952	1,469,990	21	16,872	0	1,453,118-	21-
14-16	6,702,666	1,655,665	25	19,902	0	1,635,762-	24-
15-17	2,811,327	1,665,394	59	46,215	2	1,619,180-	58-
16-18	2,001,354	4,807,895	240	43,412	2	4,764,483-	238-
17-19	5,561,314	5,892,905	106	65,981	1	5,826,924-	105-
18-20	10,224,724	8,261,451	81	64,998	1	8,196,453-	80-
19-21	15,818,807	4,530,617	29	51,630	0	4,478,986-	28-
20-22	13,245,335	3,393,243	26	38,027	0	3,355,215-	25-
21-23	9,541,797	848,827	9	23,432	0	825,395-	9 –
FIVE-YEA	R AVERAGE						
19-23	11,365,145	2,875,824	25	38,713	0	2,837,112-	25-

ACCOUNT 314.00 TURBOGENERATOR UNITS

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1991	847,893		0		0		0
1992	538,297		0		0		0
1993	102,328		0		0		0
1994	555,226		0		0		0
1995	66,228		0		0		0
1996	5,992		0		0		0
1997	229,904		0		0		0
1998	210,493		0		0		0
1999	40,715		0		0		0
2000							
2001							
2002							
2003	311,366	43,075	14		0	43,075-	14-
2004	582,032		0		0		0
2005	850,980		0		0		0
2006	7,944	1,284	16		0	1,284-	16-
2007	1,044,758	9,522	1		0	9,522-	1-
2008	5,669,977	481,747	8	537,424	9	55,677	1
2009	1,787,235	137,589	8		0	137,589-	8 -
2010	549,448		0		0		0
2011	16,313-	78,687	482-		0	78,687-	
2012	689,392	2,218	0	1,511	0	706-	0
2013	205,842	78,030	38	500	0	78,030-	38-
2014	904,388	48,776	5	538-	0	49,314-	5-
2015	143,768	37,396	26	4-	0	37,399-	
2016	904,828	230,533	25	83,112	9	147,421-	16-
2017	490,139	270,220	55	942 214	0	270,220-	55-
2018	713,282	908,932	127	743,314	104	165,618-	23-
2019	1,255,969	3,541,847	282	704,873	56	2,836,975-	
2020	5,826,342	366,888	6 1 0	117,823	2	249,065-	4-
2021 2022	6,092,323	726,528	12 35	466,504 26-	8 0	260,023-	4- 25
2022	4,138,160	1,445,712	20	89,673		1,445,738-	35- 19-
2023	9,095,603	1,826,658	20	09,075	1	1,736,985-	19-
TOTAL	43,844,539	10,235,640	23	2,743,666	б	7,491,974-	17-
᠃᠃᠃᠃᠃᠃	AR MOVING AVERAG	FIS					
			0		0		0
91-93	496,173		0		0		0
92-94	398,617		0		0		0
93-95	241,260		0		0		0
94-96	209,149		0		0		0

ACCOUNT 314.00 TURBOGENERATOR UNITS

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YEA	AR MOVING AVERAGE	S					
95-97	100,708		0		0		0
96-98	148,796		0		0		0
97-99	160,371		0		0		0
98-00	83,736		0		0		0
99-01	13,572		0		0		0
00-02							
01-03	103,789	14,358	14		0	14,358-	14-
02-04	297,799	14,358	5		0	14,358-	5 -
03-05	581,459	14,358	2		0	14,358-	2-
04-06	480,319	428	0		0	428-	0
05-07	634,561	3,602	1		0	3,602-	1-
06-08	2,240,893	164,184	7	179,141	8	14,957	1
07-09	2,833,990	209,619	7	179,141	6	30,478-	1-
08-10	2,668,887	206,445	8	179,141	7	27,304-	1-
09-11	773,456	72,092	9		0	72,092-	9 –
10-12	407,509	26,968	7	504	0	26,464-	б-
11-13	292,974	52,978	18	504	0	52,474-	18-
12-14	599,874	43,008	7	324	0	42,683-	7 –
13-15	417,999	54,734	13	181-	0	54,914-	13-
14-16	650,995	105,568	16	27,523	4	78,045-	12-
15-17	512,912	179,383	35	27,703	5	151,680-	30-
16-18	702,749	469,895	67	275,475	39	194,420-	28-
17-19	819,796	1,573,667	192	482,729	59	1,090,938-	133-
18-20	2,598,531	1,605,889	62	522,003	20	1,083,886-	42-
19-21	4,391,545	1,545,088	35	429,733	10	1,115,355-	25-
20-22	5,352,275	846,376	16	194,767	4	651,609-	12-
21-23	6,442,028	1,332,966	21	185,384	3	1,147,582-	18-
FIVE-YEAR	R AVERAGE						
19-23	5,281,679	1,581,527	30	275,769	5	1,305,757-	25-

ACCOUNT 315.00 ACCESSORY ELECTRIC EQUIPMENT

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	32,390		0		0		0
1991	71,444		0		0		0
1992	32,766		0		0		0
1993							
1994							
1995	259,537		0		0		0
1996	69,143		0		0		0
1997	68,288		0		0		0
1998							
1999							
2000							
2001							
2002							
2003	75,714		0		0		0
2004	729,582		0		0		0
2005	69,401		0		0		0
2006							
2007	201,141	9,407	5		0	9,407-	5-
2008	3,085		0		0		0
2009	43,091	49	0		0	49-	0
2010	109,381		0		0		0
2011	142,864	972	1		0	972-	1-
2012	3,785,797		0		0		0
2013	96,218		0	1 000	0		0
2014	7,950	18,667	235	1,000	13	17,667-	
2015	23,366	8,386	36	2 644	0	8,386-	36-
2016	138,337	174,762	126	3,644	3	171,118-	124-
2017	0 104	0.0.0	4.0		0	0.0.0	4.0
2018	2,104	880	42		0	880-	42-
2019	243,525	23,367	10		0	23,367-	10-
2020	20 760	2 750	10		0	2 750	10
2021	20,769	3,759	18		0	3,759-	18-
2022	3,836,200 51,532	2,342	0		0 0	2,342-	
2023	51,532	21,561	42		0	21,561-	42-
TOTAL	10,113,626	264,152	3	4,644	0	259,508-	3-
THREE-YE.	AR MOVING AVERAGE:	5					
90-92	45,533		0		0		0
91-93	34,737		0		0		0
92-94	10,922		0		0		0

ACCOUNT 315.00 ACCESSORY ELECTRIC EQUIPMENT

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YEA	AR MOVING AVERAGES						
93-95	86,512		0		0		0
94-96	109,560		0		0		0
95-97	132,323		0		0		0
96-98	45,810		0		0		0
97-99	22,763		0		0		0
98-00							
99-01							
00-02							
01-03	25,238		0		0		0
02-04	268,432		0		0		0
03-05	291,566		0		0		0
04-06	266,328		0		0		0
05-07	90,181	3,136	3		0	3,136-	3 –
06-08	68,075	3,136	5		0	3,136-	5 –
07-09	82,439	3,152	4		0	3,152-	4 -
08-10	51,852	16	0		0	16-	0
09-11	98,445	340	0		0	340-	0
10-12	1,346,014	324	0		0	324-	0
11-13	1,341,626	324	0		0	324-	0
12-14	1,296,655	6,222	0	333	0	5,889-	0
13-15	42,512	9,018	21	333	1	8,684-	20-
14-16	56,551	67,272	119	1,548	3	65,724-	116-
15-17	53,901	61,049	113	1,215	2	59,834-	111-
16-18	46,814	58,547	125	1,215	3	57,333-	122-
17-19	81,876	8,082	10		0	8,082-	10-
18-20	81,876	8,082	10		0	8,082-	10-
19-21	88,098	9,042	10		0	9,042-	10-
20-22	1,285,656	2,034	0		0	2,034-	0
21-23	1,302,834	9,221	1		0	9,221-	1-
FIVE-YEAR	R AVERAGE						
19-23	830,405	10,206	1		0	10,206-	1-

ACCOUNT 316.00 MISCELLANEOUS POWER PLANT EQUIPMENT

	REGULAR	COST OF REMOVAL	DOW	GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	46,577		0		0		0
1991	17,681		0		0		0
1992							
1993							
1994	19,547		0		0		0
1995	13,008		0		0		0
1996							
1997							
1998							
1999							
2000							
2001							
2002			•		•		
2003	138,740		0		0		0
2004	112 000		-	0 500	0	1 505	0
2005	113,268	775	1	2,500	2	1,725	2
2006	26 410		-		0		-
2007	36,418	354	1		0	354-	1-
2008			0		0		0
2009	28,970	12 401	0		0	12 401	0
2010	1,129,078	13,421	1		0	13,421-	1-
2011	77,470-		0		0		0
2012	29,490		0		0		0
2013	161,855 106,228	6,571	0 6		0	6,571-	0 6 –
2014 2015	84,021	1,485	2		0 0	1,485-	2-
2015	123,305	453	0		0	453-	2- 0
2010	7,976-	143,623	0		0	143,623-	0
2017	7,970-	16,582			0	16,582-	
2010	353,290	47,256-	13-		0	47,256	13
2020	513,676	1,372	0		0	1,372-	0
2020	244,149	1,572	0		0	1,572	0
2021	139,428		0		0		0
2022	54,489	7,303	13		0	7,303-	13-
2025	51,105	1,505	10		Ū	1,505	10
TOTAL	3,267,773	144,683	4	2,500	0	142,183-	4-
THREE-YEA	AR MOVING AVERAGE	IS					
90-92	21,420		0		0		0
91-93	5,894		0		0		0
92-94	6,516		0		0		0

ACCOUNT 316.00 MISCELLANEOUS POWER PLANT EQUIPMENT

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YE	AR MOVING AVERAGE	IS					
93-95	10,852		0		0		0
94-96	10,852		0		0		0
95-97	4,336		0		0		0
96-98	,						
97-99							
98-00							
99-01							
00-02							
01-03	46,247		0		0		0
02 - 04	46,247		0		0		0
03-05	84,003	258	0	833	1	575	1
04-06	37,756	258	1	833	2	575	2
05-07	49,895	376	1	833	2	457	1
06-08	12,139	118	1		0	118-	1-
07-09	21,796	118	1		0	118-	1-
08-10	386,016	4,474	1		0	4,474-	1-
09-11	360,193	4,474	1		0	4,474-	1-
10-12	360,366	4,474	1		0	4,474-	1-
11-13	37,959		0		0		0
12-14	99,191	2,190	2		0	2,190-	2-
13-15	117,368	2,685	2		0	2,685-	2-
14-16	104,518	2,836	3		0	2,836-	3 –
15-17	66,450	48,520	73		0	48,520-	73-
16-18	38,443	53,553			0	53,553-	
17-19	115,105	37,650	33		0	37,650-	
18-20	288,989	9,767-			0	9,767	3
19-21	370,372	15,295-			0	15,295	4
20-22	299,084	457	0		0	457-	0
21-23	146,022	2,434	2		0	2,434-	2-
FIVE-YEA	R AVERAGE						
19-23	261,006	7,716-	3-		0	7,716	3

ACCOUNT 341.00 STRUCTURES AND IMPROVEMENTS

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT PCT	NET SALVAGE AMOUNT	PCT
2007	10,618	936	9	0	936-	9-
2007	22,463	5,016	22	0	5,016-	22-
2009	22,105	5,010	22	Ű	5,010	22
2010	15,621	4,410	28	0	4,410-	28-
2011	10,011	1,110	20	Ū.	1,110	20
2012	6,963		0	0		0
2013						
2014	75,984	5,933	8	0	5,933-	8-
2015						
2016						
2017	172,056	37,476	22	0	37,476-	22-
2018		33,596			33,596-	
2019	14,301	1,238	9	0	1,238-	9 –
2020	150,447	54,195	36	0	54,195-	36-
2021	10,444	2,094	20	0	2,094-	20-
2022	9,739	3,008	31	0	3,008-	31-
2023	85,823		0	0		0
TOTAL	574,459	147,901	26	0	147,901-	26-
THREE-YE.	AR MOVING AVERAG	ES				
07-09	11,027	1,984	18	0	1,984-	18-
08-10	12,694	3,142	25	0	3,142-	25-
09-11	5,207	1,470	28	0	1,470-	28-
10-12	7,528	1,470	20	0	1,470-	20-
11-13	2,321		0	0		0
12-14	27,649	1,978	7	0	1,978-	7-
13-15	25,328	1,978	8	0	1,978-	8-
14-16	25,328	1,978	8	0	1,978-	8-
15-17	57,352	12,492	22	0	12,492-	22-
16-18	57,352	23,691	41	0	23,691-	41-
17-19	62,119	24,103	39	0	24,103-	39-
18-20	54,916	29,676	54	0	29,676-	54-
19-21	58,397	19,176	33	0	19,176-	33-
20-22	56,877	19,765	35	0	19,765-	35-
21-23	35,335	1,700	5	0	1,700-	5-
₽Ŧ₩₽_₩₽₩	R AVERAGE					
19-23	54,151	12,107	22	0	12,107-	22-

ACCOUNT 342.00 FUEL HOLDERS, PRODUCERS AND ACCESSORIES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
2004	42,403		0		0		0
2005							
2006							
2007							
2008							
2009							
2010							
2011							
2012	98,945		0		0		0
2013							
2014	21,496	777	4		0	777-	4 -
2015	83,669	4,996	6		0	4,996-	6-
2016	70,159	3,042	4		0	3,042-	4-
2017							
2018							
2019	2,054,051	4,375	0		0	4,375-	0
2020	73,342	2,032,046		100,473	137	1,931,573-	
2021							
2022							
2023	47,556	5,341	11		0	5,341-	11-
TOTAL	2,491,620	2,050,577	82	100,473	4	1,950,104-	78-
THREE-YE	AR MOVING AVERAG	ES					
04-06	14,134		0		0		0
05-07							
06-08							
07-09							
08-10							
09-11							
10-12	32,982		0		0		0
11-13	32,982		0		0		0
12-14	40,147	259	1		0	259-	1-
13-15	35,055	1,924	5		0	1,924-	5-
14-16	58,441	2,938	5		0	2,938-	5-
15-17	51,276	2,679	5		0	2,679-	5-
16-18	23,386	1,014	4		0	1,014-	4-
17-19	684,684	1,458	0		0	1,458-	0
18-20	709,131	678,807	96	33,491	5	645,316-	91-
19-21	709,131	678,807	96	33,491	5	645,316-	91-

ACCOUNT 342.00 FUEL HOLDERS, PRODUCERS AND ACCESSORIES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YE	AR MOVING AVERAGES	5					
20-22	24,447	677,349		33,491	137	643,858-	
21-23	15,852	1,780	11		0	1,780-	11-
FIVE-YEA	R AVERAGE						
19-23	434,990	408,352	94	20,095	5	388,258-	89-

ACCOUNT 344.00 GENERATORS

		COST OF		GROSS		NET	
YEAR	REGULAR RETIREMENTS	REMOVAL	PCT	SALVAGE	DOT	SALVAGE	DOT
		AMOUNT		AMOUNT	PCT	AMOUNT	PCT
2003	5,187		0		0		0
2004	32,402		0		0		0
2005	8,425,368		0	5,014,886	60	5,014,886	60
2006	4,742		0		0		0
2007	3,708,458		0		0		0
2008	11,539,368	5,444	0		0	5,444-	0
2009	12,561,235		0	2,595,016	21	2,595,016	21
2010	2,460,899		0		0		0
2011	3,261,267		0	786,306	24	786,306	24
2012	6,057,335		0		0		0
2013	199,816		0		0		0
2014	1,410,294-		0		0		0
2015	928,074-	65,681	7-		0	65,681-	7
2016	66,004-	24,500	37-		0	24,500-	37
2017	12,261-	14,900	122-		0	14,900-	122
2018		15,959		2,127,028		2,111,069	
2019	290,845	43,338	15		0	43,338-	15-
2020	2,236,503	93,647	4		0	93,647-	4 -
2021	2,912,065	173,627	б	7,638	0	165,989-	б-
2022							
2023	373,878		0		0		0
TOTAL	51,652,736	437,095	1	10,530,873	20	10,093,777	20
THREE-YE	AR MOVING AVERAGE	S					
03-05	2,820,986		0	1,671,629	59	1,671,629	59
04-06	2,820,837		0	1,671,629	59	1,671,629	59
05-07	4,046,189		0	1,671,629	41	1,671,629	41
06-08	5,084,189	1,815	0		0	1,815-	0
07-09	9,269,687	1,815	0	865,005	9	863,190	9
08-10	8,853,834	1,815	0	865,005	10	863,190	10
09-11	6,094,467		0	1,127,107	18	1,127,107	18
10-12	3,926,500		0	262,102	7	262,102	7
11-13	3,172,806		0	262,102	8	262,102	8
12-14	1,615,619		0		0		0
13-15	712,851-	21,894	3 –		0	21,894-	3
14-16	801,457-	30,060	4-		0	30,060-	4
15-17	335,446-	35,027	10-		0	35,027-	10
16-18	26,088-	18,453	71-	709,009		690,556	
17-19	92,861	24,732	27	709,009	764	684,277	737
18-20	842,449	50,981	б	709,009	84	658,028	78

ACCOUNT 344.00 GENERATORS

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YE	CAR MOVING AVERAGE	S					
19-21	1,813,138	103,537	6	2,546	0	100,991-	б-
20-22	1,716,189	89,091	5	2,546	0	86,545-	5-
21-23	1,095,314	57,876	5	2,546	0	55,330-	5-
FIVE-YEA	AR AVERAGE						
19-23	1,162,658	62,122	5	1,528	0	60,595-	5-

ACCOUNT 345.00 ACCESSORY ELECTRIC EQUIPMENT

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
2003	52,428		0		0		0
2004	,						
2005							
2006							
2007	6,651	873	13		0	873-	13-
2008	6,268	892	14		0	892-	14-
2009							
2010							
2011	198,105-		0		0		0
2012	1,186,043		0		0		0
2013							
2014	55,185	12,089	22		0	12,089-	22-
2015	1,368,190	17,000	1	8,391	1	8,609-	1-
2016							
2017	146,082	11,870	8		0	11,870-	8-
2018	61,462	2,067	3		0	2,067-	3-
2019							
2020	247,331	27,602	11		0	27,602-	11-
2021	223,341	252	0		0	252-	0
2022	11,702	710	6		0	710-	б-
2023		437				437-	
TOTAL	3,166,578	73,792	2	8,391	0	65,401-	2-
THREE-YE	AR MOVING AVERAG	ES					
03-05	17,476		0		0		0
04-06							
05-07	2,217	291	13		0	291-	13-
06-08	4,306	588	14		0	588-	14-
07-09	4,306	588	14		0	588-	14-
08-10	2,089	297	14		0	297-	14-
09-11	66,035-		0		0		0
10-12	329,313		0		0		0
11-13	329,313		0		0		0
12-14	413,743	4,030	1		0	4,030-	1-
13-15	474,458	9,696	2	2,797	1	6,899-	1-
14-16	474,458	9,696	2	2,797	1	6,899-	1-
15-17	504,757	9,623	2	2,797	1	6,826-	1-
16-18	69,181	4,646	7		0	4,646-	7-
17-19	69,181	4,646	7		0	4,646-	7-
18-20	102,931	9,890	10		0	9,890-	10-

ACCOUNT 345.00 ACCESSORY ELECTRIC EQUIPMENT

	REGULAR	COST OF REMOVAL		GROSS SALVAGE	NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT PC:	r amount	PCT
THREE-YE	AR MOVING AVERAGES	5				
19-21	156,891	9,285	б	() 9,285-	- б-
20-22	160,791	9,521	б	() 9,521-	- б-
21-23	78,348	466	1	(9 466-	- 1-
FIVE-YEA	R AVERAGE					
19-23	96,475	5,800	6	(5,800-	- 6-

ACCOUNT 346.00 MISCELLANEOUS POWER PLANT EQUIPMENT

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT PCT	NET SALVAGE AMOUNT	PCT
		12100112			11100111	
2003	37,219		0	0		0
2004 2005	12 672		0	0		0
2005	23,673		0	0		0
2000	82,232	2,907	4	0	2,907-	4-
2007	02,232	2,907	т	0	2,907-	- T
2009	146,504		0	0		0
2010	71,076-		0	0		0
2011	90,281	956	1	0	956-	1-
2012	<i>J</i> 07201	200	-	6	200	-
2013	6,098		0	0		0
2014	-,					
2015						
2016	254-	2,955		0	2,955-	
2017	84,101	4,246	5	0	4,246-	5-
2018	7,407	2,358	32	0	2,358-	32-
2019	17,049	344	2	0	344-	2-
2020	60,742	95	0	0	95-	0
2021						
2022						
2023						
TOTAL	483,976	13,861	3	0	13,861-	3-
THREE-YE	AR MOVING AVERAG	ES				
03-05	20,297		0	0		0
04-06	7,891		0	0		0
05-07	35,302	969	3	0	969-	3-
06-08	27,411	969	4	0	969-	4 -
07-09	76,245	969	1	0	969-	1-
08-10	25,143		0	0		0
09-11	55,237	319	1	0	319-	1-
10-12	6,402	319	5	0	319-	5-
11-13	32,126	319	1	0	319-	1-
12-14	2,032		0	0		0
13-15	2,032		0	0		0
14-16	85-	985		0	985-	
15-17	27,949	2,401	9	0	2,401-	9–
16-18	30,418	3,186	10	0	3,186-	10-
17-19	36,186	2,316	6	0	2,316-	6-
18-20	28,399	932	3	0	932-	3-

ACCOUNT 346.00 MISCELLANEOUS POWER PLANT EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT PCT	NET SALVAGE AMOUNT	PCT
THREE-YE	CAR MOVING AVERAGE	5				
19-21	25,930	146	1	0	146-	1-
20-22	20,247	32	0	0	32-	0
21-23						

FIVE-YEAR AVERAGE

19-23	15,558	88 1	0	88- 1-
			-	

ACCOUNTS 352.00 AND 361.00 STRUCTURES AND IMPROVEMENTS

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT PCT	NET SALVAGE AMOUNT	PCT
1992	930	2,208	237	0	2,208-	237-
1993						
1994	1,042		0	0		0
1995						
1996						
1997						
1998	1,925		0	0		0
1999	1,918	370-	19-	0	370	19
2000						
2001						
2002						
2003						
2004						
2005	34,703		0	0		0
2006	6,015	9,055	151	0	9,055-	151-
2007	1,175	39,895		0	39,895-	
2008						
2009	4 1 4 0	0 000	5.6	<u>_</u>	0.000	5.6
2010	4,149	2,333	56	0	2,333-	
2011	56,262	14,966	27	0	14,966-	27-
2012						
2013		44 740	67	0	44,740-	67
2014 2015	67,048 60,906	44,740 112,689	67 105	0	44,740- 112,689-	67- 105
2015	60,906	112,009	185	0	112,009-	102-
2010	55,722		0	0		0
2018	55,722		0	0		0
2010						
2020						
2021						
TOTAL	291,795	225,515	77	0	225,515-	77-
THREE-YE.	AR MOVING AVERAG	ES				
92-94	657	736	112	0	736-	112-
93-95	347		0	0		0
94-96	347		0	0		0
95-97						
96-98	642		0	0		0
97-99	1,281	123-	10-	0	123	10
98-00	1,281	123-	10-	0	123	10

ACCOUNTS 352.00 AND 361.00 STRUCTURES AND IMPROVEMENTS

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT PCT	NET SALVAGE AMOUNT PCT
THREE-YE	CAR MOVING AVERAGES				
99-01	639	123-	19-	0	123 19
00-02					
01-03					
02-04					
03-05	11,568		0	0	0
04-06	13,573	3,018	22	0	3,018- 22-
05-07	13,964	16,317	117	0	16,317- 117-
06-08	2,397	16,317	681	0	16,317- 681-
07-09	392	13,298		0	13,298-
08-10	1,383	778	56	0	778- 56-
09-11	20,137	5,766	29	0	5,766- 29-
10-12	20,137	5,766	29	0	5,766- 29-
11-13	18,754	4,989	27	0	4,989- 27-
12-14	22,349	14,913	67	0	14,913- 67-
13-15	42,652	52,476	123	0	52,476- 123-
14-16	42,652	52,476	123	0	52,476- 123-
15-17	38,876	37,563	97	0	37,563- 97-
16-18	18,574		0	0	0
17-19	18,574		0	0	0
18-20					
19-21					

FIVE-YEAR	AVERAGE			
17-21	11,144	0	0	0

ACCOUNT 353.00 STATION EQUIPMENT

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT PCT	NET SALVAGE AMOUNT	PCT
1996	5,552	1,770	32	0	1,770-	32-
1997						
1998						
1999	4,924		0	0		0
2000						
2001						
2002						
2003	8,271	971	12	0	971-	12-
2004	28,699		0	0		0
2005	8,525	244	3	0	244-	3-
2006						
2007						
2008	25,000		0	0		0
2009						
2010						
2011						
2012						
2013						
2014	10,106	5,940	59	0	5,940-	59-
2015	251,224	67,833	27	0	67,833-	
2016	18,716	5,459	29	0	5,459-	29-
2017	124,854	8,210	7	0	8,210-	7-
2018	219,257	21,551	10	0	21,551-	10-
2019	1 1 7 0 0 0 1		1 17			1 🗗
2020	1,179,021	205,362	17	0	205,362-	17-
2021	1,881,249	225,179	12	0	225,179-	12-
TOTAL	3,765,400	542,518	14	0	542,518-	14-
THREE-YE.	AR MOVING AVERAG	ES				
96-98	1,851	590	32	0	590-	32-
97-99	1,641		0	0		0
98-00	1,641		0	0		0
99-01	1,641		0	0		0
00-02						
01-03	2,757	324	12	0	324-	12-
02 - 04	12,323	324	3	0	324-	3 –
03-05	15,165	405	3	0	405-	3-
04-06	12,408	81	1	0	81-	1-
05-07	2,842	81	3	0	81-	3 -
06-08	8,333		0	0		0

ACCOUNT 353.00 STATION EQUIPMENT

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGES						
07-09	8,333		0		0		0
08-10	8,333		0		0		0
09-11							
10-12							
11-13							
12-14	3,369	1,980	59		0	1,980-	59-
13-15	87,110	24,591	28		0	24,591-	28-
14-16	93,349	26,410	28		0	26,410-	28-
15-17	131,598	27,167	21		0	27,167-	21-
16-18	120,942	11,740	10		0	11,740-	10-
17-19	114,704	9,920	9		0	9,920-	9 –
18-20	466,093	75,638	16		0	75,638-	16-
19-21	1,020,090	143,514	14		0	143,514-	14-
FIVE-YEA	R AVERAGE						
17-21	680,876	92,060	14		0	92,060-	14-

ACCOUNTS 353.20 AND 362.20 STATION EQUIPMENT - MAJOR

SUMMARY OF BOOK SALVAGE

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2000	24,335		0		0		0
2001							
2002	40,579		0		0		0
2003	683,187	13,017	2		0	13,017-	2-
2004	70,129	66,253	94		0	66,253-	94-
2005	105,868	3,406	3		0	3,406-	3-
2006	11,848	5,524	47		0	5,524-	47-
2007	32,151	4,148	13		0	4,148-	13-
2008	154,112	28,695	19	30,651	20	1,956	1
2009	2,241	1,357	61		0	1,357-	61-
2010	109,099	10,604	10		0	10,604-	10-
2011							
2012							
2013							
2014							
2015							
2016							
2017							
2018	2,674	1,032	39		0	1,032-	39-
2019							
2020							
2021							
TOTAL	1,236,224	134,036	11	30,651	2	103,385-	8-
THREE-YE	AR MOVING AVERAG	ES					
00-02	21,638		0		0		0
01-03	241,255	4,339	2		0	4,339-	2-
02-04	264,632	26,423	10		0	26,423-	10-
03-05	286,395	27,559	10		0	27,559-	10-
04-06	62,615	25,061	40		0	25,061-	40-
05-07	49,956	4,359	9		0	4,359-	9 –
06-08	66,037	12,789	19	10,217	15	2,572-	4 -
07-09	62,835	11,400	18	10,217	16	1,183-	2-
08-10	88,484	13,552	15	10,217	12	3,335-	4-
09-11	37,113	3,987	11		0	3,987-	11-
10-12	36,366	3,535	10		0	3,535-	10-
11-13							
12-14							
13-15							

13-15 14-16

ACCOUNTS 353.20 AND 362.20 STATION EQUIPMENT - MAJOR

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT PCT	NET SALVAGE AMOUNT	PCT
THREE-YE	AR MOVING AVERAGES					
15-17						
16-18	891	344	39	0	344-	39-
17-19	891	344	39	0	344-	39-
18-20	891	344	39	0	344-	39-
19-21						
FIVE-YEA	R AVERAGE					
17-21	535	206	39	0	206-	39-

ACCOUNT 355.00 POLES AND FIXTURES

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	763	972	127	1,766	232	794	104
1991	14,549	4,066	28	17,670	121	13,605	94
1992	8,323	6,604	79	1,262	15	5,342-	64-
1993	27,199	4,929	18	12,384	46	7,455	27
1994	83,911	17,032	20	150,518	179	133,486	159
1995	46,396	8,076	17	8,057	17	19-	0
1996	109,925	9,135	8		0	9,135-	8 -
1997	4,381	5,437	124	279	б	5,158-	118-
1998	4,211	862	20	5,114	121	4,252	101
1999	50,612	14,338	28	18,395	36	4,057	8
2000	9,767	3,084	32		0	3,084-	32-
2001	117,966	20,992	18		0	20,992-	18-
2002	13,673	6,716	49		0	6,716-	49-
2003	517	1,763	341		0	1,763-	341-
2004	12,902	5,311	41		0	5,311-	41-
2005	36,647	17,279	47	2,000	5	15,279-	42-
2006	47,381	3,638	8		0	3,638-	8 -
2007	75,430	45,207	60		0	45,207-	60-
2008	43,933	5,851	13		0	5,851-	13-
2009	19,683	17,472	89		0	17,472-	89-
2010							
2011	69,526	18,700	27		0	18,700-	27-
2012	20,502		0		0		0
2013	9,915		0		0		0
2014	4,760	8,199	172		0	8,199-	172-
2015		3,338				3,338-	
2016	16,021	33,955	212		0	33,955-	
2017	45,555	54,776	120		0	54,776-	120-
2018		84,870				84,870-	
2019	3,366	73	2		0	73-	2-
2020							
2021	995,920	1,972,555	198	1,882	0	1,970,673-	198-
TOTAL	1,893,732	2,375,229	125	219,327	12	2,155,902-	114-
THREE-YE.	AR MOVING AVERAGE	ES					
90-92	7,878	3,880	49	6,899	88	3,019	38
91-93	16,690	5,200	31	10,439	63	5,239	31
92-94	39,811	9,521	24	54,721	137	45,200	114
93-95	52,502	10,012	19	56,986	109	46,974	89
94-96	80,077	11,414	14	52,858	66	41,444	52

ACCOUNT 355.00 POLES AND FIXTURES

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE.	AR MOVING AVERAGE	S					
95-97	53,567	7,549	14	2,779	5	4,770-	9 –
96-98	39,506	5,145	13	1,798	5	3,347-	8 -
97-99	19,735	6,879	35	7,929	40	1,050	5
98-00	21,530	6,095	28	7,836	36	1,741	8
99-01	59,448	12,805	22	6,132	10	6,673-	11-
00-02	47,135	10,264	22		0	10,264-	22-
01-03	44,052	9,823	22		0	9,823-	22-
02-04	9,031	4,597	51		0	4,597-	51-
03-05	16,689	8,118	49	667	4	7,451-	45-
04-06	32,310	8,743	27	667	2	8,076-	25-
05-07	53,152	22,041	41	667	1	21,375-	40-
06-08	55,581	18,232	33		0	18,232-	33-
07-09	46,349	22,844	49		0	22,844-	49-
08-10	21,205	7,775	37		0	7,775-	37-
09-11	29,737	12,057	41		0	12,057-	41-
10-12	30,009	6,233	21		0	6,233-	21-
11-13	33,314	6,233	19		0	6,233-	19-
12-14	11,726	2,733	23		0	2,733-	23-
13-15	4,891	3,846	79		0	3,846-	79-
14-16	6,927	15,164	219		0	15,164-	219-
15-17	20,525	30,690	150		0	30,690-	150-
16-18	20,525	57,867	282		0	57,867-	282-
17-19	16,307	46,573	286		0	46,573-	286-
18-20	1,122	28,314			0	28,314-	
19-21	333,095	657,542	197	627	0	656,915-	197-
FIVE-YEA	R AVERAGE						
17-21	208,968	422,455	202	376	0	422,078-	202-

ACCOUNT 356.00 OVERHEAD CONDUCTORS AND DEVICES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT PCT
1990	399 5 146	425	107	26	7	399- 100- 10 545 - 205
1991	5,146	752 5,658	15 82	11,297	220	10,545 205
1992	6,930		82 9	584	8	5,074-73-
1993	10,050	915 15 260	9 20	385	4 0	530- 5- 15,269- 20-
1994 1005	74,663	15,269	20 14	7,803	17	
1995	47,175	6,437	14 0	7,803	1 / 0	1,366 3 0
1996	115,748		0		0	0
1997 1998	50		0		0	0
1998		27 100		1 200	3	
2000	38,345	27,198-	- /1-	1,288	3	28,486 74
2000	140,500	13,093	9		0	13,093- 9-
2001	2,879	3,919	9 136		0	3,919-136-
2002	2,019	1,834	130		0	1,834-
2003	5,376	6,881	128		0	6,881- 128-
2004	20,039	0,001	0	2,000	10	2,000 10
2005	71,240	11,817	17	2,000	0	11,817- 17-
2000	39,937	6,050	15		0	6,050- 15-
2007	64,045	16,180	25		0	16,180- 25-
2008	456	1,919-			0	1,919 421
2010	450	1,717	TZT		0	1,717 421
2010		1,563-	_			1,563
2012		1,505				1,305
2012	13,949		0		0	0
2014	10,588		0		0	0
2015	20,000	1,589	U U		0	1,589-
2016	4,853	7,125	147		0	7,125- 147-
2017	43	10	24		0	10- 24-
2018	6,523	6,995	107		0	6,995- 107-
2019	289,816	-,	0		0	0
2020	2,822		0		0	0
2021	246,104	532,334	216	943	0	531,391- 216-
						·
TOTAL	1,217,675	606,603	50	24,327	2	582,276- 48-
THREE-YE2	AR MOVING AVERAGES	5				
90-92	4,158	2,279	55	3,969	95	1,691 41
91-93	7,375	2,442	33	4,089	55	1,647 22
92-94	30,547	7,281	24	323	1	6,958- 23-
93-95	43,963	7,540	17	2,729	б	4,811- 11-
94-96	79,195	7,235	9	2,601	3	4,634- 6-

ACCOUNT 356.00 OVERHEAD CONDUCTORS AND DEVICES

	REGULAR	COST OF REMOVAL	GROSS SALVAGE	NET SALVAGE
YEAR	RETIREMENTS	AMOUNT PCT	AMOUNT PCT	AMOUNT PCT
THREE-YE.	AR MOVING AVERAGE	S		
95-97	54,308	2,146 4	2,601 5	455 1
96-98	38,599	0	0	0
97-99	12,798	9,066- 71-	430 3	9,495 74
98-00	12,798	9,066- 71-	430 3	9,495 74
99-01	59,615	4,702- 8-	430 1	5,131 9
00-02	47,793	5,670 12	0	5,670- 12-
01-03	47,793	6,282 13	0	6,282- 13-
02-04	2,752	4,211 153	0	4,211- 153-
03-05	8,472	2,905 34	667 8	2,238- 26-
04-06	32,219	6,233 19	667 2	5,566- 17-
05-07	43,739	5,956 14	667 2	5,289- 12-
06-08	58,407	11,349 19	0	11,349- 19-
07-09	34,812	6,770 19	0	6,770- 19-
08-10	21,500	4,754 22	0	4,754- 22-
09-11	152	1,161- 764-	0	1,161 764
10-12		521-		521
11-13	4,650	521- 11-	0	521 11
12-14	8,179	0	0	0
13-15	8,179	530 6	0	530- 6-
14-16	5,147	2,905 56	0	2,905- 56-
15-17	1,632	2,908 178	0	2,908- 178-
16-18	3,806	4,710 124	0	4,710- 124-
17-19	98,794	2,335 2	0	2,335- 2-
18-20	99,720	2,332 2	0	2,332- 2-
19-21	179,581	177,445 99	314 0	177,130- 99-
FIVE-YEA	R AVERAGE			
17-21	109,061	107,868 99	189 0	107,679- 99-

ACCOUNT 362.00 STATION EQUIPMENT

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	35,343	23,601	67		0	23,601-	67-
1991		14,827				14,827-	
1992	21,444	3,732	17		0	3,732-	17-
1993	395,717	4,265	1		0	4,265-	1-
1994	608,354	59,357	10	2,449-	0	61,807-	10-
1995	141,231	28,005	20	214	0	27,791-	20-
1996	35,982	13,491	37	16	0	13,476-	37-
1997	63,344	7,053	11	70	0	6,983-	11-
1998	686,272	3,445-			0	3,445	1
1999	181,674-	7,267	4-	5,655	3-	1,612-	1
2000							
2001							
2002							
2003	134,044	50,103	37		0	50,103-	37-
2004	3,033	857	28		0	857-	28-
2005	121,086	25,083	21		0	25,083-	21-
2006	115,429	160,756	139		0	160,756-	
2007	45,070	1,576	3		0	1,576-	3 –
2008	18,828	864	5		0	864-	5 -
2009	511	1,009	197		0	1,009-	
2010	59,547	27,855	47		0	27,855-	
2011	260,714	62,252	24		0	62,252-	24-
2012							
2013	356,343	67,546	19	16,665	5	50,881-	14-
2014	638,580	204,028	32		0	204,028-	32-
2015	372,145	44,602	12	15,327	4	29,275-	8 -
2016	30,518	10,846	36		0	10,846-	36-
2017	24,595	4,715	19		0	4,715-	19-
2018	3,168,288	168,588	5		0	168,588-	5-
2019	2,356,661	40,437	2		0	40,437-	2-
2020	1,064,614	307,364	29		0	307,364-	29-
2021	7,240,542	498,290	7		0	498,290-	7-
TOTAL	17,816,562	1,834,927	10	35,497	0	1,799,430-	10-
	, ,	, , -		, -		, ,	
THREE-YEA	AR MOVING AVERAGI	ES					
90-92	18,929	14,053	74		0	14,053-	74-
91-93	139,054	7,608	5		0	7,608-	5-
92-94	341,838	22,452	7	816-	0	23,268-	7-
93-95	381,768	30,543	8	745-	0	31,288-	8-
94-96	261,856	33,618	13	740-	0	34,358-	13-

ACCOUNT 362.00 STATION EQUIPMENT

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGE	S					
95-97	80,186	16,183	20	100	0	16,083-	20-
96-98	261,866	5,700	2	28	0	5,671-	2-
97-99	189,314	3,625	2	1,908	1	1,717-	1-
98-00	168,199	1,274	1	1,885	1	611	0
99-01	60,558-	2,422	4-	1,885	3-	537-	1
00-02							
01-03	44,681	16,701	37		0	16,701-	37-
02 - 04	45,692	16,987	37		0	16,987-	37-
03-05	86,054	25,348	29		0	25,348-	29-
04-06	79,849	62,232	78		0	62,232-	78-
05-07	93,861	62,472	67		0	62,472-	67-
06-08	59,776	54,399	91		0	54,399-	91-
07-09	21,470	1,150	5		0	1,150-	5-
08-10	26,295	9,909	38		0	9,909-	38-
09-11	106,924	30,372	28		0	30,372-	28-
10-12	106,754	30,036	28		0	30,036-	28-
11-13	205,686	43,266	21	5,555	3	37,711-	18-
12-14	331,641	90,525	27	5,555	2	84,970-	26-
13-15	455,689	105,392	23	10,664	2	94,728-	21-
14-16	347,081	86,492	25	5,109	1	81,383-	23-
15-17	142,419	20,054	14	5,109	4	14,945-	10-
16-18	1,074,467	61,383	6		0	61,383-	б-
17-19	1,849,848	71,247	4		0	71,247-	4-
18-20	2,196,521	172,130	8		0	172,130-	8 -
19-21	3,553,939	282,030	8		0	282,030-	8-
FIVE-YEA	R AVERAGE						
17-21	2,770,940	203,879	7		0	203,879-	7-

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	217,732	98,829	45	151,720	70	52,891	24
1991	220,355	160,349	73	133,244	60	27,105-	12-
1992	838,996	181,086	22	373,355	45	192,269	23
1993	187,297	118,920	63	213,890	114	94,970	51
1994	383,269	194,529	51	144,301	38	50,228-	13-
1995	477,684	171,827	36	380,720	80	208,893	44
1996	174,965	58,850	34	32,929-	19-	91,778-	52-
1997	147,637	45,107-	31-	107,087	73	152,194	103
1998	207,158	27,024	13	20,768	10	6,256-	3 –
1999	395,043	108,686	28	7,371	2	101,315-	26-
2000	102,198	7,376-	- 7-		0	7,376	7
2001	548,586	74,872	14	12,273	2	62,599-	11-
2002	101,028	5,918	б		0	5,918-	б-
2003	138,540	153,817	111		0	153,817-	111-
2004	504,478	3,253	1		0	3,253-	1-
2005	656,916	76,489	12	4	0	76,485-	12-
2006	307,789	6,199	2		0	6,199-	2-
2007	485,951	38,788	8		0	38,788-	8 -
2008	406,689	35,745	9		0	35,745-	9 –
2009	329,339	191,659	58	46-	0	191,705-	58-
2010	299,289	467,435	156		0	467,435-	156-
2011	270,974	2,001	1		0	2,001-	1-
2012	154,070	72,712	47		0	72,712-	47-
2013	295,418		0		0		0
2014	571,297	392,057	69	272	0	391,785-	69-
2015	15,426	60,190	390	б-	0	60,197-	
2016	655,881	314,794	48		0	314,794-	48-
2017	244,982	740,748	302	76,865	31	663,883-	
2018	409,478	1,465,094	358	1,989	0	1,463,105-	
2019	276,844	67,523	24		0	67,523-	24-
2020	392,112	186,530	48		0	186,530-	48-
2021	793,617	2,463,131	310	123-	0	2,463,253-	310-
TOTAL	11,211,038	7,886,572	70	1,590,755	14	6,295,817-	56-
THREE-YEA	AR MOVING AVERAGE	S					
90-92	425,694	146,755	34	219,440	52	72,685	17
91-93	415,549	153,452	37	240,163	58	86,711	21
92-94	469,854	164,845	35	243,849	52	79,004	17
93-95	349,417	161,759	46	246,304	70	84,545	24
94-96	345,306	141,735	41	164,031	48	22,295	6

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGE	S					
95-97	266,762	61,857	23	151,626	57	89,769	34
96-98	176,586	13,589	8	31,642	18	18,053	10
97-99	249,946	30,201	12	45,076	18	14,875	6
98-00	234,800	42,778	18	9,380	4	33,398-	14-
99-01	348,609	58,728	17	б,548	2	52,179-	15-
00-02	250,604	24,471	10	4,091	2	20,380-	8 -
01-03	262,718	78,202	30	4,091	2	74,111-	28-
02 - 04	248,015	54,329	22		0	54,329-	22-
03-05	433,311	77,853	18	1	0	77,851-	18-
04-06	489,728	28,647	б	1	0	28,645-	б-
05-07	483,552	40,492	8	1	0	40,491-	8 -
06-08	400,143	26,911	7		0	26,911-	7-
07-09	407,326	88,731	22	15-	0	88,746-	22-
08-10	345,106	231,613	67	15-	0	231,629-	67-
09-11	299,867	220,365	73	15-	0	220,380-	73-
10-12	241,444	180,716	75		0	180,716-	75-
11-13	240,154	24,904	10		0	24,904-	10-
12-14	340,261	154,923	46	91	0	154,832-	46-
13-15	294,047	150,749	51	88	0	150,661-	51-
14-16	414,201	255,680	62	88	0	255,592-	62-
15-17	305,430	371,911	122	25,619	8	346,291-	113-
16-18	436,780	840,212	192	26,284	6	813,927-	186-
17-19	310,435	757,788	244	26,284	8	731,504-	236-
18-20	359,478	573,049	159	663	0	572,386-	159-
19-21	487,524	905,728	186	41-	0	905,769-	186-
FIVE-YEA	R AVERAGE						
17-21	423,407	984,605	233	15,746	4	968,859-	229-

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

F	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR RET	TIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	303,463	136,626	45	75,581	25	61,045-	20-
1991	227,749	147,390	65	155,875	68	8,484	4
1992	313,481	219,476	70	84,048	27	135,428-	43-
1993	240,027	136,014	57	84,089	35	51,925-	22-
1994	611,884	406,780	66	170,730	28	236,049-	39-
1995	596,355	234,379	39	342,025	57	107,646	18
1996	312,145	12,935	4	18,101-	б-	31,036-	10-
1997	80,667	130,365	162	19,621	24	110,744-	137-
1998	138,235	14,622	11	16,660	12	2,038	1
1999	393,713	121,417	31	2,920	1	118,497-	30-
2000	130,205	844	1		0	844-	1-
2001	729,041	196,330	27	45,423	6	150,907-	21-
2002	25,330-	55,995	221-		0	55,995-	221
2003	118,377	362,994	307		0	362,994-	307-
2004	836,373	35,574	4		0	35,574-	4 -
2005	813,573	459,814	57	44	0	459,770-	57-
2006	390,352	63,797	16		0	63,797-	16-
2007	973,394	389,352	40		0	389,352-	40-
2008	538,581	224,711	42		0	224,711-	42-
2009	632,125	200,030	32	1,889	0	198,141-	31-
2010	935,685	1,403,092	150		0	1,403,092-	150-
2011	860,354	5,419	1		0	5,419-	1-
	1,303,520	352,308	27		0	352,308-	27-
2013	2,705,340		0		0		0
	7,116,082	1,161,243	16	7,705	0	1,153,538-	16-
	1,436,963-	328,128	23-	110-	0	328,238-	23
2016	3,273,645	989,485	30		0	989,485-	30-
2017	1,314,887	1,074,671	82	112,011	9	962,660-	73-
2018	724,734	1,690,786	233	1,989	0	1,688,797-	233-
	2,613,458	32,091	1		0	32,091-	1-
2020	2,763,999	484,622	18		0	484,622-	18-
2021	1,413,688	3,901,868	276	358-	0	3,902,226-	276-
TOTAL 3	1,942,842	14,973,158	47	1,102,041	3	13,871,117-	43-
THREE-YEAR M	OVING AVERAGES	5					
90-92	281,564	167,831	60	105,168	37	62,663-	22-
91-93	260,419	167,627	64	108,004	41	59,623-	23-
92-94	388,464	254,090	65	112,956	29	141,134-	36-
93-95	482,755	259,057	54	198,948	41	60,109-	12-
94-96	506,795	218,031	43	164,885	33	53,146-	10-

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGE	IS					
95-97	329,723	125,893	38	114,515	35	11,378-	3-
96-98	177,016	52,641	30	6,060	3	46,581-	26-
97-99	204,205	88,801	43	13,067	б	75,734-	37-
98-00	220,718	45,628	21	6,527	3	39,101-	18-
99-01	417,653	106,197	25	16,114	4	90,083-	22-
00-02	277,972	84,390	30	15,141	5	69,249-	25-
01-03	274,029	205,106	75	15,141	б	189,966-	69-
02 - 04	309,807	151,521	49		0	151,521-	49-
03-05	589,441	286,127	49	15	0	286,113-	49-
04-06	680,099	186,395	27	15	0	186,380-	27-
05-07	725,773	304,321	42	15	0	304,307-	42-
06-08	634,109	225,954	36		0	225,954-	36-
07-09	714,700	271,365	38	630	0	270,735-	38-
08-10	702,131	609,278	87	630	0	608,648-	87-
09-11	809,388	536,180	66	630	0	535,551-	66-
10-12	1,033,186	586,940	57		0	586,940-	57-
11-13	1,623,071	119,242	7		0	119,242-	7-
12-14	3,708,314	504,517	14	2,568	0	501,948-	14-
13-15	2,794,820	496,457	18	2,531	0	493,925-	18-
14-16	2,984,255	826,285	28	2,531	0	823,754-	28-
15-17	1,050,523	797,428	76	37,300	4	760,128-	72-
16-18	1,771,089	1,251,647	71	38,000	2	1,213,647-	69-
17-19	1,551,026	932,516	60	38,000	2	894,516-	58-
18-20	2,034,064	735,833	36	663	0	735,170-	36-
19-21	2,263,715	1,472,860	65	119-	0	1,472,980-	65-
FIVE-YEA	R AVERAGE						
17-21	1,766,153	1,436,807	81	22,728	1	1,414,079-	80-

ACCOUNT 366.00 UNDERGROUND CONDUIT

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1990	2,240	6,496	290	9,926	443	3,431	153
1991	3,988	2,036	51	3,033-		5,069-	
1992	8,711	3,249	37	2,761	32	489-	б-
1993	2,058	1,169	57		0	1,169-	57-
1994	2,013	894	44		0	894-	
1995	1,881	1,411	75		0	1,411-	75-
1996							
1997	1,360	217-	16-		0	217	16
1998							
1999	1,518	505	33		0	505-	33-
2000							
2001							
2002	4,609		0		0		0
2003	6,541	1,563	24		0	1,563-	24-
2004	3,222		0		0		0
2005	22,393	5,165	23		0	5,165-	23-
2006	11,712		0		0		0
2007	4,158	45	1		0	45-	1-
2008	5,640	1,135	20		0	1,135-	20-
2009	961	38	4		0	38-	4 -
2010	991	74,897			0	74,897-	
2011	375	1	0		0	1-	0
2012	437	11,184			0	11,184-	
2013	44,240		0		0		0
2014	17,399	10,597	61	42	0	10,556-	61-
2015	8,309	149,206		99-	1-	149,305-	
2016	25,192	37	0		0	37-	0
2017		28,474-		6,494		34,967	
2018	41,871	1,623	4		0	1,623-	4 -
2019	1,872		0		0		0
2020	1		0		0		0
2021	18,722	8,719	47		0	8,719-	47-
TOTAL	242,413	251,280	104	16,091	7	235,189-	97-
THREE-YE.	AR MOVING AVERAGE	IS					
90-92	4,980	3,927	79	3,218	65	709-	14-
91-93	4,919	2,152	44	90-	2-	2,242-	46-
92-94	4,261	1,771	42	920	22	850-	20-
93-95	1,984	1,158	58		0	1,158-	58-
94-96	1,298	768	59		0	768-	59-

ACCOUNT 366.00 UNDERGROUND CONDUIT

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YEA	AR MOVING AVERAGES	5					
95-97	1,080	398	37		0	398-	37-
96-98	453	72-	16-		0	72	16
97-99	959	96	10		0	96-	10-
98-00	506	168	33		0	168-	33-
99-01	506	168	33		0	168-	33-
00-02	1,536		0		0		0
01-03	3,717	521	14		0	521-	14-
02 - 04	4,790	521	11		0	521-	11-
03-05	10,718	2,242	21		0	2,242-	21-
04-06	12,442	1,722	14		0	1,722-	14-
05-07	12,754	1,737	14		0	1,737-	14-
06-08	7,170	393	5		0	393-	5 -
07-09	3,586	406	11		0	406-	11-
08-10	2,531	25,357			0	25,357-	
09-11	776	24,979			0	24,979-	
10-12	601	28,694			0	28,694-	
11-13	15,017	3,729	25		0	3,729-	25-
12-14	20,692	7,260	35	14	0	7,247-	35-
13-15	23,316	53,268	228	19-	0	53,287-	229-
14-16	16,967	53,280	314	19-	0	53,299-	314-
15-17	11,167	40,256	360	2,131	19	38,125-	341-
16-18	22,354	8,938-	40-	2,165	10	11,103	50
17-19	14,581	8,950-	61-	2,165	15	11,115	76
18-20	14,581	541	4		0	541-	4 -
19-21	6,865	2,906	42		0	2,906-	42-
FIVE-YEAR	R AVERAGE						
17-21	12,493	3,626-	29-	1,299	10	4,925	39

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1990	87,401	30,394	35	23,927	27	6,467-	7-
1991	31,879	17,356	54	36,234	114	18,877	59
1992	42,260	14,850	35	9,879	23	4,971-	12-
1993	69,647	24,244	35	15,918	23	8,326-	12-
1994	97,300	39,946	41	35,687	37	4,259-	4-
1995	75,590	44,001	58	261,764-		305,765-	
1996	34,498	3,291	10	1,099	3	2,192-	6-
1997	3,146	11,711-		6,457	205	18,168	577
1998	1,662	5,918	356	2,565	154	3,353-	
1999	27,742	5,107	18		0	5,107-	18-
2000	0 000		0		0		0
2001	8,202		0		0		0
2002	29,273		0		0	20 107	0
2003 2004	50,583	20,187 75-	40 0		0	20,187- 75	40- 0
2004 2005	221,372 199,633	-	50	7	0 0	100,111-	0 50-
2005	91,793	100,118	2	1	0	1,805-	50- 2-
2008		1,805			0	16,972-	2- 9-
2007	186,161	16,972	9 25		0	57,868-	9- 35-
2008	165,461 221,383	57,868 80,193	35 36	152-	0	80,345-	35- 36-
2009	94,652	797,328	842	192-	0	797,328-	
2010	172,050	167-			0	167	042-
2011	191,577	55,921	29		0	55,921-	29-
2012	527,957	JJ,921	0		0	55,921-	29- 0
2013	441,377	68,658	16	481	0	68,177-	15-
2015	23,839-	56,707	238-	16-	0	56,723-	
2015	236,215	34,154	14	10	0	34,154-	14-
2017	177,846	61,315	34	3,688-	2-	65,003-	37-
2018	243,960	123,284	51	57000	0	123,284-	51-
2019	815,636	61,384	8		0	61,384-	8-
2020	227,739	71,586	31		0	71,586-	31-
2021	471,639	265,699	56	24-	0	265,724-	56-
	,	· · , · · ·				,	
TOTAL	5,221,795	2,046,334	39	133,391-	3-	2,179,725-	42-
THREE-YEA	AR MOVING AVERAGI	ES					
90-92	53,847	20,867	39	23,347	43	2,480	5
91-93	47,929	18,817	39	20,677	43	1,860	4
92-94	69,736	26,346	38	20,495	29	5,852-	-8
93-95	80,846	36,064	45	70,053-	87-	106,117-	
94-96	69,129	29,079	42	74,993-		104,072-	
	0,127	20,019	12	11,000-	T00	101,072-	тЭт

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGE	S					
95-97	37,745	11,860	31	84,736-	224-	96,596-	256-
96-98	13,102	834-	б-	3,374	26	4,208	32
97-99	10,850	229-	2-	3,008	28	3,236	30
98-00	9,802	3,675	37	855	9	2,820-	29-
99-01	11,982	1,702	14		0	1,702-	14-
00-02	12,492		0		0		0
01-03	29,353	6,729	23		0	6,729-	23-
02 - 04	100,409	6,704	7		0	6,704-	7 –
03-05	157,196	40,077	25	2	0	40,075-	25-
04-06	170,932	33,949	20	2	0	33,947-	20-
05-07	159,196	39,632	25	2	0	39,629-	25-
06-08	147,805	25,548	17		0	25,548-	17-
07-09	191,002	51,678	27	51-	0	51,728-	27-
08-10	160,499	311,797	194	51-	0	311,847-	194-
09-11	162,695	292,451	180	51-	0	292,502-	180-
10-12	152,759	284,361	186		0	284,361-	186-
11-13	297,194	18,585	6		0	18,585-	б-
12-14	386,970	41,526	11	160	0	41,366-	11-
13-15	315,165	41,788	13	155	0	41,633-	13-
14-16	217,918	53,173	24	155	0	53,018-	24-
15-17	130,074	50,725	39	1,235-	1-	51,960-	40-
16-18	219,340	72,918	33	1,229-	1-	74,147-	34-
17-19	412,481	81,994	20	1,229-	0	83,224-	20-
18-20	429,112	85,418	20		0	85,418-	20-
19-21	505,005	132,890	26	8-	0	132,898-	26-
FIVE-YEA	R AVERAGE						
17-21	387,364	116,654	30	743-	0	117,396-	30-

ACCOUNTS 368.00 AND 368.20 LINE TRANSFORMERS

37E N D	REGULAR	COST OF REMOVAL	DOT	GROSS SALVAGE	DOT	NET SALVAGE	DOT
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	362,018	281,670	78	218,313	60	63,357-	18-
1991	266,727	70,694	27	165,931	62	95,237	36
1992	375,952	101,792	27	115,679	31	13,887	4
1993	487,171	39,446	8	170,173	35	130,728	27
1994	574,496	167,718	29	241,011	42	73,293	13
1995	482,193	63,494	13	336,495	70	273,001	57
1996	446,033	16,438	4	148,036	33	131,599	30
1997	265,872	15,936	6	177,691	67	161,755	61
1998	215,514	3,437	2	110,476	51	107,039	50
1999	264,966	21,062	8	110,002	42	88,941	34
2000	13,975	6,880-	49-		0	6,880	49
2001	551,332	14,567	3	1,066	0	13,501-	2-
2002	334,527	2,260	1		0	2,260-	1-
2003	310,036	41,328	13		0	41,328-	13-
2004	376,438	860	0		0	860-	0
2005	563,912	73,053	13		0	73,053-	13-
2006	208,781	3,202	2		0	3,202-	2-
2007	528,209	11,499	2		0	11,499-	2-
2008	197,196	2,225	1		0	2,225-	1-
2009	965,741	31,994	3	77-	0	32,071-	3 –
2010	53,216	577,525			0	577,525-	
2011	134,367	737	1		0	737-	1-
2012	180,054	39,145	22		0	39,145-	22-
2013	131,425		0		0		0
2014	477,978	89,621	19	362	0	89,259-	19-
2015	672,040	340,393	51	65,764	10	274,629-	41-
2016	1,829,330	12,300	1		0	12,300-	1-
2017	710,145	442,465	62	26,532	4	415,933-	59-
2018	715,201	1,192,946	167	140	0	1,192,806-	167-
2019	900,734	46,489	5		0	46,489-	5 -
2020	1,182,994	38,789	3		0	38,789-	3 –
2021	1,218,878	1,569,101	129	35-	0	1,569,135-	129-
TOTAL	15,997,452	5,305,303	33	1,887,560	12	3,417,743-	21-
THREE-YE.	AR MOVING AVERAGI	ES					
90-92	334,899	151,385	45	166,641	50	15,256	5
91-93	376,616	70,644	19	150,595	40	79,950	21
92-94	479,206	102,985	21	175,621	37	72,636	15
93-95	514,620	90,219	18	249,227	48	159,007	31
94-96	500,908	82,550	16	241,848	48	159,298	32

ACCOUNTS 368.00 AND 368.20 LINE TRANSFORMERS

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE.	AR MOVING AVERAGES	5					
95-97	398,033	31,956	8	220,741	55	188,785	47
96-98	309,140	11,937	4	145,401	47	133,465	43
97-99	248,784	13,478	5	132,723	53	119,245	48
98-00	164,818	5,873	4	73,493	45	67,620	41
99-01	276,758	9,583	3	37,023	13	27,440	10
00-02	299,945	3,315	1	355	0	2,960-	1-
01-03	398,632	19,385	5	355	0	19,030-	5 -
02-04	340,334	14,816	4		0	14,816-	4 -
03-05	416,795	38,414	9		0	38,414-	9 –
04-06	383,044	25,705	7		0	25,705-	7 –
05-07	433,634	29,251	7		0	29,251-	7 –
06-08	311,395	5,642	2		0	5,642-	2-
07-09	563,715	15,239	3	26-	0	15,265-	3 –
08-10	405,384	203,915	50	26-	0	203,940-	50-
09-11	384,441	203,419	53	26-	0	203,444-	53-
10-12	122,546	205,802	168		0	205,802-	168-
11-13	148,616	13,294	9		0	13,294-	9 –
12-14	263,153	42,922	16	121	0	42,801-	16-
13-15	427,148	143,338	34	22,042	5	121,296-	28-
14-16	993,116	147,438	15	22,042	2	125,396-	13-
15-17	1,070,505	265,053	25	30,765	3	234,287-	22-
16-18	1,084,892	549,237	51	8,891	1	540,346-	50-
17-19	775,360	560,633	72	8,891	1	551,743-	71-
18-20	932,976	426,075	46	47	0	426,028-	46-
19-21	1,100,869	551,460	50	12-	0	551,471-	50-
FIVE-YEA	R AVERAGE						
17-21	945,590	657,958	70	5,327	1	652,631-	69-

ACCOUNTS 369.10 AND 369.20 SERVICES

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	53,521	55,416	104	12,566	23	42,850-	80-
1991	67,772	63,859	94	39	0	63,820-	94-
1992	52,070	46,374	89	8,328	16	38,046-	73-
1993	57,132	54,546	95	8,066	14	46,480-	81-
1994	62,665	37,281	59	11,630	19	25,651-	41-
1995	68,188	31,387	46	34,873	51	3,486	5
1996	56,475	33,400	59	2,906	5	30,493-	54-
1997	49,435	5,919	12	6,259	13	340	1
1998	72,403	41,964	58	7,514	10	34,451-	48-
1999	68,815	19,196	28		0	19,196-	28-
2000	2,737	3,885-	142-		0	3,885	142
2001	77,480	13,283	17	308	0	12,975-	17-
2002	10,930		0		0		0
2003	47,881	3,299	7		0	3,299-	7-
2004	262,044		0		0		0
2005	146,322	115,968	79		0	115,968-	79-
2006	189,787	16	0		0	16-	0
2007	433,399	339	0		0	339-	0
2008	238,365	8,308	3		0	8,308-	3 -
2009	152,224	34,526	23	57-	0	34,583-	23-
2010	10,643	254,394			0	254,394-	
2011	29,666		0		0		0
2012	12,427	11,184	90		0	11,184-	90-
2013	10,233		0		0		0
2014	126,074	4,963	4	24	0	4,939-	4 -
2015	4,862-	5,045	104-		0	5,045-	
2016	26,336	62,677	238	54-	0	62,730-	
2017	22,550	194,759	864	3,307	15	191,451-	849-
2018	10,932	133,018		22-	0	133,040-	
2019	11,628	112,620	969	23-	0	112,643-	
2020	8,213	78,090	951	16-	0	78,106-	951-
2021	8,368	141,408		62-	1-	141,470-	
TOTAL	2,441,854	1,559,354	64	95,586	4	1,463,768-	60-
THREE-YE.	AR MOVING AVERAGE	IS					
90-92	57,787	55,216	96	6,978	12	48,239-	83-
91-93	58,991	54,926	93	5,478	9	49,449-	84-
92-94	57,289	46,067	80	9,341	16	36,726-	64-
93-95	62,662	41,071	66	18,190	29	22,882-	37-
94-96	62,443	34,023	54	16,470	26	17,553-	28-
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ACCOUNTS 369.10 AND 369.20 SERVICES

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGES	3					
95-97	58,033	23,568	41	14,679	25	8,889-	15-
96-98	59,438	27,094	46	5,560	9	21,535-	36-
97-99	63,551	22,360	35	4,591	7	17,769-	28-
98-00	47,985	19,092	40	2,505	5	16,587-	35-
99-01	49,678	9,531	19	103	0	9,429-	19-
00-02	30,383	3,133	10	103	0	3,030-	10-
01-03	45,430	5,527	12	103	0	5,425-	12-
02 - 04	106,952	1,100	1		0	1,100-	1-
03-05	152,083	39,756	26		0	39,756-	26-
04-06	199,385	38,662	19		0	38,661-	19-
05-07	256,503	38,775	15		0	38,774-	15-
06-08	287,184	2,888	1		0	2,888-	1-
07-09	274,663	14,391	5	19-	0	14,410-	5 -
08-10	133,744	99,076	74	19-	0	99,095-	74-
09-11	64,178	96,307	150	19-	0	96,326-	150-
10-12	17,579	88,526	504		0	88,526-	504-
11-13	17,442	3,728	21		0	3,728-	21-
12-14	49,578	5,382	11	8	0	5,374-	11-
13-15	43,815	3,336	8	8	0	3,328-	8 -
14-16	49,182	24,228	49	10-	0	24,238-	49-
15-17	14,675	87,494	596	1,085	7	86,409-	589-
16-18	19,939	130,151	653	1,077	5	129,074-	647-
17-19	15,037	146,799	976	1,087	7	145,711-	969-
18-20	10,257	107,909		20-	0	107,930-	
19-21	9,403	110,706		34-	0	110,740-	
FIVE-YEA	R AVERAGE						
17-21	12,338	131,979		637	5	131,342-	

ACCOUNT 370.11 METERS AND METERING EQUIPMENT

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1990	93,976	11,420	12	81,341	87	69,921	74
1990	90,291	7,855	9	89,564	99	81,709	90
1991	255,062	9,174	9 4	84,464	33	75,290	30
1992	329,246	8,920	4 3	89,303	33 27	80,383	24
1993	283,205	15,510	5	59,032	27	43,523	24 15
1994	155,278	13,244	9	49,500	32	36,257	23
1995	240,095	10,670	4	64,189	27	53,520	22
1990	239,605	19,453	8	75,142	31	55,690	23
1998	329,257	19,455	6	61,248	19	42,165	13
1999	670,128	2,766	0	11,691	2	8,925	1
2000	070,120	2,700	0	11,001	2	0,725	Ŧ
2000	447,957		0		0		0
2001	117,957		0		0		0
2002	387,642	104,633	27	25,649	7	78,984-	20-
2003	297,843	17	0	23,019	0	17-	0
2001	576,514	Ξ,	0		0	± /	0
2005	653,849		0		0		0
2000	590,455		0		0		0
2008	1,366,259		0		0		0
2009	276,416		0		0		0
2010	2707120	645-			Ū	645	0
2011	811,880	76,497	9		0	76,497-	9-
2012	600,159	60,900	10		0	60,900-	10-
2013	65,697	,	0		0	· · · , · · · ·	0
2014	320,832	24,788	8		0	24,788-	8 -
2015							
2016	3,055,318		0		0		0
2017	622,807		0		0		0
2018	112,286	193,192	172		0	193,192-	172-
2019	436,108	301,426	69		0	301,426-	69-
2020	571,278		0		0		0
2021		818				818-	
TOTAL	13,879,442	879,719	б	691,123	5	188,596-	1-
THREE-YEA	AR MOVING AVERAGES	5					
			6	05 100	EO	75 610	50
90-92 01 02	146,443 224,866	9,483	6 4	85,123	58 20	75,640	52 25
91-93 92-94		8,649		87,777	39 27	79,128	35
92-94 93-95	289,171	11,201	4 5	77,600	27 26	66,399 52,207	23
	255,909	12,558	5	65,945 57 574	26 25	53,387 44,433	21 20
94-96	226,193	13,141	б	57,574	25	44,433	20

ACCOUNT 370.11 METERS AND METERING EQUIPMENT

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGE	S					
95-97	211,659	14,455	7	62,944	30	48,489	23
96-98	269,653	16,402	б	66,860	25	50,458	19
97-99	412,997	13,767	3	49,360	12	35,593	9
98-00	333,128	7,283	2	24,313	7	17,030	5
99-01	372,695	922	0	3,897	1	2,975	1
00-02	149,319		0		0		0
01-03	278,533	34,878	13	8,550	3	26,328-	9 –
02 - 04	228,495	34,883	15	8,550	4	26,334-	12-
03-05	420,666	34,883	8	8,550	2	26,334-	б-
04-06	509,402	6	0		0	б-	0
05-07	606,939		0		0		0
06-08	870,188		0		0		0
07-09	744,377		0		0		0
08-10	547,558	215-	0		0	215	0
09-11	362,765	25,284	7		0	25,284-	7-
10-12	470,680	45,584	10		0	45,584-	10-
11-13	492,578	45,799	9		0	45,799-	9–
12-14	328,896	28,563	9		0	28,563-	9–
13-15	128,843	8,263	б		0	8,263-	б-
14-16	1,125,383	8,263	1		0	8,263-	1-
15-17	1,226,042		0		0		0
16-18	1,263,470	64,397	5		0	64,397-	5 -
17-19	390,401	164,873	42		0	164,873-	42-
18-20	373,224	164,873	44		0	164,873-	44-
19-21	335,795	100,748	30		0	100,748-	30-
FIVE-YEA	R AVERAGE						
17-21	348,496	99,087	28		0	99,087-	28-

ACCOUNT 371.20 COMPANY-OWNED OUTDOOR LIGHTING

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
2011	1,579-		0		0		0
2012	389-	5,592			0	5,592-	
2013							
2014							
2015							
2016							
2017	102,165	4,769-	- 5-	675	1	5,444	5
2018	44,527	52,597	118		0	52,597-	118-
2019	3,422		0		0		0
2020	18,916		0		0		0
2021	18,043	685	4		0	685-	4 -
TOTAL	185,105	54,106	29	675	0	53,431-	29-
THREE-YEA	AR MOVING AVERAGES	S					
11-13	656-	1,864	284-		0	1,864-	284
12-14	130-	1,864			0	1,864-	
13-15							
14-16							
15-17	34,055	1,590-	- 5-	225	1	1,814	5
16-18	48,897	15,943	33	225	0	15,718-	32-
17-19	50,038	15,943	32	225	0	15,718-	31-
18-20	22,288	17,532	79		0	17,532-	79-
19-21	13,461	228	2		0	228-	2-
FIVE-YEAR	R AVERAGE						
17-21	37,415	9,703	26	135	0	9,568-	26-

ACCOUNT 373.10 STREET LIGHTING - OVERHEAD

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1990	20,216	7,522	37	4,336	21	3,187-	16-
1991	9,619	6,948	72	3,286	34	3,662-	38-
1992	9,688	4,726	49	1,156	12	3,570-	37-
1993	16,190	4,106	25	1,333	8	2,773-	17-
1994	28,579	5,619	20	13,033	46	7,413	26
1995	29,964	6,883	23	46,611	156	39,728	133
1996	18,284	4,333	24	7	0	4,326-	24-
1997	5,424	1,902-		108	2	2,010	37
1998	13,430	2,834	21	8	0	2,826-	21-
1999	29,130	5,860	20	-	0	5,860-	20-
2000	5,110	1,868-			0	1,868	37
2001	512,299	6,338	1	234	0	6,104-	1-
2002	10,538	461	4		0	461-	4-
2003	14,022	105	1		0	105-	1-
2004	77,153	288	0		0	288-	0
2005	121,631	29,975	25	14	0	29,961-	25-
2006	43,772	119	0		0	119-	0
2007	39,262	2,090	5		0	2,090-	5 -
2008	40,843	401	1		0	401-	1-
2009	55,463	6,831	12	1-	0	6,832-	12-
2010	4,469	16,355	366		0	16,355-	366-
2011	4,784	7-	0		0	7	0
2012	7,687	11,581	151		0	11,581-	151-
2013	47,445		0		0		0
2014	78,900	5,364	7	55	0	5,308-	7-
2015	78,784-	699	1-		0	699-	1
2016	122,126	744	1		0	744-	1-
2017	190,772	137,937	72	220	0	137,717-	72-
2018		32,303				32,303-	
2019							
2020		1,096				1,096-	
2021		43				43-	
TOTAL	1,478,014	297,785	20	70,399	5	227,386-	15-
THREE-YEA	AR MOVING AVERAGE:	S					
90-92	13,174	6,399	49	2,926	22	3,473-	26-
91-93	11,832	5,260	44	1,925	16	3,335-	28-
92-94	18,152	4,817	27	5,174	29	357	2
93-95	24,911	5,536	22	20,326	82	14,790	59
94-96	25,609	5,612	22	19,883	78	14,272	56

ACCOUNT 373.10 STREET LIGHTING - OVERHEAD

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGE	IS					
95-97	17,891	3,104	17	15,575	87	12,471	70
96-98	12,379	1,755	14	41	0	1,714-	14-
97-99	15,994	2,264	14	39	0	2,225-	14-
98-00	15,890	2,275	14	3	0	2,273-	14-
99-01	182,179	3,443	2	78	0	3,365-	2-
00-02	175,982	1,644	1	78	0	1,566-	1-
01-03	178,953	2,302	1	78	0	2,224-	1-
02 - 04	33,904	285	1		0	285-	1-
03-05	70,935	10,123	14	5	0	10,118-	14-
04-06	80,852	10,127	13	5	0	10,123-	13-
05-07	68,222	10,728	16	5	0	10,723-	16-
06-08	41,292	870	2		0	870-	2-
07-09	45,189	3,107	7		0	3,108-	7 -
08-10	33,591	7,862	23		0	7,863-	23-
09-11	21,572	7,726	36		0	7,727-	36-
10-12	5,646	9,310	165		0	9,310-	165-
11-13	19,972	3,858	19		0	3,858-	19-
12-14	44,677	5,648	13	18	0	5,630-	13-
13-15	15,853	2,021	13	18	0	2,002-	13-
14-16	40,747	2,269	б	18	0	2,251-	б-
15-17	78,038	46,460	60	73	0	46,387-	59-
16-18	104,299	56,995	55	73	0	56,922-	55-
17-19	63,591	56,747	89	73	0	56,674-	89-
18-20		11,133				11,133-	
19-21		380				380-	
FIVE-YEA	R AVERAGE						
17-21	38,154	34,276	90	44	0	34,232-	90-

ACCOUNT 373.20 STREET LIGHTING - BOULEVARD

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1990	3,523	2,720	77	6,087	173	3,367	96
1990 1991	15,833	5,713	36	4,585	173 29	1,129-	90 7-
1991	18,138	7,473	41	4,385	62	3,842	21
1992	9,699	2,227	23	9,587	99	7,360	21 76
1993	6,263	3,760	60	6,179	99	2,419	39
1994	11,168	1,070	10	1,952	17	882	8
1996	15,106	4,906	32	1,752	0	4,906-	32-
1997	9,535	761-			0	761	8
1998	29,706	701	2		0	703-	2-
1999	24,055	3,273	14		0	3,273-	14-
2000	21,000	57275			Ũ	57275	
2001	10,627		0		0		0
2002	22,424		0		0		0
2003	3,503	1,182	34		0	1,182-	34-
2004	20,786		0		0		0
2005	30,122	3,362	11		0	3,362-	11-
2006	25,595		0		0		0
2007	48,101		0		0		0
2008	18,175	491	3		0	491-	3 –
2009	27,543	2,369	9		0	2,369-	9 –
2010	14,568		607		0	88,454-	607-
2011	27,464	6	0		0	б-	0
2012	13,982	40	0		0	40-	0
2013	23,915		0		0		0
2014	2,248	204	9		0	204-	9 –
2015	11,573-		0		0		0
2016	15,664	27	0		0	27-	0
2017	12,829		0		0		0
2018		13,393				13,393-	
2019							
2020		1,052-				1,052	
2021							
TOTAL	448,997	139,562	31	39,704	9	99,858-	22-
THREE-YEA	AR MOVING AVERAGE	S					
90-92	12,498	5,302	42	7,329	59	2,027	16
91-93	14,557	5,138	35	8,495	58	3,358	23
92-94	11,367	4,486	39	9,027	79	4,540	40
93-95	9,043	2,352	26	5,906	65	3,554	39
94-96	10,845	3,245	30	2,710	25	535-	5-

ACCOUNT 373.20 STREET LIGHTING - BOULEVARD

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGE:	S					
95-97	11,936	1,738	15	651	5	1,088-	9 –
96-98	18,116	1,616	9		0	1,616-	9 –
97-99	21,098	1,072	5		0	1,072-	5 -
98-00	17,920	1,326	7		0	1,326-	7 -
99-01	11,561	1,091	9		0	1,091-	9 –
00-02	11,017		0		0		0
01-03	12,185	394	3		0	394-	3 –
02 - 04	15,571	394	3		0	394-	3 –
03-05	18,137	1,515	8		0	1,515-	8 -
04-06	25,501	1,121	4		0	1,121-	4 -
05-07	34,606	1,121	3		0	1,121-	3 –
06-08	30,624	164	1		0	164-	1-
07-09	31,273	953	3		0	953-	3 –
08-10	20,095	30,438	151		0	30,438-	151-
09-11	23,192	30,277	131		0	30,277-	131-
10-12	18,671	29,500	158		0	29,500-	158-
11-13	21,787	16	0		0	16-	0
12-14	13,382	82	1		0	82-	1-
13-15	4,863	68	1		0	68-	1-
14-16	2,113	77	4		0	77-	4 -
15-17	5,640	9	0		0	9 –	0
16-18	9,498	4,473	47		0	4,473-	47-
17-19	4,276	4,464	104		0	4,464-	104-
18-20		4,114				4,114-	
19-21		351-				351	
FIVE-YEA	R AVERAGE						
17-21	2,566	2,468	96		0	2,468-	96-

ACCOUNT 373.30 STREET LIGHTING - CUSTOMER POLES

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
1990	50,637	8,814	17	3,300	7	5,514-	11-
1991	27,156	15,496	57	11,821	44	3,675-	14-
1992	23,087	13,123	57	5,159	22	7,964-	34-
1993	23,870	9,722	41	2,151	9	7,572-	32-
1994	28,547	10,620	37	2,667	9	7,954-	28-
1995	30,221	14,882	49	2,433	8	12,449-	41-
1996	26,883	7,686	29	37	0	7,649-	28-
1997	32,974	300-	- 1-	5-	0	296	1
1998	38,832	7,785	20	421	1	7,364-	19-
1999	29,017	10,110	35		0	10,110-	35-
2000	359	53-	15-		0	53	15
2001	177,694	8,915	5		0	8,915-	5-
2002	6,178		0		0		0
2003	10,245	122	1		0	122-	1-
2004	49,285	13-	- 0		0	13	0
2005	89,573	39,459	44	162	0	39,297-	44-
2006	52,577		0		0		0
2007	37,824	125	0		0	125-	0
2008	23,212	188	1		0	188-	1-
2009	38,423	2,354	6		0	2,354-	б-
2010	10,419	56,752	545		0	56,752-	545-
2011	44,849	245	1		0	245-	1-
2012	1,917	54	3		0	54-	3 –
2013	3,978		0		0		0
2014	1,029		0		0		0
2015	1,776-	6	0		0	б-	0
2016	21,779	197	1		0	197-	1-
2017	24,850	459	2		0	459-	2-
2018	64,022	85,984	134	3,539	6	82,445-	129-
2019	871,135		0		0		0
2020	119,629	167	0		0	167-	0
2021	277,219	322	0		0	322-	0
TOTAL	2,235,645	293,220	13	31,683	1	261,537-	12-
THREE-YEA	AR MOVING AVERAGES						
90-92	33,627	12,478	37	6,760	20	5,718-	17-
91-93	24,704	12,781	52	6,377	26	6,404-	26-
92-94	25,168	11,155	44	3,325	13	7,830-	31-
93-95	27,546	11,742	43	2,417	9	9,325-	34-
94-96	28,550	11,063	39	1,712	6	9,351-	33-

ACCOUNT 373.30 STREET LIGHTING - CUSTOMER POLES

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGES	5					
95-97	30,026	7,422	25	822	3	6,601-	22-
96-98	32,897	5,057	15	151	0	4,906-	15-
97-99	33,608	5,865	17	139	0	5,726-	17-
98-00	22,736	5,947	26	140	1	5,807-	26-
99-01	69,023	6,324	9		0	б,324-	9 –
00-02	61,410	2,954	5		0	2,954-	5 -
01-03	64,706	3,012	5		0	3,012-	5 -
02-04	21,902	36	0		0	36-	0
03-05	49,701	13,189	27	54	0	13,135-	26-
04-06	63,812	13,149	21	54	0	13,095-	21-
05-07	59,992	13,195	22	54	0	13,141-	22-
06-08	37,871	104	0		0	104-	0
07-09	33,153	889	3		0	889-	3 –
08-10	24,018	19,764	82		0	19,764-	82-
09-11	31,230	19,784	63		0	19,784-	63-
10-12	19,062	19,017	100		0	19,017-	100-
11-13	16,915	100	1		0	100-	1-
12-14	2,308	18	1		0	18-	1-
13-15	1,077	2	0		0	2-	0
14-16	7,010	68	1		0	68-	1-
15-17	14,951	221	1		0	221-	1-
16-18	36,884	28,880	78	1,180	3	27,700-	75-
17-19	320,002	28,814	9	1,180	0	27,635-	9 –
18-20	351,596	28,717	8	1,180	0	27,537-	8 -
19-21	422,661	163	0		0	163-	0
FIVE-YEAD	R AVERAGE						
17-21	271,371	17,386	б	708	0	16,679-	б-

ACCOUNT 392.10 TRANSPORTATION EQUIPMENT - TRAILERS

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1990	605		0		0		0
1991	5,340	40	1	735	14	695	13
1992	8,212		0	3,910	48	3,910	48
1993							
1994							
1995	10,407	309	3	323	3	14	0
1996							
1997	44,002		0		0		0
1998	18,745		0		0		0
1999	23,244		0		0		0
2000							
2001	8,635		0	160	2	160	2
2002	10,236		0		0		0
2003	20,304		0		0		0
2004	1,820		0	20-	1-	20-	1-
2005							
2006							
2007							
2008							
2009							
2010 2011	9,374		0	990	11	990	11
2011	9,374		0	990	ΤT	990	ΤT
2012							
2013							
2015							
2016	32,610		0		0		0
2017		5,433-		1,907		7,340	
2018							
2019							
2020							
2021							
TOTAL	193,534	5,084-	3-	8,005	4	13,089	7
THREE-YE	AR MOVING AVERAGE	S					
90-92	4,719	13	0	1,548	33	1,535	33
91-93	4,517	13	0	1,548	34	1,535	34
92-94	2,737		0	1,303	48	1,303	48
93-95	3,469	103	3	108	3	5	0
94-96	3,469	103	3	108	3	5	0

ACCOUNT 392.10 TRANSPORTATION EQUIPMENT - TRAILERS

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT P	РСТ	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
THREE-YE	AR MOVING AVERAGE						
95-97	18,136	103	1	108	1	5	0
96-98	20,916		0		0		0
97-99	28,664		0		0		0
98-00	13,996		0		0		0
99-01	10,626		0	53	1	53	1
00-02	6,290		0	53	1	53	1
01-03	13,058		0	53	0	53	0
02 - 04	10,787		0	7-	0	7-	0
03-05	7,375		0	7-	0	7-	0
04-06	607		0	7-	1-	7-	1-
05-07							
06-08							
07-09							
08-10							
09-11	3,125		0	330	11	330	11
10-12	3,125		0	330	11	330	11
11-13	3,125		0	330	11	330	11
12-14							
13-15							
14-16	10,870		0		0		0
15-17	10,870	1,811-		636	б	2,447	23
16-18	10,870	1,811-	17-	636	б	2,447	23
17-19		1,811-		636		2,447	
18-20							
19-21							
FIVE-YEA	R AVERAGE						
17-21		1,087-		381		1,468	

ACCOUNT 396.00 POWER OPERATED EQUIPMENT

	REGULAR	COST OF REMOVAL	- 6-	GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
1991	26,356	132	1	10,350	39	10,218	39
1992	13,984		0	3,405	24	3,405	24
1993	72,991		0	21,640	30	21,640	30
1994	8,093	101	1	852	11	751	9
1995							
1996							
1997							
1998	16,943		0	1,030	6	1,030	6
1999							
2000							
2001	33,087		0	4,880	15	4,880	15
2002							
2003							
2004	33,349		0		0		0
2005	35,306		0	17,765	50	17,765	50
2006							
2007							
2008							
2009							
2010							
2011							
2012							
2013 2014							
2014 2015							
2015							
2010							
2018							
2010							
2020							
2021							
2021							
TOTAL	240,110	233	0	59,922	25	59,689	25
THREE_VE	AR MOVING AVERAG	۲۹					
			-		<i>a</i> -		
91-93	37,777	44	0	11,798	31	11,754	31
92-94	31,689	34	0	8,632	27	8,599	27
93-95	27,028	34	0	7,497	28	7,464	28
94-96	2,698	34	1	284	11	250	9
95-97			-	A 4 -	-		-
96-98	5,648		0	343	6	343	б

ACCOUNT 396.00 POWER OPERATED EQUIPMENT

SUMMARY OF BOOK SALVAGE

	REGULAR	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
YEAR	RETIREMENTS	AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
THREE-YE	AR MOVING AVERAGES	1					
97-99	5,648		0	343	6	343	6
98-00	5,648		0	343	б	343	6
99-01	11,029		0	1,627	15	1,627	15
00-02	11,029		0	1,627	15	1,627	15
01-03	11,029		0	1,627	15	1,627	15
02 - 04	11,116		0		0		0
03-05	22,885		0	5,922	26	5,922	26
04-06	22,885		0	5,922	26	5,922	26
05-07	11,769		0	5,922	50	5,922	50
06-08							
07-09							
08-10							
09-11							
10-12							

- 11-13
- 12-14
- 13-15
- 14-16
- 15-17
- 16-18
- 17-19
- 18-20
- 19-21

FIVE-YEAR AVERAGE

17-21

PART IX. DETAILED DEPRECIATION CALCULATIONS

ACCOUNT 190.00 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	ER OPERATIONS C M SURVIVOR CURV		0.5			
	LE RETIREMENT Y					
	LVAGE PERCENT					
2005	922,856.53	287,478	86,266	928,876	35.64	26,063
2009	5,185.77	1,357	407	5,297	35.92	147
2018	1,368,577.40	161,699	48,523	1,456,912	36.48	39,937
2019	1,657,802.89	164,013	49,217	1,774,366	36.53	48,573
2020	147,175.21	11,585	3,476	158,416	36.59	4,329
2021	207,298.87	11,915	3,575	224,453	36.64	6,126
2022	7,719.51	271	81	8,410	36.70	229
2023	7,252,383.39	87,993	26,405	7,951,217	36.75	216,360
	11,568,999.57	726,311	217,951	12,507,948		341,764
KENTUC	KY SERVICE BUIL	DING - 19TH A	ND AUGUSTINE			
	M SURVIVOR CURV					
	LE RETIREMENT Y					
NET SA	LVAGE PERCENT	-10				
1939	29.40	25	8	25	15.14	2
1947	211,951.28	178,779	53,648	179,499	15.61	11,499
1949	7,874.04	6,606	1,982	6,679	15.72	425
1950	2,833.13	2,370	711	2,405	15.77	153
1951	610.66	509	153	519	15.82	33
1953	4,989.45	4,138	1,242	4,247	15.92	267
1955	121.96	101	30	104	16.02	6
1956	313.02	257	77	267	16.06	17
1957	1,480.66	1,213	364	1,265	16.11	79
1958	91.02	74	22	78	16.15	5
1959	1,905.03	1,550	465	1,630	16.19	101
1961	3,761.02	3,038	912	3,225	16.28	198
1964	1,660.34	1,326	398	1,428	16.40	87
1965	2,410.30	1,917	575	2,076	16.44	126
1966	478.18	379	114	412	16.47	25
1967	8,188.75	6,458	1,938	7,070	16.51	428
1969	4,337.05	3,390	1,017	3,753	16.58	226
1970	1,925.44	1,498	450	1,668	16.62	100
1972	4,634.39	3,570	1,071	4,027	16.68	241
1973	8,585.30	6,580	1,975	7,469	16.71	447
1974	6,637.72	5,060	1,518	5,783	16.74	345
1975	6,319.85	4,791	1,438	5,514	16.77	329
1976	337.18	254	76	295	16.80	18
1977	975.57	731	219	854	16.83	51

ACCOUNT 190.00 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIM PROBABI	XY SERVICE BUIL 1 SURVIVOR CURV LE RETIREMENT Y LVAGE PERCENT	E IOWA 75-R EAR 6-2042	20.5			
1978	23,626.36	17,593	5,279	20,710	16.86	1,228
1979	39,938.23	29,547	8,866	35,066	16.89	2,076
1980	11,560.66	8,495	2,549	10,168	16.92	601
1981	33,194.05	24,229	7,271	29,243	16.94	1,726
1982	12,516.21	9,069	2,721	11,046	16.97	651
1983	14,035.96	10,095	3,029	12,410	16.99	730
1984	42,353.87	30,220	9,068	37,521	17.02	2,205
1985	24,798.14	17,550	5,266	22,012	17.04	1,292
1986	443.45	311	93	394	17.06	23
1987	12,451.85	8,659	2,598	11,099	17.09	649
1988	593.39	409	123	530	17.11	31
1989	35,301.47	24,083	7,227	31,605	17.13	1,845
1990	3,340.07	2,256	677	2,997	17.15	175
1991	38,025.34	25,401	7,622	34,206	17.17	1,992
1992	58,847.35	38,866	11,663	53,069	17.19	3,087
1993	59,866.03	39,066	11,723	54,130	17.21	3,145
1994	201,782.73	130,007	39,012	182,949	17.23	10,618
1995	12,489.98	7,943	2,384	11,355	17.24	659
1996	5,130.73	3,217	965	4,678	17.26	271
1998	26,943.53	16,383	4,916	24,722	17.29	1,430
1999	193,661.05	115,757	34,736	178,291	17.31	10,300
2000	208,595.64	122,508	36,762	192,693	17.32	11,125
2001	104,267.18	60,042	18,017	96,677	17.34	5,575
2002	11,191.29	6,314	1,895	10,416	17.35	600
2003	57,780.29	31,880	9,567	53,992	17.37	3,108
2004	11,087.97	5,975	1,793	10,404	17.38	599
2005	32,681.20	17,164	5,151	30,799	17.39	1,771
2006	10,536.72	5,378	1,614	9,977	17.41	573
2008	83,669.17	40,087	12,029	80,007	17.43	4,590
2009	208,294.55	96,193	28,865	200,259	17.44	11,483
2010	5,918.47	2,623	787	5,723	17.46	328
2011	327,253.40	138,696	41,620	318,359	17.47	18,223
2012	1,914,828.55	771,837	231,612	1,874,699	17.48	107,248
2014	479,129.50	171,073	51,335	475,707	17.50	27,183
2016	16,488.00	5,006	1,502	16,635	17.52	949
2017	25,126.74	6,868	2,061	25,578	17.54	1,458
2018	3,382,601.14	814,720	244,480	3,476,381	17.55	198,084
2019	1,153,356.68	237,296	71,208	1,197,485	17.56	68,194

ACCOUNT 190.00 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
INTERIN PROBABI	CY SERVICE BUILD 4 SURVIVOR CURV LE RETIREMENT Y LVAGE PERCENT	E IOWA 75-R EAR 6-2042	.0.5			
2020	58,932.88	9,856	2,958	61,869	17.57	3,521
2021		13,313	3,995			
2022	59,631.17	4,708	1,413	64,182	17.59	3,649
	9,390,969.51	3,355,307	1,006,857	9,323,209		534,624
SURVIVO	STRUCTURES DR CURVE IOWA LVAGE PERCENT					
2018	123,818.00	13,499	4,050	132,150	40.54	3,260
	123,818.00	13,499	4,050	132,150		3,260
	21,083,787.08	4,095,117	1,228,858	21,963,307		879,648

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.0 4.17

ACCOUNT 191.00 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	VOR CURVE 20-SQU	JARE				
NET S	ALVAGE PERCENT 0)				
2010	2 006 42	2 0 2 0	2 0 2 0	077		150
2010	3,006.42	2,029	2,029	977	6.50	150
2013	20,895.34	10,970	10,970	9,925	9.50	1,045
2014	43,997.73	20,899	20,899	23,099	10.50	2,200
2017	687,664.25	223,491	223,491	464,173	13.50	34,383
2018	2,517.92	692	692	1,826	14.50	126
2019	17,766.54	3,997	3,997	13,770	15.50	888
2020	13,020.59	2,279	2,279	10,742	16.50	651
2023	771,499.09	19,287	19,287	752,212	19.50	38,575
	1,560,367.88	283,644	283,644	1,276,724		78,018
	COMPOSITE REMAININ	NG LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r 16.4	5.00

ACCOUNT 191.10 ELECTRONIC DATA PROCESSING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE 5-SQ AGE PERCENT					
2022	9,798.43	2,940	2,937	6,861	3.50	1,960
	9,798.43	2,940	2,937	6,861		1,960

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 3.5 20.00

ACCOUNT 194.00 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	VOR CURVE 25-SQU	ARE				
NET S	ALVAGE PERCENT 0					
1999	5,371.46	5,264	5,221	150	0.50	150
2004	37,038.55	28,890	28,652	8,387	5.50	1,525
2005	2,964.11	2,193	2,175	789	6.50	121
2006	2,287.17	1,601	1,588	699	7.50	93
2007	17,796.89	11,746	11,649	6,148	8.50	723
2010	1,150.51	621	616	535	11.50	47
2014	10,220.00	3,884	3,852	6,368	15.50	411
2015	37,021.21	12,587	12,483	24,538	16.50	1,487
	113,849.90	66,786	66,236	47,614		4,557
	COMPOSITE REMAININ	IG LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	T 10.4	4.00

ACCOUNT 197.00 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIV	OR CURVE 15-SQ	JUARE				
NET SA	LVAGE PERCENT.	0				
2009	145,687.05	140,831	139,901	5,786	0.50	5,786
2010	203,089.96	182,781	181,574	21,516	1.50	14,344
2011	708,177.65	590,146	586,247	121,931	2.50	48,772
2012	525,145.64	402,613	399,953	125,193	3.50	35,769
2013	1,417.96	993	986	432	4.50	96
2014	141,883.83	89,859	89,265	52,619	5.50	9,567
2015	485,705.76	275,235	273,417	212,289	6.50	32,660
2016	603,244.17	301,622	299,630	303,614	7.50	40,482
2017	411,282.85	178,221	177,044	234,239	8.50	27,558
2023	3,250,843.15	108,351	107,635	3,143,208	14.50	216,773
	6,476,478.02	2,270,652	2,255,652	4,220,826		431,807

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.8 6.67

ACCOUNT 198.00 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 15-SQ ALVAGE PERCENT					
2010	24,647.40	22,183	22,183	2,464	1.50	1,643
2011	3,561.95	2,968	2,968	594	2.50	238
2012	13,294.66	10,193	10,193	3,102	3.50	886
2020	53,796.79	12,552	12,552	41,245	11.50	3,587
	95,300.80	47,896	47,896	47,405		6,354
	COMPOSITE REMAINI	NG LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	т7.5	6.67

GANNETT FLEMING

ACCOUNT 311.00 STRUCTURES AND IMPROVEMENTS

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)				
EAST H	EAST BEND									
	IM SURVIVOR CURV	E IOWA 65-S	31							
PROBAI	BLE RETIREMENT Y	EAR 12-203	38							
NET SA	ALVAGE PERCENT	-10								
				~~ ~ ~ ~						
1980	81,905.23	66,733	55,051	35,045	13.23	2,649				
1981	19,276,794.95	15,619,428	12,885,099	8,319,375	13.28	626,459				
1982 1983	193,583.84 72,230.43	155,955	128,654 47,715	84,289	13.33 13.38	6,323 2,372				
1983	313,838.14	57,841 248,070	204,643	31,738 140,579	13.38 13.48	10,429				
1985	56,946.12	44,700	36,875	25,766	13.40 13.53	1,904				
1980	25,699.44	20,024	16,519	11,751	13.53	865				
1988	7,679.70	5,938	4,898	3,549	13.63	260				
1990	248,748.12	189,104	156,000	117,623	13.73	8,567				
1991	7,244.23	5,459	4,503	3,465	13.77	252				
1992	214,519.73	160,097	132,071	103,901	13.82	7,518				
1993	106,959.72	79,013	65,181	52,475	13.87	3,783				
1994	208,985.68	152,776	126,031	103,853	13.91	7,466				
1999	3,286,260.31	2,252,074	1,857,827	1,757,059	14.13	124,350				
2001	236,199.12	156,645	129,223	130,596	14.22	9,184				
2002	231,816.95	150,987	124,555	130,443	14.26	9,147				
2003	103,526.01	66,137	54,559	59,320	14.30	4,148				
2004	228,372.86	142,836	117,831	133,379	14.34	9,301				
2005	151,399.00	92,532	76,333	90,206	14.38	6,273				
2006	3,098,291.42	1,846,963	1,523,635	1,884,486	14.42	130,686				
2007	223,770.74	129,754	107,039	139,108	14.46	9,620				
2008	168,425.07	94,757	78,169	107,099	14.50	7,386				
2009	514,042.96	279,874	230,879	334,568	14.53	23,026				
2010	450,707.51	236,501	195,099	300,679	14.57	20,637				
2011	484,241.10	243,881	201,187	331,478	14.60	22,704				
2012	637,062.52	306,180	252,580	448,188	14.64	30,614				
2013	499,911.96	228,122	188,187	361,716	14.67	24,657				
2014	545,564.35	234,527	193,471	406,650	14.70	27,663				
2015	19,442,261.71	7,796,230	6,431,426	14,955,062	14.73	1,015,279				
2016	11,449,783.49	4,232,218	3,491,328	9,103,434	14.76	616,764				
2017	42,192,344.22	14,139,287	11,664,071	34,747,508	14.79	2,349,392				
2018	13,444,200.58	3,992,188	3,293,318	11,495,303	14.82	775,661				
2019	43,769,919.98	11,177,787	9,221,009	38,925,903	14.85	2,621,273				
2020	20,787,949.84	4,356,801	3,594,102	19,272,643	14.87	1,296,076				

ACCOUNT 311.00 STRUCTURES AND IMPROVEMENTS

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
EAST	BEND					
INTER	IM SURVIVOR CURV	E IOWA 65-S	1			
PROBA	BLE RETIREMENT Y	EAR 12-203	8			
NET S	ALVAGE PERCENT	-10				
2021	1,605,694.85	253,918	209,467	1,556,797	14.89	104,553
2022	312,708.25	31,443	25,939	318,040	14.91	21,331
2023	2,842,494.85	101,307	83,572	3,043,172	14.93	203,829
	187,522,084.98	69,348,087	57,208,047	149,066,246		10,142,401
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	 14.7	5.41

ACCOUNT 312.00 BOILER PLANT EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
EAST	BEND					
	IM SURVIVOR CURV	E IOWA 50-9	50			
	BLE RETIREMENT Y					
NET S	ALVAGE PERCENT	-10				
1001	123,712,090.52	07 150 022	115,230,507	20,852,792	10 10	1,678,969
1981	73,032.91	97,158,033 57,031	67,639	12,697	12.42 12.48	1,017
1983	758,041.65	588,195	697,606	136,240	12.55	10,856
1984	1,069,838.90	825,200	978,696	198,126	12.60	15,724
1985	992,190.52	760,298	901,722	189,688	12.66	14,983
1986	508,078.99	386,632	458,550	100,337	12.72	7,888
1987	715,736.33	540,827	641,427	145,883	12.77	11,424
1988	146,366.40	109,759	130,175	30,828	12.83	2,403
1989	274,137.86	203,988	241,932	59,620	12.88	4,629
1990	12,821.13	9,462	11,222	2,881	12.93	223
1991	518,417.01	379,342	449,904	120,355	12.98	9,272
1992	1,887,920.78	1,368,907	1,623,539	453,174	13.03	34,779
1993	339,323.82	243,650	288,972	84,285	13.08	6,444
1994 1995	4,592,825.99	3,264,117	3,871,279	1,180,830	13.13	89,934
1995	344,651.91 113,773.05	242,294 79,055	287,363 93,760	91,754 31,390	13.18 13.23	6,962 2,373
1998	1,465,153.04	992,836	1,177,515	434,154	13.32	32,594
1999	4,677,932.46	3,125,205	3,706,528	1,439,198	13.32	107,644
2000	1,103,675.58	726,605	861,762	352,282	13.41	26,270
2001	178,769.21	115,777	137,313	59,333	13.46	4,408
2002	44,387,318.70	28,259,542	33,516,131	15,309,920	13.50	1,134,068
2003	638,881.69	399,117	473,357	229,413	13.55	16,931
2004	2,166,891.74	1,326,296	1,573,002	810,579	13.60	59,601
2005	740,682.81	443,567	526,075	288,676	13.64	21,164
2006	548,548.71	320,812	380,487	222,917	13.68	16,295
2007	2,986,021.64	1,700,581	2,016,908	1,267,716	13.73	92,332
2008	1,670,067.06	924,507	1,096,476	740,598	13.77	53,783
2009	2,146,386.41	1,150,291	1,364,258	996,767	13.82	72,125
2010	1,984,392.33	1,025,931	1,216,766	966,066	13.87	69,651
2011	441,816.54	219,637	260,492	225,506	13.91	16,212
2012	9,791,356.61	4,653,499	5,519,102	5,251,391	13.96	376,174
2013	1,265,275.73	571,711	678,056	713,748	14.00	50,982
2014 2015	37,227,354.46 135,380,571.53	15,869,388 53,907,054	18,821,271 63,934,365	22,128,819	14.05	1,575,005
2015	12,237,977.35	4,497,848	5,334,498	84,984,263 8,127,277	$14.10 \\ 14.15$	6,027,253 574,366
2010	2,692,510.63	900,139	1,067,575	1,894,187	14.13	133,393
2017	95,311,189.22	28,344,118	33,616,439	71,225,869	14.25	4,998,307
2019	2,427,606.63	622,836	738,690	1,931,677	14.30	135,082
2020	25,902,766.92	5,454,708	6,469,344	22,023,699	14.36	1,533,684

ACCOUNT 312.00 BOILER PLANT EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
PROBA	BEND IM SURVIVOR CURV BLE RETIREMENT Y ALVAGE PERCENT	EAR 12-203				
2021 2022 2023	14,297,636.44 8,494,183.21 18,021,813.51	2,276,069 866,432 658,950	2,699,443 1,027,598 781,522	13,027,957 8,316,004 19,042,473	14.42 14.48 14.54	903,464 574,310 1,309,661
	564,246,027.93 COMPOSITE REMAIN	265,570,246 NING LIFE AND	314,969,264 ANNUAL ACCRUAL	305,701,367 RATE, PERCENT	5 14.0	21,812,639 3.87

ACCOUNT 312.30 BOILER PLANT EQUIPMENT - SCR CATALYST

YEAR	ORIGINAL COST	CALCULATED ACCRUED	ALLOC. BOOK RESERVE	FUTURE BOOK ACCRUALS	REM. LIFE	ANNUAL ACCRUAL			
(1)	(2)	(3)	(4)	(5)	(6)	(7)			
INTER PROBA	EAST BEND INTERIM SURVIVOR CURVE IOWA 15-R3 PROBABLE RETIREMENT YEAR 12-2038 NET SALVAGE PERCENT 0								
2002	1,096,393.26	1,027,682	1,096,393						
2013	536,263.68	331,052	480,770	55,494	5.74	9,668			
2015	2,653,930.47	1,371,206	1,991,332	662,599	7.25	91,393			
2019	2,563,477.12	746,023	1,083,411	1,480,067	10.50	140,959			
2022	1,725,231.43	180,511	262,147	1,463,085	12.58	116,302			
	8,575,295.96	3,656,474	4,914,052	3,661,244		358,322			
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	r 10.2	4.18			

ACCOUNT 314.00 TURBOGENERATOR UNITS

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)			
EAST BEND									
	IM SURVIVOR CURV	E IOWA 35-S	30.5						
PROBAE	BLE RETIREMENT Y	EAR 12-203	38						
NET SA	ALVAGE PERCENT	-10							
1981	16,304,062.20	13,481,878	12,549,745	5,384,724	8.61	625,403			
1982	58,061.01	47,568	44,279	19,588	8.83	2,218			
1983	15,183.01	12,331	11,478	5,223	9.03	578			
1984	10,207.91	8,216	7,648	3,581	9.23	388			
1985	11,254,146.67	8,974,068	8,353,603	4,025,958	9.43	426,931			
1986	463,905.17	366,693	341,340	168,956	9.61	17,581			
1987	636,364.46	498,443	463,981	236,020	9.79	24,108			
1989	54,725.97	42,058	39,150	21,048	10.14	2,076			
1990	158,093.76	120,287	111,970	61,933	10.31	6,007			
1991	198,456.18	149,500	139,164	79,138	10.47	7,559			
1992	640,896.37	477,755	444,723	260,263	10.63	24,484			
1993	66,699.95	49,197	45,796	27,574	10.78	2,558			
1994	88,755.33	64,746	60,269	37,361	10.93	3,418			
1996	96,612.68	68,801	64,044	42,230	11.22	3,764			
1997	96,476.91	67,828	63,138	42,986	11.36	3,784			
1999	2,355.17	1,609	1,498	1,093	11.64	94			
2000	341,306.00	229,696	213,815	161,622	11.77	13,732			
2001	206,777.67	136,899	127,434	100,022	11.90	8,405			
2002	27,909.66	18,155	16,900	13,801	12.03	1,147			
2003	197,125.32	125,790	117,093	99,745	12.16	8,203			
2004	89,271.54	55,828	51,968	46,231	12.28	3,765			
2005	6,942,324.58	4,244,627	3,951,155	3,685,402	12.41	296,970			
2006	77,714.53	46,379	43,172	42,314	12.53	3,377			
2007	83,723.73	48,658	45,294	46,802	12.65	3,700			
2008	12,485.43	7,048	6,561	7,173	12.77	562			
2009	1,580,872.44	864,054	804,314	934,646	12.89	72,509			
2010	549,806.26	290,044	269,990	334,796	13.00	25,754			
2011	276,330.25	139,984	130,306	173,658	13.12	13,236			
2012	943,595.69	457,313	425,695	612,261	13.23	46,278			
2013	1,063,683.68	489,948	456,073	713,979	13.34	53,522			
2014	2,322,726.88	1,007,283	937,640	1,617,360	13.46	120,160			
2015	29,836,335.05	12,085,953	11,250,333	21,569,635	13.57	1,589,509			
2016	554,321.24	207,469	193,125	416,629	13.67	30,478			
2017	613,243.94	208,394	193,986	480,583	13.78	34,875			
2018	13,532,365.02	4,088,628	3,805,941	11,079,660	13.89	797,672			
2019	2,140,240.99	557,419	518,879	1,835,386	13.99	131,193			
2020	4,951,409.59	1,058,210	985,046	4,461,505	14.10	316,419			

ACCOUNT 314.00 TURBOGENERATOR UNITS

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)			
EAST BEND INTERIM SURVIVOR CURVE IOWA 35-S0.5									
-	BLE RETIREMENT Y ALVAGE PERCENT		8						
2021	19,104,165.21	3,092,296	2,878,495	18,136,086	14.20	1,277,189			
2022	906,666.52	93,540	87,073	910,261	14.30	63,655			
2023	2,142,884.49	77,527	72,167	2,285,006	14.41	158,571			
	118,642,288.46	54,062,120	50,324,279	80,182,238		6,221,832			
	COMPOSITE REMAIN	NING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	r 12.9	5.24			

ACCOUNT 315.00 ACCESSORY ELECTRIC EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
PROBAI	BEND IM SURVIVOR CURV BLE RETIREMENT Y ALVAGE PERCENT	EAR 12-203				
1980 1981	510,760.54 21,228,868.49	415,001 17,140,889	483,097 19,953,471	78,740 3,398,285	13.12 13.20	6,002 257,446
1982	258,626.65	207,450	241,490	43,000	13.28	3,238
1983	48,933.57	38,989	45,387	8,440	13.35	632
1984	276,234.86	218,568	254,432	49,426	13.42	3,683
1985	24,050.59	18,891	21,991	4,465	13.49	331
1986	25,758.88	20,075	23,369	4,966	13.56	366
1987	32,911.68	25,451	29,627	6,576	13.62	483
1989	61,628.68	46,851	54,539	13,253	13.74	965
1990	146,081.85	110,028	128,082	32,608	13.80	2,363
1992	284,827.83	210,404	244,928	68,382	13.90	4,920
1995	1,290.00	922	1,073	346	14.04	25
2001	112,022.85	73,264	85,286	37,940	14.28	2,657
2002	129,665.97	83,265	96,928	45,705	14.31	3,194
2004	87,558.37	53,963	62,818	33,497	14.37	2,331
2005	422,592.28	254,483	296,240	168,611	14.40	11,709
2006	50,031.42	29,375	34,195	20,840	14.43	1,444
2009	106,920.20	57,310	66,714	50,898	14.51	3,508
2010	308,549.41	159,422	185,581	153,823	14.53	10,587
2011	195,647.63	97,005	112,922	102,290	14.55	7,030
2012	683,225.09	323,474	376,552	374,996	14.57	25,738
2013	380,227.18	170,725	198,739	219,511	14.60	15,035
2014	133,522.10	56,461	65,725	81,149	14.62	5,551
2015	12,011,588.32	4,742,055	5,520,160	7,692,587	14.63	525,809
2016	1,399,850.72	509,285	592,852	946,984	14.65	64,641
2017	4,255,886.82	1,403,319	1,633,584	3,047,891	14.67	207,764
2018	957,559.98	280,045	325,996	727,319	14.69	49,511
2019	146,819.56	37,010	43,083	118,419	14.70	8,056
2021	5,204,286.08	813,539	947,029	4,777,685	14.73	324,351
2022	299,010.41	29,625	34,486	294,425	14.75	19,961
2023	188,720.18	6,670	7,764	199,828	14.76	13,538
	49,973,658.19	27,633,814	32,168,139	22,802,885		1,582,869

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 14.4 3.17

ACCOUNT 316.00 MISCELLANEOUS POWER PLANT EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
PROBAB	END M SURVIVOR CURV LE RETIREMENT Y LVAGE PERCENT	EAR 12-203				
1981	2,134,513.66	1,680,603	1,806,956	541,009	12.87	42,036
1982	235,379.13	184,248	198,100	60,817	12.92	4,707
1983	113,761.60	88,537	95,194	29,944	12.96	2,310
1984	157,554.25	121,844	131,005	42,305	13.01	3,252
1985	101,065.69	77,666	83,505	27,667	13.05	2,120
1986	113,063.57	86,285	92,772	31,598	13.10	2,412
1987	121,651.98	92,189	99,120	34,697	13.14	2,641
1988	81,696.88	61,456	66,076	23,790	13.18	1,805
1989	160,311.26	119,662	128,659	47,684	13.22	3,607
1990	108,479.70	80,278	86,314	33,014	13.27	2,488
1991	420,109.15	308,197	331,368	130,752	13.31	9,824
1992	141,502.92	102,859	110,592	45,061	13.35	3,375
1993	49,356.38	35,531	38,202	16,090	13.39	1,202
1994	217,002.50	154,605	166,229	72,474	13.43	5,396
1995	20,672.44	14,569	15,664	7,075	13.47	525
1996	6,611.10	4,607	4,953	2,319	13.50	172
1997	108,562.36	74,715	80,332	39,086	13.54	2,887
1999	643,219.54	430,702	463,084	244,458	13.62	17,948
2000	90,906.69	59,963	64,471	35,526	13.66	2,601
2001	331,341.39	215,128	231,302	133,173	13.69	9,728
2002	280,411.23	178,862	192,309	116,143	13.73	8,459
2003	41,468.35	25,955	27,906	17,709	13.77	1,286
2004	251,997.55	154,540	166,159	111,038	13.81	8,040
2005	407,125.60	244,287	262,653	185,185	13.84	13,380
2006	377,319.96	220,953	237,565	177,487	13.88	12,787
2007	84,074.08	47,953	51,558	40,923	13.92	2,940
2008	598,969.43	331,779	356,723	302,143	13.96	21,643
2009	808,886.13	433,810	466,425	423,349	14.00	30,239
2010	429,177.62	222,248	238,957	233,138	14.03	16,617
2011	1,604,054.06	798,100	858,104	906,356	14.07	64,418
2012	931,965.12	443,300	476,629	548,533	14.11	38,875
2013	185,105.83	83,668	89,958	113,658	14.15	8,032
2014	638,770.79	272,325	292,799	409,849	14.19	28,883
2015	5,516,288.45	2,197,618	2,362,842	3,705,075	14.23	260,371
2016	2,427,229.97	891,657	958,695	1,711,258	14.28	119,836
2017	1,873,812.52	625,572	672,605	1,388,589	14.32	96,969
2018	815,726.38	242,226	260,437	636,862	14.36	44,350
2019	1,144,524.86	292,951	314,976	944,001	14.41	65,510

ACCOUNT 316.00 MISCELLANEOUS POWER PLANT EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
EAST			<u>_</u>			
	IM SURVIVOR CURV					
	BLE RETIREMENT Y ALVAGE PERCENT		8			
NET S	ALVAGE PERCENT	-10				
2021	30,992.38	4,945	5,317	28,775	14.50	1,984
2022	822,293.90	83,460	89,735	814,788	14.56	55,961
2023	471,673.97	17,168	18,459	500,383	14.61	34,249
	25,098,630.37	11,807,021	12,694,713	14,913,781		1,055,865
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	г 14.1	4.21

ACCOUNT 341.00 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
PROBAI	DALE IM SURVIVOR CURV BLE RETIREMENT Y ALVAGE PERCENT	EAR 6-2040				
1991	6,686.52	4,858	5,712	1,510	15.51	97
1992	33,083,740.47	23,761,457	27,938,195	7,792,245	15.60	499,503
1994	32,271.08	22,611	26,586	8,267	15.76	525
1995	28,624.96	19,783	23,260	7,655	15.84	483
2006	13,755.09	7,674	9,023	5,833	16.33	357
2007	77,734.54	42,118	49,521	34,432	16.35	2,106
2008	28,902.54	15,166	17,832	13,383	16.37	818
2011	1,013,820.32	472,822	555,934	538,992	16.42	32,825
2012	201,932.54	89,704	105,472	112,615	16.43	6,854
2013	216,117.23	90,919	106,901	126,506	16.44	7,695
2014	1,026,692.75	405,654	476,959	631,869	16.45	38,411
2015	78,301.70	28,776	33,834	50,732	16.46	3,082
2016	153,786.34	51,989	61,128	104,962	16.46	6,377
2017	357.46	109	128	258	16.47	16
2018	32,395.47	8,759	10,299	24,688	16.47	1,499
2019	219,192.43	50,776	59,701	177,027	16.48	10,742
2020	69,386.61	13,128	15,436	59,502	16.48	3,611
2022	405,835.08	36,546	42,970	395,332	16.49	23,974
	36,689,533.13	25,122,849	29,538,890	10,085,806		638,975

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.8 1.74

ACCOUNT 341.60 STRUCTURES AND IMPROVEMENTS - SOLAR

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
PROBABI	M SURVIVOR CURV LE RETIREMENT Y LVAGE PERCENT	EAR 6-2053	3			
2023	1,443,536.06	29,457	29,703	1,615,928	27.43	58,911
	1,443,536.06	29,457	29,703	1,615,928		58,911
C	OMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUA	L RATE, PERCEN	г 27.4	4.08

ACCOUNT 342.00 FUEL HOLDERS, PRODUCERS AND ACCESSORIES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)		
WOODSDALE INTERIM SURVIVOR CURVE IOWA 40-S1.5 PROBABLE RETIREMENT YEAR 6-2040 NET SALVAGE PERCENT8								
1992	6,494,862.40	4,819,980	2,595,713	4,418,739	11.71	377,347		
1995	65,305.28	46,697	25,148	45,382	12.31	3,687		
1996	83,697.19	59,025	31,787	58,606	12.51	4,685		
1999	36,005.88	24,223	13,045	25,841	13.10	1,973		
2001	55,587.31	36,067	19,423	40,611	13.47	3,015		
2012	407,682.47	186,343	100,352	339,945	15.25	22,291		
2014	144,852.48	58,784	31,657	124,784	15.50	8,051		
2017	168,146.39	52,515	28,281	153,317	15.83	9,685		
2018	25,088.88	6,920	3,727	23,369	15.92	1,468		
2019	53,546,233.66	12,643,936	6,809,162	51,020,770	16.01	3,186,806		
2020	235,872.28	45,428	24,464	230,278	16.08	14,321		
2023	201,597.77	б,493	3,497	214,229	16.27	13,167		
	61,464,931.99	17,986,411	9,686,255	56,695,871		3,646,496		

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.5 5.93

ACCOUNT 343.00 PRIME MOVERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
WOODSI	DALE					
	IM SURVIVOR CURV					
	BLE RETIREMENT Y					
NET SA	ALVAGE PERCENT	-8				
1992	22,344.55	18,784	9,362	14,770	5.54	2,666
2016	786,578.39	291,745	145,405	704,100	13.44	52,388
2017	6,599,425.54	2,208,704	1,100,812	6,026,567	13.74	438,615
2018	4,084.23	1,208	602	3,809	14.03	271
2019	1,722,272.93	435,662	217,133	1,642,922	14.32	114,729
2020	22,495.12	4,633	2,309	21,986	14.60	1,506
2021	1,312,793.34	201,968	100,660	1,317,157	14.87	88,578
2022	36,039.61	3,513	1,751	37,172	15.12	2,458
	10,506,033.71	3,166,217	1,578,034	9,768,482		701,211
					_ 10	~ ~ ~ -

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 13.9 6.67

ACCOUNT 344.00 GENERATORS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)			
INTEF PROBA	WOODSDALE INTERIM SURVIVOR CURVE IOWA 38-S0.5 PROBABLE RETIREMENT YEAR 6-2040 NET SALVAGE PERCENT8								
1992	119,095,460.76	84,504,089	98,322,943	30,300,155	12.05	2,514,536			
1995	44,071.41	30,194	35,132	12,466	12.49	998			
1996	-	50,778	59,082	21,990	12.63	1,741			
1999	289,576.93	187,568	218,241	94,502	13.04	7,247			
2000	,	1,387,319	1,614,186	736,804	13.17	55,946			
2001	12,551,711.26	7,861,172	9,146,700	4,409,148	13.30	331,515			
2003		253,893	295,412	159,814	13.56	11,786			
2004	13,649.50	8,048	9,364	5,377	13.68	393			
2005	10,461,096.18	6,027,135	7,012,745	4,285,239	13.80	310,525			
2006	10,833,651.11	6,080,200	7,074,488	4,625,855	13.93	332,079			
2007	170,201.58	92,912	108,106	75,712	14.05	5,389			
2008	301,113.37	159,444	185,518	139,685	14.17	9,858			
2009	15,814,499.03	8,093,367	9,416,866	7,662,793	14.29	536,235			
2010	7,960,271.15	3,922,252	4,563,653	4,033,440	14.41	279,906			
2011	8,356,990.93	3,951,927	4,598,181	4,427,369	14.52	304,915			
2012	8,423,077.89	3,797,329	4,418,302	4,678,622	14.64	319,578			
2013	2,798,083.81	1,196,654	1,392,341	1,629,589	14.75	110,481			
2014	175,950.78	70,829	82,412	107,615	14.86	7,242			
2015	254,485.19	95,368	110,963	163,881	14.98	10,940			
2016	112,718.61	38,876	45,233	76,503	15.09	5,070			
2017	834.01	260	303	598	15.20	39			
2018	1,518,631.87	419,986	488,666	1,151,457	15.31	75,209			
2019	6,531,850.71	1,552,955	1,806,908	5,247,491	15.41	340,525			
2021	2,493,206.44	363,590	423,047	2,269,616	15.63	145,209			
2023	2,789,754.41	90,418	105,204	2,907,731	15.84	183,569			
	213,664,301.34	130,236,563	151,533,994	79,223,451		5,900,931			
	COMPOSITE REMAIN	NING LIFE AND	ANNUAL ACCRUA	L RATE, PERCEN	r 13.4	4 2.76			

실 GANNETT FLEMING

ACCOUNT 344.60 GENERATORS - SOLAR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	COST		ALLOC. BOOK RESERVE (4)		LIFE	-			
INTERI PROBAE	CRITTENDEN INTERIM SURVIVOR CURVE IOWA 25-S2.5 PROBABLE RETIREMENT YEAR 6-2047 NET SALVAGE PERCENT19								
2017	4,472,284.81	1,431,304	1,213,704	4,108,315	17.56	233,959			
	4,472,284.81	1,431,304	1,213,704	4,108,315		233,959			
PROBAE NET SA	M SURVIVOR CURVE SLE RETIREMENT YE LVAGE PERCENT 6,005,765.45 6,005,765.45	EAR 6-2047 -20 1,938,229	1,629,864	5,577,054 5,577,054		317,600 317,600			
AERO INTERIM SURVIVOR CURVE IOWA 25-S2.5 PROBABLE RETIREMENT YEAR 6-2053 NET SALVAGE PERCENT14									
2023	808,767.37	19,196	16,991	905,004	23.52	38,478			
	808,767.37	19,196	16,991	905,004		38,478			
	11,286,817.63	3,388,729	2,860,559	10,590,373		590,037			
		ING I THE AND			m 17 0	F 00			

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 17.9 5.23

ACCOUNT 345.00 ACCESSORY ELECTRIC EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
PROBA	DALE IM SURVIVOR CURV BLE RETIREMENT Y ALVAGE PERCENT	EAR 6-2040				
1992	12,128,216.59	8,710,092	10,112,701	2,985,773	13.13	227,401
1996	13,528.24	9,271	10,764	3,847	13.62	282
1999	2,218.96	1,457	1,692	705	13.97	50
2000	23,116.79	14,931	17,335	7,631	14.08	542
2001	6,287.18	3,989	4,631	2,159	14.20	152
2002	42,708.77	26,591	30,873	15,252	14.31	1,066
2006	8,616.82	4,893	5,681	3,625	14.74	246
2007	8,047.88	4,439	5,154	3,538	14.85	238
2008	5,782.47	3,092	3,590	2,655	14.95	178
2009	7,263.33	3,751	4,355	3,489	15.06	232
2011	3,017,940.84	1,436,798	1,668,169	1,591,207	15.26	104,273
2012	2,171,324.04	984,772	1,143,352	1,201,678	15.36	78,234
2013	28,395.09	12,202	14,167	16,500	15.45	1,068
2014	273,443.75	110,373	128,147	167,173	15.55	10,751
2015	374,312.15	140,597	163,238	241,019	15.64	15,410
2016	114,608.56	39,527	45,892	77,885	15.73	4,951
2017	261,347.40	81,515	94,642	187,614	15.81	11,867
2018	227,115.00	62,729	72,830	172,454	15.89	10,853
2019	528,311.90	124,779	144,872	425,704	15.97	26,656
2021	604,614.16	87,369	101,438	551,545	16.12	34,215
2022	15,826.72	1,450	1,683	15,409	16.18	952
	19,863,026.64	11,864,617	13,775,207	7,676,862		529,617
	COMPOSITE REMAIN	ITNG LIFE AND	ANNUAL ACCRUA	I RATE. PERCEN	т. 14.5	5 2.67

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 14.5 2.67

ACCOUNT 345.60 ACCESSORY ELECTRIC EQUIPMENT - SOLAR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)				FUTURE BOOK ACCRUALS (5)	LIFE	ACCRUAL				
INTERIN PROBABI	CRITTENDEN INTERIM SURVIVOR CURVE IOWA 30-S2.5 PROBABLE RETIREMENT YEAR 6-2047 NET SALVAGE PERCENT19									
2017	687,705.87	199,216	153,609	664,761	20.14	33,007				
	687,705.87	199,216	153,609	664,761		33,007				
PROBABI NET SAI	4 SURVIVOR CURVI LE RETIREMENT YI LVAGE PERCENT 1,037,180.86 1,037,180.86	EAR 6-2047 -20 302,977	231,670			50,295 50,295				
AERO INTERIM SURVIVOR CURVE IOWA 30-S2.5 PROBABLE RETIREMENT YEAR 6-2053 NET SALVAGE PERCENT14										
2023	3,827,389.27	81,941	66,182	4,297,042	26.12	164,512				
	3,827,389.27	81,941	66,182	4,297,042		164,512				
	5,552,276.00	584,134	451,461	5,974,750		247,814				
C	MDOCTTE DEMAIN	TNC TTEE AND		י סאיידי הדסמדאוי	т <u>2</u> /	1 1 16				

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 24.1 4.46

ACCOUNT 346.00 MISCELLANEOUS POWER PLANT EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
PROBA	IM SURVIVOR CURVE BLE RETIREMENT YE	EAR 6-2040				
NET S	SALVAGE PERCENT	-8				
1990	3,122.67	2,238	2,810	563	13.35	42
1991		5,327	6,688	1,432	13.50	106
1992		1,527,645	1,918,066	438,429	13.64	32,143
1993		23,790	29,870	7,275	13.77	528
1994		68,555	86,076	22,366	13.90	1,609
1995	4,756.58	3,205	4,024	1,113	14.02	79
1996		1,617	2,030	600	14.14	42
1997		1,490	1,871	588	14.25	41
1998	10,992.46	7,080	8,889	2,982	14.36	208
1999		280,586	352,296	126,014	14.46	8,715
2000		75,161	94,370	36,061	14.56	2,477
2001	339,993.67	207,662	260,734	106,459	14.65	7,267
2002		3,958	4,970	2,171	14.74	147
2003		5,068	6,363	2,978	14.82	201
2006	83,904.90	45,623	57,283	33,334	15.04	2,216
2007		45,534	57,171	35,976	15.11	2,381
2008	93,734.75	47,947	60,201	41,033	15.17	2,705
2009	44,263.05	21,857	27,443	20,361	15.23	1,337
2010	40,517.21	19,242	24,160	19,599	15.29	1,282
2011	305,238.51	138,901	174,400	155,258	15.34	10,121
2012	10,349.94	4,487	5,634	5,544	15.39	360
2013	106,572.43	43,728	54,904	60,195	15.44	3,899
2014	226,097.98	87,172	109,451	134,735	15.49	8,698
2015	110,886.68	39,799	49,970	69,787	15.53	4,494
2016	165,030.22	54,455	68,372	109,861	15.57	7,056
2017	453,044.95	135,195	169,747	319,542	15.61	20,470
2018	63,398.81	16,729	21,004	47,466	15.65	3,033
2019	40,469.80	9,165	11,507	32,200	15.68	2,054
2020	8,277.81	1,528	1,919	7,022	15.72	447
2021	18,728.17	2,607	3,273	16,953	15.75	1,076
2022	72,134.78	6,349	7,972	69,934	15.78	4,432
2023	418,261.93	13,041	16,374	435,349	15.81	27,536
	5,613,907.69	2,946,741	3,699,841	2,363,179		157,202
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUA	L RATE, PERCEN	т 15.0	2.80

ACCOUNT 350.10 RIGHTS OF WAY

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	VOR CURVE IOWA	75-R4				
	SALVAGE PERCENT					
1050	1 (05 10	1 4 2 1	1 500	07	11 00	0
1950	-	1,431	1,598	97	11.70	8
1956	2,703.51	2,160	2,412	292	15.07	19
1957		287	320	43	15.70	3
1958	79,809.09	62,421	69,706	10,103	16.34	618
1959		1,518	1,695	268	17.00	16
1960	2,355.33	1,800	2,010	345	17.67	20
1961	50,047.85	37,803	42,215	7,833	18.35	427
1962		175	195	40	19.03	2
1963	22,089.15	16,278	18,178	3,911	19.73	198
1965	75,275.56	54,048	60,356	14,920	21.15	705
1966	3,845.27	2,723	3,041	804	21.88	37
1967	-	60,293	67,330	18,984	22.61	840
1968	4,755.68	3,274	3,656	1,100	23.36	47
1969	1,091.55	741	827	265	24.11	11
1970	46.30	31	35	11	24.88	
1971	8,895.38	5,853	6,536	2,359	25.65	92
1972	25,173.18	16,299	18,201	6,972	26.44	264
1973	34,776.92	22,150	24,735	10,042	27.23	369
1974	26,321.38	16,481	18,404	7,917	28.04	282
1975	1,578.60	971	1,084	495	28.85	17
1976	14,597.75	8,821	9,850	4,748	29.68	160
1977	275.20	163	182	93	30.51	3
1981	85,664.62	46,899	52,373	33,292	33.94	981
1983	346,750.92	181,697	202,903	143,848	35.70	4,029
1988	18,297.90	8,481	9,471	8,827	40.24	219
1989	7,057.21	3,184	3,556	3,501	41.16	85
1992	3,991.58	1,651	1,844	2,148	43.98	49
2006	124,268.34	28,864	32,233	92,035	57.58	1,598
2011	0.14					
2019	605.10	36	40	565	70.51	8
2020	302,688.73	14,126	15,775	286,914	71.50	4,013
2022		154,817	172,884	7,567,955	73.50	102,965
2023		771	861	114,732	74.50	1,540
	9,189,963.91	756,247	844,506	8,345,458		119,625
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	т 69.8	1.30

ACCOUNT 352.00 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
1955	48,873.53	42,210	26,735	29,470	17.43	1,691
1958	49,503.38	41,542	26,312	30,617	18.92	1,618
1960	71,981.46	59,163	37,472	45,307	19.97	2,269
1965	1,230.56	954	604	811	22.81	36
1967	2,611.13	1,972	1,249	1,754	24.02	73
1968	1,911.98	1,425	903	1,296	24.64	53
1971	2,028.33	1,448	917	1,416	26.56	53
1976	146,306.73	96,289	60,987	107,266	29.94	3,583
1993	21,996.24	9,811	6,214	19,082	42.85	445
2006	124,869.08	32,966	20,880	122,719	53.93	2,276
2007	419,838.40	104,771	66,359	416,455	54.81	7,598
2012	351,875.96	61,795	39,139	365,518	59.31	6,163
2013	222,849.40	35,769	22,655	233,622	60.23	3,879
2016	14,537.12	1,677	1,062	15,656	62.98	249
2020	4,505,126.98	243,502	154,228	5,026,668	66.71	75,351
2021	47,505.29	1,842	1,167	53,464	67.64	790
	6,033,045.57	737,136	466,883	6,471,119		106,127

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 61.0 1.76

ACCOUNT 353.00 STATION EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	YOR CURVE IOWA					
1943	3,307.21	3,179	3,021	617	6.31	98
1951	8,875.04	8,007	7,609	2,154	8.99	240
1955	2,021.43	1,759	1,671	553	10.45	53
1958	263,923.77	223,021	211,925	78,391	11.59	6,764
1960	64,781.63	53,602	50,935	20,325	12.39	1,640
1961	2,479.97	2,030	1,929	799	12.79	62
1965	196,895.08	153,905	146,247	70,338	14.47	4,861
1966	1,394.05	1,076	1,022	511	14.90	34
1967	329.35	251	239	123	15.34	8
1968	3,984.66	2,999	2,850	1,533	15.79	97
1971	48,032.41	34,692	32,966	19,870	17.17	1,157
1973	36,610.30	25,677	24,399	15,872	18.12	876
1974	407.00	281	267	181	18.61	10
1975	2,654.12	1,804	1,714	1,206	19.10	63
1976	338,411.94	226,330	215,069	157,184	19.60	8,020
1978	1,810.00	1,170	1,112	879	20.62	43
1979	4,385.57	2,784	2,645	2,179	21.14	103
1982	42,063.83	25,227	23,972	22,298	22.74	981
1983	299,131.92	175,776	167,030	162,015	23.29	6,956
1985	68,625.24	38,635	36,713	38,775	24.41	1,588
1986	16,638.72	9,159	8,703	9,600	24.98	384
1991	144,506.44	70,164	66,673	92,284	27.93	3,304
1992	821,677.01	388,111	368,801	535,044	28.53	18,754
1995	509,123.85	219,534	208,611	351,425	30.40	11,560
1998	103,784.59	40,391	38,381	75,782	32.31	2,345
2000	718,534.36	259,089	246,198	544,190	33.61	16,191
2002	501,628.47	166,310	158,035	393,756	34.93	11,273
2003	1,043,452.03	330,566	314,119	833,678	35.60	23,418
2005	56,620.11	16,268	15,459	46,823	36.94	1,268
2006	385,318.09	105,030	99,804	324,046	37.61	8,616
2007	3,197,244.08	823,674	782,692	2,734,276	38.29	71,410
2009	10,657.31	2,424	2,303	9,420	39.66	238
2012	539,698.23	98,074	93,194	500,474	41.74	11,990
2013	174,696.16	29,094	27,646	164,520	42.43	3,877
2014	1,304,582.80	197,175	187,365	1,247,676	43.13	28,928
2015	1,884,870.30	255,438	242,729	1,830,628	43.84	41,757
2016	51,448.64	6,169	5,862	50,732	44.55	1,139
2017	1,003,219.98	104,616	99,411	1,004,131	45.26	22,186
2018	134,921.02	11,932	11,338	137,075	45.98	2,981
2019	4,005,859.92	290,825	276,355	4,130,091	46.70	88,439
2020	10,328,269.53	583,960	554,905	10,806,191	47.43	227,835

ACCOUNT 353.00 STATION EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
2021 2022 2023	2,194,140.51 104,246.94 30,387.46	88,819 2,546 247	84,400 2,419 235	2,329,155 112,253 33,191	48.16 48.89 49.63	48,363 2,296 669
	30,655,651.07	5,081,820	4,828,973	28,892,243		682,875
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r 42.3	2.23

ACCOUNT 353.10 STATION EQUIPMENT - STEP UP

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
1992 1996 2023	8,405,252.90 968,381.08 264,197.69	5,229,412 535,805 2,848	4,648,827 476,318 2,532	4,596,951 588,901 288,085	21.72 24.85 49.51	211,646 23,698 5,819
	9,637,831.67	5,768,065	5,127,677	5,473,938		241,163
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	r 22.7	2.50

ACCOUNT 353.20 STATION EQUIPMENT - MAJOR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA					
1950	10,834.19	10,053	10,779	1,139	9.39	121
1954	222,862.54	201,757	216,326	28,823	10.62	2,714
1958	261,300.93	229,801	246,395	41,036	12.03	3,411
1965	65,041.15	53,611	57,482	14,063	15.04	935
1971	4,093.09	3,138	3,365	1,137	18.18	63
1973	11,683.92	8,710	9,339	3,513	19.34	182
1976	40,615.59	28,921	31,009	13,668	21.16	646
1978	26,247.29	18,074	19,379	9,493	22.44	423
1983	111,783.06	70,067	75,126	47,835	25.81	1,853
1985	122,679.77	73,704	79,026	55,922	27.23	2,054
1992	34,444.03	17,391	18,647	19,241	32.46	593
2000	264,762.57	102,370	109,762	181,477	38.91	4,664
2001	125,472.82	46,605	49,970	88,050	39.74	2,216
2002	780,656.67	277,797	297,857	560,865	40.59	13,818
2003	994,850.91	338,511	362,954	731,382	41.44	17,649
2005	130,205.14	40,199	43,102	100,124	43.16	2,320
2006	134,369.73	39,342	42,183	105,624	44.03	2,399
2007	1,788,006.76	494,986	530,728	1,436,079	44.90	31,984
2011	82,257.49	17,418	18,676	71,807	48.45	1,482
2014	61,020.46	9,878	10,591	56,532	51.17	1,105
2015	561,727.06	81,563	87,453	530,447	52.08	10,185
2019	1,036,803.25	80,404	86,210	1,054,274	55.77	18,904
2020	4,576,560.39	276,026	295,957	4,738,259	56.71	83,552
2021	355.48	15	17	375	57.64	7
	11,448,634.29	2,520,341	2,702,333	9,891,165		203,280

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 48.7 1.78

ACCOUNT 353.40 STATION EQUIPMENT - STEP UP EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
1992 2012 2021	1,218,688.02 5,838,602.22 611,786.26	864,324 1,685,896 39,537	881,977 1,720,330 40,344	458,580 4,702,132 632,621	14.21 29.50 37.65	32,272 159,394 16,803
	7,669,076.50	2,589,757	2,642,651	5,793,333		208,469
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	r 27.8	2.72

ACCOUNT 355.00 POLES AND FIXTURES

SURVIVOR CURVE IOWA 55-R1 NET SALVAGE FERCENT30 1946 12.22 13 8 8 10.70 1 1949 90.213.06 92.094 53,893 63,84 11.81 5,367 1961 9.088.84 8.224 4,813 7,002 16.72 419 1962 275.47 246 144 214 17.17 12 1963 8.837.48 7,808 4,569 6,920 17.62 393 1964 33,701.32 29,417 17,215 26,597 18.07 1,472 1965 36,065.05 31,089 18,193 28,692 18.53 1,548 1966 11,610.72 9,880 5,782 9,312 19.00 490 1967 6,512.34 5,468 3,200 5,266 19.48 270 1968 176.61 146 85 145 19.96 7 1969 6,403.92 5,231 3,061 5,264 20.44 258 1971 17,200.25 13,648 7,987 14,373 21.43 671 1972 21,084.72 16,476 9,642 17,768 21.94 810 1973 137,536.31 05,816 61,923 116,674 22.45 5,206 1974 7,825.32 5,924 3,467 6,706 22.97 292 1975 2,340.05 1,743 1,020 2,022 23.49 86 1976 75,509.98 55,146 32,271 65,632 24.02 2,732 1977 9,560.14 6,878 4,025 8,403 24.65 342 1978 3,298.60 2,331 1,364 2,924 25.10 116 1979 24,488.04 16,988 9,941 21.893 22.65 854 1970 75,309.98 55,146 32,271 65,632 24.02 2,732 1977 9,560.14 6,878 4,025 8,403 24.65 342 1978 3,298.60 2,331 1,364 2,924 25.10 116 1979 24,488.04 16,988 9,941 21.893 25.65 854 1980 24,042.59 16,367 7,578 21,677 26.20 827 1981 195,827.99 130,666 76,465 178,111 26,77 6,653 1982 9,765.49 6,387 3,738 8,957 27.33 328 1983 27,517.35 17,620 10,311 25,662 27.91 912 1984 14,001.85 8,774 5,135 13,067 28.49 459 1983 27,517.35 17,620 10,311 25,662 7.91 912 1984 14,001.85 8,774 5,135 13,067 20.49 459 1984 32,7517.55 202,346 118,412 342,76 30.87 11,155 1989 30,535.45 16,976 9,934 29,762 31.48 945 1980 354,775.55 202,346 118,412 342,76 30.87 11,155 1988 354,775.55 202,346 118,412 342,76 30.87 11,155 1988 354,775.55 202,346 118,412 342,76 30.87 11,155 1989 30,535.45 16,976 9,934 29,762 31.48 945 1990 65,711.26 35,556 20,314 64,612 32.10 2,013 1991 80,641.24 42,457 24,852 79,982 32.72 2,444 1992 227,242.94 116,341 68,082 277,34 33.34 6,819 1991 80,641.24 42,457 24,852 79,982 33.72 1,455 1999 105,858.64 52,619 30,792 106,824 33.97 3,145 1994 81,572.49 39,314 23,006 83,033 34.61 23,399 1995 105,858.64 52,	YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$							
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1946	12.22	13	8	8	10.70	1
19619,088.848,2244,8137,00216.724191962275.4724614421417.171219638,837.487,8084,5696,92017.62393196433,701.3229,41717,21526,59718.071,472196536,065.0531,08918,19328,69218.531,548196611,610.729,8805,7829,31219.0049019676,512.345,4683,2005,26619.4827019696,403.925,2313,0615,26420.4425819705,511.984,4392,5984,56820.93218197117,200.2513,6487,98714,37321.43671197221,084.7216,4769,64217,76821.948101973137,536.33105,81661,923116,87422.455,20619747,825.325,9243,4676,70622.9729219752,340.051,7431,0202,02223.4986197675,309.9855,14632,27165,63224.022,73219779,560.146,8784,0258,40324.5634219783,298.602,3311,3642,92425.10116197924,488.0416,9889,9121,89325.65854198024,042.5916,3679,57821,67726			92,094	53,893	63,384		5,367
1962275.4724614421417.171219638,837.487,8084,5696,92017.62393196433,701.3229,41717,21526,59718.071,472196536,065.0531,08918,19328,69218.531,548196611,610.729,8805,7829,31219.0049019676,512.345,4683,2005,26619.4827019696,403.925,2313,0615,26420.4425819707,511.984,4392,5984,56820.9321.8197117,200.2513,6487,98714,37321.43671197221,084.7216,4769,64217,76821.948101973137,536.33105,81661,923116,87422.455,20619747,825.325,9243,4676,70622.9729219752,340.051,7431,0202,02223.4986197675,309.9855,14632,27165,63224.022,73219779,560.146,8784,0258,40324.56342219783,288.602,3311,3642,92425.10116198024,042.5916,3873,7388,95727.333281981195,827.99130,66676,465178,11126.676,65319829,765.496,3873,7388,957 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1962	275.47	246	144	214	17.17	12
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1963	8,837.48	7,808	4,569	6,920	17.62	393
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1964	33,701.32	29,417	17,215	26,597	18.07	1,472
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1965	36,065.05	31,089	18,193	28,692	18.53	1,548
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1966		9,880	5,782	9,312	19.00	490
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1967	6,512.34	5,468	3,200	5,266	19.48	270
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1968			85		19.96	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					5,264		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$							
$\begin{array}{cccccccccccccccccccccccccccccccccccc$							
19747,825.325,9243,4676,70622.97292 1975 2,340.051,7431,0202,02223.4986 1976 75,309.9855,14632,27165,63224.022,732 1977 9,560.146,8784,0258,40324.56342 1978 3,298.602,3311,3642,92425.10116 1979 24,488.0416,9889,94121,89325.65854 1980 24,042.5916,3679,57821,67726.20827 1981 195,827.99130,66676,465178,11126.776,653 1982 9,765.496,3873,7388,95727.33328 1983 27,517.3517,62010,31125,46227.91912 1984 14,001.858,7745,13513,06728.49459 1985 57,432.8835,20020,59954,06429.071,860 1986 9,513.265,6963,3339,03429.6730.4 1987 36,501.9621,33712,48634,96730.271,155 1988 354,775.65202,346118,412342,79630.8711,105 1990 65,711.9635,56820,81464,61232.102,013 1991 80,641.2442,46724,85279,98232.722,444 1992 227,242.94116,34168,08227,33433.346,819<							
$\begin{array}{cccccccccccccccccccccccccccccccccccc$							
197675,309.9855,146 $32,271$ $65,632$ 24.02 $2,732$ 19779,560.146,878 $4,025$ $8,403$ 24.56 342 1978 $3,298.60$ $2,331$ $1,364$ $2,924$ 25.10 116 1979 $24,488.04$ $16,988$ $9,941$ $21,893$ 25.65 854 1980 $24,042.59$ $16,367$ $9,578$ $21,677$ 26.20 827 1981 $195,827.99$ $130,666$ $76,465$ $178,111$ 26.77 $6,653$ 1982 $9,765.49$ $6,387$ $3,738$ $8,957$ 27.33 328 1983 $27,517.35$ $17,620$ $10,311$ $25,462$ 27.91 912 1984 $14,001.85$ $8,774$ $5,135$ $13,067$ 28.49 459 1985 $57,432.88$ $35,200$ $20,599$ $54,064$ 29.07 $1,860$ 1986 $9,513.26$ $5,696$ $3,333$ $9,034$ 29.67 304 1987 $36,501.96$ $21,337$ $12,486$ $34,967$ 30.27 $1,155$ 1988 $354,775.65$ $202,346$ $118,412$ $342,796$ 30.87 $11,105$ 1989 $30,535.45$ $16,976$ $9,934$ $29,762$ 31.48 945 1990 $65,711.96$ $35,568$ $20,814$ $64,612$ 32.10 $2,013$ 1991 $80,641.24$ $42,467$ $24,852$ $79,982$ 32.72 $2,444$ 1992 $227,242.94$ $116,341$ $68,082$ <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
1977 $9,560.14$ $6,878$ $4,025$ $8,403$ 24.56 342 1978 $3,298.60$ $2,331$ $1,364$ $2,924$ 25.10 116 1979 $24,488.04$ $16,988$ $9,941$ $21,893$ 25.65 854 1980 $24,042.59$ $16,367$ $9,578$ $21,677$ 26.20 827 1981 $195,827.99$ $130,666$ $76,465$ $178,1111$ 26.77 $6,653$ 1982 $9,765.49$ $6,387$ $3,738$ $8,957$ 27.33 328 1983 $27,517.35$ $17,620$ $10,311$ $25,462$ 27.91 912 1984 $14,001.85$ $8,774$ $5,135$ $13,067$ 28.49 459 1985 $57,432.88$ $35,200$ $20,599$ $54,064$ 29.07 $1,860$ 1986 $9,513.26$ $5,696$ $3,333$ $9,034$ 29.67 304 1987 $36,501.96$ $21,337$ $12,486$ $34,967$ 30.27 $1,155$ 1988 $354,775.65$ $202,346$ $118,412$ $342,796$ 30.87 $11,105$ 1989 $30,535.45$ $16,976$ $9,934$ $29,762$ 31.48 945 1990 $65,711.96$ $35,568$ $20,814$ $64,612$ 32.10 $2,013$ 1991 $80.641.24$ $42,467$ $24,852$ $79,982$ 32.72 $2,444$ 1992 $227,242.94$ $116,341$ $68,082$ $227,334$ 33.34 $6,819$ 1993 $105,858.$							
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1981195,827.99130,666 $76,465$ $178,111$ 26.77 $6,653$ 19829,765.49 $6,387$ $3,738$ $8,957$ 27.33 328 1983 $27,517.35$ $17,620$ $10,311$ $25,462$ 27.91 912 1984 $14,001.85$ $8,774$ $5,135$ $13,067$ 28.49 459 1985 $57,432.88$ $35,200$ $20,599$ $54,064$ 29.07 $1,860$ 1986 $9,513.26$ $5,696$ $3,333$ $9,034$ 29.67 304 1987 $36,501.96$ $21,337$ $12,486$ $34,967$ 30.27 $1,155$ 1988 $354,775.65$ $202,346$ $118,412$ $342,796$ 30.87 $11,105$ 1989 $30,535.45$ $16,976$ $9,934$ $29,762$ 31.48 945 1990 $65,711.96$ $35,568$ $20,814$ $64,612$ 32.10 $2,013$ 1991 $80,641.24$ $42,467$ $24,852$ $79,982$ 32.72 $2,444$ 1992 $227,242.94$ $116,341$ $68,082$ $227,334$ 33.34 $6,819$ 1993 $105,858.64$ $52,619$ $30,792$ $106,824$ 33.97 $3,145$ 1994 $81,572.49$ $39,314$ $23,006$ $83,038$ 34.61 $2,399$ 1995 $256,713.69$ $119,838$ $70,129$ $263,599$ 35.25 $7,478$ 1996 $62,303.84$ $28,127$ $16,460$ $64,535$ 35.90 $1,798$ 1997 $165,115.13$ $72,00$							
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1984 $14,001.85$ $8,774$ $5,135$ $13,067$ 28.49 459 1985 $57,432.88$ $35,200$ $20,599$ $54,064$ 29.07 $1,860$ 1986 $9,513.26$ $5,696$ $3,333$ $9,034$ 29.67 304 1987 $36,501.96$ $21,337$ $12,486$ $34,967$ 30.27 $1,155$ 1988 $354,775.65$ $202,346$ $118,412$ $342,796$ 30.87 $11,105$ 1989 $30,535.45$ $16,976$ $9,934$ $29,762$ 31.48 945 1990 $65,711.96$ $35,568$ $20,814$ $64,612$ 32.10 $2,013$ 1991 $80,641.24$ $42,467$ $24,852$ $79,982$ 32.72 $2,444$ 1992 $227,242.94$ $116,341$ $68,082$ $227,334$ 33.34 $6,819$ 1993 $105,858.64$ $52,619$ $30,792$ $106,824$ 33.97 $3,145$ 1994 $81,572.49$ $39,314$ $23,006$ $83,038$ 34.61 $2,399$ 1995 $256,713.69$ $119,838$ $70,129$ $263,599$ 35.25 $7,478$ 1996 $62,303.84$ $28,127$ $16,460$ $64,535$ 35.90 $1,798$ 1997 $165,115.13$ $72,004$ $42,136$ $172,514$ 36.55 $4,720$ 1998 $47,716.49$ $20,076$ $11,748$ $50,283$ 37.20 $1,352$ 1999 $95,041.86$ $38,504$ $22,532$ $101,022$ 37.86 $2,668$ </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
1985 $57, 432.88$ $35, 200$ $20, 599$ $54, 064$ 29.07 $1, 860$ 1986 $9, 513.26$ $5, 696$ $3, 333$ $9, 034$ 29.67 304 1987 $36, 501.96$ $21, 337$ $12, 486$ $34, 967$ 30.27 $1, 155$ 1988 $354, 775.65$ $202, 346$ $118, 412$ $342, 796$ 30.87 $11, 105$ 1989 $30, 535.45$ $16, 976$ $9, 934$ $29, 762$ 31.48 945 1990 $65, 711.96$ $35, 568$ $20, 814$ $64, 612$ 32.72 $2, 444$ 1992 $227, 242.94$ $116, 341$ $68, 082$ $227, 334$ 33.34 $6, 819$ 1993 $105, 858.64$ $52, 619$ $30, 792$ $106, 824$ 33.97 $3, 145$ 1994 $81, 572.49$ $39, 314$ $23, 006$ $83, 038$ 34.61 $2, 399$ 1995 $256, 713.69$ $119, 838$ $70, 129$ $263, 599$ 35.25 $7, 478$ 1996 $62, 303.84$ $28, 127$ $16, 460$ $64, 535$ 35.90 $1, 798$ 1997 $165, 115.13$ $72, 004$ $42, 136$ $172, 514$ 36.55 $4, 720$ 1998 $47, 716.49$ $20, 076$ $11, 748$ $50, 283$ 37.20 $1, 352$ 1999 $95, 041.86$ $38, 504$ $22, 532$ $101, 022$ 37.86 $2, 668$							
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1999 95,041.86 38,504 22,532 101,022 37.86 2,668							

ACCOUNT 355.00 POLES AND FIXTURES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA CALVAGE PERCENT					
2001	12,367.27	4,621	2,704	13,373	39.19	341
2002	51,605.02	18,467	10,807	56,280	39.86	1,412
2003	198,945.69	68,043	39,819	218,810	40.53	5,399
2004	643,444.27	209,730	122,733	713,745	41.21	17,320
2005	178,495.84	55,354	32,393	199,652	41.88	4,767
2006	64,751.67	19,024	11,133	73,044	42.57	1,716
2007	693,790.52	192,688	112,761	789,167	43.25	18,247
2008	159,777.45	41,769	24,443	183,268	43.94	4,171
2009	129,318.90	31,698	18,550	149,565	44.63	3,351
2010	395,932.55	90,589	53,012	461,700	45.32	10,188
2011	117,427.32	24,952	14,602	138,054	46.01	3,001
2012	299,332.26	58,654	34,324	354,808	46.71	7,596
2013	126,990.66	22,782	13,332	151,756	47.41	3,201
2014	263,307.26	42,818	25,057	317,242	48.12	6,593
2015	377,583.84	55,065	32,224	458,635	48.83	9,392
2016	41,841.83	5,400	3,160	51,234	49.54	1,034
2017	670,056.45	75,226	44,022	827,051	50.25	16,459
2018	299,995.77	28,575	16,722	373,273	50.97	7,323
2019	1,484,296.36	115,775	67,751	1,861,834	51.70	36,012
2020	2,067,385.23	126,075	73,779	2,613,822	52.42	49,863
2021	2,740,268.21	119,837	70,128	3,492,221	53.15	65,705
2022	1,763,895.23	46,274	27,079	2,265,985	53.89	42,048
2023	26,653,822.71	233,194	136,465	34,513,505	54.63	631,768
	41,928,438.79	3,147,003	1,841,615	52,665,355		1,028,938
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	т 51.2	2 2.45

ACCOUNT 356.00 OVERHEAD CONDUCTORS AND DEVICES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1925	3,067.61	3,561	3,797	38	3.93	10
1949	8.79	9	10	1	11.81	
1955	15.50	14	15	4	14.17	
1957	0.91	1	1			
1958	489.61	440	469	143	15.42	9
1959	878.43	782	834	264	15.85	17
1960	16,259.25	14,308	15,257	5,067	16.28	311
1961	22,523.26	19,595	20,895	7,259	16.72	434
1962	809.23	696	742	270	17.17	16
1963	10,820.54	9,193	9,803	3,723	17.62	211
1964	83,700.89	70,251	74,913	29,713	18.07	1,644
1965	65,221.55	54,060	57,647	23,880	18.53	1,289
1966	19,163.55	15,679	16,719	7,235	19.00	381
1967	6,979.87	5,635	6,009	2,716	19.48	139
1968	89.47	71	76	36	19.96	2
1969	28,339.68	22,259	23,736	11,689	20.44	572
1970	1,052.10	815	869	446	20.93	21
1971	75,515.32	57,614	61,437	32,957	21.43	1,538
1972	9,112.16	6,847	7,301	4,089	21.94	186
1973	124,121.46	91,822	97,915	57,237	22.45	2,550
1974	162,887.03	118,574	126,442	77,167	22.97	3,359
1975	20,655.16	14,792	15,774	10,045	23.49	428
1976	90,279.92	63,565	67,783	45,067	24.02	1,876
1977	22,050.86	15,255	16,267	11,297	24.56	460
1979	6,521.51	4,350	4,639	3,513	25.65	137
1980	10,683.74	6,993	7,457	5,898	26.20	225
1981	225,881.39	144,923	154,540	127,812	26.77	4,774
1983	582,085.04	358,382	382,164	345,442	27.91	12,377
1985	36,079.09	21,262	22,673	22,426	29.07	771
1986	3,355.09	1,931	2,059	2,135	29.67	72
1987	601.57	338	360	392	30.27	13
1988	400,632.35	219,712	234,292	266,498	30.87	8,633
1990	64,931.49	33,794	36,036	45,128	32.10	1,406
1991 1992	58,890.12	29,820	31,799	41,814	32.72	1,278
	324,166.34	159,579	170,168	235,040	33.34	7,050
1993 1994	51,461.41 6,411.68	24,596 2,971	26,228 3,168	38,099 4,847	33.97 34.61	1,122 140
1994	222,883.75	100,044	106,683	171,922	35.25	4,877
1995	70,154.41	30,453	32,474	55,219	35.25	1,538
1990	105,682.85	44,314	47,255	84,849	36.55	2,321
1998	2,355.51	953	1,016	1,928	37.20	52
1999	108,946.07	42,440	45,256	90,927	37.86	2,402
	100,010.07	12,110	10,200	JU; JZ1	57.00	2,102

ACCOUNT 356.00 OVERHEAD CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
2000	71,134.34	26,643	28,411	60,507	38.52	1,571
2001	34,473.00	12,387	13,209	29,882	39.19	762
2002	38,991.78	13,417	14,307	34,433	39.86	864
2003	190,279.42	62,576	66,728	171,121	40.53	4,222
2004	296,466.03	92,916	99,082	271,501	41.21	б,588
2005	48,314.89	14,407	15,363	45,031	41.88	1,075
2006	66,996.75	18,927	20,183	63,563	42.57	1,493
2007	796,741.62	212,770	226,889	769,038	43.25	17,781
2008	29,497.89	7,415	7,907	28,965	43.94	659
2009	14,558.83	3,431	3,659	14,540	44.63	326
2010	224,131.54	49,309	52,581	227,583	45.32	5,022
2011	116,560.40	23,815	25,395	120,306	46.01	2,615
2012	156,049.78	29,402	31,353	163,709	46.71	3,505
2013	70,493.43	12,160	12,967	75,150	47.41	1,585
2014	35,934.50	5,619	5,992	38,926	48.12	809
2015	30,546.45	4,283	4,567	33,616	48.83	688
2016	50,366.08	6,250	6,665	56,293	49.54	1,136
2017	122,475.65	13,221	14,098	138,997	50.25	2,766
2018	61,094.14	5,595	5,966	70,402	50.97	1,381
2019	1,435,952.11	107,696	114,843	1,680,097	51.70	32,497
2020	2,439,067.75	143,021	152,512	2,896,323	52.42	55,252
2021	1,935,930.44	81,406	86,808	2,333,105	53.15	43,897
2022	2,130,215.50	53,735	57,301	2,605,468	53.89	48,348
2023	1,551,885.56	13,055	13,921	1,925,936	54.63	35,254
	14,993,923.44	2,826,149	3,013,685	15,728,719		334,737

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 47.0 2.23

ACCOUNT 356.10 OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA VAGE PERCENT					
2007	4,273.99	1,045	1,101	3,173	49.11	65
2008	678.77	156	164	515	50.05	10
2009	6,650.00	1,433	1,510	5,140	50.99	101
2010	8,002.00	1,609	1,695	6,307	51.93	121
2011	17,292.00	3,224	3,397	13,895	52.88	263
2012	44,728.00	7,687	8,099	36,629	53.83	680
2013	18,513.00	2,911	3,067	15,446	54.78	282
2014	35,273.00	5,025	5,294	29,979	55.74	538
2015	36,833.00	4,698	4,950	31,883	56.71	562
2016	40,997.56	4,623	4,871	36,127	57.67	626
2017	321,299.63	31,439	33,123	288,177	58.64	4,914
2018	313,956.90	26,033	27,428	286,529	59.61	4,807
2019	199,142.71	13,512	14,236	184,907	60.59	3,052
2020	623,062.09	32,972	34,738	588,324	61.56	9,557
2021	171,149.94	6,478	6,825	164,325	62.54	2,628
2022	435,474.62	9,916	10,447	425,028	63.52	6,691
2023	434,176.51	3,274	3,450	430,727	64.51	6,677
	2,711,503.72	156,035	164,395	2,547,109		41,574

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 61.3 1.53

ACCOUNT 360.10 RIGHTS OF WAY

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1937 1938 1939 1940 1941	21,090.83 4,555.53 566.88 3,030.65 1,573.96	19,193 4,127 511 2,720 1,406	21,091 4,556 567 3,031 1,574			
1942 1943 1944 1945 1946	5,164.10 4,897.52 462.34 330.67 781.58	4,589 4,329 406 289 679	5,164 4,898 462 331 782			
1947 1948 1949 1950	1,799.58 3,349.38 8,676.40 1,737.77	1,552 2,869 7,380 1,467	1,800 3,349 8,676 1,738			
1951 1952 1953 1954 1955	8,346.55 12,726.87 2,603.56 9,502.50 4,760.79	6,988 10,565 2,142 7,746 3,843	8,347 12,727 2,604 9,502 4,761			
1956 1957 1958 1959 1960	14,044.62 13,905.05 14,105.17 11,597.81 17,228.28	11,223 10,994 11,032 8,969 13,169	14,045 13,905 14,105 11,598 17,228			
1961 1962 1963 1964 1965	35,962.20 30,065.96 23,589.95 21,297.85 47,056.95	27,163 22,437 17,384 15,494 33,787	35,962 30,066 23,590 21,298 47,057			
1966 1967 1968 1969 1970	28,568.21 37,661.09 34,610.71 31,018.91 47,115.95	20,234 26,307 23,831 21,047 31,486	28,568 37,661 34,254 30,252 45,257	357 767 1,859	23.36 24.11 24.88	15 32 75
1971 1972 1973 1974 1975 1976	45,736.43 67,572.03 78,177.44 140,806.04 61,888.66 75,551.33	30,095 43,751 49,794 88,163 38,082 45,653 21,204	43,258 62,886 71,573 126,723 54,738 65,620	2,478 4,686 6,604 14,083 7,151 9,931 7,751	25.65 26.44 27.23 28.04 28.85 29.68	97 177 243 502 248 335 254
1977 1978	52,602.82 62,310.29	31,204 36,265	44,852 52,126	7,751 10,184	30.51 31.35	254 325

ACCOUNT 360.10 RIGHTS OF WAY

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
1979	71,128.25	40,581	58,330	12,798	32.21	397
1980	120,456.92	67,344	96,798	23,659	33.07	715
1981	123,971.39	67,871	97,556	26,415	33.94	778
1982	114,830.29	61,534	88,447	26,383	34.81	758
1983	238,309.31	124,874	179,491	58,818	35.70	1,648
1984	140,617.91	72,015	103,512	37,106	36.59	1,014
1985	222,229.32	111,144	159,755	62,474	37.49	1,666
1986	226,881.50	110,718	159,143	67,738	38.40	1,764
1987	374,182.90	178,010	255,867	118,316	39.32	3,009
1988	162,262.39	75,204	108,096	54,166	40.24	1,346
1989	273,358.16	123,339	177,284	96,074	41.16	2,334
1990	238,355.78	104,560	150,292	88,064	42.10	2,092
1991	284,100.23	121,064	174,014	110,086	43.04	2,558
1992	206,935.37	85,588	123,022	83,913	43.98	1,908
1993	166,625.11	66,805	96,024	70,601	44.93	1,571
1994	142,883.92	55,478	79,743	63,141	45.88	1,376
1995	178,950.56	67,191	96,579	82,372	46.84	1,759
1996	66,778.64	24,219	34,812	31,967	47.80	669
2000	18,278.20	5,683	8,168	10,110	51.68	196
2017	19,994.03	1,730	2,487	17,507	68.51	256
2018	8,487.03	621	893	7,594	69.51	109
2019	9,522.89	570	819	8,704	70.51	123
2022	224,615.80	4,492	6,457	218,159	73.50	2,968
2023	59,823.11	399	573	59,250	74.50	795
	4,782,010.22	2,311,399	3,280,744	1,501,266		34,112

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 44.0 0.71

ACCOUNT 361.00 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
NEI S	ALVAGE PERCENI	-12				
1939	28,191.50	27,178	18,357	14,063	11.32	1,242
1942	1,443.55	1,370	925	735	12.25	60
1946	489.99	454	307	256	13.63	19
1953	87.10	77	52	48	16.50	3
1955	713.14	616	416	404	17.43	23
1964	2,439.86	1,915	1,293	1,513	22.22	68
1969	2,540.34	1,867	1,261	1,660	25.27	66
1974	90,080.14	61,327	41,422	62,170	28.56	2,177
1975	92.16	62	42	64	29.24	2
2007	9,905.05	2,472	1,670	9,721	54.81	177
2008	139,224.59	32,709	22,093	138,015	55.70	2,478
2010	7,073.24	1,453	981	7,153	57.50	124
2011	6,032.09	1,149	776	6,161	58.41	105
2013	50,345.99	8,081	5,458	52,440	60.23	871
2014	689,479.20	100,357	67,785	725,116	61.14	11,860
2015	374,914.98	48,906	33,033	398,119	62.06	6,415
2016	1,221.72	141	95	1,310	62.98	21
2018	5,712.25	484	327	6,242	64.84	96
2022	270,925.51	6,322	4,270	307,294	68.58	4,481
2023	1,645,881.96	12,700	8,578	1,884,186	69.53	27,099
	3,326,794.36	309,640	209,141	3,616,673		57,387

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 63.0 1.72

ACCOUNT 362.00 STATION EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	DR CURVE IOWA VAGE PERCENT					
1952	624.87	687	687			
1956	1,858.83	2,045	2,045			
1958	13,753.62	15,129	15,129			
1960	21,692.86	23,676	21,415	2,447	0.25	2,447
1964	24,194.82	24,818	22,447	4,167	2.16	1,929
1965	597.87	604	546	112	2.62	43
1966	753.86	750	678	151	3.06	49
1967	3,036.07	2,975	2,691	649	3.49	186
1969	6,539.75	6,220	5,626	1,568	4.33	362
1970	3,432.15	3,216	2,909	866	4.74	183
1971	11,164.97	10,309	9,324	2,957	5.14	575
1972	1,277.60	1,162	1,051	354	5.54	64
1973	16,110.30	14,437	13,058	4,663	5.93	786
1974	160.06	141	128	48	6.33	8
1975	28.00	24	22	9	6.73	1
1976	43,720.34	37,392	33,820	14,272	7.12	2,004
1977	13,334.59	11,221	10,149	4,519	7.52	601
1979	69,490.65	56,542	51,141	25,299	8.33	3,037
1980	9,451.91	7,557	6,835	3,562	8.74	408
1981	40,912.61	32,135	29,066	15,938	9.15	1,742
1982	255,853.94	197,359	178,508	102,931	9.56	10,767
1983	66,909.53	50,623	45,788	27,812	9.99	2,784
1984	168,487.64	125,045	113,101	72,235	10.41	6,939
1985 1986	1,345.65	978	885 9,264	595	10.85	55
1987	14,379.18 5,139.10	10,242 3,581	3,239	6,553 2,414	11.28 11.73	581 206
1987	320,498.50	218,361	197,503	155,045	12.18	12,729
1990	66,704.67	43,337	39,198	34,177	13.10	2,609
1991	332,512.48	210,541	190,430	175,334	13.58	12,911
1992	751,395.13	463,372	419,111	407,424	14.06	28,978
1993	857,290.64	514,530	465,383	477,637	14.54	32,850
1994	2,033.12	1,185	1,072	1,164	15.04	77
1995	712,182.96	402,966	364,475	418,926	15.54	26,958
1996	97,118.84	53,249	48,163	58,668	16.05	3,655
1997	95,877.06	50,887	46,026	59,439	16.56	3,589
1998	434.11	222	201	277	17.09	16
1999	125,741.52	62,156	56,219	82,097	17.62	4,659
2000	10,587.02	5,040	4,559	7,087	18.15	390
2001	1,323,960.00	605,291	547,474	908,882	18.70	48,603
2002	897,736.31	393,463	355,880	631,630	19.25	32,812
2003	1,034,634.70	433,900	392,454	745,644	19.80	37,659
2004	946,369.45	378,666	342,496	698,510	20.36	34,308

ACCOUNT 362.00 STATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
2005 2006 2007 2008 2010 2011 2012 2013 2014 2015 2016 2017 2018	$1,847,483.71\\1,472,069.26\\1,017,655.68\\1,954,023.09\\768,137.87\\78,764.92\\219,506.28\\1,847,433.91\\2,986,126.86\\2,909,761.63\\2,205,214.59\\2,898,268.52\\3,567,320.16\\8,648,383.73$	703,030 531,317 347,021 627,374 231,306 22,120 57,196 443,909 655,930 579,141 393,430 457,300 489,290 1,004,787	635,877 480,566 313,874 567,448 209,212 20,007 51,733 401,507 593,277 523,822 355,850 413,619 442,554 908,811	1,396,355 1,138,710 805,547 1,581,977 635,740 66,634 189,724 1,630,670 2,691,463 2,676,916 2,069,886 2,774,476 3,481,498 8,604,411	20.93 21.50 22.08 22.66 23.24 23.83 24.42 25.01 25.61 26.21 26.81 27.41 28.01 28.62	66,715 52,963 36,483 69,814 27,355 2,796 7,769 65,201 105,094 102,133 77,206 101,221 124,295 300,643
2019 2020 2021 2022 2023	21,599,648.73 14,137,495.23 4,951,180.78 2,742,637.47 3,067,190.32 87,287,630.02	2,056,632 1,049,709 263,819 87,671 32,693 14,509,709	1,860,186 949,442 238,619 79,297 29,570 13,125,467	21,899,428 14,601,803 5,207,680 2,937,604 3,344,339 82,890,926	29.23 29.84 30.45 31.07 31.69	749,211 489,337 171,024 94,548 105,533 3,067,901

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 27.0 3.51

ACCOUNT 362.20 STATION EQUIPMENT - MAJOR

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA VAGE PERCENT					
1955	6,151.27	5,532	6,070	696	10.95	64
1958	14,414.37	12,677	13,910	1,946	12.03	162
1960	19,160.21	16,573	18,185	2,891	12.82	226
1962	4,096.00	3,480	3,819	687	13.66	50
1963	10,431.35	8,776	9,630	1,844	14.11	131
1964	120,966.56	100,751	110,553	22,510	14.57	1,545
1966	132,307.92	107,869	118,364	27,175	15.53	1,750
1967	15,812.04	12,746	13,986	3,407	16.03	213
1969	98,152.63	77,233	84,747	23,221	17.08	1,360
1970	9,366.59	7,277	7,985	2,318	17.62	132
1971	196,837.41	150,915	165,597	50,924	18.18	2,801
1972	25,581.14	19,346	21,228	6,911	18.75	369
1973	37,552.07	27,993	30,716	10,591	19.34	548
1974	136,571.00	100,327	110,088	40,140	19.93	2,014
1976	443,042.16	315,474	346,166	141,180	21.16	6,672
1977	130,310.33	91,284	100,165	43,176	21.79	1,981
1979	38,922.77	26,339	28,902	13,913	23.09	603
1980	61,317.19	40,739	44,702	22,747	23.76	957
1981	150,376.13	98,062	107,602	57,812	24.43	2,366
1982	353,461.57	226,092	248,088	140,720	25.11	5,604
1983	676,934.41	424,311	465,592	279,036	25.81	10,811
1984	401,128.70	246,288	270,249	170,993	26.51	6,450
1986	41,970.00	24,661	27,060	19,107	27.95	684
1987	35,726.65	20,514	22,510	16,789	28.68	585
1988 1989	83,800.96	46,982	51,553	40,628	29.42 30.17	1,381 1,626
1989	98,124.26 34,368.83	53,663 18,323	58,884 20,106	49,053 17,700	30.17	572
1991	1,100,145.56	570,990	626,541	583,619	31.69	18,417
1992	377,796.58	190,749	209,307	206,269	32.46	6,355
1993	939,635.95	460,985	505,834	527,766	33.24	15,877
1995	202,678.25	93,564	102,667	120,279	34.82	3,454
2000	1,228,111.88	474,849	521,047	829,876	38.91	21,328
2000	3,212,609.26	1,193,282	1,309,376	2,224,494	39.74	55,976
2002	509,919.85	181,455	199,109	361,803	40.59	8,914
2003	641,208.58	218,180	239,407	465,922	41.44	11,243
2004	948,700.00	307,853	337,804	705,766	42.30	16,685
2005	1,019,470.66	314,748	345,370	776,048	43.16	17,981
2006	1,457,748.51	426,810	468,334	1,135,189	44.03	25,782
2007	1,360,135.34	376,536	413,169	1,082,980	44.90	24,120
2008	1,930,162.77	503,193	552,148	1,571,031	45.78	34,317
2009	904,783.53	221,117	242,629	752,633	46.67	16,127
2010	2,036,293.53	464,403	509,584	1,730,339	47.56	36,382

ACCOUNT 362.20 STATION EQUIPMENT - MAJOR

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA					
NET S	ALVAGE PERCENT	-10				
2014	1,197,690.66	193,891	212,755	1,104,705	51.17	21,589
2015	896,309.89	130,144	142,806	843,135	52.08	16,189
2018	3,842,122.76	362,746	398,037	3,828,298	54.85	69,796
2019	6,655,109.02	516,104	566,315	6,754,305	55.77	121,110
2020	5,116,051.45	308,564	338,584	5,289,073	56.71	93,265
2021	3,550,678.99	153,613	168,558	3,737,189	57.64	64,837
2022	1,329,485.40	34,616	37,984	1,424,450	58.58	24,316
2023	2,676,736.89	23,055	25,298	2,919,113	59.53	49,036
	46,510,469.83	10,005,674	10,979,120	40,182,397		824,753
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	r 48.7	1.77

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1915	22.22	33	33			
1917	21.06	31	32			
1918	18.91	27	28			
1919	20.33	29	30			
1921	35.85	50	54			
1922	39.78	55	60			
1923	36.37	50	55			
1924	77.90	106	117			
1925	664.20	898	996			
1926	289.01	388	434			
1927	271.71	361	408			
1928	369.96	488	555			
1929	590.30	771	885			
1930	606.66	786	910			
1931	2,896.49	3,719	4,345			
1932	1,238.39	1,577	1,858			
1933	2,623.78	3,311	3,936			
1934	2,954.44	3,696	4,432			
1935	2,954.79	3,665	4,432			
1936	839.25	1,032	1,259			
1937	4,285.23	5,222	6,428			
1938	6,196.70	7,485	9,295			
1939	4,735.19	5,668	7,103			
1940	8,680.56 7,196.69	10,296	13,021			
1941 1942	11,122.69	8,459 12,953	10,795 16,684			
1942	2,493.95	2,877	3,741			
1943	4,646.42	5,310	6,970			
1945	9,089.39	10,288	13,533	101	13.50	7
1946	6,838.31	7,665	10,083	174	13.90	13
1947	14,290.81	15,859	20,861	575	14.31	40
1948	15,836.75	17,402	22,891	864	14.71	59
1949	24,853.02	27,031	35,557	1,723		114
1950	9,141.36	9,840	12,944	768	15.53	49
1951	42,263.24	45,010	59,207	4,188	15.95	263
1952	58,267.55	61,387	80,750	6,651	16.37	406
1953	57,068.07	59,470	78,228	7,374	16.79	439
1954	59,568.57	61,393	80,758	8,595	17.21	499
1955	77,753.99	79,245	104,241	12,390	17.63	703
1956	68,372.90	68,883	90,610	11,949	18.06	662
1957	80,502.90	80,137	105,414	15,340	18.50	829
1958	84,072.11	82,704	108,791	17,317	18.93	915
		-	-	-		

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	DR CURVE IOWA JVAGE PERCENT					
1959	95,909.56	93,198	122,595	21,269	19.37	1,098
1960	79,697.90	76,467	100,586	18,961	19.82	957
1961	121,438.88	115,058	151,350	30,808	20.26	1,521
1962	88,367.86	82,616	108,675	23,877	20.72	1,152
1963	87,740.00	80,952	106,486	25,124	21.17	1,187
1964	153,254.10	139,476	183,470	46,411	21.63	2,146
1965	147,142.19	132,066	173,722	46,991	22.09	2,127
1966	133,559.27	118,164	155,435	44,904	22.56	1,990
1967	141,043.48	122,977	161,767	49,798	23.03	2,162
1968	180,880.98	155,345	204,344	66,977	23.51	2,849
1969	186,784.29	157,969	207,796	72,380	23.99	3,017
1970	223,679.08	186,243	244,988	90,531	24.47	3,700
1971	234,238.25	191,904	252,435	98,922	24.96	3,963
1972	306,160.11	246,736	324,562	134,678	25.45	5,292
1973	395,149.75	313,065	411,812	180,913	25.95	6,972
1974	273,311.36	212,810	279,935	130,032	26.45	4,916
1975	246,067.48	188,242	247,618	121,483	26.95	4,508
1976	261,360.80	196,307	258,226	133,815	27.46	4,873
1977	409,076.26	301,450	396,534	217,080	27.98	7,758
1978	426,014.69	308,009	405,162	233,860	28.49	8,208
1979	560,775.07	397,491	522,868	318,295	29.01	10,972
1980	835,046.13	579,827	762,717	489,852	29.54	16,583
1981	715,157.08	486,239	639,609	433,127	30.07	14,404
1982	634,802.93	422,436	555,681	396,523	30.60	12,958
1983	661,320.30	430,341	566,080	425,900	31.14	13,677
1984	596,540.83	379,400	499,071	395,740	31.68	12,492
1985	693,435.96	430,624	566,452	473,702	32.23	14,698
1986	746,839.50	452,585	595,340	524,919	32.78	16,013
1987	1,062,428.72	627,895	825,947	767,696	33.33	23,033
1988	724,153.45	417,112	548,678	537,552	33.88	15,866
1989	1,659,757.29	930,676	1,224,231	1,265,405	34.44	36,742
1990	975,346.23	531,734	699,454	763,565	35.01	21,810
1991	1,348,941.44	714,811	940,278	1,083,134	35.57	30,451
1992	1,623,444.15	835,043	1,098,434	1,336,732	36.14	36,988
1993	1,734,113.19	865,019	1,137,865	1,463,305	36.71	39,861
1994	1,807,169.70	872,863	1,148,183	1,562,572	37.29	41,903
1995	1,627,697.70	760,884	1,000,883	1,440,664	37.86	38,052
1996	1,377,211.70	621,997	818,188	1,247,630	38.44	32,457
1997	1,163,404.39	506,709	666,536	1,078,571	39.03	27,634
1998	1,448,703.44	608,064	799,861	1,373,194	39.61	34,668
1999	1,287,483.28	519,673	683,589	1,247,636	40.20	31,036
2000	1,003,355.71	389,126	511,865	993,169	40.78	24,354

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA SALVAGE PERCENT					
2001	678,058.78	252,055	331,559	685,529	41.37	16,571
2002	111,557.74	39,674	52,188	115,149	41.96	2,744
2003	850,402.28	288,516	379,520	896,083	42.56	21,055
2004	748,233.19	241,810	318,082	804,268	43.15	18,639
2005	1,254,814.06	385,008	506,448	1,375,773	43.75	31,446
2006	1,607,442.41	467,332	614,739	1,796,425	44.34	40,515
2007	1,212,125.29	332,565	437,463	1,380,725	44.94	30,724
2009	1,673,903.23	404,474	532,054	1,978,801	46.14	42,887
2010	1,220,346.14	274,907	361,619	1,468,900	46.74	31,427
2011	719,875.41	150,191	197,564	882,249	47.35	18,633
2012	2,404,673.33	462,347	608,181	2,998,829	47.95	62,541
2013	2,410,805.54	423,422	556,979	3,059,229	48.56	62,999
2014	2,576,980.61	410,436	539,896	3,325,575	49.16	67,648
2015	3,433,459.17	489,731	644,203	4,505,986	49.77	90,536
2016	3,207,152.52	404,101	531,563	4,279,166	50.38	84,938
2017	2,747,768.91	300,510	395,297	3,726,356	50.99	73,080
2018	1,289,779.88	119,601	157,326	1,777,344	51.60	34,445
2019	3,085,471.05	233,956	307,751	4,320,456	52.22	82,736
2020	2,689,258.14	159,137	209,332	3,824,555	52.83	72,394
2021	6,966,029.59	294,454	387,331	10,061,713	53.45	188,245
2022	5,836,080.07	148,032	194,725	8,559,395	54.07	158,302
2023	3,132,693.35	26,503	34,863	4,664,177	54.69	85,284
	79,008,762.97	23,214,022	30,530,755	87,982,390		1,939,835
	CONDOCTED DEMATN	TNO I TEE AND			m 1r	1 0 10

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 45.4 2.46

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1905	90.21	126	126			
1925	47,643.45	61,982	66,701			
1926	1.94	. 2	2	1	4.25	
1927	17.21	22	24			
1932	127.38	154	174	4	7.25	1
1938	15,669.18	17,694	20,007	1,930	10.25	188
1939	8,516.11	9,504	10,746	1,177	10.75	109
1940	441.32	487	551	67	11.25	б
1941	10,164.45	11,075	12,522	1,708	11.75	145
1942	8,810.57	9,484	10,724	1,611	12.25	132
1943	5,135.47	5,460	6,174	1,016	12.75	80
1944	706.95	742	839	151	13.25	11
1945	3,621.03	3,754	4,245	824	13.75	60
1946	8,402.48	8,601	9,725	2,038	14.25	143
1947	25,266.31	25,529	28,866	6,507	14.75	441
1948	14,948.28	14,906	16,854	4,074	15.25	267
1949	31,754.52	31,245	35,329	9,127	15.75	579
1950	74,632.32	72,450	81,919	22,566	16.25	1,389
1951	50,944.87	48,782	55,158	16,165	16.75	965
1952	99,676.72	94,129	106,431	33,116	17.25	1,920
1953	40,298.50	37,523	42,427	13,991	17.75	788
1954	94,670.38	86,900	98,258	34,281	18.25	1,878
1955	77,982.80	70,553	79,774	29,402	18.75	1,568
1956	81,729.49	72,862	82,385	32,036	19.25	1,664
1957	80,036.57	70,296	79,484	32,567	19.75	1,649
1958	91,672.92	79,305	89,670	38,672	20.25	1,910
1959	72,490.14	61,753	69,824	31,662	20.75	1,526
1960	92,265.68	77,382	87,496	41,676	21.25	1,961
1961	178,165.14	147,070	166,292	83,139	21.75	3,822
1962	174,337.41	141,608	160,116	83,956	22.25	3,773
1963	195,022.43	155,833	176,200	96,831	22.75	4,256
1964	270,078.39	212,241	239,980	138,130	23.25	5,941
1965	261,660.92	202,171	228,594	137,731	23.75	5,799
1966	291,120.41	221,086	249,981	157,588	24.25	6,498
1967	208,308.92	155,446	175,762	115,870	24.75	4,682
1968	238,506.49	174,828	197,678	136,231	25.25	5,395
1969	209,003.60	150,443	170,106	122,499	25.75	4,757
1970	414,369.48	292,797	331,065	249,052	26.25	9,488
1971	413,817.21	286,938	324,440	254,904	26.75	9,529
1972	362,599.66	246,637	278,872	228,768	27.25	8,395
1973	648,276.78	432,393	488,906	418,681	27.75	15,088
1974	546,531.20	357,307	404,006	361,138	28.25	12,784

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
1975	425,352.55	272,468	308,079	287,415	28.75	9,997
1976	349,678.74	219,372	248,043	241,507	29.25	8,257
1977	315,603.61	193,829	219,162	222,683	29.75	7,485
1978	294,770.88	177,143	200,295	212,384	30.25	7,021
1979	649,490.54	381,728	431,619	477,668	30.75	15,534
1980	816,757.26	469,253	530,583	612,877	31.25	19,612
1981	459,031.41	257,662	291,338	351,306	31.75	11,065
1982	590,787.66	323,819	366,141	460,962	32.25	14,293
1983	969,172.38	518,422	586,179	770,662	32.75	23,532
1984	593,595.00	309,676	350,150	480,883	33.25	14,463
1985 1986	870,985.62 914,469.07	442,891	500,776	718,604	33.75 34.25	21,292 22,428
1980	1,227,929.43	452,916 591,955	512,111 669,322	768,146 1,049,779	34.25	30,209
1987	749,610.38	351,473	397,410	652,045	35.25	18,498
1989	2,183,508.41	994,933	1,124,969	1,931,943	35.75	54,040
1989	1,295,061.51	573,008	647,899	1,165,187	36.25	32,143
1990	2,024,887.31	869,163	982,761	1,852,081	36.75	50,397
1992	2,022,256.19	841,335	951,296	1,879,863	37.25	50,466
1993	1,927,870.45	776,616	878,118	1,820,901	37.75	48,236
1994	3,275,824.20	1,276,327	1,443,140	3,143,014	38.25	82,170
1995	1,954,606.24	735,749	831,910	1,904,539	38.75	49,149
1996	1,301,468.06	472,696	534,476	1,287,579	39.25	32,805
1997	993,128.17	347,595	393,025	997,354	39.75	25,091
1998	1,929,354.16	649,803	734,731	1,966,365	40.25	48,854
1999	1,781,889.21	576,587	651,946	1,842,699	40.75	45,220
2000	4,379,719.73	1,359,377	1,537,045	4,594,563	41.25	111,383
2001	2,122,151.45	630,627	713,049	2,257,963	41.75	54,083
2002	426,434.41	121,091	136,917	460,091	42.25	10,890
2003	5,329,717.08	1,443,074	1,631,681	5,829,923	42.75	136,372
2004	4,833,438.19	1,244,823	1,407,519	5,359,294	43.25	123,914
2005	2,954,215.83	721,839	816,182	3,319,720	43.75	75,879
2006	6,121,407.14	1,414,816	1,599,729	6,970,241	44.25	157,520
2007	3,645,181.03	794,372	898,195	4,205,058	44.75	93,968
2008	1,725,104.03	353,167	399,325	2,015,821	45.25	44,549
2009	3,366,850.73	644,772	729,042	3,984,549	45.75	87,094
2010	5,715,588.76	1,019,112	1,152,308	6,849,516	46.25	148,098
2011	1,174,229.37	193,851	219,187	1,424,734	46.75	30,476
2012	9,775,944.17	1,484,829	1,678,893	12,007,429	47.25	254,125
2013	5,474,484.63	759,223	858,452	6,805,826	47.75	142,530
2014	2,899,548.71	363,801	411,349	3,648,019	48.25	75,607
2015	5,967,938.69	669,997	757,564	7,597,550	48.75	155,847
2016	4,006,816.73	396,875	448,746	5,160,797	49.25	104,788

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT	53-01 -40				
2017	4,453,772.09	382,347	432,319	5,802,962	49.75	116,642
2018	3,075,043.20	223,390	252,586	4,052,474	50.25	80,646
2019	7,764,460.20	461,442	521,751	10,348,493	50.75	203,911
2020	8,210,130.41	379,538	429,143	11,065,040	51.25	215,903
2021	9,243,014.93	305,130	345,010	12,595,211	51.75	243,386
2022	10,226,955.56	202,596	229,075	14,088,663	52.25	269,639
2023	5,064,120.12	33,464	37,837	7,051,931	52.75	133,686
	153,322,870.92	32,829,472	37,116,816	177,535,203		3,932,780
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	45.1	2.57

ACCOUNT 365.10 OVERHEAD CONDUCTORS AND DEVICES - CLEARING AND RIGHT OF WAY

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA CALVAGE PERCENT					
2017	4,136,475.58	404,754	546,738	3,589,738	58.64	61,217
2018	319,584.85	26,500	35,796	283,789	59.61	4,761
2019	727,201.20	49,341	66,649	660,552	60.59	10,902
2020	284,408.99	15,051	20,331	264,078	61.56	4,290
2021	1,553,130.79	58,786	79,407	1,473,724	62.54	23,565
2022	771,820.93	17,574	23,739	748,082	63.52	11,777
2023	343,560.89	2,590	3,499	340,062	64.51	5,271
	8,136,183.23	574,596	776,159	7,360,025		121,783
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r 60.4	1.50

ACCOUNT 366.00 UNDERGROUND CONDUIT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA	75-23				
	AGE PERCENT.					
		23				
1901	3,112.44	3,837	3,891			
1911	78.84	94	99			
1916	468.11	548	585			
1920	108.08	125	135			
1923	4,392.64	5,013	5,491			
1924	68.88	78	86			
1926	620.21	700	775			
1927	1,637.40	1,840	2,047			
1928	226.28	253	283			
1929	6,837.45	7,621	8,547			
1930	188.44	209	236			
1931	10,162.37	11,233	12,703			
1932	2,744.67	3,021	3,431			
1933	224.03	245	280			
1934	33.01	36	41			
1935	1,437.63	1,560	1,797			
1937	90.60	97	113			
1938	22,077.80	23,598	27,583	14	10.87	1
1939	0.78	1	1			
1940	43,879.67	46,374	54,205	645	11.59	56
1941	8,991.51	9,447	11,042	197	11.96	16
1942	2,002.86	2,092	2,445	59	12.34	5
1943	1,872.24	1,943	2,271	69	12.74	5
1944	264.60	273	319	12	13.14	1
1945	958.82	982	1,148	51	13.56	4
1946	0.54	1	1	150	1 1 1 1	1 1
1947	2,233.96	2,255	2,636	156	14.44	11
1948	134.05	134	157	11	14.90	1
1949 1950	12,469.60 18,885.62	12,393 18,618	14,486 21,762	1,101 1,845	15.37 15.85	72 116
1950 1951	5,092.68	4,978	5,819	1,845 547	16.35	33
1951	11,353.68	11,004	12,862	1,330	16.85	79
1953	3,198.37	3,072	3,591	407	17.37	23
1954	3,645.74	3,469	4,055	502	17.91	23
1955	23,262.88	21,925	25,627	3,452	18.45	187
1956	8,665.97	8,087	9,453	1,379	19.01	73
1957	6,172.51	5,701	6,664	1,052	19.58	54
1958	9,331.87	8,529	9,969	1,696	20.16	84
1959	3,625.55	3,278	3,832	700	20.10	34
1960	1,109.45	992	1,160	227	20.75	11
1961	18,696.13	16,521	19,311	4,059	21.90	185
1962	11,412.72	9,967	11,650	2,616	22.60	116
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ACCOUNT 366.00 UNDERGROUND CONDUIT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA VAGE PERCENT					
1963	79,290.37	68,401	79,951	19,162	23.24	825
1964	5,416.55	4,614	5,393	1,378	23.89	58
1965	13,763.26	11,573	13,527	3,677	24.55	150
1966	998.12	828	968	280	25.22	11
1967	8,379.20	6,858	8,016	2,458	25.89	95
1968	135.89	110	129	41	26.58	2
1969	22,636.23	18,003	21,043	7,252	27.28	266
1970	35,358.97	27,709	32,388	11,811	27.98	422
1971	84,706.56	65,365	76,402	29,481	28.70	1,027
1972	21,599.73	16,409	19,180	7,820	29.42	266
1973	119,553.55	89,366	104,456	44,986	30.15	1,492
1974	76,540.25	56,270	65,772	29,903	30.89	968
1975	206,026.30	148,887	174,028	83,505	31.64	2,639
1976	177,412.60	125,992	147,267	74,499	32.39	2,300
1977	33,257.18	23,197	27,114	14,457	33.15	436
1978	6,263.61	4,288	5,012	2,818	33.92	83
1979	3,638.48	2,444	2,857	1,691	34.70	49
1980	128,425.16	84,568	98,848	61,683	35.49	1,738
1982	39,502.24	24,965	29,181	20,197	37.08	545
1983	17,578.46	10,875	12,711	9,262	37.88	245
1984 1005	100,230.17	60,639	70,878	54,410	38.70	1,406
1985	6,009.67 52,919.87	3,554 30,570	4,154	3,358	39.52 40.34	85 754
1986 1987	17,225.08	9,709	35,732 11,348	30,418 10,183	40.34	247
1987	129,405.93	71,130	83,141	78,616	42.02	1,871
1989	177,567.45	95,116	111,177	110,782	42.86	2,585
1990	166,884.17	87,003	101,694	106,911	43.72	2,445
1991	58,878.65	29,861	34,903	38,695	44.57	868
1992	621,839.70	306,357	358,088	419,212	45.44	9,226
1993	835,136.66	399,331	466,761	577,160	46.31	12,463
1994	1,061,651.88	492,248	575,368	751,697	47.18	15,933
1995	826,899.68	371,144	433,814	599,811	48.07	12,478
1996	779,049.12	338,234	395,347	578,464	48.95	11,817
1997	884,331.22	370,678	433,270	672,144	49.85	13,483
1998	835,436.36	337,798	394,838	649,457	50.74	12,800
1999	1,791,983.32	697,373	815,129	1,424,850	51.65	27,587
2000	402,180.81	150,416	175,815	326,911	52.56	6,220
2001	152,435.63	54,700	63,936	126,609	53.47	2,368
2002	79,421.74	27,281	31,888	67,389	54.39	1,239
2003	3,055,195.82	1,002,601	1,171,897	2,647,098	55.31	47,859
2004	233,781.05	73,095	85,438	206,788	56.24	3,677
2005	376,798.07	111,970	130,877	340,121	57.17	5,949

ACCOUNT 366.00 UNDERGROUND CONDUIT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA					
2006	508,046.90	143,015	167,164	467,895	58.11	8,052
2007	526,782.68	140,039	163,686	494,792	59.05	8,379
2008	202,560.41	50,673	59,229	193,972	59.99	3,233
2009	256,943.53	60,212	70,379	250,800	60.94	4,116
2010	309,433.75	67,611	79,028	307,764	61.89	4,973
2011	309,253.01	62,674	73,257	313,309	62.84	4,986
2012	437,723.53	81,707	95,504	451,650	63.80	7,079
2013	289,171.09	49,351	57,684	303,780	64.76	4,691
2014	748,303.28	115,613	135,135	800,244	65.73	12,175
2015	79,087.72	10,954	12,804	86,056	66.69	1,290
2016	238,194.77	29,140	34,060	263,683	67.66	3,897
2017	2,606,856.31	276,750	323,481	2,935,089	68.63	42,767
2018	2,927,327.95	262,984	307,391	3,351,769	69.61	48,151
2019	5,956,669.30	438,783	512,874	6,932,963	70.58	98,228
2020	12,281,743.54	704,204	823,114	14,529,065	71.56	203,033
2021	1,376,901.88	56,453	65,985	1,655,142	72.54	22,817
2022	1,087,434.98	26,819	31,348	1,327,946	73.52	18,062
2023	3,995,546.58	32,614	38,121	4,956,313	74.51	66,519
	48,115,496.65	8,773,270	10,252,569	49,891,802		770,620

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 64.7 1.60

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1901	43,138.60	58,237	58,237			
1911	24.39	33	33			
1922	0.16	00	00			
1923	11.93	16	16			
1926	10.01	13	11	3	1.69	2
1927	5.82	8	8			
1929	96.53	124	109	21	2.50	8
1931	59.99	77	68	13	3.06	4
1932	19.75	25	22	5	3.34	1
1933	20.25	26	23	4	3.63	1
1935	15.44	19	17	4	4.21	1
1937	35.10	43	38	9	4.78	2
1938	2,160.16	2,652	2,336	580	5.07	114
1939	133.14	163	144	36	5.36	7
1940	12,479.79	15,145	13,339	3,509	5.66	620
1941	180.80	218	192	52	5.95	9
1942	73.64	88	78	21	6.24	3
1943	61.46	73	64	19	6.53	3
1945	155.65	183	161	49	7.13	7
1947	891.48	1,037	913	290	7.73	38
1949	3,676.32	4,223	3,719	1,244	8.35	149
1950	11,008.17	12,563	11,065	3,796	8.66	438
1951	2,164.71	2,453	2,161	761	8.99	85
1952	496.37	559	492	178	9.31	19
1953 1954	969.72 2,594.82	1,084 2,878	955 2,535	354 968	9.65 9.99	37 97
1954 1955	2,394.82	2,878	2,535 21,664	8,503	9.99 10.34	822
1955	9,242.65	10,093	8,890	3,588	10.34	335
1957	4,544.22	4,923	4,336	1,799	11.06	163
1958	1,355.14	1,925	1,282	547	11.44	48
1959	9,213.18	9,813	8,643	3,795	11.82	321
1960	5,894.40	6,221	5,479	2,478	12.22	203
1961	9,005.64	9,418	8,295	3,863	12.62	306
1962	4,959.37	5,137	4,525	2,170	13.03	167
1963	33,322.20	34,172	30,098	14,887	13.46	1,106
1964	23,933.74	24,296	21,399	10,912	13.89	786
1965	18,636.39	18,717	16,485	8,674	14.34	605
1966	8,522.85	8,467	7,457	4,049	14.79	274
1967	11,750.16	11,543	10,167	5,696	15.25	374
1968	9,688.89	9,406	8,285	4,795	15.73	305
1969	15,487.59	14,852	13,081	7,827	16.22	483
1970	55,560.62	52,626	46,351	28,656	16.71	1,715

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	DR CURVE IOWA LVAGE PERCENT					
1971	71,608.02	66,945	58,963	37,708	17.22	2,190
1972	69,559.49	64,157	56,508	37,397	17.74	2,108
1973	100,363.12	91,287	80,403	55,087	18.27	3,015
1974	171,672.80	153,913	135,562	96,196	18.81	5,114
1975	157,666.97	139,266	122,661	90,189	19.36	4,659
1976	275,978.90	240,044	211,424	161,148	19.92	8,090
1977	378,407.22	323,935	285,313	225,537	20.49	11,007
1978	197,670.08	166,451	146,605	120,250	21.07	5,707
1979	448,346.08	371,156	326,904	278,363	21.66	12,851
1980	404,482.03	328,996	289,770	256,281	22.26	11,513
1981	238,302.31	190,326	167,634	154,074	22.87	6,737
1982	238,798.96	187,154	164,840	157,539	23.49	6,707
1983	393,218.14	302,204	266,173	264,671	24.12	10,973
1984	521,528.72	392,769	345,940	358,124	24.76	14,464
1985	492,267.06	363,016	319,734	344,827	25.41	13,571
1986	577,622.97	416,907	367,200	412,591	26.06	15,832
1987	1,156,669.31	816,167	718,856	842,648	26.73	31,524
1988	915,637.65	631,084	555,841	680,270	27.41	24,818
1989	1,217,988.43	819,495	721,788	922,496	28.09	32,841
1990	1,158,819.21	760,411	669,748	894,658	28.78	31,086
1991	1,002,943.65	641,201	564,751	789,223	29.48	26,771
1992	997,476.38	620,631	546,634	799,959	30.19	26,497
1993	1,593,544.23	963,862	848,942	1,302,343	30.91	42,133
1994	1,050,141.27	616,951	543,393	874,298	31.63	27,641
1995	715,043.41	407,495	358,910	606,399	32.36	18,739
1996	660,139.43	364,434	320,983	570,205	33.10	17,227
1997	1,085,414.17	579,588	510,484	954,825	33.85	28,208
1998	724,785.40	373,733	329,173	649,287	34.61	18,760
1999	2,913,575.57	1,448,998	1,276,236	2,657,091	35.37	75,123
2000	2,602,842.49	1,246,147	1,097,570	2,416,267	36.14	66,859
2001	1,963,475.20	903,117	795,439	1,855,253	36.92	50,251
2002	574,536.06	253,466	223,246	552,378	37.70	14,652
2003	2,472,534.39	1,043,701	919,262	2,418,659	38.49	62,839
2004	1,729,037.68	696,502	613,459	1,720,742	39.29	43,796
2005	4,003,249.39	1,535,440	1,352,371	4,052,016	40.09	101,073
2006	2,810,098.88	1,022,915	900,954 656 155	2,892,679	40.90	70,726
2007	2,164,062.29	744,978	656,155	2,265,329	41.72	54,298
2008	1,819,939.09	590,545	520,135	1,936,783	42.54	45,529
2009	2,761,216.28	840,732 536,590	740,493	2,987,149	43.37	68,876
2010	1,886,356.77		472,613	2,073,969	44.20	46,922
2011	442,407.12	116,888 738 245	102,952	494,298	45.04	10,975 74,937
2012	3,028,958.39	738,245	650,225	3,438,869	45.89	/4,93/

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
2013	704,333.59	157,233	138,486	812,364	46.74	17,380
2014	1,240,161.69	251,133	221,191	1,453,027	47.60	30,526
2015	1,267,601.34	230,404	202,933	1,508,329	48.46	31,125
2016	1,375,648.57	221,202	194,828	1,662,298	49.33	33,698
2017	3,721,811.09	520,382	458,337	4,566,108	50.20	90,958
2018	3,540,212.87	419,908	369,843	4,409,444	51.08	86,324
2019	3,515,238.50	341,491	300,775	4,444,797	51.97	85,526
2020	7,055,418.75	535,771	471,892	9,052,923	52.85	171,295
2021	9,941,474.83	539,255	474,960	12,946,031	53.75	240,856
2022	4,865,740.74	159,555	140,532	6,428,218	54.64	117,647
2023	9,615,434.80	104,366	91,922	12,888,915	55.55	232,024
	95,355,409.01	26,940,219	23,735,119	104,994,683		2,394,656
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	г 43.8	2.51

ACCOUNT 368.00 LINE TRANSFORMERS

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1901	200,540.18	230,621	230,621			
1906	31,582.54	36,320	36,320			
1910	930.79	1,070	1,070			
1916	93.05	107	107			
1917	39.05	45	45			
1920	151.13	174	174			
1921	117.96	136	136			
1922	48.54	56	56			
1923	81.40	94	94			
1925	233.01	268	268			
1926	248.00	285	285			
1927	97.32	112	112			
1928	180.65	207	208			
1929	179.48	203	206			
1930	62.06	70	71			
1932	374.42	411	431			
1933	182.90	199	210			
1935	66.95	71	77			
1936	799.25	842	919			
1937	57.28	60	66			
1938	113.55	117	131			
1939	122.80	126	141			
1940	1,836.37	1,858	2,112			
1941	235.63	236	271			
1942	165.20	164	190			
1945	242.21	233 239	279 289			
1946 1947	250.89 1,354.26	1,278	1,557			
1947	1,262.20	1,179	1,452			
1948	2,961.57	2,739	3,406			
1950	3,724.57	3,410	4,283			
1951	6,213.31	5,628	7,145			
1952	6,886.57	6,172	7,920			
1953	3,673.55	3,258	4,225			
1954	10,938.32	9,597	12,579			
1955	28,311.54	24,568	32,258	300	11.78	25
1956	42,482.04	36,447	47,855	999	12.19	82
1957	9,580.00	8,127	10,671	346	12.59	27
1958	28,807.29	24,156	31,717	1,411	13.00	109
1959	39,637.40	32,848	43,129	2,454	13.41	183
1960	35,663.40	29,204	38,345	2,668	13.82	193
1961	41,758.15	33,775	44,346	3,676	14.24	258
	,	,	-,>	-,		

ACCOUNT 368.00 LINE TRANSFORMERS

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT	48-R0.5 -15				
1962	40,420.75	32,287	42,392	4,092	14.66	279
1963	56,872.30	44,855	58,894	6,509	15.08	432
1964	136,403.52	106,178	139,411	17,453	15.51	1,125
1965	93,397.71	71,740	94,194	13,213	15.94	829
1966	162,992.48	123,477	162,124	25,317	16.38	1,546
1967	124,932.59	93,327	122,537	21,135	16.82	1,257
1968	197,475.46	145,437	190,957	36,140	17.26	2,094
1969	279,567.61	202,881	266,381	55,122	17.71	3,112
1970	367,531.95	262,756	344,996	77,666	18.16	4,277
1971	407,020.03	286,596	376,298	91,775	18.61	4,931
1972	461,046.15	319,559	419,578	110,625	19.07	5,801
1973	534,409.11	364,391	478,442	136,128	19.54	6,967
1974	601,048.33	403,056	529,208	161,998	20.01	8,096
1975	379,714.11	250,265	328,595	108,076	20.49	5,275
1976	303,333.85	196,509	258,014	90,820	20.96	4,333
1977	456,730.84	290,521	381,451	143,789	21.45	6,703
1978	595,835.57	372,015	488,452	196,759	21.94	8,968
1979	573,597.70	351,395	461,378	198,259	22.43	8,839
1980	615,156.41	369,484	485,129	222,301	22.93	9,695
1981	782,750.51	460,586	604,745	295,418	23.44	12,603
1982	556,358.39	320,706	421,084	218,728	23.94	9,137
1983	1,004,470.93	566,505	743,815	411,327	24.46	16,816
1984	920,781.02	507,826	666,770	392,128	24.98	15,698
1985	1,003,647.82	541,029	710,365	443,830	25.50	17,405
1986	1,006,889.43	529,993	695,875	462,048	26.03	17,751
1987	1,064,618.62	546,863	718,025	506,286	26.56	19,062
1988	1,850,822.38	927,194	1,217,396	911,050	27.09	33,630
1989	1,907,249.69	930,348	1,221,537	971,800	27.64	35,159
1990	1,822,350.27	865,358	1,136,206	959,497	28.18	34,049
1991	1,782,305.43	822,853	1,080,397	969,254	28.73	33,737
1992	1,391,303.57	624,000	819,305	780,694	29.28	26,663
1993	1,797,404.78	782,014	1,026,776	1,040,239	29.84	34,861
1994	2,357,188.43	993,957	1,305,055	1,405,712	30.40	46,241
1995	1,282,129.28	523,120	686,851	787,598	30.97	25,431
1996	1,151,152.42	453,966	596,053	727,772	31.54	23,075
1997	1,782,531.95	678,603	890,999	1,158,913	32.11	36,092
1998	1,468,227.99	538,906	707,578	980,884	32.68	30,015
1999	1,386,148.47	489,507	642,718	951,353	33.26	28,604
2000	1,239,312.93	420,437	552,029	873,181	33.84	25,803
2001	448,410.16	145,894	191,557	324,115	34.42	9,416
2002	567,339.90	176,564	231,827	420,614	35.01	12,014
2003	1,031,236.87	306,359	402,246	783,676	35.60	22,013

ACCOUNT 368.00 LINE TRANSFORMERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIN	VOR CURVE IOWA	48-R0.5				
NET SA	ALVAGE PERCENT	-15				
2004	1,370,016.03	387,641	508,969	1,066,549	36.19	29,471
2005	769,715.08	206,909	271,669	613,503	36.78	16,680
2006	909,888.85	231,730	304,259	742,113	37.37	19,859
2007	1,392,591.68	334,645	439,385	1,162,095	37.97	30,606
2008	781,921.82	176,659	231,951	667,259	38.57	17,300
2009	846,751.83	179,338	235,469	738,296	39.16	18,853
2010	1,204,702.26	237,833	312,272	1,073,136	39.76	26,990
2011	23,004.09	4,211	5,529	20,926	40.36	518
2012	711,482.82	120,006	157,567	660,638	40.96	16,129
2013	393,961.44	60,691	79,687	373,369	41.57	8,982
2014	2,383,473.82	332,921	437,122	2,303,873	42.17	54,633
2015	1,702,802.73	212,957	279,610	1,678,613	42.78	39,238
2016	1,501,423.64	165,826	217,728	1,508,909	43.39	34,776
2017	1,141,861.40	109,424	143,673	1,169,468	44.00	26,579
2018	731,356.05	59,396	77,986	763,073	44.61	17,105
2019	1,687,431.58	112,396	147,575	1,792,971	45.22	39,650
2020	3,070,992.22	159,665	209,638	3,322,003	45.83	72,485
2021	12,744,135.91	473,234	621,352	14,034,404	46.45	302,140
2022	7,522,701.36	167,658	220,133	8,430,974	47.07	179,116
2023	3,663,968.87	27,220	35,740	4,177,825	47.69	87,604
	81,048,587.97	21,696,387	28,400,731	64,805,146		1,689,425

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 38.4 2.08

ACCOUNT 368.20 LINE TRANSFORMERS - CUSTOMER

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1937	1.04	1	1			
1938	2.53	3	3			
1940	0.01		_			
1941	0.95	1	1			
1942	10.94	11	13			
1943	2.50	2	3			
1945	1,765.26	1,699	2,030			
1946	3,329.42	3,184	3,829			
1947	2,300.29	2,186	2,645			
1948	401.17 3,857.31	379	461			
1949 1950		3,615 387	4,436 479			
1950	416.26 5,955.07	5,501	6,848			
1951	49.28	45	57			
1953	1,452.54	1,321	1,670			
1953	1,558.30	1,407	1,792			
1954	581.76	521	669			
1955	26,953.32	23,935	30,996			
1950	2,433.12	23,935	2,798			
1957	213.84	187	246			
1958	2,698.35	2,334	3,103			
1959	5,229.50	4,437	6,014			
1962	3,983.11	3,345	4,568	13	14.83	1
1963	14,251.40	11,848	16,180	209	15.24	14
1963	4,392.70	3,613	4,934	118	15.24	8
1965	5,116.30	4,161	5,682	202	16.10	13
1965	6,770.22	5,444	7,434	352	16.54	21
1967	2,140.86	1,701	2,323	139	16.99	8
1968	26,876.44	21,102	28,817	2,091	17.45	120
1969	25,290.78	19,608	26,777	2,001	17.92	120
1970	4,780.28	3,658	4,995	502	18.40	27
1971	21,630.59	16,336	22,308	2,567	18.88	136
1972	4,522.23	3,368	4,599	602	19.38	31
1973	6,132.94	4,502	6,148	905	19.89	46
1974	2,241.30	1,621	2,214	363	20.41	18
1975	5,212.61	3,713	5,070	925	20.93	44
1976	23,132.60	16,218	22,147	4,455	20.93	207
1977	7,355.35	5,072	6,926	1,133	22.02	70
1978	16,190.89	10,979	14,993	3,627	22.57	161
1984	5,955.63	3,601	4,918	1,931	26.08	74
	2,200.00	5,001	1,210	-,,,,,		, 1

ACCOUNT 368.20 LINE TRANSFORMERS - CUSTOMER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

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-R1.5 NET SALVAGE PERCENT15								
1986	6,576.87	3,806	5,198	2,365	27.32	87		
1989	1,093.01	589	804	453	29.23	15		
1990	20,801.65	10,922	14,915	9,007	29.89	301		
	273,660.52	208,505	280,044	34,665		1,531		

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 22.6 0.56

ACCOUNT 369.10 SERVICES - UNDERGROUND

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1937	2,102.70	2,681	2,944			
1938	285.12	362	399			
1940	41.87	53	59			
1941	61.27	77	86			
1942	79.40	99	111			
1943	40.05	50	56			
1944	7.99	10	11			
1945	55.14	68	77			
1946	113.01	138	158			
1947	1.37	2	2			
1948	33.10	40	46			
1949	711.04	853	995			
1950	2,722.18	3,246	3,811			
1951	963.92	1,142	1,349			
1952	161.30	190	226			
1953	2,097.44	2,451	2,936			
1954	2.40	3	3			
1955	5,688.46	6,547	7,964			
1956	5,252.42	5,997	7,353			
1957	1,742.85	1,973	2,440			
1958	4,390.81	4,929	6,147			
1959	2,216.13	2,465	3,078	25	13.35	2
1960	1,748.05	1,926	2,405	42	13.84	3
1961	4,994.94	5,451	6,806	187	14.33	13
1962	4,051.53	4,376	5,464	208	14.85	14
1963	9,823.23	10,498	13,108	645	15.38	42
1964	7,489.85	7,918	9,886	600	15.92	38
1965	5,003.84	5,229	6,529	476	16.48	29
1966	10,814.74	11,169	13,946	1,195	17.05	70
1967	8,596.12	8,770	10,950	1,085	17.63	62
1968	6,368.32	6,415	8,010	906	18.23	50
1969	16,508.14	16,413	20,493	2,618	18.84	139
1970	11,077.59	10,866	13,567	1,942	19.46	100
1971	3,470.46	3,356	4,190	669	20.10	33
1972 1072	627.60	598	747	132	20.75	6
1973 1075	775.11	728	909 548	176	21.41	8
1975	482.08	439	548	127	22.76	6
1976 1077	528.32	473	591	149	23.45	6
1977 1987	870.14	765	955	263	24.16	11
1987 1999	2,059.61	1,477 632	1,844 789	1,039 983	31.71	33 23
2003	1,265.67 312,396.30	131,679	789 164,416	983 272,939	41.83 45.43	
2003	212,390.30	131,0/9	104,410	414,939	40.45	6,008

ACCOUNT 369.10 SERVICES - UNDERGROUND

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	DR CURVE IOWA LVAGE PERCENT					
2004	269.07	108	135	242	46.34	5
2005	115.00	44	55	106	47.26	2
2006	740.20	268	335	701	48.18	15
2007	309.48	106	132	301	49.11	6
2008	132.00	43	54	131	50.05	3
2009	1,078.83	326	407	1,103	50.99	22
2014	1,979,667.46	394,833	492,992	2,278,542	55.74	40,878
2015	19,759.66	3,528	4,405	23,259	56.71	410
2017	8,211.81	1,125	1,405	10,092	58.64	172
2018	532.88	62	77	669	59.61	11
2019	6,970.93	662	827	8,932	60.59	147
2020	113,601.35	8,416	10,508	148,534	61.56	2,413
2021	186,855.22	9,901	12,362	249,235	62.54	3,985
2022	467,932.94	14,917	18,626	636,480	63.52	10,020
2023	573,713.52	6,056	7,561	795,637	64.51	12,334
	3,797,611.96	702,949	876,285	4,440,371		77,119

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 57.6 2.03

ACCOUNT 369.20 SERVICES - OVERHEAD

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1925	13,110.48	16,219	18,355			
1938	513.57	583	719			
1939	1,164.03	1,312 1,363	1,630			
1940 1941	1,218.56 1,418.89	1,505	1,706 1,986			
1941	726.10	800	1,988			
1942	1,003.82	1,097	1,405			
1944	969.78	1,051	1,358			
1945	1,051.02	1,129	1,471			
1946	2,258.45	2,406	3,162			
1947	3,292.57	3,477	4,610			
1948	4,679.48	4,897	6,551			
1949	5,650.86	5,861	7,911			
1950	6,791.79	6,978	9,509			
1951	6,216.97	6,328	8,704			
1952	9,190.19	9,262	12,866			
1953	8,696.62	8,679	12,175			
1954	9,867.65	9,749	13,815			
1955	515.77	504	722			
1956	18,913.37	18,297	26,479			
1957	27,733.34	26,538	38,827			
1958	34,629.37	32,765	48,481			
1959	40,690.38	38,072	56,967			
1960	48,146.56	44,521	67,405			
1961	51,024.50	46,623	71,434			
1962	48,603.08	43,877	68,044			
1963	48,233.98	43,004	67,528			
1964	49,599.83	43,655	69,440			
1965	56,298.17	48,906	78,817			
1966	62,164.21	53,277	87,030			
1967	75,124.40	63,507	105,174			
1968	64,718.64	53,941	90,214	392	24.28	16
1969	84,560.52	69,472	116,189	2,196		89
1970	84,961.41	68,751	114,983	3,963	25.32	157
1971	110,117.78	87,771	146,793	7,372	25.84	285
1972	113,966.30	89,429	149,566	9,987	26.37	379
1973	108,948.51	84,119	140,685	11,843	26.91	440
1974	156,127.63	118,542	198,256	20,323	27.46	740
1975	156,212.61	116,603	195,013	23,685	28.01	846
1976	150,943.31	110,732	185,194	26,127	28.56	915
1977	166,448.14	119,932	200,580	32,447	29.12	1,114
1978	198,792.31	140,593	235,135	43,174	29.69	1,454

ACCOUNT 369.20 SERVICES - OVERHEAD

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA VAGE PERCENT					
1070	100 200 50	120 271	221 410	47 740	20.20	1 570
1979	199,399.50	138,371 136,017	231,419 227,482	47,740	30.26	1,578
1980 1981	199,907.36 242,882.52	161,969	270,885	52,388 69,151	30.84 31.42	1,699 2,201
1981	213,246.88	139,272	232,926	65,620	32.01	2,201
1983	214,750.83	137,247	229,520	71,112	32.61	2,050
1984	303,707.57	189,848	317,511	107,680	33.21	3,242
1985	248,813.79	152,050	254,296	94,043	33.81	2,782
1986	283,065.96	168,888	282,457	113,835	34.43	3,306
1987	292,909.02	170,590	285,303	124,770	35.04	3,561
1988	261,684.25	148,620	248,560	117,798	35.66	3,303
1989	245,296.64	135,707	226,963	116,452	36.29	3,209
1990	239,144.99	128,789	215,393	119,410	36.92	3,234
1991	227,049.89	118,937	198,916	118,954	37.55	3,168
1992	296,928.60	151,107	252,719	162,981	38.19	4,268
1993	300,052.21	148,147	247,769	172,304	38.84	4,436
1994	277,400.36	132,753	222,023	166,338	39.49	4,212
1995	298,990.12	138,552	231,721	186,865	40.14	4,655
1996	413,677.30	185,426	310,116	269,032	40.79	6,596
1997	285,074.97	123,391	206,365	192,740	41.45	4,650
1998	250,174.40	104,373	174,559	175,685	42.12	4,171
1999	206,056.65	82,794	138,469	150,010	42.78	3,507
2000	510,092.27	196,978	329,436	384,693	43.45	8,854
2001	3,268.64	1,211	2,025	2,551	44.12	58
2003	926,311.32	313,834	524,872	771,964	45.48	16,974
2004	186,060.37	60,086	100,491	159,994	46.16	3,466
2005	278,240.97	85,437	142,889	246,648	46.84	5,266
2006	549,948.73	160,145	267,835	502,093	47.52	10,566
2007	457,041.78	125,732	210,281	429,577	48.21	8,911
2008	515,458.48	133,504	223,279	498,363	48.90	10,191
2009	619,903.76	150,427	251,582	616,283	49.60	12,425
2010	303,563.94	68,776	115,025	309,965	50.29	6,164
2011	21,002.07	4,415	7,384	22,019	50.99	432
2012	644,834.08	125,033	209,112	693,656	51.69	13,420
2013	1,228,339.90	217,831	364,312	1,355,364	52.40	25,866
2014	110,390.00	17,773	29,724	124,822	53.10	2,351
2015	1,137,070.89	164,236	274,677	1,317,222	53.81	24,479
2016	474,010.91	60,502	101,187	562,428	54.53	10,314
2017	515,256.22	57,110	95,514	625,845	55.25	11,328
2018	375,184.10	35,282	59,007	466,251	55.97	8,330
2019	397,692.75	30,717	51,373	505,397	56.69	8,915
2020	418,068.90	25,168	42,092	543,204	57.42	9,460

ACCOUNT 369.20 SERVICES - OVERHEAD

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
2021	357,011.45	15,409	25,771	474,045	58.15	8,152
2022	462,028.17	11,967	20,014	626,825	58.89	10,644
2023	576,736.95	4,982	8,332	799,100	59.63	13,401
	18,603,025.41	6,705,600	11,129,511	14,914,725		308,411
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	r 48.4	1.66

ACCOUNT 370.11 METERS AND METERING EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1920	44.62	46	46			
1921	33.06	34	34			
1922	65.71	67	67			
1923	404.07	412	412			
1924	338.11	345	345			
1925	596.06	608	608			
1926	394.33	402	402			
1927	915.90	934	934			
1928	759.22	774	774			
1929	1,479.22	1,509	1,509			
1930	702.69	717	717			
1931	837.11	854	854			
1933	25.93	26	26			
1934	349.75	357	357			
1935	240.77	246	246			
1936	899.50	917	917			
1937	1,314.85	1,341	1,341			
1938	159.03	162	162			
1939	1,186.84	1,211	1,211			
1940	758.81	774	774			
1941	2,117.78	2,160	2,160			
1942	1,272.97	1,298	1,298			
1943	204.25	208	208			
1944	439.19	448	448			
1945	273.87	279	279			
1946	820.94	837	837			
1947	4,290.12	4,376	4,376			
1948	3,011.68	3,066	3,072			
1949	2,046.72	2,045	2,088			
1950	3,315.40	3,292	3,382			
1951 1952	2,016.80 5,033.04	1,988 4,928	2,057 5,134			
1953	6,460.57	6,282	6,590			
1953	3,232.01	3,121	3,297			
1955	3,970.37	3,807	4,050			
1955	5,446.56	5,185	5,555			
1957	9,946.36	9,401	10,145			
1958	4,304.20	4,037	4,390			
1959	5,274.94	4,910	5,380			
1960	7,553.30	6,979	7,704			
1961	7,945.98	7,281	8,105			
1962	4,978.36	4,526	5,078			
	_,	1,020	5,5.5			

ACCOUNT 370.11 METERS AND METERING EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1963	4,792.59	4,322	4,888			
1964	6,368.92	5,695	6,496			
1965	2,960.09	2,624	3,019			
1966	10,849.70	9,536	11,067			
1967	7,627.65	6,646	7,780			
1968	13,207.19	11,400	13,471			
1969	10,652.48	9,113	10,866			
1970	8,036.91	6,811	8,198	F 2	4 0 6	1 0
1971	7,520.29	6,309	7,598	73	4.26	17
1972 1072	13,447.79	11,173	13,456	261	4.45	59
1973 1974	13,007.66 20,241.88	10,697 16,474	12,883	385 807	4.65	83
1974 1975	5,479.59	4,413	19,840 5,315	274	4.85 5.05	166 54
1975	3,516.48	2,801	3,373	214	5.05	41
1977	5,671.65	4,467	5,380	405	5.47	74
1978	6,284.81	4,893	5,893	518	5.68	91
1979	8,002.48	6,156	7,414	749	5.90	127
1980	6,914.48	5,254	6,328	725	6.12	118
1981	2,512.39	1,886	2,271	292	6.34	46
1983	1,357.69	993	1,196	189	6.79	28
1984	7,982.51	5,757	6,933	1,209	7.03	172
1985	11,959.11	8,508	10,246	1,952	7.26	269
1986	22,318.93	15,642	18,838	3,927	7.51	523
1987	16,886.92	11,662	14,045	3,180	7.75	410
1988	2,767.31	1,882	2,267	556	8.00	70
1989	8,988.57	6,017	7,246	1,922	8.25	233
1990	15,906.04	10,471	12,611	3,613	8.51	425
1991	17,381.47	11,243	13,540	4,189	8.78	477
1992	11,684.95	7,424	8,941	2,978	9.05	329
1993	9,550.43	5,959	7,177	2,564	9.32	275
1994	15,512.16	9,493	11,433	4,389	9.60	457
1995	12,347.01	7,409	8,923	3,671	9.88	372
1996	700.53	412	496	219	10.17	22
1998	36,146.70	20,324	24,477	12,393	10.77	1,151
2004	65,789.10	31,511	37,950	29,155	12.73	2,290
2005	127,116.21	58,995	71,049	58,610	13.08	4,481
2006	186,724.98	83,802	100,925	89,534	13.44	6,662
2007	268,031.07	116,077	139,795	133,597	13.81	9,674
2008	266,529.32	111,237	133,966	137,894	14.18	9,725
2011	118,612.40	43,454	52,333	68,652	15.38	4,464
2012	33,378.99	11,604	13,975	20,072	15.82	1,269
2013	17,558.20	5,753	6,928	10,981	16.29	674

ACCOUNT 370.11 METERS AND METERING EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	VOR CURVE IOWA	24-L1				
NET S	ALVAGE PERCENT	-2				
2014	334,304.54	102,154	123,027	217,964	16.81	12,966
2017	8,100.06	1,852	2,230	6,032	18.62	324
2018	2,290.41	455	548	1,788	19.33	92
2019	472,960.24	78,794	94,894	387,525	20.08	19,299
2020	109,087.00	14,418	17,364	93,905	20.89	4,495
2021	164,405.99	15,861	19,102	148,592	21.73	6,838
2022	484,742.96	28,638	34,489	459,949	22.61	20,343
2023	369,480.91	7,379	8,887	367,984	23.53	15,639
	3,473,158.73	1,058,040	1,258,736	2,283,886		125,324
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r 18.2	3.61

ACCOUNT 370.20 UOF METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT	15-S2.5 0				
2015	195,374.34	103,808	126,389	68,985	7.03	9,813
2016	263,192.08	125,806	153,172	110,020	7.83	14,051
2019	24,390,530.09	7,252,036	8,829,536	15,560,994	10.54	1,476,375
2021	79,299.22	13,217	16,092	63,207	12.50	5,057
2022	3,041,953.15	304,195	370,365	2,671,588	13.50	197,895
2023	499,834.42	16,659	20,283	479,552	14.50	33,073
	28,470,183.30	7,815,721	9,515,837	18,954,346		1,736,264

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.9 6.10

ACCOUNT 371.10 INSTALLATIONS ON CUSTOMERS' PREMISES - AREA LIGHTING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
2019	156.58	31	59	98	16.04	б
2021	894.66	103	195	700	17.69	40
	1,051.24	134	254	798		46

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 17.3 4.38

ACCOUNT 371.20 COMPANY-OWNED OUTDOOR LIGHTING

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
2002	598.08	628	628			
2008	271.13	249	11	274	1.38	199
2011	0.01					
2015	84,392.29	53,167	2,450	86,162	4.40	19,582
2016	131,618.51	75,005	3,457	134,742	5.03	26,788
2017	15,557.05	7,856	362	15,973	5.71	2,797
2018	43,931.60	19,164	883	45,245	6.43	7,037
2019	172,753.73	62,827	2,895	178,496	7.19	24,826
2020	289,524.72	83,463	3,847	300,154	7.98	37,613
2021	184,678.38	38,606	1,779	192,133	8.81	21,809
2022	240,408.92	30,521	1,407	251,022	9.67	25,959
2023	207,952.97	8,933	412	217,939	10.55	20,658
	1,371,687.39	380,419	18,131	1,422,141		187,268
	COMPOSITE REMAINI	NG LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	г7.6	13.65

ACCOUNT 372.00 LEASED PROPERTY ON CUSTOMERS' PREMISES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1969	9,647.36	8,551	9,647			
	9,647.36	8,551	9,647			

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

ACCOUNT 373.10 STREET LIGHTING - OVERHEAD

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA VAGE PERCENT					
1910	78.85	79	91			
1925	1,885.21	1,766	2,168			
1927	3.09	3	4			
1938	170.68	152	196			
1939	25.99	23	30			
1940	114.48	101	132			
1941	365.71	321	421			
1942	25.06	22	29			
1943	9.58	8	11			
1944	22.00	19	25			
1945	75.74	65	87			
1946	102.29	88	118			
1947	1,289.01	1,102	1,482			
1948	93.66	80	108			
1949	205.66	174	237			
1950	56.23	47	65			
1951	144.66	121	166			
1952	288.06	239	331			
1953	264.52	219	304			
1954	173.29	142	199			
1955	423.29	345	487			
1956	1,335.84	1,082	1,536			
1957	539.30	434	620			
1958	1,178.70	942	1,356			
1959	4,487.08	3,557	5,160			
1960	7,703.32	6,063	8,859			
1961	18,836.52	14,711	21,662			
1962	20,182.06	15,632	23,209			
1963	20,249.41	15,554	23,287			
1964	16,784.33	12,785	19,302			
1965	46,299.45	34,969	53,244			
1966	39,703.67	29,719	45,659			
1967	25,296.43	18,755	29,091			
1968	12,733.09	9,354	14,643			
1969	49,692.35	36,154	57,146			
1970	49,788.51	35,853	57,257			
1971	48,145.62	34,312	55,367			
1972	36,738.60	25,909	42,249			
1973	42,887.13	29,911	49,320			
1974	17,033.30	11,747	19,588			
1975	20,726.95	14,133	23,836			
1976	9,228.13	6,218	10,612			

ACCOUNT 373.10 STREET LIGHTING - OVERHEAD

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1977	13,091.56	8,714	15,055			
1978	19,057.34	12,524	21,916			
1979	30,623.36	19,867	35,217			
1980	40,750.37	26,091	46,863			
1981	20,459.10	12,920	23,528			
1982	11,778.09	7,334	13,545			
1983	12,607.57	7,735	14,499			
1984	14,244.10	8,610	16,381			
1985	45,296.09	26,949	52,091			
1986	31,674.18	18,545	36,425			
1987	15,970.30	9,199	18,366	100	1 - 0	0.4
1988	22,538.99	12,762	25,512	408	17.26	24
1989	63,258.56	35,176	70,318	2,429	17.56	138
1990	38,417.50	20,973	41,925	2,255	17.86	126
1991 1992	13,589.62 41,628.25	7,281	14,555	1,073	18.16	59
1992	82,530.99	21,866 42,458	43,711 84,874	4,161 10,037	18.47 18.79	225 534
1993	82,530.99	42,458	82,070	11,676	10.79	611
1994	75,857.11	37,383	74,729	12,507	19.11	644
1995	59,652.50	28,731	57,434	11,166	19.43	565
1997	91,922.73	43,217	86,392	19,319	20.10	961
1998	114,903.42	52,700	105,348	26,791	20.10	1,311
1999	145,014.37	64,842	129,621	37,146	20.78	1,788
2000	99,614.52	43,330	86,618	27,939	21.14	1,322
2001	28,286.70	11,969	23,926	8,604	21.49	400
2002	7,009.27	2,878	5,753	2,308	21.86	106
2004	157,564.41	60,702	121,345	59,854	22.61	2,647
2005	54,100.78	20,147	40,274	21,942	22.99	954
2006	28,667.94	10,288	20,566	12,402	23.39	530
2007	55,634.27	19,194	38,369	25,610	23.80	1,076
2008	18,290.88	б,044	12,082	8,953	24.23	370
2009	39,669.53	12,519	25,026	20,594	24.67	835
2010	11,636.29	3,487	6,971	6,411	25.14	255
2012	33,725.01	8,977	17,945	20,839	26.13	798
2014	5,366.40	1,229	2,457	3,714	27.23	136
2015	313,351.24	65,606	131,148	229,206	27.81	8,242
2016	32,025.22	6,033	12,060	24,769	28.43	871
2017	33,362.94	5,563	11,120	27,247	29.07	937
2018	1,852.41	268	536	1,594	29.73	54
2019	2,852.24	344	688	2,592	30.43	85

ACCOUNT 373.10 STREET LIGHTING - OVERHEAD

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA ALVAGE PERCENT					
2020	785.48	76	152	751	31.15	24
2021	3.09			4	31.91	
2023	49.70	1	2	56	33.55	2
	2,505,619.18	1,208,497	2,237,107	644,356		26,630
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	г 24.2	1.06

ACCOUNT 373.20 STREET LIGHTING - BOULEVARD

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1922	269.37	306	323			
1923	3,481.73	3,927	4,178			
1927	1,995.79	2,207	2,395			
1928	1,451.94	1,598	1,742			
1929	3,724.55	4,082	4,469			
1930	53.15	58	64			
1931	1,776.61	1,929	2,132			
1932	602.71	651	723			
1933	354.16	381	425			
1936	53.64	57	64			
1937	147.76	156	177			
1938	290.84	305	349			
1939	63.35	66	76			
1941	1,449.08	1,492	1,739			
1942	26.87	28	32			
1943	283.50	288	340			
1950	171.43	166	206			
1951	1,257.21	1,212	1,509			
1952	114.34	109	137			
1953	0.10					
1954	171.18	161	205			
1955	361.21	338	433			
1956	565.62	524	679			
1958	509.17	464	611			
1959	293.96	265	353			
1960	21.46	19	26			
1961	28.82	26	35			
1962	273.08	239	328			
1963	253.93	220	305			
1965	4,917.77	4,174	5,901			
1970	400.52	320	481			
1972	1,582.16	1,230	1,899			
1973	13,625.05	10,437	16,350			
1974	18,600.26	14,037	22,320			
1975	4,518.21	3,359	5,422			
1976 1077	7,327.42	5,361	8,793			
1977	7,718.76	5,554	9,263			
1978	14,756.10	10,441	17,707			
1979	13,221.08	9,193	15,865			
1980	16,725.73	11,422	20,071			
1981	12,793.42	8,572	15,352			
1982	10,784.55	7,087	12,941			

ACCOUNT 373.20 STREET LIGHTING - BOULEVARD

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	VOR CURVE IOWA	55-R1.5				
NET S	SALVAGE PERCENT	-20				
1983	•	1,551	2,890			
1984	-	8,125	15,453			
1985	•	23,529	45,711	1	26.69	0.1
1986		12,720	24,712	563	27.32	21
1987		34,329	66,692	3,108	27.95	111
1988		41,041	79,732	5,738	28.59	201
1989	-	51,802	100,638	9,921	29.23	339
1990	-	72,302	140,464	17,903	29.89	599
1991		25,247	49,048	7,744	30.55	253
1992	-	66,954	130,074	24,715	31.21	792
1993		39,956	77,624	17,469	31.89	548
1994		43,082	83,697	21,942	32.57	674
1995	•	53,966	104,842	31,686	33.26	953
1996	-	45,708	88,799	30,626	33.95	902
1997	-	64,569	125,441	49,071	34.65	1,416
1998	-	62,144	120,729	53,301	35.36	1,507
1999	-	259,431	504,006	249,761	36.07	6,924
2000	•	53,756	104,434	57,927	36.79	1,575
2001		5,037	9,786	6,054	37.51	161
2002	32,074.31	11,729	22,786	15,703	38.24	411
2004	387,664.12	129,325	251,245	213,952	39.71	5,388
2005	364,108.47	115,507	224,400	212,530	40.46	5,253
2006	200,674.41	60,378	117,298	123,511	41.21	2,997
2007	42,779.63	12,171	23,645	27,691	41.96	660
2009	55,789.51	14,022	27,241	39,706	43.48	913
2010	33,453.09	7,854	15,258	24,886	44.24	563
2012	25,121.11	5,048	9,807	20,338	45.79	444
2017	23,600.45	2,719	5,283	23,038	49.72	463
2018	1,486.80	145	282	1,502	50.52	30
2019	2,144.04	172	334	2,239	51.33	44
2020	590.49	37	72	637	52.14	12
	3,368,422.54	1,436,817	2,748,843	1,293,264		34,154
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	т 37.9	1.01

ACCOUNT 373.30 STREET LIGHTING - CUSTOMER POLES

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE IOWA AGE PERCENT					
1901	70,551.86	77,607	77,607			
1962	755.64	620	362	469	6.36	74
1963	2,782.60	2,263	1,321	1,740	6.52	267
1964	3,748.22	3,020	1,763	2,360	6.69	353
1965	4,665.23	3,724	2,174	2,958	6.86	431
1966	5,777.78	4,568	2,667	3,689	7.03	525
1967	3,479.48	2,725	1,591	2,236	7.20	311
1968	6,702.27	5,196	3,034	4,338	7.38	588
1969	7,039.84	5,402	3,154	4,590	7.56	607
1970	5,509.18	4,184	2,443	3,617	7.74	467
1971 1972	9,268.50	6,961	4,064	6,131	7.93 8.11	773 609
1972	7,421.14 7,731.84	5,515 5,681	3,220 3,317	4,943 5,188	8.30	625
1973	8,908.55	6,468	3,317	6,023	8.50	709
1975	8,885.45	6,377	3,773	6,023	8.69	696
1976	9,620.18	6,819	3,981	6,601	8.89	743
1977	9,884.29	6,919	4,040	6,833	9.09	752
1978	17,299.53	11,951	6,978	12,051	9.30	1,296
1979	26,010.63	17,739	10,357	18,255	9.50	1,922
1980	22,740.61	15,289	8,927	16,088	9.72	1,655
1981	22,233.17	14,742	8,607	15,849	9.93	1,596
1982	16,008.79	10,460	6,107	11,503	10.15	1,133
1983	11,307.29	7,279	4,250	8,188	10.37	790
1984	9,332.94	5,913	3,452	6,814	10.60	643
1985	6,882.67	4,291	2,505	5,066	10.83	468
1986	6,740.07	4,134	2,414	5,000	11.06	452
1987	3,167.17	1,909	1,115	2,369	11.30	210
1988	12,023.15	7,121	4,158	9,067	11.54	786
1989	12,810.66	7,452	4,351	9,741	11.78	827
1990	23,089.62	13,167	7,688	17,711	12.04	1,471
1991	28,187.99	15,764	9,204	21,803	12.29	1,774
1992	27,730.95	15,191	8,869	21,635	12.55	1,724
1993	28,177.85	15,113	8,824	22,172	12.81	1,731
1994	27,014.71	14,169	8,273	21,443	13.08	1,639
1995	34,876.96	17,863	10,430	27,935	13.36	2,091
1996	34,167.86	17,078	9,971	27,614	13.64	2,024
1997	28,963.90	14,120	8,244	23,616	13.92	1,697
1998	31,524.66	14,967	8,739	25,938	14.21	1,825
1999	22,323.39	10,304	6,016	18,540	14.51	1,278
2000	5,610.07	2,515	1,468	4,703	14.81	318
2001	21,321.77 74.99	9,269	5,412 19	18,042	15.12	1,193
2002	14.99	32	19	63	15.43	4

ACCOUNT 373.30 STREET LIGHTING - CUSTOMER POLES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	OR CURVE IOWA LVAGE PERCENT					
2004	201,420.48	79,054	46,156	175,407	16.08	10,908
2005	17,427.37	6,587	3,846	15,324	16.41	934
2006	31,439.65	11,413	6,664	27,920	16.75	1,667
2007	23,372.29	8,124	4,743	20,967	17.10	1,226
2008	27,968.75	9,291	5,425	25,341	17.45	1,452
2009	15,793.16	4,996	2,917	14,455	17.81	812
2010	3,892.91	1,168	682	3,600	18.18	198
2011	7,548.80	2,139	1,249	7,055	18.56	380
2012	20,198.78	5,386	3,145	19,074	18.94	1,007
2013	36,169.63	9,024	5,269	34,518	19.33	1,786
2015	28,953.03	6,166	3,600	28,248	20.16	1,401
2016	286,810.73	55,527	32,420	283,072	20.60	13,741
2017	190,026.68	32,859	19,185	189,844	21.07	9,010
2018	216,550.63	32,872	19,193	219,013	21.55	10,163
2019	322,849.41	41,764	24,384	330,750	22.06	14,993
2020	689,127.55	72,469	42,311	715,729	22.61	31,655
2021	360,761.84	28,572	16,682	380,156	23.20	16,386
2022	1,099,085.04	55,614	32,471	1,176,523	23.85	49,330
2023	1,160,675.54	21,449	12,523	1,264,220	24.58	51,433
	5,392,425.72	906,355	561,480	5,370,188		257,559

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 20.9 4.78

ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA 4 ALVAGE PERCENT					
1948	10,963.57	11,698	11,325	735	1.20	612
1951	328.00	343	332	29	2.02	14
1977	3,297.18	2,695	2,609	1,018	10.28	99
2007	40,659.35	16,123	15,610	29,115	25.58	1,138
2008	59,235.18	22,317	21,606	43,553	26.30	1,656
2010	28,802.78	9,655	9,348	22,335	27.81	803
2020	22,055.60	2,099	2,032	22,229	36.54	608
	165,341.66	64,930	62,862	119,014		4,930
	COMPOSITE REMAINI	NG LIFE AND	ANNUAL ACCRUAL	RATE, PERCEN	r 24.1	2.98

ACCOUNT 391.00 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	CURVE 20-SO AGE PERCENT	~				
2008	3,084.80	2,391	2,391	694	4.50	154
2009	9,910.13	7,185	7,185	2,725	5.50	495
2013	1,587.47	833	833	754	9.50	79
2017	8,689.56	2,824	2,824	5,866	13.50	435
2019	3,236.56	728	728	2,509	15.50	162
2021	344,689.12	43,086	43,086	301,603	17.50	17,234
	371,197.64	57,047	57,047	314,151		18,559

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 16.9 5.00

ACCOUNT 391.10 ELECTRONIC DATA PROCESSING

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVI	VOR CURVE 5-SQU	JARE				
NET S	ALVAGE PERCENT	0				
2019	595,996.15	536,397	508,822	87,174	0.50	87,174
2020	467,784.33	327,449	310,615	157,169	1.50	104,779
2021	203,913.06	101,957	96,716	107,197	2.50	42,879
2022	4,151,426.82	1,245,428	1,181,402	2,970,025	3.50	848,579
2023	452,053.43	45,205	42,881	409,172	4.50	90,927
	5,871,173.79	2,256,436	2,140,436	3,730,738		1,174,338
	COMPOSITE REMAIN	ING LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	3.2	20.00

ACCOUNT 392.00 TRANSPORTATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	R CURVE IOWA VAGE PERCENT	12-S3 0				
2020 2021	915,183.33 9,106.53	266,932 1,897	440,224 3,129	474,959 5,978	8.50 9.50	55,878 629
	924,289.86	268,829	443,353	480,937		56,507

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 8.5 6.11

ACCOUNT 392.10 TRANSPORTATION EQUIPMENT - TRAILERS

YEAR (1)	ORIGINAL (COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA 24 ALVAGE PERCENT +					
1999	15,736.15	12,610	14,949			
2000	5,838.07	4,595	5,546			
2001	21,763.00	16,778	20,675			
2003	14,278.00	10,478	13,564			
2005	26,234.28	18,044	24,923			
2006	92,022.48	60,933	86,571	850	6.06	140
2016	96,194.41	30,842	43,819	47,566	13.25	3,590
	272,066.39	154,280	210,047	48,416		3,730
	COMPOSITE REMAININ	G LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	r 13.0	1.37

ACCOUNT 394.00 TOOLS, SHOP AND GARAGE EQUIPMENT

YEAR (1)	ORIGINAL (COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 25-SQU ALVAGE PERCENT 0	ARE				
2000	109,708.96	103,126	103,126	6,583	1.50	4,389
2001	51,974.41	46,777	46,777	5,197	2.50	2,079
2002	37,932.62	32,622	32,622	5,311	3.50	1,517
2003	4,809.80	3,944	3,944	866	4.50	192
2005	25,940.45	19,196	19,196	6,744	6.50	1,038
2008	380,978.53	236,207	236,207	144,772	9.50	15,239
2009	2,959.10	1,716	1,716	1,243	10.50	118
2010	2,978.89	1,609	1,609	1,370	11.50	119
2012	106,042.10	48,779	48,779	57,263	13.50	4,242
2020	2,127,101.95	297,794	297,794	1,829,308	21.50	85,084
2021	278,770.84	27,877	27,877	250,894	22.50	11,151
2022	379,441.56	22,766	22,766	356,676	23.50	15,178
2023	154,435.68	3,089	3,089	151,347	24.50	6,177
	3,663,074.89	845,502	845,502	2,817,573		146,523
	COMPOSITE REMAININ	IG LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	r 19.2	4.00

ACCOUNT 396.00 POWER OPERATED EQUIPMENT

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE IOWA 2 ALVAGE PERCENT (
2008	11,770.00	7,282	10,026	1,744	5.72	305
	11,770.00	7,282	10,026	1,744		305
	COMPOSITE REMAINI	NG LIFE AND	ANNUAL ACCRUAL	RATE, PERCENT	5.7	2.59

ACCOUNT 397.00 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
	VOR CURVE 15-SO ALVAGE PERCENT	-				
2009	107,358.47	103,780	103,430	3,928	0.50	3,928
2010	1,406,843.74	1,266,159	1,261,895	144,949	1.50	96,633
2011	376,460.38	313,716	312,659	63,801	2.50	25,520
2012	96,245.96	73,789	73,541	22,705	3.50	6,487
2013	4,217.11	2,952	2,942	1,275	4.50	283
2014	326,528.70	206,800	206,104	120,425	5.50	21,895
2015	17,836.10	10,107	10,073	7,763	6.50	1,194
2016	248,081.51	124,041	123,623	124,459	7.50	16,595
2017	9,491.24	4,113	4,099	5,392	8.50	634
2018	96,526.82	35,393	35,274	61,253	9.50	б,448
2019	975,613.66	292,684	291,698	683,916	10.50	65,135
2020	4,165,151.26	971,855	968,582	3,196,569	11.50	277,963
2021	2,570,828.10	428,480	427,037	2,143,791	12.50	171,503
2022	4,147,600.24	414,760	413,363	3,734,237	13.50	276,610
2023	6,156,399.01	205,193	204,502	5,951,897	14.50	410,476
	20,705,182.30	4,453,822	4,438,822	16,266,360		1,381,304

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 11.8 6.67

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF DUKE) ENERGY KENTUCKY, INC., FOR: 1) AN) ADJUSTMENT OF THE ELECTRIC RATES; 2)) CASE NO. APPROVAL OF NEW TARIFFS; 3) APPROVAL) 2024-00354 OF ACCOUNTING PRACTICES TO ESTABLISH) REGULATORY ASSETS AND LIABILITIES;) AND 4) ALL OTHER REQUIRED APPROVALS) AND RELIEF.

DIRECT TESTIMONY OF

LISA D. STEINKUHL

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

TABLE OF CONTENTS

PAGE

I.	INTRODUCTION AND PURPOSE	1
II.	TEST PERIOD AND RATE BASE	3
III.	FILING REQUIREMENTS SPONSORED BY WITNESS	4
IV.	ENVIRONMENTAL SURCHARGE MECHANISM	15
V.	DEFERRALS	16
VI.	FUEL ADJUSTMENT CLAUSE AND PROFIT SHARING MECHANISM	18
VII.	CONCLUSION	20

ATTACHMENTS:

Attachment LDS-1 PSM Template

I. <u>INTRODUCTION AND PURPOSE</u>

1	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.														
2	A.	My name is Lisa D. Steinkuhl and my business address is 139 East Fourth Street,														
3		Cincinnati, Ohio 45202.														
4	Q.	BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?														
5	A.	I am employed by Duke Energy Business Services LLC (DEBS) as Director Rates														
6		& Regulatory Planning. DEBS provides various administrative and other services														
7		to Duke Energy Kentucky, Inc., (Duke Energy Kentucky or Company) and other														
8		affiliated companies of Duke Energy Corporation (Duke Energy).														
9	Q.	PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND														

PROFESSIONAL EXPERIENCE. A. I received a Bachelor Degree in Mathematics from Western Kentucky University in Bowling Green, Kentucky. After completing my Bachelor Degree, I received a

13 Post Baccalaureate Certificate in Professional Accountancy from the University 14 of Southern Indiana in Evansville, Indiana. I became a Certified Public 15 Accountant (CPA) in the State of Ohio in 1993. After receiving my Post 16 Baccalaureate Certificate in 1988, I was employed by several public accounting 17 firms. I was hired by Cinergy Services, Inc., (Cinergy Services, predecessor to 18 DEBS) in 1996 as a tax accountant. I held various positions with Cinergy Services 19 including responsibilities in Regulated Business Financial Operations, 20 Commercial Business Asset Management, and Budgets and Forecasts. I joined the 21 Rates Department in April 2006 as a Lead Rates Analyst and was promoted to 22 Rates & Regulatory Manager in January 2014 and Utility Strategy Director in

May 2018. I have held my current position as Director, Rates & Regulatory
 Planning since March 2022.

3 Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AS DIRECTOR, 4 RATES AND REGULATORY PLANNING.

A. As Director Rates and Regulatory Planning, I am responsible for the preparation
of financial and accounting data used in Duke Energy Kentucky and Duke Energy
Ohio retail rate filings and changes in various other rate recovery mechanisms,
along with filings with the Federal Energy Regulatory Commission (FERC).

9 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY 10 PUBLIC SERVICE COMMISSION?

11 A. Yes.

12 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS 13 PROCEEDING?

14 A. I support the revenue requirement proposed by Duke Energy Kentucky. To that end, 15 I support various adjustments to the projected data for the forecasted test period provided by Duke Energy Kentucky witness, Mr. Grady S. "Tripp" Carpenter. I also 16 17 sponsor Filing Requirements (FR) 16(6)(b), 16(6)(c), 16(6)(f) and 16(7)(t). I also 18 sponsor the following schedules: Schedule A in satisfaction of FR 16(8)(a) and 19 Schedule B-1, in response to FR 16(8)(b); Schedules C-1 through C-2.1 in 20 compliance with FR 16(8)(c); Schedules D-1, D-2.17 through D-2.23, D-2.25, and 21 D-2.27 through D-2.30, in compliance with FR 16(8)(d); Schedules F-1 through F-7 22 in compliance with FR 16(8)(f); and Schedules G-1 and H in response to FR 23 16(8)(g) and FR16((8)(h), respectively. I also support the inclusion of certain PJM

1	Billing Line Items (BLI's) in the Company's Fuel Adjustment Clause (FAC) and
2	Profit-Sharing Mechanism (PSM) and other changes to the PSM being requested in
3	this proceeding.

II. <u>TEST PERIOD AND RATE BASE</u>

4 Q. WHAT IS THE TEST PERIOD IN THIS PROCEEDING?

A. The Company has elected to use a forecasted test period in this proceeding. The
forecasted test period reflects the twelve months ending June 30, 2026, adjusted
for known and measurable changes, and a base period of twelve months ending
February 28, 2025. The base period consists of six months of actual data, through
August 31, 2024, and the remaining six months consist of forecasted data.

10 Q. HOW WAS RATE BASE DETERMINED IN THIS PROCEEDING?

A. The Company determined rate base using a thirteen-month average for the
 forecasted test period ending June 30, 2026. The base period rate base represents
 end-of-period balances.

14 Q. DID THE COMPANY FOLLOW THE COMMISSION'S GUIDELINES IN

15 DEVELOPING THE BASE AND FORECASTED TEST PERIOD DATA?

A. Yes. Per the Commission's rules, 807 KAR 5:001, Section 16(7)(e)(2), "the forecast contains the same assumptions and methodologies as used in the forecast period for use by management." As described by Mr. Carpenter, the base and forecasted test periods were developed using the same methods applied in the Company's annual budgeting process. The first six months of the base period are actual results and are taken from the Company's books and records.

III. FILING REQUIREMENTS SPONSORED BY WITNESS

1 Q. PLEASE DESCRIBE FR 16(6)(b).

A. FR 16(6)(b) requires that the forecasted adjustments are limited to the twelve months
immediately following the suspension period. The forecasted adjustments in this
proceeding are limited to the twelve months immediately following the suspension
period.

6 Q. PLEASE DESCRIBE FR 16(6)(c).

A. FR 16(6)(c) requires that capitalization and net investment rate base are based on
a thirteen-month average for the forecasted test period, in this case, the twelve
months ending June 30, 2026. In this proceeding, the capitalization and net
investment in rate base are based on a thirteen-month average.

11 Q. PLEASE DESCRIBE FR 16(6)(f)

- A. FR 16(6)(f) contains a reconciliation of the capitalization and rate base used to
 determine the revenue requirement in this case.
- 14 Q. PLEASE DESCRIBE FR 16(7)(t)
- A. FR 16(7)(t) contains a list of all commercially available or in-house developed
 computer software, programs, and models used in the development of the schedules
 and workpapers associated with the filing of the utility's application.
- 18 Q. PLEASE DESCRIBE SCHEDULE A.
- A. Schedule A is the overall financial summary for both the base period and the
 forecasted period at present rates. Based on the filing in this proceeding, as adjusted,
 the Company's electric operations are projected to earn a return on rate base of 3.886
 percent for the forecasted test period, which is considerably less than the 7.968
- 23 percent return requested in this proceeding. In order to achieve the appropriate return

on rate base, Duke Energy Kentucky's base electric revenues must increase by
 \$70,008,476 as shown in Schedule A.

3

Q. PLEASE DESCRIBE SCHEDULE B-1.

4 Schedule B-1 is the jurisdictional rate base summary for both the base and A. 5 forecasted periods and is supported by various schedules in Section B of the 6 Company's filing. The plant in service, and reserve for accumulated depreciation 7 and amortization for the base and forecasted periods were summarized from 8 Schedules B-2, B-3, and B-3.2 as supported by Company witnesses Mr. Sharif S. 9 Mitchell and Mr. Carpenter. The cash working capital from Schedule B-5 is 10 supported by a lead-lag study prepared by Company witness Mr. Michael J. 11 Adams. The other working capital component was summarized from Schedule B-12 5, as supported by Mr. Carpenter, and other items of rate base were obtained from 13 Schedule B-6, as supported by Mr. John R. Panizza. The jurisdictional electric 14 rate base for the forecast period as contained in Schedule B-1 is \$1,273,791,539.

15

Q. PLEASE DESCRIBE SCHEDULE C-1.

16 A. Schedule C-1 is a jurisdictional operating income summary for the forecasted period 17 ended June 30, 2026. This schedule includes the operating income summary at both 18 current and proposed rates. It assumes that the Commission allows the total amount 19 of the requested electric base revenue increase of \$70,008,476. The adjusted 20 operating results at current rates were summarized from Schedule C-2 and the 21 proposed increase was obtained from Schedule M. The revenue at proposed rates 22 was developed by adding the revenue increase to the operating revenues at current 23 rates. The related expenses and taxes on the proposed increase were added to the

current adjusted operating results to determine the jurisdictional *pro forma* amounts
 and the corresponding rate of return. The rate base as shown on this schedule is
 calculated on Schedule B-1.

4

Q. PLEASE DESCRIBE SCHEDULE C-2.

5 Schedule C-2 is a jurisdictional operating income statement to be used for A. 6 ratemaking purposes. In order to develop the forecasted test period that is appropriate for ratemaking, a two-step process was required. First, as required by 7 807 KAR 5:001, Section 16(6)(a), it was necessary to show the adjustments 8 9 necessary to transform the financial data for the base period into the forecasted 10 period. Second, it was necessary to adjust the forecasted period data to reflect any 11 adjustments required to ensure that the revenues and expenses to be recovered in 12 rates are representative of the expected costs to serve Duke Energy Kentucky 13 electric customers on an ongoing basis.

14 Schedule C-2 starts with the unadjusted base period and shows the 15 adjustments required to extend the Company's income statement from the base 16 period to the forecasted period. The next column on the schedule summarizes the 17 adjustments to the unadjusted forecasted test period. These adjustments are 18 described below. Generally, they relate to costs that were not reflected in the 19 Company's forecasted data or were reflected in the forecasted data but not allocable 20 to Duke Energy Kentucky's electric customers or were made to reflect traditional ratemaking methodology. The unadjusted operating results are summarized from 21 22 Schedule C-2.1. The adjusted amounts include the effects of the adjustments 23 summarized on Schedule D-1.

1 Q. PLEASE DESCRIBE SCHEDULE C-2.1.

- A. Schedule C-2.1 sets forth the detail of total Company operating results for both the
 base and forecasted periods. The operating results as shown in this Schedule C-2.1
 are listed by account and are summarized on Schedule C-2.
- 5 Q. PLEASE DESCRIBE SCHEDULE D-1.
- 6 A. Schedule D-1 is a summary of the detailed adjustments to test period operating
 7 revenues and operating expenses as set forth in Schedules D-2.1 through D-2.30.

8 Q. WHY ARE ADJUSTMENTS TO THE BASE AND FORECASTED 9 PERIOD INFORMATION NECESSARY?

10 The adjustments shown in Schedules D-2.1 through D-2.15 reflect the normal A. 11 budgetary changes that are expected to occur from the base period through the 12 forecasted period. Schedules D-2.1 through D-2.15 are sponsored by Mr. Carpenter. 13 The remaining adjustments, shown in Schedules D-2.16 through D-2.30, present 14 adjustments to the forecasted period data needed to ensure that the correct level of 15 revenue and expense is included in rates at the proper ongoing level. Some costs, 16 although reflected in the normal forecasting process, are not recoverable from Duke 17 Energy Kentucky's electric customers. Other adjustments were made to reflect 18 traditional ratemaking methodology (e.g., amortizing a regulatory asset to reflect the 19 Commission's prior orders). The reflection of a proper cost level is necessary to 20 ensure that customers are not paying for more than the cost of providing service and 21 to give the Company a reasonable opportunity to earn its authorized return. Ignoring 22 appropriate adjustments to the test period used for setting rates puts customers at risk 23 for overpaying for service and puts the Company at risk for potentially under-

1	recovering its ongoing costs. Schedule D-2.16 is sponsored by Mr. Carpenter.
2	Schedule D-2.24 is sponsored by Mr. Mitchell. Schedule D-2.26 is sponsored by Mr.
3	Jacob S. Colley. Schedules D-2.17 through D-2.23, D-2.25, and D-2.27 through D-
4	2.30 are discussed in my testimony below.

5 Q. HOW ARE THE INCOME TAX EFFECTS OF THESE ADJUSTMENTS 6 SHOWN ON YOUR SCHEDULES?

A. All applicable adjustments to state and federal income taxes resulting from the
adjustments, described below, are shown for each individual adjustment on Schedule
D-1.

10 Q. PLEASE DESCRIBE SCHEDULE D-2.17.

A. The adjustment in Schedule D-2.17 is to amortize the projected cost of presenting
the rate case. Duke Energy Kentucky proposes to amortize these costs over five
years, which increases test period operating expenses by \$176,067.

14 Q. PLEASE DESCRIBE SCHEDULE D-2.18.

A. Schedule D-2.18 is an adjustment required to eliminate from base rates, both
revenue and expenses recovered in the Environmental Surcharge Mechanism
(ESM) not already included in base rates. I will discuss in further detail later in
my testimony the costs being included in base rates. The effect of the adjustment
on electric operations is a decrease in electric operating revenue of \$1,999,924, a
decrease in pre-tax operating expenses of \$3,731,410, an increase in depreciation
expense of \$1,665,492, and an increase in property taxes of \$163,314.

1 Q. PLEASE DESCRIBE SCHEDULE D-2.19.

A. Interest synchronization is used to ensure that the revenue requirement reflects the appropriate income tax effects for interest expense determined in the weightedaverage cost of capital. Schedule D-2.19 presents the calculation of the state and federal income taxes on the interest cost included in the cost of capital. The adjustment is calculated by first determining the debt portion of total electric rate base. The total electric rate base is multiplied by the long-term and short-term debt percentage of total capital structure.

9 The result is then multiplied by the average cost of long-term and short-10 term debt. The sum of these results represents the annualized electric interest cost 11 deductible for income tax purposes. From this annualized total, we subtract the 12 forecasted test period electric book interest to determine the electric interest 13 expense adjustment for income tax purposes. The effect of this adjustment on 14 electric operations is to increase test period federal income taxes by \$1,854,665 15 and to increase test period state income taxes by \$461,747.

16 Q. PLEASE DESCRIBE SCHEDULE D-2.20.

A. Revenue and expenses associated with off-system sales are included in the budget and, consequently, in the forecasted test period. Schedule D-2.20 is intended to completely exclude all revenue and costs that will flow through the Company's PSM from the calculation of the forecasted test year revenue requirement. Base Revenue is increased by \$13,894,708 and Other Revenue is reduced by \$33,441,809 for the revenue flowing through the PSM. Operating expenses are reduced by \$17,320,437 for related expenses flowing through the PSM. Related

expenses include fuel, purchased power, reactive power expense, and other
 variable expenses.

3 Q. PLEASE DESCRIBE SCHEDULE D-2.21.

- A. Schedule D-2.21 is the adjustment to the forecasted period uncollectible expense
 to reflect annualized uncollectible expense based on the forecasted revenues and
 the uncollectible account factor from Schedule H. The adjustment increases
 operating expenses \$1,785,485.
- 8 Q. PLEASE DESCRIBE SCHEDULE D-2.22.
- 9 A. The adjustment in Schedule D-2.22 eliminates from the forecasted test year 10 revenue requirement the impact of Demand Side Management (DSM) revenue of 11 \$7,966,807 and pre-tax DSM operating expense of \$8,661,560. Schedule D-2.22 12 is intended to completely exclude all revenue and costs that will flow through the Company's Rider DSM from the calculation of the forecasted test year revenue 13 14 requirement. The adjustment recognizes that revenue and expenses associated 15 with the Company's energy efficiency programs are addressed in its existing 16 Rider DSM.
- 17 Q. PLEASE DESCRIBE SCHEDULE D-2.23.
- A. Schedule D-2.23 is an adjustment to eliminate miscellaneous expenses such as
 community relations, advertising, donations, governmental affairs, club dues and
 miscellaneous events expenses from the forecasted test period. These adjustments
 were made to comply with the Commission's orders in prior rate proceedings.
 The effect of the adjustment on electric operations is a decrease in pre-tax
 operating expenses of \$912,585.

1 Q. PLEASE DESCRIBE SCHEDULE D-2.25.

A. Schedule D-2.25 is an adjustment to eliminate unbilled revenue from the
forecasted test period. The adjustment is needed to be consistent with the revenue
and volume computations contained on Schedule M. The revenue and volume
amounts on Schedule M are based on test year billing statistics and, consequently,
do not reflect estimated unbilled sales. The adjustment decreases revenue in the
forecasted test period by \$330,788.

8 Q. PLEASE DESCRIBE SCHEDULE D-2.27.

9 A. Schedule D-2.27 is an adjustment to include in the forecasted test period,
10 amortization of the regulatory asset balances related to the Planned Outage O&M
11 and Forced Outage Purchased Power, for which the Company was granted
12 deferral authority in Case No. 2017-00321. The adjustment increases electric
13 operating expense in the forecasted test period by \$1,281,601. I discuss this
14 adjustment and the deferral mechanisms later in my testimony.

15 Q. PLEASE DESCRIBE SCHEDULE D-2.28.

16 Schedule D-2.28 is an adjustment to eliminate incentive compensation from the A. 17 forecasted test period related to the achievement of financial goals and 18 compensation for Restricted Stock Units (RSUs) consistent with what the 19 Commission previously approved in the Company's base rate cases, Case No. 20 2017-00321, Case No. 2018-00261 and Case No. 2022-00372. Company witness Ms. Shannon A. Caldwell discusses why the Company did not eliminate the 21 22 portion of the short-term incentive payments that "would only be paid out in the 23 event that a predetermined "circuit breaker" EPS value is met in the fiscal year."

1 The adjustment removes long-term and short-term incentive compensation 2 included in the forecasted test period tied to the achievement of financial goals of the Company. The RSU component of employee compensation is a fixed 3 percentage of the employee's salary and, therefore, it is not related to the 4 5 achievement of the Company's financial goals. Nevertheless, the Company 6 eliminated this expense consistent with Commission precedence in prior cases. 7 The adjustment decreases incentive compensation expense in the forecasted test 8 period by \$2,324,831.

9 The adjustment also removes payroll taxes associated with the short-term 10 incentive compensation being eliminated. This adjustment decreases taxes other 11 than income in the forecasted test period by \$100,722.

- 12 Q. PLEASE DESCRIBE SCHEDULE D-2.29.
- A. Schedule D-2.29 is an adjustment to eliminate pension expense related to
 employees who participate in both a defined benefit pension program and a 401K
 company match program and expenses for the Company's Supplemental
 Executive Retirement Plan (SERP). This is made to be consistent with
 Commission rulings in prior cases. The adjustment decreases operating expense in
 the forecasted test period by \$533,600.
- 19 Q. PLEASE DESCRIBE SCHEDULE D-2.30.

A. Schedule D-2.30 is an adjustment required to normalize the cost of planned outages in the forecast test period to reflect an average of the costs based on an eight-year average. The effect of the adjustment on electric operations is a decrease in pre-tax operating expenses of \$2,414,473. The Commission approved this methodology for leveling outage costs in base rates for Duke Energy
 Kentucky in Case No. 2017-00321.

3 Q. PLEASE DESCRIBE SCHEDULE F-1.

A. Schedule F-1 sets forth the detail, by account, of Social and Service Club Dues for
both the base and unadjusted forecasted test periods. All amounts are either charged
below the line or have been removed from operating expenses on Schedule D-2.23
and, thus, not included in the forecasted test period revenue requirement.

8 Q. PLEASE DESCRIBE SCHEDULE F-2.1.

9 A. Schedule F-2.1 sets forth the detail, by account, of Charitable Contributions for both 10 the base period and unadjusted forecasted test periods. All amounts are charged 11 below the line and, thus, not included in the forecasted test period revenue 12 requirement.

13 Q. PLEASE DESCRIBE SCHEDULE F-2.2.

A. Schedule F-2.2 indicates that the Initiation Fees and Country Club expenses for the
base and forecasted test periods are included on Schedule F-1.

16 Q. PLEASE DESCRIBE SCHEDULE F-2.3.

- A. Schedule F-2.3 sets forth the detail, by account of Employee Party, Outing, & Gift
 Expense for both the base and forecasted test periods.
- 19 Q. PLEASE DESCRIBE SCHEDULE F-3.
- A. Schedule F-3 sets forth the detail, by account, of Customer Service and
 Informational Expense, Sales Expense and General Advertising Expense for both
 the base and unadjusted forecasted test periods. Advertising costs included in

- 1 Account 913 and 930150 have been removed from operating expenses on Schedule
- 2 D-2.23 and, thus, not included in the forecasted test period revenue requirement.

3 Q. PLEASE DESCRIBE SCHEDULE F-4.

A. Schedule F-4 sets forth additional details supporting advertising costs for both the
base and unadjusted forecasted test periods. As noted above, these costs are not
included in the forecasted test period revenue requirement.

7 Q. PLEASE DESCRIBE SCHEDULE F-5.

8 A. Schedule F-5 sets forth the detail of Professional Services Expenses for both the
9 base and forecasted test periods.

10 Q. PLEASE DESCRIBE SCHEDULE F-6.

A. Schedule F-6, entitled "Rate Case Expense," indicates the estimated expense of presenting this case. The top half of this schedule details the estimated expense of this proceeding. Also included is a comparison to the rate case expense in the Company's last two rate case proceedings. The bottom half of this schedule shows the amortization over a five-year period. This amount is included in expense through the adjustment contained in Schedule D-2.17.

17 Q. PLEASE DESCRIBE SCHEDULE F-7.

A. Schedule F-7 sets forth Civic, Political and Related Expense for both the base and
unadjusted forecasted test periods. All amounts are charged below the line and, thus,
not included in the forecasted test period revenue requirement.

21 Q. PLEASE DESCRIBE SCHEDULE G-1.

A. Schedule G-1 contains a summary of all payroll costs and related benefits and taxes
 included in electric Operations & Maintenance (O&M) expense for both the base

1 and forecasted test periods.

2 Q. PLEASE DESCRIBE SCHEDULE H.

A. Schedule H, entitled "Computation of Gross Revenue Conversion Factor," (GRCF)
sets forth the calculation of the GRCF. This is the factor, or multiplier, used to grossup the operating income deficiency to a revenue deficiency amount. It includes an
uncollectible accounts factor based on the 12 months ended 2023 actual gross
charge-offs net of recoveries. Also included in the GCRF are the Kentucky Public
Service Commission assessment, and state and federal income taxes. The GRCF is
included on Schedule A and is used to compute the calculated revenue deficiency.

IV. ENVIRONMENTAL SURCHARGE MECHANISM

10 Q. CAN YOU BRIEFLY EXPLAIN THE COSTS CURRENTLY INCLUDED 11 IN THE ESM?

12 A. The ESM includes the return on eligible environmental compliance rate base 13 including eligible environmental compliance plant investments net of associated 14 accumulated depreciation and accumulated deferred income taxes (ADIT). It also 15 includes the recovery of environmental operating expenses including property taxes 16 and depreciation expense associated with the eligible environmental compliance 17 investments, as well as environmental reagent expenses, amortization of coal ash 18 and landfill closure ARO, and emission allowance expenses. The rider also credits 19 back to customers any proceeds from emission allowance sales.

20 Q. ARE ANY OF THE COSTS ASSOCIATED WITH DUKE ENERGY 21 KENTUCKY'S ESM INCLUDED IN BASE RATES?

A. Yes. Per Commission Order in Case No. 2023-00374 (two-year review), the annual
 ESM revenue requirement of \$22,535,632 was incorporated into base rates. The

ESM still includes the total revenue requirement for the approved Environmental Compliance Plan; however, the amount included in base rates will reduce the amount recovered through the ESM.

4

5

Q. WHAT ADJUSTMENTS WERE MADE TO THE FORECASTED TEST YEAR FOR THE AMOUNTS INCLUDED IN THE ESM?

- A. First, the rate base was reduced for the assets approved for recovery in the ESM. As
 discussed by Mr. Mitchell, the adjustments on Schedule B-2.2, Adjustments to Plant
 in Service, and B-3.1, Adjustments to Accumulated Depreciation and Amortization,
 removed the net book value of the environmental compliance assets from rate base.
- 10 Next the ESM related revenue and expenses included in the forecasted test
 11 year above or below the amounts included in base rates were adjusted on Schedule
 12 D-2.18.

V. <u>DEFERRALS</u>

13 Q. DOES THE COMPANY HAVE ANY DEFERRALS PREVIOUSLY

14 **APPROVED BY THE COMMISSION THAT IT IS SEEKING TO**

15 **AMORTIZE IN THIS PROCEEDING?**

A. Yes. Duke Energy Kentucky was authorized to begin deferring annual expenses for
planned outage O&M above or below the amount being recovered in base rates and
annual expenses for forced outage purchased power expense not recovered in the
FAC, above or below the amounts being recovered in base rates. Both deferrals were
approved by the Commission in Case No. 2017-00321. The October 12, 2023
Order in Case No. 2022-00372, authorized the five-year amortization of the
December 31, 2021 planned outage O&M deferral balance and the June 30, 2022

1		deferral balance for the forced outage purchased power expense not recovered in
2		the FAC. The Order also discontinued both deferrals.
3		In Schedule D-2.27, the Company is requesting authority to amortize the
4		remaining regulatory asset balance for Planned Outage O&M, January 1, 2022
5		through October 12, 2023, and Forced Outage Purchased Power Expense, July 1,
6		2022 through October 12, 2023, over five years.
7	Q.	WHAT IS INCLUDED IN BASE RATES RELATED TO THESE
8		DEFERRALS?
9	A.	Currently, \$7,177,425 in included in base rates for O&M expense related to planned
10		generation maintenance outages (excluding fuel, emission allowances, and
11		environmental reagent costs) and \$1,609,964 is included in base rates for cost of
12		replacement power expense related to forced outages.
13	Q.	IS THIS THE SAME AMOUNT INCLUDED IN THE REVENUE
14		REQUIREMENT BEING REQUESTED IN THIS PROCEEDING?
15	A.	No. The Company's forecasted test year has been adjusted to reflect a representative
16		(i.e., average) level of expense. The normalized planned outage O&M expense is
17		\$9,258,237 based on four years of actual expenses and four years of projected
18		expenses. The normalized cost of forced outage purchased power expense is
19		\$3,604,255 based on three years of actual expenses.

Q. IS THE COMPANY INCLUDING AMORTIZATION EXPENSE FOR ANY OTHER NEW DEFERRALS IN ITS FORECASTED TEST PERIOD REVENUE REQUIREMENT?

A. Yes. The Company is seeking to create a regulatory asset for the cost associated
with developing, presenting, and litigating this base rate case. Following
precedent established in prior cases, the Company is seeking a five-year
amortization period for this deferral. Schedule D-2.17 reflects the impact of this
adjustment.

VI. FUEL ADJUSTMENT CLAUSE AND PROFIT SHARING MECHANISM

9 Q. IS THE COMPANY PROPOSING CHANGES TO ITS FAC AND PSM?

A. Yes. As explained by Company witness Mr. John D. Swez, the Company is
proposing changes to the PJM BLI Codes included in the FAC and PSM as a
result of PJM BLIs being added, eliminated, and bifurcated. Also, as explained by
Company witness Mr. James J. McClay, the Company is proposing to include in
the PSM net proceeds of selling gas to manage fuel at its Woodsdale generation
station and net proceeds of capacity performance insurance.

16 Q. WHAT ARE THE PROPOSED CHANGES TO THE FAC?

A. The proposed changes have been incorporated in the red-lined FAC tariff
sponsored by Mr. Bruce L. Sailers.

19 Q. HOW WILL THE FAC REFLECT THE CHANGES DUKE ENERGY IS 20 PROPOSING?

A. The line item entitled "Net Fuel Related PJM Billing Line Items" on FAC
Schedule 2, Schedule 4 and Schedule 6, Section A will include the changes
proposed by Mr. Swez.

1 Q. WILL THE PROPOSED CHANGES TO THE FAC AFFECT THE PSM?

A. Yes. The changes proposed by Mr. Swez for fuel-related PJM billing line items
will also result in changes to the PSM. The non-native portion of these PJM
billing line items will be included in the calculation of the off-system sales
margin.

6 Q. ARE THERE OTHER CHANGES BEING PROPOSED TO THE PSM?

A. Yes. Mr. Swez discusses additional PJM BLI changes to incorporate into the
PSM related to non-fuel and capacity. Also, Mr. McClay discusses the proposal
to include net proceeds from capacity performance insurance and the sale of
surplus gas on the pipelines. All of the proposed changes have been incorporated
in the red-line PSM tariff sponsored by Mr. Sailers.

12 Q. HOW WILL THE PSM REFLECT THE CHANGES DUKE ENERGY IS 13 PROPOSING?

14 A. The non-native fuel related changes will be included in Schedule 2, Off-System 15 Sales Schedule. The non-fuel related PJM BLI changes will be included in 16 Schedule 3, Non-Fuel Related RTO Charges and Credits. The capacity related 17 PJM BLI changes will be included on Schedule 4, Capacity Transactions. The net 18 proceeds for capacity performance insurance will be included in Schedule 4, 19 Capacity Transactions. The net proceeds for sale of surplus gas on the pipelines 20 will be included on Schedule 2, Off-System Sales Schedule, line 13, (Gain)/Loss 21 on Sale of Fuel.

Q. HAS THE COMPANY PROVIDED A REVISED TEMPLATE FOR THE PROPOSED CHANGES TO THE PSM?

- 3 A. Yes. Attached to my testimony is Attachment LDS-1 which provides a revised
 4 template for the Company's PSM incorporating the changes discussed above.
- 5 Q. IS THE COMPANY PROPOSING ANY OTHER CHANGES TO THE PJM
- 6 BLI CODES INCLUDED IN THE FAC OR PSM?
- A. No. The Company is not requesting any other changes to the PJM BLIs except for
 those discussed by Mr. Swez and included on the red-lined tariffs.

VII. <u>CONCLUSION</u>

- 9 Q. WERE FR 16(6)(b), FR 16(6)(c), FR 16(6)(f), AND FR 16(7)(t),
 10 SCHEDULES A, B-1, C-1 THROUGH C-2.1, D-1, D-2.17 THROUGH D11 2.23, D-2.25 AND D-2.27 THROUGH D-2.30, F-1 THROUGH F-7, G-1, H,
 12 AND ATTACHMENT LDS-1 PREPARED BY YOU OR UNDER YOUR
 13 DIRECTION AND SUPERVISION?
 14 A. Yes.
- 15 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?
- 16 A. Yes.

VERIFICATION

STATE OF OHIO)	
)	SS:
COUNTY OF HAMILTON)	

The undersigned, Lisa D. Steinkuhl, Director Rates & Regulatory Planning, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of her knowledge, information and belief.

) Steinkull Lisa D. Steinkuhl Affiant

Subscribed and sworn to before me by Lisa D. Steinkuhl on this $\frac{2nd}{d}$ day of December, 2024.

NOTARY PUBLIC

My Commission Expires: JULY 8,2027



EMILIE SUNDERMAN. Notary Public State of Ohio My Comm. Expires July 8, 2027

Schedule 1

DUKE ENERGY KENTUCKY CALCULATION OF RIDER PSM CREDIT FOR MONTH 20XX - MONTH 20XX BILLING

Line No.	Description	Jan-XX	Feb-XX	Mar-XX	Apr-XX	May-XX	Jun-XX	Jul-XX	Aug-XX	Sep-XX	Oct-XX	Nov-XX	Dec-XX	Total
1	Off-System Sales Margin (Schedule 2, Line 15)												(+) \$	-
2	Non-Fuel Related RTO Costs and Credits (Schedule 3, Line 13 16)												(+)	-
3	Net Capacity Revenue (Expense) (Schedule 4, Line 44.23)												(+)	-
4	Net Proceeds from the Sale of Renewable Energy Credits	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0 (+)	\$0
5	Total Amount of Credits Owed to Customers												\$	-
6	Percentage Allocated to Customers (90% of net margin) $^{\left(b\right) }$												_	90.00%
7	Total Allocated to Customers (Line 5 x Line 6)												(+) \$	-
8	Remaining PSM Credit Due to (From) Customers at 12/31/XX (Schedule 5, Line 10)												(+)	
9	Total Amount of Credits due to (from) Customers												(+)	-
10	Actual Amount Credited (Charged) to Customers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$ 0	\$0	\$0 (-)	\$0
11	Net Refund due to (from) Customers												\$	-
12	Sales (kWh) from FAC Filing for the current quarter (FAC Schedule 3, Line C)										0	0	0 ÷	0
13	Profit Sharing Mechanism Credit (Charge) Rate (kWh) ^(a)												_	0.000000
Note: (a) (b)	Rider PSM credits, reductions to bills, are shown as positive num Rider PSM charges, increases to bills, are shown in parentheses. Per Commission Order dated April 13, 2018 in Case No. 2017-00		entheses.											
	Effective Date for Billing:													
	Submitted by:													
	Title:													
	Date Submitted:													

Schedule 2

DUKE ENERGY KENTUCKY OFF-SYSTEM SALES SCHEDULE (C) PERIOD: YEAR TO DATE - DECEMBER 31, 20XX

Line			Jan-XX		Feb-XX		ar-XX	Apr->	~	May-X	N	Jun-XX		Jul-XX	A	~ ~~	6.		Oct	vv	Nov-	vv	Dee		Tatal	
<u>No.</u>			Jan-AA		Feb-VV	IVI	dr-AA	Apr-/	~~	way-A		Jun-AA		Jui-AA	Aug	g-XX	56	p-XX	Oct	~^^	NOV-	~~	Dec	:-XX	Total	
1	Off-System Sales Revenue																									
2	Asset Energy	(+)	\$-		\$ -	\$	-	\$	-	\$	-	\$-	9	\$-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
3	Non-Asset Energy	(+)		-	-				-		-		-	-								-				-
4	Bilateral Sales	(+)		-	-		-		-		-		-	-		-		-		-		-		-		-
5	Net Fuel Related PJM Costs and Credits	(+)		-	-				-		-		-	-		-				-		-		-		-
6	Hedges	(+)_			-		-		-		-		-	-		-				-		-		-		-
7	Sub-Total Revenues	_	\$	-	\$-	\$	-	\$	-	\$	-	\$	- 9	\$-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
8	Variable Costs Allocable to Off-System Sales																									
9	Bilateral Purchases	(+)	\$-		\$-	\$	-	\$	-	\$	-	\$-	9	\$-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
10	Non-Native Fuel Cost ^(a)	(+)		-	-		-		-		-		-	-		-				-		-		-		-
11	Variable O&M Cost	(+)		-	-		-		-		-		-	-		-				-		-		-		-
12	Jurisdictional Rider ESM to be Recovered in Rider PSM ^(b)	(+)		-	-		-		-		-		-	-		-		-		-		-		-		-
13	(Gain)/Loss on Sale of Fuel	(+)			-		-				-			-		-		-				-		-		-
14	Sub-Total Expenses		\$	-	\$-	\$	-	\$	-	\$	-	\$	- \$	\$-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
		_																								
15	Off-System Sales Margin (Line 7 - Line 14)		\$	-	\$-	\$	-	\$	-	\$	-	\$	- 9	\$-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
	/	-																								—

Note: (a) Line 10 ties to Duke Energy Kentucky's FAC Filing, Schedule 2, Schedule 4 or Schedule 6, Line C.

(c) Per Commission Order dated April 13, 2018 in Case No. 2017-00321 2024-00354

(T)

Schedule 3

DUKE ENERGY KENTUCKY NON-FUEL RELATED RTO CHARGES AND CREDITS (a) PERIOD: YEAR TO DATE - DECEMBER 31, 20XX

Line No.	Description	PJM BLI	Jan-XX	Feb-XX	Mar-XX	Apr-XX	May-XX	Jun-XX	Jul-XX	Aug-XX	Sep-XX	Oct-XX	Nov-XX	Dec-XX	Total	
																_
1	Day-Ahead Economic Load Response	1240 / 2240	\$-	\$-	\$	· \$ ·	\$-	\$-	\$-	\$-	\$.	\$-	\$-	\$	- \$	- (D)
2	Real-Time Economic Load Response	1241/2241	-	-				-	-	-			-			- (D)
3	Day-Ahead Load Response Charge Allocation	1242	-	-				-	-	-			-		-	-
4	Real-Time Load Response Charge Allocation	1243	-	-				-	-	-			-		-	-
5	Pre-Emergency and Emergency Load Response	1245 / 2245	-	-				-	-	-			-			- (T)
6	Load Response Test Reduction	1246 / 2246	-	-				-	-	-			-		-	- (T)
7	PJM Reactive Supply and Voltage Control	1330 / 2330	-	-				-	-	-			-		-	-
8	Day-Ahead and Balancing Secondary Scheduling Reserve	1365 / 2365 / 1361 / 2361 / 2367 / 1471 / 1475	-	-				-	-	-			-		-	- (D)(T)
9	Day-Ahead and Balancing Non-Synchronized Reserve	1362 / 2362 / 2368 / 1472	-	-				-	-	-			-			- (T)
10	Day-Ahead Operating Reserve for Load Response	1371 / 2371	-	-				-	-	-			-			-
11	Balancing Operating Reserve for Load Response	1376 / 2376	-	-				-	-	-			-		-	-
12	Black Start Service	1380 / 2380	-	-				-	-	-			-		-	-
13	Fuel Cost Policy Penalty	1390 / 2390	-	-				-	-	-			-		-	- (T)
14	Bilateral Purchase or Sale	1980 / 2980	-	-				-	-	-			-		-	- (T)
15	PJM Customer Payment Default	1999	-	-				-					-			- (T)
					_		_								_	_
16	Total		\$-	\$ -	\$	<u> </u>	<u> </u>	<u>\$</u> -	\$ -	\$-	\$.	- \$ -	<u>\$ -</u>	\$. \$	<u>.</u>
							_									_

Note: ^(a) Per Commission Order dated April 13, 2018 in Case No. 2017-00321 2024-00354

Schedule 4

DUKE ENERGY KENTUCKY CAPACITY TRANSACTIONS (a) PERIOD: YEAR TO DATE - DECEMBER 31, 20XX

Line																												
No.	Description	PJM BLI		Jan-XX	F	eb-XX	Mar	-XX	Apr	-XX	May	/-XX	Jun-	XX	Jul-X	X	Aug-X	х	Sep-XX	Oct	-XX	Nov->	x	Dec-XX		Total		
1	Capacity Sales Revenues																										_	
2	Revenue Received for Capacity Sales	2600	(+)	\$ -	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$-	\$	-	\$	-	\$	- 1	\$	-	
3	Load Management Test Failure	2666	(+)	-		-		-		-		-		-		-		-	-		-		-		-		-	(T)
4	Capacity Performance Credits	2667	(+)	-		-		-		-		-		-		-		-	-		-		-		-		-	
5	PRD Commitment Compliance Penalty	2669	(+)	-		-		-		-		-		-		-		-	-		-		-		-		-	(T)
6	FRR LSE Reliability	2670	(+)	-		-		-		-		-		-		-		-	-		-		-		-		-	(T)
7	FRR LSE Capacity Resource Deficiency	2681	(+)	-		-		-		-		-		-		-		-	-		-		-		-		-	(T)
8	Bilateral Sales	2980	(+)	-		-		-		-		-		-		-		-	-		-		-		-		-	(T)
9	Capacity Performance Insurance Proceeds	-	(+)	-		-		-		-		-		-		-		-	-		-		-				-	(T)
10	Sub-Total Revenues		-	\$ -	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$-	\$	-	\$	-	\$	- 9	\$	-	
11	Capacity Purchase Expenses																											
12	Cost of Replacement Capacity	1600	(+)	\$ -	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$-	\$	-	\$	-	\$	- 9	\$	-	
13	Load Management Test Failure	1666	(+)	-		-		-		-		-		-		-		-	-		-		-		-		-	(T)
14	Capacity Performance Assessments	1667	(+)	-		-		-				-		-		-		-	-		-		-		-		-	
15	PRD Commitment Compliance Penalty	1669	(+)	-		-		-		-		-		-		-		-	-		-		-		-		-	(T)
16	FRR LSE Reliability	1670	(+)	-		-		-		-		-		-		-		-	-		-		-		-		-	(T)
17	FRR LSE Capacity Resource Deficiency	1681	(+)	-		-		-				-		-		-		-	-		-		-		-		-	(T)
18	Bilateral Purchases	1980	(+)	-		-				-		-		-		-		-	-		-		-		-		-	(T)
19	PJM Weekly Miscellaneous	1985	(+)	-		-				-		-		-		-		-	-		-		-		-		-	(T)
20	PJM Customer Payment Default	1999	(+)	-		-				-		-		-		-		-	-		-		-		-		-	(T)
21	Capacity Performance Insurance Costs	-	(+)	-		-		-		-		-		-		-		-	-		-		-		-		-	(T)
22	Sub-Total Expenses		-	\$ -	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$-	\$	-	\$	-	\$	- 9	\$	-	
23	Net Capacity Revenue (Expense) (Line 5 10 - I	_ine <mark>10-22</mark>)		\$ -	\$	-	\$	_	\$	-	\$	-	\$	-	\$	_	\$	<u> </u>	\$-	\$	-	\$	-	\$	- 4	\$	_	(T)

Note: ^(a) Per Commission Order dated April 13, 2018 in Case No. 2017-00321 2024-00354

(T)

Schedule 5

DUKE ENERGY KENTUCKY RECONCILIATION OF PRIOR PERIOD PERIOD: TWELVE MONTHS ENDED DECEMBER 31, 20XX

Line No.	Description		Total
1	Off-System Sales Margin	(+)	-
2	Non-Fuel Related PJM Costs and Credits	(+)	\$ -
3	Net Capacity Revenue (Expense)	(+)	\$ -
4	Net Proceeds from the Sale of Solar RECs	(+)	\$ <u> </u>
5	Sub-Total		\$ -
6	Percentage Allocated to Customers	,	90.00%
7	Total Allocated to Customers (Line 5 x Line 6)	(+)	\$
8	Prior Period Over (Under) Recovery ^(a)	(+)	\$ -
9	Actual Amount Credited (Charged) to Customers in 20XX	(-)	\$ -
10	Remaining PSM Credit Due to (From) Customers at 12/31/XX	1	\$ -

^(a) Incremental change from prior filing is due to PJM resettlements

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF DUKE) ENERGY KENTUCKY, INC., FOR: 1) AN) ADJUSTMENT OF THE ELECTRIC RATES; 2)) CASE NO. APPROVAL OF NEW TARIFFS; 3) APPROVAL) 2024-00354 OF ACCOUNTING PRACTICES TO ESTABLISH) REGULATORY ASSETS AND LIABILITIES;) AND 4) ALL OTHER REQUIRED APPROVALS) AND RELIEF.

DIRECT TESTIMONY OF

JOHN D. SWEZ

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

December 2, 2024

TABLE OF CONTENTS

I.	INT	RODUCTION AND PURPOSE	1
II.	RES	ERVIEW OF DUKE ENERGY'S CURRENT GENERATING SOURCES AND PARTICIPATION IN WHOLESALE CAPACITY A ERGY MARKETS	
	А.	Overview of Duke Energy's Current Generating Resources	3
	B.	Overview of PJM's Capacity Market	6
	C.	Overview of PJM's Energy Market	17
III.	REQ	PATCHABILITY OF THE COMPANY'S GENERATION IN PJM A QUEST TO REINSTITUTE TERMINAL NET SALVAGE AND FAGE DEFERRALS	
	А.	Overview of the Company's Generation Dispatch in PJM	19
	B.	Request to Recover Terminal Net Salvage Expense in Rates	22
	C.	Forced Outage Purchased Power Deferral Request	31
IV.	PJM	I BILLING LINE-ITEM CHARGES AND CREDITS	35
V.	INF	ORMATION SPONSORED BY WITNESS	47
VI.	CON	NCLUSION	48

ATTACHMENTS:

Attachment JDS-1	Complete List of All Current PJM BLIs
Attachment JDS-2	PJM's Customer Guide to PJM Billing
Attachment JDS-3	PJM BLIs – Current Recovery in FAC/PSM Riders
Attachment JDS-4	Proposed PJM BLIs – Recovery in FAC/PSM Riders

I. <u>INTRODUCTION AND PURPOSE</u>

1 О. STATE YOUR NAME AND BUSINESS ADDRESS. 2 A. My name is John D. Swez, and my business address is 525 South Tryon Street, 3 Charlotte, North Carolina 28202. 4 0. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY? 5 A. I am employed as Managing Director, Trading and Dispatch, by Duke Energy 6 Carolinas, LLC, a utility affiliate of Duke Energy Kentucky, Inc. (Duke Energy 7 Kentucky or Company). 8 PLEASE **EDUCATION Q**. DESCRIBE BRIEFLY YOUR AND 9 **PROFESSIONAL EXPERIENCE.** 10 A. I received a Bachelor of Science degree in Mechanical Engineering from Purdue 11 University in 1992. I received a Master of Business Administration degree from 12 the University of Indianapolis in 1995. I joined PSI Energy, Inc. in 1992 and have 13 held various engineering positions with the Company or its affiliates in the 14 generation dispatch or power trading departments. In 2003, I assumed the position 15 of Manager, Real-Time Operations, on January 1, 2006, became the Director of 16 Generation Dispatch and Operations, and finally assumed my current role on 17 November 1, 2019. 18 **Q**. HAVE YOU EVER TESTIFIED BEFORE THE KENTUCKY PUBLIC 19 SERVICE COMMISSION?

20 A. Yes, I have testified before the Kentucky Public Service Commission
21 (Commission) on several occasions.

1

Q. PLEASE BRIEFLY DESCRIBE YOUR DUTIES AS MANAGING DIRECTOR, TRADING & DISPATCH.

3 A. As Managing Director, Trading and Dispatch of Duke Energy, I am responsible 4 for Power Trading on behalf of Duke Energy's regulated utilities in the Carolinas 5 and Florida and Generation Dispatch on behalf of Duke Energy's regulated 6 utilities in Indiana, Ohio, and Kentucky. I am responsible for Duke Energy 7 Kentucky's participation as a member of PJM Interconnection LLC (PJM) as it 8 relates to the Company's generation dispatch, unit commitment, 24-hour real-time 9 operations, and short-term maintenance planning. I am also responsible for the 10 Company's submittal of supply offers in PJM's day-ahead and real-time electric 11 energy (collectively Energy Markets) and ancillary services markets (ASM), as 12 well as managing the Company's short-term supply position to ensure that the Company has adequate economic resources committed to serve its retail 13 14 customers' electricity needs. I also work closely with the teams responsible for 15 managing the Company's capacity position with respect to meeting its Fixed 16 Resource Requirement (FRR) obligation as a member of PJM.

17 Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. I provide a brief overview of the Company's generating resources used to meet its
customer load obligations and to provide economic, safe, and reliable service to
customers. I then discuss the Company's participation in the PJM capacity,
energy, ancillary services market (ASM) and Financial Transmission Rights
(FTR) markets and discuss the customer benefits that the Company's PJM
membership provides, along with a discussion of the Company's recent request to

1 transition from the PJM Fixed Resource Requirement (FRR) to Reliability Pricing 2 Model (RPM) capacity constructs. I then discuss and support the Company's 3 proposal to reincorporate terminal net salvage into its base rates to avoid intergenerational subsidies. I also discuss and support the Company's proposal to 4 5 reincorporate the deferral for forced outage replacement purchased power costs 6 above or below the amounts being recovered through the Company's fuel 7 adjustment clause (FAC) or in base rates as established in this case. I discuss and 8 support the Company's proposal for recovery of new PJM Billing Line Items 9 (BLIs) and changes to existing approved PJM BLIs. Finally, I sponsor Filing 10 Requirement (FR) 16(7)(h)(7) and certain forecasted financial data that I provided 11 to Duke Energy Kentucky witness Mr. Grady S. "Tripp" Carpenter for his use in 12 preparing the Company's forecast.

II. <u>OVERVIEW OF DUKE ENERGY KENTUCKY'S</u> <u>CURRENT GENERATING RESOURCES AND PARTICIPATION IN</u> <u>WHOLESALE CAPACITY AND ENERGY MARKETS</u>

A. <u>Overview of Duke Energy Kentucky's Current Generating Resources</u> 13 Q. PLEASE PROVIDE A BRIEF OVERVIEW OF HOW DUKE ENERGY 14 KENTUCKY MEETS ITS KENTUCKY LOAD OBLIGATIONS.

A. Duke Energy Kentucky currently owns and operates approximately 1,076 MW of
summer generating capacity. East Bend Unit 2 Generating Unit (East Bend) is a
600 MW (net rating) coal-fired unit located along the Ohio River in Boone
County, Kentucky. The Woodsdale Generating Station (Woodsdale) is a 476 MW
(net summer rating) six-unit natural gas-fired combustion turbine (CT) facility
with fuel oil back-up located in Trenton, Ohio. The net ratings represent the

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amount of power that the Company can dispatch from the plants after a portion of the gross power output is used to power the plant machinery.

3 Additionally, the Company has 8.8 MW of solar assets consisting of the nameplate ratings of Walton 1 (2 MW), Walton 2 (2 MW), Crittenden (2.8 MW), 4 5 and Aero Solar (2.0 MW) facilities with the combined net firm summer capacity 6 at all four solar facilities of 3.7 MW. These assets are connected at the distribution 7 level and thus, from PJM's perspective are behind the meter, meaning these 8 generating assets reduce the customer demand as seen from PJMs perspective but 9 are not separately dispatched into the market.

10 In the PJM energy market, collectively East Bend and Woodsdale 11 generating assets are dispatched into PJM, which maintains functional control of 12 the transmission system within its footprint including the Duke Energy 13 Ohio/Kentucky system. Additionally in the PJM capacity market, these resources, 14 East Bend, Woodsdale, and the solar facilities, along with the Company's demand 15 response programs and potential bilateral capacity purchases, are utilized to meet 16 the customers' capacity load obligation.

17 Finally, to the extent Duke Energy Kentucky can monetize its assets to 18 produce off-system sales through PJM, customers receive the majority of those 19 net revenues (or costs) through the Company's profit-sharing mechanism (PSM).

Q. PLEASE GENERALLY DESCRIBE PJM AND DUKE ENERGY KENTUCKY'S MEMBERSHIP IN PJM.

3 PJM is the nation's first fully functioning Regional Transmission Organization A. 4 (RTO). PJM operates the power grid and wholesale electric market for all or parts 5 of thirteen states and the District of Columbia. This electric market consists of a 6 capacity market, energy market, Ancillary Service Market (ASM), and a Financial 7 Transmission Rights (FTR) market. PJM's operation is governed by agreements and tariffs approved by the Federal Energy Regulatory Commission (FERC) 8 including the Operating Agreement,¹ Open Access Transmission Tariff (OATT),² 9 and the Reliability Assurance Agreement (RAA).³ 10

Effective January 1, 2012, Duke Energy Kentucky became a member of PJM, and as a PJM member, Duke Energy Kentucky is subject to these agreements, which among other things, require Duke Energy Kentucky to offer its available generation to PJM and to purchase its energy to serve customer load from the PJM Day-Ahead or Real-Time Energy Markets as well as participate in one of the two PJM capacity constructs, either Reliability Pricing Model (RPM) or Fixed Resource Requirement (FRR).

18 Through PJM's Day-Ahead energy market, market participants can 19 mitigate their exposure to real-time price risk by offering available generation and 20 purchasing forecasted demand. Duke Energy Kentucky submits demand bids and 21 supply offers as both a load serving entity and a generator owner, respectively.

¹ Available at: <u>https://agreements.pjm.com/oa/4541.</u>

² Available at: <u>https://agreements.pjm.com/oatt/3897.</u>

³ Available at: <u>https://agreements.pjm.com/raa/17427</u>.

1 Thus, the Company simultaneously functions as both a buyer and seller to serve 2 its retail electric customers.

Pursuant to the Commission's December 22, 2010, Order in Case No. 3 2010-00203 (PJM Realignment Order),⁴ Duke Energy Kentucky currently 4 5 participates in the PJM capacity construct as a self-supply FRR entity. As an FRR 6 entity, Duke Energy Kentucky uses its own generation assets located in the Duke 7 Energy Ohio/Kentucky (DEOK) Zone, Company demand response programs, and 8 any necessary bilateral capacity purchases to satisfy its PJM capacity demand 9 requirements. The Company effectively matches its PJM determined load/demand obligation, including sufficient reserves with unit-specific⁵ capacity resources and 10 11 demand response programs to meet supply reliability requirements.

B. <u>Overview of the PJM Capacity Market</u>

12 Q. PLEASE DESCRIBE THE PJM CAPACITY MARKET.

13 A. PJM's capacity market is called RPM. The purpose of the RPM is to provide a 14 market construct that enables PJM to secure adequate generation resources to 15 meet the reliability needs of the RTO. Put simply, the market pays participants for 16 the promise to produce electricity when called upon by PJM. The RPM construct 17 and the associated rules regarding how PJM members participate in the PJM 18 capacity market is described within the PJM OATT and RAA. The PJM capacity 19 market operates on a planning period that spans 12 months beginning June 1st and 20 ending May 31st of each year (Delivery Year). In PJM, the capacity market

⁴ In the Matter of the Application of Duke Energy Kentucky, Inc., for Approval to Transfer Functional Control of its Transmission Assets from the Midwest Independent Transmission System Operator to the *PJM Interconnection Regional Transmission Organization and Request for Expedited Treatment*, Case No. 2010-00203, Order, p. 18, (Dec. 22, 2010).

1 structure is intended to provide transparent forward market signals that support 2 generation and infrastructure investment. Capacity resources include generators 3 that produce electricity and other resources, such as demand response, which incentivizes customers to reduce electricity use and help operators keep the 4 5 supply and demand for electricity in balance. To meet PJM FERC-approved 6 reliability requirements, a utility that delivers electricity to end-use customers 7 must have the resources available to meet customers' demand as well as reserves 8 necessary to support the reliable operation of the transmission system. PJM 9 utilities meet these mandates with capacity they own, capacity purchased bilaterally, or capacity procured from the PJM capacity market. 10

11 There are two ways for a PJM member to participate in the RPM capacity 12 structure: 1) through the RPM baseline procurement auctions otherwise known as 13 the base residual auction (BRA) and subsequent incremental auctions (IA); or 2) 14 as a self-supply FRR entity. BRAs are typically conducted three years in advance 15 of the actual Delivery Year to allow bidders to complete construction of projects 16 that clear the BRA, although that schedule has become compressed recently. The 17 PJM capacity market is designed to provide incentives for the development of 18 additional resources through capacity market payments. Another important 19 component of RPM is that price signals are locational and designed to recognize 20 and quantify the geographical value of capacity. PJM divides the RTO into 21 multiple locational delivery areas (LDA) to model the locational value of 22 generation.

⁵ Unit specific capacity means that the Company can directly point to specific generating unit as supplying needed MWs.

1 Q. HOW IS THE CAPACITY MARKET AUCTION PRICE ESTABLISHED?

A. In a capacity market auction, PJM first accepts offers to provide capacity at the
lowest cost. As the auction progresses, PJM accepts progressively higher-priced
offers until enough capacity is assembled to meet the projected demand plus
reserve requirement for the future delivery year. At that point, when the auction
clears, all sellers receive the last or "marginal" offer price. This marginal price is
also known as the auction clearing price.

8 Q. PLEASE BRIEFLY EXPLAIN PJM'S FRR PROCESS.

9 A. The FRR process is the alternative that allows PJM Load Serving Entities (LSE), 10 such as Duke Energy Kentucky, to satisfy its customer capacity obligation under 11 the PJM RAA. Under the FRR construct, an LSE must annually submit two self-12 supply plans (FRR Plan): 1) a preliminary or "initial" three-year forward capacity plan, and 2) a final or "current year" FRR capacity plan. Each FRR Plan must 13 14 meet a PJM defined customer capacity obligation, including required reserves. 15 The FRR Plan must identify the unit-specific generating or demand response 16 capacity resources that will fulfill the LSE's customer demand obligation. FRR 17 allows the LSE to match its customer reliability requirement to its own generation, demand response, energy efficiency⁶ and/or transmission resources, 18 19 while still being permitted to sell some excess supply, subject to certain defined limitations, into the RPM.⁷ 20

 $^{^6}$ PJM has recently requested FERC approve a proposal to end energy efficiency participation in the 2026/2027 capacity auction.

⁷ FRR entities are limited in the amount of excess capacity they can sell into the capacity auctions. As an FRR entity, Duke Energy Kentucky is subject to the lesser of 450 MW or a 3 percent hold back on its ability to sell excess in the BRA. The hold back requirement is relaxed only in the 3rd IA, at which time the capacity can be sold in the auction.

Q. PLEASE EXPLAIN HOW DUKE ENERGY KENTUCKY CURRENTLY PARTICIPATES IN THE PJM CAPACITY CONSTRUCT.

A. As previously noted, Duke Energy Kentucky is an FRR Entity in PJM. As a
condition of Duke Energy Kentucky becoming a member of PJM, the
Commission required the Company to participate in PJM as an FRR entity until
such time as it received Commission approval to participate in the PJM capacity
auctions.

8 As of the date of the preparation of this testimony, the Company has 9 pending before the Commission, an Application in Case No. 2024-00285 to 10 transition from participating in PJM as an FRR entity to full participation in the 11 RPM auction construct. Since first entering PJM, the FRR arrangement was the 12 logical decision and has benefited customers. However, the Company has 13 determined through analysis that a move to a full RPM auction participant is now 14 in the customer's best interest. Simply said, the move lowers customer costs and 15 reduces risk.

16 Q. PLEASE EXPLAIN WHAT BEING AN FRR ENTITY MEANS FOR DUKE 17 ENERGY KENTUCKY.

A. As a FRR entity, Duke Energy Kentucky must secure and commit unit-specific
resources to meet the peak load capacity requirements for all its customers in
advance of the PJM's annual BRA through its FRR Plan. As the FRR Plan
timeline follows the RPM auction timeline, the Company recently submitted its
initial 2025/2026 FRR Plan for the delivery year spanning June 1, 2025 through

May 31, 2026, and its final 2024/2025 FRR plan for the delivery year spanning
 June 1, 2024 through May 31, 2025.

3 Duke Energy Kentucky must own or contract and commit the unit specific 4 generation resources to satisfy its forecasted load requirements for the applicable 5 period. The load requirements include both the forecasted load of Duke Energy 6 Kentucky's customers, as well as the reserve requirement mandated by PJM.

7 Q. PLEASE PROVIDE AN UPDATED PJM AUCTION SCHEDULE.

A. The 2025/2026 PJM BRA recently occurred in July 2024 and was the first auction
to employ the use of the new Effective Load Carrying Capability (ELCC)
methodology. This auction cleared at a substantially higher price than the last
auction at \$269.92/MW-Day. The DEOK Zone cleared at the same price as the
PJM Rest of RTO price; thus, the DEOK Zone did not split out or separate in this
auction. As PJM undergoes a transition to lower emitting resources and lower
reserve margins,⁸ the Company expects capacity prices to continue to increase.

In October of 2024, PJM filed a motion to FERC requesting a 2026/2027
BRA auction delay of six-months, as well as a six-month delay to subsequent
capacity auctions. In early November, FERC approved the delay of the 2026/2027
BRA by approximately six months as well as each BRA through 2029/2030.

19 Q. PLEASE EXPLAIN WHAT YOU MEAN BY THE PHRASE UNIT20 SPECIFIC GENERATION RESOURCES.

A. A unit-specific generation resource, as the phrase implies, simply means a
 specific generating resource that meets the eligibility requirements defined by

⁸ https://www.pjm.com/-/media/library/reports-notices/special-reports/2023/energy-transition-in-pjmresource-retirements-replacements-and-risks.ashx (Table 1, p. 16).

1 PJM. PJM eligible resources include both physical and demand-side management 2 resources. Duke Energy Kentucky must identify the specific generation resources 3 it owns or has contracted for to provide capacity to meet its entire Delivery Year FRR obligation. Unit-specific capacity is distinguishable from the more "generic" 4 5 capacity that is purchased by PJM and charged to LSEs through the BRA or buy-6 bid capacity offered by suppliers in the incremental auctions of PJM. The capacity 7 product available for purchase in those auctions is not directly tied to a specific 8 generator, so it cannot be used to satisfy an FRR plan obligation. While sellers in 9 the BRA identify the generation resource offered into the auction, the end product 10 is not as specific. The entire generator performance obligation in the BRA is to 11 PJM, not the purchaser of the buy-bid capacity. From the purchaser's perspective, 12 buy-bid capacity has guaranteed deliverability and performance by PJM. This is 13 distinguishable from the FRR entity where the performance obligation of 14 generation committed to FRR plans is the responsibility of the FRR entity.

As an FRR entity, Duke Energy Kentucky must rely upon the bilaterial capacity market to manage the risk of meeting its FRR plan if adjustments are needed. RPM entities have more liquidity and additional options to adjust plans to account for changes between the BRA and the Delivery Year.

19 Q. WHAT ARE THE COMPANY'S CURRENT LOAD PLUS RESERVE 20 MARGIN REQUIREMENTS?

A. For the 2025/2026 initial FRR plan, the utility's peak load (FRR Committed Load
Obligation), which includes the Forecast Pool Requirement (FPR) or reserve
margin, is 800.6 MW. As the level and characteristics of the load change over

time, the Company routinely assesses resource adequacy and adjusts its plans accordingly to ensure reliability in a cost-effective way for customers. Should new load come into the service territory, the Company will evaluate how that load fits within the overall utility's obligation in determining appropriate resource additions.

6 Q. DOES DUKE ENERGY KENTUCKY CURRENTLY HAVE SUFFICIENT 7 CAPACITY TO MEET ITS KENTUCKY CUSTOMER LOAD 8 OBLIGATIONS?

9 A. Yes. Duke Energy Kentucky currently has sufficient capacity to meet its load 10 obligations; however, short-term capacity purchases may be necessary to maintain 11 sufficient reserves and meet its capacity obligations in PJM. As was approved by 12 the Commission in the Company's electric rate case, Case No. 2017-00321, Duke Energy Kentucky uses the PSM, to address short-term capacity shortfalls in its 13 14 FRR plan through short-term capacity purchases as well as for netting any tariffed 15 capacity co-generation purchases including from qualified facilities as is required 16 under the Public Utility Regulatory Policies Act (PURPA).

Duke Energy Kentucky continually evaluates its load obligations and its portfolio to ensure that there is adequate supply available. This evaluation factors in the unique circumstances and challenges the Company faces in its Northern Kentucky service territory. Duke Energy Kentucky must plan to make sure the Company is able to meet any additional demand. While the East Bend and Woodsdale generating stations have been reliable and economic assets to satisfy base load and peaking obligations, the fact remains that Duke Energy Kentucky is heavily dependent upon these two stations to serve customers. As load demand
 grows, the Company's portfolio of resources should diversify to ensure there is a
 continued access to a stable, economic energy supply.

4 Q. WHAT WOULD HAPPEN IF DUKE ENERGY KENTUCKY'S FRR PLAN 5 IS INSUFFICIENT TO SATISFY ITS DEMAND OBLIGATION?

6 A. Duke Energy Kentucky would face severe penalties and limitations on its ability 7 to choose the FRR option if PJM were to deem the Company's initial or final 8 FRR Plans to be insufficient or its generation otherwise non-compliant with PJM 9 requirements. Additionally, if the Company does not have sufficient unit-specific 10 capacity to meet its demand obligation in either its initial or final FRR Plans, PJM 11 would assess significant monetary penalties for the deficient delivery year, require 12 the Company to procure additional capacity going forward, and remove the 13 Company's ability to participate as a FRR entity. The two FRR plans submitted 14 each year by Duke Energy Kentucky are consistent with the Commission's Order 15 in Case No. 2010-00203 whereby the Commission required the Company to 16 participate in the PJM capacity market as a FRR entity until such time as it 17 received Commission approval to participate in the PJM capacity auctions. To 18 date, Duke Energy Kentucky has not requested such permission, but now is doing 19 so since it has determined that a change would be in the best interest of its 20 customers and should be made at this time.

21 Q. PLEASE EXPLAIN THE FRR DEFICIENCY PENALTY.

A. As the name implies, FRR deficiency penalties are only applicable to FRR
entities. The potential magnitude of a deficiency penalty can be severe if Duke

1 Energy Kentucky is unable to meet its initial FRR plan as submitted prior to the 2 BRA or its final FRR plan determined before the delivery year. A FRR plan 3 deficiency and therefore penalty can occur due to an unexpected increase in customer demand, planned or unplanned unit retirements, or through a reduction 4 in Duke Energy Kentucky's generation capacity value if the Company were 5 6 unable to purchase adequate bilaterial capacity to meet this short position. Starting 7 with the 2025/2026 Delivery Year, this deficiency penalty is equal to the capacity 8 shortfall amount multiplied by the greater of either the Gross CONE or 1.75 9 multiplied by Net CONE, in \$/MW-day. Thus, depending upon the size of the 10 deficiency and ability to cure this shortfall through the bilaterial market, a penalty 11 could be very costly. A move to RPM eliminates the risk potential for a large FRR 12 deficiency penalty charge.

Q. PLEASE DESCRIBE THE CHALLENGES ASSOCIATED WITH PROCURING BILATERIAL CAPACITY NEEDED TO MEET THE FRR PLAN IN THE EVENT OF A SHORTFALL.

16 A challenge of meeting the Company's FRR plan is the PJM minimum internal A. 17 resource requirement. Under this requirement, Duke Energy Kentucky must 18 locate a certain, PJM-determined percentage of its unit-specific generation that is 19 included in its FRR Plans within the DEOK zone. This percentage varies from 20 year to year and can be volatile. While the Company's owned generation at East 21 Bend and Woodsdale stations are located within the DEOK zone, if a FRR plan 22 required a purchase of additional capacity, such capacity may also need to meet 23 those zone limitations. While the current year's requirement is a low 4.4%

1 percent, this percentage can have substantial changes year to year, with the 2 previous yearly required value at 29.3%. With recent and announced merchant generation retirements located within the DEOK zone,⁹ there is a significant risk 3 that bilateral capacity within the DEOK zone will be scarce and potentially 4 5 unavailable. Because PJM's minimum internal requirement is responsive to and 6 influenced by additional load added within the zone, as well as changes in 7 generating unit capacity within the zone, and changes in local transmission capability, the Company and its customers are exposed to a significant reliability 8 9 and cost risk if additional capacity is needed but not available within the DEOK 10 zone. This PJM minimum internal resource requirement risk is not present as an 11 RPM participant.

12 0. PLEASE EXPLAIN THE RISK OF ZONAL SEPARATION AND 13 WHETHER THE DEOK DELIVERY ZONE PREVIOUSLY SEPARATED 14 AS A CONSTRAINED ZONE.

15 In the BRA/IA, PJM procures capacity for its entire footprint. During these A. 16 auctions, it is possible for one or more individual zones to separate, or clear at a 17 different, higher price than that of the rest of the PJM footprint. This separation 18 can occur for several reasons, but more often than not, due to some constraint 19 within that specific zone. In three of the past six PJM BRAs, the DEOK zone 20 "separated," or cleared at a higher price than the remainder of PJM. Specifically, 21 for the 2020/2021, 2022/2023, and 2024/2025 auctions, the DEOK zone cleared at 22 a higher price than the rest of the RTO, highlighting the "tightness" of capacity in

⁹ See e.g., Vistra announces retirement of Zimmer Power Plant in Moscow Ohio and Miami Fort Power Plant in North Bend Ohio by 2027: available at https://investor.vistracorp.com/2020-09-29-Vistra-

the DEOK zone. The fact that this separation has occurred in multiple delivery
 years shows the ongoing risk to customers with Duke Energy Kentucky remaining
 in FRR.

4 Q. PLEASE EXPLAIN HOW PJM CALCULATES THE COMPANY'S 5 RESERVE MARGIN TODAY?

- A. The reserve margin for FRR entities is a constant amount, set by PJM prior to the
 BRA in the review of PJM's Variable Resource Requirement (VRR) Curve. PJM
 calculated this Installed Reserve Margin (IRM), which is the same as the reserve
 margin for FRR entities, for the 2026/2027 auction at 18.6%.¹⁰
- 10 Q. WILL THAT CHANGE IF THE COMMISSION APPROVES THE
 11 COMPANY'S APPLICATION TO EXIT THE FRR AND TRANSITION
 12 TO FULL AUCTION PARTICIPATION?
- A. Yes. Under the RPM, the reserve margin is variable, or a function of the PJM
 auction clearing price. For RPM entities, the 2026/2027 reserve margin is
 currently as high as 22.5% at very low-capacity prices, but as low as 17% at the
 highest capacity prices.

Accelerates-Pivot-to-Invest-in-Clean-Energy-and-Combat-Climate-Change.

¹⁰ <u>20240716-item-04--irm---fpr--elcc---2026-2027-delivery-year.ashx</u>

Q. IF THE COMMISSION APPROVES THE COMPANY'S APPLICATION
 TO EXIT THE FRR AND BECOME A FULL PARTICIPANT IN THE
 PJM BRA AND INCREMENTAL AUCTIONS, WILL THE DISPATCH OF
 THE COMPANY'S EXISTING GENERATING PORTFOLIO CHANGE?
 PLEASE EXPLAIN.

A. No. Whether an entity participates in either the FRR or RPM PJM capacity
construct has no impact on how that unit operates in the PJM energy and ancillary
services market. Thus, the actual dispatch and commitment of the Company's
generating units will not change.

C. Overview of PJM's Energy Market

10 Q. PLEASE BRIEFLY DESCRIBE THE PJM ENERGY MARKET.

A. PJM administers its Energy Market utilizing locational marginal pricing (LMP).
LMP can be broadly defined as the value of one additional megawatt of energy at
a specific point on the electric grid. In PJM, LMP is composed of three
components: the system energy price, the marginal congestion price, and the
marginal loss price. Both the Day-Ahead and Real-Time Energy Markets are
based on supply offers and demand bids submitted to PJM by market participants,
including both generator owners (as sellers) and load serving entities (as buyers).

18 The Day-Ahead Energy Market provides a means for market participants 19 to mitigate their exposure to price risk in the Real-Time Energy Market. The Day-20 Ahead Energy Market also provides meaningful information to PJM regarding 21 expected real-time operating conditions for the next day, which enhances PJM's 22 ability to ensure reliable operation of the transmission system. The Real-Time 23 Energy Market functions as a balancing market between generation and load in

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real-time. Through the PJM Energy Market and the LMP price signals, PJM
 provides a market-based solution to value and thus manage energy production,
 transmission congestion, and marginal losses in the PJM region. PJM also
 operates, and Duke Energy Kentucky participates in the ASM. Ancillary services
 include:

- Synchronized Reserves, which provide energy during an unexpected
 period of need;
- Non-Synchronized Reserves, which also provide energy during an
 unexpected period of need, but which are typically off-line;
- Regulating Reserves, which are utilized to manage short-term changes
 in energy requirements;
- Secondary Reserves, a 30-minute reserve product;
- Black Start Service, which provides energy to the grid without using
 an outside electrical supply in the event of a black out condition; and
- Reactive Supply and Voltage Control¹¹, which is produced by
 capacitors and generators and absorbed by reactors and other inductive
 devices.

18 Synchronized, Non-Synchronized, Regulating, and Secondary Reserves 19 are co-optimized, in different degrees, with the PJM Energy Market to minimize 20 overall production costs across the PJM footprint. PJM recently broke out 21 Synchronized, Non-synchronized, and Secondary Reserves into separate reserve

¹¹ On October 17, 2024, FERC issued Order No. 904 ruling finding that it is unjust and unreasonable for transmission providers to charge transmission customers for a generating facility's provision of reactive power within the standard power factor range, and that that such charges result in unjust and unreasonable

products for both the Day-Ahead and Real-Time (Balancing) Markets. The PJM
 regulating reserves market remains a Real-Time market only.

III. <u>DISPATCHABILITY OF THE COMPANY'S GENERATION IN PJM AND</u> <u>REQUEST TO REINSTITUTE TERMINAL NET SALVAGE</u> <u>AND OUTAGE DEFERRALS</u>

A. <u>Overview of the Company's Generation Dispatch in PJM</u>

3 Q. PLEASE EXPLAIN HOW PJM DISPATCHES GENERATING 4 RESOURCES TO MEET DEMAND.

5 A. PJM performs a security constrained economic commitment and least-cost 6 security constrained economic dispatch process that simultaneously optimizes 7 energy and reserves for all generation in its footprint in determining which additional assets to commit and dispatch. This process considers the various, 8 9 unique challenges faced in reliably and economically supplying power to all load across its footprint, most significantly aligning the production of energy 10 11 simultaneously with changes in demand within the capability of the transmission 12 network. PJM must continually act to account for the fact that customer demand is 13 dynamic in nature, fluctuating over the course of a hour, day, week, and season, 14 while analyzing factors such as costs, unit availability, and operating 15 characteristics of generation from different types of units within its entire 16 footprint and expected and unexpected conditions on the transmission network 17 that affect which generation units can be used to serve load economically and reliably given the numerous constraints that must be considered. Because of these 18 19 challenges, PJM's dispatch process "is designed to be an optimization

transmission rates. PJM is expected to make a compliance filing which will determine the impact to Duke Energy Kentucky customers.

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process...so that a reliable supply of electricity at the lowest cost possible under the conditions prevailing in each dispatch time interval can be delivered."¹²

Importantly, PJM's decisions as to which generating units should be 3 dispatched are not made exclusively based on the individual unit's cost. Although 4 the price of energy at a generating unit is certainly important, PJM's dispatch 5 6 process must consider several factors, including system-wide reliability, 7 transmission grid congestion and losses, and numerous operational conditions. 8 PJM has access to complete information regarding the operation of its Day-Ahead 9 and Real-Time Energy Markets in making the determination to commit and 10 dispatch a unit. Because of the efficient and informed nature of PJM's dispatch 11 methodology, a utility's energy purchases in PJM's Day-Ahead and Real-Time 12 Energy Markets are efficient and economic means available to satisfy customer 13 load. Stated another way, energy acquired by all load serving entities from PJM is 14 necessarily, and by definition, purchased on an economic dispatch basis.

Q. PLEASE BRIEFLY EXPLAIN HOW DUKE ENERGY KENTUCKY'S
 CURRENT GENERATION PORTFOLIO PARTICIPATES AND IS
 DISPATCHED IN THE DAY-AHEAD AND REAL-TIME ENERGY
 MARKETS.

A. Under the terms of PJM's RAA, as a FRR entity and generation owner in PJM,
Duke Energy Kentucky is under a must-offer requirement to offer its generation
committed to the FRR plan into the Day-Ahead Energy Market. Duke Energy
Kentucky offers its units to PJM's Energy Market and ASM for commitment and

¹² FERC Docket AD05-13-000, *Report on Security Constrained Economic Dispatch by the Joint Board of PJM/MISO Region*, Attachment 1, p. 5 (May 24, 2006).

1 dispatch purposes based on variable production costs used for the calculation of 2 incremental cost, no-load cost, and startup cost. These costs are comprised of the 3 optimized spot market price of fuel and emissions costs plus variable operation and maintenance costs. The generating units are offered with designations 4 including Must Run, Economic, Emergency, and Unavailable. Units offered with 5 6 a Must Run status will clear the market and are available for dispatch between the 7 unit's economic minimum and economic maximum load. Units will be dispatched 8 down or at minimum load during periods when the marginal cost of the unit is 9 above the LMP solved by the dispatch model or will be dispatched up or at full 10 load during periods when the marginal cost of the unit is below the LMP solved 11 by the dispatch model. Economic status units generally are committed if their "all 12 in" costs, including startup costs, are economic across the following day or during periods of the following day. Emergency status units can be committed during an 13 14 energy emergency event. Unavailable status units will not be considered by the 15 commitment and dispatch model.

16

6 Q. HOW COMPETITIVE IS DUKE ENERGY KENTUCKY'S GENERATION

17 IN THE PJM ENERGY MARKET TODAY?

A. In the Day-Ahead and Real-Time Energy Markets, East Bend historically competed favorably in the PJM market. However, while it still remains mostly economic, in recent times there have been periods when the unit was uneconomic to operate and was placed in reserve shutdown status. During reserve shutdown periods, the summation of the variable costs to run the unit are generally expected to be greater than the energy and ancillary service revenues that would be received from the market. This occurred during 57 days at the beginning of the COVID pandemic during 2020. Additionally, there have been a few instances since that time when, due to market conditions, reserve shutdown again occurred.

The Company's six natural gas-fired CT units at Woodsdale station, which 4 5 operate as peaking units, saw limited dispatch within the PJM energy markets up 6 until approximately 2022. However, in 2023 and especially 2024, with lower 7 natural gas prices, the Woodsdale units have seen usage increase, with net 8 capacity factors in 2024 above 10% in multiple months. Additionally, these units 9 may also clear the energy market for ancillary services such as Non-Synchronized 10 and Secondary Reserves, providing value to the Kentucky customer and PJM 11 without being on-line or dispatched to full load. Additionally, PJM reimburses 12 service providers such as Duke Energy Kentucky for black start and reactive services¹³. Woodsdale is currently a black start unit in the Company's black start 13 14 plan and thus two of the units are reimbursed for certain costs to provide black 15 start service to PJM.

B. <u>Request to Recover Terminal Net Salvage Expense in Rates</u>

16 Q. WHAT RELIEF IS THE COMPANY REQUESTING AS IT RELATES TO

17 TERMINAL NET SALVAGE EXPENSE IN RATES THROUGH THIS 18 PROCEEDING.

A.

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20 expense in its depreciation rates through this proceeding. Company witnesses

As I understand, the Company is seeking to re-incorporate terminal net salvage

¹³ On October 17, 2024, FERC issued Order No. 904 ruling finding that it is unjust and unreasonable for transmission providers to charge transmission customers for a generating facility's provision of reactive power within the standard power factor range, and that that such charges result in unjust and unreasonable transmission rates. PJM is expected to make a compliance filing which will determine the impact to Duke Energy Kentucky customers.

1 2 3 4 5 6 7		(d) The utility shall not commence retirement or decommissioning of the electric generating unit until the replacement generating capacity meeting the requirements of paragraph (a) of this subsection is fully constructed, permitted, and in operation, unless the utility can demonstrate that it is necessary under the circumstances to commence retirement or decommissioning of the existing unit earlier.
8		The purpose of my testimony, as it relates to this rebuttable presumption,
9		is to focus on the dispatchability, reliability and resilience components, and the
10		reserve capacity requirement components necessary to meet this requirement and
11		reinstitute the recovery of terminal net salvage.
12	Q.	ARE YOU AWARE OF THE COMPANY'S MOST RECENTLY FILED
13		INTEGRATED RESOURCE PLAN (IRP) AND THE ASSOCIATED
14		MODELING AS IT RELATES TO THE COMPANY'S GENERATING
15		PORTFOLIO?
16	A.	Yes. Company witness Kalemba performed the Company's IRP modeling and
17		supports the Company's plan to satisfy its load requirements over the long term
18		and in compliance with environmental requirements. As I understand, the
19		Company is not seeking Commission approval to retire any generating assets as
20		part of this case. However, it is inevitable that the Company's generating assets
21		will eventually retire. In the Company's current IRP modeling, as led by Mr.
22		Kalemba, East Bend's service life is impacted by both wholesale energy markets
23		and environmental regulations. Under the current IRP, and as more fully
24		explained by Mr. Kalemba, I am aware that the current modeling suggests that
25		East Bend, largely as a result of environmental regulations, will either have to
26		convert to a different fuel by 2030 or retire by 2032. The Company's current

1 preferred portfolio shows East Bend converting to dual fuel, natural gas and coal, 2 by 2030, which would allow it to continue operating until December 31, 2038. At 3 that time under the Company's preferred portfolio, the Company will replace its 600 MW East Bend Unit with a 664 MW (Winter rating) natural gas combined 4 5 cycle.

6 **Q**. UNDER THE COMPANY'S CURRENT IRP, WHEN EAST BEND IS 7 **EVENTUALLY** RETIRED. WILL DUKE ENERGY **KENTUCKY** 8 **REPLACE IT** WITH A GENERATING ASSET THAT IS AS 9 DISPATCHABLE AS THE CURRENT 600 MW EAST BEND 10 GENERATING UNIT AS REQUIRED BY KRS 278.264(2)(a)(1)? PLEASE 11 **EXPLAIN.**

12 Yes. The 664 MW natural gas combined cycle station is dispatchable in that the A. 13 unit can be turned on/off (committed) or raised/lowered up and down (dispatched) 14 to respond to instructions sent by either PJM or the Company because of either a 15 change in demand or as a result of a change in energy market prices, both 16 generally considered "load following" in an RTO. Modern combined cycle 17 stations generally have a faster ramp rate and a shorter startup time than East 18 Bend. For example, East Bend is generally offered to PJM at a ramp rate of 2.5 19 MW/minute, but modern combined cycle units typically have a station ramp rate 20 of approximately four times faster at 10 MW/minute. Additionally, East Bend is 21 offered to PJM with a cold notification plus startup time, or the time it takes to 22 start the unit in a cold state from the word "go" until the unit is dispatchable, of 43 23 hours compared to approximately 8-10 hours for a new combined cycle unit.

Therefore, the asset that is identified as replacing East Bend would have greater
 dispatchability than East Bend currently can provide.

3 Q. UNDER THE COMPANY'S CURRENT IRP, WHEN EAST BEND IS 4 EVENTUALLY RETIRED, WILL DUKE ENERGY **KENTUCKY REPLACE IT WITH A GENERATING ASSET THAT WILL MAINTAIN** 5 6 OR IMPROVE THE RELIABLITY AND RESILIENCE OF THE 7 ELECTRIC TRANSMISSION AS GRID REQUIRED BY KRS 8 278.264(2)(a)(2)? PLEASE EXPLAIN.

Yes. Reliable Operation¹⁴ is defined by the North American Electric Reliability 9 A. 10 Corporation (NERC) as "Operating the elements of the [Bulk-Power System] 11 within equipment and electric system thermal, voltage, and stability limits so that 12 instability, uncontrolled separation, or cascading failures of such system will not 13 occur as a result of a sudden disturbance, including a cybersecurity incident, or 14 unanticipated failure of system elements." The characteristics of a generating unit 15 that contribute to the reliable operation of the Bulk-Power System include 16 dispatchability and load following as previously discussed, but also its 17 dependability and predictability, flexibility, rotating mass (rotational inertia), and 18 voltage support. Although East Bend currently has these characteristics, a modern 19 combined cycle unit generally has the same or greater values of these same 20 characteristics. For example, one characteristic that determines a unit's flexibility, 21 in addition to the previously discussed ability to start/stop and ramp up/down 22 quicky, is a generating unit's minimum capability. When an on-line unit is needed

¹⁴ <u>https://www.nerc.com/pa/stand/glossary%20of%20terms/glossary_of_terms.pdf</u>.

1 to reduce output to its minimum operating level, a lower minimum capability 2 provides more flexibility. East Bend has a minimum capability of 300 MW, or a 50% turndown from its full capability of 600 MW. A new combined cycle unit 3 has approximately the same turndown ratio. Further, from a dependability and 4 5 predictability standpoint, a new combined cycle unit is an efficient generating unit 6 typically operating with a limited number of scheduled outages and expected 7 unscheduled outages, capable of operating indefinitely without disruptions, 8 similar to East Bend. Although the fuel for a new combined cycle unit would not 9 be stored on-site, as it is for East Bend, it is expected that the gas supply for the 10 new combined cycle unit would be served under a firm transportation (FT) 11 contract, helping to ensure a reliable fuel supply to the unit. Duke Energy, as 12 operators of one of the largest natural gas combined cycle and combustion turbine fleets in the country, has decades of experience managing natural gas supply to 13 14 ensure reliable and dependable delivery of natural gas to its generating fleet. 15 Finally, a new combined cycle unit can withstand sudden disturbances, such as 16 changes to system frequency, helping to avoid uncontrolled cascading blackouts, 17 similar to East Bend. Both East Bend and a new combined cycle unit have 18 rotating mass (rotational inertia), providing resistance to changes in its rotation, 19 providing stored energy and stability to the Bulk-Power System.

From a resilience perspective, or the ability of the system and its components to recover from an event or disruption, a new combined cycle unit again performs as well or better than East Bend. As previously mentioned, since new combined cycle stations generally have a quicker startup time than East 1 Bend, if the combined cycle unit is off-line or comes off-line during an event, the 2 unit can be started quicker than East Bend, enhancing the resiliency of the grid.

3 UNDER THE COMPANY'S CURRENT IRP, WHEN EAST BEND IS 0. 4 EVENTUALLY RETIRED, WILL DUKE ENERGY **KENTUCKY** 5 **REPLACE IT WITH A GENERATING ASSET THAT MAINTAINS THE** 6 MINIMUM RESERVE CAPACITY REQUIREMENT AND HAS THE SAME OR HIGHER CAPACITY VALUE AND NET CAPABILITY, AS 7 8 EAST BEND CURRENTLY MAINTAINS AS REQUIRED BY KRS 9 278.264(2)(a)(3) and (4)? PLEASE EXPLAIN.

10 Yes, the current Company IRP for the preferred portfolio has a 664 MW A. 11 combined cycle unit replacing the 600 MW East Bend unit after 2038. Since the 12 PJM ELCC class averages are updated with each auction and thus these values change over time, it is too early to make a final determination of the difference in 13 14 PJM capacity value for East Bend versus a new combined cycle unit. However, 15 using the ELCC class average rating for the 2026/2027 PJM auction, 84% is the 16 ELCC for a Coal Unit and 78% is the ELCC for a Gas Combined Cycle Unit. 17 Next, within the ELCC class average, a specific unit adjustment is further applied 18 based on that asset's performance within that class. Although East Bend has 19 tended to fair well after applying its adjustment to the class average, the 20 expectation is that a new combined cycle unit will compare even more positive to 21 its class. However, even before applying the adjustment to the class average, if a 22 comparison is made between a new combined cycle unit and East Bend, the 23 capacity value of the new Combined Cycle unit (664 MW x .78 = 518 MW) is

greater than East Bend (600 MW x .84 = 504 MW). After applying the adjustment
 for the class average, it is likely that the difference will be greater since the
 expectation would be that a new generating unit have better performance within
 its class as compared to East Bend.

5 Q. HOW WOULD THE COMPANY EVENTUALLY REPLACE THE 6 WOODSDALE COMBUSTION TURBINE UNITS?

- A. As Company witness Matt Kalemba testifies, the 2024 IRP had a 15-year time
 horizon and not include evaluation of Woodsdale's retirement in December of
 2040. However, the Company anticipates replacing Woodsdale with similarly
 dispatchable firm capacity that will be compliant with all Kentucky legislation or
 statutes in place at that time.
- Q. WILL THE COMPANY REPLACE THE WOODSDALE COMBUSTION
 TURBINES WITH AN ASSET(S) THAT COMPLIES WITH KRS 278.264,
 JUST AS DESCRIBED FOR EAST BEND?
- A. Yes, although the exact type of generation is not known yet, the Company intends to replace Woodsdale CTs with a unit that can respond to instructions sent by either PJM or the Company as a result of either a change in demand or market prices, one that maintains or improves the reliability and resiliency of the electric grid, maintains the minimum reserve capacity requirement, and provides the same or higher capacity value necessary to provide reliable service.

1 **Q**. ARE YOU AWARE OF ANY CHANGES TO THE WHOLESALE 2 ELECTRIC POWER MARKETS THAT ARE ANTICIPATED TO OCCUR 3 IN THE FUTURE THAT COULD AFFECT DUKE **ENERGY** 4 **KENTUCKY'S POWER PROCUREMENT PRACTICES?**

A. From a macro level perspective, the Company believes that the energy and
electricity sector continues to go through an extraordinary period of change. This
change is primarily driven by shifts in load growth patterns, commodity price
relationships, the move towards renewable generation, and increasing regulatory
uncertainty.

10 Although the Company believes that the PJM markets will continue to 11 function as they do today, wholesale energy and capacity price volatility have and 12 will likely continue to experience upward pressure in the short term. Drivers behind this increased volatility include effects from commodity pricing impacts 13 14 from world events such as the conflict in the Middle East, US natural gas and coal 15 exports, new environmental regulations as they become effective, trends towards 16 a more renewable and efficient generation mix, and structural market changes 17 implemented by PJM. As coal-fired generation continues to retire and more 18 natural gas and intermittent resources connect to the grid, both in front of and 19 behind the meter, there will be potential impacts to how grid operators reliably 20 meet demands and to the investments that will be required in energy resources 21 and grid infrastructure and modernization. It remains to be seen what extent the 22 incoming federal administration will have on the arc of environmental regulation;

but that uncertainty itself will be a challenge to utilities such as Duke Energy
 Kentucky.

3 Q. CONSIDERING THE CHANGES IN THE WHOLESALE PJM 4 MARKETS, INCLUDING BOTH POTENTIAL RISKS AND REWARDS, 5 DO YOU BELIEVE DUKE ENERGY KENTUCKY'S CUSTOMERS 6 STILL BENEFIT FROM THE COMPANY'S MEMBERSHIP IN PJM?

7 Yes. Duke Energy Kentucky's customers benefit significantly from PJM's A. 8 centrally dispatched RTO construct. PJM dispatches generation in broad 9 consideration of total RTO cost minimization, the benefits of which are directly 10 passed to customers in the form of energy alternatives to owned generation. The 11 approximately 178,000 MWs of generating capacity in PJM's footprint provides a 12 significant benefit in terms of reliability and provides Duke Energy Kentucky 13 with access to the most efficient generation. Further, these markets maximize the 14 opportunity for non-native sales from the Company's generation, the majority of 15 the proceeds flow back to Duke Energy Kentucky's customers through a credit on 16 their bills. PJM's focus is on maintaining and improving reliability across its 17 entire system, which directly translates to more efficient and reliable access to 18 electric resources to serve Duke Energy Kentucky's customers.

C. Forced Outage Purchased Power Deferral Request

19Q.PLEASE SUMMARIZE THE COMPANY'S REQUEST TO RE-20INSTITUTE ITS FORCED OUTAGE PURCHASED POWER DEFERRAL.

A. As part of its Application in this proceeding, the Company is seeking to re implement its previously authorized deferral for the actual cost for purchased
 power expense related to forced outages above or below the amounts being

recovered through the Company's FAC or in base rates as established in this case.
The Commission first approved this process as part of the Company's 2017
electric base rate case.¹⁵ The Company explained that because of the Company's size, and the fact that its load is served primarily by two generating assets, including a single 600 MW coal unit, replacement purchase power costs for forced outages have a significant impact on the Company's financial stability and performance.

8 As part of its decision in the Company's last electric base rate case, Case 9 No. 2022-00372, the Commission eliminated this deferral finding that the 10 anticipated expense was in line with base rate amounts.

Q. PLEASE EXPLAIN WHY THE COMMISSION SHOULD RE-ESTABLISH THIS DEFERRAL.

13 The Company's forecasted test year budget for forced purchased power costs for A. 14 the Company's East Bend and Woodsdale generating stations have been adjusted 15 to reflect a representative (i.e., average) level of expense. Note that for the remainder of this testimony, forced outage means both a forced outage and/or a 16 17 forced derate, since the term forced outage is assumed to mean reductions in unit 18 capability not only times when the entire generating unit is forced off-line (forced 19 outage), but times when the unit has a reduction in its operating capability (forced 20 derate). Forced outage purchased power costs have been normalized based upon 21 three years of actual purchased power for forced outages. In the Company's last

¹⁵In the Matter of the Electronic Application for Duke Energy Kentucky, Inc., for (1) An Adjustment of Electric Rates; (2) Approval of an Environmental Compliance Plan and Surcharge Mechanism; (3) Approval of New Tariffs; (4) Approval of Accounting Practices to Establish Regulatory Assets and

1 electric base rate case, the Commission eliminated the deferral stating that the 2 anticipated costs were in line with base rate amounts. As demonstrated by the 3-3 year average discussed in Company witness Sarah E. Lawler's testimony, the expenses can vary significantly year-to-year causing volatility in the Company's 4 5 earnings. The deferral is designed to, over time, approach \$0 and prevent this cost 6 volatility from having significant influence on the Company's earnings. As 7 Company witness Danielle L. Weatherston states in her testimony, permitting the 8 Company to defer for future recovery any incremental amount over or under what 9 is established in base rates for these expenses will also ensure that customers are 10 not overpaying, and the Company is not under recovering for actual costs incurred 11 in serving customers.

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Q. IS RE-ESTABLISHING THIS DEFERRAL REASONABLE?

13 A. Yes. Forced unit outages are volatile and can expose customers to day-to-day 14 power price volatility for multiple days at a time. The power markets are 15 dependent and driven by the underlying interrelated fuel markets, customer demand, and other generating unit availability. Additionally, foreign demand for 16 17 energy, such as liquified natural gas, and global conflicts can result in substantial 18 or frequent changes in prices contributing to the volatility of energy prices in the 19 US. These factors and others have caused energy market volatility to increase, 20 changing the landscape for coal and gas supply price stability. Thus, it is difficult 21 to accurately forecast what power prices will be during times of a unit's forced 22 outage. East Bend is an over 40-year-old coal unit that, as illustrated in Mr.

Liabilities; and (5) All Other Required Approvals and Relief, Case No. 2017-00321, Order, pp. 19-20 (Apr. 13, 2018).

1 Luke's direct testimony, has experienced volatility in its Equivalent Forced 2 Outage Rate (EFOR) over the last eight years. Given East Bend's age and its 3 general run profile, and the unpredictable nature of forced outages it is difficult to forecast when a forced outage will occur and how long it will last. Additionally, 4 5 Duke Energy Kentucky is relatively small and only has two fossil-fueled 6 generating stations, making replacement purchased power the Company's primary 7 mechanism for serving customer demand if East Bend (or Woodsdale) are in a 8 forced outage, causing variations in replacement purchased power costs to have a 9 greater impact on customer costs. The deferral balances the need for protecting 10 customers from overpaying for these costs when the utility's actual costs incurred 11 are below the levels used to establish base rates, and conversely mitigate the 12 utility's risk to financial stability and performance during years where the 13 Company's actual costs incurred are higher than those used to establish base rates. 14 Finally, the deferral will mitigate earnings volatility of the Company which 15 impacts financial metrics such as the Funds from Operations (FFO) to debt ratio.

16 Q. PLEASE EXPLAIN THE VOLATILITY IN FORCED OUTAGE 17 PURCHASED POWER COSTS YEAR-OVER-YEAR AND PROJECTED 18 INTO THE FUTURE.

A. As discussed above, power prices are becoming increasingly volatile given energy
market conditions. At the same time forced plant outages are unpredictable and
can expose customers to day-to-day power price volatility for multiple days at a
time. Therefore, the year-over-year costs will also vary significantly. Projecting
forward, this cycle is expected to continue.

IV. PJM BILLING LINE-ITEM CHARGES AND CREDITS

Q. HOW IS DUKE ENERGY KENTUCKY BILLED CHARGES AND CREDITED REVENUES RELATED TO ITS PARTICIPATION IN PJM?

3 PJM has a standard and robust process for accounting for all costs and credits A. 4 accrued in participation of its markets. All costs and credits accrued as a member 5 of PJM are invoiced weekly with a monthly true-up and settled by PJM through 6 BLIs. The monthly bill includes a detailed listing of the different BLIs, with BLIs 7 that start with a 1000 designation as costs, BLIs that start with a 2000 designation 8 as credits, BLIs that start with a 1400 designation as a reconciliation of a cost, and 9 BLIs that start with a 2400 designation as a reconciliation of a credit. 10 Reconciliations for costs and credits are necessary since PJM calculates load 11 reconciliations on a two- or three-month lag as new meter data is received. A reconciliation is essentially a "true-up" for changes to meter data as it relates to 12 13 specific 1000 costs or 2000 credits. If a 1000 charge or 1400 reconciliation is 14 positive, that represents a cost, whereas a 1000 charge or 1400 reconciliation that 15 is negative represents a credit to the Company. Conversely, if a 2000 charge or 16 2400 reconciliation is positive, that represents a credit, whereas a 2000 charge or 17 2400 reconciliation that is negative represents a cost to the Company. BLIs 18 provide a transparent process to account for costs caused and benefits incurred as 19 a member. These BLIs include costs for use of the PJM managed interstate 20 transmission grid, including reliability projects, as well as participation in the 21 wholesale Energy Markets, ASM, and Capacity Markets.

1 Q. ARE PJM BLI CHARGES AND CREDITS FERC-APPROVED RATES?

- A. Yes. PJM's operation is governed by agreements approved by the FERC
 including the Operating Agreement, OATT, and the RAA. All PJM BLIs are the
 result of activity under these FERC approved agreements.
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Q. ARE THE TYPES OF CHARGES AND CREDITS CONTAINED WITHIN THE PJM BLIS SIMILAR TO WHAT A UTILITY WOULD EXPERIENCE IF IT WERE NOT A MEMBER OF AN RTO?

8 A. Yes. While it is true that the PJM BLI charges and credits are a function of the 9 Company's membership in PJM, the types of charges and credits contained in 10 PJM BLIs are similar to expenses (and revenues) that would be experienced if the 11 Company were not in an RTO. However, if Duke Energy Kentucky were not in an 12 RTO, it would likely experience greater costs as a stand-alone utility. In such a 13 scenario, Duke Energy Kentucky would either have to become its own balancing 14 authority or contract with another entity to operate as such and would be subject 15 to FERC-approved OATTs. In addition, partly due to its relatively small size, the 16 Company could see changes to the operation of its generators, additional costs for 17 agreements to maintain certain NERC standards, other administrative fees, and 18 additional bilateral energy and capacity purchases. These additional expenses 19 would be necessary to attempt to maintain the same level of reliability. Finally, 20 the Company would likely not experience the level of detail and transparency in 21 terms of the BLIs it receives from PJM.

Q. PLEASE PROVIDE A COMPLETE AND CURRENT LIST OF ALL PJM'S
 BLI CODES, AN EXPLANATION OF THE DIFFERENT BLIS, AND
 WHAT BLIS THE COMPANY CHARGES OR CREDITS CUSTOMERS
 THROUGH ITS FAC OR PSM, AS WELL AS A LISTING OF BLIS THAT
 ARE INCLUDED IN THE COMPANY'S BASE RATES.

A. Attachment JDS-1 is a complete list of all current PJM BLI charges and credits.
Attachment JDS-2 is a copy of PJM's Customer Guide to PJM Billing that
describes what each of PJM's BLIs is intended to charge or credit. Finally,
Attachment JDS-3 is list of the PJM BLIs that the Company currently includes in
its FAC and PSM calculations as well as those included in the Company's base
rates.

12 Q. HOW WAS IT DETERMINED TO INCLUDE THESE PJM BLI CODES 13 IN EACH MECHANISM?

- A. As part of Case No. 2017-00321, the Commission approved these PLM BLIs to
 be recovered in the appropriate mechanism(s). Attachment JDS-3 shows what
 PJM BLIs are recovered in the FAC, PSM, or both.
- 17 Q. HAVE THERE BEEN ANY CHANGES IN THE BLI CODES PJM
 18 INCLUDES ON THE COMPANY'S INVOICE?
- A. Yes, PJM has added, eliminated, and bifurcated some BLIs since Case No. 201700321.

Q. HAVE ANY OF THE CHANGES BEEN INCLUDED IN THE FAC OR PSM?

A. No. Per the Commission Order in one of the Company's FAC cases, Case No.
2021-00296, the Company is not allowed to change any of the PJM BLIs included
in the FAC without Commission approval. Nor has the Company made any
changes to the PJM BLIs included in the PSM.

Q. IS THE COMPANY REQUESTING ANY CHANGES TO THE PJM BLI CODES INCLUDED IN THE FAC AND PSM IN THIS PROCEEDING?

9 A. Yes. The Company is proposing changes to the PJM BLI Codes included in the
FAC and PSM to update for the changes PJM has made to PJM BLIs already
approved for inclusion by the Commission and to include additional BLIs the
Company considers appropriate for recovery in these mechanisms. Attachment
JDS-4 is the update to Attachment JDS-3. JDS-4 details the PJM BLIs that the
Company is proposing to include in its FAC and PSM calculations, as well as the
BLIs that have previously been approved by the Commission.

16 Q. ARE THERE ANY PJM BLIS THAT WERE PREVIOUSLY APPROVED

BY THE COMMISSION, BUT HAVE EITHER HAD THE NAME OR
NUMBER OF THE BLI CHANGED, OR WERE SPLIT UP INTO

- 19 ADDITIONAL BLIS?
- A. Yes. The following PJM BLIs have been previously approved by the Commission for inclusion in either the FAC or PSM, or both, but PJM has modified the BLI or
- 22 split a BLI into different components, creating new BLI's as described below.

1 <u>2360 – Balancing Synchronized Reserve</u>: The previous name for BLI 2 2360, Synchronized Reserve, has been renamed Balancing Synchronized Reserve. 3 On October 1, 2022, PJM modified its ancillary services market, creating both Day-Ahead and Real-Time (Balancing) markets for Synchronized Reserves. BLI 4 5 2360 continues to be for payment for the provision of Synchronized Reserves but 6 in the Real-Time market only. This ancillary service was previously determined to 7 be fuel related since deployment of synchronized reserves involves ramping an 8 on-line generator up in output to supply the reserve, burning fuel. The 9 Commission approved Synchronized Reserves to be included in the FAC and 10 PSM based on native and non-native allocations.

11 <u>2366 – Day-Ahead Synchronized Reserve</u>: BLI 2366 is the same type of 12 ancillary product that existed previously as BLI 2360, Synchronized Reserves, but 13 PJM expanded this ancillary service into the Day-Ahead Market, creating the 14 Day-Ahead Synchronized Reserve. This ancillary service was previously 15 determined to be fuel related since deployment of synchronized reserves involves 16 ramping an on-line generator up in output to supply the reserve, burning fuel. The 17 Company is requesting the same recovery treatment for this new BLI as was 18 approved in Case No. 2017-00321 for Synchronized Reserve, the native portion to 19 be included in the FAC and the non-native portion included in the PSM.

20 <u>2362 – Balancing Non-Synchronized Reserve</u>: The previous name for
 21 BLI 2362, Non-Synchronized Reserve, has been renamed Balancing Non 22 Synchronized Reserve. On October 1, 2022, PJM modified its ancillary services
 23 market, creating both Day-Ahead and Real-Time markets for Non-Synchronized

1 Reserves. BLI 2362 continues to be for payment for the provision of Non-2 Synchronized Reserves but in the Real-Time market only. This ancillary service 3 was previously determined to be non-fuel, since non-synchronized reserves are typically supplied by units that are off-line not consuming fuel, such as quick start 4 (within 10 minute) resources such as the Woodsdale units. The unit is off-line and 5 6 not burning fuel when clearing this reserve product, but once deployed by PJM 7 the unit is turned on-line and begins burning fuel. Given that the unit is not 8 burning fuel during the majority of the BLI activity, the Commission approved 9 Non-Synchronized Reserve to be included in the PSM rider.

10 2368 – Day-Ahead Non-Synchronized Reserve: BLI 2368 is the same type 11 of ancillary product that existed previously as BLI 2362, Synchronized Reserves, 12 but PJM expanded this ancillary service into the Day-Ahead Market, creating the 13 Day-Ahead Non-Synchronized Reserve. This ancillary service was previously 14 determined to be non-fuel related since non-synchronized reserves are typically 15 supplied by units that are off-line not consuming fuel, such as quick start (within 16 10 minute) resources such as the Woodsdale units. The Company is requesting the 17 same recovery treatment for this new BLI as was approved in Case No. 2017-18 00321 for Non-Synchronized Reserve, to be included in the PSM.

<u>1365 – Day-ahead Scheduling Reserve and 2365 – Day-ahead Scheduling</u>
 <u>Reserve:</u> These PJM BLIs have been retired by PJM because this service was
 renamed to Secondary Reserve per FERC Order ER19-1486. The Commission
 approved Day-ahead Scheduling Reserve to be included in the PSM rider.

1		<u> 1361 – Secondary Reserve, 2367 – Day-Ahead Secondary Reserve, 2361 –</u>
2		Balancing Secondary Reserve, and 1471 - Load Reconciliation for Secondary
3		Reserves: On October 1, 2022, PJM modified its ancillary services market,
4		creating both Day-Ahead and Real-Time markets for Secondary Reserves and
5		renamed Day-Ahead Scheduling Reserve to Secondary Reserve per FERC Order
6		ER19-1486. Secondary Reserves are reserves that take more than 10 minutes but
7		less than 30 minutes to convert to energy and can be on-line or off-line. This type
8		of ancillary service was previously determined to be non-fuel related since
9		secondary reserves can be supplied by units that are off-line. Since these new PJM
10		BLIs are for the same ancillary service as Day-Ahead Reserves, the Company is
11		requesting the same recovery treatment for these new BLIs as was approved in
12		Case No. 2017-00321 for Day-Ahead Scheduling Reserve, to be included in the
13		PSM.
14	Q.	IS THE COMPANY REQUESTING TO INCLUDE ANY NEW PJM BLIS
15		IN BOTH ITS FAC AND RIDER PSM?
16	А.	Yes. PJM BLI 1216, described below, is a new BLI.
17		1216 Pseudo-Tie Balancing Congestion Refund: This is a new PJM BLI
18		related to the pseudo tie of generators by market participants importing energy in
19		and exporting energy out of PJM. A pseudo-tied generator's energy import or
20		export is subject to congestion and losses, the same as a generator inside PJM.

Since congestion and losses are directly related to fuel consumption, the Company
 proposes allocation of this charge or credit to be included in the FAC and PSM
 based on native and non-native allocations.

1 **Q**. IS THE COMPANY REQUESTING TO INCLUDE IN THE PSM ANY 2 NEW PJM BLIS OR BLIS THAT PREVIOUSLY EXISTED IN 2017 BUT 3 THAT WERE NOT PREVIOUSLY REQUESTED?

4 Yes. PJSM BLI 1246 and 2246 are new and 1390 and 2390 previously existed. A.

5 1246 - Load Response Test Reduction and 2246 - Load Response Test 6 Reduction: Starting on June 1, 2023, PJM created two new BLIs, 1246 and 2246, 7 that represent either the charge (1246) or the credit (2246) for entities testing load 8 management programs. Eligible entities can receive a credit equal to the measured 9 reduction in demand adjusted for losses times the appropriate 5-minute LMP. 10 These new BLIs were created to allocate credits for testing and corresponding 11 allocated charges. Since no fuel is consumed from reducing demand, the 12 Company is requesting this charge and credit be included in the PSM consistent 13 with the recovery the Commission has approved with other Load Response BLIs.

14 1390 - Fuel Cost Policy Penalty and 2390 - Fuel Cost Policy Penalty: The 15 Company, as all other PJM entities that offer generators into the PJM Energy 16 Market, make both a price-based and cost-based offer for its generators. For the 17 cost-based offers, the Company creates and then must follow a PJM approved 18 cost-based offer policy. Each day, PJM compares the generators submitted cost-19 based offer to a calculated cost-based offer using the entities Fuel Cost Policy. If 20 an entity submits a cost-based offer outside of an allowable range, the entity is assessed a penalty (BLI 1390). Additionally, penalties assessed to entities are 21 22 credited to other PJM participants based on real-time load ratio share for the hour 23 the penalty was assessed (BLI 2390). To date, the Company has received

JOHN D. SWEZ DIRECT 42

substantially more credits under BLI 2390 than charges under BLI 1390. Since
 no fuel is consumed for either of these BLIs, the Company is requesting the
 inclusion of both BLIs in the PSM.

4

5

Q. AS A PJM FRR CAPACITY ENTITY, ARE THERE ADDITIONAL PJM BLIS THE COMPANY IS REQUESTING TO INCLUDE IN THE PSM?

- A. Yes. The Company is requesting to include in the PSM the following BLIs the
 Company may receive as a PJM FRR capacity entity consistent with the
 Commission approval of other capacity PJM BLIs.
- 9 1666 - Load Management Test Failure and 2666 - Load Management Test 10 Failure: Sellers with committed Demand Resources that fail performance tests pay 11 a penalty charge which is allocated to eligible LSEs. This billing is performed in 12 the August monthly bill issued in September after the conclusion of the delivery year. Net capability testing shortfall MWs are charged daily at the weighted 13 14 annual revenue rate for the applicable zone plus the greater of 0.2 times that 15 weighted annual revenue rate or \$20/MW-day. Total revenues each day are 16 allocated to LSEs that paid a Locational Reliability charge that day based on their 17 daily unforced capacity obligations.

18 Q. WHAT ADDITIONAL PJM BLI CREDITS AND CHARGES WILL THE

19 COMPANY INCUR IF IT WERE TO TRANSITION TO THE PJM RPM

- 20 CAPACITY CONSTRUCT?
- 21 A. The following is a list of such BLIs:
- 22 1610 Locational Reliability
- 23 1650 Auction Specific MW Capacity Transaction
- 24 1660 Demand Resource Interruptible Load for Reliability (ILR)
- 25 Compliance Penalty

$ \begin{array}{r} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9 \\ 10 \\ 11 \\ 12 \\ 13 \\ 14 \\ 15 \\ 16 \\ 17 \\ 18 \\ \end{array} $		 1661 – Capacity Resource Deficiency 1662 – Generation Resource Rating Test Failure 1663 – Qualifying Transmission Upgrade Compliance Penalty 1664 – Peak Season Maintenance Compliance Penalty 1665 – Peak-Hour Period Availability 1666 – Load Management Test Failure 2605 – RPM Seasonal Capacity Performance Auction 2620 – Interruptible Load for Reliability 2625 – LSE Price Responsive Demand 2630 – Capacity Transfer Rights 2650 – Auction Specific MW Capacity Transaction 2660 – Demand Resource and ILR Compliance Penalty 2661 – Capacity Resource Deficiency 2662 – Generation Resource Rating Test Failure 2663 – Qualifying Transmission Upgrade Compliance Penalty 2664 – Peak Season Maintenance Compliance Penalty 2665 – Peak-Hour Period Availability 2665 – Peak-Hour Period Availability
19	Q.	IS THE COMPANY REQUESTING ANY CHANGES RELATED TO PJM
20		BLIS ASSOCIATED WITH THE RPM?
21	A.	No. The Company has filed an application in Case No. 2024-00285 to exit the
22		FRR and transition to full auction participation. PJM BLIs associated with the
23		RPM are addressed in that case.
24	Q.	ARE THERE ANY ADDITIONAL CAPACITY PERFORMANCE PJM
25		BLIS THE COMPANY IS REQUESTING TO INCLUDE IN THE RIDER
26		PSM?
27	A.	Yes. There are seven additional PJM BLIs associated with non-performance the
28		Company is requesting to include in Rider PSM consistent with the recovery the
29		Commission has approved for the Capacity Performance BLIs.
30		1669 - PRD Commitment Compliance Penalty and 2669 - PRD
31		Commitment Compliance Penalty: PRD Commitment Compliance Penalties are
32		charges and credits related to a commitment compliance shortfall for a Price

1	Responsive Demand (PRD). This charge or credit can be paid or received for
2	either a RPM or FRR capacity construct member. Non-performance related to
3	price responsive demand is charged under BLI 1669 and the corresponding
4	revenues is paid in BLI 2669.
5	<u> 1670 – FRR LSE Reliability and 2670 – FRR LSE Reliability</u> : FRR LSE
6	Reliability are charges or credits incurred by LSEs serving load whose capacity
7	requirement is being met through an FRR plan that is owned by another company.
8	The FRR LSE reliability charge or credit is applied by PJM on behalf of the FRR
9	Entity to compensate the FRR Entity for capacity procured on the LSE's behalf.
10	1681 - FRR LSE Capacity Resource Deficiency and 2681 - FRR LSE
11	Capacity Resource Deficiency: As discussed earlier in this testimony, PJM may
12	charge or credit an entity for an FRR deficiency penalty. FRR LSE Capacity
13	Resource Deficiencies are charges or credits incurred when capacity resources of
14	entities participating in the FRR are unable or unavailable to deliver unforced
15	capacity, and do not obtain replacement unforced capacity. Each capacity
16	resource's deficiency MWs for each day it is deficient pays the daily deficiency
17	rate. For example, an LSE participating as an FRR Capacity participant, for the
18	2024/2025 Delivery Year, will pay a deficiency charge equal to 1.2 times the
19	RPM Clearing Price in that Delivery Year. Starting with the 2025/2026 Delivery
20	Year, the FRR Capacity Resource Deficiency Charge is equal to the shortfall
21	amount multiplied by the greater of either the Gross Cost of New Entry (CONE)
22	or 1.75 multiplied by Net CONE. A FRR plan deficiency can occur due to a
23	sudden increase in customer demand, planned or unplanned unit retirements, or

through a reduction in Duke Energy Kentucky's generation capacity value. Total
 revenues each day are allocated to LSEs that paid a Locational Reliability charge
 that day based on their daily unforced capacity obligations.

<u>1985 – PJM Weekly Miscellaneous Charge:</u> To address a credit risk for a
future assessment of Non-Performance Assessment capacity performance penalty
charges, PJM may charge an entity a payment towards its penalty obligation, then
credit a redemption once the obligation to withhold prepayments has ended.
Thus, this BLI would be both a charge and a credit and can be paid or received for
either an RPM or FRR capacity construct member.

10Q.ARE THERE ANY OTHER CHANGES THE COMPANY IS11REQUESTING?

A. Yes. The Company is requesting to recover BLI 1999 - PJM Customer Payment
 Default based on the approved recovery of the underlying default.

14 1999 - PJM Customer Payment Default: A default could occur when a 15 PJM Market entity defaults in any of the PJM markets. A small portion of the 16 default is allocated to all PJM members and the remaining portion is allocated 17 based on market settlement activity. The Company previously received a charge 18 in BLI 1999 after a PJM FTR Market entity defaulted on its obligations to PJM. 19 In the FTR Market example, the Company would include this charge in the FAC 20 for the native portion or PSM for non-native portion since the underlying default 21 was related to PJM BLI 1500 and 2500 – Financial Transmission Rights Auction 22 (FTRs). Since this activity is directly related to the Company's participation in

1		PJM, the Company proposes recovery of this charge or credit based on approved
2		recovery of the underlying default.
3	Q.	PLEASE LIST THE BLIS THAT HAVE BEEN ARCHIVED BY PJM, BUT
4		THE COMPANY HAS PREVIOUSLY RECEIVED RECOVERY
5		APPROVAL.
6	A.	The following additional PJM BLIs have been archived by PJM since the
7		Company received approval for recovery:
8 9 10		2210 – Transmission Congestion 1240 – Day-Ahead Economic Load Response 1241 – Real-Time Economic Load Response
11	Q.	HOW WILL THE PJM BLI CHANGES IMPACT THE FAC AND RIDER
12		PSM FILINGS?
13	A.	Company witness Lisa Steinkuhl will discuss treatment of each PJM BLI change
14		as they relate to the Company's FAC and PSM filings in her direct testimony.
		V. <u>INFORMATION SPONSORED BY WITNESS</u>
15	Q.	PLEASE DESCRIBE FR 16(7)(h)(7).
16	A.	FR 16(7)(h)(7) provides Duke Energy Kentucky's generation mix for the
17		forecasted years of 2024 through 2026 and is projected to be approximately 92
18		percent coal and 8 percent gas/oil for each year.
19	Q.	DID YOU PROVIDE ANY INFORMATION TO MR. CARPENTER FOR
20		HIS USE IN DEVELOPING THE FORECASTED FINANCIAL DATA?
21	A.	Yes. I supplied Mr. Carpenter with information for the forecasted portion of the
22		base period, consisting of the six months ending February 28, 2025, and for the
23		forecasted test period, consisting of the 12 months ending June 30, 2026. I

1		provided Mr. Carpenter with certain production costs and revenues such as fuel
2		costs, emission allowances costs and purchased power costs, and revenue derived
3		from off-system sales, after applying the off-system sales sharing mechanism.
4		I also provided Mr. Carpenter with the projected account balances, for his
5		use in preparing the balance sheet, and for the forecasted test period for the
6		following items: emission allowances, coal, oil, gas and materials and supplies. I
7		obtained this information from historic trends and adjustments for expected
8		changes forecasted within the PowerSIMM® Model run.
		VI. <u>CONCLUSION</u>
9	Q.	WERE ATTACHMENTS JDS-1, JDS-2, JDS-3, AND JDS-4 PREPARED
9 10	Q.	
	Q. A.	WERE ATTACHMENTS JDS-1, JDS-2, JDS-3, AND JDS-4 PREPARED
10	-	WERE ATTACHMENTS JDS-1, JDS-2, JDS-3, AND JDS-4 PREPARED BY YOU OR AT YOUR DIRECTION AND UNDER YOUR CONTROL?
10 11	A.	WERE ATTACHMENTS JDS-1, JDS-2, JDS-3, AND JDS-4 PREPARED BY YOU OR AT YOUR DIRECTION AND UNDER YOUR CONTROL? Yes.
10 11 12	A.	WERE ATTACHMENTS JDS-1, JDS-2, JDS-3, AND JDS-4 PREPARED BY YOU OR AT YOUR DIRECTION AND UNDER YOUR CONTROL? Yes. WAS FR 16(7)(h)(7), THE INFORMATION SUPPLIED TO MR.
10 11 12 13	А. Q.	WERE ATTACHMENTS JDS-1, JDS-2, JDS-3, AND JDS-4 PREPARED BY YOU OR AT YOUR DIRECTION AND UNDER YOUR CONTROL? Yes. WAS FR 16(7)(b)(7), THE INFORMATION SUPPLIED TO MR. CARPENTER PREPARED BY YOU OR UNDER YOUR SUPERVISION?
10 11 12 13 14	А. Q. А.	WERE ATTACHMENTS JDS-1, JDS-2, JDS-3, AND JDS-4 PREPARED BY YOU OR AT YOUR DIRECTION AND UNDER YOUR CONTROL? Yes. WAS FR 16(7)(h)(7), THE INFORMATION SUPPLIED TO MR. CARPENTER PREPARED BY YOU OR UNDER YOUR SUPERVISION? Yes.

VERIFICATION

STATE OF NORTH CAROLINA)))SS:COUNTY OF MECKLENBURG))

The undersigned, John D. Swez, Managing Director Trading & Dispatch, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of his knowledge, information and belief.

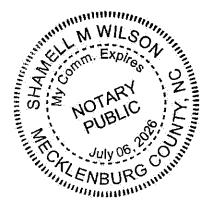
D. Swez Affiant

Subscribed and sworn to before me by John D. Swez on this $\frac{21^{5t}}{21}$ day of <u>MVLMbL</u>

2024.

NÓTÁRY PUBLIC

My Commission Expires:



KyPSC Case No. 2024-00354 Attachment JDS-1 Page 1 of 3

PJM Billing Statement Line Items						
ID # CHARGES ID # CREDITS						
ransmis						
	Amount Due for Interest on Past Due Charges					
1100	Network Integration Transmission Service	2100	Network Integration Transmission Service			
1100	Network Integration Transmission Service (exempt)	2102	Network Integration Transmission Service (exempt)			
1102	Underground Transmission Service	2102	Underground Transmission Service			
1104	Network Integration Transmission Service Offset	2103	Network Integration Transmission Service Offset			
1101		2104	Non-Zone Network Integration Transmission Service			
1108	Transmission Enhancement	2108	Transmission Enhancement			
1109	MTEP Project Cost Recovery	2109	MTEP Project Cost Recovery			
1110	Direct Assignment Facilities	2110	Direct Assignment Facilities			
1115	Transmission Enhancement Settlement (EL05-121-009)	2110				
1120	Other Supporting Facilities	2120	Other Supporting Facilities			
1120	Firm Point-to-Point Transmission Service	2120	Firm Point-to-Point Transmission Service			
1100		2132	Internal Firm Point-to-Point Transmission Service			
1133	Firm Point-to-Point Transmission Service Resale	2132	Firm Point-to-Point Transmission Service Resale			
1135	Neptune Voluntary Released Transmission Service (Firm)	2135	Neptune Voluntary Released Transmission Service (Firm)			
1136	Hudson Voluntary Released Transmission Service (Firm)	2136	Hudson Voluntary Released Transmission Service (Firm)			
1138	Linden Voluntary Released Transmission Service (Firm)	2138	Linden Voluntary Released Transmission Service (Firm)			
1140	Non-Firm Point-to-Point Transmission Service	2140	Non-Firm Point-to-Point Transmission Service			
1110		2142	Internal Non-Firm Point-to-Point Transmission Service			
1143	Non-Firm Point-to-Point Transmission Service Resale	2142	Non-Firm Point-to-Point Transmission Service Resale			
1145	Neptune Voluntary Released Transmission Service (Non-Firm)	2145	Neptune Voluntary Released Transmission Service (Non-Firm)			
1146	Neptune Default Released Transmission Service (Non-Firm)	2146	Neptune Default Released Transmission Service (Non-Firm)			
1147	Neptune Unscheduled Usage Billing Allocation	2110				
1155	Linden Voluntary Released Transmission Service (Non-Firm)	2155	Linden Voluntary Released Transmission Service (Non-Firm)			
1156	Linden Default Released Transmission Service (Non-Firm)	2150	Linden Default Released Transmission Service (Non-Firm)			
1157	Linden Unscheduled Usage Billing Allocation	2100				
1165	Hudson Voluntary Released Transmission Service (Non-Firm)	2165	Hudson Voluntary Released Transmission Service (Non-Firm)			
1166	Hudson Default Released Transmission Service (Non-Firm)	2166	Hudson Default Released Transmission Service (Non-Firm)			
1167	Hudson Unscheduled Usage Billing Allocation					
Energy	Day about Market Energy					
1200	Day-ahead Spot Market Energy					
1205	Balancing Spot Market Energy	0014	Day about Transmission Congestion			
1210 1215	Day-ahead Transmission Congestion	2211 2215	Day-ahead Transmission Congestion			
1215	Balancing Transmission Congestion Pseudo-Tie Balancing Congestion Refund	2213	Balancing Transmission Congestion			
1210		0017	Planning Period Excess Congestion			
1210	Planning Paried Congestion Liplift					
	Planning Period Congestion Uplift		Planning Period Congestion Uplift			
1220	Day-ahead Transmission Losses	2220	Transmission Losses			
1225	Balancing Transmission Losses					
1230	Inadvertent Interchange	2010	Day ahaad Economia Load Postation			
		2240	Day-ahead Economic Load Response			
1040	Day Abaad Load Deepense Charge Alles-	2241	Real-time Economic Load Response			
1242	Day-Ahead Load Response Charge Allocation					
1243	Real-Time Load Response Charge Allocation	00.45	Emergency Load Decrement			
1245	Emergency Load Response	2245	Emergency Load Response			

KyPSC Case No. 2024-00354 Attachment JDS-1 Page 2 of 3

-	PJM Billing Statement Line Items				
ID #	CHARGES	ID #	CREDITS		
1246	Load Response Test Reduction	2246	Load Response Test Reduction		
1250	Meter Error Correction				
1260	Emergency Energy	2260	Emergency Energy		
Market A	dministration Costs				
1301	PJM Scheduling, System Control and Dispatch Service - Control Area Administration				
1302	PJM Scheduling, System Control and Dispatch Service - FTR Administration				
1303	PJM Scheduling, System Control and Dispatch Service - Market Support				
1305	PJM Scheduling, System Control and Dispatch Service - Capacity Resource/Obligation Mgmt.				
1313	PJM Settlement, Inc.				
1314	Market Monitoring Unit (MMU) Funding				
1315	FERC Annual Charge Recovery				
1316	Organization of PJM States, Inc. (OPSI) Funding				
1317	North American Electric Reliability Corporation (NERC)				
1318	Reliability First Corporation (RFC)				
1319	Consumer Advocates of PJM States, Inc. (CAPS)				
Ancillary	Services				
1320	Transmission Owner Scheduling, System Control and Dispatch Service	2320	Transmission Owner Scheduling, System Control and Dispatch Service		
1330	Reactive Supply and Voltage Control from Generation and Other Sources Service	2330	Reactive Supply and Voltage Control from Generation and Other Sources Service		
1340	Regulation and Frequency Response Service	2340	Regulation and Frequency Response Service		
1350	Energy Imbalance Service	2350	Energy Imbalance Service		
1360	Synchronized Reserve	2360	Balancing Synchronized Reserve		
1361	Secondary Reserve	2361	Balancing Secondary Reserve		
1362	Non-Synchronized Reserve	2362	Balancing Non-Synchronized Reserve		
		2366	Day-ahead Synchronized Reserve		
		2367	Day-ahead Secondary Reserve		
		2368	Day-ahead Non-Synchronized Reserve		
1370	Day-ahead Operating Reserve	2370	Day-ahead Operating Reserve		
1371	Day-ahead Operating Reserve for Load Response	2371	Day-ahead Operating Reserve for Load Response		
1375	Balancing Operating Reserve	2375	Balancing Operating Reserve		
1376	Balancing Operating Reserve for Load Response	2376	Balancing Operating Reserve for Load Response		
1377	Synchronous Condensing	2377	Synchronous Condensing		
1378	Reactive Services	2378	Reactive Services		
1380	Black Start Service	2380	Black Start Service		
1390	Fuel Cost Policy Penalty	2390	Fuel Cost Policy Penalty		
Reconcil					
	Load Reconciliation for Spot Market Energy				
1410	Load Reconciliation for Transmission Congestion				
4.400		2415	Balancing Transmission Congestion Load Reconciliation		
1420	Load Reconciliation for Transmission Losses	2420	Load Reconciliation for Transmission Losses		
1430	Load Reconciliation for Inadvertent Interchange				
1440	Load Reconciliation for PJM Scheduling, System Control and Dispatch Service				
1443	Load Reconciliation for PJM Settlement, Inc.				
1444	Load Reconciliation for Market Monitoring Unit (MMU) Funding				
1445	Load Reconciliation for FERC Annual Charge Recovery				

KyPSC Case No. 2024-00354 Attachment JDS-1 Page 3 of 3

PJM Billing Statement Line Items				
ID #	CHARGES	ID #	CREDITS	
1446	Load Reconciliation for Organization of PJM States, Inc. (OPSI) Funding			
1447	Load Reconciliation for North American Electric Reliability Corporation (NERC)			
1448	Load Reconciliation for Reliability First Corporation (RFC)			
1449	Load Reconciliation for Consumer Advocates of PJM States, Inc. (CAPS) Funding			
1450	Load Reconciliation for Transmission Owner Scheduling, System Control and Dispatch Service			
1460	Load Reconciliation for Regulation and Frequency Response Service			
1470	Load Reconciliation for Synchronized Reserve			
1471	Load Reconciliation for Secondary Reserve			
1472	Load Reconciliation for Non-Synchronized Reserve			
1475	Load Reconciliation for Day-ahead Scheduling Reserve			
1478	Load Reconciliation for Balancing Operating Reserve			
1480	Load Reconciliation for Synchronous Condensing			
1490	Load Reconciliation for Reactive Services			
Financial	Transmission Rights			
1500	Financial Transmission Rights Auction	2500	Financial Transmission Rights Auction	
		2510	Auction Revenue Rights	
Capacity	- Reliability Pricing Model (RPM)			
1600	RPM Auction	2600	RPM Auction	
	Locational Reliability			
		2605	RPM Seasonal Capacity Performance Auction	
		2625	LSE PRD	
		2630	Capacity Transfer Rights	
		2640	Incremental Capacity Transfer Rights	
1650	Auction Specific MW Capacity Transaction	2650	Auction Specific MW Capacity Transaction	
1661	Capacity Resource Deficiency	2661	Capacity Resource Deficiency	
1662	Generation Resource Rating Test Failure	2662	Generation Resource Rating Test Failure	
1663	Qualifying Transmission Upgrade Compliance Penalty	2663	Qualifying Transmission Upgrade Compliance Penalty	
1666	Load Management Test Failure	2666	Load Management Test Failure	
	- Performance			
	Non-Performance	2667	Bonus Performance	
	PRD Commitment Compliance Penalty	2669	PRD Commitment Compliance Penalty	
	FRR LSE Reliability	2670	FRR LSE Reliability	
	FRR LSE Capacity Resource Deficiency	2681	FRR LSE Capacity Resource Deficiency	
Miscellan				
	Station Power			
	Generation Deactivation	2930	Generation Deactivation	
	Deferred Tax Adjustment	2952	Deferred Tax Adjustment	
1956	Dominion Settlement	2956	Dominion Settlement	
1957	Schedule 11A PJM Net	2957	Schedule 11A PJM Net	
1980	Miscellaneous Bilateral	2980	Miscellaneous Bilateral	
1985	PJM Weekly Miscellaneous			
1995	PJM Annual Membership Fee			
	· ····································	2996	Annual PJM Cell Tower	
		2997	Annual PJM Building Rent	

CUSTOMER GUIDE TO PJM BILLING

- Billing Line Items include PJM Open Access Transmission Tariff (OATT) references, PJM Operating Agreement (OpAgr) references, and PJM Manual references.
- Reports are available for viewing, printing, and downloading from PJM's Market Settlement Reporting System (MSRS).

Billing Line Item	Description	Reports
Network Integration Transmission Service (OATT Section 34, Attachments H-1 through H-17, Attachment H-A, and TOA Section 7.8 Manual 27, Section 5)	Network customers pay daily demand charges to PJM transmission owners using the applicable zonal or non-zone Network Integration Transmission Service rates. For transmission owners (except those in ATSI, PPL, ComEd, Dayton, Duke, and Duquesne zones), the charges for their own transmission facilities are not actually paid (i.e., exempted with an equal amount credits) and are shown only to identify their cost responsibility as ordered by FERC. <u>Charges</u> : Daily demand charges calculated as network customers' daily network service peak load contribution times 1/365 th of the applicable zonal rate(s) for the zone(s) in which the network load is located. Non-zone network service peak load contributions are coincident with the PJM Region peak. Virginia Network Load customers in the Dominion Zone pay applicable rates for Underground Billing under FERC Opinion No. 555. <u>Credits</u> : PJM zonal network transmission service revenues allocated to the applicable zone's transmission owners on a transmission revenue requirement basis. PJM non-zone network revenues allocated to transmission owners based on transmission revenue requirement ratio shares, with the ComEd, AEP, and Dominion shares further allocated to their respective zonal network customers based on demand charge ratios.	NITS Charge Summary NITS Credit Summary NITS Offset Charge Summary Non-Zone NITS Credit Summary Underground Transmission Service Charge Summary Underground Transmission Service Credit Summary
Firm Point-to-Point Transmission Service (OATT Section 13.7, Schedule 7, and TOA Section 7.8 Manual 27, Section 6)	Firm point-to-point transmission customers pay demand charges for reserved capacity at the applicable tariff rates based on the term of the reservations. There is no charge for reserved capacity with a MISO point of delivery. <u>Charges</u> : Monthly demand charges for daily, weekly, monthly, and yearly delivery calculated based on the transmission customer's reserved capacity times the applicable tariff rate. The total demand charge in any week, pursuant to a reservation for daily delivery, shall not exceed the weekly delivery rate times the highest amount of reserved capacity in any day during such week. <u>Credits</u> : Total firm transmission service revenues allocated to PJM transmission owners based on transmission revenue requirement ratio shares, with the ComEd, AEP, and Dominion shares further allocated to their respective zonal network customers based on demand charge ratios.	Firm PTP Charges Firm PTP Credit Summary
Non-Firm Point-to- Point Transmission Service (OATT Sections 14.5 & 27A, Schedule 8 Manual 27, Section 6)	Non-firm point-to-point transmission customers pay demand charges for reserved capacity at the discounted rate. There is no charge for reserved capacity with a MISO point of delivery. <u>Charges</u> : Monthly demand charges for hourly, daily, weekly, and monthly delivery calculated based on the transmission customer's reserved capacity (in MWh) times the discounted rate of \$0.67/MWh. Rebates are provided for transaction MWh curtailed by PJM and for transmission congestion charges. <u>Credits</u> : Total non-firm transmission service revenues allocated to PJM network and firm point-to-point transmission customers in proportion to their monthly demand charges.	Non-Firm PTP Charges Non-Firm PTP Credit Summary
Transmission Enhancement (OATT Schedule 12)	All network customers and merchant transmission owners pay transmission owners for required transmission enhancement projects in accordance with the zonal cost responsibility allocations in the appendix to Schedule 12. All transmission projects collecting these payments are on PJM's website under Transmission Services/Formula Rates. Charges: All network customers serving load in a responsible zone pay for that zone's applicable projects' revenue requirements in proportion to their network service peak load share in that zone, and responsible merchant transmission owners also pay their share of applicable revenue requirements. Note that several EDCs bear these charges for the default suppliers in their territory. Credits: Total revenues allocated to the applicable transmission enhancement project owners, or the applicable transmission zone network customers for zonal TOs that include these project costs in their network rates.	Transmission Enhancement Charge Summary Transmission Enhancement Credit Summary

Billing Line Item	Description	Reports
Spot Market Energy OpAgr Schedules 1-3.2.1 \$ 3.3.1 and OATT Schedule 4 Vanual 28, Section 3)	Day-ahead Spot Market energy position MWs are calculated in hourly intervals for cleared day-ahead generation and increment offers, demand, decrement, and load response bids, and day-ahead energy transactions. Real-time Spot Market energy position MWs are calculated in five minute increments for real-time energy transactions, load (without losses), generation, and metered tie flows, as applicable. In situations where five minute energy position interval data has not been provided, the energy position value provided will be scaled or flat-profiled across each of the five minute intervals of the provided period in order to obtain five minute interval energy positions.	DA Daily Energy Transactions RT Daily Energy Transactions for customer review and verification Spot Market Energy Charge
	Day-ahead Charges: Net Day-ahead Spot Market energy positions are charged at the PJM-wide day-ahead system energy price for each hour. Charges are positive for energy purchased from the PJM Spot Market (i.e. energy withdrawals) and negative for energy delivered to the PJM Spot Market (i.e. energy injections) and totals are summed for each hour. Balancing Charges: Net real-time deviations from day-ahead energy positions are charged at one-twelfth the PJM-wide real-time system energy price for each five minute interval. In situations where five minute energy position interval data has not been provided (including all day-ahead energy position data), the energy position value provided will be scaled or flat-profiled across each of the five minute intervals of the provided period in order to obtain five minute interval energy positions and deviations. Charges may be positive or negative depending on the direction of the real-time deviation from the day-ahead energy position, and totals are summed for each hour. Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the hourly PJM-wide real-time system energy price on a two-month billing lag.	Spot Market Energy Charge Summary Energy & Inadvertent Load Recon Charge Summary Energy Market and Congestion Loss Charge Details Balancing Generator LMP Charges
Transmission Congestion (OpAgr Schedules 1-	The increased energy costs due to redispatch during the applicable interval when the PJM transmission system is constrained are assessed to market participants based on the congestion price component of LMPs. Day-Ahead revenues collected are allocated as credits to FTR holders. Balancing Revenues are allocated as credits based on real-time load plus exports ratio	Transmission Congestion Charge Summary
(UpAgr Schedules 1- 3.2.4, 3.4.1, & 5.1-5.2 Manual 28, Section 8)	shares. <u>Day-ahead Charges</u> : Day-ahead Implicit Congestion charges are calculated hourly as the sum of day-ahead withdrawal values (i.e., all cleared day-ahead demand/decrement/load response bids and sale transactions priced at the applicable locations' day-ahead congestion prices) minus the sum of day-ahead injection values (i.e., all cleared day-ahead generation/increment offers and purchase transactions priced at the applicable locations' day-ahead congestion prices).	Explicit Congestion Charges Energy Market and Congestion Loss Charge Details
	Explicit Congestion charges for day-ahead energy transactions are calculated hourly and equal the scheduled MWh times the difference between day-ahead sink and source congestion prices. These charges are assessed to the buyer (or point-to-point transmission customer, if applicable). Balancing Charges: Balancing Implicit Congestion charges are calculated for each five minute interval as the sum of balancing withdrawal congestion values (i.e., all deviations between demand/decrement/load response bids and sale	FTR Target Credits Hourly Transmission Congestion Credits
	transactions cleared day-ahead versus real-time load without losses, and sale transactions, priced at one-twelfth of the applicable locations' real-time congestion prices) minus the sum of balancing injection congestion values (i.e., all deviations between generation/increment offers and purchase transactions cleared day-ahead versus real-time generation and purchase	Congestion and Loss Load Recon Charges
	transactions, priced at one-twelfth of the applicable locations' real-time congestion prices). In situations where five minute energy position interval data has not been provided (including all day-ahead energy position data), the energy position value provided will be scaled or flat-profiled across each of the five minute intervals of the provided period in order to obtain five	Congestion Uplift Charge Summary
	minute interval energy positions and deviations. Charges may be positive or negative depending on the direction of the real- time deviation from the day-ahead energy position, and totals are summed for each hour. Explicit Congestion charges for balancing energy transactions are calculated for each five minute interval and equal any real-	Network ARR Target Credit Summary
	time deviations from the transaction MWs cleared day-ahead times one-twelfth of the difference between the real-time sink and source congestion prices. In situations where five minute energy position interval data has not been provided (including all day- ahead energy position data), the energy position value provided will be flat-profiled across each of the five minute intervals of	Cross-Monthly Congestion Credit Summary
	the provided period in order to obtain five minute interval energy positions and deviations. Charges may be positive or negative depending on the direction of the real-time deviation from the day-ahead energy position, and totals are summed for each hour. These charges are assessed to the buyer (or point-to-point transmission customer, if applicable).	Balancing Transmission Congestion Credit Summary
	<u>Day-ahead Credits</u> : Total day-ahead congestion revenues (including net day-ahead MISO and NYISO Market-to-Market adjustments) are allocated as hourly credits based on FTR target allocations (FTR MW times the difference between day-ahead FTR sink and source congestion prices). The monthly total of excess hourly congestion credits and FTR Auction net revenues remaining after distribution to ARRs are used to proportionately reduce any remaining FTR target deficiencies in all hours of the month. Any additional excess monthly congestion revenues are allocated to previous deficient months of the planning period.	Balancing Transmission Congestion Load Reconciliation Credit Summary
	Balancing Credits: Total Balancing Transmission Congestion Charges (including MISO and NYISO real-time Market-to-	

Planning Period Congestion Uplift (OpAgr Schedules 5.2.5 & 5.2.6 Manual 28, Section 8)	Market adjustments and inadvertent interchange congestion contribution) are allocated among the PJM market participants in proportion to their real-time load (de-rated for transmission losses) plus their real-time PJM exports as a percentage of the total PJM load (excluding losses) and exports. <u>Reconciliation Charges and Credits:</u> Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the applicable source/sink congestion price on a two-month billing lag. For planning years in which the sum of actual Transmission Congestion credits paid to FTR holders during the planning year was less than the sum of their FTR Targets, Planning Period Congestion Uplift credits are awarded to the FTR holders at the end of the planning year (May) to completely fulfill those remaining FTR Target deficiencies. Planning Period Congestion Uplift credits and Planning Period Congestion Uplift charges can only occur at the end of the Annual Planning Period (which runs from June 1st through May 31st), so they will only apply to May monthly billing statements. The "Planning Period Congestion Uplift credit" is a "make-whole" congestion credit to FTR holders to satisfy any previously unfulfilled FTR Target Credits that remain at the end of the planning year. A summary of FTR Targets and all applicable Congestion Credits broken down by month can be viewed in the "Cross-Monthly Congestion Credits Summary" report in MSRS. Select the "All Billed" option for the period from 6/1/12 through 5/31/13 to see the complete set of details. The "Planning Period Congestion Uplift charge" is the participant's share of the allocated costs of providing the Uplift credits. Charges are allocated to FTR holders in proportion to their net positive total FTR Target Credits for the planning year. Details of this charge allocation can be viewed in the "Congestion Uplift Charge Summary" report in MSRS. The calculation for the Uplift charge is: (positive FTR Target credit / Total PJM Posi	Congestion Uplift Charge Summary Cross-Monthly Congestion Credit Summary
Planning Period Excess Congestion (OpAgr Schedule 5.2.6 Manual 28, Section 8.4.4)	For planning years in which the sum of total PJM congestion revenues collected during the planning year was greater than the sum of FTR holders' total net FTR Targets, Planning Period Excess Congestion credits are awarded to the ARR holders at the end of the planning year (May) to distribute those remaining excess congestion revenues. Planning Period Excess Congestion credits can only occur at the end of the Annual Planning Period (which runs from June 1st through May 31st), so they will only apply to May monthly billing statements. Planning Period Excess Congestion credits are allocated to ARR holders in proportion to their net positive total ARR Target Credits for the planning year.	Cross-Monthly Congestion Credit Summary

Billing Line Item	Description	Reports
Transmission Losses (OpAgr Schedules 1- 3.2.5, 3.4.2, & 5.4-5.5 Manual 28, Section 9)	The increased costs of energy due to transmission losses represented in the PJM network model are assessed to market participants based on the loss component of LMPs, and the revenues collected are allocated to market participants' serving load and delivering PJM exports (that pay for PJM transmission service). Day-ahead Charges: Day-ahead Transmission Loss charges are calculated hourly as the sum of day-ahead withdrawal loss values (i.e., all cleared day-ahead demand/decrement/load response bids and sale transactions priced at the applicable locations' day-ahead ogeneration/increment offers and purchase transactions priced at the applicable locations' day-ahead loss prices). Explicit loss charges for day-ahead energy transactions are calculated hourly and equal the scheduled MWh times the difference between day-ahead is mark and source loss prices. These charges are assessed to the buyer (or point-to-point transmission customer, if applicable). Balancing Charges: Balancing Loss charges are calculated for each five minute interval as balancing withdrawal loss values (i.e., all deviations between demand/decrement/load response bids and sale transactions cleared day-ahead versus real-time lost prices) minus balancing injection loss values (i.e., all deviations between demand/decrement/load response bids and sale transactions cleared day-ahead energy position data), the energy position and purchase transactions priced at one-twelfth of the applicable locations' real-time loss prices) minus balancing injection loss values (i.e., all deviations between demand/decrement/load response bids and sale transactions. Charges may be positive or negative depending on the direction of the real-time deviation from the day-ahead energy position ata), the energy position and purchase transactions priced at one-twelfth of the applicable locations' real-time loss prices). In situations where five minute interval energy positions and deviations. Charges may be positive or negative depending on the direction of the real-time	Transmission Loss Charge Summary Explicit Loss Charges Energy Market and Congestion Loss Charge Details Transmission Loss Credit Summary Congestion and Loss Load Recon Charges Transmission Loss Load Recon Credit Summary
Inadvertent Interchange (OpAgr Schedule 1-3.7 Manual 28, Section 18)	allocation) on a two-month billing lag. <u>Charges:</u> PJM hourly total inadvertent interchange charges (+/-) priced at the load weighted-average PJM real-time LMP and allocated based on real-time load ratio shares. <u>Reconciliation Charges:</u> Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the PJM-wide real-time system energy price on a two-month billing lag.	Inadvertent Interchange Charge Summary Energy & Inadvertent Load Recon Charge Summary
Load Response (OpAgr, just prior to Schedule 2 Manual 28, Section 11)	Credits: Day-ahead and real-time economic and real-time pre-emergency and emergency load response credits are provided to CSPs equal to the reduced MWs times LMP. In situations where five- minute interval data has not been provided, the Load Response energy value provided will be scaled or flat-profiled across each of the five minute intervals of the provided period in order to obtain five minute interval energy positions. Those MW positions are then multiplied by one-twelfth of the applicable interval real-time zonal or aggregate LMP to determine credits, which are then summed for the hour. Charges: For day-ahead and real-time economic load response, the charges are allocated to all real-time load where load is served in a zone that has benefitted from load reductions plus real-time exports. For pre-emergency and emergency load response, all balancing energy market participants are allocated charges using the same method as for PJM emergency energy purchases.	Load Response Summary Real-time Load Response Credits Econ Load Response Zonal Charge Allocations Emergency Load Response Allocation Summary Emergency Load Response Allocation Credits

Meter Error Correction (OpAgr Schedule 1-3.6 Manual 28, Section 12)	Charges: Monthly charges (+/-) to PJM fully-metered EDCs and generators for corrections to metered energy values, with PJM Mid-Atlantic 500kV corrections allocated based on real-time load ratio shares, using the applicable generator or PJM load weighted-average real-time LMP for the month. Meter correction charges for any external PJM tie-line corrections are allocated to all LSEs based on real-time load (without losses) ratio shares. Effective February 2010, EDCs may elect to have their charges (+/-) directly allocated by PJM to LSEs in their zone based on load ratio shares if all LSEs in the EDC territory concur.	Meter Correction Charge Summary Meter Correction Allocation Charge Summary
Emergency Energy (OpAgr Schedules 1- 3.2.6, 3.3.4, 3.5.1, & 4.3 Manual 28, Section 10)	PJM emergency energy transactions (made on behalf of market participants) are priced at 150% of LMP at the appropriate PJM interface in accordance with the PJM agreements with adjacent control areas. <u>Charges</u> : For each applicable five-minute interval, net costs of emergency energy purchased by PJM are allocated to real-time deviations from day-ahead net interchange that create a shorter real-time position, except for purchases for external control areas' MinGen Emergencies where costs are allocated to deviations that create a longer position. <u>Credits</u> : For each applicable five-minute interval, net revenues from emergency energy sold by PJM are allocated to real-time deviations from day-ahead net interchange that create a shorter real-time position and to any curtailed exports, except for PJM MinGen Emergency sales where revenues are allocated to deviations that create a longer position.	Emergency Energy Charge and Credit Allocation Summary Emergency Energy Transactions
PJM Scheduling, System Control & Dispatch Service (OATT Schedules 1 and 9-1 through 9-4 Manual 27, Section 2)	Charges: PJM's monthly operating expenses for the following service categories are allocated to PJM members on an unbundled basis. PJM transitioned from a stated rate to a formula rate mechanism on January 1, 2022. All amounts held in reserve as of December 31, 2021 will be refunded within the first calendar quarter of 2022. These refunds will use the applicable billing determinants per each Schedule. Control Area Administration – Monthly formula rate is charged to transmission customers based on their usage of the PJM transmission system. Monthly transmission use (in MWh) includes network customers' real-time load and point-to-point customers' real-time energy use. Financial Transmission Rights Administration – Component 1: Monthly formula rate is charged to FTR holders based on FTR MW and hours each FTR is in effect (regardless of congested hours and dollar value of FTR). Component 2: Monthly formula rate is charged to FTR Auction participants based on the number of hours associated with each FTR obligation bid submitted in an FTR Auction (this rate is multiplied by 5 for FTR options). Market Support – Component 1: Monthly formula rate is charged to their accepted increment offers, decrement bids, and up-to congestion bids. Component 2: Monthly formula rate is charged for each energy bid/offer segment price/quantity pair submitted, including those submitted during the rebidding period. Capacity Resource and Obligation Management – Monthly formula rate is charged to LSEs based on their daily unforced capacity obligations and to capacity resource owners based on their daily unforced capacity (including FRRs). Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are rec	Schedule 9 and 10 Charge Details Schedule 9 & 10 Summary Schedule 9 & 10 Daily Usage Details Schedule 9 & 10 Load Recon Charge Summary
PJM Settlement, Inc. (OATT Schedule 9- PJMSettlement Manual 27, Section 2)	<i>Charges:</i> PJM transitioned from a stated rate to a formula rate mechanism on January 1, 2022. All amounts held in reserve as of December 31, 2021 will be refunded within the first calendar quarter of 2022. A monthly formula rate is charged to each user of PJM Settlement Services through two components. Component 1: 68% of the PJMSettlement Rate allocated on a per- invoice basis. Component 2: 32% of the PJMSettlement Rate allocated as a sum of the determinants used in Schedules 9-1 through 9-5.	Schedule 9 and 10 Charge Details Schedule 9 & 10 Summary Schedule 9 & 10 Daily Usage Details
MMU Funding (OATT Schedule 9-MMU Manual 27, Section 2)	Charges: Component 1: 2022 rate of \$0.0069/MWh charged to transmission customers based on their network load and exports, to providers of generation and imports, and to day-ahead energy market participants based on their accepted increment offers, decrement bids, and up-to congestion bids. Component 2: 2022 rate of \$0.0042 is charged for each energy bid/offer segment price/quantity pair submitted, including those submitted during the rebidding period. Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the MMU rate on a two-month billing lag.	Schedule 9 and 10 Charge Details Schedule 9 & 10 Summary Schedule 9 & 10 Daily Usage Details Schedule 9 & 10 Load Recon Charge Summary

Billing Line Item	Description	Reports
FERC Annual Recovery (OATT Schedule 9-FERC Manual 27, Section 2)	ecovery system. Monthly transmission use includes network customers' real-time load and point-to-point transmission customers' real-time energy transactions.	
Organization of PJM States, Inc.	<u>Charges</u> : 2023 rate of \$0.0011/MWh charged to transmission customers based on their usage of the PJM transmission system. Monthly transmission use includes network customers' real-time load and point-to-point transmission customers' real-	Charge Summary Schedule 9 and 10 Charge Details
(OPSI) Funding (OATT Schedule 9-OPSI Manual 27, Section 2)	time energy transactions. <u>Reconciliation Charges</u> : Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the OPSI rate on a two-month billing lag.	Schedule 9 & 10 Summary Schedule 9 & 10 Daily Usage Details
		Schedule 9 & 10 Load Recon Charge Summary
Consumer Advocates of PJM States, Inc. (CAPS) Funding (OATT Schedule 9-CAPS Manual 27, Section 2)	<u>Charges</u> : 2023 rate of \$0.0006/MWh charged to transmission customers based on their usage of the PJM transmission system. Monthly transmission use includes network customers' real-time load (including losses) and point-to-point transmission customers' real-time energy transactions. <u>Reconciliation Charges</u> : Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the CAPS rate on a two-month billing lag.	Schedule 9 and 10 Charge Details Schedule 9 & 10 Summary Schedule 9 & 10 Daily Usage Details
		Schedule 9 & 10 Load Recon Charge Summary
North American Electric Reliability Corp. (NERC)	Charges: 2023 rate of \$0.0187/MWh charged to transmission customers based on their energy delivered to load in the PJM Region, excluding load in the Dominion and East Kentucky Power Cooperative zones. Each calendar year, any over or under collection of NERC's actual costs are trued up in that year's December billing cycle.	Schedule 9 and 10 Charge Details Schedule 9 & 10 Summary
(OATT Schedule 10- NERC Manual 27, Section 2)	<u>Reconciliation Charges</u> : Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the NERC rate on a two-month billing lag.	Schedule 9 & 10 Daily Usage Details
		Schedule 9 & 10 Load Recon Charge Summary
Reliability First Corp. (RFC)	Charges: 2023 rate of \$0.0269/MWh charged to transmission customers based on their energy delivered to load in the PJM Region, excluding load in the Dominion and East Kentucky Power Cooperative zones. Each calendar year, any over or under collection of RFC's actual costs are trued up in that year's December billing cycle.	Schedule 9 and 10 Charge Details
(OATT Schedule 10-RFC Manual 27, Section 2)	Reconciliation Charges: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the RFC rate on a two-month billing lag.	Schedule 9 & 10 Summary Schedule 9 & 10 Daily Usage Details
		Schedule 9 & 10 Load Recon Charge Summary

Billing Line Item	Description	Reports
Transmission Owner Scheduling, System Control and Dispatch Service (OATT Schedule 1A Manual 27, Section 2)	Sched 1A Charge Summary Sched 1A Credit Summary Sched 1A Load Recon Charge Summary	
Reactive Supply and Voltage Control from Generation and Other Sources Service (OATT Schedule 2 Manual 27, Section 3)	two-month billing lag. All Transmission Customers purchase this from PJM to maintain acceptable transmission voltages. <u>Credits</u> : Monthly credits provided to generation and transmission owners with FERC-approved reactive revenue requirements. <u>Charges</u> : Monthly pool-wide reactive revenue requirements allocated as charges to point-to-point customers (and to network customers in transmission zones with no reactive revenue requirements) based on their monthly peak usage of the PJM transmission system. Monthly peak usage equals the total hourly amounts of transmission zone not recovered from point-to-point customers are allocated to the network customers serving load in that zone based on their monthly network service peak load contributions.	Reactive Charge Summary
Regulation and Frequency Response Service (OpAgr Schedules 1- 3.2.2, 3.2.2A, 3.3.2, & 3.3.2A and OATT Schedule 3 Manual 28, Section 4)	PJM conducts a regulation market to continuously balance generation resources with PJM load and to maintain Interconnection frequency within acceptable limits. <u>Credits</u> : Generators and demand resources receive five minute interval credits for pool- and self-scheduled regulation (with consideration of the resource's performance) priced at one-twelfth of the regulation market capability clearing price. Generators and demand resources receive five minute interval credits for pool- and self-scheduled regulation (with consideration of the resource's performance) priced at one-twelfth of the regulation market capability clearing price. Generators and demand resources receive five minute interval credits for pool- and self-scheduled regulation (with consideration of the resource's performance and the ratio between the requested mileage for the regulation dispatch signal assigned to the resource and the mileage for the traditional regulation signal (mileage ratio)) priced at one-twelfth of the regulation market performance clearing prices. Additional credits provided to pool-scheduled regulating resources for any unrecovered portion of regulation offer plus opportunity cost. <u>Charges</u> : PJM LSEs have an hourly regulation obligation equal to their real-time load (without losses) ratio share of regulation supplied excluding mileage (adjusted for any bilateral regulation transactions). Hourly charges are allocated based on obligation ratio shares times the sum of total PJM Regulation credits awarded for each hour of the Operating Day In addition, any lost opportunity or other unrecovered cost payments that PJM provides to regulation supplies are allocated to regulation market purchasers based on the amount of Regulation they purchased from the market in that hour. <u>Reconciliation Charges</u> : Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using a \$//WWh billing determinant calculated as the total regulation market charges divided by the total MWh	Regulation Summary Regulation Credits Load Response Regulation Credits Reg Load Recon Charge Summary
Synchronized Reserve (OpAgr Schedules 1- 3.2.3A & 3.3.5 and OATT Schedule 5 Manual 28, Section 6)	PJM conducts synchronized reserve markets to ensure the capability of synchronized generation and economic load response that can be converted fully into energy within ten minutes. <u>Day-ahead Credits</u> : Day-ahead Synchronized Reserve Market credits are paid hourly to pool-scheduled or self-scheduled resources that are assigned synchronized reserve MWs within the day-ahead market by multiplying the hourly day-ahead synchronized reserve MWs within the day-ahead market by multiplying the hourly day-ahead synchronized reserve MWs assigned by the day-ahead synchronized reserve market clearing price. <u>Balancing Credits</u> : Balancing Synchronized Reserve Market credits for pool and self-scheduled resources are calculated for each five minute interval and equal the difference between the capped real-time synchronized reserve assignment and the day-ahead synchronized reserve assignment multiplied by one-twelfth of the applicable reserve zone's real-time synchronized reserve assignment during a synchronized reserve event are assessed a shortfall charge equal to the product of the applicable real-time SRMCP and the lesser of the amount of the MW shortfall during the event or the capped real-time synchronized reserve assignment MW for all five-minute intervals the resource was assigned or self-scheduled for real-time synchronized reserve assignment	Day-ahead Synchronized Reserve Credits Balancing Synchronized Reserve Credits Market Revenue Neutrality Increased Revenue Details Market Revenue Neutrality Offset Details Reserve Market Summary

	not recovered via the total day-ahead and balancing Synchronized Reserve Market Clearing Price revenues less any shortfall charges. If applicable, additional profits from other reserve markets and/or the energy market (Market Revenue Neutrality Offset) or the cost attributable to a reserve market buy back (Opportunity Cost Credit Owed) for the same five-minute interval are also included as additional offsets in the lost opportunity cost credit determination. <u>Charges</u> : PJM LSEs that are not part of an agreement to share reserves with external entities have an hourly synchronized reserve obligation equal to their real-time load (without losses) ratio share of their applicable reserve zone or active sub-zone total assignments (adjusted for any bilateral synchronized reserve transactions). For each hour of the Operating Day, Synchronized Reserve Market Clearing Price charges are calculated for each applicable reserve zone or active sub-zone based on the adjusted obligation ratio shares times the sum of total PJM day-ahead and balancing Synchronized Reserve market clearing price credits adjusted for shortfall charges. In addition, Synchronized Reserve lost opportunity cost charges are calculated each hour for each applicable reserve zone or active sub-zone based on the adjusted for shortfall charges. In addition, Synchronized Reserve lost opportunity cost charges are calculated each hour for each applicable reserve zone or active sub-zone by allocating the total PJM synchronized reserve lost opportunity cost credits for the hour to market participants that do not meet their hourly obligation, in proportion to their synchronized reserve purchases for the hour. Resources that fail to provide assigned synchronized reserve during a synchronized reserve event also incur a retroactive penalty charge. This charge is determined by multiplying the retroactive penalty MWs times the RT SRMCP for all real-time settlement intervals the resource was assigned for self-scheduled to provide synchronized reserve for a duration imm	Charges Synchronized Reserve Retroactive Penalty Charges Synchronized Reserve Load Recon Charge Summary
Non-Synchronized Reserve (OpAgr Schedules 1- 3.2.3A.001 & 3.3.5A Manual 28, Section 7)	PJM conducts non-synchronized reserve markets to ensure the capability of generation off-line and available to provide energy within ten minutes as necessary to meet the primary reserve requirement. <u>Day-ahead Credits</u> : Day-ahead Non-Synchronized Reserve Market credits are paid hourly to resources that are assigned non-synchronized reserve Market by multiplying the hourly day-ahead non-synchronized reserve Market clearing price. <u>Balancing Credits</u> : Balancing Non-Synchronized Reserve Market credits for pool and self-scheduled resources are calculated for each five minute interval and equal the difference between the real-time non-synchronized reserve assignment multiplied by one-twelfth of the applicable non-synchronized reserve clearing price. Additional lost opportunity cost credits are provided to pool-scheduled non-synchronized reserve resources for each five minute interval for any portion of non-synchronized reserve opticable, additional profits from other reserve market clearing price. Additional profits from other reserve market clearing price revenues. If applicable, additional profits from other reserve markets and/or the energy market (Market Revenue Neutrality Offset) or the cost attributable to a reserve market by back (Opportunity Cost Credit Owed) for the same five-minute interval are also included as additional offsets to the lost opportunity cost credit determination. <u>Charges</u> : PJM LSEs that are not part of an agreement to share reserves with external entities have an hourly non-synchronized reserve eards to sub-zone total non-synchronized reserve subplied (adjusted for any bilateral non-synchronized reserve transactions). For each hour of the Operating Day, Non-Synchronized Reserve Market Clearing price charges are calculated for each applicable reserve market zone and active sub-zone based on the obligation ratio share times the sum of total day-ahead and balancing PJM Non-Synchronized Reserve market clearing price credits. In addition, Non-Synchronized Reserve lost opportunity cost ch	Day-ahead Non-Synchronized Reserve Credits Balancing Non-Synchronized Reserve Credits Reserve Market Summary Market Revenue Neutrality Increased Revenue Details Non-Synchronized Reserve Charges Non-Synchronized Reserve Load Recon Charge Summary

Billing Line Item	Description	Reports
Day-ahead Scheduling Reserve (OpAgr Schedules 1- 3.2.3A.01 and OATT Schedule 6 Manual 28, Section 19)	Effective October 1, 2022, Day-ahead Scheduling Reserve was removed from the PJM market. Reconciliation Charges will conclude in the December 2022 monthly bill. <u>Reconciliation Charges</u> : Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the \$/MWh billing determinant calculated as the total charges divided by the total MWh of PJM real-time load on a two-month billing lag.	Day-ahead Scheduling Reserve Load Recon Charge Summary
Secondary Reserve OpAgr Schedules 1- 3.2.3A.001 Manual 28, Section 19)	PJM conducts secondary reserve markets to ensure the capability of off-line and on-line generation and economic load response available to provide energy with a response between ten minutes and thirty minutes as necessary to meet the 30-minute reserve requirement. <u>Day-ahead Credits</u> : Day-ahead Secondary Reserve Market credits are paid hourly to resources that are assigned secondary reserve MWs within the day-ahead market by multiplying the hourly day-ahead secondary reserve MWs assigned by the day-ahead secondary reserve market clearing price. <u>Balancing Credits</u> : Balancing Secondary Reserve Market credits for pool and self-scheduled resources are calculated for each five minute interval and equal the difference between the capped real-time secondary reserve assignment (including any reductions for shortfall MWs) and the day-ahead secondary reserve assignment multiplied by one-twelfth of the applicable reserve zone' real-time secondary reserve clearing price (SecRMCP). Additional lost opportunity cost credits are provided to pool-scheduled secondary reserve resources for each five minute interval for any portion of secondary reserve opportunity costs not recovered via the total day-ahead and balancing secondary reserve market clearing price revenues. If applicable, additional profits from other reserve markets and/or the energy market (Market Revenue Neutrality Offset) or the cost attributable to a reserve market buy back (Opportunity Cost Credit Owed) for the same five-minute interval are also included as additional offsets to the lost opportunity cost credit determination. <u>Charges</u> : PJM LSEs that are not part of an agreement to share reserves with external entities have an hourly secondary Reserve bulgation equal to their real-time load (without losses) ratio share of their applicable reserve market's zone or active sub-zone total real-time secondary Reserve supplied (adjusted for any bilateral secondary reserve market clearing price credits. In addition, Secondary Reserve lost opportunity cost charges are	Day-ahead Secondary Reserve Credits Balancing Secondary Reserve Credits Secondary Reserve Charges Reserve Market Summary Market Revenue Neutrality Increased Revenue Detail Market Revenue Neutrality Offset Details Secondary Reserve Load Recon Charge Summary

Billing Line Item	Description	Reports
Operating Reserve (OpAgr Schedules 1-3.2.3 & 3.3.3 and OATT Schedule 6 Manual 28, Section 5 and Section 11)	To ensure adequate operating reserve and for spot market support, pool-scheduled generation and demand resources that operate as requested by PJM are guaranteed to fully recover their daily offer amounts. Day-ahead Credits: Daily credits provided to pool-scheduled generators, demand response, and transactions cleared day-ahead for any portion of their offer amount in excess of their scheduled MWh times day-ahead bus LMP. Balancing Credits: Daily credits for specified operating period segments are provided to eligible pool-scheduled generators, demand response, and import transactions in real-time, and will be evaluated on a five minute interval basis for any portion of their offer amount in excess of: (1) scheduled MWh times day-ahead bus LMP; (2) MW deviation from day-ahead schedule times one-twelfth of real-time bus LMP; (3) any day-ahead operating reserve credits; (4) any secondary reserve market revenues in excess of offer plus opportunity, energy use, and startup costs; (6) any non-synchronized reserve market revenues in excess of opportunity, energy use, and startup costs; (6) any non-synchronized reserve market revenues in excess of opportunity costs; (7) any applicable reactive services credits; (a) less any amounts attributed to the Market Revenue Neutrality Offset. Cancellation credits are based on actual costs submitted to PJM Market Settlements. Credits for lost opportunity costs are also evaluated on a five minute interval basis and are provided to generating reserve in the day-ahead market excluding the total cost for resources scheduled to provide Black Start Service, Reactive Services or transfer interface control is allocated based on day-ahead demand, demand response, and decrement bids) plus exports ratio shares. Balancing Charges: Total daily cost of operating reserve in the balancing market related to resources identified as Credits for Deviations is allocated based on regional shares of five minute interval real-time locations. Instructions and (3) cleared demand, demand response, an	Operating Reserve Charge Summary Balancing Operating Reserve Generator Credit Details Operating Reserve Lost Opportunity Cost Credits Operating Reserve Generator Deviations Operating Reserve Generator Deviations – 5 min Operating Reserve Deviation Summary Operating Reserve Deviation Summary – 5 min Operating Reserve Deviation Summary – 5 min Operating Reserve Transaction Credits Balancing Operating Reserves for Load Response Credit Operating Reserve for Load Response Deviation Charge Summary Operating Reserve for Load Response Charge Allocations Regional Balancing Operating Reserve Charge Summary Balancing Operating Reserve Load Recon Charge Summary
Synchronous Condensing	<u>Credits</u> : Daily credits for condensing and energy use costs are calculated on a five minute interval basis and are provided to eligible synchronous condensers dispatched by PJM for purposes other than synchronized reserve, post-contingency, or	Forfeiture Synchronous Condensing Credits
(OpAgr Schedule 1-3.2.3 Manual 28, Section 5)	reactive services. <u>Charges</u> : Total daily cost of synchronous condensing (not for synchronized reserve or reactive services) is allocated based on real-time load (without losses) plus export ratio shares.	Synchronous Condensing Charge Summary
	<u>Reconciliation Charges</u>: Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using a \$/MWh billing determinant calculated as the total charges divided by the total MWh of PJM real-time load plus exports on a two-month billing lag.	Synchronous Condensing Load Recon Charge Summary

Billing Line Item	Description	Reports
Reactive Services (OpAgr Schedule 1-	Generating resources whose output is altered by PJM for the purpose of maintaining reactive reliability are guaranteed to fully recover their daily offer amounts or to be compensated for their lost opportunity costs.	Reactive Services Credits

3.2.3B Manual 28, Section 5)	<u>Credits</u> : Daily credits are calculated on a five minute interval basis for each eligible generator in real-time and equal the operating reserve credits for generation increased, or equal the lost opportunity costs for generation reduced or instructed to	Synchronous Condensing Credits
	condense, to provide reactive services. <u>Charges</u> : Total daily cost of reactive services and the total day-ahead Operating Reserve credits for resources scheduled to provide Reactive Services or transfer interface control is allocated separately for each PJM transmission zone based on real- time load (without losses) ratio shares in the applicable transmission zone.	Reactive Services Charge Summary
	<u>Reconciliation Charges</u> : Retail load schedules with reconciliation data (in kWh) provided by the applicable EDC are reconciled on an hourly basis using the applicable zone's \$/MWh billing determinant calculated as the total applicable zone's charges divided by the total MWh of real-time load served in the that zone on a two-month billing lag.	Reactive Svcs Load Recon Charge Summary
Black Start Service (OATT Schedule 6A Manual 27, Section 7)	All Transmission Customers purchase this from PJM to ensure the reliable restoration following a shut down of the PJM transmission system. <u>Credits</u> : Monthly credits provided to generators with approved black start revenue requirements. <u>Charges</u> : Monthly pool-wide black start revenue requirements and day-ahead and balancing Operating Reserve credits associated with scheduling resources for black start service or testing allocated as charges to point-to-point customers based on their monthly peak usage of the PJM transmission system. Monthly peak usage of the PJM transmission system. Monthly peak usage equals the total hourly amounts of transmission capacity reserved, and not curtailed by PJM, divided by 24. The remaining black start revenue requirements nominated by each zonal Transmission Owner and day-ahead and balancing Operating Reserve credits associated with scheduling resources for black start service or testing not recovered from point-to-point customers are allocated to the network customers serving load in that transmission zone based on their monthly network service peak load contributions.	Black Start Charge Summary
Fuel Cost Policy Penalty (OpAgr Schedule 2, Section 5 Manual 15, Section 2)	Market Sellers are required to have a PJM-approved Fuel Cost Policy for energy market units submitting cost-based offers. A Fuel Cost Policy Penalty is assessed if PJM determines and the Market Monitoring Unit (MMU) agrees or the MMU determines and PJM agrees that a cost-based offer is not compliant with the PJM-approved Fuel Cost Policy or other applicable cost-based offer guidelines in Schedule 2 of Operating Agreement. Charges: An hourly charge is assessed to the participant that applies to all hours that the Market Seller does not have a PJM approved Fuel Cost Policy or a cost offer not in accordance with its Fuel Cost Policy. Credits: Fuel Cost Policy Penalties are allocated as credits based on real-time load ratio share in the hour for which the Fuel Cost Policy Penalty has been assessed.	Fuel Cost Policy Penalty Charge Details Fuel Cost Policy Penalty Credit Allocation Summary
Financial Transmission Rights Auction (OpAgr Schedule 1-7.3.8 Manual 28, Section 16)	PJM conducts annual and monthly FTR auctions for the transaction of FTRs at market clearing prices. Net auction revenues are allocated daily to ARR holders and then FTR holders as excess congestion revenues. <u>Charges</u> : Monthly auction charges are calculated for each market participant for each FTR (in 0.1 MW increments) purchased in the annual or monthly auctions based on the FTR's market price. <u>Credits</u> : Monthly auction credits are calculated for each market participant for each FTR (in 0.1 MW increments) sold in the annual or monthly auctions based on the FTR's market price.	FTR Auction Charges and Credits
Auction Revenue Rights (OpAgr Schedule 1-7.4 Manual 28, Section 17)	Auction Revenue Rights (ARR) are entitlements to receive an allocation of net FTR auction revenues that are allocated annually and reassigned daily to network and firm point-to-point transmission customers. <u>Credits</u> : Annual FTR auction net revenues are allocated as daily credits based on ARR target allocations, which equal the ARR MW (divided by the number of auction rounds) times the difference between auction clearing prices at the ARR sink and source. Any ARR target deficiencies may be proportionately eliminated by any monthly FTR auction net revenues and excess congestion revenues in that planning period.	ARR Target Credits

Billing Line Item	Description	Reports
RPM Auction (OATT Att. DD, Section 5.14 Manual 18, Section 9.3)	<u>Credits</u> : Each sell offer for generation, demand, or qualified transmission upgrade resource MW cleared in an RPM Auction is paid the applicable resource's clearing price in the applicable auction. Resource make-whole payments are also provided to sell offers that clear less than the minimum amount specified. Sell offers are adjusted by approved unit-specific transactions for cleared capacity. <u>Charges</u> : Each buy bid MW cleared in an incremental auction adjusted by cleared buy bid transactions pays the applicable LDA's resource clearing price. Resource make-whole payments for an incremental auction are also allocated as charges to Market Buyers based on the MW shares of cleared buy bids adjusted by cleared buy bid transactions for the incremental auction. Resource make-whole payments for an incremental auction of the resource make-whole payment for an incremental auction of the resource make-whole payment for an incremental auction that would be based on PJM cleared buy bids are allocated as charges to LSEs in the applicable LDA via the Final Zonal Capacity Price.	RPM Auction Charges and Credits RPM Auction Make-Whole Charge Summary RPM Auction Charges RPM Auction Credits
Locational Reliability (OATT Att. DD, Section 5.14 Manual 18, Section 9.2)	<u>Charges</u> : Each LSE is charged for their daily unforced capacity obligation priced at the applicable zonal capacity price for the delivery year.	Locational Reliability Charge Summary
Capacity Transfer Rights (OATT Att. DD, Section 5.15 Manual 18, Section 9.3)	To recognize the value of import capability to constrained LDAs, Capacity Transfer Rights (CTRs) are allocated to LSEs in those LDAs to offset their higher load charges. <u>Credits</u> : CTRs equal to the unforced capacity imported into the LDA (less any incremental CTRs) are allocated to LSEs in that LDA based on daily unforced capacity obligations. These MW allocations are priced at the difference between the LDA's clearing price and the unconstrained price.	CTR Credit Summary
Incremental Capacity Transfer Rights (OATT Att. DD, Section 5.16, OATT Schedule 12A (b) Manual 18, Section 9.3)	Incremental CTRs are provided to fund for transmission upgrades (not including qualifying transmission upgrades cleared in the Base Residual Auction) that increase import capability into a constrained LDA. Incremental CTRs for Incremental-Rights Eligible Required Transmission Enhancements are determined and allocated as defined in Schedule 12A of the Tariff. <u>Credits</u> : Incremental CTR MW are priced at the sum of: 1) locational price adder of the sink LDA minus that of the Source LDA from the Base Residual Auction; and 2) locational price adder of the sink LDA minus that of the source LDA from the Second Incremental Auction multiplied by the increase in unforced capacity imported into the sink LDA. Incremental Auction compared to the Base Residual Auction, divided by the base unforced capacity imported into the sink LDA. Incremental CTR credits determined for an Incremental-Rights Eligible Required Transmission Enhancement are allocated to the responsible customers that are assigned cost responsibility for the transmission enhancements in accordance with the cost allocations in the appendix to Schedule 12. Responsible customers include Network customers. Network customers serving load in a responsible zone receive credits in proportion to their network service peak load share in that zone.	Incremental CTR Credits Incremental CTR for Required Transmission Enhancemen Credits
Auction Specific MW Transaction (OATT Att. DD, Section 5.14 Manual 18, Section 9.3)	Bilateral capacity transactions for multi-day durations are settled in the PJM capacity markets. <u>Charges:</u> Sellers are charged for the transaction MW times the transaction's pricing point for each day for which the transaction is in effect. <u>Credits:</u> Buyers are credited for the transaction MW times the transaction's pricing point for each day for which the transaction is in effect.	Auction Specific MW Transaction Charges and Credits
Billing Line Item	Description	Reports
Load Management Compliance Penalty (OATT Att. DD, Section 11 Manual 18, Section 9.1)	Sellers with zonal aggregate committed Demand Resources that cannot demonstrate hourly real-time performance pay a penalty charge which is allocated to Demand Resource providers and, potentially, LSEs. This billing is performed on a three-month lag. <u>Charges:</u> For each non-compliant reduction event, under-compliance MW (on an unforced capacity basis) are charged at the lesser of one divided by the actual number of events during the year or 0.50 of the Weighted Annual Revenue Rate. The Weighted Annual Revenue Rate equals the average rate for all cleared Demand Resources, weighted by the MWs cleared at each price, multiplied by the number of days in the Delivery Year. The total Compliance Penalty Charge for the Delivery Year is capped at the annual revenue received for such resources. <u>Credits:</u> Revenues from events in a given month are allocated to Demand Resources that reduced in excess of their commitment. Any resource credit by event is capped at their excess MW times 1/5 th of their Annual Revenue Rate. Revenues above that cap are allocated to LSEs based on their average daily unforced capacity obligations during the month of the event.	Load Management Compliance Penalty Charges Load Management Compliance Penalty Credits Load Management Compliance Penalty Residual Credits

Capacity Resource Deficiency (OATT Att. DD, Section 8 Manual 18, Section 9.1)	Capacity resources that are unable or unavailable to deliver unforced capacity, and do not obtain replacement unforced capacity to satisfy their cleared sell offer pay this charge which is allocated to eligible LSEs. <u>Charges:</u> Each capacity resource's deficiency MW for each day it is deficient pays the daily deficiency rate. <u>Credits:</u> Total revenues each day are allocated to LSEs that paid a Locational Reliability charge that day based on their daily unforced capacity obligations.	Non-Compliance Charge Summary Deficiency Credit Summary
Generation Resource Rating Test Failure (OATT Att. DD, Section 7 Manual 18, Section 9.1)	Generation capacity resources that fail a capacity test pay this charge which is allocated to eligible LSEs. This billing is performed in the June billing cycle after the conclusion of the delivery year. <u>Charges:</u> Each capacity resource's installed capacity minus its highest rating in the relevant testing period (on an unforced capacity basis) pays a daily deficiency rate which is the weighted average capacity resource clearing price plus the higher of: 1) 0.2 times the weighted average capacity resource clearing price or 2) \$20/MW-day; <u>Credits:</u> Total revenues each day are allocated to LSEs that paid a Locational Reliability charge that day based on their daily unforced capacity obligations.	Non-Compliance Charge Summary Deficiency Credit Summary
Qualifying Transmission Upgrade Compliance Penalty (OATT Att. DD, Section 12 Manual 18, Section 9.1)	Cleared qualifying transmission upgrades delayed in coming into service for the applicable delivery year pay a daily penalty charge which is allocated to eligible LSEs. <u>Charges</u> : Capacity market sellers with import capability cleared in a base residual auction based on a qualifying transmission upgrade are charged each day that the upgrade is not in service during the applicable delivery year and the seller does not obtain replacement capacity resources. The import capability MW are charged at the higher of the following rates: 1) two times the locational price adder of the applicable LDA; or 2) the Net CONE less the clearing price in the applicable LDA. <u>Credits</u> : Total revenues each day are allocated to LSEs that paid a Locational Reliability charge that day based on their daily unforced capacity obligations.	Non-Compliance Charge Summary Deficiency Credit Summary
Peak Season Maintenance Compliance Penalty (OATT Att. DD, Section 9 Manual 18, Section 9.1)	Each generation capacity resource must have available unforced capacity during the peak season to satisfy its cleared MW. This billing is performed in the June billing cycle after the conclusion of the delivery year. <u>Charges:</u> Each generation capacity resource's cleared MW for each day of the peak season that is out-of-service on a maintenance outage not authorized by PJM pays the daily deficiency rate times (1-EFORd). <u>Credits:</u> Total revenues each day are allocated to LSEs that paid a Locational Reliability charge that day based on their daily unforced capacity obligations.	Non-Compliance Charge Summary Deficiency Credit Summary
Peak-Hour Period Availability (OATT Att. DD, Section 10 Manual 18, Section 9.1)	To ensure capacity resource availability during critical peak hours, incentives are provided to resources that exceed expected availability and penalties are assessed to those who fall short. This billing is performed in the August billing cycle after the conclusion of the delivery year. <u>Charges:</u> Net peak period capacity shortfall MW are charged at the weighted average resource clearing price for the applicable LDA (except for FRR capacity that are charged at the LDA's Net CONE). <u>Credits:</u> Total revenues for the delivery year for each LDA are allocated to resources with peak period excesses based on their excess MW. Since these allocations are capped, any remaining credits are allocated to LSEs that paid a Locational Reliability charge based on their daily unforced capacity obligations.	
Billing Line Item Load Management Test Failure (OATT Att. DD, Section 11A Manual 18, Section 9.1) PRD Commitment Compliance Penalty (RAA Schedule 6.1,	Description Sellers with committed Demand Resources that fail performance tests pay a penalty charge which is allocated to eligible LSEs. This billing is performed in the August monthly bill issued in September after the conclusion of the Delivery Year. Charges: Net capability testing shortfall MW are charged daily at the weighted annual revenue rate for the applicable zone plus the greater of 0.2 times that weighted annual revenue rate or \$20/MW-day. Credits: Total revenues each day are allocated to LSEs that paid a Locational Reliability charge that day based on their daily unforced capacity obligations. A PRD Provider with a positive daily commitment compliance shortfall in a sub-zone/zone for RPM or FRR will be assessed a Daily PRD Commitment compliance Penalty. Charges: Commitment compliance shortfall MW are charged daily at the Delivery Year Forecast Pool Requirement times the PRD Commitment Compliance Penalty. Charges: Commitment compliance shortfall MW are charged daily at the Delivery Year Forecast Pool Requirement times the PRD Commitment Compliance Penalty Rate.	Reports Load Management Test Failure Charge Summary Load Management Test Failure Credit Summary PRD Commitment Compliance Penalty Charges PRD Commitment Compliance Penalty Credits
Section I Manual 18, Section 9.4)	delivery year based on their daily revenues from Capacity Market Clearing Prices in such auctions, net of any daily compliance charges incurred.	

RTO Start-up Cost Recovery (OATT Attachments H-13 and H-14)	All network customers in the AEP Zone pay AEP (ended May 2020).	RTO Startup Cost Recovery Charge Summary
Unscheduled Transmission Service (OpAgr Sch1-5.3a Manual 28, Section 14)	<u>Charges</u> : Hourly charges to NYISO for any costs incurred due to unscheduled use of the PJM transmission system in accordance with the PJM-NYPP Interconnection Agreement Schedule 6.02. <u>Credits</u> : Total hourly charges are allocated as credits with monthly excess congestion credits.	Hourly Transmission Congestion Credits
Ramapo Phase Angle Regulators (OpAgr Schedule 1-5.3b Manual 28, Section 15)	<u>Credits</u> : PJM's share of monthly carrying charges for Ramapo Phase Angle Regulators (PARs) are credited to NYISO in accordance with the NYPP-PJM PARs Facilities Agreement. <u>Charges</u> : Charges are allocated to PJM Mid-Atlantic transmission owners based on transmission revenue requirement shares.	Ramapo PAR Charge Summary
Generation Deactivation (OATT Part V)	Revenues are collected for generators requesting retirement where PJM studies find reliability issues that require the generation to continue operating. Cost allocations to zonal load and firm withdrawal rights are determined by PJM based on the beneficiaries. These responsible customers pay the generation owners a share of the Deactivation Avoidable Cost Rate or the FERC-approved Cost of Service Recovery Rate. <u>Charges</u> : Charges are being collected for NRG Power Marketing, LLC resource Indian River Unit 4 based on a Cost of Service Recover Rate for dates June 1, 2022 through December 31, 2026. The monthly charges are allocated on a one-month lag. Based on PJM's assessment of the contribution to the need for, and benefits expected to be derived from, the facilities, the zonal percentage cost allocation is 100% to DPL.	Generation Deactivation Charge Summary Generation Deactivation Refund Charge Summary
Deferred Tax Adjustment (OATT Attachments H-7B, H-8A and H-17C)	<u>Charges:</u> Each Network Customer that serves one or more end-use customers taking distribution service from PPL Electric Utilities Corporation, Duquesne Light Company, or PECO Energy Company under its applicable retail tariff on file with the Pennsylvania Public Utility Commission ("PPL Electric Distribution Customers", "Duquesne Electric Distribution Customers", and/or "PECO Energy Company Distribution Customers") shall pay a Monthly Deferred Tax Adjustment Charge. This charge permits PPL Electric, Duquesne Light and PECO Energy Company to recover a deferred income tax liability that is currently unfunded due to a Pennsylvania Public Utility decision to flow-through to customers certain income tax benefits.	Deferred Tax Adjustment Charge Summary

KyPSC Case No. 2024-00354 Attachment JDS-3 Page 1 of 3

15 /	01142050	FAC	-	Des Der				Done	D D
ID#	CHARGES	FAC	PSM	Base Rates	ID #	CREDITS	FAC	PSM	Base Ra
Transmission		-			-				
	erest on Past Due Charges	_		X	0400	Natural lateration Transmission Consist			v
1100 Network Integration	Transmission Service	_		X		Network Integration Transmission Service Network Integration Transmission Service (exempt)			<u>x</u>
1102 INetwork Integration 1103 Underground Transi		_		X		Underground Transmission Service (exempt)			×
	Transmission Service Offset	-		x		Network Integration Transmission Service Offset			<u>x</u>
1104 Network Integration				^		Non-Zone Network Integration Transmission Service			<u>x</u>
1108 Transmission Enhar	ncement			х		Transmission Enhancement			X
1109 MTEP Project Cost				x		MTEP Project Cost Recovery			X
1110 Direct Assignment F				X		Direct Assignment Facilities			X
	ncement Settlement (EL05-121-009)			Х					
1120 Other Supporting Fa	acilities			Х	2120	Other Supporting Facilities			Х
1130 Firm Point-to-Point	Transmission Service			Х		Firm Point-to-Point Transmission Service			Х
						Internal Firm Point-to-Point Transmission Service			Х
	Transmission Service Resale			Х		Firm Point-to-Point Transmission Service Resale			Х
	Released Transmission Service (Firm)			Х		Neptune Voluntary Released Transmission Service (Firm)			X
	Released Transmission Service (Firm)			X		Hudson Voluntary Released Transmission Service (Firm)			X
	eleased Transmission Service (Firm)			X		Linden Voluntary Released Transmission Service (Firm)			X
1140 Non-Firm Point-to-P	Point Transmission Service			X		Non-Firm Point-to-Point Transmission Service		\vdash	X
						Internal Non-Firm Point-to-Point Transmission Service			Х
	Point Transmission Service Resale			х		Non-Firm Point-to-Point Transmission Service Resale			Х
	Released Transmission Service (Non-Firm)			Х		Neptune Voluntary Released Transmission Service (Non-Firm)			Х
1146 Neptune Default Re	eleased Transmission Service (Non-Firm)			X	2146	Neptune Default Released Transmission Service (Non-Firm)			Х
1147 Neptune Unschedul	led Usage Billing Allocation			Х					
1155 Linden Voluntary Re	eleased Transmission Service (Non-Firm)			Х	2155	Linden Voluntary Released Transmission Service (Non-Firm)			Х
1156 Linden Default Rele	ased Transmission Service (Non-Firm)			Х	2156	Linden Default Released Transmission Service (Non-Firm)			Х
1157 Linden Unscheduled				X					
	Released Transmission Service (Non-Firm)			х	2165	Hudson Voluntary Released Transmission Service (Non-Firm)			Х
	eased Transmission Service (Non-Firm)			X		Hudson Default Released Transmission Service (Non-Firm)			X
	ed Usage Billing Allocation			x	2100				~
Energy		_							
1200 Day-ahead Spot Ma	arket Energy	X	Х						
1205 Balancing Spot Mar	rket Energy	Х	х		2210	Transmission Congestion 3	×	×	
1210 Day-ahead Transmi	ission Congestion	х	х		2211	Day-ahead Transmission Congestion	X		
1215 Balancing Transmis		X	х			Balancing Transmission Congestion	X	X	
1216 Pseudo-Tie Balancii	ing Congestion Refund ²								
					2217	Planning Period Excess Congestion	X	X	
1218 Planning Period Cor	ngestion Uplift	Х	Х		2218	Planning Period Congestion Uplift	X	X	
1220 Day-ahead Transmi	ission Losses	Х	Х		2220	Transmission Losses	X	X	
1225 Balancing Transmis		Х	Х						
1230 Inadvertent Intercha		Х	Х						
1240 Day-Ahead Econom			¥			Day-ahead Economic Load Response		X	
1241 Real-Tim Economic	Load Response 3		x		2241	Real-time Economic Load Response		X	
	esponse Charge Allocation		Х						
	sponse Charge Allocation		Х						
1245 Emergency Load Re			Х		2245	Emergency Load Response		X	
1246 Load Response Tes	st Reduction ²				2246	Load Response Test Reduction ²			
1250 Meter Error Correcti	ion	Х	Х						
1260 Emergency Energy		Х	Х		2260	Emergency Energy	X	X	
Market Administration Co									
	ystem Control and Dispatch Service - Control Area Administration			X					
	ystem Control and Dispatch Service - FTR Administration			X					
	ystem Control and Dispatch Service - Market Support			X					
	ystem Control and Dispatch Service - Capacity Resource/Obligation Mgmt.			X				$ \downarrow \downarrow$	
1313 PJM Settlement, Inc				х					
	Jnit (MMU) Funding			х					
1314 Market Monitoring U				Х					
1315 FERC Annual Charg									
1315 FERC Annual Charge 1316 Organization of PJM	M States, Inc. (OPSI) Funding			Х					
1315 FERC Annual Charge 1316 Organization of PJM	A States, Inc. (OPSI) Funding ctric Reliability Corporation (NERC)								

ID #	CHARGES	FAC	PSM	Base Rates	ID #	CREDITS	FAC	PSM	Base Ra
Ancilla	ry Services	1.7.0	1. 0				1.7.0	1. 0	12400 11
1320	Transmission Owner Scheduling, System Control and Dispatch Service Reactive Supply and Voltage Control from Generation and Other Sources Service			х	2320	Transmission Owner Scheduling, System Control and Dispatch Service			X
1330	Reactive Supply and Voltage Control from Generation and Other Sources Service		X			Reactive Supply and Voltage Control from Generation and Other Sources Service		X	L
	Regulation and Frequency Response Service	X X	X X			Regulation and Frequency Response Service	X		
	Energy Imbalance Service Synchronized Reserve	X	x			Energy Imbalance Service Balancing Synchronized Reserve (Previous name: Synchronized Reserve) ^{4 10}	X		
1360	Synchronized Reserve Secondary Reserve (Replaces BLI 1365 / DA Scheduling Reserve) ²⁶	^	<u> </u>			Balancing Synchronized Reserve (Previous name: Synchronized Reserve) Balancing Secondary Reserve (Previously part of BLI 2365 / DA Scheduling Reserve) ²⁶	- ^	⊢^	───
1361	Secondary Reserve (Replaces BLI 1365 / DA Scheduling Reserve)		x			Balancing Secondary Reserve (Previously part of BLI 2365 / DA Scheduling Reserve) 5 10 Balancing Non-Synchronized Reserve (Previous name: Non-Synchronized Reserve) 5 10	_	x	──
						Balancing Non-Synchronized Reserve (Previous name: Non-Synchronized Reserve) ^{5,12}	_		<u> </u>
1365	Day ahead Scheduling Reserve 36		×				_	×	<u> </u>
		-				Day-ahead Synchronized Reserve 24	_	—	
					2367	Day-ahead Secondary Reserve (Previously part of BLI 2365 / DA Scheduling Reserve) ²⁶ Day-ahead Non-Synchronized Reserve ²³	_	—	
4070	Device and Occupation Decourse	v			2368	Day-anead Non-Synchronized Reserve			
	Day-ahead Operating Reserve Day-ahead Operating Reserve for Load Response	X	X		2370	Day-ahead Operating Reserve Day-ahead Operating Reserve for Load Response	<u>x</u>	X X	──
	Balancing Operating Reserve	x	Â		2375	Balancing Operating Reserve	x		
	Balancing Operating Reserve for Load Response	^	x			Balancing Operating Reserve for Load Response	<u></u>	1 x	
	Synchronous Condensing	x	x			Synchronous Condensing	- x	x x	<u> </u>
	Reactive Services	X	X			Reactive Services	X	X	
	Black Start Service		x			Black Start Service		x	
1390	Fuel Cost Policy Penalty ⁷				2390	Fuel Cost Policy Penalty ⁷		1	
Recon	ciliations							-	
	Load Reconciliation for Spot Market Energy	Х	X						
1410	Load Reconciliation for Transmission Congestion	Х	X						
						Balancing Transmission Congestion Load Reconciliation	X	X	
	Load Reconciliation for Transmission Losses	X	X		2420	Load Reconciliation for Transmission Losses	X	X	
	Load Reconciliation for Inadvertent Interchange Load Reconciliation for PJM Scheduling, System Control and Dispatch Service	X	X	v				<u> </u>	
	Load Reconciliation for PJM Scheduling, System Control and Dispatch Service			X				—	
	Load Reconciliation for Market Monitoring Unit (MMU) Funding			x				──	
1445	Load Reconciliation for FERC Annual Charge Recovery			x				<u> </u>	
1446	Load Reconciliation for Organization of PJM States, Inc. (OPSI) Funding			X				<u> </u>	1
	Load Reconciliation for North American Electric Reliability Corporation (NERC)			Х					
1448	Load Reconciliation for Reliability First Corporation (RFC)			х					
	Load Reconciliation for Consumer Advocates of PJM States, Inc. (CAPS) Funding			Х					
1450	Load Reconciliation for Transmission Owner Scheduling, System Control and Dispatch Service			X					
1460	Load Reconciliation for Regulation and Frequency Response Service	X	X						
	Load Reconciliation for Synchronized Reserve	X	Х					<u> </u>	<u> </u>
	Load Reconciliation for Secondary Reserve ²⁶							<u> </u>	
	Load Reconciliation for Non-Synchronized Reserve		X				_	<u> </u>	
14/5	Load Reconciliation for Day-ahead Scheduling Reserve Load Reconciliation for Balancing Operating Reserve	v	X X					<u> </u>	
1470	Load Reconciliation for Synchronous Condensing	X	Â					<u> </u>	
	Load Reconciliation for Reactive Services	x	x					<u> </u>	
	ial Transmission Rights								
	Financial Transmission Rights Auction	X	X		2500	Financial Transmission Rights Auction	X	X	
					2510	Auction Revenue Rights	X		
Capac									
	RPM Auction		X		2600	RPM Auction		X	
1610	Locational Reliability				0005			+	L
						RPM Seasonal Capacity Performance Auction	-	<u> </u>	<u> </u>
						LSE PRD Consolity Trapefor Bighte	_	—	I
					2030	Capacity Transfer Rights Incremental Capacity Transfer Rights	_	—	×
1650	Auction Specific MW Capacity Transaction				2650	Auction Specific MW Capacity Transaction	_	┼──	⊢ _^
	Capacity Resource Deficiency					Capacity Resource Deficiency	_	<u>+</u>	1
1662	Generation Resource Rating Test Failure				2662	Generation Resource Rating Test Failure		<u>+</u>	<u> </u>
1663	Qualifying Transmission Upgrade Compliance Penalty				2663	Qualifying Transmission Upgrade Compliance Penalty		<u> </u>	<u> </u>
1666	Load Management Test Failure ⁷⁸				2666	Load Management Test Failure 78		<u> </u>	
	Non-Performance		X	1		Bonus Performance		X	1
	PRD Commitment Compliance Penalty ²⁹					PRD Commitment Compliance Penalty ²⁹		<u> </u>	
	FRR LSE Reliability 79	1		1		FRR LSE Reliability ⁷⁹		<u> </u>	L
	FRR LSE Capacity Resource Deficiency 79	-				FRR LSE Capacity Resource Deficiency ⁷⁹	_	+	t

KyPSC Case No. 2024-00354 **Attachment JDS-3** Page 3 of 3

PJM Billing Statement Line Items - Current Recovery in FAC / PSM Riders

ID #	CHARGES	EAC	DEM	Base Rates	ID #	CREDITS	EAC	DEM	Base Rates
		IFAC	FOIN	Dase hales	10#	GREDITS	FAC	FOIN	Dase Rales
	Ilaneous								
	Station Power								1
	Generation Deactivation	Х	X			Generation Deactivation	X	X	í –
1952	Deferred Tax Adjustment				2952	Deferred Tax Adjustment			í The second
	Dominion Settlement					Dominion Settlement			í
1957	Schedule 11A PJM Net				2957	Schedule 11A PJM Net			í –
1980	Miscellaneous Bilateral	X ¹	X ¹	X ¹	2980	Miscellaneous Bilateral	X ¹	X ¹	X ¹
1985	PJM Weekly Miscellaneous (Capacity Performance related) ^{2 9}								í l
1995	PJM Annual Membership Fee								í l
						Annual PJM Cell Tower			í
					2997	Annual PJM Building Rent			í
1999	PJM Customer Payment Default 7								i

Notes from Case No. 2017-00321

1 Misc Bilateral is an agreement between parties regarding discrepancies - This will depend on the detail of the settlement by PJM BLI and recovery will follow the PJM BLI.

Notes related to Case No. 2024-00354

2 New PJM BLI since Case No. 2017-00321

- PJM archived these BLIs; No longer in use 3
- 4 Synchronized Reserve divided into the Day Ahead Synchronized Reserve and Balancing Synchronized Reserve
- 5 Non-Synchronized Reserve divided into Day Ahead Non-Synchronized Reserve and Balancing Non-Sychronized Reserve
- 6 The ancillary service Day Ahead Scheduling Reserve was renamed to Secondary Reserve 7 Existed at time of Case No. 2017-00321; however, not addressed in Case No. 2017-00321
- 8 Additional FRR Capacity BLIs
- 9 Additional Capacity Performance BLIs
- 10 BLI existed in Case No. 2017-00321; PJM renamed

KyPSC Case No. 2024-00354

Attachment JDS-4

Page 1 of 3

D # CHARGES	FAC	PSM	Base Rates	ID #	CREDITS	FAC	PSM	Base Ra
ransmission	-	1		-				
1000 Amount Due for Interest on Past Due Charges			X					
100 Network Integration Transmission Service			X		Network Integration Transmission Service			X
102 Network Integration Transmission Service (exempt)			X		Network Integration Transmission Service (exempt)			X
103 Underground Transmission Service	_		X		Underground Transmission Service			X
104 Network Integration Transmission Service Offset	-		x		Network Integration Transmission Service Offset Non-Zone Network Integration Transmission Service			X
108 Transmission Enhancement			x		Transmission Enhancement			X
109 MTEP Project Cost Recovery			x		MTEP Project Cost Recovery			X
110 Direct Assignment Facilities			X		Direct Assignment Facilities			X
1115 Transmission Enhancement Settlement (EL05-121-009)			X					
120 Other Supporting Facilities			Х	2120	Other Supporting Facilities			Х
130 Firm Point-to-Point Transmission Service			Х		Firm Point-to-Point Transmission Service			Х
				2132	Internal Firm Point-to-Point Transmission Service			Х
133 Firm Point-to-Point Transmission Service Resale			Х		Firm Point-to-Point Transmission Service Resale			Х
135 Neptune Voluntary Released Transmission Service (Firm)			Х		Neptune Voluntary Released Transmission Service (Firm)			Х
136 Hudson Voluntary Released Transmission Service (Firm)			X		Hudson Voluntary Released Transmission Service (Firm)			Х
138 Linden Voluntary Released Transmission Service (Firm)	_	L	X		Linden Voluntary Released Transmission Service (Firm)			X
140 Non-Firm Point-to-Point Transmission Service	_	I	X		Non-Firm Point-to-Point Transmission Service			X
					Internal Non-Firm Point-to-Point Transmission Service			Х
143 Non-Firm Point-to-Point Transmission Service Resale			х	2143	Non-Firm Point-to-Point Transmission Service Resale			Х
145 Neptune Voluntary Released Transmission Service (Non-Firm)			x	2145	Neptune Voluntary Released Transmission Service (Non-Firm)			Х
146 Neptune Default Released Transmission Service (Non-Firm)			х	2146	Neptune Default Released Transmission Service (Non-Firm)			Х
147 Neptune Unscheduled Usage Billing Allocation			Х					
155 Linden Voluntary Released Transmission Service (Non-Firm)			Х	2155	Linden Voluntary Released Transmission Service (Non-Firm)			Х
156 Linden Default Released Transmission Service (Non-Firm)			Х	2156	Linden Default Released Transmission Service (Non-Firm)			Х
157 Linden Unscheduled Usage Billing Allocation			Х					
165 Hudson Voluntary Released Transmission Service (Non-Firm)			х	2165	Hudson Voluntary Released Transmission Service (Non-Firm)			Х
166 Hudson Default Released Transmission Service (Non-Firm)			Х	2166	Hudson Default Released Transmission Service (Non-Firm)			Х
167 Hudson Unscheduled Usage Billing Allocation			X					
nergy	-	1						
200 Day-ahead Spot Market Energy	X	X						
1205 Balancing Spot Market Energy	X	X						
210 Day-ahead Transmission Congestion	X	X			Day-ahead Transmission Congestion	X	X	
215 Balancing Transmission Congestion	X	X	-	2215	Balancing Transmission Congestion	X	X	
216 Pseudo-Tie Balancing Congestion Refund	X	х		2217	Planning Period Excess Congestion	v	x	
218 Planning Period Congestion Uplift	x	x			Planning Period Excess Congestion Planning Period Congestion Uplift	X	x	
1210 Day-ahead Transmission Losses	x	x			Transmission Losses	x	x	
225 Balancing Transmission Losses	Ŷ	x		2220		^	<u> </u>	
1220 Inadvertent Interchange	X	X						
				2240	Day-ahead Economic Load Response		х	
					Real-time Economic Load Response		х	
242 Day-Ahead Load Response Charge Allocation		х						
243 Real-Time Load Response Charge Allocation		Х						
245 Emergency Load Response		Х		2245	Emergency Load Response		Х	
246 Load Response Test Reduction		Х		2246	Load Response Test Reduction		Х	
250 Meter Error Correction	X	Х						
260 Emergency Energy	X	X		2260	Emergency Energy	X	Х	
larket Administration Costs	_	-						
1301 PJM Scheduling, System Control and Dispatch Service - Control Area Administration	_		X					
302 PJM Scheduling, System Control and Dispatch Service - FTR Administration	_		X					
I303 PJM Scheduling, System Control and Dispatch Service - Market Support I305 PJM Scheduling, System Control and Dispatch Service - Capacity Resource/Obligation Mgmt.	_		X					
	_	<u> </u>	X					
1313 PJM Settlement, Inc.			X					
I314 Market Monitoring Unit (MMU) Funding	_	<u> </u>	X					
1315 FERC Annual Charge Recovery	_	<u> </u>	X					
I316 Organization of PJM States, Inc. (OPSI) Funding I317 North American Electric Reliability Corporation (NERC)	_		X					
1317 North American Electric Reliability Corporation (NERC) 1318 Reliability First Corporation (RFC)	_	<u> </u>	X					
319 Consumer Advocates of PJM States, Inc. (CAPS)			X					

KyPSC Case No. 2024-00354

Attachment JDS-4 Page 2 of 3

ID #	CHARGES	FAC	PSM	Base Rates	ID #	CREDITS	FAC	PSM	Base Rate
	ary Services	11710	11.011			UNEBITO		1.011	
	Transmission Owner Scheduling, System Control and Dispatch Service			Х		Transmission Owner Scheduling, System Control and Dispatch Service			Х
	Reactive Supply and Voltage Control from Generation and Other Sources Service		Х			Reactive Supply and Voltage Control from Generation and Other Sources Service	10000	Х	
	Regulation and Frequency Response Service	Х	Х			Regulation and Frequency Response Service	X	Х	
	Energy Imbalance Service	Х	Х			Energy Imbalance Service	Х	Х	
	Synchronized Reserve	Х				Balancing Synchronized Reserve	Х	Х	
	Secondary Reserve		Х			Balancing Secondary Reserve		Х	
1362	Non-Synchronized Reserve		Х		2362	Balancing Non-Synchronized Reserve		Х	
						Day-ahead Synchronized Reserve	Х	Х	
						Day-ahead Secondary Reserve		Х	
						Day-ahead Non-Synchronized Reserve		Х	
	Day-ahead Operating Reserve	Х	Х			Day-ahead Operating Reserve	х	Х	
	Day-ahead Operating Reserve for Load Response		Х			Day-ahead Operating Reserve for Load Response		Х	
	Balancing Operating Reserve	Х	Х			Balancing Operating Reserve	Х	Х	
	Balancing Operating Reserve for Load Response		Х			Balancing Operating Reserve for Load Response		Х	
	Synchronous Condensing	Х	Х			Synchronous Condensing	Х	Х	
	Reactive Services	Х	Х			Reactive Services	Х	Х	
	Black Start Service		Х			Black Start Service		Х	
	Fuel Cost Policy Penalty		Х		2390	Fuel Cost Policy Penalty		Х	
_	ciliations								
	Load Reconciliation for Spot Market Energy	X	Х						
410	Load Reconciliation for Transmission Congestion	Х	Х						
					2415	Balancing Transmission Congestion Load Reconciliation	Х	Х	
	Load Reconciliation for Transmission Losses	Х	Х		2420	Load Reconciliation for Transmission Losses	X	Х	
430	Load Reconciliation for Inadvertent Interchange	X	Х						
440	Load Reconciliation for PJM Scheduling, System Control and Dispatch Service			Х					
				Х					
1444	Load Reconciliation for Market Monitoring Unit (MMU) Funding			Х					
	Load Reconciliation for FERC Annual Charge Recovery			Х					
1446	Load Reconciliation for Organization of PJM States, Inc. (OPSI) Funding			Х					
1447	Load Reconciliation for North American Electric Reliability Corporation (NERC)			Х					
1448	Load Reconciliation for Reliability First Corporation (RFC)			Х					
1449	Load Reconciliation for Consumer Advocates of PJM States, Inc. (CAPS) Funding			Х					
1450	Load Reconciliation for Transmission Owner Scheduling, System Control and Dispatch Service			Х					
1460	Load Reconciliation for Regulation and Frequency Response Service	Х	Х						
1470	Load Reconciliation for Synchronized Reserve	X	Х						
1471	Load Reconciliation for Secondary Reserve		Х						
1472	Load Reconciliation for Non-Synchronized Reserve		х						
	Load Reconciliation for Day-ahead Scheduling Reserve		х						
	Load Reconciliation for Balancing Operating Reserve	x	X					1	
	Load Reconciliation for Synchronous Condensing	X	х					1	
	Load Reconciliation for Reactive Services	X	X						
	ial Transmission Rights								
	Financial Transmission Rights Auction	X	X		2500	Financial Transmission Rights Auction	X	X	
	5					Auction Revenue Rights	X	х	
apac	itv								
	RPM Auction		X	1	2600	RPM Auction		X	
	Locational Reliability		1						
				1	2605	RPM Seasonal Capacity Performance Auction			
			1			LSE PRD			
			1			Capacity Transfer Rights			
			1			Incremental Capacity Transfer Rights			x
	Auction Specific MW Capacity Transaction		1			Auction Specific MW Capacity Transaction			<u>^</u>
650		-	+			Capacity Resource Deficiency			
			1	1		Generation Resource Rating Test Failure		<u> </u>	I
661	Capacity Resource Deficiency	-			2662				
661 662	Capacity Resource Deficiency Generation Resource Rating Test Failure								
661 662 663	Capacity Resource Deficiency Generation Resource Rating Test Failure Qualifying Transmission Upgrade Compliance Penalty		-		2663	Qualifying Transmission Upgrade Compliance Penalty		v	
661 662 663 666	Capacity Resource Deficiency Generation Resource Rating Test Failure Qualifying Transmission Upgrade Compliance Penalty Load Management Test Failure		x		2663 2666	Qualifying Transmission Upgrade Compliance Penalty Load Management Test Failure		X	
661 662 663 666 667	Capacity Resource Deficiency Generation Resource Rating Test Failure Qualifying Transmission Upgrade Compliance Penalty Load Management Test Failure Non-Performance		Х		2663 2666 2667	Qualifying Transmission Upgrade Compliance Penalty Load Management Test Failure Bonus Performance		Х	
661 662 663 666 667 669	Capacity Resource Deficiency Generation Resource Rating Test Failure Qualifying Transmission Upgrade Compliance Penalty Load Management Test Failure				2663 2666 2667 2669	Qualifying Transmission Upgrade Compliance Penalty Load Management Test Failure			

KyPSC Case No. 2024-00354

Attachment JDS-4

	PJM Billing Statement Line Items - Current Recovery in FAC / PSM Riders											
ID #	CHARGES	FAC	PSM	Base Rates	ID #	CREDITS	FAC	PSM	Base Rates			
	Ilaneous											
	Station Power						-					
	Generation Deactivation	Х	Х	17 - 19 M	2930	Generation Deactivation	Х	Х				
	Deferred Tax Adjustment					Deferred Tax Adjustment						
	Dominion Settlement					Dominion Settlement						
1957	Schedule 11A PJM Net				2957	Schedule 11A PJM Net						
1980	Miscellaneous Bilateral	X ¹	X ¹	X ¹	2980	Miscellaneous Bilateral	X ¹	X ¹	X ¹			
1985	PJM Weekly Miscellaneous (Capacity Performance related)		Х									
1995	PJM Annual Membership Fee											
					2996	Annual PJM Cell Tower						
					2997	Annual PJM Building Rent						
1999	PJM Customer Payment Default	X ²	X ²	X ²			X ²	X ²	X ²			

1 Misc Bilateral is an agreement between parties regarding discrepancies - This will depend on the detail of the settlement by PJM BLI and recovery will follow the PJM BLI.

2 PJM Customer Payment Default occurs when a PJM Market Entity defaults in any PJM market - This will depend on the underlying default and recovery will follow that PJM BLI.

Page 3 of 3

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF DUKE) ENERGY KENTUCKY, INC., FOR: 1) AN) ADJUSTMENT OF THE ELECTRIC RATES; 2)) CASE NO. APPROVAL OF NEW TARIFFS; 3) APPROVAL) 2024-00354 OF ACCOUNTING PRACTICES TO ESTABLISH) REGULATORY ASSETS AND LIABILITIES;) AND 4) ALL OTHER REQUIRED APPROVALS) AND RELIEF.

DIRECT TESTIMONY OF

DANIELLE L. WEATHERSTON

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

TABLE OF CONTENTS

PAGE

I.	INTRODUCTION AND PURPOSE	1
II.	OVERVIEW OF DUKE ENERGY KENTUCKY'S ACCOUNTING RECORDS	2
III.	DEFERRAL ACCOUNTING TREATMENT	3
IV.	SCHEDULES AND FILING REQUIREMENTS SPONSORED BY WITNESS	6
V.	CONCLUSION	8

I. INTRODUCTION AND PURPOSE

1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Danielle L. Weatherston, and my business address is 525 South
Tryon Street, Charlotte, North Carolina 28202.

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

A. I am employed by Duke Energy Business Services LLC (DEBS), as Manager
Accounting II. DEBS provides various administrative and other services to Duke
Energy Kentucky, Inc., (Duke Energy Kentucky or Company) and other affiliated
companies of Duke Energy Corporation (Duke Energy).

9 Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND 10 PROFESSIONAL EXPERIENCE.

A. I graduated from Indiana State University with a Bachelor of Science in
Accounting and from Ball State University with a Master of Arts in Business
Education. I am also a certified public accountant in Indiana. I have held various
accounting roles at Sony Disc Manufacturing and Hill-Rom in Indiana, prior to
joining Duke Energy. At Duke Energy I have worked in various groups such as
corporate accounting, regulated accounting, and commercial power before
accepting my current role as Manager Accounting II in Charlotte.

18 Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS MANAGER 19 ACCOUNTING II.

A. I am responsible for maintaining the books of account and reporting the financial
 position and the results of electric operations for Duke Energy's public utility
 operating companies in Kentucky and Ohio.

DANIELLE L. WEATHERSTON DIRECT

1Q.HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY2PUBLIC SERVICE COMMISSION?

3 A. Yes.

4 Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS 5 PROCEEDING?

6 A. My testimony in this proceeding addresses the various capital and operating 7 expenditures and accounting adjustments to Duke Energy Kentucky's books of 8 account in support of Duke Energy Kentucky's application in this proceeding. I 9 discuss the accounting treatment being requested in this proceeding for two 10 categories of regulatory assets/liabilities as I will discuss further in my testimony. 11 I sponsor the historical data in Schedule B-8 provided in satisfaction of Filing 12 Requirement FR 16(8)(b); and Filing Requirements FR 12(2)(i), FR 16(7)(i), FR 13 16(7)(k), FR 16(7)(m), FR 16(7)(n), FR 16(7)(o), FR 16(7)(p), and FR 16(7)(q). 14 Finally, I also sponsor the historical data on Schedules I-1 through I-5 in response 15 to FR 16(8)(i), and Schedule K in response to FR 16(8)(k).

II. <u>OVERVIEW OF DUKE ENERGY KENTUCKY'S ACCOUNTING</u> <u>RECORDS</u>

16 Q. ARE YOU FAMILIAR WITH THE ACCOUNTING PROCEDURES AND

- 17 BOOKS OF ACCOUNT OF DUKE ENERGY KENTUCKY?
- A. Yes. The books of account for Duke Energy Kentucky's regulated business follow
 the Uniform System of Accounts prescribed by the Federal Energy Regulatory
 Commission (FERC).

Q. ARE THE BOOKS OF ACCOUNT FOR THE ELECTRIC BUSINESS OF DUKE ENERGY KENTUCKY PREPARED AT YOUR DIRECTION AND UNDER YOUR SUPERVISION?

4 A. Yes.

5 Q. ARE THE CAPITAL AND OPERATING EXPENDITURES 6 REPRESENTED ON DUKE ENERGY KENTUCKY'S BOOKS OF 7 ACCOUNT ACCURATE AND REASONABLE?

8 A. Yes. Duke Energy Kentucky has various review procedures in place to ensure 9 capital and operating expenditures are recorded correctly. The system of internal 10 accounting controls provides reasonable assurance that all transactions are 11 executed in accordance with management's authorization and are recorded 12 properly.

The system of internal accounting controls is annually reviewed, tested, and documented by Duke Energy Kentucky to provide reasonable assurance that amounts recorded on the books and records of the Company are accurate and proper. In addition, independent certified public accountants perform an annual audit to provide assurance that internal accounting controls are operating effectively and that Duke Energy Kentucky's financial statements are materially accurate.

III. DEFERRAL ACCOUNTING TREATMENT

20 Q. IS THE COMPANY REQUESTING ANY DEFERRAL MECHANISMS IN 21 THIS PROCEEDING?

A. Yes, as part of this proceeding, Duke Energy Kentucky is seeking Commission
authorization to create two deferrals for the differences between the actual amounts

DANIELLE L. WEATHERSTON DIRECT

3

1 incurred for certain costs and the amounts established in base rates for those costs in 2 this proceeding. The first deferral proposed will allow the Company to defer the 3 actual annual operation and maintenance (O&M) expense related to planned generation maintenance outages (excluding fuel, emission allowances, and 4 5 environmental reagent costs,) above or below the amount being recovered in base 6 rates. The second deferral will allow the Company to defer the actual cost for 7 replacement purchased power expense related to forced outages, above or below the 8 amounts being recovered through the Company's fuel adjustment clause or in base 9 rates as established in this case.

In addition to the request for regulatory asset treatment for these items, Duke Energy Kentucky will continue recording deferrals, per normal regulatory accounting standards, for riders that are subject to being trued-up. Over- or underrecovery of costs are flowed through riders such as the fuel adjustment clause, the profit-sharing mechanism, and the environmental surcharge mechanism and, therefore, the Company records the amounts to be trued-up in future periods as regulatory assets or regulatory liabilities.

17 Q. WHY IS IT APPROPRIATE TO CREATE THESE REGULATORY 18 ASSETS/LIABILITIES?

A. The Commission has exercised its discretion to approve regulatory assets where a
utility has incurred: (1) an extraordinary, nonrecurring expense which could not
have reasonably been anticipated or included in the utility's planning; (2) an
expense resulting from a statutory or administrative directive; (3) an expense in
relation to an industry sponsored initiative; or (4) an extraordinary or

DANIELLE L. WEATHERSTON DIRECT

1 2 nonrecurring expense that over time will result in a saving that fully offsets the costs.

The costs for which the Company is seeking to create the regulatory deferrals represent incremental costs or savings compared to normalized or expected levels, and as such they effectively constitute extraordinary nonrecurring expenses (or savings) which could not have reasonably been anticipated or included in the utility's planning. The actual costs of these items are unable to be planned or anticipated.

9 The Company's forecasted test year for planned outage O&M expense and 10 replacement purchased power costs for the Company's East Bend coal-fired Generating Station (East Bend), and Woodsdale Combustion Turbines (Woodsdale) 11 12 have been adjusted to reflect a representative (*i.e.*, average) level of expense. 13 Planned outage O&M expense has been normalized based upon four years of actual 14 expenses and four years of projected expenses. Forced outage replacement 15 purchased power costs have been normalized based upon three years of actual 16 replacement purchased power for forced outages. Permitting the Company to defer 17 for future recovery any incremental amount over or under what is established in base 18 rates for these two expenses will ensure that customers are not overpaying, and the 19 Company is not under recovering for actual costs incurred in serving customers.

The deferral balances the need for protecting customers from overpaying for these costs when the utility's actual costs incurred are below the levels used to establish base rates, and conversely mitigate the utility's risk to financial stability and performance during years where the Company's actual costs incurred are higher than those used to establish base rates.

DANIELLE L. WEATHERSTON DIRECT

5

Because Duke Energy Kentucky is relatively small, the swings from year to year in these costs cause volatility in the Company's earnings. The proposed deferral mechanisms are designed so that, over time, the balance should approach \$0 but will prevent these two volatile cost items from having a significant influence on the Company's earnings.

6 Q. HOW WILL THESE REGULATORY ASSETS/LIABILITIES WORK?

- A. On an annual basis, the Company will track the actual costs for these two items
 against the base rate level established in this proceeding and will either debit a
 regulatory asset account (Account 182.3) or credit a regulatory liability account
 (Account 254), for the difference between the actual costs for these two items and
 the amounts in base rates.
- 12 These regulatory accounts will continue to accumulate until the next rate 13 case when the Company will seek to include the then existing balance for recovery 14 or refund in new base rates. The intent with these deferrals is simply to provide 15 assurance that the Company can recover its costs and avoid volatility of earnings and 16 customers pay no more or no less than the actual cost incurred to provide service 17 with the generating assets.

IV. <u>SCHEDULES AND FILING REQUIREMENTS SPONSORED BY</u> <u>WITNESS</u>

18 Q. PLEASE DESCRIBE SCHEDULE B-8.

A. Schedule B-8 contains the Comparative Balance Sheets for Duke Energy
Kentucky for the most recent five calendar years, the base period, and the forecasted
period.

1 Q. PLEASE DESCRIBE FR 12(2)(I).

- A. FR 12(2)(i) consists of Duke Energy Kentucky's detailed income statement and
 balance sheet for the period ended September 30, 2024.
- 4 Q. PLEASE DESCRIBE FR 16(7)(I).
- 5 A. FR 16(7)(i) consists of the Company's most recent Federal Energy Regulatory
- 6 Commission (FERC) audit report, reporting the results of the Company's last
 7 FERC audit.

8 Q. PLEASE DESCRIBE FR 16(7)(K).

9 A. FR 16(7)(k) consists of Duke Energy Kentucky's most recent FERC Form 1 and
10 FERC Form 2.

11 Q. PLEASE DESCRIBE FR 16(7)(M).

12 A. FR 16(7)(m) consists of Duke Energy Kentucky's current chart of accounts.

13 Q. PLEASE DESCRIBE FR 16(7)(N).

A. FR 16(7)(n) consists of the latest twelve months of the monthly management
 reports providing financial results of the Company's operations in comparison to

16 the forecast.

- 17 Q. PLEASE DESCRIBE FR 16(7)(O).
- 18 A. FR 16(7)(o) consists of management's monthly budget variance reports for Duke
 19 Energy Kentucky electric operations.

20 Q. PLEASE DESCRIBE FR 16(7)(P).

A. FR 16(7)(p) consists of Duke Energy Kentucky's most recent Form 10-K and
Form 8-K as well as those forms for the last two years. Additionally, the
Company is submitting copies of its Form 10-Qs that were filed during the past
six quarters.

DANIELLE L. WEATHERSTON DIRECT

1 Q. PLEASE DESCRIBE FR 16(7)(Q).

A. FR 16(7)(q) consists of the independent auditor's annual opinion report for Duke
Energy Kentucky. The auditor did not note any material weaknesses in internal
controls.

5 Q. PLEASE DESCRIBE THE INFORMATION YOU SUPPORT IN 6 RESPONSE TO FR 16(8)(I), SCHEDULES I-1 THROUGH I-5.

- A. Schedule I-1 contains comparative income statements for the Company.
 Schedules I-2.1 through I-5 contains comparative revenue and sales statistical
 information as required by the Commission's filing requirements. I support the
 historic information contained on these schedules.
- Q. PLEASE DESCRIBE THE INFORMATION YOU SUPPORT IN
 RESPONSE TO FR 16(8)(K), THE "K" SCHEDULES.
- A. The information I support in response to FR 16(8)(k) consists of the Capital
 Structure and the Consolidated Condensed Income Statement for Duke Energy
 Kentucky. I also provided the Mix of Sales schedules. I provided this information
 to Mr. Carpenter for his use in preparation of the forecast.

V. <u>CONCLUSION</u>

- 17 Q. WAS THE INFORMATION YOU SPONSORED IN SCHEDULES B-8, I-1,
- 18 I-2.1, I-3, I-4, I-5 AND K AS WELL AS FR 12(2)(I), FR 16(7)(I), FR
- 19 16(7)(K), FR 16(7)(M), FR 16(7)(N), FR 16(7)(O), FR 16(7)(P), FR 16(7)(Q),
- 20 FR 16(8)(B), FR 16(8)(I), AND FR 16(8)(K) PREPARED BY YOU OR
- 21 UNDER YOUR DIRECTION AND SUPERVISION?
- 22 A. Yes.

- Q. IS THE INFORMATION YOU SPONSORED IN THOSE SCHEDULES
 AND FILING REQUIREMENTS ACCURATE TO THE BEST OF YOUR
 KNOWLEDGE AND BELIEF?
- 4 A. Yes.
- 5 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?
- 6 A. Yes.

)

STATE OF NORTH CAROLINA COUNTY OF MECKLENBURG

SS:

The undersigned, Danielle L. Weatherston, Manager Accounting II, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of her knowledge, information and belief.

Danielle Weatherston, Affiant

Subscribed and sworn to before me by Danielle L. Weatherston on this 25th day of <u>November</u>, 2024.

Enia Elliott

My Commission Expires: 06/27/2026

My Comm

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF DUKE) ENERGY KENTUCKY, INC. FOR: 1) AN) ADJUSTMENT OF THE ELECTRIC RATES; 2)) CASE NO. APPROVAL OF NEW TARIFFS; 3) APPROVAL) 2024-00354 OF ACCOUNTING PRACTICES TO ESTABLISH) REGULATORY ASSETS AND LIABILITIES;) AND 4) ALL OTHER REQUIRED APPROVALS) AND RELIEF.

DIRECT TESTIMONY OF

JAMES E. ZIOLKOWSKI

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

TABLE OF CONTENTS

I.	INT	RODUCTION AND PURPOSE	1
II.		EDULES AND FILING REQUIREMENTS SPONSORED BY NESS	3
III.	COS	T OF SERVICE STUDIES	4
	А.	Functionalizing Costs	17
	В.	Classifying Costs	18
	C.	Allocation of Costs	19
IV.	RES	ULTS OF COST OF SERVICE STUDY	
V.	DIST	TRIBUTION OF PROPOSED REVENUE INCREASE	
VI.	CON	ICLUSION	

ATTACHMENTS:

Attachment JEZ-1	Electric Cost of Service Study
Attachment JEZ-2	K201 Generation Allocator Using 12 CP
Attachment JEZ-3	Cost of Service Study Calculation of Average & Excess Allocator
Attachment JEZ-4	Cost of Service Study Calculation of Production Stacking (TOD) Allocator
Attachment JEZ-5	Zero Intercept

I. <u>INTRODUCTION AND PURPOSE</u>

1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is James E. Ziolkowski, and my business address is 139 East Fourth
Street, Cincinnati, Ohio 45202.

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

A. I am employed by Duke Energy Business Services LLC (DEBS) as Director,
Rates & Regulatory Planning. DEBS provides various administrative and other
services to Duke Energy Kentucky, Inc., (Duke Energy Kentucky) and other
affiliated companies of Duke Energy Corporation (Duke Energy).

9 Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATION AND 10 PROFESSIONAL EXPERIENCE.

A. I received a Bachelor of Science degree in Mechanical Engineering from the U.S.
Naval Academy in 1979 and a Master of Business Administration degree from
Miami University in 1988. I am also a licensed Professional Engineer in the state
of Ohio. I received certification as a Chartered Industrial Gas Consultant in 1994
from the Institute of Gas Technology and the American Gas Association. I have
attended the EUCI Cost of Service seminar.

After graduating from the Naval Academy, I attended the Naval Nuclear
Power School and other follow-on schools. I served as a nuclear-trained officer on
various ships in the U.S. Navy through 1986. From 1988 through 1990, I worked
for Mobil Oil Corporation as a Marine Marketing Representative in the New York
City area.

1	I joined The Cincinnati Gas & Electric Company n/k/a Duke Energy Ohio,
2	Inc., (Duke Energy Ohio) in 1990 as a Product Applications Engineer, in which
3	capacity I designed and managed some of Duke Energy Ohio's demand side
4	management programs, including Energy Audits and Interruptible Rates. From
5	1996 until 1998, I was an Account Engineer and worked with large customers to
6	resolve various service-related issues, particularly in the areas of billing,
7	metering, and demand management. In 1998, I joined the Rate Department, where
8	I focused on rate design and tariff administration. I was appointed to my current
9	position in January 2014.

10 Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AS DIRECTOR 11 RATES & REGULATORY PLANNING.

12 As Director Rates & Regulatory Planning, I am responsible for cost of service A. 13 studies, tariff administration, billing, and revenue reporting issues in Kentucky 14 and Ohio. I also prepare filings to modify charges and terms in the retail tariffs of 15 both Duke Energy Kentucky and Duke Energy Ohio, and I develop rates for new 16 services. During major rate cases, I help with the design of the new base rates. 17 Additionally, I frequently work with Duke Energy Kentucky's and Duke Energy 18 Ohio's customer contact and billing personnel to answer rate-related questions, 19 and to apply the retail tariffs to specific situations. Occasionally, I meet with 20 customers and Company representatives to explain rates or provide rate training. I 21 also prepare reports that are required by regulatory authorities.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION?

3 A. Yes.

4 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS 5 PROCEEDING?

A. I sponsor Schedules B-7, B-7.1, B-7.2, D-3, D-4, and D-5 in response to Filing
Requirement (FR) 16(8)(b) and FR 16(8)(d), respectively. I also support the cost
of service studies identified in response to Filing Requirement FR 16(7)(v).

II. SCHEDULES AND FILING REQUIREMENTS SPONSORED BY WITNESS

9 Q. PLEASE DESCRIBE SCHEDULES B-7 AND D-3.

10 A. These schedules report the allocation factors used to determine the jurisdictional 11 percentages of electric plant, expenses, *etc.*, necessary to allocate the amount of 12 the proposed new electric rates between jurisdictional and non-jurisdictional 13 customers. These schedules indicate that 100 percent of the costs are 14 jurisdictional, because Duke Energy Kentucky does not provide service to any 15 non-jurisdictional electric customers.

16 Q. PLEASE DESCRIBE SCHEDULES B-7.1 AND D-4.

A. These schedules are the support for Schedules B-7 and D-3 described above. They
provide the basis for the actual jurisdictional allocation factors.

19 Q. PLEASE DESCRIBE SCHEDULES B-7.2 AND D-5.

A. These schedules explain changes made to the jurisdictional allocation from the
Company's prior electric base rate proceeding in Case No. 2022-00372.

1 Q. PLEASE DESCRIBE FR 16(7)(V).

A. FR 16(7)(v) contains 25 schedules: Schedules FR 16(7)(v)-1 through FR 16(7)(v)25 which represent the fully allocated, embedded cost of service study by rate
class. I discuss these filing requirements in greater detail in my testimony below.

III. COST OF SERVICE STUDIES

5 Q. WHAT IS THE PURPOSE OF A COST OF SERVICE STUDY?

6 A. A cost of service study is an analytical tool used in traditional utility rate design to 7 allocate costs to different classes of customers. When the process of preparing a 8 cost of service study is completed, the resulting class cost of service study can (1) 9 assist in determining the revenue requirement for the services offered by a utility; 10 (2) analyze, at a very detailed level, the costs imposed on the utility's system by 11 different classes of customers; (3) show the total costs the company incurs in 12 serving each retail rate class, as well as the rate of return on capitalization earned 13 from each class during the test year; and (4) establish cost responsibility that 14 makes it possible to determine just and reasonable rates based on costs.

Q. WHAT INFORMATION DID THE COMPANY USE TO DEVELOP THE COST ALLOCATION FACTORS FOR THE COST OF SERVICE STUDIES USED IN THIS PROCEEDING?

A. The test year for this proceeding is the 12 months ending June 30, 2026, which is
comprised of forecasted test period data. The development of the test year
allocation factors is primarily based on historical data for the 12 months ended
May 2024. Otherwise, forecasted test year information was used as appropriate. I

will discuss the actual development of the various allocation factors used in this
 proceeding later in my testimony.

3 Q. HAS THE COMPANY PREPARED MULTIPLE COSTS OF SERVICE 4 STUDIES?

A. Yes. The Company prepared three Class Cost of Service Studies that contain
essentially the same data, except that different methodologies were used to
develop the allocation factor for the demand component of production-related
costs. The demand allocation methods are as follows: (1) the Average of the
Twelve (12) Coincident Peaks (12 CP) method; (2) the Average and Excess
(A&E) method; and (3) the Production Stacking method.

Q. PLEASE DESCRIBE THE DEMAND METHODOLOGIES USED IN THESE COST OF SERVICE STUDIES.

A. The 12 CP method is designed to allocate capacity related costs to the customer
classes using the system during maximum system load. The allocation of capacity
costs to each customer class is based on the class load contribution to the
maximum peak, at the time of peak, regardless of what their respective loads were
at other times of the day.

18 The A&E method, also referred to as the "used and unused capacity 19 method," recognizes both the class average use of the system capacity and the 20 class contribution to the capacity required to meet the maximum system load. The 21 capacity costs are allocated in a two-part formula. Attachment JEZ-3 shows the 22 calculation of the production allocator K201 using the A&E method.

JAMES E. ZIOLKOWSKI DIRECT

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1 The "class-used" capacity component is the proportion of the class's 2 respective average hourly kilowatt-hour (kWh) sales to the total average hourly 3 sales. The "class-unused" capacity is the class excess hourly peak demand 4 contribution ratio, which is the difference between the class average hourly 5 demands and the hourly class peak demands. The used and unused capacity 6 factors for each class are combined to allocate capacity costs to the respective rate 7 classes.

The Production Stacking method is a time-differentiated method that allocates baseload plant costs on energy (kWh) and peaker plants costs on peak demands. As shown in Attachment JEZ-4, net plant associated with the East Bend plant is allocated to each rate class based on annual kWh. Net plant associated with the Woodsdale facility is allocated to each rate class based on 12 CP. The K201 production allocator combines both allocations.

14 Q. DID YOU COMPARE THE CLASS DEMAND RATIOS FOR EACH OF 15 THE DEMAND METHODOLOGIES?

16 A. Yes. Attachment JEZ-1 shows the demand ratios for the different methods.
17 Attachment JEZ-2 shows the rate impacts using the different methods.

18 Q. HOW DID YOU SELECT THE APPROPRIATE ALLOCATOR FOR 19 PRODUCTION COSTS?

A. In its October 12, 2023, Order in Case No. 2022-00372, the Commission stated that the Company should consider using a method that takes into account energy utilization at times other than the 12-month peaks and should examine the

1 utilization of expenses throughout the year beyond the 12 peaks.¹ The 2 Commission further stated that the Company in its next electric base rate case 3 should perform additional analysis and evaluations on using other available 4 methodology when proposing the Cost of Service Study (COSS).² The Company 5 should provide testimony on the reasonableness of its proposed COSS 6 methodology, the analysis that was conducted when considering other available 7 methodology, and the advantages and disadvantages of each methodology.³

8 The National Association of Regulatory Utility Commissioners (NARUC) 9 Electric Utility Cost Allocation Manual classifies the 12 CP method as a Peak 10 Demand Method. The manual considers the Average and Excess method to be an 11 Energy Weighted Method, and it classified the Production Stacking method as a 12 Time-Differentiated Embedded Cost of Service Method.

13There are three metrics that are available to allocate expenses and plant14costs to the rate groups: demand (kW), energy (kWh), and customer counts.

- The 12 CP method looks only at peak monthly demands.
- The A&E method uses kWh to allocate that portion of the generating capacity that would be needed if all customers used energy at a constant 100 percent load factor. Excess demand is then allocated to the rate classes based on non-coincident peaks.

15

³ *Id*.

¹ In the Matter of Electronic Application of Duke Energy Kentucky, Inc. for (1) an adjustment of Electric Rates; (2) Approval of New Tariffs; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and (4) All other Required Approvals and Relief, Case No. 2022-00372, Order, p. 29 (Oct. 12, 2023).

 $^{^{2}}$ Id.

1	• The Production Stacking method uses kWh to allocate baseload
2	plant costs (i.e., East Bend) and 12 CP to allocate peaker costs
3	(Woodsdale).
4	The NARUC manual lists various production allocation methods:
5	Peak Demand Methods
6	0 1 CP
7	 Summer and Winter Peak
8	o 12 CP
9	 Multiple Coincident Peak
10	 All Peak Hours Approach
11	Energy Weighting Methods
12	• Average and Excess
13	 Equivalent Peaker
14	o Base and Peak
15	• Time-Differentiated Embedded Cost of Service Methods
16	 Production Stacking
17	o Base-Intermediate-Peak
18	 Loss of Load Probability
19	 Probability of Dispatch
20	I calculated allocators using three of the above methods (<i>i.e.</i> , 12 CP, A&E,
21	and Production Stacking) for the following reasons:
22	• Demand (kW) coincident and non-coincident peak data is routinely
23	calculated by the Company's Load Research group;

1		• Energy (kWh) data is easily available;
2		• The Company has one baseload plant and one peaker plant;
3		• These analyses are relatively easy to perform and understand; and
4		• These analyses are objective and do not require subjective
5		judgements.
6		In my opinion, each of the three allocation methods produce reasonable
7		results. Attachment JEZ-1 shows the results of each of the three allocation
8		methods, and Attachment JEZ-2 shows the impacts to rates from each method. I
9		recommend using the 12 CP method to allocate production plant costs because
10		this method results in a residential rate increase that falls between the increases
11		that would result from the other two methods. The A&E method results in a
12		residential increase of 18.8%, and the Production Stacking method results in a
13		residential rate increase of 15.8%. The 12 CP method results in a residential rate
14		increase of 16.8%. Rate subsidies will generally occur among customer classes,
15		regardless of the cost of service methodology used. Changing to either the A&E
16		or Production Stacking methodology will not change this fact. The Company
17		believes that the use of the 12 CP methodology is the appropriate means to align
18		capacity costs with the customer classes that are imposing the costs.
19	Q.	PLEASE DESCRIBE THE ELECTRIC COST OF SERVICE STUDY.
20	A.	The electric cost of service study contained in Schedules FR-16(7)(v)-1 through

for the test period ended June 30, 2026. In preparing the cost of service study, I
used information provided by other Company employees. The cost of service

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JAMES E. ZIOLKOWSKI DIRECT

FR-16(7)(v)-25 is an embedded, fully allocated cost of service study by rate class

study functionalizes, classifies, and allocates cost items such as plant investment,
operating expenses, and taxes to the various customer classes and calculates the
revenue responsibility of each class. Finally, the cost of service study calculates
the revenue responsibility of each rate class required to generate the
recommended rate of return.

6 Q. PLEASE DESCRIBE HOW THE COST OF SERVICE STUDY IS 7 ORGANIZED IN SCHEDULES FR-16(7)(V)-1 THROUGH SCHEDULE 8 FR-16(7)(V)-25.

9 A. The schedules provided in the cost of service study are organized as shown in the
10 table below. The detailed calculation and derivation of the allocation factors
11 utilized in the cost of service study are included in the workpapers filed in these
12 proceedings.

		Table 1
Schedule	Page No.	Description
Schedule 1	1	Summary of Results
Schedule 2	2	Gross Plant in Service
Schedule 3	3	Depreciation Reserve
Schedule 4	4	Net Electric Plant in Service
Schedule 5	5	Subtractive Rate Base Adjustments
Schedule 5.1	6	Additive Rate Base Adjustments
Schedule 5.2	7	Working Capital
Schedule 6	8	O&M Expenses
Schedule 6.1	9	O&M Expenses
Schedule 7	10	Depreciation Expense
Schedule 8	11	Taxes Other Than Income Taxes
Schedule 9	12	Federal Income Tax Based on Return
Schedule 9.1	13	State Income Tax Based on Return
Schedule 10	14	Cost of Service Computation
Schedule 11	15	ROR, Tax Rates & Special Factors
Schedule 12	16	Allocation Factors
Schedule 12.1	17	Allocation Factors
Schedule 12.2	18	Allocation Factors

1 **Q**. WHAT JURISDICTIONAL RATE CLASSES WERE USED IN THE 2 **CLASS COST OF SERVICE STUDY?** 3 A. The cost of service is organized showing the following rate classes: 4 Residential: (Rate RS); • 5 Secondary Distribution Small: (Rates DS, GS-FL, EH and SP); 6 Secondary Distribution Large: (Rates DT); • 7 Primary Distribution: (Rate DT and DP); 8 Transmission: (Rates TT); 9 Lighting: (Rates NSU, NSP, OL, SC, SE, SL, TL and UOLS combined); 10 and 11 Other: (Flood Control Water Pumping Stations). ٠ WHAT ARE THE ELEMENTS OF A COST OF SERVICE STUDY? 12 **O**. 13 Much like the components of the overall revenue requirement, the elements of a A. 14 cost of service study consist of the following elements, which are allocated to 15 each function, classification and rate class: **Operating & Maintenance Expense** 16 17 + Depreciation 18 + Other Taxes 19 + Federal Income Tax 20 + State Income Tax 21 + Return (Jurisdictional Rate Base x Rate of Return (ROR)) 22 - Revenue Credits 23 = Class Revenue Requirement or Cost of Service

1 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-1.

A. Schedule FR-16(7)(v)-1 is a functional cost of service study that separates the cost
items into the production, transmission, and distribution functions.

4 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-2.

A. Schedule FR-16(7)(v)-2 is a classified cost of service study that separates the cost
items contained in the production function on Schedule FR-16(7)(v)-1 between
the demand, energy, and customer classifications.

8 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-3.

9 A. Schedule FR-16(7)(v)-3 is an allocated cost of service study that allocates the cost
10 items contained in the production demand classification from Schedule FR11 16(7)(v)-2 to the various rate groups.

12 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-4.

A. Schedule FR-16(7)(v)-4 is an allocated cost of service study that allocates the cost
items contained in the production energy classification from Schedule FR15 16(7)(v)-2 to the various rate groups.

16 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-5.

17 A. Schedule FR-16(7)(v)-5 is an allocated cost of service study that allocates the cost

18 items contained in the production customer classification from Schedule FR-

- 19 16(7)(v)-2 to the various rate groups. As is evident on the schedule, there are no
- 20 production costs classified as customer related.

1 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-6.

A. Schedule FR-16(7)(v)-6 is a classified cost of service study that separates the cost
items contained in the transmission function on Schedule FR-16(7)(v)-1 between
the demand, energy, and customer classifications.

5 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-7.

A. Schedule FR-16(7)(v)-7 is an allocated cost of service study that allocates the cost
items contained in the transmission demand classification from Schedule FR16(7)(v)-6 to the various rate groups.

9 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-8.

10 A. Schedule FR-16(7)(v)-8 is an allocated cost of service study that allocates the cost 11 items contained in the transmission energy classification from Schedule FR-12 16(7)(v)-6 to the various rate groups. As is evident on the schedule, there are no 13 transmission costs classified as energy related.

14 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-9.

- 15 A. Schedule FR-16(7)(v)-9 is an allocated cost of service study that allocates the cost
- 16 items contained in the transmission customer classification from Schedule FR-
- 17 16(7)(v)-6 to the various rate groups.

18 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-10.

A. Schedule FR-16(7)(v)-10 is a classified cost of service study that separates the
cost items contained in the distribution function on Schedule FR-16(7)(v)-1
between the demand, energy, and customer classifications.

1 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-11.

A. Schedule FR-16(7)(v)-11 is an allocated cost of service study that allocates the
cost items contained in the distribution demand classification from Schedule FR16(7)(v)-10 to the various rate groups.

5 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-12.

A. Schedule FR-16(7)(v)-12 is an allocated cost of service study that allocates the
cost items contained in the distribution energy classification from Schedule FR16(7)(v)-10 to the various rate groups. As is evident on the schedule, there are no
distribution costs classified as energy related.

10 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-13.

A. Schedule FR-16(7)(v)-13 is an allocated cost of service study that allocates the
 cost items contained in the distribution customer classification from Schedule FR 16(7)(v)-10 to the various rate groups.

14 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-14.

- 15 A. Schedule FR-16(7)(v)-14 is a total class cost of service study that sums the
- 16 allocated costs from Schedules FR-16(7)(v)-3, FR-16(7)(v)-4, FR-16(7)(v)-5, FR-
- 17 16(7)(v)-7, FR-16(7)(v)-8, FR-16(7)(v)-9, FR-16(7)(v)-11, FR-16(7)(v)-12 and
- 18 FR-16(7)(v)-13, by the various rate groups.

19 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-15.

- 20 A. Schedule FR-16(7)(v)-15 is a classified cost of service study for the residential 21 class that shows the allocated costs from Schedules FR-16(7)(v)-3, FR-16(7)(v)-7 22 and FR-16(7)(v)-11, summarized by the demand, energy, and customer
- 23 classifications.

1 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-16.

A. Schedule FR-16(7)(v)-16 is a classified cost of service study for the Distribution
Secondary class that shows the allocated costs from Schedules FR-16(7)(v)-3,
FR-16(7)(v)-7 and FR-16(7)(v)-11, summarized by the demand, energy, and
customer classifications.

6 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-17.

A. Schedule FR-16(7)(v)-17 is a classified cost of service study for the GSFL
Secondary class that shows the allocated costs from Schedules FR-16(7)(v)-3,
FR-16(7)(v)-7 and FR-16(7)(v)-11, summarized by the demand, energy, and
customer classifications.

11 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-18.

12 A. Schedule FR-16(7)(v)-18 is a classified cost of service study for the EH 13 Secondary class that shows the allocated costs from Schedules FR-16(7)(v)-3, 14 FR-16(7)(v)-7 and FR-16(7)(v)-11, summarized by the demand, energy, and 15 customer classifications.

16 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-19.

- 17A.Schedule FR-16(7)(v)-19 is a classified cost of service study for the SP Secondary18class that shows the allocated costs from Schedules FR-16(7)(v)-3, FR-16(7)(v)-719and FR-16(7)(v)-11, summarized by the demand, energy, and customer
- 20 classifications.

21 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-20.

22 A. Schedule FR-16(7)(v)-20 is a classified cost of service study for the DT 23 Secondary class that shows the allocated costs from Schedules FR-16(7)(v)-3,

- 1 FR-16(7)(v)-7 and FR-16(7)(v)-11, summarized by the demand, energy, and 2 customer classifications.
- 3 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-21.
- A. Schedule FR-16(7)(v)-21 is a classified cost of service study for the DT Primary
 class that shows the allocated costs from Schedules FR-16(7)(v)-3, FR-16(7)(v)-7
 and FR-16(7)(v)-11, summarized by the demand, energy, and customer
 classifications.

8 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-22.

9 A. Schedule FR-16(7)(v)-22 is a classified cost of service study for the Distribution
10 Primary class that shows the allocated costs from Schedules FR-16(7)(v)-3, FR11 16(7)(v)-7 and FR-16(7)(v)-11, summarized by the demand, energy, and customer
12 classifications.

13 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-23.

- A. Schedule FR-16(7)(v)-23 is a classified cost of service study for the Time-of-Day
 Rate for Service at Transmission Voltage (Rate TT) class that shows the allocated
 costs from Schedules FR-16(7)(v)-3, FR-16(7)(v)-7 and FR-16(7)(v)-11,
 summarized by the demand, energy, and customer classifications.

18 Q. PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-24.

- 19 A. Schedule FR-16(7)(v)-24 is a classified cost of service study for the Lighting class
- 20 that shows the allocated costs from Schedules FR-16(7)(v)-3, FR-16(7)(v)-7 and
- 21 FR-16(7)(v)-11, summarized by the demand, energy, and customer classifications.

1

Q.

PLEASE DESCRIBE SCHEDULE FR-16(7)(V)-25.

A. Schedule FR-16(7)(v)-25 is a classified cost of service study for the Other –
Water Pumping class that shows the allocated costs from Schedules FR-16(7)(v)3, FR-16(7)(v)-7 and FR-16(7)(v)-11, summarized by the demand, energy, and
customer classifications.

6 Q. HOW DID YOU DEVELOP THE COST OF SERVICE STUDY THAT 7 YOU USED TO ALLOCATE COSTS TO THE DIFFERENT RATE 8 CLASSES?

9 A. First, I developed various allocation factors based on customer, energy usage, and 10 demand statistics for the test period. Next, I functionalized costs into the specific 11 utility functions, *i.e.*, production, transmission and distribution. I then classified 12 the costs as demand, energy, or customer related, or a combination in some 13 instances. Lastly, I allocated the demand, energy, and customer related costs to 14 rate classes based on the cost causation guidelines published in the NARUC "Electric Utility Cost Allocation Manual," my utility company experience, and 15 16 my knowledge of cost of service studies.

A. <u>Functionalizing Costs</u>

17 Q. PLEASE EXPLAIN HOW YOU FUNCTIONALIZE COSTS.

A. The production function includes the costs associated with power generation and power purchases and their delivery to the bulk transmission system. The transmission function consists of costs associated with the high voltage system utilized for the bulk transmission of power to and from interconnected utilities to the load centers of the utility's system. The distribution function includes the radial distribution system that connects the transmission system and the ultimate
 customer.

The Company's accounting records use the Uniform System of Accounts of the Federal Energy Regulatory Commission (FERC). These accounts functionalize the Company's investment into the primary categories of production (generation), transmission, distribution, and general plant. Similarly, the Company's operating costs are categorized into production, transmission, distribution, customer services, and administrative and general (A&G) functions.

B. <u>Classifying Costs</u>

9 Q. PLEASE EXPLAIN THE CLASSIFICATION OF COSTS.

10 A. Next, functionalized costs are grouped according to their cost-causation 11 characteristics. This process is known as classification of costs. Typically, these 12 cost-causing characteristics are defined as demand-related, energy-related, or 13 customer-related.

14 Q. PLEASE DEFINE DEMAND-RELATED COSTS.

A. Demand-related costs are fixed costs incurred regardless of the level of energy sales and have a direct relationship to the kilowatts (kW) of demand that customers place on the various segments of the system. Costs that are classified as demand-related include major portions of the Company's investment and related expenses in its production and transmission facilities and a significant portion of the investment and related expenses of its distribution system. Until the Company has the full ability to bill all customers based on demand (both from a technical and a regulatory perspective), the Company will continue to use fixed and kWh
 charges to recover demand-related costs for some base rates.

3 Q. PLEASE DEFINE ENERGY-RELATED COSTS.

A. Energy-related costs are costs incurred that vary in direct relationship to the
amount of energy or kilowatt hours (kWh) generated and delivered. These costs
are often referred to as variable costs. Fuel is an example of an energy-related
cost.

8 Q. PLEASE DEFINE CUSTOMER-RELATED COSTS.

9 A. Customer-related costs are costs incurred primarily as a result of the number of 10 customers being served. These fixed costs include items of investment and related 11 expenses in functional categories such as metering, and costs associated with 12 customer accounting and sales. Customer costs do not vary significantly with the 13 customers' volume of usage but are influenced more by factors such as number of 14 customers.

C. <u>Allocation of Costs</u>

15 Q. PLEASE EXPLAIN HOW COSTS ARE ALLOCATED TO VARIOUS 16 CUSTOMER CLASSES.

A. The allocation of costs is the process of multiplying the functionalized and classified costs by allocation factors, resulting in costs being assigned to customer classes. Some costs are directly assignable to a single class of customers. Most costs, however, are attributable to more than one type of customer. Costs are allocated to the various customer groups in relationship to how those customers influence the Company to incur the costs. This relationship is referred to as "cost

1 causation." Specific allocation factors are developed that relate to the demand, 2 energy, and customer classifications identified above, to accomplish a proper 3 matching of the costs to the customer groups, based on cost causation.

4

Q. PLEASE DESCRIBE THE ALLOCATION METHODOLOGY YOU USED

5 IN THIS PROCEEDING TO ALLOCATE DEMAND-RELATED COSTS.

6 A. Each customer class's cost responsibility (i.e., the percentage of the demand 7 related costs assigned to each customer class) is equal to the ratio of their demand 8 in relation to the total demand placed on the system. The cost of service study 9 supporting the Company's proposed rate design in this proceeding allocates 10 production and transmission demand-related costs based upon the 12 monthly 11 coincident peaks (12 CP).

12 **O**. HOW WERE THE DEMAND VALUES DEVELOPED FROM COMPANY

CUSTOMER LOAD RESEARCH DATA? 13

- 14 kWh sales and load research data for the 12 months ended May 31, 2024, were A. 15 used to calculate the monthly peak contributions. The calculations of the monthly 16 demands appear on pages 11 through 32 of work paper FR-16(7)(v). The 17 following is an example of how the class group demand was calculated for rate 18 RS for the month of January 2024.
- 19 Step 1 – Determine the average demand by dividing the total kWh by the 20 number of hours in the month.

21 153,032,777 kWh \div 744 hours = 205,689 kW

1		Step 2 – Determine the coincident peak demand by dividing the average
2		demand from Step 1 by the coincident peak load factor supplied by load
3		research.
4		205,689 kW ÷ 60.58 percent = 339,509 kW
5		Step 3 – To determine the demand at generation, line losses are added by
6		multiplying the coincident peak demand from step 2 by the loss factor.
7		339,509 x 1.03511 = 351,429 kW (with losses)
8		This process was followed for all customer classes for the 12 months of
9		the test year to determine each class's monthly peak coincident with Duke Energy
10		Kentucky's monthly system peak. I used a similar procedure to develop each
11		class's diversified class peak and highest (single) non-coincident peak demands.
12	Q.	PLEASE DESCRIBE HOW THE 12 CP DEMAND ALLOCATOR WAS
13		USED TO ALLOCATE COSTS.
14	А.	The 12 CP demand allocator was used to allocate Production and Transmission
15		capacity related investments and expenses to the customer classes.
16	Q.	PLEASE DESCRIBE THE METHODS USED TO ALLOCATE
17		DISTRIBUTION RELATED COSTS TO THE VARIOUS RATE CLASSES.
18	А.	Several different allocation factors were used to allocate distribution plant to the
19		materian classes. First distribution plant was around by the type of plant such
		customer classes. First, distribution plant was grouped by the type of plant, such
20		as substations, poles, conductors, <i>etc</i> . Then it was determined whether each type

1 Substations are considered 100 percent demand-related and were allocated 2 using the average class group coincident peak demand ratios for the twelve 3 months ending May 31, 2024. This factor takes into consideration the load 4 diversity by rate group at the distribution substation level.

5 Poles and conductors are allocated partially on demand and partially based
6 on customer counts using the minimum size method.

7 Transformers were allocated between customer and demand using the 8 minimum size method. Transformers, as well as other distribution plant facilities, 9 are considered to have a customer component because the number of facilities 10 needed on the system are dependent on the number of customers. The remaining 11 costs are demand-related. I allocated the demand portion of transformers among 12 the customer classes using the maximum non-coincident peak load ratios. The 13 maximum non-coincident peak demand allocator is appropriate because 14 transformers are sized to meet the maximum demand and are close to the customer so there is little or no load diversity. I then allocated the customer 15 portion of transformers among the customer classes based on the total number of 16 17 customers.

18 Services are considered 100 percent customer-related and were allocated 19 based on a weighted-average number of customers (K217). The weighting is 20 based on an engineering analysis that prices various service drop costs based on 21 demands. For example, it is twice as costly for a service drop at 100 kVA versus a 22 service drop at 25 kVA. Customers with an average demand of 100 kVA are 23 weighted at twice the cost of customers with an average demand of 25 kVA.

1 Other distribution and customer service-related costs can be more directly 2 associated with a customer statistic such as the cost of meters (K407), customer 3 charge-offs (K411) and other customer-related studies. As an example, the 4 investment in meters can be directly associated with the costs of metering the 5 various customer groups (K407).

6

Streetlights were directly assigned to the street lighting rate class.

7 Q. PLEASE DESCRIBE THE MINIMUM SIZE METHOD USED TO 8 ALLOCATE TRANSFORMER COSTS BETWEEN CUSTOMER- AND 9 DEMAND-RELATED COSTS.

A. The minimum size study is shown on Work Paper FR-16(7)(v), page 53. The
minimum size method assumes that a minimum size distribution system can be
built to serve the minimum load requirements of the customer. For transformers,
the study involved determining the minimum size transformer currently installed
by Duke Energy Kentucky. In this case, it is a 15 kVa transformer. Duke Energy
Kentucky's 2024 cost of a 15 kVa transformer was \$2,049.

I used asset accounting records to determine the number of overhead and 16 17 pad-mounted transformers installed each year from 1910 to 2023. I then used the 18 Handy-Whitman Index for Utility Plant Materials (specifically line transformers) 19 to calculate the cost per transformer for each of the years 1910 to 2023, beginning 20 with a 2023 Handy-Whitman index of 2010.5 and 2024 cost of \$2,049. For each 21 year, I multiplied the number of transformers by the cost per transformer to get 22 the minimum size cost per year. I summarized each of the years 1910 to 2023 to 23 arrive at the minimum size transformer cost of approximately \$12.4 million. This

was classified as a customer-related cost. The difference between this customerrelated cost and the balance in FERC Line Transformer account 368 is the
demand component, resulting in allocation factors of 12.53 percent to customer
and 87.47 percent to demand. I allocated all transformer-related cost (plant,
accumulated depreciation) to customer and demand using these factors.

6 Q. DID YOU PERFORM MINIMUM SIZE STUDIES FOR OTHER TYPES 7 OF DISTRIBUTION EQUIPMENT?

A. Yes, in a manner like the transformer study, I prepared minimum size studies for
primary poles, secondary poles, overhead primary conductor, secondary overhead
conductor, underground primary conductor, and underground secondary
conductor. The results of these analyses appear on the "Minimum Size Summary"
tab. This tab also includes the results of the minimum size studies that were
performed in Case No. 2022-00372.

14 Q. DID YOU PERFORM ANY ZERO-INTERCEPT ANALYSES TO 15 DETERMINE THE CUSTOMER AND DEMAND COMPONENTS OF 16 TRANSFORMERS, POLES, AND CONDUCTORS?

A. Yes. In its Order dated April 27, 2020, in Case No. 2019-00271, the Commission
stated that the Company should perform a zero-intercept study in its next base rate
case. Page 1 of Attachment JEZ-5 shows the results of the zero-intercept analyses
of poles and transformers, and how they compare with the results of the minimum
size studies. Zero-intercept analyses of primary and secondary conductors were
not performed because of the difficulty of obtaining consistent engineering data
that matches cost versus ampacity.

1Q.PLEASE DESCRIBE THE ZERO-INTERCEPT ANALYSIS OF2TRANSFORMERS.

3 A. The zero-intercept analysis of transformers appears on page 3 of Attachment JEZ-4 5. Transformer cost and quantity data were obtained from the Company's plant 5 accounting records, and the average cost for each transformer accounting group 6 was calculated. Only transformers with ratings of about 500 kVA or lower were 7 included. The accounting data groups transformers into size ranges, e.g., 46-150 8 kVA. For each accounting group, I assumed that the typical transformer in the 9 group had a size that was approximately in the middle of the range. For example, 10 I assumed that all transformers in the 46-150 kVA accounting group were 100 11 kVA transformers. These assumptions were necessary because more granular data 12 is not available. If a straight line is drawn through the various data points (size 13 versus average cost), the calculated zero-intercept cost (*i.e.*, the cost of a zero-kW 14 transformer) is \$845. This is lower than the minimum size study cost of \$2,049. 15 The zero-intercept method results in a customer percentage of 34.06% versus the 16 customer percentage of 12.53% in the minimum size study. This very large 17 difference in customer percentages occurs because the zero-intercept method does 18 not account for the age of the transformers that exist on the Company's 19 distribution system. The minimum size study uses a Handy Whitman factor to 20 recognize that many transformers were installed decades ago and recorded on the 21 Company's books at much lower costs than current costs.

1 Q. PLEASE DESCRIBE THE ZERO-INTERCEPT ANALYSIS OF POLES.

2 A. The zero-intercept analysis of poles appears on page 2 of Attachment JEZ-5. Pole 3 cost and quantity data were obtained from the Company's plant accounting 4 records, and the average cost for each pole-size accounting group was calculated. 5 Only poles with heights of 70 feet or smaller were included. If a straight line is 6 drawn through the various data points (size versus average cost), the calculated 7 zero-intercept cost (*i.e.*, the cost of a zero-foot pole) is \$208. This is lower than 8 the minimum size study cost of \$1,569 for primary poles and \$878 for secondary 9 poles. The analysis includes both primary and secondary poles because the 10 accounting data does not specify the type of pole in each category. The zero-11 intercept method results in a customer percentage of 10.16% for primary poles 12 versus the customer percentage of 31.34% in the minimum size study. The zero-13 intercept method results in a customer percentage of 10.72% for secondary poles 14 versus the customer percentage of 18.48% in the minimum size study.

Q. WHY DID YOU USE THE MINIMUM SIZE ANALYSES IN THE COST OF SERVICE STUDY INSTEAD OF THE ZERO-INTERCEPT ANALYSES?

A. I believe that the minimum size analyses, using the Handy Whitman indexes,
 more accurately calculate the costs of minimum size systems. The minimum size
 analyses use actual costs of actual minimum size equipment. I believe that the
 zero-intercept method has the following flaws:

• The zero-intercept method does not recognize that much of the 23 equipment on the distribution system was installed many years ago, and the costs of the older equipment were recorded at much
 lower dollar values than current. This flaw is especially noticeable
 when looking at transformers.

4

5

- The zero-intercept method assumes that there is a linear relationship between equipment size and cost.
- The zero-intercept method assumes that this linear relationship
 between size and cost continues outside of the range of data that
 was used to develop the line.
- 9 The zero-intercept method attempts to accurately compute the
 10 costs of fictitious equipment that do not and cannot exist (*e.g.*, zero
 11 height poles).
- The Company's plant accounting records are not sufficiently
 detailed to perform the zero-intercept analyses without making
 numerous assumptions about the size of equipment within various
 accounting groups.

16 On the other hand, the minimum size method uses actual costs of actual 17 equipment, and it adjusts those costs for decades of inflation. I believe that the 18 minimum size methodology more accurately depicts the split between the 19 customer and demand components of transformers, poles, and conductors.

20Q.PLEASE DESCRIBE THE METHODOLOGY USED TO ALLOCATE21COMMON AND GENERAL PLANT.

A. I functionalized common and general plant based on functional salaries and wages
as presented on pages 354-355 of Duke Energy Kentucky's 2023 FERC Form 1

annual report. I then used distribution kW and various weighted O&M expense
 ratios to allocate each function to customer classes.

3 Q. PLEASE EXPLAIN HOW YOU ALLOCATED A&G EXPENSES USING 4 THIS METHODOLOGY.

A. I functionalized A&G expenses based on the same functional salaries and wages
used for general and common plant. After I functionalized the expenses, I
allocated the expenses to rate classes based on the allocation of direct O&M for
that function. For example, A&G expenses functionalized as distribution were
allocated to rate classes based on each rate class's allocation of direct distribution
O&M.

11 Q. WHAT ARE THE RATE BASE ADJUSTMENTS THAT YOU IDENTIFY 12 IN THE COST OF SERVICE?

A. While net plant is the largest single component of rate base, there are other items
which must be added to or subtracted from rate base. These items include deferred
income taxes, miscellaneous deferrals, and working capital which includes
materials and supplies and prepayments.

17 Q. HOW DID YOU ALLOCATE THE ADJUSTMENTS THAT WERE

18 SUBTRACTED FROM RATE BASE?

A. I allocated the subtractive adjustments based on the net plant ratios and otherallocators for each rate class.

1Q.HOW DID YOU ALLOCATE ADJUSTMENTS THAT WERE ADDED TO2RATE BASE?

A. I used various factors to allocate the amounts reflected in the Accumulated
Deferred Income Tax Account 190.

5 Q. HOW DID YOU ALLOCATE WORKING CAPITAL?

- A. Working capital consists of the following items: fuel inventories, emission
 allowances, materials and supplies, prepayments, cash, and other miscellaneous
 items. Fuel Inventories and emission allowances were allocated to rate groups
 based on K301, class kWh ratios; materials and supplies were allocated using
 PD29, class net plant ratios; general insurance and excise tax were allocated to
 rate groups using net plant ratios NP29, collateral asset was allocated to rate
 groups based on K301 class kWh ratios.
- 13 Cash working capital is based on the lead/lag study.

14 Q. HOW DID YOU ALLOCATE DEPRECIATION EXPENSES?

- A. I allocated depreciation expenses to rate class based on the functional class net-depreciable plant ratios.
- 17 Q. HOW DID YOU ALLOCATE REAL ESTATE AND PROPERTY TAXES?
- 18 A. I allocated real estate and property taxes to rate class based on the functional class
 19 net plant ratios.

1 Q. HOW DID YOU ALLOCATE PAYROLL AND HIGHWAY TAXES, THE

2 PSC ASSESSMENT AND OTHER MISCELLANEOUS TAXES?

A. I allocated the PSC Maintenance Taxes to class based on each rate class revenue
ratio. I allocated Payroll, Highway and Other Miscellaneous Taxes to rate class
based the class-weighted A&G expense ratio (A315).

6 Q. HOW DID YOU ALLOCATE FEDERAL AND STATE INCOME TAX 7 ADJUSTMENTS AND DEDUCTIONS?

A. I reviewed each income tax adjustment and deduction to determine the functional
cause of the adjustment and deduction, then selected the appropriate allocation
factor. For example, an "Other Deductions" item, tax depreciation in excess of
book depreciation, was allocated to the rate classes based on the class
depreciation expense ratio (DE49).

13 Q. HOW DID YOU ALLOCATE OTHER OPERATING REVENUES?

A. I evaluated each other operating revenue item to determine the source of the
revenue, then selected the appropriate allocation factor. The class ratio of present
revenues was the primary allocation factor used to allocate the revenue credits to
the respective rate groups.

18 Q. DID YOU USE ANY OTHER ALLOCATION FACTORS IN THE COST

19 **OF S**

OF SERVICE STUDY?

A. Yes, there are many plant and expense ratios that were developed internally in the cost of service study. The cost of service study lists each item's allocation factor under the column identified as "ALLO."

IV. <u>RESULTS OF COST OF SERVICE STUDY</u>

1 Q. WHAT DO THE RESULTS OF THE COST OF SERVICE STUDY SHOW?

- A. Schedule FR-16(7)(v)-14, page 1 of 15, is a summary of the cost of service study
 that shows the costs allocated to each rate class.
- 4 Q. HOW WERE THE RESULTS OF YOUR COST OF SERVICE STUDY
 5 USED IN THESE PROCEEDINGS?
- A. The results of the fully allocated cost of service study by rate class were supplied
 to Duke Energy Kentucky witness Bruce Sailers, who used this data to develop
 the proposed rate design for these proceedings.

V. DISTRIBUTION OF PROPOSED REVENUE INCREASE

9 Q. DID THE COST OF SERVICE STUDY SHOW THAT THE INCREASE 10 REQUIRED FOR EACH CUSTOMER CLASS WAS PROPORTIONAL?

11 A. No. The cost of service study revealed that there are significant differences among 12 the rate classes when comparing the actual return earned by each rate class to the 13 7.968 percent overall return on rate base being requested in this case. Put another 14 way, developing rates that generate the amount of revenue that equals the 15 allocated revenue requirement for each rate class will mean much greater 16 increases for some rate classes, in terms of percentage increases, than other 17 classes.

18 To mitigate the rate shock that may come from eliminating the 19 subsidy/excess (or rate disparities) among the rate classes, the Company is 20 proposing to use a two-step process to distribute the proposed revenue increase. 21 The first step eliminates fifteen (15) percent of the subsidy/excess revenues

JAMES E. ZIOLKOWSKI DIRECT

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between customer classes based on present revenues. The second step allocates
 the rate increase to customer classes based on electric original cost depreciated
 (OCD) rate base.

4 Q. PLEASE EXPLAIN IN GREATER DETAIL THE FIRST STEP THAT 5 ELIMINATES FIFTEEN PERCENT OF THE SUBSIDY/EXCESS 6 REVENUES.

7 A. Again, it is a general tenet of ratemaking that each class should, to the extent 8 practicable, pay the costs of providing service to that class. The elimination of a 9 portion of the subsidy/excess takes into consideration that the Company is not 10 earning the same rate of return on all customer classes. It is unlikely that equal 11 rates of return across all rate classes are achievable; nonetheless, to the extent 12 possible, large variances among the customer classes should be eliminated. A 13 comparison of revenues under present rates and at the retail average rate of return 14 is made and then 15 percent of that amount is added to, or subtracted from, the 15 rate increase to determine the proposed revenues in this proceeding.

Admittedly, this proposal lets a subsidy/excess persist, but it will reduce the gap so that each class is paying rates that more closely reflect their costs of service.

19 Q. HOW DID THIS RATE DISPARITY ARISE?

A. Rate disparities exist mostly because over the years rates have not been set based
on the cost to serve customers as determined by a class cost of service study.
Other factors include: (1) customer mix often changes between rate cases, *i.e.*,
residential, for example, may make up more or less of the total today than it did

the last time rates were set; (2) different asset classes depreciate at different rates
 and because different asset classes are allocated differently, long periods between
 rate cases can shift the relative costs to serve each rate class. Also, regulators may
 purposely allow subsidy/excesses to persist in the interest of rate gradualism.

5

Q. WHY DID YOU PROPOSE A FIFTEEN PERCENT REDUCTION OF THE

6 SUBSIDY/EXCESS REVENUES IN THESE PROCEEDINGS?

7 A. The present rate of returns by class shown on Work Paper FR-16(7)(v), page 1, 8 indicate that there is a significant difference in those returns. To ensure that each 9 rate class pays the actual cost to serve that class and move each class to the 10 average rate of return, 100 percent of the subsidy/excess would need to be 11 eliminated. However, given the wide disparity among rate classes, complete 12 elimination of the subsidy excess would cause a dramatic swing in rate impacts 13 between and among various rate classes. By proposing to eliminate only fifteen 14 percent of the subsidy/excess, the Company is choosing to invoke the rate making 15 principle of gradualism so to mitigate the volatility of 100 percent subsidy/excess 16 elimination.

VI. <u>CONCLUSION</u>

Q. WERE ATTACHMENTS JEZ-1 THROUGH JEZ-4, SCHEDULES B-7, B7.1, B-7.2, D-3, D-4 AND D-5, AS WELL AS, FR 16(7)(V), AND WORKPAPER FR 16(7)(V), AND ATTACHMENT JEZ-5, ZERO INTERCEPT PREPARED BY YOU OR UNDER YOUR SUPERVISION? A. Yes.

1 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

2 A. Yes.

VERIFICATION

STATE OF OHIO)	
)	SS:
COUNTY OF HAMILTON	Ĵ	

The undersigned, James E. Ziolkowski, Director, Rates & Regulatory Planning, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of his knowledge, information and belief.

James E. Ziolkowski Affiant

Subscribed and sworn to before me by James E. Ziolkowski on this day of <u>xcember</u>, 2024.

NOTARY PUBLIC

My Commission Expires: JULY 8, 2027



EMILIE SUNDERMAN Notary Public State of Ohio My Comm. Expires July 8, 2027

DUKE ENERGY KENTUCKY, INC. ELECTRIC COST OF SERVICE STUDY CASE NO: 2024-00354 ALLOCATION FACTORS FOR COST OF SERVICE STUDY

Attachment JEZ-1 Witness Responsible: James E. Ziolkowski Page 1 of 1

LINE	RATE	12 CP DEMAND	AVG & EXCESS	DIFFERENCE	PROD STACKING	DIFFERENCE
NO.	GROUP	RATIO %	RATIO %	%	RATIO %	%
1		A	В	C = B - A	D	E = D - A
2	Retail:					
3	Residential	42.568%	51.228%	8.660%	37.720%	-4.848%
4	Dist Secondary - DS	29.387%	24.794%	-4.593%	30.268%	0.881%
5	Dist Secondary - GS-FL	0.126%	0.102%	-0.024%	0.147%	0.021%
6	Dist Secondary - EH	0.564%	0.685%	0.121%	0.497%	-0.067%
7	Dist Secondary - SP	0.007%	0.007%	0.000%	0.007%	0.000%
8	Dist Secondary - DT	12.984%	10.184%	-2.800%	14.375%	1.391%
9	Dist Primary - DT	10.463%	8.381%	-2.082%	11.892%	1.429%
10	Dist Primary - DP	0.141%	0.299%	0.158%	0.145%	0.004%
11	Transmission	3.460%	3.654%	0.194%	4.296%	0.836%
12	Lighting	0.000%	0.404%	0.404%	0.339%	0.339%
13	Other	0.300%	0.265%	-0.035%	0.316%	0.016%
14	Total Retail	100.000%	100.000%	0.000%	100.000%	0.000%

KyPSC Case No. 2024-00354 Attachment JEZ-2 Page 1 of 1

7,621,969

1,655,440

55,392

496,139

251,329

Attachment JEZ-2 Witness Responsible: James E. Ziolkowski Page 1 of 1

K201 Constation Allocator Using 12 CB

Rate DT-Primary

Total

Other - Water Pumping

129,308,205

1,662,340

30,596,103

9,074,830

3,666,307

44,398,656

15,479,736

2,496,338

\$ 1,273,791,540 \$ 450,848,090 \$ 48,954,703

941,124

846,253

2,383,310

1,304,913

243,805

361,218

(108,796)

1.8431%

14.6664%

4.2650%

3.9804%

-2.9675%

7

8 Rate DP

9 Rate TT

10 Lighting

11

12 13

										K201 Genera	ation Allocator Usir	ng 12 CP	
						Present	Inter Class	Inter Class					
		Jurisdictional				Revenues	Subsidization	Subsidization	Rate Increase	Proposed Revenues	Proposed	ROR	Proposed Increas
		Electric	Present	Net Operating	Present	At Average	Overcollected	times	(Allocated to class	85.00% Interclass	Percent	At Proposed	Less
Line		Rate Base	Revenues	Income	ROR	ROR	(Undercollected)	15.00%	based on Rate Base) Subsidization	Increase	Rates	(Subsidy) Excess
No.	Rate Class	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
						(B) + (((D) Line 5 *						((((H) - (G))*(1-	
		FR-16(7)(v)-14,	FR-16(7)(v)-14,	Work Paper FR-	(0) ((1)	(C))/(1-		(5) * 45 000/	(H) Line 5 * ((A) / (A)			CompositeTaxRate	
		page1	page1	16(7)(v), Page 2	(C) / (A) C	CompositeTaxRate))	(B) - (E)	(F) * 15.00%	Line 5)	(B) - (G) + (H)	((H) - (G)) / (B))+ (C)) / (A)	(H) - (G)
1	Rate RS	\$ 596,725,161	\$ 197,851,566	\$ 20,426,459	3.4231%	\$ 201,190,957	\$ (3,339,391)	\$ (500,909	9) \$ 32,789,066	\$ 231,141,541	16.826%	7.611355%	\$ 33,289,975
2	Rate DS	358,384,986	128,946,845	16,735,310	4.6696%	125,001,770	3,945,075	591,761	19,692,617	148,047,701	14.813%	8.670915%	19,100,856
3	Rate GS-FL	1,511,311	800,742	224,405	14.8484%	579,201	221,541	33,231	83,011	850,522	6.217%	17.321214%	49,780
4	Rate EH	7,110,263	1,829,152	2,293	0.0322%	2,190,086	(360,934)	(54,140) 390,698	2,273,990	24.319%	4.729150%	444,838
5	Rate SP	90,221	50,918	18,798	20.8355%	30,498	20,420	3,063	4,969	52,824	3.744%	22.421921%	1,906
6	Rate DT - Secondary	150,335,601	57,206,760	6,175,703	4.1079%	56,676,670	530,090	79,514	8,260,662	65,387,908	14.301%	8.193462%	8,181,148
7	Rate DT-Primary	121,314,570	44,398,656	3,029,880	2.4975%	46,573,171	(2,174,515)	(326,177	() 6,666,022	51,390,855	15.749%	6.824625%	6,992,199
8	Rate DP	1,639,791	846,253	245,614	14.9784%	603,038	243,215	36,482		899,851	6.334%	17.432280%	53,598
9	Rate TT	25,922,814	15,479,736	1,683,202	6.4931%	14,564,744	914,992	137,249	1,424,419	16,766,906	8.315%	10.220893%	1,287,170
10	Lighting	7,180,711	2,496,338	514,605	7.1665%	2,178,477	317,861	47,679	394,548	2,843,207	13.895%	10.793034%	346,869
11	Other - Water Pumping		941,124		-2.8401%	1,259,478	(318,354)	(47,753		1,185,346	25.950%	2.286939%	
12		-,,-,	• • • • • • • •	(,)		.,,	(***,****)	(,	.,,	.,,			,
13	Total	\$ 1,273,791,540	\$ 450,848,090	\$ 48,954,703	3.8432%	\$ 450,848,090	\$ -	\$ -	\$ 69,992,562	\$ 520,840,652	15.525%	7.968458%	\$ 69,992,562
1	Rate RS	\$ 645,143,591	\$ 197,851,566	\$ 16,509,397	2.5590%	\$ 208.887.128	\$ (11,035,562)	\$ (1,655,334		201 Generation Alloca \$ 234,956,313	18.754%	6.876879%	
2	Rate DS	332,695,991	128,946,845	18,813,482	5.6549%	120,918,569	8,028,276	1,204,241	18,281,077	146,023,681	13.243%	9.508349%	17,076,836
3	Rate GS-FL	1,376,016	800,742		17.0971%	557,817	242,925	36,439		839,895	4.890%	19.233283%	
4	Rate EH	7,786,734	1,829,152		-0.6735%	2,297,628	(468,476)	(70,271		2,327,288	27.233%	4.129185%	
5	Rate SP	90,221	50,918		20.8355%	30,498	20,420	3,063		52,824	3.744%	22.421921%	
6	Rate DT - Secondary Rate DT-Primary	134,675,292 109,673,628	57,206,760 44,398,656	7,442,610 3,971,970	5.5263% 3.6216%	54,187,465 44,722,382	3,019,295 (323,726)	452,894 (48,559		64,154,040 50,473,575	12.144% 13.683%	9.399105% 7.780091%	
8	Rate DP	2,524,841	44,398,030	174,127	6.8966%	743,567	102,686	(48,558		969,575	14.573%	10.563479%	
9	Rate TT	27,005,168	15,479,736	1,595,412	5.9078%	14,737,088	742,648	111,397		16,852,251	8.867%	9.723421%	
10	Lighting	9,441,252	2,496,338	331,828	3.5147%	2,537,658	(41,320)	(6,198		3,021,321	21.030%	7.689216%	
11	Other - Water Pumping	3,378,806	941,124	(85,734)	-2.5374%	1,228,290	(287,166)	(43,075	5) 185,690	1,169,889	24.308%	2.545611%	228,765
12							-	-					
13	Total	\$ 1,273,791,540	\$ 450,848,090	\$ 48,954,703	3.8432%	\$ 450,848,090	\$ -	\$ -	\$ 69,992,562	\$ 520,840,652	15.525%	7.968458%	\$ 69,992,562
									ĸ	201 Generation Alloca	ator Using Producti	on Stacking Metho	bd
1	Rate RS	\$ 569,598,665	\$ 197,851,566	\$ 22,620,910	3.9714%	\$ 196,879,284	\$ 972,282				15.746%	8.077395%	1 . 1 . 1
2	Rate DS	363,311,952	128,946,845		4.4966%	125,785,019	3,161,826	474,274		148,435,920	15.114%	8.523816%	
3	Rate GS-FL	1,629,693	800,742		13.1876%	597,898	202,844	30,427		859,835	7.380%	15.909890%	
4	Rate EH Rate SP	6,732,566 90,221	1,829,152 50,918		0.4842% 20.8355%	2,130,384 30,498	(301,232) 20,420	(45,185 3,063		2,244,248 52,824	22.693% 3.744%	5.112918% 22.421921%	
6	Rate DT - Secondary	158,120,658	57,206,760		3.5077%	57,913,452	(706,692)	(106,004		66,001,221	15.373%	7.683259%	
7	Rate DT - Secondary	120,120,000	44 209 656	2 292 210	1 9/210/	47 942 614	(2 444 059)	(516 744		52 020 625	17 167%	6 2692520/	

(3,444,958)

239,651

171,875

16,586

(332,602)

- \$

47,843,614

15,307,861

2,479,752

1,273,726

3.8432% \$ 450,848,090 \$

606,602

(516,744)

35,948

25,781

2,488

(49,890)

- \$

7,105,225

1,681,221

498,627

201,439

69,992,562 \$

91,340

52,020,625

17,135,176

2,992,477

1,192,453

520,840,652

901,645

17.167%

6.546%

10.694%

19.875%

26.705%

15.525%

6.268353%

17.168010%

8.326985%

8.084932%

2.178995%

7.968458% \$ 69,992,562

KyPSC Case No. 2024-00354 Attachment JEZ-3 Page 1 of 1

DUKE ENERGY KENTUCKY COST OF SERVICE STUDY CALCULATION OF AVERAGE & EXCESS ALLOCATOR CASE NO: 2024-00354

Attachment JEZ-3 Witness Responsible: James E. Ziolkowski Page 1 of 1

Line No.	Rate Group	Annual Usage (a) (kWh)	System Hour CP (b) (kW)	Class Maximum NCP Demand (c) (kW)	Average Hourly Demand (kW) (Col. 1 / 8,760 hrs)	Excess Demand (Hourly kW) (Col.3 - Col.4)	Excess Demand Ratio (%)	Allocated Excess Demand (kW)	Average & Excess Hourly Demand (kW) (Col.4 + Col. 7)	Average & Excess Hourly Demand (Ratio) K201
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1										
2										
3	Residential	1,443,705,845		1,006,247	164,807	841,440	71.0099%	252,186	416,993	51.2277%
4	Dist Secondary - DS	1,228,525,857		345,706	140,243	205,463	17.3392%	61,578	201,821	24.7937%
5	Dist Secondary - GS-FL	6,217,334		1,108	710	398	0.0336%	119	829	0.1018%
6	Dist Secondary - EH	18,950,879		13,538	2,163	11,375	0.9599%	3,409	5,572	0.6845%
7	Dist Secondary - SP	282,024		107	32	75	0.0063%	22	54	0.0066%
9	Dist Secondary - DT	598,073,462		117,067	68,273	48,794	4.1178%	14,624	82,897	10.1839%
10	Dist Primary - DT	498,572,884		94,629	56,915	37,714	3.1827%	11,303	68,218	8.3806%
8	Dist Primary - DP	5,854,739		6,558	668	5,890	0.4971%	1,765	2,433	0.2989%
11	Transmission	187,967,402		49,094	21,457	27,637	2.3323%	8,283	29,740	3.6536%
12	Lighting	18,575,013		6,010	2,120	3,890	0.3283%	1,166	3,286	0.4037%
13	Other	12,897,022		3,758	1,472	2,286	0.1929%	685	2,157	0.2650%
14	Total	4,019,622,460	814,000	1,643,822	458,860	1,184,962	100.0000%	355,140	814,000	100.0000%

DUKE ENERGY KENTUCKY COST OF SERVICE STUDY CALCULATION OF PRODUCTION STACKING (TOD) ALLOCATOR CASE NO: 2024-00354

Attachment JEZ-4 Witness Responsible: James E. Ziolkowski Page 1 of 1

			Baseload East Bend Net		Peak		
Line No.	Rate Group	Annual Usage (a) (kWh)	Plant (Allocated on kWh)	12CP Demand (kW)	Woodsdale Net Plant (Allocated on 12CP)	Total Revenue Requirement	Allocator K201
		(1)	(2)	(3)	(4)	(5)	(6)
1							
2							
3	Residential	1,443,705,845	\$165,168,874	275,875	\$71,501,182	\$236,670,056	37.7201
4	Dist Secondary - DS	1,228,525,857	\$140,550,953	190,450	\$49,360,762	\$189,911,714	30.2678
5	Dist Secondary - GS-FL	6,217,334	\$711,301	819	\$212,268	\$923,570	0.1472
6	Dist Secondary - EH	18,950,879	\$2,168,098	3,656	\$947,561	\$3,115,658	0.4966
7	Dist Secondary - SP	282,024	\$32,265	44	\$11,404	\$43,669	0.0070
9	Dist Secondary - DT	598,073,462	\$68,423,301	83,991	\$21,768,757	\$90,192,058	14.3747
10	Dist Primary - DT	498,572,884	\$57,039,820	67,809	\$17,574,712	\$74,614,532	11.8919
8	Dist Primary - DP	5,854,739	\$669,818	917	\$237,668	\$907,486	0.1446
11	Transmission	187,967,402	\$21,504,633	21,024	\$5,448,993	\$26,953,625	4.2958
12	Lighting	18,575,013	\$2,125,096	-	\$0	\$2,125,096	0.3387
13	Other	12,897,022	\$1,475,499	1,946	\$504,364	\$1,979,863	0.3155
14	Total	4,019,622,460	\$459,869,659	646,531	\$167,567,669	\$627,437,328	100.0000

DUKE ENERGY KENTUCKY, INC. ELECTRIC COST OF SERVICE STUDY CASE NO: 2024-00354 SUMMARY OF MINIMUM SIZE AND ZERO INTERCEPT STUDIES

Attachment JEZ-5 Witness Responsible: James E. Ziolkowski Page 1 of 3

	Minimum Size Method Zero Intercept Method														
		WPE-3.2d	Minimum	Cost											
Account	Class of Property	<u>Reference</u>	Size	Per	Loa	ded Cost	<u>Quantity</u>		Loaded Cost	<u>Customer</u>	<u>Demand</u>	Zer	o Intercept Cost	<u>Customer</u>	<u>Demand</u>
	Poles, Towers & Fixtures														
364	Primary	 pages 55-57	40 ft, Class 4, Wood	Pole	\$	1,569	32,954	\$	67,434,637	31.34%	68.66%	\$	208	10.16%	89.84%
364	Secondary	pages 58-60	35 ft, Class 5, Wood	Pole	\$	878	<u>11,582</u>	\$	22,478,212	18.48%	81.52%	\$	208	10.72%	89.28%
	•						44,536	\$	89,912,849						
	Overhead Conductors						,								
365	Primary	pages 61-63	1/0 ACSR Primary OH	Mile of	\$	25,770	4,465	\$	130,413,408	19.56%	80.44%		Not Available		
	,		Conductor	Conductor											
365	Secondary	pages 64-66	#2 ALTX Secondary OH	Mile of	\$	27,328	<u>1,573</u>	\$	53,267,448	17.91%	82.09%		Not Available		
			Conductor	Conductor											
							6,038	\$	183,680,856						
	Underground Conductor	s													
367	Primary	pages 67-69	1/0 ALTRXPE 15KV	Mile of	\$	29,168	1,451	\$	141,514,576	9.91%	90.09%		Not Available		
			Primary UG cable	Conductor											
367	Secondary	pages 70-72	4/0 ALTX Secondary UG	Mile of	\$	25,287	<u>510</u>	\$	28,984,913	14.78%	85.22%		Not Available		
			cable	Conductor											
							1,961	\$	170,499,489						
			45114				00.054	•				•	0.45		
368	Line Transformer	pages 52-54	15 kVa	Transformer	\$	2,049	39,951	\$	99,119,721	12.53%	87.47%	\$	845	34.06%	65.94%

DUKE ENERGY KENTUCKY, INC. ELECTRIC COST OF SERVICE STUDY CASE NO: 2024-00354 ZERO INTERCEPT - POLES

Attachment JEZ-5 Witness Responsible: James E. Ziolkowski Page 2 of 3

TYPE	<u>COST</u>	QUANTITY	AVERAGE COST
Pole: Wood, 10'	\$14,105	6	\$908
Pole: Wood, 25'	\$103,606	537	\$117
Pole: Wood, 30'	\$570,981	1,287	\$146
Pole: Wood, 35'	\$2,952,357	5,495	\$186
Pole: Wood, 40'	\$10,017,325	14,081	\$237
Pole: Wood, 45'	\$9,104,887	7,658	\$298
Pole: Wood, 50'	\$3,032,262	1,880	\$466
Pole: Wood, 55'	\$1,021,936	578	\$654
Pole: Wood, 60'	\$491,377	215	\$885
Pole: Wood, 65'	\$211,222	49	\$1,554
Pole: Wood, 70'	\$52,073	16	\$1,059
Pole: Wood, 30' or less	\$456,334	169	\$2,417
Pole: Wood, 35'	\$2,422,857	964	\$2,511
Pole: Wood, 40'	\$7,095,734	2,149	\$3,494
Pole: Wood, 45'	\$12,206,758	3,470	\$3,108
Pole: Wood, 50'	\$4,680,061	1,247	\$3,769
Pole: Wood, 55'	\$2,158,295	549	\$4,170
Pole: Wood, 60'	\$1,033,501	220	\$4,634
Pole: Wood, 65'	\$302,227	59	\$4,292
Grand Total	\$57,927,899	40,629	\$892
	Height	Average Cost	
Pole: Wood, 10'	10	\$908	
Pole: Wood, 25'	25	\$117	
Pole: Wood, 30'	30	\$146	
Pole: Wood, 35'	35	\$186	
Pole: Wood, 40'	40	\$237	
Pole: Wood, 45'	45	\$298	
Pole: Wood, 50'	50	\$466	
Pole: Wood, 55'	55	\$654	
Pole: Wood, 60'	60	\$885	
Pole: Wood, 65'	65	\$1,554	
Pole: Wood, 70'	70	\$1,059	
Pole: Wood, 30' or less	30	\$2,417	
Pole: Wood, 35'	35	\$2,511	
Pole: Wood, 40'	40	\$3,494	
Pole: Wood, 45'	45	\$3,108	
Pole: Wood, 50'	50	\$3,769	
Pole: Wood, 55'	55	\$4,170	
Pole: Wood, 60'	60	\$4,634	
Pole: Wood, 65'	65	\$4,292	

Zero Intercept

\$208

DUKE ENERGY KENTUCKY, INC. ELECTRIC COST OF SERVICE STUDY CASE NO: 2024-00354 ZERO INTERCEPT - TRANSFORMERS

Attachment JEZ-5 Witness Responsible: James E. Ziolkowski Page 3 of 3

<u>TY</u>	PE <u>COST</u>	QUANTITY	AVERAGE COST
Conv 2009 Transformer OH 46-150 KVA	\$1,481,993	676	\$735
Conv 2009 Transformer OH 76-250 KVA	\$1,141,170	653	\$585
Conv 2009 Transformer UG 46-150 KVA	\$1,704,274	446	\$1,558
Conv 2009 Transformer UG 76-250 KVA	\$2,551,797	1,240	\$789
Conv 2009 Xfrmr OH 251<833 KVA	\$16,992	4	\$973
Transformers OH 0 to 99 KVA	\$25,312,931	23,475	\$633
Transformers OH 100 to 499 KVA	\$2,902,069	361	\$1,984
Transformers UG 0 to 99 KVA	\$15,201,819	7,617	\$973
Transformers UG 100 to 499 KVA	\$8,092,791	1,032	\$2,969
Grand Total	\$58,405,836	35,504	\$1,198

Size	Average Cost
100	\$735
100	\$585
100	\$1,558
100	\$789
500	\$973
50	\$633
300	\$1,984
50	\$973
300	\$2,969
Zero Intercept	\$845