

**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 and Newtown Artesian 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 Commission of West Virginia; Maine Public Utility Commission; Iowa Utility Board; Connecticut Public 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.

## LIST OF CASES IN WHICH JOHN J. SPANOS SUBMITTED TESTIMONY

	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<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-EI-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

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	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<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



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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

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	<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-E	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-E	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

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	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<u>Subject</u>
133.	2011	FERC	RP11-___-000	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	Integritys – MN Energy Resource Group	Depreciation
154.	2012	TX PUC	SOAH 582-14-1051/ TECQ 2013-2007-UCR	Aqua Texas	Depreciation
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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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	ER13- -0000	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	ER14- -0000	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

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	<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

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

	<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 Western Massachusetts Electric Company	Depreciation
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

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

	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<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

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

	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<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	PA PUC	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-	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. Com.	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. Com.	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.	2020	NJ BPU	Docket No. ER20020146	Jersey Central Power & Light Company	Depreciation
331.	2020	PA PUC	Docket No. R-2020-3018835	NiSource - Columbia Gas of Pennsylvania, Inc.	Depreciation
332.	2020	PA PUC	Docket No. R-2020-3019369	Pennsylvania-American Water Company	Depreciation
333.	2020	PA PUC	Docket No. R-2020-3019371	Pennsylvania-American Water Company	Depreciation
334.	2020	MO PSC	GO-2018-0309, GO-2018-0310	Spire Missouri, Inc.	Depreciation
335.	2020	NM PRC	Case No. 20-00104-UT	El Paso Electric Company	Depreciation
336.	2020	MD PSC	Case No. 9644	Columbia Gas of Maryland, Inc.	Depreciation
337.	2020	MO PSC	GO-2018-0309, GO-2018-0310	Spire Missouri, Inc.	Depreciation
338.	2020	VA St CC	Case No. PUR-2020-00095	Virginia Natural Gas Company	Depreciation



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

	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<u>Subject</u>
339.	2020	SC PSC	Docket No. 2020-125-E	Dominion Energy South Carolina, Inc.	Depreciation
340.	2020	WV PSC	Case No. 20-0745-G-D	Hope Gas, Inc. d/b/a Dominion Energy West Virginia	Depreciation
341.	2020	VA St CC	Case No. PUR-2020-00106	Aqua Virginia, Inc.	Depreciation
342.	2020	PA PUC	Docket No. R-2020-3020256	City of Bethlehem – Bureau of Water	Depreciation
343.	2020	NE PSC	Docket No. NG-109	Black Hills Nebraska	Depreciation
344.	2020	NY PSC	Case No. 20-E-0428 & 20-G-0429	Central Hudson Gas & Electric Corporation	Depreciation
345.	2020	FERC	ER20-598	Duke Energy Indiana	Depreciation
346.	2020	FERC	ER20-855	Northern Indiana Public Service Company	Depreciation
347.	2020	OR PSC	UE 374	PacifiCorp	Depreciation
348.	2020	MD PSC	Case No. 9490 Phase II	Potomac Edison – Maryland	Depreciation
349.	2020	IN URC	Case No. 45447	Southern Indiana Gas and Electric Company	Depreciation
350.	2020	IN URC	IURC Cause No. 45468	Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery of	Depreciation
351.	2020	KY PSC	Case No. 2020-00349	Kentucky Utilities Company	Depreciation
352.	2020	KY PSC	Case No. 2020-00350	Louisville Gas and Electric Company	Depreciation
353.	2020	FERC	Docket No. ER21- 000	South FirstEnergy Operating Companies	Depreciation
354.	2020	OH PUC	Case Nos 20-1651-EL-AIR, 20-1652-EL-AAM & 20-1653-EL-ATA	Dayton Power and Light Company	Depreciation
355.	2020	OR PSC	UG 388	Northwest Natural Gas Company	Depreciation
356.	2020	MO PSC	Case No. GR-2021-0241	Ameren Missouri Gas	Depreciation
357.	2021	KY PSC	Case No. 2021-00103	East Kentucky Power Cooperative	Depreciation
358.	2021	MPUC	Docket No. 2021-00024	Bangor Natural Gas	Depreciation
359.	2021	PA PUC	Docket No. R-2021-3024296	Columbia Gas of Pennsylvania, Inc.	Depreciation
360.	2021	NC Util. Com.	Doc. No. G-5, Sub 632	Public Service of North Carolina	Depreciation
361.	2021	MO PSC	ER-2021-0240	Ameren Missouri	Depreciation
362.	2021	PA PUC	Docket No. R-2021-3024750	Duquesne Light Company	Depreciation
363.	2021	KS PSC	21-BHCG-418-RTS	Black Hills Kansas Gas	Depreciation
364.	2021	KY PSC	Case No. 2021-00190	Duke Energy Kentucky	Depreciation
365.	2021	OR PSC	Docket UM 2152	Portland General Electric	Depreciation
366.	2021	ILL CC	Docket No. 20-0810	North Shore Gas Company	Depreciation
367.	2021	FERC	ER21-1939-000	Duke Energy Progress	Depreciation
368.	2021	FERC	ER21-1940-000	Duke Energy Carolina	Depreciation
369.	2021	KY PSC	Case No. 2021-00183	NiSource Columbia Gas of Kentucky	Depreciation
370.	2021	MD PSC	Case No. 9664	NiSource Columbia Gas of Maryland	Depreciation
371.	2021	OH PUC	Case No. 21-0596-ST-AIR	Aqua Ohio	Depreciation
372.	2021	PA PUC	Docket No. R-2021-3026116	Hanover Borough Municipal Water Works	Depreciation
373.	2021	OR PSC	UM-2180	Idaho Power Company	Depreciation
374.	2021	ID PUC	Case No. IPC-E-21-18	Idaho Power Company	Depreciation
375.	2021	WPSC	6690-DU-104	Wisconsin Public Service Company	Depreciation

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

	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<u>Subject</u>
376.	2021	PAPUC	Docket No. R-2021-3026116	Borough of Hanover	Depreciation
377.	2021	OH PUC	Case No. 21-637-GA-AIR; Case No. 21-638-GA-ALT; Case No. 21-639-GA-UNC; Case No. 21-640-GA-AAM	NiSource Columbia Gas of Ohio	Depreciation
378.	2021	TX PUC	Texas PUC Docket No. 52195; SOHA Docket No. 473-21-2606	El Paso Electric	Depreciation
379.	2021	MO PSC	Case No. GR.2021-0108	Spire Missouri	Depreciation
380.	2021	WV PSC	Case No. 21-0215-WS-P	West Virginia American Water Company	Depreciation
381.	2021	FERC	ER21-2736	Duke Energy Carolinas	Depreciation
382.	2021	FERC	ER21-2737	Duke Energy Progress	Depreciation
383.	2021	IN URC	Cause #45621	Northern Indiana Public Service Company	Depreciation
384.	2021	PA PUC	Docket No. R-2021-3026682	City of Lancaster	Depreciation
385.	2021	OH PUC	Case No. 21-887-EL-AIR; Case No. 21-888-EL-ATA; Case No. 889-EI-AAM	Duke Energy Ohio	Depreciation
386.	2021	AK PSC	Docket No. 21-097-U	Black Hills Energy Arkansas, Inc.	Depreciation
387.	2021	OK CC	Cause No. PUD202100164	Oklahoma Gas & Electric	Depreciation
388.	2021	FERC	Case ER-22-392-001	El Paso Electric	Depreciation
389.	2021	FERC	Case ER-21-XXX	MidAmerican Electric	Depreciation
390.	2021	PA PUC	Docket Nos. R-2021-3027385, R-2021-3027386	Aqua Pennsylvania, Inc. Aqua Pennsylvania Wastewater, Inc.	Depreciation
391.	2022	FERC	Case ER-22-282-000	El Paso Electric	Depreciation
392.	2022	ILL CC	Docket No. 22-0154	MidAmerican Gas	Depreciation
393.	2022	MO PSC	Case No. ER-2022-0129	Evergy Metro	Depreciation
394.	2022	MO PSC	Case No. ER-2022-0130	Evergy Missouri West	Depreciation
395.	2022	PA PUC	Docket No. R-2022-3031211	NiSource Columbia Gas of Pennsylvania, Inc.	Depreciation
396.	2022	MA DPU	D.P.U. 22-20	The Berkshire Gas Company	Depreciation
397.	2022	PA PUC	R-2022-3031672; R-2022-	Pennsylvania-American Water Company	Depreciation
398.	2022	SD PUC	Docket No. NG22-	MidAmerican Gas	Depreciation
399.	2022	MD PSC	Case No. 9680	NiSource Columbia Gas of Maryland	Depreciation
400.	2022	WYPSC	Docket No. 20003-214-ER-22	Black Hills Energy – Cheyenne Light, Fuel and Power Company	Depreciation
401.	2022	MA DPU	D.P.U. 22.22	NSTAR Electric Company d/b/a Eversource Energy	Depreciation
402.	2022	NC Util Com	Docket No. W-218, Sub 573	Aqua North Carolina, Inc.	Depreciation
403.	2022	OR PUC	UM2213	Northwest Natural Gas	Depreciation
404.	2022	OR PUC	UM2214	Northwest Natural Gas	Depreciation
405.	2022	ME PUC	Docket No. 2022-00152	Central Maine Power	Depreciation

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

	<u>Year</u>	<u>Jurisdiction</u>	<u>Docket No.</u>	<u>Client Utility</u>	<u>Subject</u>
406.	2022	SC PSC	Docket No. 2022-254-E	Duke Energy Progress	Depreciation
407.	2022	NC Util Com	Docket No. E-2, SUB 1300	Duke Energy Progress	Depreciation
408.	2022	IN URC	Cause #45772	Northern Indiana Public Service Company	Depreciation
409.	2022	PA PUC	R-2022-3031340	The York Water Company	Depreciation
410.	2022	PA PUC	R-2022-3032806	The York Water Company	Depreciation
411.	2022	PA PUC	R-2022-3031704	Borough of Ambler	Depreciation
412.	2022	MO PSC	ER-2022-0337	Ameren Missouri	Depreciation
413.	2022	OH PUC	Case No. 22-507-GA-AIR	Duke Energy Ohio	Depreciation
414.	2022	PA PUC	R-2022-3035730	National Fuel Gas Distribution Corporation – PA Division	Depreciation
415.	2022	WY PSC	20003-214-ER-22	Cheyenne Light, Fuel and Power Company	Depreciation
416.	2022	NJ BPU	BPU Docket No.	Jersey Central Power & Light Company	Depreciation
417.	2022	KY PSC	Case No. 2022-00372	Duke Energy Kentucky	Depreciation
418.	2022	TX PUC	SOAH Docket No. 473-23-04521	Aqua Texas, Inc.	Depreciation
419.	2022	NC Util Com	Docket No. E-7, Sub 1276	Duke Energy Carolinas, LLC	Depreciation
420.	2022	KY PSC	Case No. 2022-00432	Bluegrass Water	Depreciation
421.	2023	ILL CC	Docket No. 23-0069	The Peoples Gas Light and Coke Company	Depreciation
422.	2023	ILL CC	Docket No. 23-0068	North Shore Gas Company	Depreciation
423.	2023	WV PSC	Case No. 23-0030-E-D	Monongahela Power Company and The Potomac Edison Company	Depreciation
424.	2023	ID PUC	AVU-E-23-01; AVU-G-23-01	Avista Corporation	Depreciation
425.	2023	ILL CC	Docket No. 23-0066	Northern Illinois Gas Company d/b/a Nicor Gas Company	Depreciation
426.	2023	SC PSC	Docket No. 2023-70-G	Dominion Energy South Carolina, Inc.	Depreciation
427.	2023	WY PSC	Docket No. XXXX	Black Hills Wyoming Gas Company d/b/a Black Hills Energy	Depreciation
428.	2023	PSC MD	Case No. 9695	The Potomac Edison Company	Depreciation
429.	2023	OR PUC	Case No. UM2277	Avista Corporation	Depreciation
430.	2023	OH PUC	Case No. 23-0154-GA-AIR	Northeast Ohio Natural Gas Corporation	Depreciation



LONDONDERRY, NEW HAMPSHIRE

## **2022 DEPRECIATION STUDY**

CALCULATED ANNUAL DEPRECIATION  
ACCRUALS RELATED TO ELECTRIC PLANT  
AS OF DECEMBER 31, 2022

*Prepared by:*



**GANNETT FLEMING**

**Excellence Delivered As Promised**

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
Londonderry, New Hampshire

2022 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION  
ACCRUALS RELATED TO ELECTRIC PLANT  
AS OF DECEMBER 31, 2022

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC  
Camp Hill, Pennsylvania



**Gannett Fleming**  
**Valuation and Rate Consultants, LLC**  
207 Senate Avenue  
Camp Hill, PA 17011  
P 717.763.7211 | F 717.763.8150

[gannettfleming.com](http://gannettfleming.com)

April 25, 2023

Liberty Utilities (Granite State Electric) Corp.  
15 Buttrick Road  
Londonderry, NH 03053

Attention Erica Menard  
Senior Director, Rates & Regulatory Affairs

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the electric plant of Liberty Utilities (Granite State Electric) Corp. as of December 31, 2022. 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 depreciation.

Respectfully submitted,

GANNETT FLEMING VALUATION  
AND RATE CONSULTANTS, LLC.

A handwritten signature in blue ink that reads "John J. Spanos".

JOHN J. SPANOS  
President

JJS:mle

074254.000

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## **LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP. DEPRECIATION STUDY**

### **EXECUTIVE SUMMARY**

Pursuant to the request of Liberty Utilities (Granite State Electric) Corp. (“GSE” or “Company”), Gannett Fleming Valuation and Rate Consultants, LLC (“Gannett Fleming”) conducted a depreciation study related to the electric plant of GSE as of December 31, 2022. 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.

GSE’s accounting policy has not changed since the last depreciation study was prepared. However, there have been changes to the plant in service due to system improvements. These improvements have produced changes in the life and net salvage estimates since the last depreciation study, which creates new depreciation rates. The overall impact of the updated depreciation study is a proposed decrease.

Gannett Fleming recommends the calculated annual depreciation accrual rates set forth herein apply specifically to electric plant in service as of December 31, 2022 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 \$11.7 million when applied to depreciable plant balances as of December 31, 2022. The results are summarized at the functional level as follows:

**SUMMARY OF ORIGINAL COST, ACCRUAL RATES AND AMOUNTS**

<u>FUNCTION</u>	<u>ORIGINAL COST</u>	<u>PROPOSED RATE</u>	<u>ANNUAL ACCRUAL</u>
INTANGIBLE PLANT	\$ 28,664,068.94	6.99	\$ 2,002,295
DISTRIBUTION PLANT	289,191,592.82	3.01	8,704,271
GENERAL PLANT	<u>27,197,403.45</u>	3.65	<u>991,414</u>
<b>TOTAL DEPRECIABLE PLANT</b>	<b><u>\$345,053,065.21</u></b>	<b>3.39</b>	<b><u>\$11,697,980</u></b>

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## PART I. INTRODUCTION

## **LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.**

### **DEPRECIATION STUDY**

#### **PART I. INTRODUCTION**

##### **SCOPE**

This report sets forth the results of the depreciation study for Liberty Utilities (Granite State Electric) Corp. to determine the annual depreciation accrual rates and amounts for book purposes applicable to the original cost of electric plant as of December 31, 2022. 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 plant in service as of December 31, 2022.

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 2022, 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 utilities.

##### **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 methods used in the service life study. Part III, Service Life Considerations, presents the results of the average service life analysis. Part IV, Net Salvage Considerations, presents the results of 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. 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 widely accepted in jurisdictions throughout North America. Gannett Fleming recommends its continued use. 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-4 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.

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## **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 to the maximum age, and dividing this area by the percent surviving at the observation age. For example, in Figure 1, the remaining life at age 30 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 Iowa 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 Iowa type curves. There are four families in the Iowa 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 Iowa curves were developed at the Iowa State College Engineering Experiment Station through an extensive process of observation and classification of the ages at which industrial property had been retired. A report of the study which resulted in the classification of property survivor characteristics into 18 type curves, which constitute three of the four families, was published in 1935 in the form of the Experiment Station's Bulletin 125.

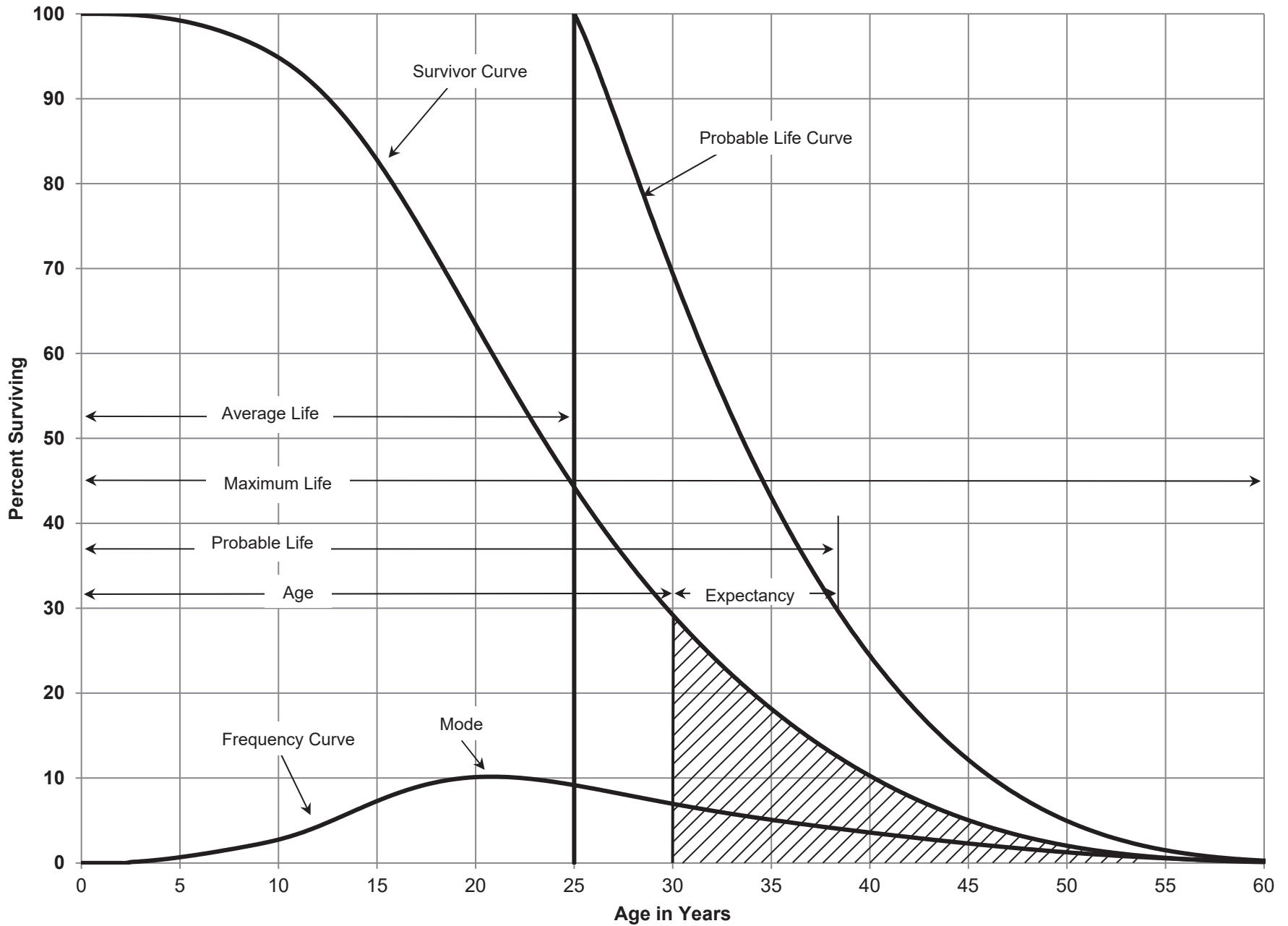


FIGURE 1. TYPICAL SURVIVOR CURVE AND DERIVED CURVES

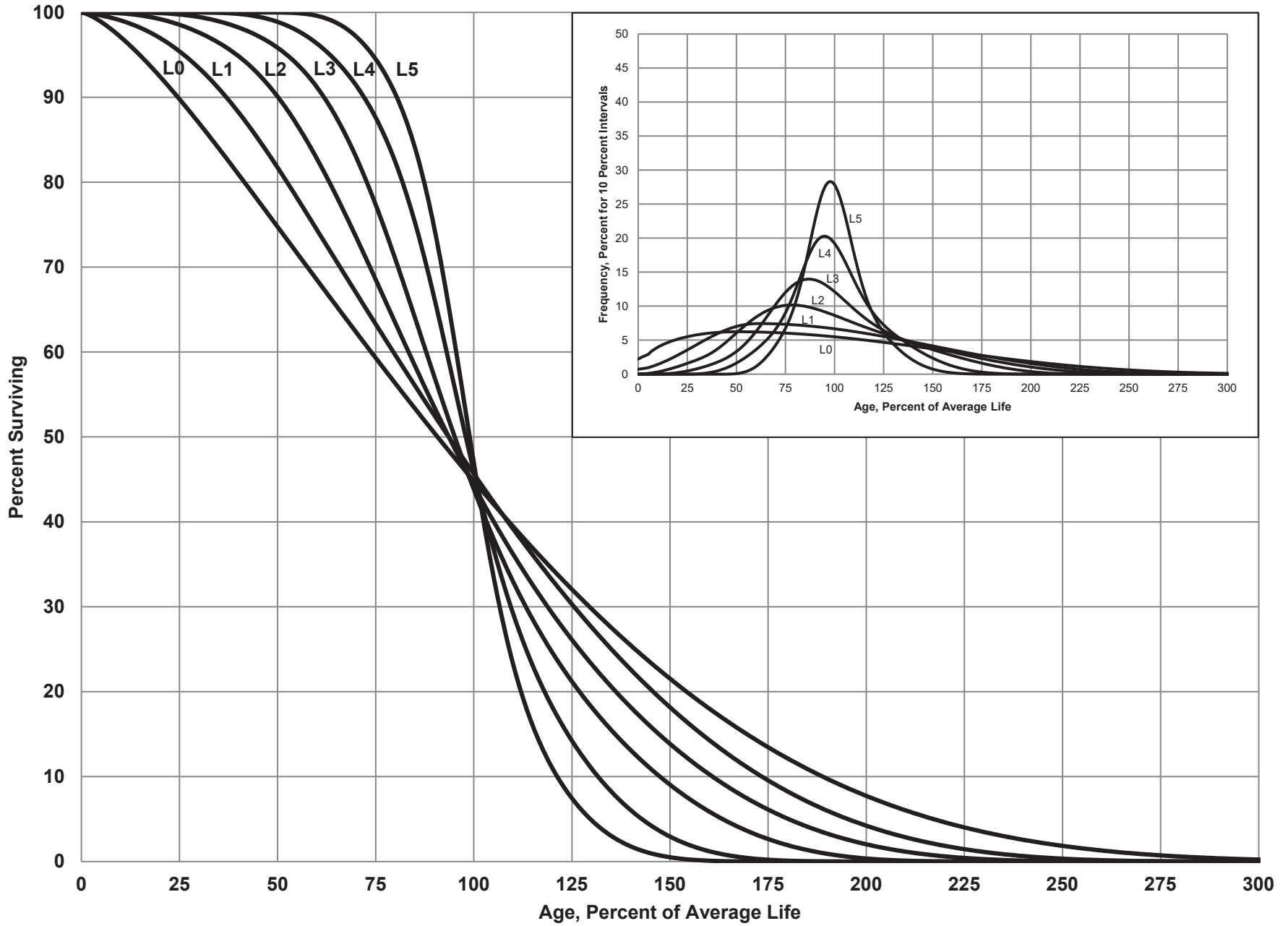


FIGURE 2. LEFT MODAL OR "L" IOWA TYPE SURVIVOR CURVES

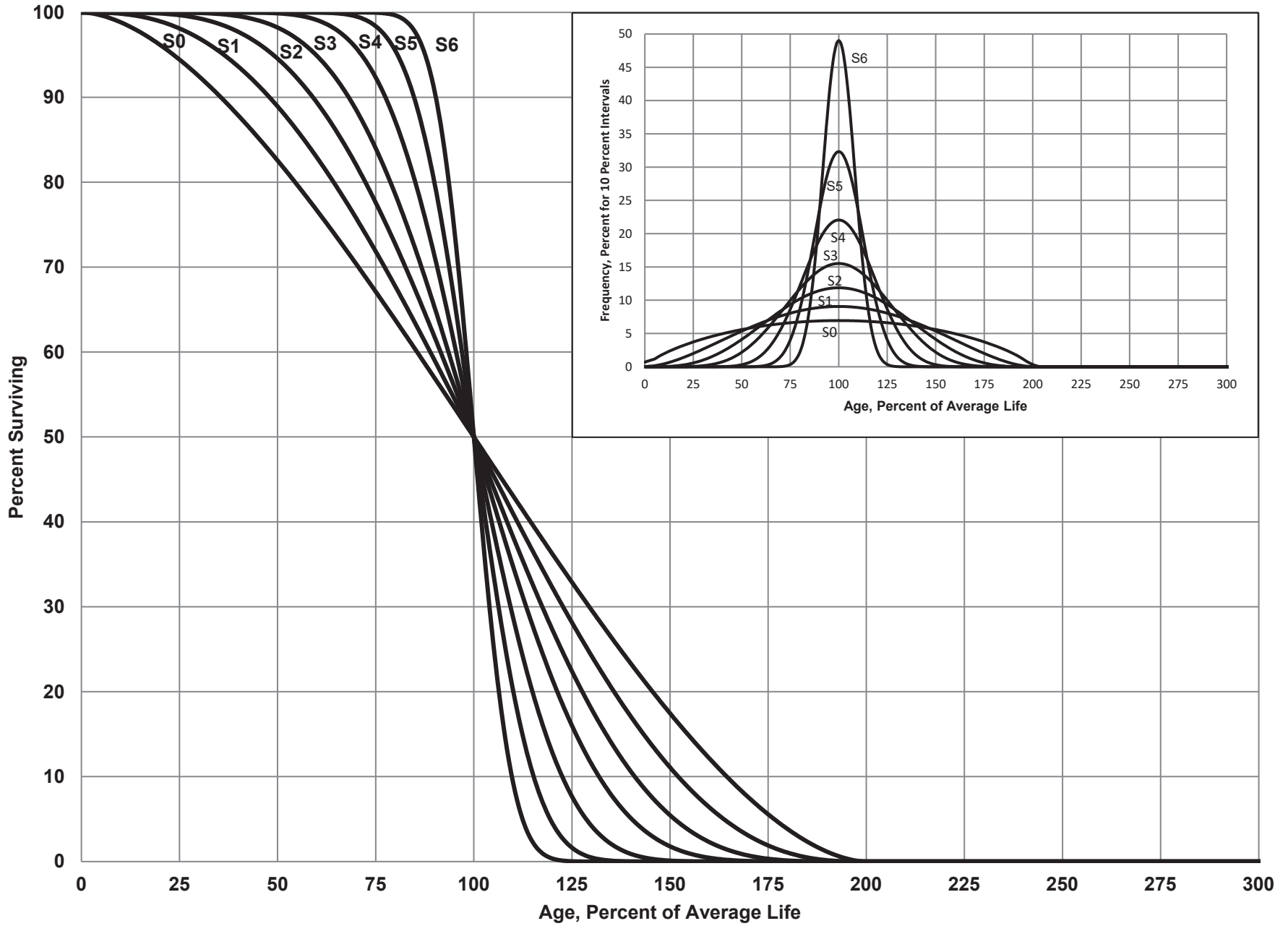


FIGURE 3. SYMMETRICAL OR "S" IOWA TYPE SURVIVOR CURVES

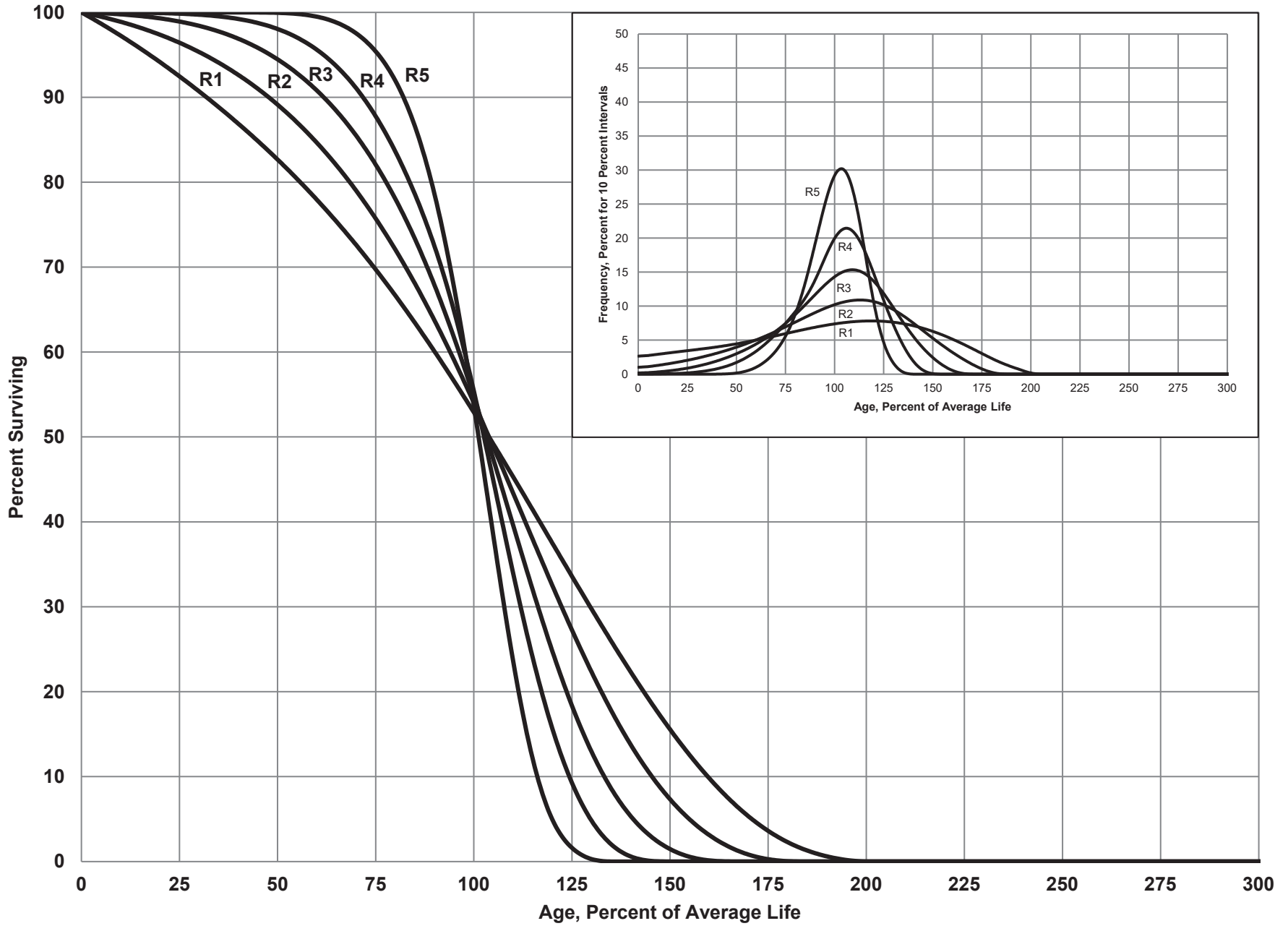


FIGURE 4. RIGHT MODAL OR "R" IOWA TYPE SURVIVOR CURVES

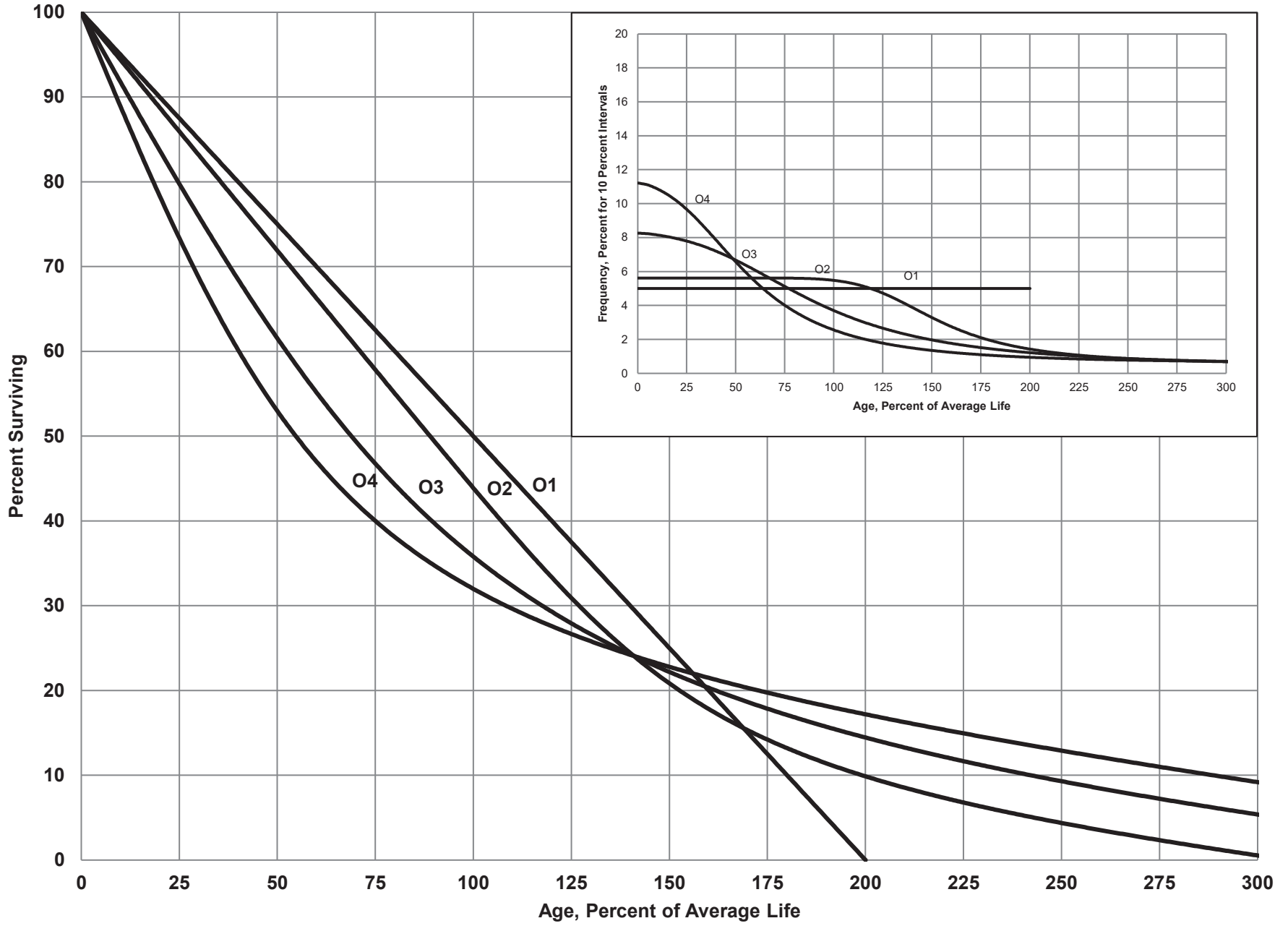


FIGURE 5. ORIGIN MODAL OR "O" IOWA TYPE SURVIVOR CURVES

These curve types have also been presented in subsequent Experiment Station bulletins and in the text, "Engineering Valuation and Depreciation."<sup>1</sup> 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,"<sup>2</sup> "Engineering Valuation and Depreciation,"<sup>3</sup> and "Depreciation Systems."<sup>4</sup>

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 experience band. The band of years which represent the installation dates of the property exposed to retirement during the experience band is referred to as the placement band. An example of the calculations used in the development of a life table follows. The example includes schedules of annual aged property transactions, a schedule of plant exposed to retirement, a life table and illustrations of smoothing the stub survivor curve.

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

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

<sup>3</sup>Marston, Anson, Robley Winfrey, and Jean C. Hempstead, Supra Note 1.

<sup>4</sup>Wolf, Frank K. and W. Chester Fitch. Depreciation Systems. Iowa State University Press. 1994.

## **Schedules of Annual Transactions in Plant Records**

The property group used to illustrate the retirement rate method is observed for the experience band 2013-2022 for which there were placements during the years 2008-2022. 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 2008 were retired in 2013. The \$10,000 retirement occurred during the age interval between 4½ and 5½ years on the basis that approximately one-half of the amount of property was installed prior to and subsequent to July 1 of each year. That is, on the average, property installed during a year is placed in service at the midpoint of the year for the purpose of the analysis. All retirements also are stated as occurring at the midpoint of a one-year age interval of time, except the first age interval which encompasses only one-half year.

The total retirements occurring in each age interval in a band are determined by summing the amounts for each transaction year-installation year combination for that age interval. For example, the total of \$143,000 retired for age interval 4½-5½ is the sum of the retirements entered on Schedule 1 immediately above the stair step line drawn on the table beginning with the 2013 retirements of 2008 installations and ending with the 2022 retirements of the 2017 installations. Thus, the total amount of 143 for age interval 4½-5½ equals the sum of:

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



SCHEDULE 1. RETIREMENTS FOR EACH YEAR 2013-2022  
SUMMARIZED BY AGE INTERVAL

Experience Band 2013-2022

Placement Band 2008-2022

Year	Retirements, Thousands of Dollars										Total During Age Interval	Age Interval
	During Year											
Placed	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Age Interval	Interval
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2008	10	11	12	13	14	16	23	24	25	26	26	13½-14½
2009	11	12	13	15	16	18	20	21	22	19	44	12½-13½
2010	11	12	13	14	16	17	19	21	22	18	64	11½-12½
2011	8	9	10	11	11	13	14	15	16	17	83	10½-11½
2012	9	10	11	12	13	14	16	17	19	20	93	9½-10½
2013	4	9	10	11	12	13	14	15	16	20	105	8½-9½
2014		5	11	12	13	14	15	16	18	20	113	7½-8½
2015			6	12	13	15	16	17	19	19	124	6½-7½
2016				6	13	15	16	17	19	19	131	5½-6½
2017					7	14	16	17	19	20	143	4½-5½
2018						8	18	20	22	23	146	3½-4½
2019							9	20	22	25	150	2½-3½
2020								11	23	25	151	1½-2½
2021									11	24	153	½-1½
2022										13	80	0-½
<b>Total</b>	<b>53</b>	<b>68</b>	<b>86</b>	<b>106</b>	<b>128</b>	<b>157</b>	<b>196</b>	<b>231</b>	<b>273</b>	<b>308</b>	<b>1,606</b>	

SCHEDULE 2. OTHER TRANSACTIONS FOR EACH YEAR 2013-2022  
SUMMARIZED BY AGE INTERVAL

Experience Band 2013-2022

Placement Band 2008-2022

Year Placed	Acquisitions, Transfers and Sales, Thousands of Dollars										Total During Age Interval	Age Interval
	During Year											
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2008	-	-	-	-	-	-	60 <sup>a</sup>	-	-	-	-	13½-14½
2009	-	-	-	-	-	-	-	-	-	-	-	12½-13½
2010	-	-	-	-	-	-	-	-	-	-	-	11½-12½
2011	-	-	-	-	-	-	-	(5) <sup>b</sup>	-	-	60	10½-11½
2012	-	-	-	-	-	-	-	6 <sup>a</sup>	-	-	-	9½-10½
2013	-	-	-	-	-	-	-	-	-	-	(5)	8½-9½
2014	-	-	-	-	-	-	-	-	-	-	6	7½-8½
2015	-	-	-	-	-	-	-	-	-	-	-	6½-7½
2016	-	-	-	-	-	-	-	(12) <sup>b</sup>	-	-	-	5½-6½
2017	-	-	-	-	-	-	-	-	22 <sup>a</sup>	-	-	4½-5½
2018	-	-	-	-	-	-	-	(19) <sup>b</sup>	-	-	10	3½-4½
2019	-	-	-	-	-	-	-	-	-	-	-	2½-3½
2020	-	-	-	-	-	-	-	-	-	(102) <sup>c</sup>	(121)	1½-2½
2021	-	-	-	-	-	-	-	-	-	-	-	½-1½
2022	-	-	-	-	-	-	-	-	-	-	-	0-½
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>60</b>	<b>(30)</b>	<b>22</b>	<b>(102)</b>	<b>(50)</b>	

<sup>a</sup> Transfer Affecting Exposures at Beginning of Year

<sup>b</sup> Transfer Affecting Exposures at End of Year

<sup>c</sup> Sale with Continued Use

Parentheses Denote Credit Amount.

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 2013 through 2022 is recorded by year in the portion of the table headed "Annual Survivors at the Beginning of the Year." The last amount entered in each column is the amount of new plant added to the group during the year. The amounts entered in Schedule 3 for each successive year following the beginning balance or addition are obtained by adding or subtracting the net entries shown on Schedules 1 and 2. For the purpose of determining the plant exposed to retirement, transfers-in are considered as being exposed to retirement in this group at the beginning of the year in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the beginning of the following year. Thus, the amounts of plant shown at the beginning of each year are the amounts of plant from each placement year considered to be exposed to retirement at the beginning of each successive transaction year. For example, the exposures for the installation year 2018 are calculated in the following manner:

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

SCHEDULE 3. PLANT EXPOSED TO RETIREMENT  
JANUARY 1 OF EACH YEAR 2013-2022  
SUMMARIZED BY AGE INTERVAL

Experience Band 2013-2022

Placement Band 2008-2022

Year Placed	Exposures, Thousands of Dollars										Total at Beginning of Age Interval	Age Interval
	Annual Survivors at the Beginning of the Year											
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2008	255	245	234	222	209	195	239	216	192	167	167	13½-14½
2009	279	268	256	243	228	212	194	174	153	131	323	12½-13½
2010	307	296	284	271	257	241	224	205	184	162	531	11½-12½
2011	338	330	321	311	300	289	276	262	242	226	823	10½-11½
2012	376	367	357	346	334	321	307	297	280	261	1,097	9½-10½
2013	420 <sup>a</sup>	416	407	397	386	374	361	347	332	316	1,503	8½-9½
2014		460 <sup>a</sup>	455	444	432	419	405	390	374	356	1,952	7½-8½
2015			510 <sup>a</sup>	504	492	479	464	448	431	412	2,463	6½-7½
2016				580 <sup>a</sup>	574	561	546	530	501	482	3,057	5½-6½
2017					660 <sup>a</sup>	653	639	623	628	609	3,789	4½-5½
2018						750 <sup>a</sup>	742	724	685	663	4,332	3½-4½
2019							850 <sup>a</sup>	841	821	799	4,955	2½-3½
2020								960 <sup>a</sup>	949	926	5,719	1½-2½
2021									1,080 <sup>a</sup>	1,069	6,579	½-1½
2022										1,220 <sup>a</sup>	7,490	0-½
<b>Total</b>	<b>1,975</b>	<b>2,382</b>	<b>2,824</b>	<b>3,318</b>	<b>3,872</b>	<b>4,494</b>	<b>5,247</b>	<b>6,017</b>	<b>6,852</b>	<b>7,799</b>	<b>44,780</b>	

<sup>a</sup>Additions during the year

For the entire experience band 2013-2022, 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 4½-5½, is obtained by summing:

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

### **Original Life Table**

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

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

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

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

Experience Band 2013-2022

Placement Band 2008-2022

(Exposure and Retirement Amounts are in Thousands of Dollars)

Age at Beginning of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retirement Ratio	Survivor Ratio	Percent Surviving at 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	<u>167</u>	<u>26</u>	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 Iowa type curves are used in this study to smooth those original stub curves which are expressed as percents surviving at ages in years. Each original survivor curve was compared to the Iowa curves using visual and mathematical matching in order to determine the better fitting smooth curves. In Figures 6, 7, and 8, the original curve developed in Schedule 4 is compared with the L, S, and R Iowa type curves which most nearly fit the original survivor curve. In Figure 6, the L1 curve with an average life between 12 and 13 years appears to be the best fit. In Figure 7, the S0 type curve with a 12-year average life appears to be the best fit and appears to be better than the L1 fitting. In Figure 8, the R1 type curve with a 12-year average life appears to be the best fit and appears to be better than either the L1 or the S0.

In Figure 9, the three fittings, 12-L1, 12-S0 and 12-R1 are drawn for comparison purposes. It is probable that the 12-R1 Iowa curve would be selected as the most representative of the plotted survivor characteristics of the group.



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

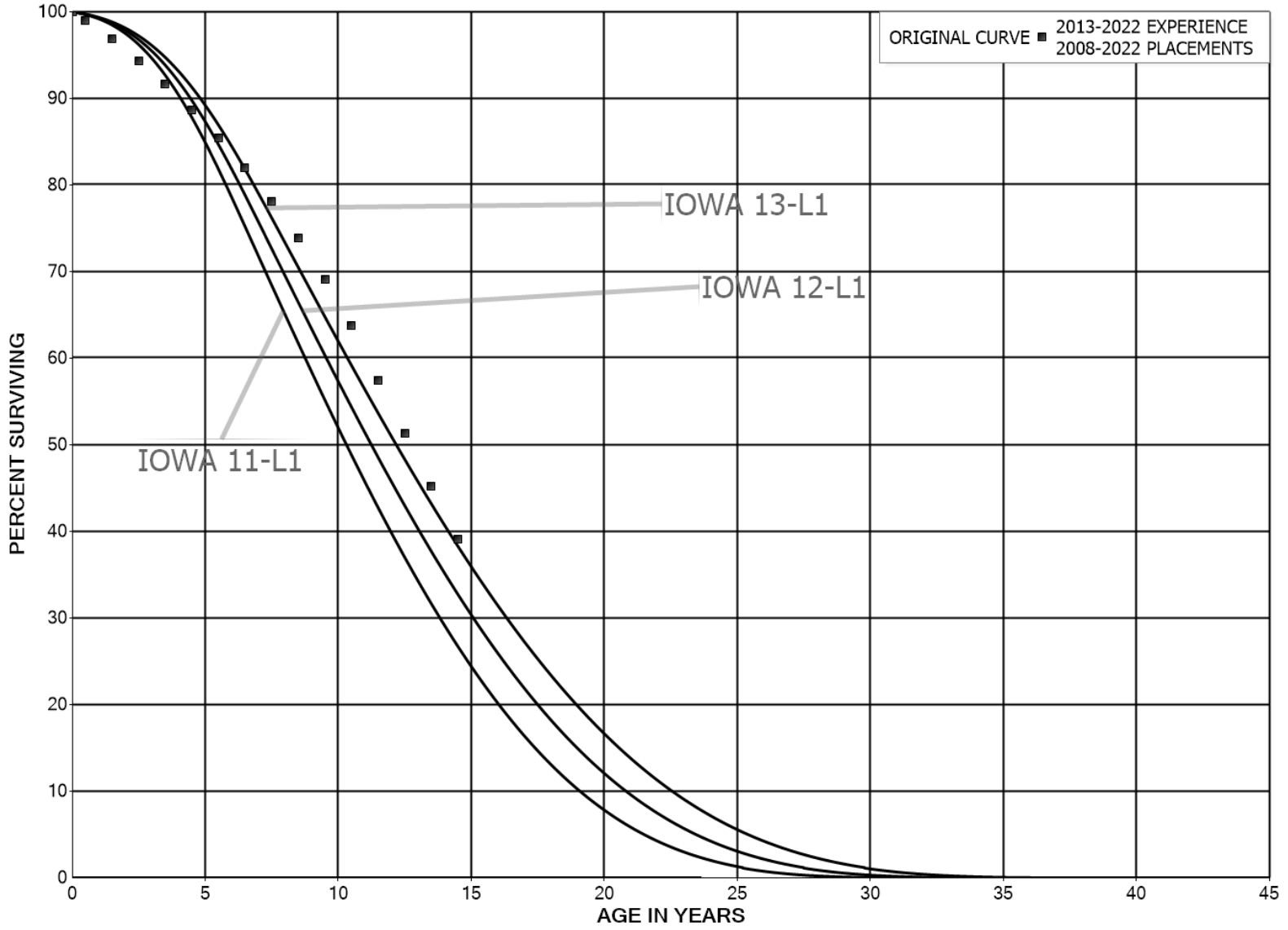






FIGURE 7. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN S0 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES

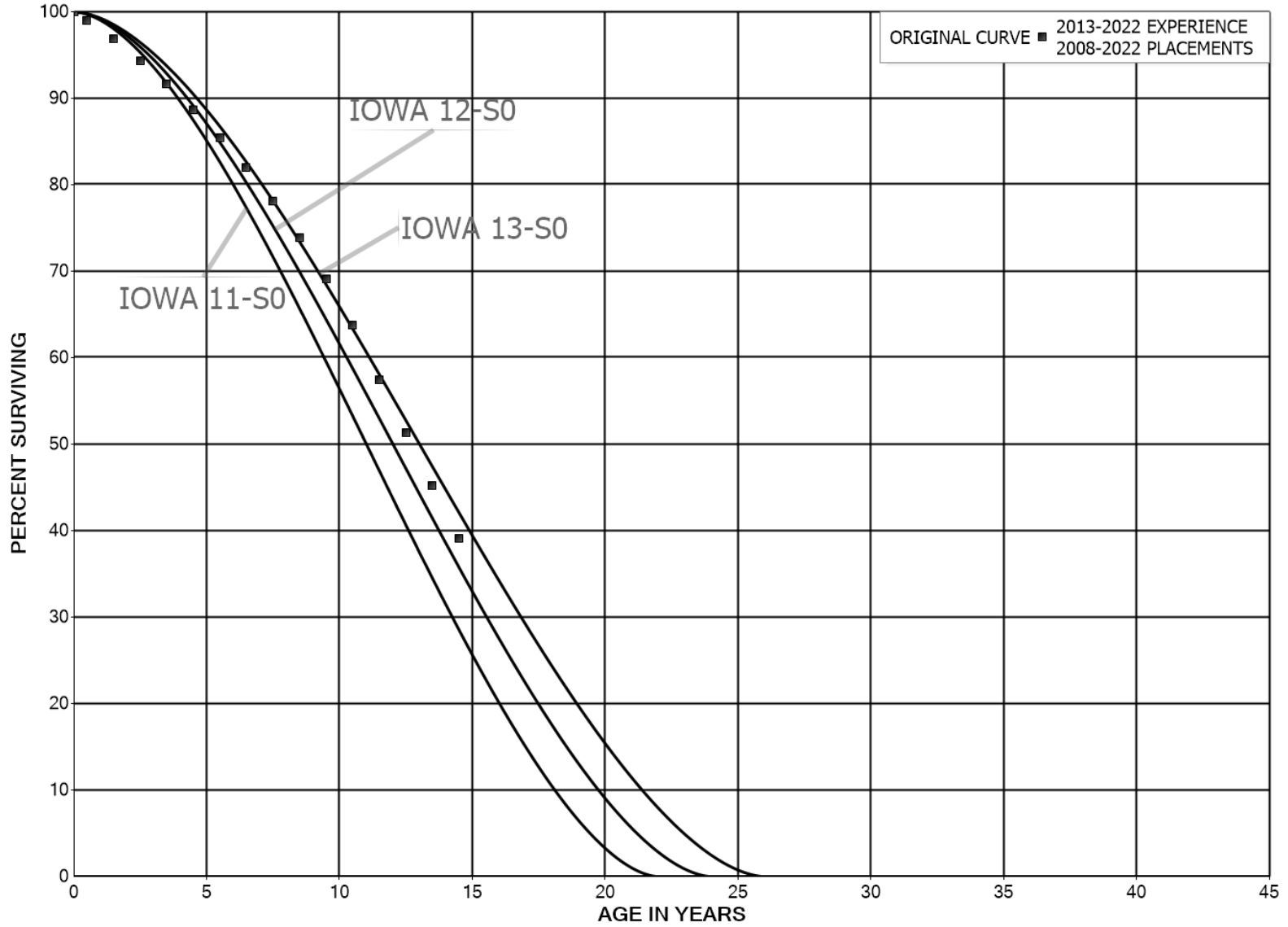




FIGURE 8. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN R1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES

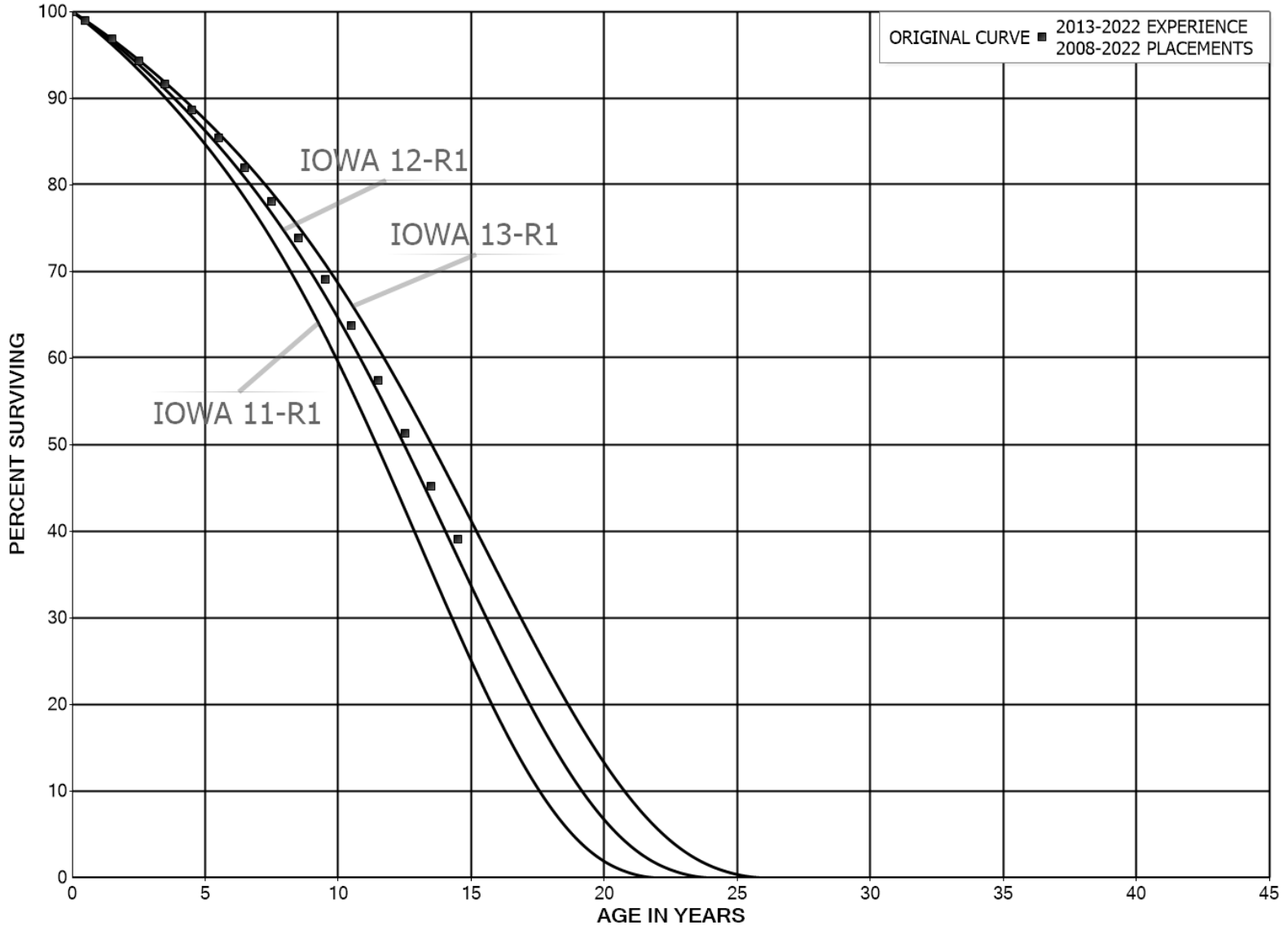
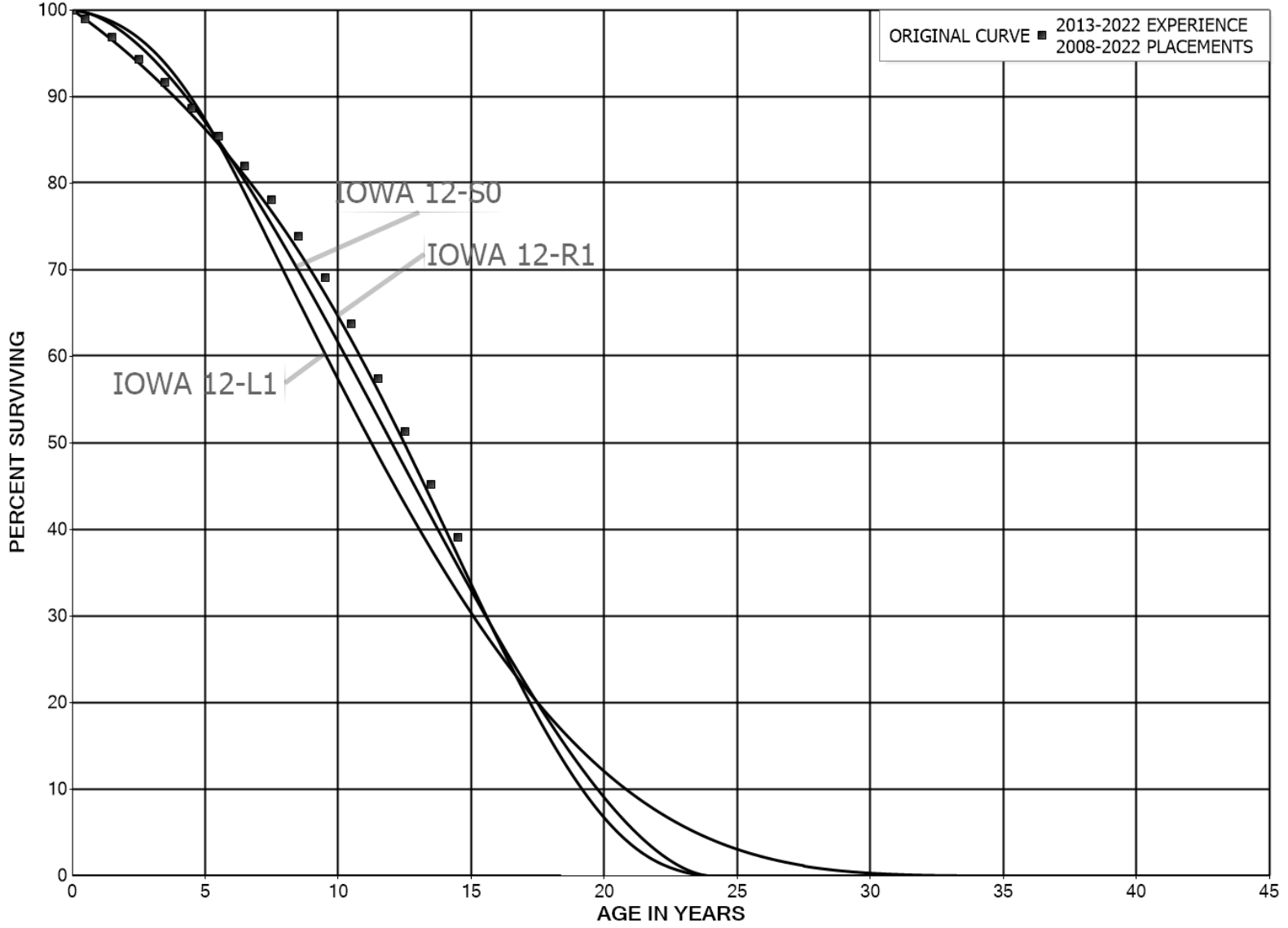




FIGURE 9. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1, S0 AND R1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES



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## **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, a field trip was conducted for the study. 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 initial field trip.

#### March 23, 2023

- Salem Service Center
- Old Trolley Substation
- Rockingham Substation
- Salem Depot Substation
- Spicket River Substation
- Pelham 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 utilities.

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 85

percent of depreciable plant. Generally, the information external to the statistics led to minimal 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.

#### DISTRIBUTION PLANT

362.00	Station Equipment
364.00	Poles, Towers and Fixtures
365.00	Overhead Conductors and Devices
367.00	Underground Conductors and Devices
368.00	Line Transformers
369.00	Services
370.00	Meters
373.00	Street Lighting and Signal Systems

#### GENERAL PLANT

390.00	Structures and Improvements
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The estimated survivor curves for most property accounts are based on statistical analyses of plant accounting data and the range of lives and type curves used for other companies in the electric industry. Account 365.00, Overhead Conductors and Devices, is the largest plant account and is used to illustrate the manner in which the study was conducted for the groups using the retirement rate method. Aged retirement and other plant accounting data were compiled for the years 2004 through 2022. These data were coded in the course of the Company's normal recordkeeping according to plant 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 data were analyzed by the retirement rate method of life analysis. The survivor curve chart for the account is presented on page VII-23 and the life tables for the experience bands, 2004 to 2022 and 2010 to 2022, are plotted on the chart that follows.

Typical service lives for overhead conductor and devices of other electric utilities range from 45 to 65 years. The Iowa 50-R2 survivor curve is estimated to represent the future, inasmuch as it is a reasonable interpretation of the significant portion of the stub survivor curve through age 50, reflects the outlook of management and is within the typical range of lives for this account. The current estimate reflects a 43-year life.

Another large account is Account 364.00, Poles, Towers and Fixtures. The estimate of survivor characteristics is based on the 2004-2022 and 2010-2022 experience bands. As the stub survivor curve chart illustrates, the experience bands represent similar life characteristics and support the 55-R2.5 survivor curve through age 50. The 55-year average life is also within the range of lives used by others in the industry. Most other electric utilities estimate lives between 45 and 60 years. The current estimate is a 44-R2.5 survivor curve.

The estimated survivor curve for the analyses of Account 370.00, Meters is also based on statistical analyses of aged retirements during the periods, 2004-2022 and 2010-2022, using the retirement rate method. The 15-R1 survivor curve is an excellent fit of the statistical analyses. The 15-year average service life is on the shorter end of the range of other electric utilities of 15 to 30 years. This reflects the utilization of newer technology related meters and a sampling program.

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 utilities.

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

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## 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 2015 through 2022. 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 2015 through 2022 contributed significantly toward the net salvage estimates for 12 plant accounts, representing 89 percent of the depreciable plant, as follows:

## DISTRIBUTION PLANT

362.00	Station Equipment
364.00	Poles, Towers and Fixtures
365.00	Overhead Conductors and Devices
366.00	Underground Conduit
367.00	Underground Conductors and Devices
368.00	Line Transformers
369.00	Services
370.00	Meters
373.00	Street Lighting and Signal Systems

## GENERAL PLANT

390.00	Structures and Improvements
392.00	Transportation Equipment
396.00	Power Operated Equipment

The net salvage results for Accounts 362.00, Station Equipment, and 370.00, Meters, will be used to illustrate the methods for estimating net salvage. The net salvage estimate for Account 362.00, Station Equipment, is negative 15 percent and is based on the historical analysis of net salvage percents as shown in the tabulation on page VIII-2 and the typical range of net salvage estimates used by other electric utilities for station equipment. The historical indication for the period 2015 through 2021 is negative 15 percent, and the range of estimates for other electric utilities is negative 5 percent to negative 25 percent. The 2018 to 2022 average was negative 15 percent net salvage as well. Based on the historical data and the range of estimates used by others, negative 15 percent net salvage is estimated for Account 362.00, Station Equipment. For Account 370.00, Meters, the net salvage estimate of negative 25 percent, is based on the historical analysis of salvage percents as shown on page VIII-9. The average net salvage for this account for the period 2016 to 2022 is negative 20 percent and most recent five-year band, is negative 16 percent. The use of negative 25 percent net salvage is based on

these indications and the range for other electric utilities of 0 percent to negative 30 percent for meters.

The net salvage estimates for the remaining plant accounts were estimated using the above-described process of historical indications, judgment and reviewing the typical range of estimates used by other electric utilities. The results of the net salvage for each plant account are presented in account sequence beginning in the section titled “Net Salvage Statistics”, page VIII-2.

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

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## **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:

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

The accrued depreciation is:

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

### **Remaining Life Annual Accruals**

For the purpose of calculating remaining life accruals as of December 31, 2022, 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, 2022, 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:

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

## 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>ACCT</u>	<u>TITLE</u>	<u>AMORTIZATION PERIOD, YEARS</u>
391	Office Furniture and Equipment	
	Furniture and Equipment	20
	Software and Desktop Computers	5
	Laptop Computers	5
393	Stores Equipment	25
394	Tools, Shop and Garage Equipment	25
395	Laboratory Equipment	20
397	Communication Equipment	
	Communication Equipment	15
	Communication Equipment–Site Specific	20
398	Miscellaneous Equipment	15

For the purpose of calculating annual amortization amounts as of December 31, 2022, 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 original cost multiplied by the ratio of the vintage's age to its amortization period. The annual amortization amount is determined by dividing the future amortizations (original cost less allocated book reserve) by the remaining period of amortization for the vintage.



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## 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 plant in service as of December 31, 2022. For most plant accounts, the application of such rates to future balances that reflect additions subsequent to December 31, 2022, is reasonable for a period of three to five years.

### **DESCRIPTION OF DETAILED TABULATIONS**

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 net 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, 2022 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.

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2022

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AS OF DECEMBER 31, 2022 (4)	BOOK DEPRECIATION RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL AMOUNT (7)	ACCRUAL RATE (8)=(7)/(4)	COMPOSITE REMAINING LIFE (9)=(6)/(7)
<b>ELECTRIC PLANT</b>								
<b>INTANGIBLE PLANT</b>								
303.00	MISCELLANEOUS INTANGIBLE PLANT - 3 YEAR	3-SQ	0	2,127,989.37	889,074	1,238,915	620,511	29.16
303.10	MISCELLANEOUS INTANGIBLE PLANT - 5 YEAR	5-SQ	0	598,614.89	598,615	0	0	0.0
303.15	MISCELLANEOUS INTANGIBLE PLANT - 7 YEAR	7-SQ	0	379,186.69	88,168	291,019	52,913	13.95
303.20	MISCELLANEOUS INTANGIBLE PLANT - 10 YEAR	10-SQ	0	12,016,607.73	10,262,503	1,754,105	653,264	5.44
303.30	MISCELLANEOUS INTANGIBLE PLANT - 20 YEAR	20-SQ	0	13,541,670.26	367,341	13,174,329	675,607	4.99
	<b>TOTAL INTANGIBLE PLANT</b>			<b>28,664,068.94</b>	<b>12,205,701</b>	<b>16,458,368</b>	<b>2,002,295</b>	<b>6.99</b>
	<b>DISTRIBUTION PLANT</b>							
361.00	STRUCTURES AND IMPROVEMENTS	60-R3	(5)	1,965,159.96	625,669	1,437,749	29,126	1.48
362.00	STATION EQUIPMENT	60-R2.5	(15)	42,392,278.48	12,743,471	36,007,649	697,620	1.65
364.00	POLES, TOWERS AND FIXTURES	55-R2.5	(70)	61,851,833.71	24,821,122	80,326,995	1,760,749	2.85
365.00	OVERHEAD CONDUCTORS AND DEVICES	50-R2	(50)	87,883,300.64	26,293,906	105,531,045	2,671,569	3.04
366.00	UNDERGROUND CONDUIT	65-R4	(10)	7,098,394.12	2,192,653	5,615,581	116,384	1.64
367.00	UNDERGROUND CONDUCTORS AND DEVICES	55-R4	(40)	20,580,040.54	6,680,641	22,131,416	524,670	2.55
368.00	LINE TRANSFORMERS	33-L2	(30)	35,203,650.48	17,894,958	27,869,788	1,345,966	3.82
369.00	SERVICES	55-R4	(75)	17,220,958.13	7,063,200	23,073,477	544,054	3.16
370.00	METERS	15-R1	(25)	6,785,897.88	1,910,146	6,572,226	718,628	10.59
371.00	INSTALLATIONS ON CUSTOMERS' PREMISES	15-S3	0	1,489,463.54	216,544	1,272,919	101,320	6.80
373.00	STREET LIGHTING AND SIGNAL SYSTEMS	33-S0.5	(25)	6,720,615.34	3,577,696	4,823,073	194,185	2.89
	<b>TOTAL DISTRIBUTION PLANT</b>			<b>289,191,592.82</b>	<b>104,020,006</b>	<b>314,661,918</b>	<b>8,704,271</b>	<b>3.01</b>
	<b>GENERAL PLANT</b>							
390.00	STRUCTURES AND IMPROVEMENTS	60-R4	(15)	13,633,947.78	1,998,829	13,680,211	284,800	2.09
391.00	OFFICE FURNITURE AND EQUIPMENT	20-SQ	0	578,812.92	108,613	470,200	30,024	5.19
391.10	OFFICE FURNITURE AND EQUIPMENT - SOFTWARE AND DESKTOP COMPUTERS	5-SQ	0	165,300.36	133,213	32,087	32,087	19.41
391.20	OFFICE FURNITURE AND EQUIPMENT - LAPTOP COMPUTERS	5-SQ	0	240,284.74	174,157	66,128	64,074	26.67
392.00	TRANSPORTATION EQUIPMENT	15-S2	15	5,831,875.24	1,633,887	3,323,207	308,377	5.29
393.00	STORES EQUIPMENT	25-SQ	0	512,515.06	82,896	429,619	27,924	5.45
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	25-SQ	0	1,491,529.52	226,573	1,264,956	56,920	3.82
395.00	LABORATORY EQUIPMENT	20-SQ	0	570,632.69	166,167	404,466	38,546	6.75
396.00	POWER OPERATED EQUIPMENT	14-L2.5	20	1,989,836.90	1,127,827	464,043	46,437	2.33
397.00	COMMUNICATION EQUIPMENT	15-SQ	0	1,993,169.25	1,234,490	758,679	93,768	4.70
397.10	COMMUNICATION EQUIPMENT - SITE SPECIFIC	20-SQ	0	54,351.75	54,352	0	0	-
398.00	MISCELLANEOUS EQUIPMENT	15-SQ	0	135,147.24	67,918	67,229	8,457	6.26
	<b>TOTAL GENERAL PLANT</b>			<b>27,197,403.45</b>	<b>7,008,922</b>	<b>20,960,825</b>	<b>991,414</b>	<b>3.65</b>
	<b>TOTAL DEPRECIABLE PLANT</b>			<b>345,053,065.21</b>	<b>123,234,629</b>	<b>352,081,111</b>	<b>11,697,980</b>	<b>3.39</b>
	<b>NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED</b>							
301.00	ORGANIZATION			24,808.42				
360.00	LAND			3,172,947.00				
372.00	LEASED PROPERTY ON CUSTOMERS' PREMISES				(23,758)			
389.00	LAND			1,620,371.60				
	<b>TOTAL NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED</b>			<b>4,818,127.02</b>	<b>(23,758)</b>			
	<b>TOTAL ELECTRIC PLANT</b>			<b>349,871,192.23</b>	<b>123,210,872</b>			

\* ADDITIONS AS OF JANUARY 1, 2023 WILL UTILIZE AN ACCRUAL RATE OF 20.00% BASED ON A 5-SQ IOWA SURVIVOR CURVE AND 0% NET SALVAGE.

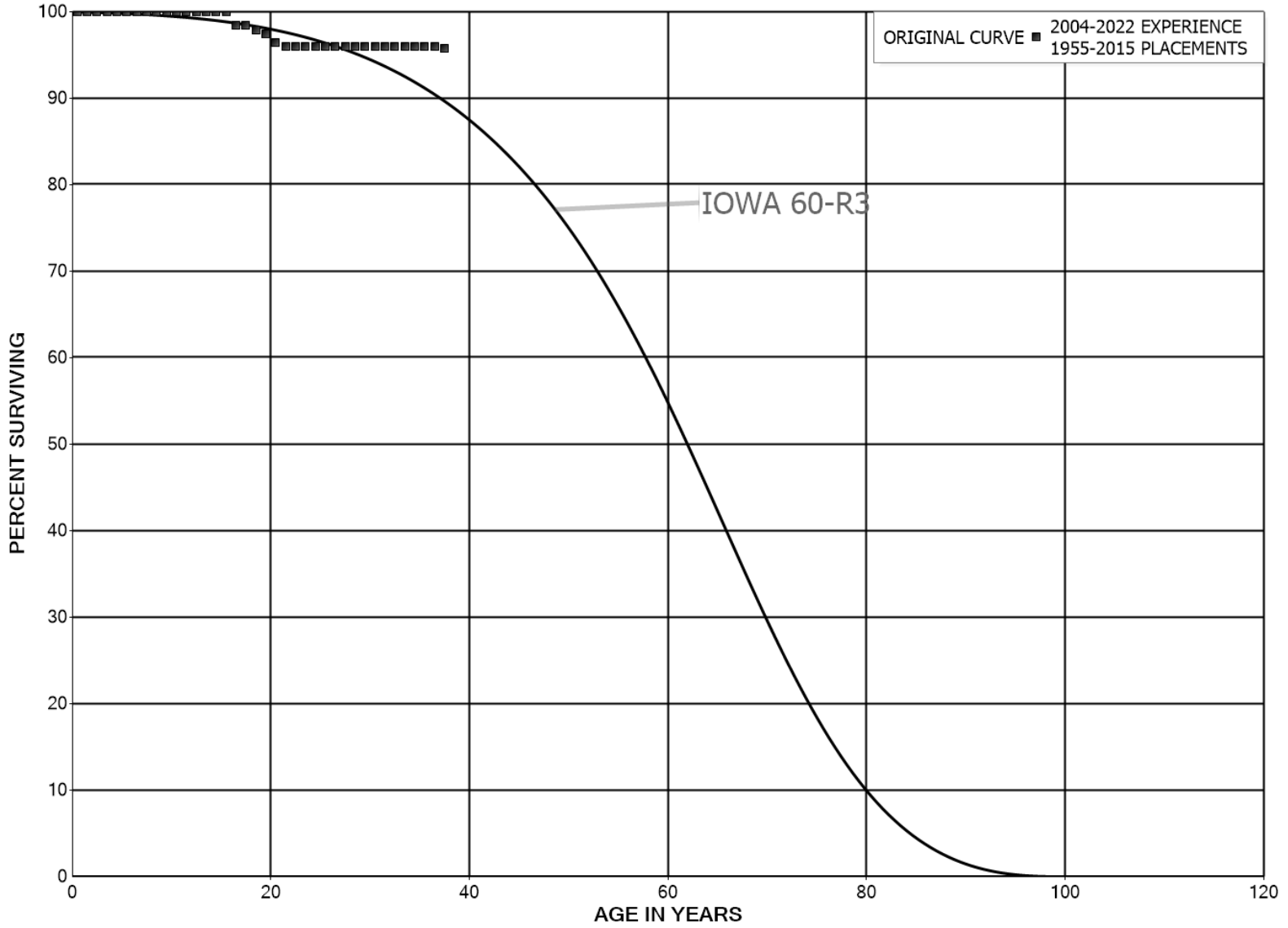
\*\* ADDITIONS AS OF JANUARY 1, 2023 WILL UTILIZE AN ACCRUAL RATE OF 5.00% BASED ON A 20-SQ IOWA SURVIVOR CURVE AND 0% NET SALVAGE.

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## PART VII. SERVICE LIFE STATISTICS



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 361.00 STRUCTURES AND IMPROVEMENTS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 361.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1955-2015			EXPERIENCE BAND 2004-2022			
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	2,167,587	10	0.0000	1.0000	100.00	
0.5	1,649,508		0.0000	1.0000	100.00	
1.5	1,649,508		0.0000	1.0000	100.00	
2.5	1,649,508		0.0000	1.0000	100.00	
3.5	1,649,508		0.0000	1.0000	100.00	
4.5	1,799,880		0.0000	1.0000	100.00	
5.5	1,799,880	158	0.0001	0.9999	100.00	
6.5	1,799,722		0.0000	1.0000	99.99	
7.5	1,799,722		0.0000	1.0000	99.99	
8.5	866,844		0.0000	1.0000	99.99	
9.5	845,591		0.0000	1.0000	99.99	
10.5	204,544		0.0000	1.0000	99.99	
11.5	204,544		0.0000	1.0000	99.99	
12.5	211,364		0.0000	1.0000	99.99	
13.5	211,364	22	0.0001	0.9999	99.99	
14.5	246,950		0.0000	1.0000	99.98	
15.5	246,950	3,802	0.0154	0.9846	99.98	
16.5	252,714		0.0000	1.0000	98.44	
17.5	205,420	1,254	0.0061	0.9939	98.44	
18.5	218,507	1,015	0.0046	0.9954	97.84	
19.5	222,703	2,272	0.0102	0.9898	97.39	
20.5	220,431	900	0.0041	0.9959	96.39	
21.5	219,949		0.0000	1.0000	96.00	
22.5	219,949	85	0.0004	0.9996	96.00	
23.5	69,649		0.0000	1.0000	95.96	
24.5	69,649		0.0000	1.0000	95.96	
25.5	69,649		0.0000	1.0000	95.96	
26.5	72,059		0.0000	1.0000	95.96	
27.5	72,059	35	0.0005	0.9995	95.96	
28.5	72,024		0.0000	1.0000	95.91	
29.5	72,024		0.0000	1.0000	95.91	
30.5	72,024		0.0000	1.0000	95.91	
31.5	65,226		0.0000	1.0000	95.91	
32.5	65,226		0.0000	1.0000	95.91	
33.5	33,420		0.0000	1.0000	95.91	
34.5	33,420		0.0000	1.0000	95.91	
35.5	26,406		0.0000	1.0000	95.91	
36.5	20,385	45	0.0022	0.9978	95.91	
37.5	9,139		0.0000	1.0000	95.70	
38.5	4,828	37	0.0076	0.9924	95.70	

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 361.00 STRUCTURES AND IMPROVEMENTS

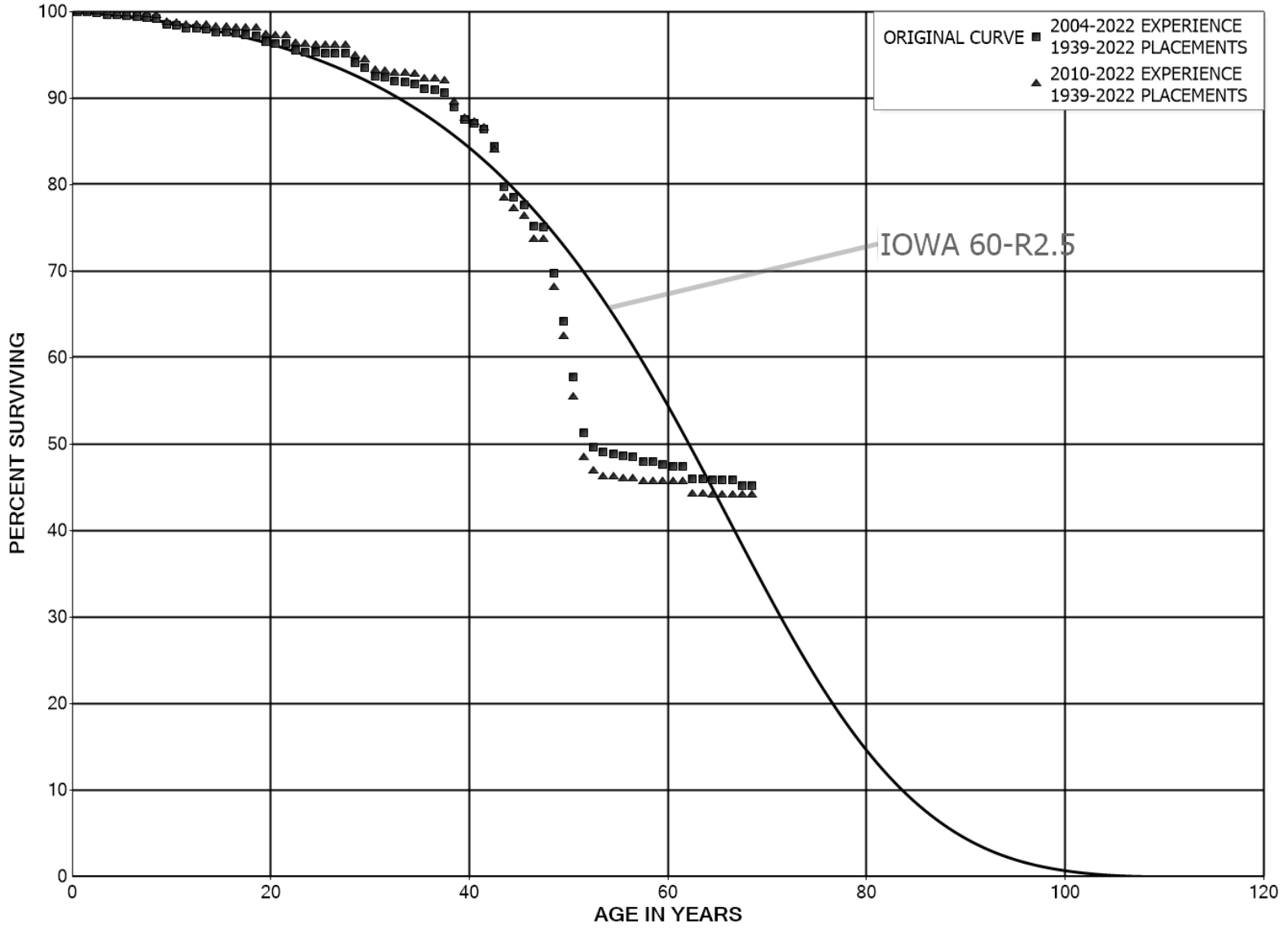
ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1955-2015			EXPERIENCE BAND 2004-2022		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,792		0.0000	1.0000	94.98
40.5	4,460		0.0000	1.0000	94.98
41.5	4,460		0.0000	1.0000	94.98
42.5	4,460		0.0000	1.0000	94.98
43.5	4,460		0.0000	1.0000	94.98
44.5	4,786		0.0000	1.0000	94.98
45.5	2,412	25	0.0105	0.9895	94.98
46.5	2,667		0.0000	1.0000	93.98
47.5	2,667	25	0.0095	0.9905	93.98
48.5	94,978		0.0000	1.0000	93.08
49.5	94,978	1,564	0.0165	0.9835	93.08
50.5	93,414		0.0000	1.0000	91.55
51.5	93,414		0.0000	1.0000	91.55
52.5	93,414		0.0000	1.0000	91.55
53.5	93,414		0.0000	1.0000	91.55
54.5	92,161		0.0000	1.0000	91.55
55.5	92,161		0.0000	1.0000	91.55
56.5	91,329		0.0000	1.0000	91.55
57.5	91,329		0.0000	1.0000	91.55
58.5	91,329		0.0000	1.0000	91.55
59.5	91,329		0.0000	1.0000	91.55
60.5	91,329		0.0000	1.0000	91.55
61.5	91,329		0.0000	1.0000	91.55
62.5	91,329		0.0000	1.0000	91.55
63.5	91,028		0.0000	1.0000	91.55
64.5	91,028		0.0000	1.0000	91.55
65.5	90,773		0.0000	1.0000	91.55
66.5	90,773		0.0000	1.0000	91.55
67.5					91.55





LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 362.00 STATION EQUIPMENT  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 362.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1939-2022			EXPERIENCE BAND 2004-2022		
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	33,808,923	6,190	0.0002	0.9998	100.00
0.5	33,857,517	21,145	0.0006	0.9994	99.98
1.5	22,230,903	18,099	0.0008	0.9992	99.92
2.5	24,046,129	41,988	0.0017	0.9983	99.84
3.5	21,885,465	16,514	0.0008	0.9992	99.66
4.5	21,802,812	22,994	0.0011	0.9989	99.59
5.5	17,408,821	10,899	0.0006	0.9994	99.48
6.5	14,042,854	18,547	0.0013	0.9987	99.42
7.5	12,699,424	17,339	0.0014	0.9986	99.29
8.5	12,352,320	85,102	0.0069	0.9931	99.15
9.5	13,285,781	14,137	0.0011	0.9989	98.47
10.5	12,822,085	34,249	0.0027	0.9973	98.37
11.5	13,499,494	11,055	0.0008	0.9992	98.10
12.5	11,961,822	7,255	0.0006	0.9994	98.02
13.5	11,857,351	36,280	0.0031	0.9969	97.96
14.5	12,865,020	10,677	0.0008	0.9992	97.66
15.5	12,325,996	16,205	0.0013	0.9987	97.58
16.5	10,673,833	24,001	0.0022	0.9978	97.45
17.5	9,356,539	6,451	0.0007	0.9993	97.24
18.5	7,887,572	56,771	0.0072	0.9928	97.17
19.5	7,644,603	10,353	0.0014	0.9986	96.47
20.5	7,456,940	4,740	0.0006	0.9994	96.34
21.5	5,655,551	48,026	0.0085	0.9915	96.28
22.5	5,575,256	11,103	0.0020	0.9980	95.46
23.5	5,571,659	1,455	0.0003	0.9997	95.27
24.5	5,575,064	1,269	0.0002	0.9998	95.24
25.5	5,070,908	3,071	0.0006	0.9994	95.22
26.5	5,132,120	881	0.0002	0.9998	95.17
27.5	4,588,305	54,615	0.0119	0.9881	95.15
28.5	3,542,770	17,392	0.0049	0.9951	94.02
29.5	3,683,306	42,517	0.0115	0.9885	93.55
30.5	3,045,247	3,838	0.0013	0.9987	92.47
31.5	2,513,648	10,083	0.0040	0.9960	92.36
32.5	2,218,383	4,261	0.0019	0.9981	91.99
33.5	1,313,100	3,010	0.0023	0.9977	91.81
34.5	1,470,314	7,979	0.0054	0.9946	91.60
35.5	1,456,435	3,050	0.0021	0.9979	91.10
36.5	1,489,877	4,946	0.0033	0.9967	90.91
37.5	1,443,855	26,397	0.0183	0.9817	90.61
38.5	1,457,027	23,854	0.0164	0.9836	88.95

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 362.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1939-2022			EXPERIENCE BAND 2004-2022			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	1,347,844	6,629	0.0049	0.9951	87.50	
40.5	1,414,902	10,330	0.0073	0.9927	87.07	
41.5	1,543,034	36,967	0.0240	0.9760	86.43	
42.5	1,371,159	74,644	0.0544	0.9456	84.36	
43.5	1,299,347	20,819	0.0160	0.9840	79.77	
44.5	1,277,814	13,378	0.0105	0.9895	78.49	
45.5	1,228,735	39,486	0.0321	0.9679	77.67	
46.5	1,092,180	2,309	0.0021	0.9979	75.17	
47.5	1,128,000	79,349	0.0703	0.9297	75.01	
48.5	915,870	72,455	0.0791	0.9209	69.74	
49.5	682,146	69,553	0.1020	0.8980	64.22	
50.5	612,593	67,750	0.1106	0.8894	57.67	
51.5	542,350	17,284	0.0319	0.9681	51.29	
52.5	465,622	5,913	0.0127	0.9873	49.66	
53.5	373,554	1,217	0.0033	0.9967	49.03	
54.5	429,335	2,548	0.0059	0.9941	48.87	
55.5	398,667	180	0.0005	0.9995	48.58	
56.5	407,138	4,990	0.0123	0.9877	48.56	
57.5	364,623	120	0.0003	0.9997	47.96	
58.5	363,134	2,542	0.0070	0.9930	47.95	
59.5	293,460	1,050	0.0036	0.9964	47.61	
60.5	168,168	173	0.0010	0.9990	47.44	
61.5	140,650	4,136	0.0294	0.9706	47.39	
62.5	131,241	0	0.0000	1.0000	46.00	
63.5	131,241	309	0.0024	0.9976	46.00	
64.5	160,762	45	0.0003	0.9997	45.89	
65.5	160,231	78	0.0005	0.9995	45.88	
66.5	126,993	1,865	0.0147	0.9853	45.85	
67.5	125,052	45	0.0004	0.9996	45.18	
68.5	92,673	1,380	0.0149	0.9851	45.16	
69.5	91,293	572	0.0063	0.9937	44.49	
70.5	90,386	20	0.0002	0.9998	44.21	
71.5	89,414	7,757	0.0868	0.9132	44.20	
72.5	81,657		0.0000	1.0000	40.37	
73.5	30,425		0.0000	1.0000	40.37	
74.5	30,425		0.0000	1.0000	40.37	
75.5	26,870	3,526	0.1312	0.8688	40.37	
76.5	23,344		0.0000	1.0000	35.07	
77.5	23,344	958	0.0410	0.9590	35.07	
78.5	22,386		0.0000	1.0000	33.63	

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 362.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1939-2022			EXPERIENCE BAND 2004-2022			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	22,386	1,413	0.0631	0.9369	33.63	
80.5	20,972		0.0000	1.0000	31.51	
81.5	20,785		0.0000	1.0000	31.51	
82.5	20,785		0.0000	1.0000	31.51	
83.5					31.51	

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 362.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1939-2022			EXPERIENCE BAND 2010-2022			
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	27,957,903	319	0.0000	1.0000	100.00	
0.5	28,423,706	10,014	0.0004	0.9996	100.00	
1.5	16,631,063	2,195	0.0001	0.9999	99.96	
2.5	17,156,036	27,615	0.0016	0.9984	99.95	
3.5	16,636,951	2,431	0.0001	0.9999	99.79	
4.5	17,671,732	8,567	0.0005	0.9995	99.77	
5.5	14,807,378	6,564	0.0004	0.9996	99.73	
6.5	11,106,463	7,957	0.0007	0.9993	99.68	
7.5	10,016,232	9,767	0.0010	0.9990	99.61	
8.5	10,747,605	80,468	0.0075	0.9925	99.51	
9.5	10,769,205	10,789	0.0010	0.9990	98.77	
10.5	10,509,329	25,661	0.0024	0.9976	98.67	
11.5	10,321,342	1,228	0.0001	0.9999	98.43	
12.5	8,767,605	29	0.0000	1.0000	98.42	
13.5	8,273,767	20,365	0.0025	0.9975	98.42	
14.5	8,895,834	137	0.0000	1.0000	98.17	
15.5	9,366,427	5,602	0.0006	0.9994	98.17	
16.5	7,640,610	8,088	0.0011	0.9989	98.11	
17.5	7,189,431	21	0.0000	1.0000	98.01	
18.5	6,211,133	46,720	0.0075	0.9925	98.01	
19.5	6,392,867	4,947	0.0008	0.9992	97.27	
20.5	7,218,573	3,585	0.0005	0.9995	97.20	
21.5	5,417,496	47,299	0.0087	0.9913	97.15	
22.5	5,402,422	9,759	0.0018	0.9982	96.30	
23.5	5,214,701	888	0.0002	0.9998	96.13	
24.5	5,257,355	112	0.0000	1.0000	96.11	
25.5	4,755,326	594	0.0001	0.9999	96.11	
26.5	4,826,144	571	0.0001	0.9999	96.10	
27.5	4,108,592	52,632	0.0128	0.9872	96.09	
28.5	3,085,236	15,520	0.0050	0.9950	94.85	
29.5	3,256,641	40,893	0.0126	0.9874	94.38	
30.5	2,375,179	2,709	0.0011	0.9989	93.19	
31.5	1,845,436	5,991	0.0032	0.9968	93.09	
32.5	1,556,310	13	0.0000	1.0000	92.78	
33.5	694,120	761	0.0011	0.9989	92.78	
34.5	693,424	3,657	0.0053	0.9947	92.68	
35.5	766,555	1	0.0000	1.0000	92.19	
36.5	1,002,270	2,997	0.0030	0.9970	92.19	
37.5	952,149	25,031	0.0263	0.9737	91.92	
38.5	1,004,342	21,048	0.0210	0.9790	89.50	

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 362.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1939-2022			EXPERIENCE BAND 2010-2022		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,025,563	5,560	0.0054	0.9946	87.62
40.5	1,174,853	8,692	0.0074	0.9926	87.15
41.5	1,237,869	36,252	0.0293	0.9707	86.50
42.5	1,080,288	71,580	0.0663	0.9337	83.97
43.5	1,011,329	16,513	0.0163	0.9837	78.41
44.5	1,033,000	10,690	0.0103	0.9897	77.13
45.5	984,084	35,349	0.0359	0.9641	76.33
46.5	920,967	53	0.0001	0.9999	73.59
47.5	1,050,402	78,682	0.0749	0.9251	73.58
48.5	867,425	72,266	0.0833	0.9167	68.07
49.5	601,967	68,070	0.1131	0.8869	62.40
50.5	533,897	67,535	0.1265	0.8735	55.34
51.5	467,120	14,741	0.0316	0.9684	48.34
52.5	392,316	5,355	0.0137	0.9863	46.82
53.5	335,878	27	0.0001	0.9999	46.18
54.5	331,146	1,910	0.0058	0.9942	46.18
55.5	335,497	5	0.0000	1.0000	45.91
56.5	334,694	2,046	0.0061	0.9939	45.91
57.5	295,482		0.0000	1.0000	45.63
58.5	295,133	23	0.0001	0.9999	45.63
59.5	227,978	69	0.0003	0.9997	45.62
60.5	158,962		0.0000	1.0000	45.61
61.5	131,618	4,064	0.0309	0.9691	45.61
62.5	131,000		0.0000	1.0000	44.20
63.5	131,000	308	0.0024	0.9976	44.20
64.5	127,225		0.0000	1.0000	44.10
65.5	126,740		0.0000	1.0000	44.10
66.5	93,579		0.0000	1.0000	44.10
67.5	93,504		0.0000	1.0000	44.10
68.5	61,379		0.0000	1.0000	44.10
69.5	61,379	21	0.0004	0.9996	44.10
70.5	90,386	20	0.0002	0.9998	44.08
71.5	89,414	7,757	0.0868	0.9132	44.07
72.5	81,657		0.0000	1.0000	40.25
73.5	30,425		0.0000	1.0000	40.25
74.5	30,425		0.0000	1.0000	40.25
75.5	26,870	3,526	0.1312	0.8688	40.25
76.5	23,344		0.0000	1.0000	34.97
77.5	23,344	958	0.0410	0.9590	34.97
78.5	22,386		0.0000	1.0000	33.53

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

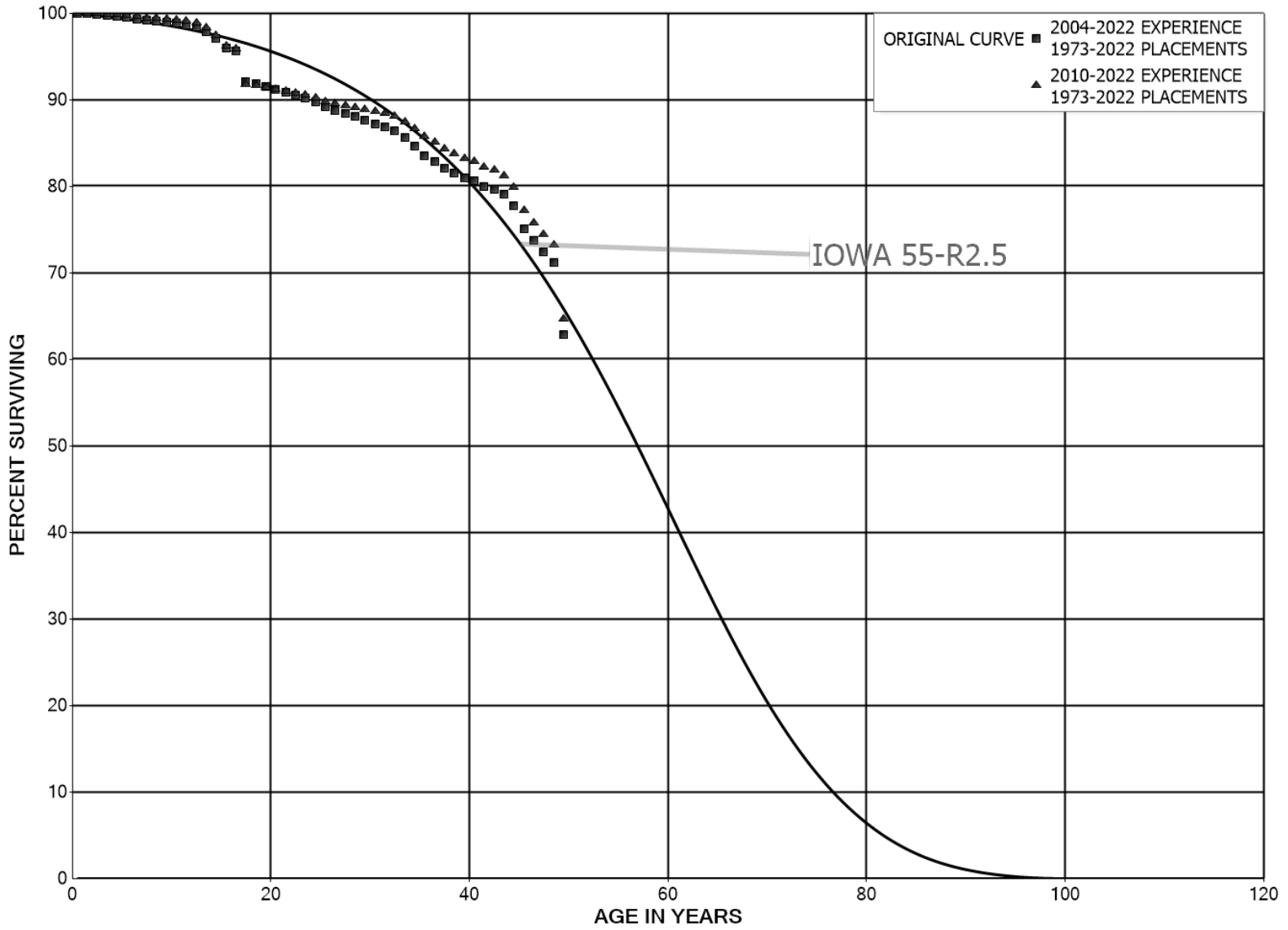
ACCOUNT 362.00 STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1939-2022			EXPERIENCE BAND 2010-2022			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	22,386	1,413	0.0631	0.9369	33.53	
80.5	20,972		0.0000	1.0000	31.41	
81.5	20,785		0.0000	1.0000	31.41	
82.5	20,785		0.0000	1.0000	31.41	
83.5					31.41	



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 364.00 POLES, TOWERS AND FIXTURES  
ORIGINAL AND SMOOTH SURVIVOR CURVES





LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2004-2022		
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	51,126,323	15,402	0.0003	0.9997	100.00
0.5	44,753,934	32,301	0.0007	0.9993	99.97
1.5	41,183,198	30,846	0.0007	0.9993	99.90
2.5	37,964,036	47,344	0.0012	0.9988	99.82
3.5	34,100,834	38,786	0.0011	0.9989	99.70
4.5	31,981,954	31,006	0.0010	0.9990	99.59
5.5	30,690,786	47,510	0.0015	0.9985	99.49
6.5	28,234,656	44,820	0.0016	0.9984	99.33
7.5	26,473,644	19,623	0.0007	0.9993	99.18
8.5	22,038,669	26,832	0.0012	0.9988	99.10
9.5	20,848,612	39,355	0.0019	0.9981	98.98
10.5	19,806,472	29,641	0.0015	0.9985	98.80
11.5	19,167,126	53,533	0.0028	0.9972	98.65
12.5	18,566,221	104,647	0.0056	0.9944	98.37
13.5	17,752,408	137,716	0.0078	0.9922	97.82
14.5	17,193,425	190,320	0.0111	0.9889	97.06
15.5	16,033,718	64,122	0.0040	0.9960	95.98
16.5	15,254,306	560,560	0.0367	0.9633	95.60
17.5	8,646,668	28,357	0.0033	0.9967	92.09
18.5	8,829,373	26,657	0.0030	0.9970	91.79
19.5	8,537,129	34,131	0.0040	0.9960	91.51
20.5	8,395,278	28,377	0.0034	0.9966	91.14
21.5	8,378,535	30,858	0.0037	0.9963	90.83
22.5	7,986,019	33,050	0.0041	0.9959	90.50
23.5	7,541,535	37,417	0.0050	0.9950	90.13
24.5	7,401,729	45,603	0.0062	0.9938	89.68
25.5	7,078,112	30,711	0.0043	0.9957	89.13
26.5	6,740,761	24,728	0.0037	0.9963	88.74
27.5	6,292,723	27,714	0.0044	0.9956	88.41
28.5	5,813,279	26,031	0.0045	0.9955	88.02
29.5	5,308,264	26,200	0.0049	0.9951	87.63
30.5	5,271,987	22,507	0.0043	0.9957	87.20
31.5	4,517,343	25,002	0.0055	0.9945	86.83
32.5	4,181,047	34,420	0.0082	0.9918	86.34
33.5	3,752,177	42,851	0.0114	0.9886	85.63
34.5	3,410,282	46,210	0.0136	0.9864	84.66
35.5	2,997,487	25,268	0.0084	0.9916	83.51
36.5	2,787,222	25,216	0.0090	0.9910	82.80
37.5	2,397,894	15,815	0.0066	0.9934	82.06
38.5	2,194,755	15,234	0.0069	0.9931	81.51

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2004-2022		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,879,648	7,790	0.0041	0.9959	80.95
40.5	1,556,944	12,869	0.0083	0.9917	80.61
41.5	1,394,106	6,036	0.0043	0.9957	79.95
42.5	1,092,930	7,752	0.0071	0.9929	79.60
43.5	928,849	15,547	0.0167	0.9833	79.04
44.5	801,343	27,351	0.0341	0.9659	77.71
45.5	705,579	12,558	0.0178	0.9822	75.06
46.5	587,704	10,449	0.0178	0.9822	73.73
47.5	498,841	8,322	0.0167	0.9833	72.41
48.5	260,687	30,474	0.1169	0.8831	71.21
49.5					62.88

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1973-2022

EXPERIENCE BAND 2010-2022

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	39,179,067	4,798	0.0001	0.9999	100.00
0.5	33,381,826	10,538	0.0003	0.9997	99.99
1.5	30,227,034	7,634	0.0003	0.9997	99.96
2.5	27,989,269	17,564	0.0006	0.9994	99.93
3.5	24,738,081	16,676	0.0007	0.9993	99.87
4.5	29,096,013	22,864	0.0008	0.9992	99.80
5.5	27,729,727	38,806	0.0014	0.9986	99.72
6.5	25,337,730	35,790	0.0014	0.9986	99.58
7.5	23,627,120	9,619	0.0004	0.9996	99.44
8.5	18,986,556	14,771	0.0008	0.9992	99.40
9.5	17,790,064	27,877	0.0016	0.9984	99.32
10.5	16,715,071	16,874	0.0010	0.9990	99.17
11.5	15,987,351	39,932	0.0025	0.9975	99.07
12.5	15,042,003	87,725	0.0058	0.9942	98.82
13.5	14,322,239	120,228	0.0084	0.9916	98.24
14.5	13,906,192	171,027	0.0123	0.9877	97.42
15.5	12,989,766	46,895	0.0036	0.9964	96.22
16.5	12,603,974	541,982	0.0430	0.9570	95.87
17.5	6,183,008	12,623	0.0020	0.9980	91.75
18.5	6,721,627	11,203	0.0017	0.9983	91.56
19.5	6,553,755	19,429	0.0030	0.9970	91.41
20.5	6,497,314	12,598	0.0019	0.9981	91.14
21.5	6,453,653	15,859	0.0025	0.9975	90.96
22.5	6,290,590	17,033	0.0027	0.9973	90.74
23.5	5,722,788	21,232	0.0037	0.9963	90.50
24.5	5,814,474	28,902	0.0050	0.9950	90.16
25.5	5,581,067	13,399	0.0024	0.9976	89.71
26.5	5,507,422	11,141	0.0020	0.9980	89.50
27.5	5,291,020	12,631	0.0024	0.9976	89.31
28.5	4,903,514	13,684	0.0028	0.9972	89.10
29.5	4,439,809	14,359	0.0032	0.9968	88.85
30.5	4,223,528	9,840	0.0023	0.9977	88.57
31.5	3,601,061	13,292	0.0037	0.9963	88.36
32.5	3,349,713	23,243	0.0069	0.9931	88.03
33.5	3,044,881	26,840	0.0088	0.9912	87.42
34.5	2,803,097	29,090	0.0104	0.9896	86.65
35.5	2,668,153	20,935	0.0078	0.9922	85.75
36.5	2,787,222	25,216	0.0090	0.9910	85.08
37.5	2,397,894	15,815	0.0066	0.9934	84.31
38.5	2,194,755	15,234	0.0069	0.9931	83.75

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

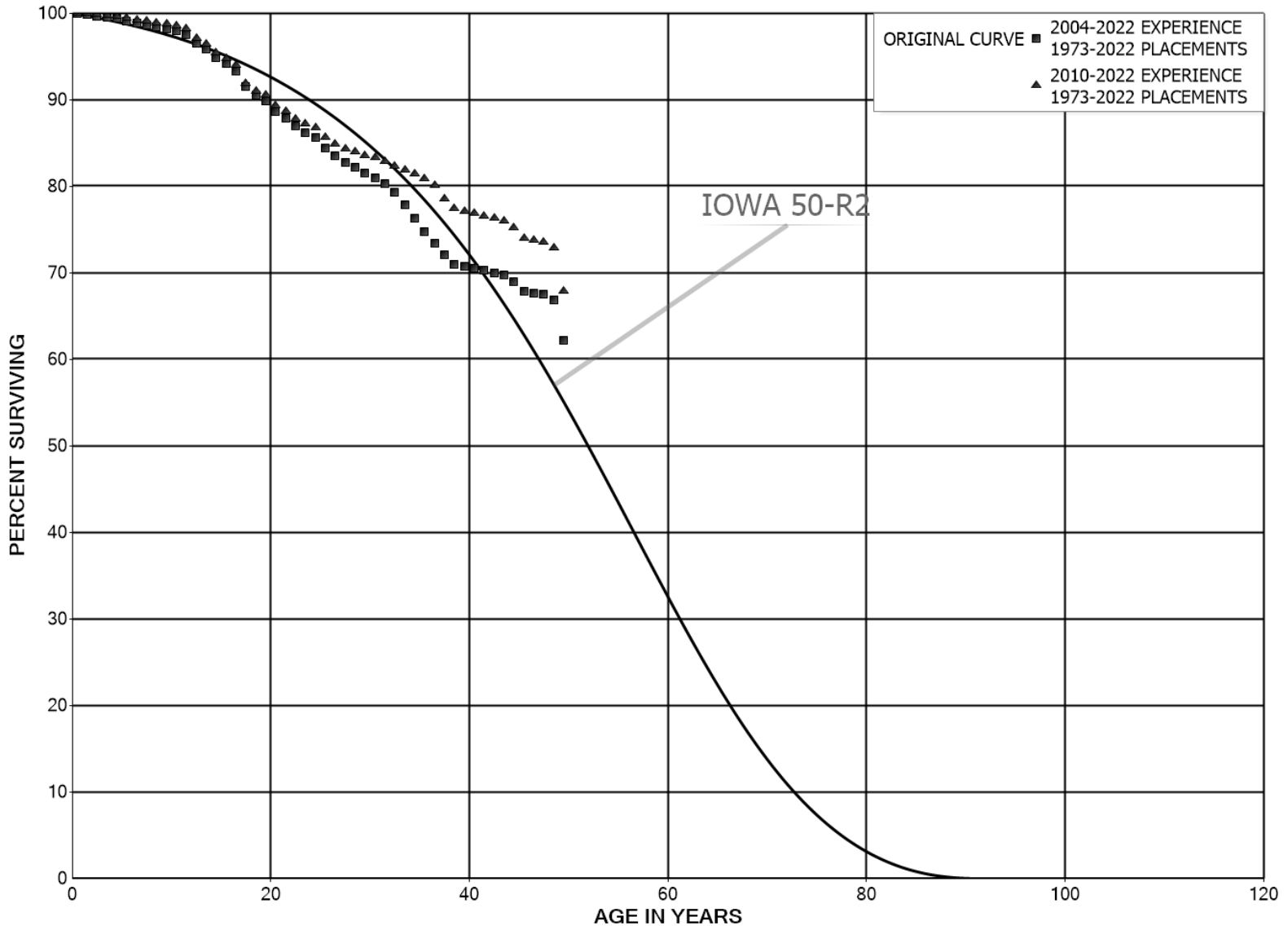
ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2010-2022		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,879,648	7,790	0.0041	0.9959	83.17
40.5	1,556,944	12,869	0.0083	0.9917	82.83
41.5	1,394,106	6,036	0.0043	0.9957	82.14
42.5	1,092,930	7,752	0.0071	0.9929	81.79
43.5	928,849	15,547	0.0167	0.9833	81.21
44.5	801,343	27,351	0.0341	0.9659	79.85
45.5	705,579	12,558	0.0178	0.9822	77.12
46.5	587,704	10,449	0.0178	0.9822	75.75
47.5	498,841	8,322	0.0167	0.9833	74.40
48.5	260,687	30,474	0.1169	0.8831	73.16
49.5					64.61



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 365.00 OVERHEAD CONDUCTORS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 365.00 OVERHEAD CONDUCTORS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2004-2022		
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	68,337,679	46,575	0.0007	0.9993	100.00
0.5	60,023,662	88,586	0.0015	0.9985	99.93
1.5	57,455,227	75,466	0.0013	0.9987	99.78
2.5	54,550,830	91,386	0.0017	0.9983	99.65
3.5	48,193,423	65,142	0.0014	0.9986	99.49
4.5	41,165,609	119,764	0.0029	0.9971	99.35
5.5	38,061,177	94,090	0.0025	0.9975	99.06
6.5	33,393,133	55,797	0.0017	0.9983	98.82
7.5	31,005,850	75,742	0.0024	0.9976	98.65
8.5	22,796,729	57,259	0.0025	0.9975	98.41
9.5	22,021,993	51,608	0.0023	0.9977	98.16
10.5	22,534,395	100,921	0.0045	0.9955	97.93
11.5	21,734,773	231,894	0.0107	0.9893	97.50
12.5	20,556,761	142,067	0.0069	0.9931	96.46
13.5	20,626,763	198,539	0.0096	0.9904	95.79
14.5	19,443,143	148,717	0.0076	0.9924	94.87
15.5	17,862,615	171,493	0.0096	0.9904	94.14
16.5	16,474,914	303,089	0.0184	0.9816	93.24
17.5	13,785,955	146,273	0.0106	0.9894	91.52
18.5	13,920,753	106,998	0.0077	0.9923	90.55
19.5	13,575,941	185,803	0.0137	0.9863	89.86
20.5	13,393,077	111,544	0.0083	0.9917	88.63
21.5	13,380,134	143,735	0.0107	0.9893	87.89
22.5	13,042,102	113,905	0.0087	0.9913	86.94
23.5	12,835,221	82,135	0.0064	0.9936	86.18
24.5	12,688,039	177,693	0.0140	0.9860	85.63
25.5	12,377,314	140,149	0.0113	0.9887	84.43
26.5	12,032,433	104,094	0.0087	0.9913	83.48
27.5	11,442,775	86,450	0.0076	0.9924	82.76
28.5	11,046,401	84,611	0.0077	0.9923	82.13
29.5	10,981,157	77,318	0.0070	0.9930	81.50
30.5	12,445,997	98,118	0.0079	0.9921	80.93
31.5	10,869,082	134,345	0.0124	0.9876	80.29
32.5	9,568,727	170,660	0.0178	0.9822	79.30
33.5	8,369,950	173,983	0.0208	0.9792	77.88
34.5	7,742,997	155,134	0.0200	0.9800	76.26
35.5	6,927,871	120,420	0.0174	0.9826	74.74
36.5	6,510,090	118,979	0.0183	0.9817	73.44
37.5	5,969,512	90,689	0.0152	0.9848	72.09
38.5	5,606,905	22,602	0.0040	0.9960	71.00

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 365.00 OVERHEAD CONDUCTORS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2004-2022		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	5,205,368	14,093	0.0027	0.9973	70.71
40.5	4,821,434	19,104	0.0040	0.9960	70.52
41.5	4,526,815	16,074	0.0036	0.9964	70.24
42.5	4,040,432	17,272	0.0043	0.9957	69.99
43.5	3,772,896	40,512	0.0107	0.9893	69.69
44.5	3,375,588	54,682	0.0162	0.9838	68.94
45.5	3,097,034	7,705	0.0025	0.9975	67.83
46.5	2,873,051	6,823	0.0024	0.9976	67.66
47.5	2,612,218	24,756	0.0095	0.9905	67.50
48.5	1,693,976	117,817	0.0696	0.9304	66.86
49.5					62.21

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 365.00 OVERHEAD CONDUCTORS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2010-2022		
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	57,264,156	21,184	0.0004	0.9996	100.00
0.5	49,532,476	35,630	0.0007	0.9993	99.96
1.5	48,703,506	29,832	0.0006	0.9994	99.89
2.5	47,605,792	53,127	0.0011	0.9989	99.83
3.5	42,759,850	35,877	0.0008	0.9992	99.72
4.5	37,985,563	103,561	0.0027	0.9973	99.63
5.5	34,668,018	74,964	0.0022	0.9978	99.36
6.5	29,873,666	35,164	0.0012	0.9988	99.15
7.5	27,500,346	53,650	0.0020	0.9980	99.03
8.5	18,797,652	31,142	0.0017	0.9983	98.84
9.5	17,916,808	23,695	0.0013	0.9987	98.67
10.5	17,858,999	68,766	0.0039	0.9961	98.54
11.5	16,618,900	193,621	0.0117	0.9883	98.16
12.5	14,529,042	95,354	0.0066	0.9934	97.02
13.5	13,935,740	143,083	0.0103	0.9897	96.38
14.5	12,502,230	83,402	0.0067	0.9933	95.39
15.5	11,168,659	99,262	0.0089	0.9911	94.76
16.5	10,316,365	230,397	0.0223	0.9777	93.92
17.5	8,200,535	76,062	0.0093	0.9907	91.82
18.5	9,459,113	48,199	0.0051	0.9949	90.97
19.5	10,078,178	138,506	0.0137	0.9863	90.50
20.5	10,581,439	71,995	0.0068	0.9932	89.26
21.5	10,659,747	105,401	0.0099	0.9901	88.65
22.5	10,730,754	78,522	0.0073	0.9927	87.78
23.5	10,307,870	43,129	0.0042	0.9958	87.13
24.5	10,330,273	138,029	0.0134	0.9866	86.77
25.5	9,889,411	94,903	0.0096	0.9904	85.61
26.5	9,702,150	58,793	0.0061	0.9939	84.79
27.5	9,275,313	39,463	0.0043	0.9957	84.27
28.5	8,885,545	37,666	0.0042	0.9958	83.92
29.5	8,197,240	30,050	0.0037	0.9963	83.56
30.5	7,644,812	34,616	0.0045	0.9955	83.25
31.5	6,534,563	43,432	0.0066	0.9934	82.88
32.5	5,579,444	31,532	0.0057	0.9943	82.33
33.5	4,759,884	30,135	0.0063	0.9937	81.86
34.5	4,565,007	26,564	0.0058	0.9942	81.34
35.5	4,876,244	51,145	0.0105	0.9895	80.87
36.5	6,510,090	118,979	0.0183	0.9817	80.02
37.5	5,969,512	90,689	0.0152	0.9848	78.56
38.5	5,606,905	22,602	0.0040	0.9960	77.36



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

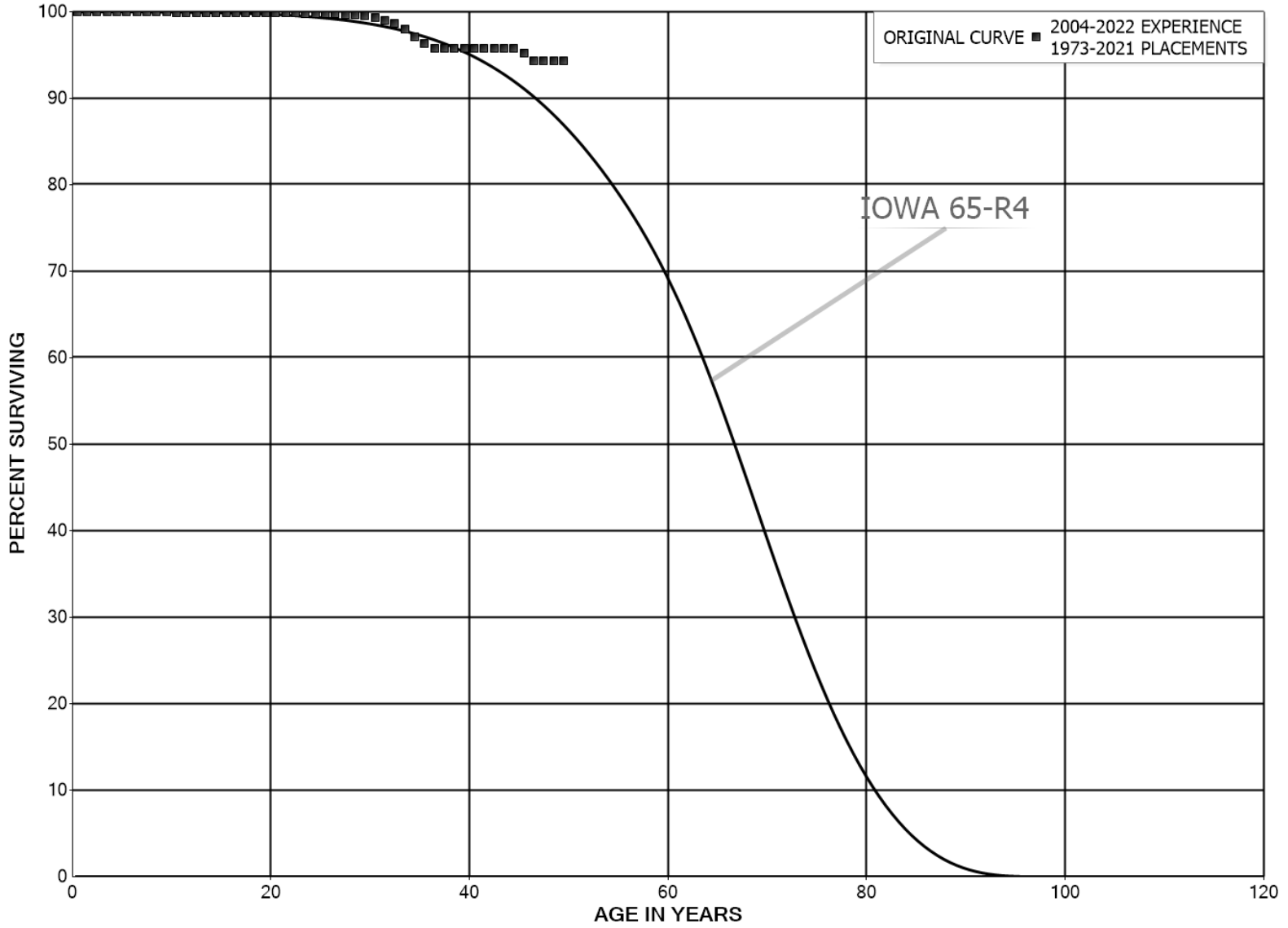
ACCOUNT 365.00 OVERHEAD CONDUCTORS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2010-2022		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	5,205,368	14,093	0.0027	0.9973	77.05
40.5	4,821,434	19,104	0.0040	0.9960	76.84
41.5	4,526,815	16,074	0.0036	0.9964	76.54
42.5	4,040,432	17,272	0.0043	0.9957	76.27
43.5	3,772,896	40,512	0.0107	0.9893	75.94
44.5	3,375,588	54,682	0.0162	0.9838	75.13
45.5	3,097,034	7,705	0.0025	0.9975	73.91
46.5	2,873,051	6,823	0.0024	0.9976	73.73
47.5	2,612,218	24,756	0.0095	0.9905	73.55
48.5	1,693,976	117,817	0.0696	0.9304	72.85
49.5					67.79



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 366.00 UNDERGROUND CONDUIT  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 366.00 UNDERGROUND CONDUIT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1973-2021

EXPERIENCE BAND 2004-2022

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	4,751,126	6	0.0000	1.0000	100.00
0.5	4,410,850	22	0.0000	1.0000	100.00
1.5	4,562,523	33	0.0000	1.0000	100.00
2.5	5,038,159	42	0.0000	1.0000	100.00
3.5	5,005,227	46	0.0000	1.0000	100.00
4.5	5,073,021	4,674	0.0009	0.9991	100.00
5.5	4,934,516	82	0.0000	1.0000	99.90
6.5	4,728,805	126	0.0000	1.0000	99.90
7.5	4,798,410	150	0.0000	1.0000	99.90
8.5	4,005,716	126	0.0000	1.0000	99.90
9.5	3,582,132	174	0.0000	1.0000	99.89
10.5	3,590,979	161	0.0000	1.0000	99.89
11.5	3,822,000	196	0.0001	0.9999	99.88
12.5	4,010,887	187	0.0000	1.0000	99.88
13.5	4,000,278	168	0.0000	1.0000	99.88
14.5	3,910,670	209	0.0001	0.9999	99.87
15.5	3,528,466	444	0.0001	0.9999	99.87
16.5	3,213,843	1,133	0.0004	0.9996	99.85
17.5	2,999,848	321	0.0001	0.9999	99.82
18.5	2,699,724	182	0.0001	0.9999	99.81
19.5	2,474,864	59	0.0000	1.0000	99.80
20.5	2,317,000	89	0.0000	1.0000	99.80
21.5	1,664,704	179	0.0001	0.9999	99.79
22.5	1,571,416	209	0.0001	0.9999	99.78
23.5	1,379,422	280	0.0002	0.9998	99.77
24.5	1,250,551	230	0.0002	0.9998	99.75
25.5	1,126,065	408	0.0004	0.9996	99.73
26.5	1,024,079	525	0.0005	0.9995	99.70
27.5	960,413	557	0.0006	0.9994	99.64
28.5	941,246	690	0.0007	0.9993	99.59
29.5	889,578	1,605	0.0018	0.9982	99.51
30.5	577,261	2,225	0.0039	0.9961	99.33
31.5	360,788	1,076	0.0030	0.9970	98.95
32.5	302,115	2,038	0.0067	0.9933	98.66
33.5	291,176	2,874	0.0099	0.9901	97.99
34.5	278,784	2,229	0.0080	0.9920	97.02
35.5	265,018	1,290	0.0049	0.9951	96.25
36.5	244,049	18	0.0001	0.9999	95.78
37.5	233,771	10	0.0000	1.0000	95.77
38.5	220,228	11	0.0001	0.9999	95.77

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

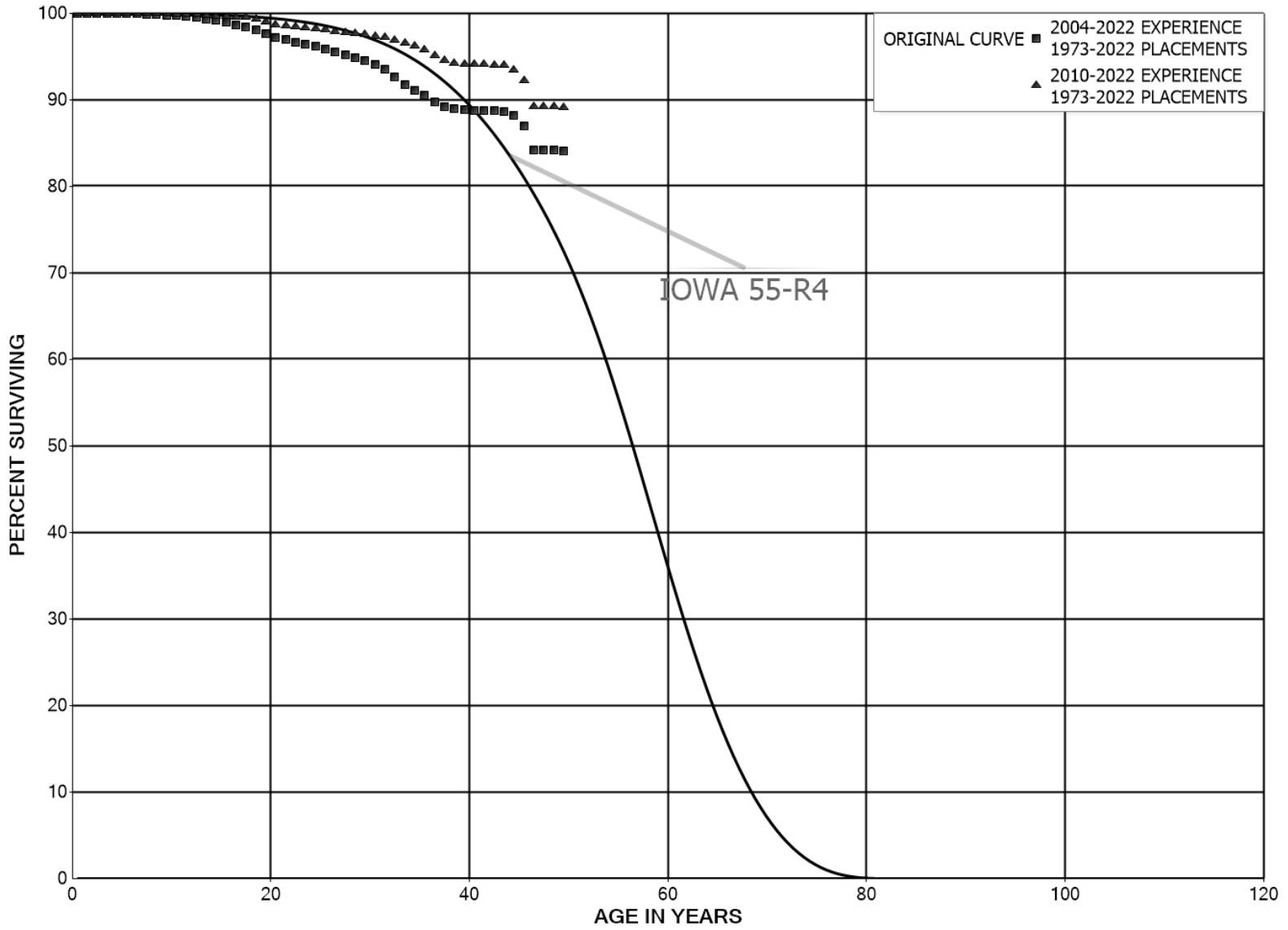
ACCOUNT 366.00 UNDERGROUND CONDUIT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1973-2021			EXPERIENCE BAND 2004-2022		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	213,876		0.0000	1.0000	95.76
40.5	200,896		0.0000	1.0000	95.76
41.5	193,408		0.0000	1.0000	95.76
42.5	180,756		0.0000	1.0000	95.76
43.5	171,519	156	0.0009	0.9991	95.76
44.5	134,133	671	0.0050	0.9950	95.68
45.5	119,414	1,078	0.0090	0.9910	95.20
46.5	111,863		0.0000	1.0000	94.34
47.5	84,313		0.0000	1.0000	94.34
48.5	59,165		0.0000	1.0000	94.34
49.5					94.34



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 367.00 UNDERGROUD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1973-2022

EXPERIENCE BAND 2004-2022

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	16,003,626	19	0.0000	1.0000	100.00
0.5	15,934,426	267	0.0000	1.0000	100.00
1.5	15,041,205	683	0.0000	1.0000	100.00
2.5	14,609,192	1,416	0.0001	0.9999	99.99
3.5	13,822,186	2,454	0.0002	0.9998	99.98
4.5	11,184,465	3,273	0.0003	0.9997	99.97
5.5	10,631,293	3,158	0.0003	0.9997	99.94
6.5	9,322,890	3,299	0.0004	0.9996	99.91
7.5	8,955,824	4,483	0.0005	0.9995	99.87
8.5	7,898,393	5,866	0.0007	0.9993	99.82
9.5	7,939,136	5,744	0.0007	0.9993	99.75
10.5	7,457,806	6,188	0.0008	0.9992	99.68
11.5	7,325,026	7,800	0.0011	0.9989	99.59
12.5	7,650,589	12,823	0.0017	0.9983	99.49
13.5	7,492,875	14,204	0.0019	0.9981	99.32
14.5	7,291,524	17,617	0.0024	0.9976	99.13
15.5	6,457,911	16,112	0.0025	0.9975	98.89
16.5	4,906,470	13,631	0.0028	0.9972	98.65
17.5	4,268,763	15,222	0.0036	0.9964	98.37
18.5	4,012,782	17,120	0.0043	0.9957	98.02
19.5	3,937,366	15,803	0.0040	0.9960	97.60
20.5	3,743,268	11,703	0.0031	0.9969	97.21
21.5	3,460,072	9,639	0.0028	0.9972	96.91
22.5	3,370,956	8,054	0.0024	0.9976	96.64
23.5	3,203,085	8,093	0.0025	0.9975	96.41
24.5	2,995,085	9,429	0.0031	0.9969	96.16
25.5	2,509,286	10,537	0.0042	0.9958	95.86
26.5	2,443,978	8,532	0.0035	0.9965	95.46
27.5	2,379,592	8,184	0.0034	0.9966	95.12
28.5	2,250,289	8,230	0.0037	0.9963	94.80
29.5	2,173,399	9,180	0.0042	0.9958	94.45
30.5	1,816,429	10,184	0.0056	0.9944	94.05
31.5	1,274,619	11,882	0.0093	0.9907	93.52
32.5	945,214	9,296	0.0098	0.9902	92.65
33.5	904,891	6,473	0.0072	0.9928	91.74
34.5	843,229	5,683	0.0067	0.9933	91.08
35.5	757,578	5,786	0.0076	0.9924	90.47
36.5	660,931	4,280	0.0065	0.9935	89.78
37.5	588,733	1,881	0.0032	0.9968	89.20
38.5	476,877	687	0.0014	0.9986	88.91

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 367.00 UNDERGROUD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2004-2022			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	445,964	88	0.0002	0.9998	88.79	
40.5	418,150	65	0.0002	0.9998	88.77	
41.5	377,964	143	0.0004	0.9996	88.75	
42.5	292,759	224	0.0008	0.9992	88.72	
43.5	284,169	1,559	0.0055	0.9945	88.65	
44.5	218,839	2,930	0.0134	0.9866	88.17	
45.5	183,935	5,899	0.0321	0.9679	86.99	
46.5	155,284		0.0000	1.0000	84.20	
47.5	107,508	39	0.0004	0.9996	84.20	
48.5	35,791	53	0.0015	0.9985	84.17	
49.5					84.04	

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 367.00 UNDERGROUD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2010-2022			
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	11,740,171	3	0.0000	1.0000	100.00	
0.5	11,973,870	45	0.0000	1.0000	100.00	
1.5	11,086,738	102	0.0000	1.0000	100.00	
2.5	11,226,878	449	0.0000	1.0000	100.00	
3.5	11,938,952	1,432	0.0001	0.9999	99.99	
4.5	9,763,699	2,052	0.0002	0.9998	99.98	
5.5	9,314,949	1,659	0.0002	0.9998	99.96	
6.5	7,621,863	1,057	0.0001	0.9999	99.94	
7.5	7,373,871	1,019	0.0001	0.9999	99.93	
8.5	6,538,004	1,426	0.0002	0.9998	99.92	
9.5	6,519,389	1,426	0.0002	0.9998	99.89	
10.5	6,134,801	2,221	0.0004	0.9996	99.87	
11.5	5,792,313	2,181	0.0004	0.9996	99.84	
12.5	6,114,936	6,251	0.0010	0.9990	99.80	
13.5	5,716,421	3,088	0.0005	0.9995	99.70	
14.5	5,577,917	2,659	0.0005	0.9995	99.64	
15.5	4,884,663	2,482	0.0005	0.9995	99.60	
16.5	3,423,551	2,957	0.0009	0.9991	99.54	
17.5	3,104,981	6,434	0.0021	0.9979	99.46	
18.5	3,326,530	10,289	0.0031	0.9969	99.25	
19.5	3,459,207	10,402	0.0030	0.9970	98.95	
20.5	3,267,718	5,375	0.0016	0.9984	98.65	
21.5	3,015,686	2,846	0.0009	0.9991	98.49	
22.5	2,969,164	2,401	0.0008	0.9992	98.39	
23.5	2,800,444	3,204	0.0011	0.9989	98.31	
24.5	2,658,171	3,495	0.0013	0.9987	98.20	
25.5	2,216,034	4,775	0.0022	0.9978	98.07	
26.5	2,148,986	3,118	0.0015	0.9985	97.86	
27.5	2,090,987	2,096	0.0010	0.9990	97.72	
28.5	1,948,756	1,966	0.0010	0.9990	97.62	
29.5	1,875,219	3,787	0.0020	0.9980	97.52	
30.5	1,479,668	2,230	0.0015	0.9985	97.33	
31.5	1,014,027	3,494	0.0034	0.9966	97.18	
32.5	727,346	2,756	0.0038	0.9962	96.84	
33.5	718,095	2,360	0.0033	0.9967	96.48	
34.5	713,710	3,041	0.0043	0.9957	96.16	
35.5	710,746	4,805	0.0068	0.9932	95.75	
36.5	660,931	4,280	0.0065	0.9935	95.10	
37.5	588,733	1,881	0.0032	0.9968	94.49	
38.5	476,877	687	0.0014	0.9986	94.19	



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

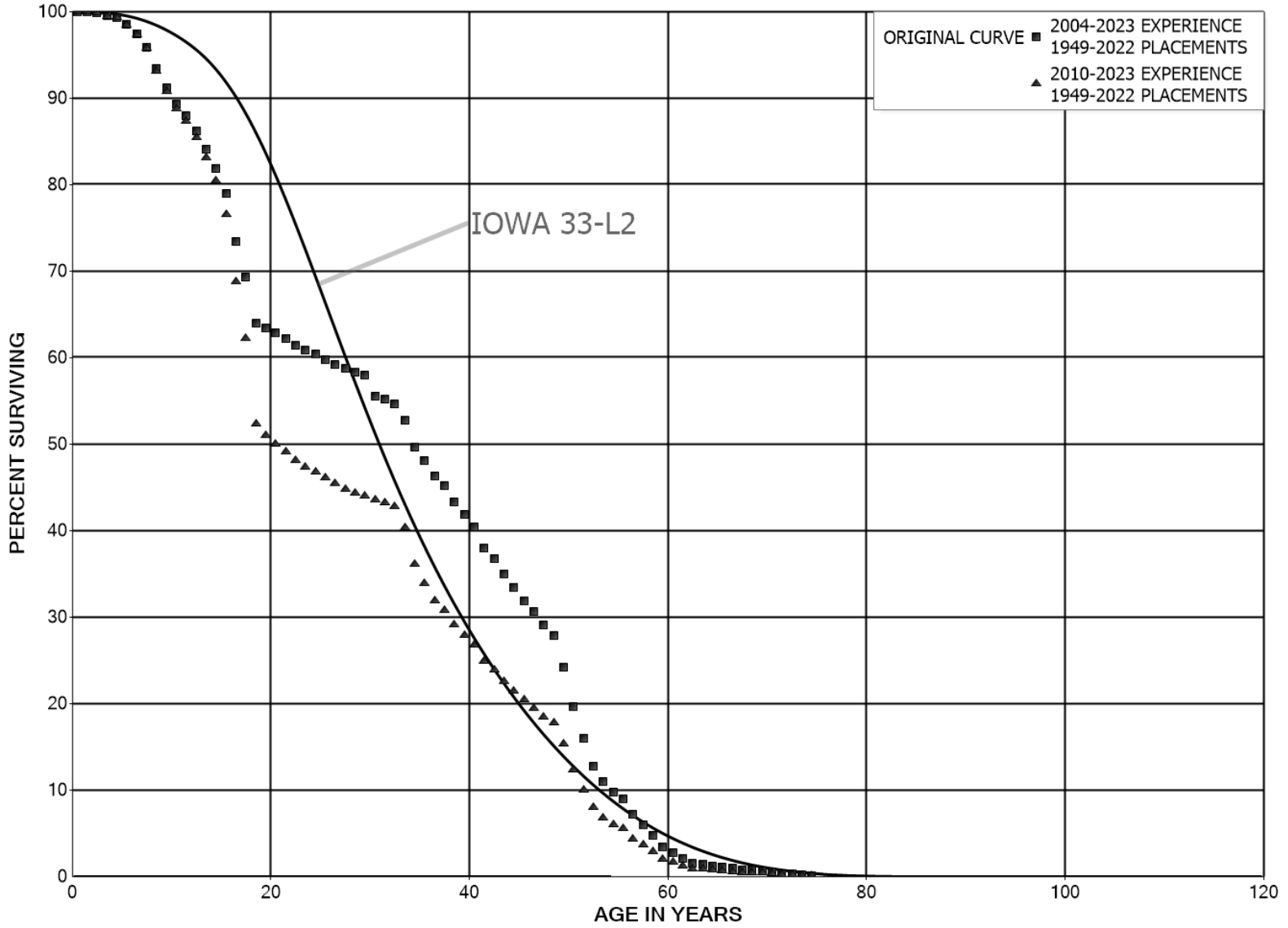
ACCOUNT 367.00 UNDERGROUD CONDUCTORS AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2010-2022			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	445,964	88	0.0002	0.9998	94.05	
40.5	418,150	65	0.0002	0.9998	94.03	
41.5	377,964	143	0.0004	0.9996	94.02	
42.5	292,759	224	0.0008	0.9992	93.98	
43.5	284,169	1,559	0.0055	0.9945	93.91	
44.5	218,839	2,930	0.0134	0.9866	93.39	
45.5	183,935	5,899	0.0321	0.9679	92.14	
46.5	155,284		0.0000	1.0000	89.19	
47.5	107,508	39	0.0004	0.9996	89.19	
48.5	35,791	53	0.0015	0.9985	89.16	
49.5					89.02	



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 368.00 LINE TRANSFORMERS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 368.00 LINE TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2022			EXPERIENCE BAND 2004-2023			
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	22,713,315	13	0.0000	1.0000	100.00	
0.5	24,112,236	110	0.0000	1.0000	100.00	
1.5	23,534,807	42,198	0.0018	0.9982	100.00	
2.5	22,792,331	81,415	0.0036	0.9964	99.82	
3.5	21,011,679	31,636	0.0015	0.9985	99.46	
4.5	19,918,720	159,197	0.0080	0.9920	99.31	
5.5	17,699,873	207,247	0.0117	0.9883	98.52	
6.5	16,143,448	245,136	0.0152	0.9848	97.37	
7.5	13,794,544	359,559	0.0261	0.9739	95.89	
8.5	10,100,610	242,070	0.0240	0.9760	93.39	
9.5	7,335,288	148,695	0.0203	0.9797	91.15	
10.5	6,610,306	103,354	0.0156	0.9844	89.30	
11.5	6,031,924	117,805	0.0195	0.9805	87.91	
12.5	5,687,632	140,252	0.0247	0.9753	86.19	
13.5	5,686,675	152,218	0.0268	0.9732	84.06	
14.5	5,744,722	204,121	0.0355	0.9645	81.81	
15.5	5,156,622	358,281	0.0695	0.9305	78.91	
16.5	4,513,699	252,339	0.0559	0.9441	73.42	
17.5	3,840,729	297,361	0.0774	0.9226	69.32	
18.5	3,506,381	31,594	0.0090	0.9910	63.95	
19.5	3,735,142	33,898	0.0091	0.9909	63.38	
20.5	3,948,245	39,755	0.0101	0.9899	62.80	
21.5	4,077,737	49,797	0.0122	0.9878	62.17	
22.5	4,224,957	39,555	0.0094	0.9906	61.41	
23.5	4,383,718	35,670	0.0081	0.9919	60.84	
24.5	4,584,458	43,263	0.0094	0.9906	60.34	
25.5	4,788,064	44,323	0.0093	0.9907	59.77	
26.5	4,923,362	44,853	0.0091	0.9909	59.22	
27.5	5,141,779	34,964	0.0068	0.9932	58.68	
28.5	5,300,960	31,255	0.0059	0.9941	58.28	
29.5	6,927,094	286,688	0.0414	0.9586	57.94	
30.5	7,515,760	52,514	0.0070	0.9930	55.54	
31.5	8,144,462	75,977	0.0093	0.9907	55.15	
32.5	8,616,177	299,508	0.0348	0.9652	54.63	
33.5	8,296,827	487,831	0.0588	0.9412	52.74	
34.5	7,962,432	248,016	0.0311	0.9689	49.64	
35.5	7,802,176	285,307	0.0366	0.9634	48.09	
36.5	7,789,626	187,665	0.0241	0.9759	46.33	
37.5	7,769,598	324,596	0.0418	0.9582	45.21	
38.5	7,606,038	259,376	0.0341	0.9659	43.33	

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 368.00 LINE TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2022			EXPERIENCE BAND 2004-2023		
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	7,497,405	250,553	0.0334	0.9666	41.85
40.5	7,310,964	445,977	0.0610	0.9390	40.45
41.5	6,921,441	225,851	0.0326	0.9674	37.98
42.5	6,728,566	320,433	0.0476	0.9524	36.74
43.5	6,390,010	285,275	0.0446	0.9554	34.99
44.5	6,081,924	280,816	0.0462	0.9538	33.43
45.5	5,775,367	239,840	0.0415	0.9585	31.89
46.5	5,519,162	277,924	0.0504	0.9496	30.56
47.5	5,212,861	206,442	0.0396	0.9604	29.02
48.5	4,980,951	663,995	0.1333	0.8667	27.87
49.5	4,215,516	793,474	0.1882	0.8118	24.16
50.5	3,299,104	624,155	0.1892	0.8108	19.61
51.5	2,588,933	517,916	0.2001	0.7999	15.90
52.5	1,985,022	272,238	0.1371	0.8629	12.72
53.5	1,685,201	195,244	0.1159	0.8841	10.98
54.5	1,466,794	109,559	0.0747	0.9253	9.70
55.5	1,339,044	271,982	0.2031	0.7969	8.98
56.5	1,021,902	166,211	0.1626	0.8374	7.16
57.5	828,093	181,321	0.2190	0.7810	5.99
58.5	616,665	166,211	0.2695	0.7305	4.68
59.5	422,856	90,661	0.2144	0.7856	3.42
60.5	317,142	75,551	0.2382	0.7618	2.69
61.5	229,047	60,440	0.2639	0.7361	2.05
62.5	158,571	15,110	0.0953	0.9047	1.51
63.5	140,952	15,110	0.1072	0.8928	1.36
64.5	123,333	15,110	0.1225	0.8775	1.22
65.5	105,714	15,110	0.1429	0.8571	1.07
66.5	88,095	15,110	0.1715	0.8285	0.91
67.5	70,476	7,555	0.1072	0.8928	0.76
68.5	61,667	7,555	0.1225	0.8775	0.68
69.5	52,857	7,555	0.1429	0.8571	0.59
70.5	44,048	15,110	0.3430	0.6570	0.51
71.5	26,429		0.0000	1.0000	0.33
72.5	26,429	15,110	0.5717	0.4283	0.33
73.5	8,810	7,555	0.8576	0.1424	0.14
74.5					0.02

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 368.00 LINE TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1949-2022			EXPERIENCE BAND 2010-2023			
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	18,801,127	8	0.0000	1.0000	100.00	
0.5	20,560,522	79	0.0000	1.0000	100.00	
1.5	20,760,222	42,129	0.0020	0.9980	100.00	
2.5	20,859,969	81,341	0.0039	0.9961	99.80	
3.5	19,864,167	31,618	0.0016	0.9984	99.41	
4.5	19,379,673	159,194	0.0082	0.9918	99.25	
5.5	17,133,658	207,246	0.0121	0.9879	98.43	
6.5	15,554,867	245,136	0.0158	0.9842	97.24	
7.5	13,194,126	359,559	0.0273	0.9727	95.71	
8.5	9,534,784	242,070	0.0254	0.9746	93.10	
9.5	6,788,817	148,695	0.0219	0.9781	90.74	
10.5	6,059,716	103,354	0.0171	0.9829	88.75	
11.5	5,500,690	117,805	0.0214	0.9786	87.24	
12.5	5,161,340	140,252	0.0272	0.9728	85.37	
13.5	4,674,500	152,218	0.0326	0.9674	83.05	
14.5	4,314,816	204,121	0.0473	0.9527	80.35	
15.5	3,518,767	358,281	0.1018	0.8982	76.54	
16.5	2,651,447	252,339	0.0952	0.9048	68.75	
17.5	1,857,358	297,361	0.1601	0.8399	62.21	
18.5	1,267,554	31,594	0.0249	0.9751	52.25	
19.5	1,784,356	33,898	0.0190	0.9810	50.95	
20.5	2,204,574	39,755	0.0180	0.9820	49.98	
21.5	2,392,702	49,797	0.0208	0.9792	49.08	
22.5	2,588,272	39,555	0.0153	0.9847	48.06	
23.5	2,698,684	35,670	0.0132	0.9868	47.32	
24.5	2,969,376	43,263	0.0146	0.9854	46.70	
25.5	3,170,925	44,323	0.0140	0.9860	46.02	
26.5	3,359,716	44,853	0.0134	0.9866	45.37	
27.5	3,477,318	34,964	0.0101	0.9899	44.77	
28.5	3,659,131	31,255	0.0085	0.9915	44.32	
29.5	3,837,247	37,436	0.0098	0.9902	43.94	
30.5	4,033,869	34,964	0.0087	0.9913	43.51	
31.5	4,256,830	42,204	0.0099	0.9901	43.13	
32.5	4,397,070	253,200	0.0576	0.9424	42.70	
33.5	4,129,604	428,175	0.1037	0.8963	40.25	
34.5	3,871,053	240,849	0.0622	0.9378	36.07	
35.5	4,875,532	285,307	0.0585	0.9415	33.83	
36.5	5,471,063	187,665	0.0343	0.9657	31.85	
37.5	5,982,329	324,596	0.0543	0.9457	30.76	
38.5	6,211,253	259,376	0.0418	0.9582	29.09	

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

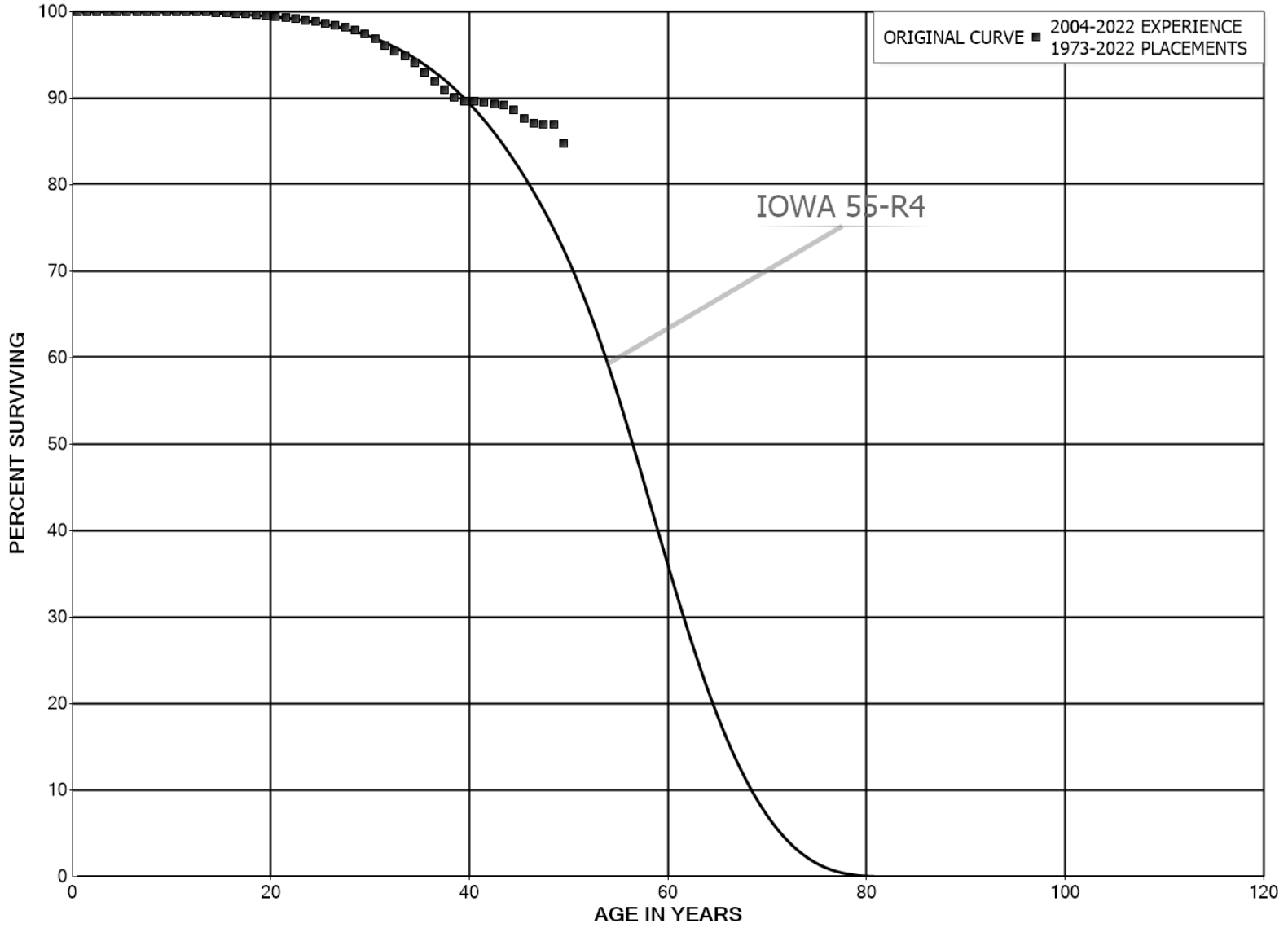
ACCOUNT 368.00 LINE TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1949-2022			EXPERIENCE BAND 2010-2023		
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	6,226,251	250,553	0.0402	0.9598	27.87
40.5	6,158,627	445,977	0.0724	0.9276	26.75
41.5	5,808,759	225,851	0.0389	0.9611	24.81
42.5	5,862,550	320,433	0.0547	0.9453	23.85
43.5	5,702,869	285,275	0.0500	0.9500	22.55
44.5	5,588,592	280,816	0.0502	0.9498	21.42
45.5	5,458,225	239,840	0.0439	0.9561	20.34
46.5	5,290,115	277,924	0.0525	0.9475	19.45
47.5	5,054,290	206,442	0.0408	0.9592	18.43
48.5	4,884,046	663,995	0.1360	0.8640	17.67
49.5	4,127,421	793,474	0.1922	0.8078	15.27
50.5	3,219,818	624,155	0.1938	0.8062	12.33
51.5	2,509,647	517,916	0.2064	0.7936	9.94
52.5	1,923,356	272,238	0.1415	0.8585	7.89
53.5	1,623,535	195,244	0.1203	0.8797	6.77
54.5	1,405,128	109,559	0.0780	0.9220	5.96
55.5	1,286,187	271,982	0.2115	0.7885	5.50
56.5	977,855	166,211	0.1700	0.8300	4.33
57.5	801,665	181,321	0.2262	0.7738	3.60
58.5	590,237	166,211	0.2816	0.7184	2.78
59.5	414,047	90,661	0.2190	0.7810	2.00
60.5	317,142	75,551	0.2382	0.7618	1.56
61.5	229,047	60,440	0.2639	0.7361	1.19
62.5	158,571	15,110	0.0953	0.9047	0.88
63.5	140,952	15,110	0.1072	0.8928	0.79
64.5	123,333	15,110	0.1225	0.8775	0.71
65.5	105,714	15,110	0.1429	0.8571	0.62
66.5	88,095	15,110	0.1715	0.8285	0.53
67.5	70,476	7,555	0.1072	0.8928	0.44
68.5	61,667	7,555	0.1225	0.8775	0.39
69.5	52,857	7,555	0.1429	0.8571	0.35
70.5	44,048	15,110	0.3430	0.6570	0.30
71.5	26,429		0.0000	1.0000	0.19
72.5	26,429	15,110	0.5717	0.4283	0.19
73.5	8,810	7,555	0.8576	0.1424	0.08
74.5					0.01



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 369.00 SERVICES  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 369.00 SERVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2004-2022		
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	13,574,043		0.0000	1.0000	100.00
0.5	11,705,358	0	0.0000	1.0000	100.00
1.5	10,326,080	3	0.0000	1.0000	100.00
2.5	6,975,903	13	0.0000	1.0000	100.00
3.5	6,831,450	33	0.0000	1.0000	100.00
4.5	6,876,530	70	0.0000	1.0000	100.00
5.5	6,686,996	131	0.0000	1.0000	100.00
6.5	6,593,407	205	0.0000	1.0000	100.00
7.5	6,403,411	282	0.0000	1.0000	99.99
8.5	6,029,946	431	0.0001	0.9999	99.99
9.5	5,802,617	596	0.0001	0.9999	99.98
10.5	5,222,494	877	0.0002	0.9998	99.97
11.5	4,968,140	1,066	0.0002	0.9998	99.95
12.5	4,724,766	1,534	0.0003	0.9997	99.93
13.5	4,439,075	1,628	0.0004	0.9996	99.90
14.5	4,213,458	2,224	0.0005	0.9995	99.86
15.5	4,033,492	2,409	0.0006	0.9994	99.81
16.5	3,937,871	2,848	0.0007	0.9993	99.75
17.5	3,496,663	2,856	0.0008	0.9992	99.68
18.5	3,442,051	3,281	0.0010	0.9990	99.60
19.5	3,169,140	3,475	0.0011	0.9989	99.50
20.5	2,989,522	3,812	0.0013	0.9987	99.39
21.5	2,901,468	4,201	0.0014	0.9986	99.27
22.5	2,762,399	4,090	0.0015	0.9985	99.12
23.5	2,662,043	5,140	0.0019	0.9981	98.98
24.5	2,502,307	4,665	0.0019	0.9981	98.79
25.5	2,348,392	5,389	0.0023	0.9977	98.60
26.5	2,230,324	5,507	0.0025	0.9975	98.38
27.5	2,121,979	7,441	0.0035	0.9965	98.13
28.5	1,977,329	7,309	0.0037	0.9963	97.79
29.5	1,875,452	10,465	0.0056	0.9944	97.43
30.5	2,220,575	19,588	0.0088	0.9912	96.88
31.5	1,978,113	12,486	0.0063	0.9937	96.03
32.5	1,904,511	11,711	0.0061	0.9939	95.42
33.5	1,737,290	13,490	0.0078	0.9922	94.84
34.5	1,609,857	18,959	0.0118	0.9882	94.10
35.5	1,459,894	16,214	0.0111	0.9889	92.99
36.5	1,364,467	15,007	0.0110	0.9890	91.96
37.5	1,254,363	11,768	0.0094	0.9906	90.95
38.5	1,177,343	6,023	0.0051	0.9949	90.09



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

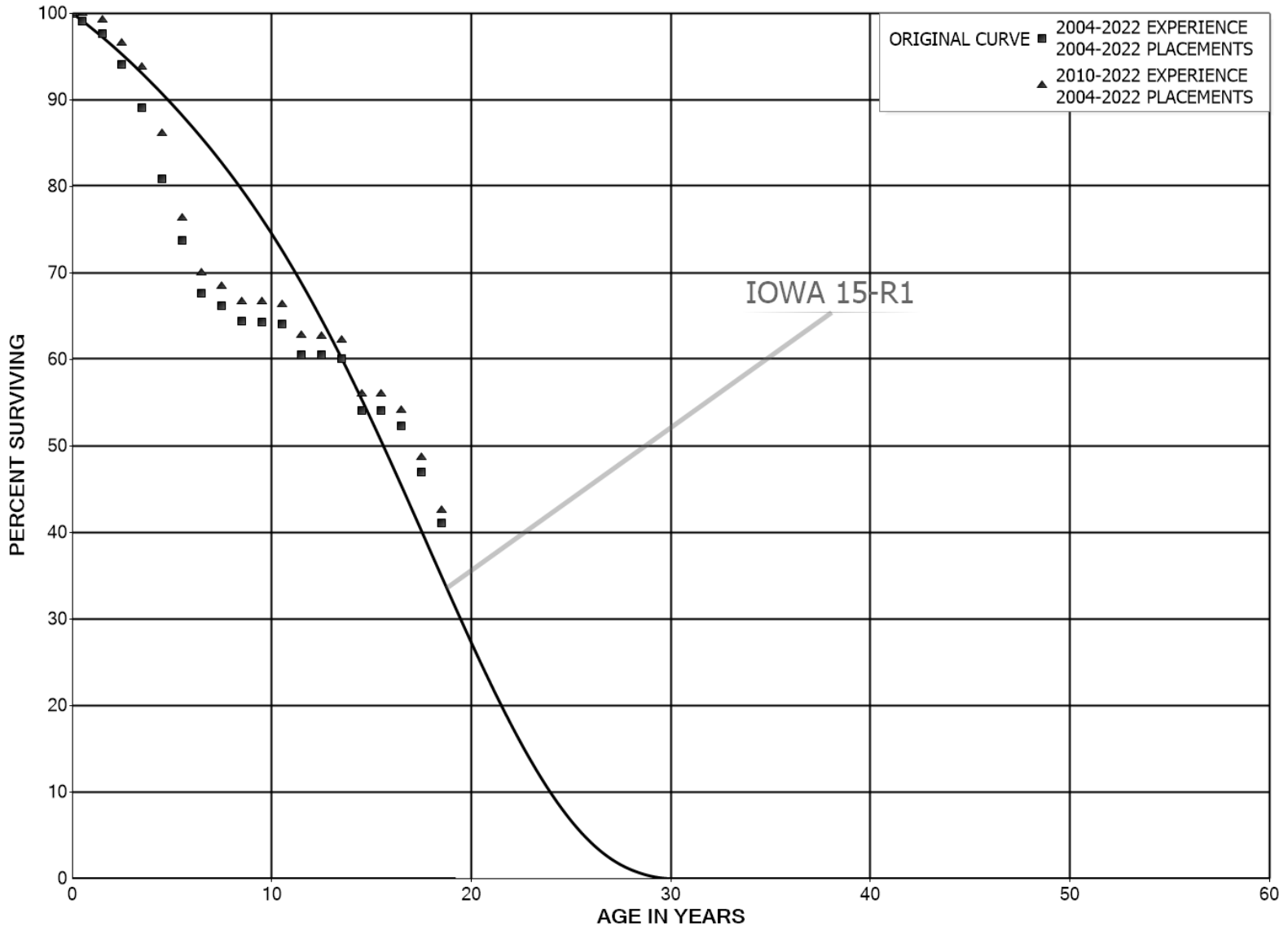
ACCOUNT 369.00 SERVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2004-2022		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,108,855	732	0.0007	0.9993	89.63
40.5	1,033,427	1,358	0.0013	0.9987	89.57
41.5	998,312	1,723	0.0017	0.9983	89.46
42.5	893,129	1,609	0.0018	0.9982	89.30
43.5	839,540	4,608	0.0055	0.9945	89.14
44.5	771,392	9,338	0.0121	0.9879	88.65
45.5	695,624	4,172	0.0060	0.9940	87.58
46.5	589,813	797	0.0014	0.9986	87.05
47.5	530,590	80	0.0002	0.9998	86.94
48.5	384,146	9,923	0.0258	0.9742	86.92
49.5					84.68



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 370.00 METERS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 370.00 METERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 2004-2022			EXPERIENCE BAND 2004-2022		
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	10,020,641	92,637	0.0092	0.9908	100.00
0.5	8,986,579	136,825	0.0152	0.9848	99.08
1.5	8,444,394	303,738	0.0360	0.9640	97.57
2.5	7,268,353	387,262	0.0533	0.9467	94.06
3.5	5,831,262	535,022	0.0918	0.9082	89.05
4.5	4,873,122	432,116	0.0887	0.9113	80.88
5.5	4,315,334	358,369	0.0830	0.9170	73.70
6.5	3,718,539	79,956	0.0215	0.9785	67.58
7.5	3,531,360	92,087	0.0261	0.9739	66.13
8.5	3,373,939	3,590	0.0011	0.9989	64.41
9.5	3,366,744	16,989	0.0050	0.9950	64.34
10.5	3,050,488	164,786	0.0540	0.9460	64.01
11.5	2,567,108	1,285	0.0005	0.9995	60.55
12.5	2,206,329	16,301	0.0074	0.9926	60.52
13.5	2,025,112	203,102	0.1003	0.8997	60.08
14.5	1,622,771	1,224	0.0008	0.9992	54.05
15.5	1,614,109	53,180	0.0329	0.9671	54.01
16.5	1,500,702	151,040	0.1006	0.8994	52.23
17.5	1,158,454	144,926	0.1251	0.8749	46.97
18.5					41.10

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

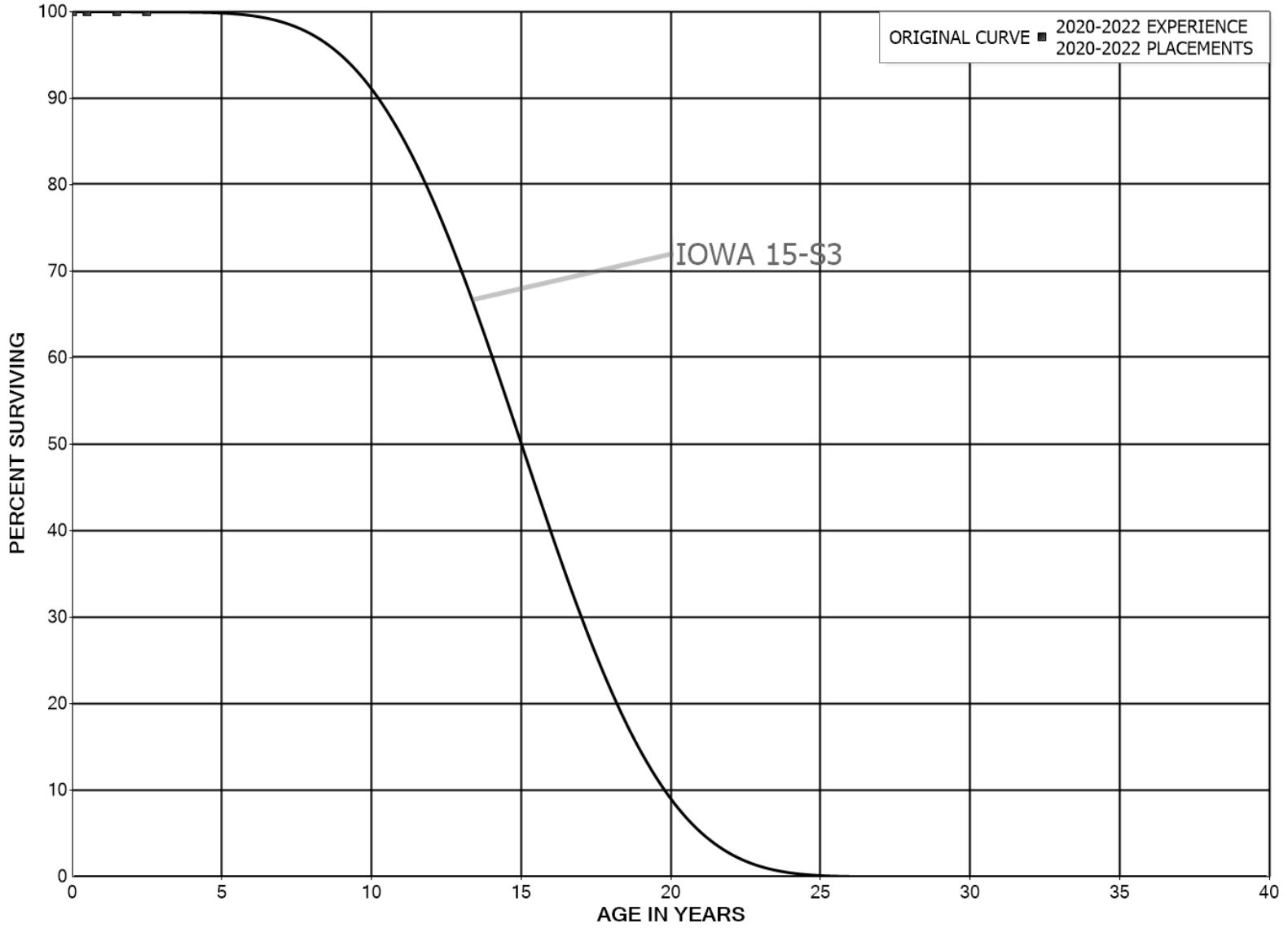
ACCOUNT 370.00 METERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 2004-2022			EXPERIENCE BAND 2010-2022		
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	6,337,308	3,275	0.0005	0.9995	100.00
0.5	5,659,853	42,166	0.0074	0.9926	99.95
1.5	5,629,541	152,012	0.0270	0.9730	99.20
2.5	4,621,428	133,549	0.0289	0.9711	96.52
3.5	3,516,456	289,696	0.0824	0.9176	93.74
4.5	3,228,150	365,263	0.1131	0.8869	86.01
5.5	4,315,334	358,369	0.0830	0.9170	76.28
6.5	3,718,539	79,956	0.0215	0.9785	69.95
7.5	3,531,360	92,087	0.0261	0.9739	68.44
8.5	3,373,939	3,590	0.0011	0.9989	66.66
9.5	3,366,744	16,989	0.0050	0.9950	66.59
10.5	3,050,488	164,786	0.0540	0.9460	66.25
11.5	2,567,108	1,285	0.0005	0.9995	62.67
12.5	2,206,329	16,301	0.0074	0.9926	62.64
13.5	2,025,112	203,102	0.1003	0.8997	62.18
14.5	1,622,771	1,224	0.0008	0.9992	55.94
15.5	1,614,109	53,180	0.0329	0.9671	55.90
16.5	1,500,702	151,040	0.1006	0.8994	54.06
17.5	1,158,454	144,926	0.1251	0.8749	48.62
18.5					42.53



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 371.00 INSTALLATIONS ON CUSTOMERS' PREMISES  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

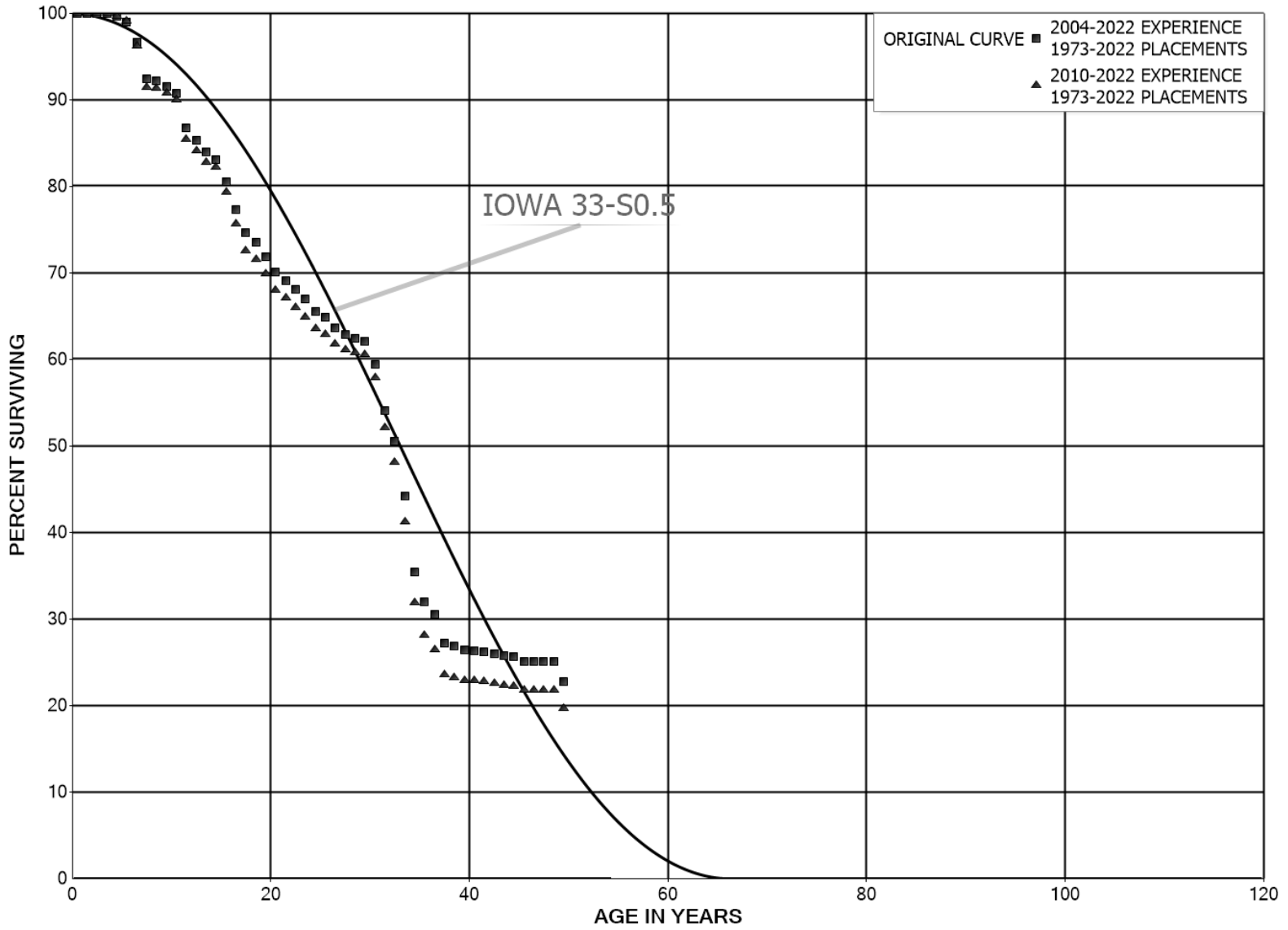
ACCOUNT 371.00 INSTALLATIONS ON CUSTOMERS' PREMISES

ORIGINAL LIFE TABLE

PLACEMENT BAND 2020-2022			EXPERIENCE BAND 2020-2022		
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	1,489,464		0.0000	1.0000	100.00
0.5	1,442,542		0.0000	1.0000	100.00
1.5	1,440,578		0.0000	1.0000	100.00
2.5					100.00



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 373.00 STREET LIGHTING AND SIGNAL SYSTEMS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 373.00 STREET LIGHTING AND SIGNAL SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2004-2022		
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	6,157,727	30	0.0000	1.0000	100.00
0.5	4,686,330	548	0.0001	0.9999	100.00
1.5	4,642,163	1,458	0.0003	0.9997	99.99
2.5	4,287,518	2,700	0.0006	0.9994	99.96
3.5	4,267,001	13,543	0.0032	0.9968	99.89
4.5	4,100,655	24,179	0.0059	0.9941	99.58
5.5	4,136,682	100,527	0.0243	0.9757	98.99
6.5	3,889,390	167,059	0.0430	0.9570	96.58
7.5	3,616,404	10,415	0.0029	0.9971	92.44
8.5	3,609,140	24,642	0.0068	0.9932	92.17
9.5	3,648,788	31,396	0.0086	0.9914	91.54
10.5	3,260,297	145,296	0.0446	0.9554	90.75
11.5	2,771,599	44,394	0.0160	0.9840	86.71
12.5	2,653,653	43,990	0.0166	0.9834	85.32
13.5	2,537,132	24,021	0.0095	0.9905	83.90
14.5	2,451,527	78,181	0.0319	0.9681	83.11
15.5	2,146,299	84,404	0.0393	0.9607	80.46
16.5	1,992,435	70,084	0.0352	0.9648	77.30
17.5	1,772,588	25,641	0.0145	0.9855	74.58
18.5	1,821,447	41,309	0.0227	0.9773	73.50
19.5	1,668,234	40,856	0.0245	0.9755	71.83
20.5	1,611,694	22,059	0.0137	0.9863	70.07
21.5	1,536,192	23,745	0.0155	0.9845	69.11
22.5	1,445,291	23,384	0.0162	0.9838	68.04
23.5	1,346,942	28,012	0.0208	0.9792	66.94
24.5	1,243,996	13,764	0.0111	0.9889	65.55
25.5	1,160,078	21,400	0.0184	0.9816	64.83
26.5	1,122,983	14,619	0.0130	0.9870	63.63
27.5	1,068,242	7,280	0.0068	0.9932	62.80
28.5	973,649	5,618	0.0058	0.9942	62.37
29.5	905,139	38,002	0.0420	0.9580	62.01
30.5	904,703	80,792	0.0893	0.9107	59.41
31.5	727,862	48,365	0.0664	0.9336	54.10
32.5	644,465	80,932	0.1256	0.8744	50.51
33.5	520,002	102,646	0.1974	0.8026	44.17
34.5	387,533	37,749	0.0974	0.9026	35.45
35.5	300,792	14,107	0.0469	0.9531	32.00
36.5	266,180	29,414	0.1105	0.8895	30.49
37.5	224,107	2,836	0.0127	0.9873	27.13
38.5	211,336	3,455	0.0163	0.9837	26.78



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 373.00 STREET LIGHTING AND SIGNAL SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2004-2022			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	170,598	244	0.0014	0.9986	26.34	
40.5	157,637	695	0.0044	0.9956	26.31	
41.5	150,148	1,407	0.0094	0.9906	26.19	
42.5	133,448	1,106	0.0083	0.9917	25.95	
43.5	105,647	452	0.0043	0.9957	25.73	
44.5	100,376	1,986	0.0198	0.9802	25.62	
45.5	67,946	75	0.0011	0.9989	25.11	
46.5	64,941		0.0000	1.0000	25.09	
47.5	64,232		0.0000	1.0000	25.09	
48.5	63,755	6,094	0.0956	0.9044	25.09	
49.5					22.69	

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 373.00 STREET LIGHTING AND SIGNAL SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2010-2022		
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	4,835,658	12	0.0000	1.0000	100.00
0.5	3,400,100	174	0.0001	0.9999	100.00
1.5	3,447,754	403	0.0001	0.9999	99.99
2.5	3,364,735	923	0.0003	0.9997	99.98
3.5	3,488,874	11,332	0.0032	0.9968	99.96
4.5	3,461,736	21,268	0.0061	0.9939	99.63
5.5	3,438,752	96,921	0.0282	0.9718	99.02
6.5	3,258,733	163,128	0.0501	0.9499	96.23
7.5	2,998,312	4,815	0.0016	0.9984	91.41
8.5	3,018,950	18,396	0.0061	0.9939	91.26
9.5	3,059,365	25,240	0.0082	0.9918	90.71
10.5	2,712,948	137,279	0.0506	0.9494	89.96
11.5	2,285,231	35,745	0.0156	0.9844	85.41
12.5	2,056,511	31,791	0.0155	0.9845	84.07
13.5	1,929,474	13,152	0.0068	0.9932	82.77
14.5	1,801,343	64,555	0.0358	0.9642	82.21
15.5	1,534,759	71,218	0.0464	0.9536	79.26
16.5	1,366,098	56,115	0.0411	0.9589	75.58
17.5	1,174,087	15,357	0.0131	0.9869	72.48
18.5	1,275,303	29,878	0.0234	0.9766	71.53
19.5	1,201,721	32,942	0.0274	0.9726	69.86
20.5	1,202,508	15,963	0.0133	0.9867	67.94
21.5	1,176,905	18,680	0.0159	0.9841	67.04
22.5	1,169,074	19,585	0.0168	0.9832	65.97
23.5	1,102,920	24,094	0.0218	0.9782	64.87
24.5	1,097,982	10,830	0.0099	0.9901	63.45
25.5	1,024,168	18,427	0.0180	0.9820	62.83
26.5	998,028	10,918	0.0109	0.9891	61.70
27.5	955,997	4,155	0.0043	0.9957	61.02
28.5	871,217	3,422	0.0039	0.9961	60.76
29.5	823,163	36,441	0.0443	0.9557	60.52
30.5	787,566	79,172	0.1005	0.8995	57.84
31.5	618,533	47,674	0.0771	0.9229	52.02
32.5	569,225	80,592	0.1416	0.8584	48.01
33.5	450,099	102,385	0.2275	0.7725	41.22
34.5	319,536	37,528	0.1174	0.8826	31.84
35.5	234,029	14,021	0.0599	0.9401	28.10
36.5	266,180	29,414	0.1105	0.8895	26.42
37.5	224,107	2,836	0.0127	0.9873	23.50
38.5	211,336	3,455	0.0163	0.9837	23.20

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

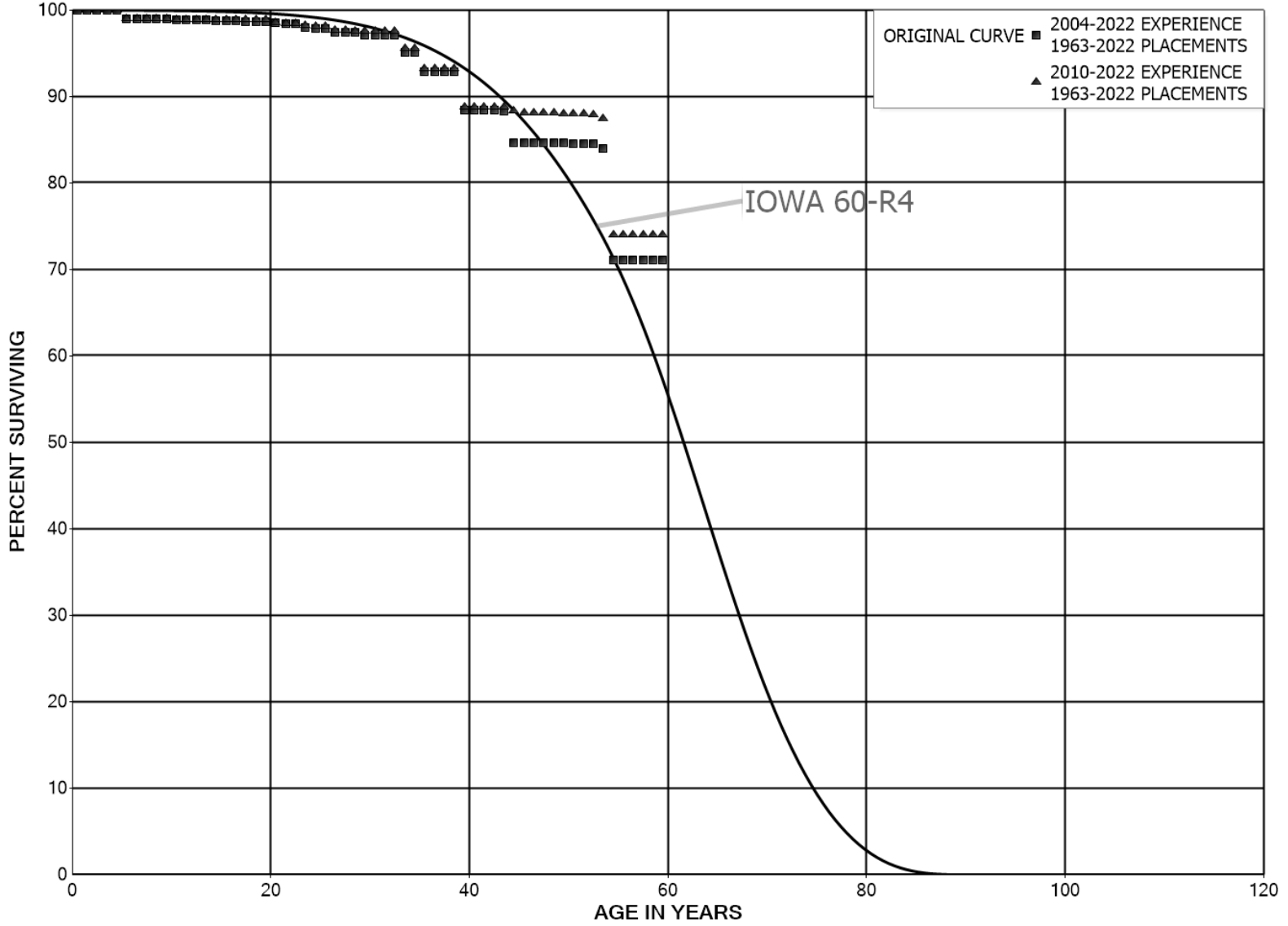
ACCOUNT 373.00 STREET LIGHTING AND SIGNAL SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1973-2022			EXPERIENCE BAND 2010-2022			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	170,598	244	0.0014	0.9986	22.82	
40.5	157,637	695	0.0044	0.9956	22.79	
41.5	150,148	1,407	0.0094	0.9906	22.69	
42.5	133,448	1,106	0.0083	0.9917	22.48	
43.5	105,647	452	0.0043	0.9957	22.29	
44.5	100,376	1,986	0.0198	0.9802	22.19	
45.5	67,946	75	0.0011	0.9989	21.76	
46.5	64,941		0.0000	1.0000	21.73	
47.5	64,232		0.0000	1.0000	21.73	
48.5	63,755	6,094	0.0956	0.9044	21.73	
49.5					19.65	



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1963-2022			EXPERIENCE BAND 2004-2022			
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	11,392,071	126	0.0000	1.0000	100.00	
0.5	9,046,424		0.0000	1.0000	100.00	
1.5	8,313,222	2,517	0.0003	0.9997	100.00	
2.5	8,279,935	748	0.0001	0.9999	99.97	
3.5	7,313,620	2,832	0.0004	0.9996	99.96	
4.5	6,606,765	61,548	0.0093	0.9907	99.92	
5.5	6,348,709	58	0.0000	1.0000	98.99	
6.5	6,414,587	36	0.0000	1.0000	98.99	
7.5	6,132,502		0.0000	1.0000	98.99	
8.5	870,234	18	0.0000	1.0000	98.99	
9.5	803,671	1,095	0.0014	0.9986	98.99	
10.5	886,600	53	0.0001	0.9999	98.85	
11.5	915,485	40	0.0000	1.0000	98.85	
12.5	1,003,516	487	0.0005	0.9995	98.84	
13.5	1,003,029	285	0.0003	0.9997	98.79	
14.5	1,012,077	168	0.0002	0.9998	98.77	
15.5	894,822	588	0.0007	0.9993	98.75	
16.5	894,235	150	0.0002	0.9998	98.68	
17.5	904,313	54	0.0001	0.9999	98.67	
18.5	906,559	158	0.0002	0.9998	98.66	
19.5	1,585,882	2,992	0.0019	0.9981	98.64	
20.5	1,582,890	273	0.0002	0.9998	98.46	
21.5	1,548,371	157	0.0001	0.9999	98.44	
22.5	1,523,042	8,031	0.0053	0.9947	98.43	
23.5	1,516,596	931	0.0006	0.9994	97.91	
24.5	1,507,003	587	0.0004	0.9996	97.85	
25.5	1,350,212	5,333	0.0039	0.9961	97.81	
26.5	1,322,728	23	0.0000	1.0000	97.43	
27.5	1,308,613	187	0.0001	0.9999	97.43	
28.5	1,154,604	4,236	0.0037	0.9963	97.41	
29.5	1,072,522		0.0000	1.0000	97.06	
30.5	1,047,657	243	0.0002	0.9998	97.06	
31.5	961,538	60	0.0001	0.9999	97.03	
32.5	961,478	18,951	0.0197	0.9803	97.03	
33.5	933,410	444	0.0005	0.9995	95.11	
34.5	919,756	21,897	0.0238	0.9762	95.07	
35.5	900,328	79	0.0001	0.9999	92.81	
36.5	891,470	68	0.0001	0.9999	92.80	
37.5	889,183	74	0.0001	0.9999	92.79	
38.5	259,080	12,129	0.0468	0.9532	92.78	

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1963-2022			EXPERIENCE BAND 2004-2022			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	261,634	53	0.0002	0.9998	88.44	
40.5	625,658	8	0.0000	1.0000	88.42	
41.5	623,729	134	0.0002	0.9998	88.42	
42.5	622,101	956	0.0015	0.9985	88.40	
43.5	619,685	25,331	0.0409	0.9591	88.27	
44.5	379,274	47	0.0001	0.9999	84.66	
45.5	379,227		0.0000	1.0000	84.65	
46.5	379,107		0.0000	1.0000	84.65	
47.5	379,107		0.0000	1.0000	84.65	
48.5	378,288	283	0.0007	0.9993	84.65	
49.5	363,616	137	0.0004	0.9996	84.58	
50.5	363,004		0.0000	1.0000	84.55	
51.5	363,004	325	0.0009	0.9991	84.55	
52.5	362,680	2,103	0.0058	0.9942	84.48	
53.5	360,577	55,412	0.1537	0.8463	83.99	
54.5	303,086		0.0000	1.0000	71.08	
55.5	302,148		0.0000	1.0000	71.08	
56.5	302,148		0.0000	1.0000	71.08	
57.5	300,208		0.0000	1.0000	71.08	
58.5	288,516		0.0000	1.0000	71.08	
59.5					71.08	

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1963-2022			EXPERIENCE BAND 2010-2022			
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	11,261,116	101	0.0000	1.0000	100.00	
0.5	8,915,495		0.0000	1.0000	100.00	
1.5	8,182,293	2,517	0.0003	0.9997	100.00	
2.5	8,241,386	748	0.0001	0.9999	99.97	
3.5	7,247,688	2,832	0.0004	0.9996	99.96	
4.5	6,540,833	61,548	0.0094	0.9906	99.92	
5.5	6,272,468	15	0.0000	1.0000	98.98	
6.5	5,947,305		0.0000	1.0000	98.98	
7.5	5,642,860		0.0000	1.0000	98.98	
8.5	404,699		0.0000	1.0000	98.98	
9.5	209,550	284	0.0014	0.9986	98.98	
10.5	209,266		0.0000	1.0000	98.85	
11.5	206,789		0.0000	1.0000	98.85	
12.5	597,062		0.0000	1.0000	98.85	
13.5	619,404		0.0000	1.0000	98.85	
14.5	633,764		0.0000	1.0000	98.85	
15.5	658,585	186	0.0003	0.9997	98.85	
16.5	742,137	150	0.0002	0.9998	98.82	
17.5	783,524		0.0000	1.0000	98.80	
18.5	871,193	71	0.0001	0.9999	98.80	
19.5	871,122	2,992	0.0034	0.9966	98.79	
20.5	877,411	191	0.0002	0.9998	98.45	
21.5	852,371	136	0.0002	0.9998	98.43	
22.5	825,037	1,643	0.0020	0.9980	98.41	
23.5	833,540	931	0.0011	0.9989	98.22	
24.5	824,668	539	0.0007	0.9993	98.11	
25.5	1,109,942	5,306	0.0048	0.9952	98.04	
26.5	1,082,485		0.0000	1.0000	97.57	
27.5	1,072,286	163	0.0002	0.9998	97.57	
28.5	920,301	261	0.0003	0.9997	97.56	
29.5	842,846		0.0000	1.0000	97.53	
30.5	803,381	241	0.0003	0.9997	97.53	
31.5	943,829	60	0.0001	0.9999	97.50	
32.5	943,769	18,928	0.0201	0.9799	97.50	
33.5	915,851		0.0000	1.0000	95.54	
34.5	902,641	21,881	0.0242	0.9758	95.54	
35.5	881,647	79	0.0001	0.9999	93.23	
36.5	887,352	68	0.0001	0.9999	93.22	
37.5	885,587	74	0.0001	0.9999	93.21	
38.5	253,085	12,022	0.0475	0.9525	93.20	

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS

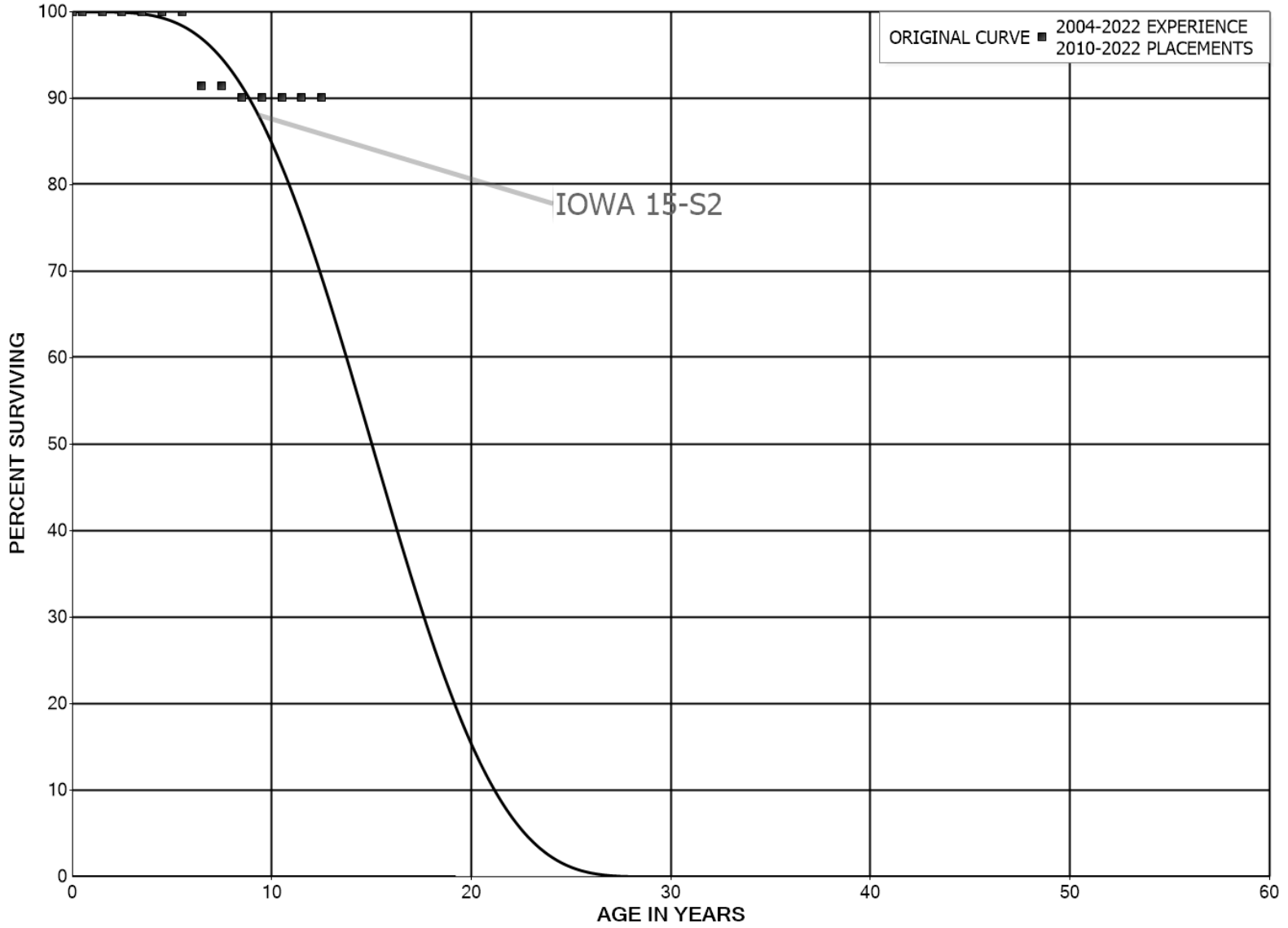
ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1963-2022			EXPERIENCE BAND 2010-2022		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	241,063		0.0000	1.0000	88.77
40.5	237,182	8	0.0000	1.0000	88.77
41.5	237,615		0.0000	1.0000	88.77
42.5	237,195	68	0.0003	0.9997	88.77
43.5	235,667	1,301	0.0055	0.9945	88.75
44.5	21,551	47	0.0022	0.9978	88.26
45.5	35,299		0.0000	1.0000	88.06
46.5	379,107		0.0000	1.0000	88.06
47.5	379,107		0.0000	1.0000	88.06
48.5	378,288	283	0.0007	0.9993	88.06
49.5	363,616	137	0.0004	0.9996	88.00
50.5	363,004		0.0000	1.0000	87.97
51.5	363,004	325	0.0009	0.9991	87.97
52.5	362,680	2,103	0.0058	0.9942	87.89
53.5	360,577	55,412	0.1537	0.8463	87.38
54.5	303,086		0.0000	1.0000	73.95
55.5	302,148		0.0000	1.0000	73.95
56.5	302,148		0.0000	1.0000	73.95
57.5	300,208		0.0000	1.0000	73.95
58.5	288,516		0.0000	1.0000	73.95
59.5					73.95





LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 392.00 TRANSPORTATION EQUIPMENT  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

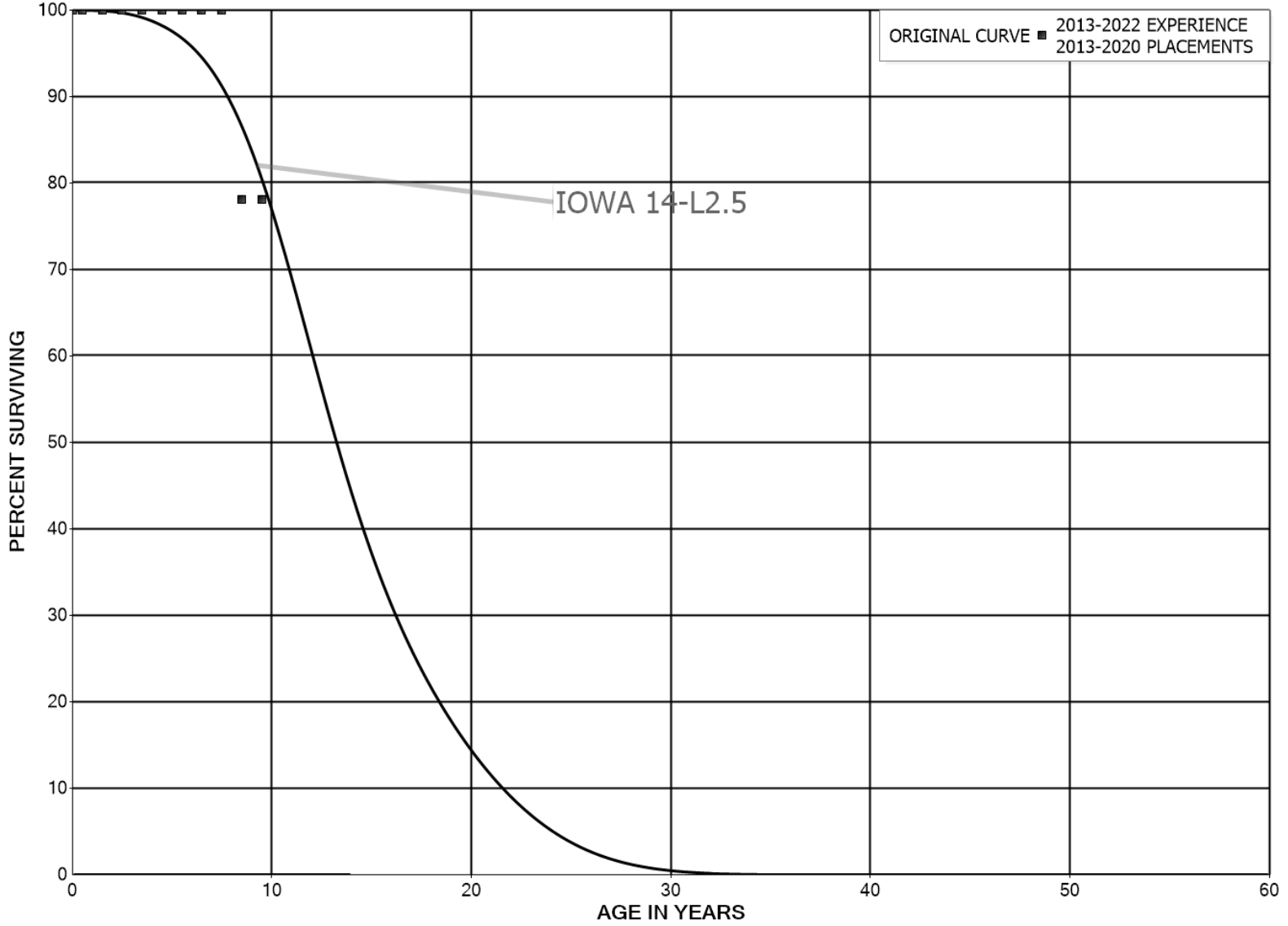
ACCOUNT 392.00 TRANSPORTATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 2010-2022			EXPERIENCE BAND 2004-2022		
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	5,087,768		0.0000	1.0000	100.00
0.5	5,037,197		0.0000	1.0000	100.00
1.5	4,911,599		0.0000	1.0000	100.00
2.5	3,319,872		0.0000	1.0000	100.00
3.5	3,319,872		0.0000	1.0000	100.00
4.5	2,546,649		0.0000	1.0000	100.00
5.5	2,512,275	215,152	0.0856	0.9144	100.00
6.5	2,046,561		0.0000	1.0000	91.44
7.5	1,973,371	29,955	0.0152	0.9848	91.44
8.5	234,851		0.0000	1.0000	90.05
9.5	82,354		0.0000	1.0000	90.05
10.5	82,354		0.0000	1.0000	90.05
11.5	82,354		0.0000	1.0000	90.05
12.5					90.05



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
ACCOUNT 396.00 POWER OPERATED EQUIPMENT  
ORIGINAL AND SMOOTH SURVIVOR CURVES



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 396.00 POWER OPERATED EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 2013-2020			EXPERIENCE BAND 2013-2022		
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	3,573,409		0.0000	1.0000	100.00
0.5	2,144,130		0.0000	1.0000	100.00
1.5	2,144,130		0.0000	1.0000	100.00
2.5	1,843,313		0.0000	1.0000	100.00
3.5	1,555,453		0.0000	1.0000	100.00
4.5	1,466,922		0.0000	1.0000	100.00
5.5	1,225,166		0.0000	1.0000	100.00
6.5	720,678		0.0000	1.0000	100.00
7.5	720,678	158,420	0.2198	0.7802	100.00
8.5	562,258		0.0000	1.0000	78.02
9.5					78.02

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## PART VIII. NET SALVAGE STATISTICS

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 362.00 STATION EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2015	3,526	2,690	76		0	2,690-	76-
2016							
2017	958	376	39	9	1	366-	38-
2018	198,974	26,692	13	4,986	3	21,706-	11-
2019	613,931	60,685	10	1,264	0	59,421-	10-
2020	3,101	490	16		0	490-	16-
2021							
2022	66,699	51,346	77		0	51,346-	77-
TOTAL	887,189	142,278	16	6,260	1	136,018-	15-
FIVE-YEAR AVERAGE							
18-22	176,541	27,842	16	1,250	1	26,592-	15-

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2015	17,277	52,721	305		0	52,721-	305-
2016							
2017	224,338	352,088	157	8,874	4	343,214-	153-
2018	118,538	63,607	54	11,882	10	51,724-	44-
2019	126,875	50,165	40	1,045	1	49,119-	39-
2020	249,247	157,452	63		0	157,452-	63-
2021	115,653	391,247	338	15,990	14	375,257-	324-
2022	174,287	367,435	211		0	367,435-	211-
TOTAL	1,026,215	1,434,713	140	37,792	4	1,396,922-	136-
FIVE-YEAR AVERAGE							
18-22	156,920	205,981	131	5,784	4	200,197-	128-

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2015	37,966	115,851	305		0	115,851-	305-
2016							
2017	303,427	476,214	157	12,002	4	464,212-	153-
2018	191,029	102,504	54	19,149	10	83,355-	44-
2019	428,046	169,244	40	3,526	1	165,717-	39-
2020	136,727	86,372	63		0	86,372-	63-
2021	67,626	228,776	338	9,350	14	219,426-	324-
2022	345,348	12,596-	4-	1,825	1	14,421	4
TOTAL	1,510,169	1,166,365	77	45,853	3	1,120,512-	74-
FIVE-YEAR AVERAGE							
18-22	233,755	114,860	49	6,770	3	108,090-	46-



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 366.00 UNDERGROUND CONDUIT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2018	4,835	324	7	61	1	264-	5-
2019	1,267	63	5	1	0	61-	5-
2020	975	77	8		0	77-	8-
2021							
2022		6,370				6,370-	
TOTAL	7,077	6,834	97	62	1	6,772-	96-
FIVE-YEAR AVERAGE							
18-22	1,415	1,367	97	12	1	1,354-	96-

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2017	6,249	6,129	98	154	2	5,975-	96-
2018	828	278	34	52	6	226-	27-
2019	9,460	2,338	25	49	1	2,289-	24-
2020	2,113	834	39		0	834-	39-
2021	39	83	211	3	9	80-	203-
2022	53	84,939			0	84,939-	
TOTAL	18,742	94,601	505	258	1	94,343-	503-
FIVE-YEAR AVERAGE							
18-22	2,499	17,694	708	21	1	17,674-	707-

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 368.00 LINE TRANSFORMERS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2015	261,749	199,680	76		0	199,680-	76-
2016							
2017	109,194	42,844	39	1,080	1	41,764-	38-
2018	41,780	5,605	13	1,047	3	4,558-	11-
2019	27,367	2,705	10	56	0	2,649-	10-
2020	43,403	6,855	16		0	6,855-	16-
2021	904	764	85	31	3	733-	81-
2022		140,890				140,890-	
TOTAL	484,397	399,343	82	2,214	0	397,129-	82-
FIVE-YEAR AVERAGE							
18-22	22,691	31,364	138	227	1	31,137-	137-

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 369.00 SERVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2015	3,786	8,665	229		0	8,665-	229-
2016							
2017	15,251	17,951	118	452	3	17,499-	115-
2018	9,338	3,758	40	702	8	3,056-	33-
2019	4,164	1,235	30	26	1	1,209-	29-
2020	1,134	537	47		0	537-	47-
2021	80	203	254	8	10	195-	243-
2022	10,350	117,830			0	117,830-	
TOTAL	44,102	150,180	341	1,189	3	148,991-	338-
FIVE-YEAR AVERAGE							
18-22	5,013	24,713	493	147	3	24,565-	490-

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 370.00 METERS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2016	1,363,662	303,793	22	1,109	0	302,683-	22-
2017	72,030	14,131	20	356	0	13,775-	19-
2018	205,627	13,792	7	2,577	1	11,216-	5-
2019							
2020	55,803	4,406	8		0	4,406-	8-
2021	151,040	63,870	42	2,610	2	61,260-	41-
2022	144,926	13,839	10		0	13,839-	10-
TOTAL	1,993,087	413,831	21	6,652	0	407,179-	20-
FIVE-YEAR AVERAGE							
18-22	111,479	19,182	17	1,037	1	18,144-	16-

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 373.00 STREET LIGHTING AND SIGNAL SYSTEMS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2015	327	499	153		0	499-	153-
2016							
2017							
2018	22,564	6,054	27	1,131	5	4,923-	22-
2019	118,539	23,434	20	488	0	22,946-	19-
2020	1,168	369	32		0	369-	32-
2021							
2022	374,843	32,392	9		0	32,392-	9-
TOTAL	517,441	62,748	12	1,619	0	61,129-	12-
FIVE-YEAR AVERAGE							
18-22	103,423	12,450	12	324	0	12,126-	12-

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2017	103,528	20,310	20	512	0	19,798-	19-
2018							
2019	60,257	2,978	5	62	0	2,916-	5-
2020							
2021	29,863	12,628	42	516	2	12,112-	41-
2022		2,087				2,087-	
TOTAL	193,648	38,004	20	1,090	1	36,914-	19-
FIVE-YEAR AVERAGE							
18-22	18,024	3,539	20	116	1	3,423-	19-

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 392.00 TRANSPORTATION EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2020	215,152		0	18,806	9	18,806	9
2021	29,955		0	18,253	61	18,253	61
2022							
TOTAL	245,107		0	37,060	15	37,060	15



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 396.00 POWER OPERATED EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2021	158,420		0	48,268	30	48,268	30
2022							
TOTAL	158,420		0	48,268	30	48,268	30

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## **PART IX. DETAILED DEPRECIATION CALCULATIONS**

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 303.00 MISCELLANEOUS INTANGIBLE PLANT - 3 YEAR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 3-SQUARE						
NET SALVAGE PERCENT.. 0						
2018	64,492.85	64,493	64,493			
2019	27,340.19	27,340	27,340			
2020	82,336.52	68,613	75,168	7,169	0.50	7,169
2021	1,000,400.00	500,200	547,986	452,414	1.50	301,609
2022	953,419.81	158,906	174,087	779,333	2.50	311,733
	2,127,989.37	819,552	889,074	1,238,915		620,511
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 2.0						29.16

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 303.10 MISCELLANEOUS INTANGIBLE PLANT - 5 YEAR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2015	32,473.99	32,474	32,474			
2016	45,346.06	45,346	45,346			
2017	74,672.06	74,672	74,672			
2018	446,122.78	401,511	446,123			
	598,614.89	554,003	598,615			
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						0.0 0.00

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 303.15 MISCELLANEOUS INTANGIBLE PLANT - 7 YEAR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 7-SQUARE						
NET SALVAGE PERCENT.. 0						
2021	379,186.69	81,256	88,168	291,019	5.50	52,913
	379,186.69	81,256	88,168	291,019		52,913
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						5.5 13.95

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 303.20 MISCELLANEOUS INTANGIBLE PLANT - 10 YEAR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 10-SQUARE						
NET SALVAGE PERCENT.. 0						
2012	406,364.40	406,364	406,364			
2013	449,654.10	427,171	449,654			
2014	8,077,698.89	6,866,044	7,488,695	589,004	1.50	392,669
2015	832,168.21	624,126	680,725	151,443	2.50	60,577
2016	1,082,199.15	703,429	767,220	314,979	3.50	89,994
2017	150,781.88	82,930	90,451	60,331	4.50	13,407
2018	388,367.02	174,765	190,614	197,753	5.50	35,955
2019	339,887.68	118,961	129,749	210,139	6.50	32,329
2020	107,003.48	26,751	29,177	77,826	7.50	10,377
2021	182,482.92	27,372	29,854	152,629	8.50	17,956
	12,016,607.73	9,457,913	10,262,503	1,754,105		653,264
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 2.7						5.44

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 303.30 MISCELLANEOUS INTANGIBLE PLANT - 15 YEAR

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2022	13,541,670.26	338,542	367,341	13,174,329	19.50	675,607
	13,541,670.26	338,542	367,341	13,174,329		675,607
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						19.5 4.99

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 361.00 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R3						
NET SALVAGE PERCENT.. -5						
1955	90,772.81	80,983	95,311			
1957	255.00	224	268			
1959	301.23	261	316			
1966	832.13	672	874			
1968	1,253.00	988	1,316			
1977	2,374.51	1,641	2,355	138	20.51	7
1982	332.21	209	300	49	24.05	2
1984	4,310.63	2,600	3,732	794	25.53	31
1985	12,069.66	7,120	10,219	2,454	26.29	93
1986	6,021.00	3,471	4,982	1,340	27.06	50
1987	8,312.06	4,678	6,714	2,014	27.84	72
1989	31,806.09	17,021	24,430	8,966	29.42	305
1991	6,797.71	3,445	4,945	2,193	31.04	71
1999	150,213.93	58,252	83,609	74,116	37.84	1,959
2005	54,330.10	15,935	22,871	34,176	43.24	790
2012	641,046.48	114,427	164,236	508,863	49.80	10,218
2013	21,253.13	3,440	4,937	17,379	50.75	342
2014	932,878.28	135,341	194,254	785,268	51.71	15,186
	1,965,159.96	450,708	625,669	1,437,749		29,126

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 49.4 1.48



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 362.00 STATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R2.5						
NET SALVAGE PERCENT.. -15						
1939	20,784.86	21,178	23,903			
1941	187.42	189	216			
1947	3,555.53	3,487	4,089			
1949	51,231.49	49,696	58,916			
1951	951.59	912	1,094			
1952	335.61	320	386			
1954	32,333.30	30,397	37,183			
1955	75.41	70	87			
1956	33,161.19	30,725	38,135			
1957	484.90	446	558			
1958	3,466.00	3,161	3,986			
1960	5,514.26	4,943	6,341			
1961	27,344.29	24,287	31,446			
1962	124,242.04	109,278	142,878			
1963	67,132.35	58,455	77,202			
1964	1,369.10	1,180	1,574			
1965	37,525.07	31,984	43,154			
1966	797.79	672	917			
1967	28,119.00	23,417	32,337			
1968	4,785.16	3,936	5,503			
1969	86,154.57	69,982	99,078			
1970	60,574.84	48,554	69,661			
1971	2,889.21	2,284	3,323			
1973	198,967.10	152,808	228,812			
1974	132,868.67	100,491	150,973	1,826	20.54	89
1975	63.52	47	71	2	21.16	
1976	97,624.22	71,496	107,412	4,856	21.79	223
1977	39,647.33	28,542	42,880	2,714	22.44	121
1978	713.27	505	759	61	23.09	3
1979	3,378.24	2,347	3,526	359	23.76	15
1980	165,546.47	112,862	169,559	20,819	24.43	852
1981	66.52	44	66	10	25.11	
1982	806.31	528	793	134	25.81	5
1983	86,841.58	55,743	83,746	16,122	26.51	608
1984	1,699.99	1,068	1,605	350	27.23	13
1985	47,123.80	28,948	43,490	10,702	27.95	383
1986	9,351.96	5,614	8,434	2,321	28.68	81
1987	77,940.50	45,683	68,632	21,000	29.42	714
1989	1,033,207.64	575,879	865,174	323,015	30.92	10,447
1990	364,246.51	197,642	296,928	121,955	31.69	3,848
1991	527,760.52	278,578	418,523	188,402	32.46	5,804
1992	849,488.83	435,703	654,580	322,332	33.24	9,697
1993	2,478.42	1,234	1,854	996	34.03	29

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 362.00 STATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R2.5						
NET SALVAGE PERCENT.. -15						
1994	990,988.00	478,271	718,532	421,104	34.82	12,094
1995	717,799.02	335,281	503,711	321,758	35.63	9,031
1996	18,324.29	8,275	12,432	8,641	36.44	237
1997	503,639.28	219,610	329,932	249,253	37.25	6,691
1998	4,177.12	1,755	2,637	2,167	38.08	57
1999	187,426.27	75,762	113,821	101,719	38.91	2,614
2000	52,534.72	20,400	30,648	29,767	39.74	749
2001	1,797,492.48	668,712	1,004,642	1,062,474	40.59	26,176
2002	269,624.19	95,913	144,095	165,973	41.44	4,005
2003	187,969.32	63,769	95,804	120,361	42.30	2,845
2004	1,511,532.41	487,878	732,966	1,005,296	43.16	23,292
2005	1,303,004.34	398,844	599,205	899,250	44.03	20,424
2006	1,722,713.72	498,589	749,057	1,232,064	44.90	27,440
2007	528,346.60	144,001	216,341	391,258	45.78	8,546
2008	80,969.24	20,687	31,079	62,036	46.67	1,329
2009	522,029.53	124,467	186,994	413,340	47.56	8,691
2010	2,071,620.22	458,605	688,987	1,693,376	48.45	34,951
2011	166,530.66	33,993	51,070	140,440	49.35	2,846
2012	452,110.11	84,400	126,799	393,128	50.26	7,822
2013	459.28	78	117	411	51.17	8
2014	1,067,141.21	161,992	243,369	983,843	52.08	18,891
2015	1,353,447.53	181,593	272,817	1,283,648	53.00	24,220
2016	3,883,354.14	452,525	679,853	3,786,004	53.92	70,215
2017	4,375,276.64	431,859	648,805	4,382,763	54.85	79,905
2018	272,355.31	22,081	33,173	280,036	55.77	5,021
2019	2,222,477.48	140,137	210,535	2,345,314	56.71	41,356
2020	3,609.75	163	245	3,906	57.64	68
2021	11,880,798.68	323,401	485,863	13,177,055	58.58	224,941
2022	11,690.56	105	158	13,286	59.53	223
	42,392,278.48	8,548,461	12,743,471	36,007,649		697,620

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 51.6 1.65

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR	ORIGINAL COST	CALCULATED ACCRUED	ALLOC. BOOK RESERVE	FUTURE BOOK ACCRUALS	REM. LIFE	ANNUAL ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
SURVIVOR CURVE.. IOWA 55-R2.5						
NET SALVAGE PERCENT.. -70						
1973	259,340.92	313,426	392,325	48,555	15.90	3,054
1974	233,819.31	278,535	348,651	48,842	16.46	2,967
1975	79,127.72	92,891	116,275	18,242	17.02	1,072
1976	106,516.09	123,133	154,129	26,948	17.60	1,531
1977	68,851.44	78,315	98,029	19,018	18.20	1,045
1978	113,253.02	126,719	158,618	33,912	18.80	1,804
1979	156,329.32	171,923	215,201	50,559	19.42	2,603
1980	297,778.31	321,588	402,542	103,681	20.06	5,169
1981	158,812.20	168,371	210,755	59,226	20.70	2,861
1982	318,840.14	331,526	414,981	127,047	21.36	5,948
1983	305,166.87	310,985	389,270	129,514	22.03	5,879
1984	190,462.38	190,092	237,944	85,842	22.71	3,780
1985	370,347.63	361,731	452,790	176,801	23.40	7,556
1986	185,389.85	177,065	221,638	93,525	24.10	3,881
1987	369,832.80	345,108	431,982	196,734	24.81	7,930
1988	308,749.15	281,238	352,034	172,840	25.53	6,770
1989	403,958.72	358,851	449,185	237,545	26.26	9,046
1990	312,091.47	270,100	338,093	192,462	27.00	7,128
1991	732,135.91	616,652	771,883	472,748	27.75	17,036
1992	366,616.98	300,294	375,887	247,362	28.50	8,679
1993	766,070.45	609,251	762,619	539,701	29.27	18,439
1994	544,190.55	419,673	525,318	399,806	30.05	13,305
1995	546,717.60	408,434	511,250	418,170	30.83	13,564
1996	386,265.87	279,136	349,403	307,249	31.62	9,717
1997	407,364.30	284,314	355,885	336,634	32.42	10,384
1998	279,804.70	188,279	235,675	239,993	33.23	7,222
1999	750,168.92	485,770	608,053	667,234	34.05	19,596
2000	542,334.92	337,441	422,385	499,584	34.87	14,327
2001	351,120.14	209,460	262,188	334,716	35.70	9,376
2002	452,830.03	258,379	323,421	446,390	36.54	12,216
2003	479,603.68	261,198	326,950	488,376	37.38	13,065
2004	201,972.85	104,692	131,046	212,308	38.23	5,553
2005	6,651,649.85	3,271,009	4,094,424	7,213,381	39.09	184,533
2006	1,128,484.15	524,593	656,649	1,261,774	39.96	31,576
2007	1,303,359.48	570,856	714,558	1,501,153	40.83	36,766
2008	854,084.42	350,848	439,167	1,012,777	41.71	24,281
2009	1,044,390.19	400,616	501,464	1,273,999	42.59	29,913
2010	1,327,571.22	472,702	591,696	1,665,175	43.48	38,297
2011	999,357.73	328,042	410,620	1,288,288	44.38	29,029
2012	1,817,124.09	545,939	683,369	2,405,742	45.28	53,130
2013	1,737,561.99	473,680	592,920	2,360,935	46.18	51,125
2014	4,988,981.35	1,219,776	1,526,832	6,954,436	47.09	147,684
2015	2,138,676.68	462,068	578,385	3,057,365	48.01	63,682

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 364.00 POLES, TOWERS AND FIXTURES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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-R2.5						
NET SALVAGE PERCENT.. -70						
2016	2,840,891.82	532,985	667,154	4,162,362	48.93	85,068
2017	1,555,056.81	247,546	309,861	2,333,736	49.85	46,815
2018	2,866,172.30	373,866	467,980	4,404,513	50.78	86,737
2019	4,382,440.01	445,668	557,856	6,892,292	51.71	133,287
2020	3,552,842.17	258,082	323,049	5,716,783	52.65	108,581
2021	4,010,053.83	176,017	220,326	6,596,766	53.58	123,120
2022	7,607,271.38	110,572	138,407	12,793,954	54.53	234,622
	61,851,833.71	19,829,435	24,821,122	80,326,995		1,760,749
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						45.6 2.85

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR	ORIGINAL COST	CALCULATED ACCRUED	ALLOC. BOOK RESERVE	FUTURE BOOK ACCRUALS	REM. LIFE	ANNUAL ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
SURVIVOR CURVE.. IOWA 50-R2						
NET SALVAGE PERCENT.. -50						
1973	1,660,917.26	1,790,303	1,729,174	762,202	14.07	54,172
1974	893,485.56	949,954	917,518	422,710	14.56	29,032
1975	254,010.05	266,253	257,162	123,853	15.06	8,224
1976	216,278.70	223,394	215,766	108,652	15.57	6,978
1977	223,872.36	227,745	219,969	115,840	16.09	7,200
1978	356,795.49	357,188	344,992	190,201	16.63	11,437
1979	250,264.10	246,485	238,069	137,327	17.17	7,998
1980	471,127.66	456,099	440,526	266,165	17.73	15,012
1981	275,514.76	262,015	253,069	160,203	18.30	8,754
1982	369,841.63	345,284	333,495	221,267	18.88	11,720
1983	378,934.24	346,952	335,106	233,295	19.48	11,976
1984	271,917.73	244,073	235,739	172,138	20.08	8,573
1985	421,599.21	370,586	357,933	274,466	20.70	13,259
1986	297,361.00	255,849	247,113	198,928	21.32	9,331
1987	659,990.86	555,184	536,228	453,758	21.96	20,663
1988	452,970.25	372,342	359,629	319,826	22.60	14,152
1989	1,028,116.80	824,755	796,594	745,581	23.26	32,054
1990	1,166,010.46	911,937	880,800	868,216	23.93	36,281
1991	1,478,796.84	1,126,843	1,088,368	1,129,827	24.60	45,928
1992	804,167.08	596,129	575,775	630,476	25.29	24,930
1993	1,158,759.56	835,002	806,491	931,648	25.98	35,860
1994	652,873.94	456,555	440,966	538,345	26.69	20,170
1995	764,959.38	518,642	500,933	646,506	27.40	23,595
1996	496,486.32	325,745	314,623	430,106	28.13	15,290
1997	591,849.09	375,351	362,535	525,239	28.86	18,200
1998	383,062.23	234,434	226,429	348,164	29.60	11,762
1999	665,251.82	392,166	378,776	619,102	30.35	20,399
2000	529,449.95	300,198	289,948	504,227	31.10	16,213
2001	341,456.98	185,718	179,377	332,808	31.87	10,443
2002	504,133.02	262,552	253,587	502,613	32.64	15,399
2003	556,044.78	276,577	267,133	566,934	33.42	16,964
2004	208,673.85	98,849	95,474	217,537	34.21	6,359
2005	2,821,787.42	1,268,958	1,225,630	3,007,051	35.01	85,891
2006	2,037,634.35	867,421	837,803	2,218,649	35.81	61,956
2007	1,998,379.46	802,150	774,761	2,222,808	36.62	60,699
2008	2,244,970.39	845,905	817,022	2,550,434	37.44	68,121
2009	1,122,777.68	395,442	381,940	1,302,227	38.26	34,036
2010	2,688,714.16	880,016	849,969	3,183,102	39.09	81,430
2011	1,598,858.90	483,015	466,523	1,931,765	39.93	48,379
2012	727,418.27	201,422	194,545	896,582	40.77	21,991
2013	1,464,157.50	367,650	355,097	1,841,139	41.63	44,226
2014	9,036,416.61	2,038,616	1,969,009	11,585,616	42.48	272,731
2015	2,956,913.01	589,904	569,762	3,865,608	43.35	89,172

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 365.00 OVERHEAD CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R2						
NET SALVAGE PERCENT.. -50						
2016	5,297,341.98	918,559	887,195	7,058,818	44.22	159,630
2017	3,428,383.89	505,001	487,758	4,654,818	45.09	103,234
2018	7,683,612.72	928,949	897,231	10,628,188	45.97	231,198
2019	6,903,981.52	650,355	628,149	9,727,823	46.86	207,593
2020	3,224,965.88	217,685	210,252	4,627,197	47.75	96,905
2021	3,114,311.02	126,130	121,823	4,549,644	48.65	93,518
2022	10,747,702.92	145,094	140,140	15,981,414	49.55	322,531
	87,883,300.64	27,223,431	26,293,906	105,531,045		2,671,569
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						39.5 3.04

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 366.00 UNDERGROUND CONDUIT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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 65-R4						
NET SALVAGE PERCENT.. -10						
1973	59,164.99	45,858	49,212	15,869	19.20	827
1974	25,147.57	19,176	20,578	7,084	19.94	355
1975	27,550.08	20,659	22,170	8,135	20.69	393
1976	6,473.74	4,770	5,119	2,002	21.46	93
1977	14,047.03	10,167	10,911	4,541	22.23	204
1978	37,229.84	26,449	28,383	12,570	23.02	546
1979	9,237.03	6,439	6,910	3,251	23.81	137
1980	12,652.59	8,646	9,278	4,640	24.62	188
1981	7,487.86	5,013	5,380	2,857	25.44	112
1982	12,980.28	8,508	9,130	5,148	26.27	196
1983	6,340.30	4,064	4,361	2,613	27.12	96
1984	13,532.74	8,480	9,100	5,786	27.97	207
1985	10,259.48	6,280	6,739	4,546	28.83	158
1986	19,679.21	11,756	12,616	9,031	29.70	304
1987	11,537.75	6,721	7,213	5,479	30.58	179
1988	9,517.75	5,401	5,796	4,674	31.47	149
1989	8,900.66	4,915	5,274	4,517	32.37	140
1990	57,597.06	30,918	33,179	30,178	33.28	907
1991	214,248.81	111,674	119,841	115,833	34.20	3,387
1992	374,298.88	189,268	203,110	208,619	35.12	5,940
1993	78,956.67	38,682	41,511	45,341	36.05	1,258
1994	50,280.56	23,834	25,577	29,732	36.99	804
1995	70,362.29	32,233	34,590	42,809	37.93	1,129
1996	116,688.90	51,581	55,353	73,005	38.88	1,878
1997	164,515.49	70,076	75,201	105,766	39.83	2,655
1998	138,114.77	56,586	60,724	91,202	40.79	2,236
1999	204,842.42	80,597	86,491	138,836	41.75	3,325
2000	100,885.18	38,038	40,820	70,154	42.72	1,642
2001	665,615.75	240,044	257,600	474,577	43.69	10,862
2002	164,186.10	56,515	60,648	119,957	44.66	2,686
2003	238,545.16	78,156	83,872	178,528	45.64	3,912
2004	310,274.39	96,510	103,568	237,734	46.62	5,099
2005	232,730.15	68,529	73,541	182,462	47.60	3,833
2006	325,839.39	90,545	97,167	261,256	48.58	5,378
2007	391,528.32	102,235	109,712	320,969	49.57	6,475
2008	98,340.66	24,031	25,789	82,386	50.56	1,629
2009	68,349.82	15,557	16,695	58,490	51.55	1,135
2010	25,571.35	5,392	5,786	22,342	52.54	425
2011	144,023.38	27,956	30,001	128,425	53.53	2,399
2012	70,142.02	12,428	13,337	63,819	54.53	1,170
2013	473,890.25	76,029	81,589	439,690	55.52	7,919
2014	862,945.39	123,838	132,895	816,345	56.52	14,443
2015	47,158.60	5,977	6,414	45,460	57.51	790

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 366.00 UNDERGROUND CONDUIT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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 65-R4						
NET SALVAGE PERCENT.. -10						
2016	370,283.31	40,670	43,644	363,668	58.51	6,215
2017	272,124.78	25,282	27,131	272,206	59.51	4,574
2018	137,194.86	10,425	11,188	139,726	60.51	2,309
2019	133,852.62	7,929	8,509	138,729	61.50	2,256
2020	190,709.56	8,068	8,658	201,123	62.50	3,218
2021	12,558.33	319	342	13,472	63.50	212
	7,098,394.12	2,043,224	2,192,653	5,615,581		116,384
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						48.3 1.64



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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-R4						
NET SALVAGE PERCENT.. -40						
1973	35,737.47	39,980	39,832	10,200	11.05	923
1974	71,677.91	79,039	78,746	21,603	11.68	1,850
1975	47,775.84	51,880	51,688	15,198	12.34	1,232
1976	22,752.55	24,325	24,235	7,619	13.00	586
1977	31,973.19	33,629	33,504	11,258	13.68	823
1978	63,771.06	65,937	65,692	23,587	14.38	1,640
1979	8,365.42	8,501	8,469	3,243	15.08	215
1980	85,061.89	84,877	84,562	34,525	15.80	2,185
1981	40,121.71	39,288	39,142	17,028	16.53	1,030
1982	27,726.34	26,621	26,522	12,295	17.28	712
1983	30,225.03	28,436	28,331	13,984	18.04	775
1984	109,975.42	101,309	100,933	53,033	18.81	2,819
1985	67,918.70	61,201	60,974	34,112	19.60	1,740
1986	90,860.49	80,023	79,726	47,479	20.40	2,327
1987	79,968.11	68,781	68,526	43,429	21.21	2,048
1988	55,189.82	46,303	46,131	31,135	22.04	1,413
1989	31,026.49	25,367	25,273	18,164	22.88	794
1990	317,523.67	252,739	251,802	192,731	23.73	8,122
1991	531,625.77	411,384	409,859	334,417	24.60	13,594
1992	400,677.81	301,179	300,062	260,887	25.47	10,243
1993	161,879.93	118,014	117,576	109,056	26.36	4,137
1994	182,576.96	128,967	128,489	127,119	27.25	4,665
1995	84,106.62	57,462	57,249	60,500	28.16	2,148
1996	94,024.69	62,035	61,805	69,830	29.08	2,401
1997	553,785.77	352,413	351,106	424,194	30.00	14,140
1998	209,950.20	128,636	128,159	165,771	30.93	5,360
1999	260,843.89	153,577	153,008	212,173	31.87	6,657
2000	126,620.57	71,487	71,222	106,047	32.82	3,231
2001	303,734.42	164,138	163,529	261,699	33.77	7,749
2002	213,083.79	109,945	109,537	188,780	34.73	5,436
2003	183,617.80	90,207	89,873	167,192	35.70	4,683
2004	317,406.31	148,095	147,546	296,823	36.67	8,094
2005	725,640.53	320,658	319,469	696,428	37.64	18,502
2006	1,623,900.39	677,082	674,571	1,598,890	38.62	41,401
2007	876,582.75	343,620	342,346	884,870	39.60	22,345
2008	220,915.78	81,088	80,787	228,495	40.58	5,631
2009	487,657.17	166,829	166,210	516,510	41.56	12,428
2010	236,014.25	74,794	74,517	255,903	42.55	6,014
2011	552,523.55	161,173	160,575	612,958	43.54	14,078
2012	646,446.19	172,280	171,641	733,384	44.53	16,469
2013	144,812.05	34,907	34,778	167,959	45.53	3,689
2014	1,140,581.90	246,197	245,284	1,351,531	46.52	29,053
2015	461,164.36	87,806	87,480	558,150	47.52	11,746

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 367.00 UNDERGROUND CONDUCTORS AND DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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-R4						
NET SALVAGE PERCENT.. -40						
2016	1,875,834.97	309,888	308,739	2,317,430	48.51	47,772
2017	765,167.18	106,931	106,535	964,699	49.51	19,485
2018	2,901,525.97	331,633	330,403	3,731,733	50.51	73,881
2019	914,323.82	81,463	81,161	1,198,892	51.50	23,279
2020	739,050.50	47,026	46,852	987,819	52.50	18,816
2021	1,108,170.80	42,308	42,151	1,509,288	53.50	28,211
2022	318,142.74	4,049	4,034	441,366	54.50	8,098
	20,580,040.54	6,705,507	6,680,641	22,131,416		524,670
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						42.2 2.55

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 368.00 LINE TRANSFORMERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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 33-L2						
NET SALVAGE PERCENT.. -30						
1974	11,222,575.76	10,606,019	10,900,946	3,688,402	9.01	409,368
2002	4,995.43	3,214	3,303	3,191	16.67	191
2003	6,162.13	3,850	3,957	4,054	17.14	237
2004	34,558.36	20,897	21,478	23,448	17.65	1,328
2005	688,182.75	401,227	412,384	482,254	18.20	26,497
2006	873,689.93	489,086	502,686	633,111	18.79	33,694
2007	954,623.58	510,316	524,507	716,504	19.43	36,876
2008	867,659.57	440,591	452,843	675,114	20.11	33,571
2009	440,763.11	211,136	217,007	355,985	20.84	17,082
2010	590,258.06	264,846	272,211	495,124	21.61	22,912
2011	441,507.36	184,362	189,489	384,471	22.40	17,164
2012	658,973.12	253,624	260,677	595,988	23.23	25,656
2013	810,150.39	285,005	292,930	760,266	24.07	31,586
2014	2,835,752.02	901,528	926,597	2,759,881	24.93	110,705
2015	3,773,589.91	1,068,847	1,098,569	3,807,098	25.81	147,505
2016	2,448,683.84	605,780	622,625	2,560,664	26.72	95,833
2017	1,654,990.87	349,445	359,162	1,792,326	27.64	64,845
2018	2,319,622.56	403,897	415,128	2,600,381	28.58	90,986
2019	1,175,887.14	160,279	164,736	1,363,917	29.54	46,172
2020	1,872,656.23	182,949	188,037	2,246,416	30.52	73,605
2021	858,282.51	50,712	52,122	1,063,645	31.50	33,767
2022	670,085.85	13,197	13,564	857,548	32.50	26,386
	35,203,650.48	17,410,807	17,894,958	27,869,788		1,345,966

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 20.7 3.82

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 369.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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-R4						
NET SALVAGE PERCENT.. -75						
1973	374,222.86	523,316	530,438	124,452	11.05	11,263
1974	146,364.14	201,744	204,490	51,647	11.68	4,422
1975	58,426.72	79,307	80,386	21,861	12.34	1,772
1976	101,638.30	135,826	137,674	40,193	13.00	3,092
1977	66,430.30	87,337	88,526	27,727	13.68	2,027
1978	63,540.47	82,124	83,242	27,954	14.38	1,944
1979	51,980.25	66,025	66,924	24,041	15.08	1,594
1980	103,459.21	129,042	130,798	50,256	15.80	3,181
1981	33,756.87	41,320	41,882	17,193	16.53	1,040
1982	74,696.48	89,650	90,870	39,849	17.28	2,306
1983	62,464.33	73,458	74,458	34,855	18.04	1,932
1984	65,251.68	75,137	76,160	38,030	18.81	2,022
1985	95,097.28	107,115	108,573	57,847	19.60	2,951
1986	79,213.36	87,207	88,394	50,229	20.40	2,462
1987	131,004.29	140,847	142,764	86,494	21.21	4,078
1988	113,943.28	119,495	121,121	78,280	22.04	3,552
1989	155,509.92	158,931	161,094	111,048	22.88	4,853
1990	61,115.78	60,808	61,636	45,317	23.73	1,910
1991	222,874.67	215,582	218,516	171,515	24.60	6,972
1992	118,227.27	111,085	112,597	94,301	25.47	3,702
1993	267,278.09	243,565	246,880	220,857	26.36	8,378
1994	205,277.14	181,252	183,719	175,516	27.25	6,441
1995	219,782.55	187,694	190,248	194,371	28.16	6,902
1996	188,202.15	155,215	157,327	172,027	29.08	5,916
1997	220,666.76	175,532	177,921	208,246	30.00	6,942
1998	212,223.87	162,536	164,748	206,644	30.93	6,681
1999	209,932.12	154,502	156,604	210,777	31.87	6,614
2000	171,580.53	121,088	122,736	177,530	32.82	5,409
2001	165,070.18	111,505	113,022	175,851	33.77	5,207
2002	242,980.10	156,713	158,846	266,369	34.73	7,670
2003	338,462.05	207,847	210,675	381,634	35.70	10,690
2004	151,707.20	88,479	89,683	175,805	36.67	4,794
2005	521,003.78	287,787	291,703	620,054	37.64	16,473
2006	229,115.55	119,412	121,037	279,915	38.62	7,248
2007	295,329.93	144,712	146,681	370,146	39.60	9,347
2008	383,564.75	175,985	178,380	492,858	40.58	12,145
2009	346,647.88	148,237	150,254	456,380	41.56	10,981
2010	469,470.26	185,971	188,502	633,071	42.55	14,878
2011	373,621.59	136,234	138,088	515,750	43.54	11,845
2012	849,963.76	283,148	287,001	1,200,436	44.53	26,958
2013	434,243.36	130,844	132,625	627,301	45.53	13,778
2014	594,961.90	160,530	162,715	878,468	46.52	18,884
2015	379,257.48	90,263	91,491	572,210	47.52	12,041

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 369.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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-R4						
NET SALVAGE PERCENT.. -75						
2016	315,232.19	65,095	65,981	485,675	48.51	10,012
2017	402,488.49	70,309	71,266	633,089	49.51	12,787
2018	165,374.39	23,627	23,949	265,456	50.51	5,256
2019	316,338.56	35,231	35,710	517,882	51.50	10,056
2020	3,563,031.33	283,395	287,251	5,948,054	52.50	113,296
2021	1,622,501.60	77,430	78,484	2,760,894	53.50	51,605
2022	1,186,431.13	18,873	19,130	2,057,124	54.50	37,745
	17,220,958.13	6,968,367	7,063,200	23,073,477		544,054
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						42.4 3.16

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 370.00 METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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 15-R1						
NET SALVAGE PERCENT.. -25						
2004	1,013,528.35	934,131	637,404	629,506	3.94	159,773
2005	191,208.60	169,537	115,684	123,327	4.36	28,286
2006	60,227.63	51,193	34,932	40,353	4.80	8,407
2007	7,437.72	6,031	4,115	5,182	5.27	983
2008	199,239.00	153,581	104,796	144,253	5.75	25,087
2009	164,916.05	120,115	81,960	124,185	6.26	19,838
2010	359,493.78	245,656	167,623	281,744	6.80	41,433
2011	318,593.71	203,103	138,587	259,655	7.35	35,327
2012	299,267.45	176,317	120,310	253,774	7.93	32,002
2013	3,604.65	1,943	1,326	3,180	8.53	373
2014	65,334.46	31,851	21,734	59,934	9.15	6,550
2015	107,222.81	46,552	31,765	102,264	9.79	10,446
2016	238,426.39	90,402	61,686	236,347	10.45	22,617
2017	125,670.87	40,634	27,727	129,362	11.12	11,633
2018	423,118.14	112,830	76,989	451,909	11.80	38,297
2019	1,049,828.36	219,585	149,834	1,162,451	12.49	93,071
2020	872,303.31	131,576	89,781	1,000,598	13.19	75,860
2021	405,360.76	37,156	25,353	481,348	13.90	34,629
2022	881,115.84	27,171	18,540	1,082,855	14.63	74,016
	6,785,897.88	2,799,364	1,910,146	6,572,226		718,628
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						9.1 10.59

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.  
 ACCOUNT 371.00 INSTALLATIONS ON CUSTOMERS' PREMISES  
 CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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 15-S3						
NET SALVAGE PERCENT.. 0						
2020	1,440,578.12	240,101	214,968	1,225,610	12.50	98,049
2021	1,963.75	196	176	1,788	13.50	132
2022	46,921.67	1,564	1,400	45,522	14.50	3,139
	1,489,463.54	241,861	216,544	1,272,919		101,320
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						12.6 6.80

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 373.00 STREET LIGHTING AND SIGNAL SYSTEMS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR	ORIGINAL COST	CALCULATED ACCRUED	ALLOC. BOOK RESERVE	FUTURE BOOK ACCRUALS	REM. LIFE	ANNUAL ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
SURVIVOR CURVE.. IOWA 33-S0.5						
NET SALVAGE PERCENT.. -25						
1973	63,755.43	66,098	79,694			
1974	476.26	487	595			
1975	709.09	717	886			
1976	2,940.54	2,932	3,676			
1977	30,503.37	30,007	38,129			
1978	4,818.23	4,674	6,023			
1979	26,868.00	25,698	33,585			
1980	15,537.41	14,643	19,422			
1981	6,859.50	6,368	8,574			
1982	12,961.15	11,852	16,201			
1983	37,537.66	33,784	46,922			
1984	11,654.70	10,317	14,450	118	9.63	12
1985	41,351.47	35,994	50,413	1,276	10.02	127
1986	26,169.05	22,382	31,348	1,363	10.42	131
1987	55,084.62	46,279	64,818	4,038	10.82	373
1988	33,149.91	27,336	38,286	3,151	11.23	281
1989	50,403.68	40,762	57,091	5,914	11.65	508
1990	46,335.74	36,735	51,450	6,470	12.07	536
1991	116,717.24	90,632	126,938	18,959	12.50	1,517
1992	41,486.78	31,524	44,152	7,706	12.94	596
1993	66,294.77	49,244	68,970	13,898	13.39	1,038
1994	92,549.24	67,133	94,025	21,662	13.85	1,564
1995	52,651.56	37,275	52,207	13,607	14.31	951
1996	66,246.60	45,695	64,000	18,808	14.79	1,272
1997	85,263.76	57,262	80,200	26,380	15.27	1,728
1998	128,972.88	84,174	117,893	43,323	15.77	2,747
1999	115,272.98	73,007	102,252	41,839	16.28	2,570
2000	90,015.18	55,270	77,410	35,109	16.79	2,091
2001	81,549.48	48,405	67,795	34,142	17.33	1,970
2002	85,573.50	49,042	68,687	38,280	17.87	2,142
2003	152,650.30	84,248	117,996	72,817	18.43	3,951
2004	77,573.02	41,137	57,616	39,350	19.00	2,071
2005	260,043.15	132,190	185,143	139,911	19.58	7,146
2006	238,179.49	115,660	161,992	135,732	20.18	6,726
2007	356,425.86	164,713	230,694	214,838	20.80	10,329
2008	181,125.97	79,381	111,180	115,227	21.43	5,377
2009	193,455.15	80,020	112,075	129,744	22.08	5,876
2010	311,251.16	120,847	169,256	219,808	22.75	9,662
2011	558,228.78	202,149	283,127	414,659	23.44	17,690
2012	464,036.39	155,557	217,871	362,174	24.15	14,997
2013	44,196.47	13,594	19,040	36,206	24.88	1,455
2014	59,894.32	16,720	23,418	51,450	25.63	2,007
2015	232,831.58	58,208	81,525	209,514	26.40	7,936



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 373.00 STREET LIGHTING AND SIGNAL SYSTEMS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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 33-S0.5						
NET SALVAGE PERCENT.. -25						
2016	292,407.46	64,242	89,976	275,533	27.20	10,130
2017	82,824.34	15,655	21,926	81,604	28.01	2,913
2018	289,019.70	45,322	63,477	297,798	28.86	10,319
2019	115,829.94	14,347	20,094	124,693	29.73	4,194
2020	441,370.17	39,624	55,497	496,216	30.63	16,200
2021	134,187.93	7,370	10,322	157,413	31.55	4,989
2022	745,374.38	13,836	19,379	912,339	32.51	28,063
	6,720,615.34	2,570,548	3,577,696	4,823,073		194,185
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						24.8 2.89

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R4						
NET SALVAGE PERCENT.. -15						
1963	288,516.48	281,915	215,593	116,201	9.02	12,883
1964	11,691.93	11,315	8,653	4,793	9.51	504
1965	1,939.65	1,858	1,421	810	10.03	81
1967	937.73	878	671	407	11.15	37
1968	2,079.00	1,923	1,471	920	11.75	78
1972	475.09	416	318	228	14.34	16
1973	14,389.69	12,406	9,487	7,061	15.02	470
1974	818.85	695	531	411	15.72	26
1976	119.91	99	76	62	17.14	4
1978	215,080.34	170,624	130,484	116,858	18.61	6,279
1979	1,460.00	1,137	870	809	19.37	42
1980	1,494.08	1,142	873	845	20.13	42
1981	1,920.73	1,439	1,100	1,109	20.91	53
1982	3,880.95	2,848	2,178	2,285	21.71	105
1984	632,428.46	444,499	339,928	387,365	23.33	16,604
1985	2,218.95	1,524	1,165	1,387	24.16	57
1986	9,906.49	6,646	5,082	6,310	25.00	252
1988	13,210.20	8,429	6,446	8,746	26.71	327
1989	9,117.58	5,664	4,332	6,153	27.59	223
1991	86,414.26	50,749	38,810	60,566	29.36	2,063
1992	40,998.23	23,362	17,866	29,282	30.27	967
1993	78,755.66	43,503	33,269	57,300	31.18	1,838
1994	153,822.33	82,256	62,905	113,991	32.10	3,551
1995	14,223.32	7,352	5,622	10,735	33.03	325
1996	22,150.60	11,055	8,454	17,019	33.96	501
1997	387,281.79	186,313	142,482	302,892	34.90	8,679
1998	10,219.38	4,730	3,617	8,135	35.85	227
2000	27,197.90	11,594	8,866	22,412	37.76	594
2001	38,319.61	15,629	11,952	32,116	38.72	829
2007	130,644.90	38,612	29,528	120,714	44.58	2,708
2011	12,767.03	2,804	2,144	12,538	48.54	258
2013	222,497.30	40,428	30,917	224,955	50.52	4,453
2014	5,276,666.97	857,614	655,858	5,412,309	51.52	105,053
2015	304,444.65	43,704	33,423	316,688	52.51	6,031
2016	325,147.73	40,447	30,932	342,988	53.51	6,410
2017	206,817.55	21,762	16,642	221,198	54.51	4,058
2018	704,023.07	60,584	46,331	763,296	55.51	13,751
2019	992,950.10	66,607	50,938	1,090,955	56.50	19,309

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R4						
NET SALVAGE PERCENT.. -15						
2020	69,319.60	3,322	2,540	77,178	57.50	1,342
2021	733,201.48	21,080	16,121	827,061	58.50	14,138
2022	2,584,398.21	24,757	18,933	2,953,125	59.50	49,632
	13,633,947.78	2,613,721	1,998,829	13,680,211		284,800
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						48.0 2.09

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 391.00 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1986	3,702.93	3,703	3,703			
1987	557.00	557	557			
1989	4,170.00	4,170	4,170			
1992	3,147.50	3,148	3,148			
1994	8,215.00	8,215	8,215			
1998	8,987.50	8,988	8,988			
2012	1,040.00	546	374	666	9.50	70
2013	4,310.23	2,047	1,401	2,909	10.50	277
2014	47,446.76	20,165	13,804	33,643	11.50	2,925
2016	64,881.34	21,086	14,434	50,447	13.50	3,737
2017	8,645.13	2,377	1,627	7,018	14.50	484
2018	15,634.94	3,518	2,408	13,227	15.50	853
2019	368,338.87	64,459	44,125	324,214	16.50	19,649
2020	14,293.94	1,787	1,223	13,071	17.50	747
2022	25,441.78	636	436	25,006	19.50	1,282
	578,812.92	145,402	108,613	470,200		30,024

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.7 5.19

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 391.10 OFFICE FURNITURE AND EQUIPMENT - SOFTWARE AND DESKTOP  
 COMPUTERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2014	70,969.01	70,969	70,969			
2018	94,331.35	84,898	62,244	32,087	0.50	32,087
	165,300.36	155,867	133,213	32,087		32,087
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						1.0 19.41

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 391.20 OFFICE FURNITURE AND EQUIPMENT - LAPTOP COMPUTERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
2014	53,668.32	53,668	53,668			
2016	74,605.76	74,606	74,606			
2018	102,890.66	92,602	42,924	59,967	0.50	59,967
2019	9,120.00	6,384	2,959	6,161	1.50	4,107
	240,284.74	227,260	174,157	66,128		64,074
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 1.0						26.67

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 392.00 TRANSPORTATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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 15-S2						
NET SALVAGE PERCENT.. +15						
2010	82,354.21	47,088	52,968	17,033	4.91	3,469
2013	152,496.88	72,502	81,555	48,067	6.61	7,272
2014	1,708,565.48	747,445	840,780	611,501	7.28	83,997
2015	73,189.37	28,949	32,564	29,647	8.02	3,697
2016	250,561.96	87,747	98,704	114,274	8.82	12,956
2017	34,373.91	10,382	11,678	17,540	9.67	1,814
2018	773,223.14	193,669	217,853	439,387	10.58	41,530
2020	1,591,727.49	224,593	252,639	1,100,329	12.51	87,956
2021	125,597.76	10,676	12,009	94,749	13.50	7,018
2022	1,039,785.04	29,458	33,137	850,681	14.50	58,668
	5,831,875.24	1,452,509	1,633,887	3,323,207		308,377
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						10.8 5.29

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 393.00 STORES EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
1986	11,025.00	11,025	11,025			
1989	4,292.03	4,292	4,292			
1992	3,080.00	3,080	3,080			
1993	17,436.44	17,436	17,436			
1998	13,345.90	13,079	7,259	6,087	0.50	6,087
2000	12,474.40	11,227	6,231	6,243	2.50	2,497
2014	5,220.00	1,775	985	4,235	16.50	257
2016	79,699.15	20,722	11,501	68,198	18.50	3,686
2017	5,500.00	1,210	672	4,828	19.50	248
2018	9,263.10	1,667	925	8,338	20.50	407
2020	351,179.04	35,118	19,490	331,689	22.50	14,742
	512,515.06	120,631	82,896	429,619		27,924

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.4 5.45



LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 394.00 TOOLS, SHOP AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 25-SQUARE						
NET SALVAGE PERCENT.. 0						
1987	8,829.88	8,830	8,830			
1988	6,549.13	6,549	6,549			
1989	31,697.65	31,698	31,698			
1991	12,823.00	12,823	12,823			
1992	17,689.95	17,690	17,690			
1993	45,273.37	45,273	45,273			
1994	1,537.97	1,538	1,538			
1996	32,586.47	32,586	32,586			
1997	4,393.94	4,394	4,394			
2005	24,127.27	16,889	8,854	15,273	7.50	2,036
2007	8,059.24	4,997	2,620	5,439	9.50	573
2014	55,379.25	18,829	9,871	45,508	16.50	2,758
2015	13,280.72	3,984	2,089	11,192	17.50	640
2016	15,965.28	4,151	2,176	13,789	18.50	745
2017	39,165.42	8,616	4,517	34,648	19.50	1,777
2018	132,732.71	23,892	12,526	120,207	20.50	5,864
2020	88,252.42	8,825	4,627	83,625	22.50	3,717
2021	377,557.55	22,653	11,876	365,682	23.50	15,561
2022	575,628.30	11,513	6,036	569,592	24.50	23,249
	1,491,529.52	285,730	226,573	1,264,956		56,920

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 22.2 3.82

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 395.00 LABRATORY EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1986	1,834.56	1,835	1,835			
1989	1,604.79	1,605	1,605			
1991	9,427.54	9,428	9,428			
1992	22,474.05	22,474	22,474			
1993	25,593.37	25,593	25,593			
1994	14,557.16	14,557	14,557			
1995	4,166.63	4,167	4,167			
1996	14,036.23	14,036	14,036			
2003	20,221.61	19,716	10,461	9,761	0.50	9,761
2010	110,133.76	68,834	36,521	73,613	7.50	9,815
2011	12,188.26	7,008	3,718	8,470	8.50	996
2014	10,925.00	4,643	2,463	8,462	11.50	736
2015	23,385.00	8,769	4,653	18,732	12.50	1,499
2018	26,522.50	5,968	3,166	23,356	15.50	1,507
2020	22,748.31	2,844	1,509	21,239	17.50	1,214
2021	250,813.92	18,811	9,981	240,833	18.50	13,018
	570,632.69	230,288	166,167	404,466		38,546
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						10.5 6.75

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 396.00 POWER OPERATED EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

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 14-L2.5						
NET SALVAGE PERCENT.. +20						
2013	562,257.68	252,535	449,806			
2016	504,488.28	172,103	320,468	83,123	8.03	10,352
2017	241,755.76	71,422	132,993	60,412	8.83	6,842
2018	88,530.96	21,804	40,601	30,224	9.69	3,119
2019	287,859.44	55,928	104,142	126,146	10.60	11,901
2020	304,944.78	42,865	79,817	164,139	11.54	14,223
	1,989,836.90	616,657	1,127,827	464,043		46,437
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						10.0 2.33

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 397.00 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2002	1,411,441.06	1,411,441	1,411,441			
2013	5,545.15	3,512	2,786-	8,331	5.50	1,515
2014	224,890.60	127,439	101,082-	325,973	6.50	50,150
2015	99,363.63	49,682	39,407-	138,771	7.50	18,503
2016	8,061.90	3,493	2,771-	10,833	8.50	1,274
2017	11,708.55	4,293	3,405-	15,114	9.50	1,591
2018	57,276.45	17,183	13,629-	70,905	10.50	6,753
2021	174,881.91	17,488	13,871-	188,753	13.50	13,982
	1,993,169.25	1,634,531	1,234,490	758,679		93,768
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						8.1 4.70

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 397.10 COMMUNICATION EQUIPMENT - SITE SPECIFIC

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
 RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1985	11,141.98	11,142	11,142			
1986	6,313.90	6,314	6,314			
1988	10,355.88	10,356	10,356			
1989	2,022.83	2,023	2,023			
2003	14,058.94	13,707	14,059			
2007	10,458.22	8,105	10,458			
	54,351.75	51,647	54,352			

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

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

ACCOUNT 398.00 MISCELLANEOUS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL  
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2022

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2013	3,725.54	2,359	2,504	1,222	5.50	222
2014	69,634.94	39,460	41,882	27,753	6.50	4,270
2015	11,234.61	5,617	5,962	5,273	7.50	703
2016	22,368.60	9,693	10,288	12,081	8.50	1,421
2017	313.09	115	122	191	9.50	20
2018	13,458.92	4,038	4,286	9,173	10.50	874
2019	9,501.24	2,217	2,353	7,148	11.50	622
2021	4,910.30	491	521	4,389	13.50	325
	135,147.24	63,990	67,918	67,229		8,457
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						7.9 6.26

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

COMPARISON OF CURRENTLY APPROVED AND PROPOSED SURVIVOR CURVES, NET SALVAGE PERCENTS AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO GAS PLANT AS OF DECEMBER 31, 2022

ACCOUNT	ORIGINAL COST AS OF DECEMBER 31, 2022	CURRENTLY APPROVED				PROPOSED				INCREASE/ (DECREASE) (11)=(9)-(6)	
		SURVIVOR CURVE	NET SALVAGE PERCENT	CALCULATED		SURVIVOR CURVE	NET SALVAGE PERCENT	CALCULATED			
				AMOUNT	RATE			AMOUNT	RATE		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
<b>ELECTRIC PLANT</b>											
<b>INTANGIBLE PLANT</b>											
303.00	MISCELLANEOUS INTANGIBLE PLANT - 3 YEAR	2,127,989.37	3-SQ	0	709,259	33.33	3-SQ	0	620,511	29.16	(88,748)
303.10	MISCELLANEOUS INTANGIBLE PLANT - 5 YEAR	598,614.89	5-SQ	0	119,723	20.00	5-SQ	0	0	-	(119,723)
303.15	MISCELLANEOUS INTANGIBLE PLANT - 7 YEAR	379,186.69	5-SQ	0	75,837	20.00	7-SQ	0	52,913	13.95	(22,924)
303.20	MISCELLANEOUS INTANGIBLE PLANT - 10 YEAR	12,016,607.73	10-SQ	0	1,201,661	10.00	10-SQ	0	653,264	5.44	(548,397)
303.30	MISCELLANEOUS INTANGIBLE PLANT - 20 YEAR	13,541,670.26	10-SQ	0	1,354,167	10.00	20-SQ	0	675,607	4.99	(678,560)
<b>TOTAL INTANGIBLE PLANT</b>		<b>28,664,068.94</b>			<b>3,460,647</b>	<b>12.07</b>			<b>2,002,295</b>	<b>6.99</b>	<b>(1,458,352)</b>
<b>DISTRIBUTION PLANT</b>											
361.00	STRUCTURES AND IMPROVEMENTS	1,965,159.96	44-S1	(5)	46,967	2.39	60-R3	(5)	29,126	1.48	(17,841)
362.00	STATION EQUIPMENT	42,392,278.48	40-S4	(20)	1,271,768	3.00	60-R2.5	(15)	697,620	1.65	(574,148)
364.00	POLES, TOWERS AND FIXTURES	61,851,833.71	44-R2.5	(60)	2,251,407	3.64	55-R2.5	(70)	1,760,749	2.85	(490,658)
365.00	OVERHEAD CONDUCTORS AND DEVICES	87,883,300.64	43-R2	(40)	2,864,996	3.26	50-R2	(50)	2,671,569	3.04	(193,427)
366.00	UNDERGROUND CONDUIT	7,098,394.12	56-R4	(10)	139,129	1.96	65-R4	(10)	116,384	1.64	(22,745)
367.00	UNDERGROUND CONDUCTORS AND DEVICES	20,580,040.54	46-R3	(40)	625,633	3.04	55-R4	(40)	524,670	2.55	(100,963)
368.00	LINE TRANSFORMERS	35,203,650.48	37-R3	(30)	1,235,648	3.51	33-L2	(30)	1,345,966	3.82	110,318
369.00	SERVICES	17,220,958.13	45-R4	(75)	669,895	3.89	55-R4	(75)	544,054	3.16	(125,841)
370.00	METERS	6,785,897.88	22-R4	(10)	339,295	5.00	15-R1	(25)	718,628	10.59	379,333
371.00	INSTALLATIONS ON CUSTOMERS' PREMISES	1,489,463.54	10-SQ	0	148,946	10.00	15-S3	0	101,320	6.80	(47,626)
373.00	STREET LIGHTING AND SIGNAL SYSTEMS	6,720,615.34	30-R3	(10)	246,647	3.67	33-S0.5	(25)	194,185	2.89	(52,462)
<b>TOTAL DISTRIBUTION PLANT</b>		<b>289,191,592.82</b>			<b>9,840,331</b>	<b>3.40</b>			<b>8,704,271</b>	<b>3.01</b>	<b>(1,136,060)</b>
<b>GENERAL PLANT</b>											
390.00	STRUCTURES AND IMPROVEMENTS	13,633,947.78	65-R4	(5)	220,870	1.62	60-R4	(15)	284,800	2.09	63,930
391.00	OFFICE FURNITURE AND EQUIPMENT	578,812.92	25-S6	0	23,153	4.00	20-SQ	0	30,024	5.19	6,871
391.10	OFFICE FURNITURE AND EQUIPMENT - SOFTWARE AND DESKTOP COMPUTERS	165,300.36	5-SQ	0	33,060	20.00	5-SQ	0	32,087	19.41	(973)
391.20	OFFICE FURNITURE AND EQUIPMENT - LAPTOP COMPUTERS	240,284.74	5-SQ	0	48,057	20.00	5-SQ	0	64,074	26.67	16,017
392.00	TRANSPORTATION EQUIPMENT	5,831,875.24	12-L1.5	10	437,391	7.50	15-S2	15	308,377	5.29	(129,014)
393.00	STORES EQUIPMENT	512,515.06	30-R2.5	0	17,067	3.33	25-SQ	0	27,924	5.45	10,857
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	1,491,529.52	24-L1	0	62,197	4.17	25-SQ	0	56,920	3.82	(5,277)
395.00	LABORATORY EQUIPMENT	570,632.69	33-R3	0	17,290	3.03	20-SQ	0	38,546	6.75	21,256
396.00	POWER OPERATED EQUIPMENT	1,989,836.90	15-L1.5	10	119,390	6.00	14-L2.5	20	46,437	2.33	(72,953)
397.00	COMMUNICATION EQUIPMENT	1,993,169.25	24-S5	0	83,115	4.17	15-SQ	0	93,768	4.70	10,653
397.10	COMMUNICATION EQUIPMENT - SITE SPECIFIC	54,351.75	24-S5	0	2,266	4.17	20-SQ	0	0	-	(2,266)
398.00	MISCELLANEOUS EQUIPMENT	135,147.24	10-S6	0	13,515	10.00	15-SQ	0	8,457	6.26	(5,058)
<b>TOTAL GENERAL PLANT</b>		<b>27,197,403.45</b>			<b>1,077,370</b>	<b>3.96</b>			<b>991,414</b>	<b>3.65</b>	<b>(85,956)</b>
<b>TOTAL DEPRECIABLE PLANT</b>		<b>345,053,065.21</b>			<b>14,378,348</b>	<b>4.17</b>			<b>11,697,980</b>	<b>3.39</b>	<b>(2,680,368)</b>
<b>NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED</b>											
301.00	ORGANIZATION	24,808.42									
360.00	LAND	3,172,947.00									
372.00	LEASED PROPERTY ON CUSTOMERS' PREMISES										
389.00	LAND	1,620,371.60									
<b>TOTAL NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED</b>		<b>4,818,127.02</b>									
<b>TOTAL ELECTRIC PLANT</b>		<b>349,871,192.23</b>									

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