BEFORE THE CORPORATION COMMISSION OF THE STATE OF OKLAHOMA

IN THE MATTER OF THE APPLICATION OF OKLAHOMA GAS AND ELECTRIC COMPANY FOR AN ORDER OF THE COMMISSION AUTHORIZING APPLICANT TO MODIFY ITS RATES, CHARGES, AND TARIFFS FOR RETAIL ELECTRIC SERVICE IN OKLAHOMA	CASE NO. PUD 2023-000087

RESPONSIVE TESTIMONY OF

DAVID J. GARRETT

PART II – DEPRECIATION

ON BEHALF OF
OKLAHOMA INDUSTRIAL ENERGY CONSUMERS

APRIL 26, 2024

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I. INTRODUCTION

Q. State your name and occupation.

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

Q. Summarize your educational background and professional experience.

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

Q. Have your qualifications as an expert witness been accepted by the Oklahoma Corporation Commission?

A. Yes. I have testified before the Oklahoma Corporation Commission (the "Commission") many times and my qualifications have been accepted each time.

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

A. I am testifying on behalf of Oklahoma Industrial Energy Consumers ("OIEC").

Q. Describe the scope and organization of your testimony.

A. My testimony addresses the authorized rate of return and depreciation rates proposed by Oklahoma Gas and Electric Company ("OG&E" or the "Company"). Collectively, these issues are voluminous, so I am submitting two separate testimony documents – Part I and Part II. Part I of my responsive testimony addresses rate of return, cost of capital and related issues, and I respond to the direct testimonies of Company witnesses Ann Bulkley and Charles Walworth. Part II of my testimony (this document) addresses depreciation rates and related issues, and I respond to the direct testimony of Company witness Dane Watson. The exhibits attached to Part I of my testimony have a prefix of "DJG-1," and the exhibits attached to Part II of my testimony have a prefix of "DJG-2."

[1] Exhibit DJG-1-1.

II. EXECUTIVE SUMMARY

Q. Summarize the key points of your testimony.

A. In this case, OG&E is proposing a substantial increase to its annual depreciation accrual in the amount of $57 million.[2] As demonstrated by the evidence presented in this testimony, it would not be reasonable to accept OG&E's proposed depreciation rates, as doing so would result in an excessive increase in rates. The table below summarizes OIEC's proposed adjustments to OG&E's proposed depreciation accrual by plant function.[3]

Figure 1:
Summary Depreciation Expense Adjustment

Plant Function	OG&E Position	OG&E Accrual	OIEC Adjustment
Intangible Plant	$ 38,800,197	$ 16,406,753	$ (22,393,444)
Steam Production	100,261,931	86,932,252	(13,329,679)
Other Production	86,999,799	64,697,594	(22,302,205)
Transmission	62,559,036	60,037,025	(2,522,010)
Distribution	178,229,924	162,965,669	(15,264,254)
General	34,738,050	34,738,050	-
Total Plant Studied	**$ 501,588,936**	**$ 425,777,344**	**$ (75,811,592)**

Accepting my proposed depreciation rates would result in an adjustment reducing OG&E's proposed depreciation accrual by $75.8 million. My proposed adjustments are based on the following issues:

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[2] Direct Testimony of Dane A. Watson, p. 5, Table 1.

[3] *See* Exhibit DJG-2-1. The depreciation "accrual" referred to in my testimony relates to plant balances as of December 31, 2022. For OIEC's proposed adjustments to OG&E's depreciation expense, see the direct testimony of OIEC witness Mark E. Garrett.

1. Use Currently Approved Production Net Salvage Rates

The Company has not made a convincing showing that its proposed net salvage rates are not excessive and have not provided adequate support for such a significant increase in production net salvage relative to currently approved rates.

2. Remove Interim Retirements

Interim retirements reduce the composite remaining life of a utility's lifespan production facilities by accounting for the individual components of a production unit that are retired in the "interim" before the unit's ultimate, terminal retirement date. While accounting for interim retirements is not an unreasonable approach, the Commission should remove interim retirements from the remaining life calculations for OG&E's production units in this case given the substantial overall increase in rates proposed by the Company. Doing so would provide rate relief for current ratepayers without financially harming the Company.

3. Use Currently Approved Retirement Dates for Wind Facilities

The Company is proposing to reduce the depreciable service life of its wind facilities from 30 years to 25 years. OG&E has not provided adequate support for this adjustment.

4. Adjust the Service Life for Software Accounts

OG&E proposes 5 and 10 year service lives for Accounts 303.10 and 303.20, respectively. The Company has not provided adequate evidence in support of these service lives. My proposed adjustment increases the service lives for each of these accounts by 5 years.

5. Adjust Other Mass Property Service Lives

For several of its mass property accounts, OG&E is proposing service lives that are shorter than those indicated by the Company's historical retirement data, which results in unreasonably high proposed depreciation rates and expense for these accounts. Basing remaining service life estimates primarily upon an objective analysis of historical retirement patterns is particularly appropriate in this case in light of the substantial rate increase requested by OG&E.

The impact each of these adjustments has to my total proposed adjustment to OG&E's annual depreciation accrual is summarized in the following table.

Figure 2:
Broad Issue Impacts

Issue	Impact ($Mil)
1. Retain current production net salvage rates	$12.3
2. Remove Interim Retirements	$11.9
3. Retain current wind facility retirement dates	$11.5
4. Adjust software service lives	$22.4
5. Adjust other mass property service lives	$17.8
Total	**$75.8 million**

Each of these issues will be further discussed in my testimony. Adopting these adjustments would provide economic relief to ratepayers in the face of an otherwise significant rate increase proposed by OG&E.

III. DEPRECIATION STANDARDS AND SYSTEMS

Q. Please discuss the standard by which regulated utilities are allowed to recover depreciation expense.

A. In *Lindheimer v. Illinois Bell Telephone Co.*, the U.S. Supreme Court stated that "depreciation is the loss, not restored by current maintenance, which is due to all the factors causing the ultimate retirement of the property. These factors embrace wear and tear, decay, inadequacy, and obsolescence."[4] The *Lindheimer* Court also recognized that the original cost of plant assets, rather than present value or some other measure, is the proper basis for calculating depreciation expense.[5] Moreover, the *Lindheimer* Court found:

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

[5] *Id.* (Referring to the straight-line method, the *Lindheimer* Court stated that "[a]ccording to the principle of this accounting practice, the loss is computed upon the actual cost of the property as entered upon the books, less the expected salvage, and the amount charged each year is one year's pro rata share of the total amount."). The original

> [T]he company has the burden of making a convincing showing that the amounts it has charged to operating expenses for depreciation have not been excessive. That burden is not sustained by proof that its general accounting system has been correct. The calculations are mathematical, but the predictions underlying them are essentially matters of opinion.[6]

Thus, the Commission must ultimately determine if the Company has met its burden of proof by making a convincing showing that its proposed depreciation rates are not excessive.

Q. Please discuss the definition and purpose of a depreciation system, as well as the depreciation system you employed for this project.

A. The legal standards set forth above do not mandate a specific procedure for conducting depreciation analysis. These standards, however, direct that analysts use a system for estimating depreciation rates that will result in the "systematic and rational" allocation of capital recovery for the utility. Over the years, analysts have developed "depreciation systems" designed to analyze grouped property in accordance with this standard. A depreciation system may be defined by several primary parameters: 1) a method of allocation; 2) a procedure for applying the method of allocation; 3) a technique of applying the depreciation rate; and 4) a model for analyzing the characteristics of vintage property groups.[7] In this case, I used the straight-line method, the average life procedure, the remaining life technique, and the broad group model; this system would be denoted as an

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cost standard was reaffirmed by the Court in *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591, 606 (1944). The *Hope* Court stated: "Moreover, this Court recognized in [*Lindheimer*], supra, the propriety of basing annual depreciation on cost. By such a procedure the utility is made whole and the integrity of its investment maintained. No more is required."

[6] *Id.* at 169 (emphasis added).

[7] *See* Wolf *supra* n. 9, at 70, 140.

"SL-AL-RL-BG" system. This depreciation system conforms to the legal standards set forth above and is commonly used by depreciation analysts in regulatory proceedings. I provide a more detailed discussion of depreciation system parameters, theories, and equations in Appendix A.

Q. Has the Commission adopted rates developed under this depreciation system?

A. Yes. The Commission has adopted depreciation rates developed by various parties using the same or substantially similar depreciation system I have employed in this case.

Q. Please describe the Company's depreciable assets in this case.

A. The Company's depreciable assets can be divided into two main groups: life span property (i.e., production plant) and mass property (i.e., transmission, distribution and general plant). The analytical process is slightly different for each type of property, as discussed further below.

IV. LIFE SPAN PROPERTY ANALYSIS

Q. Describe life span property.

A. "Life span" property accounts usually consist of property within a production plant. The assets within a production plant will be retired concurrently at the time the plant is retired, regardless of their individual ages or remaining economic lives. For example, a production plant will contain property from several accounts, such as structures, fuel holders, and generators. When the plant is ultimately retired, all of the property associated with the plant will be retired together, regardless of the age of each individual unit. Analysts often use the analogy of a car to explain the treatment of life span property. Throughout the life of a car, the owner will retire and replace various components, such as tires, belts, and brakes. When the car reaches the end of its useful life and is finally retired, all of the car's individual components are retired together. Some of the components may still have some useful life remaining, but they are nonetheless retired along with the car. Thus, the various accounts of life span property are scheduled to retire concurrently as of the production unit's probable retirement date.

Q. Please summarize the adjustments you are proposing related to OG&E's production plant accounts.

A. I am proposing three adjustments which affect the proposed depreciation rates of nearly all of OG&E's production plant accounts. These adjustments are as follows: (1) retaining the currently approved net salvage rates; (2) removing interim retirements from the remaining life calculations; and (3) retaining the currently approved retirement dates for wind facilities. These adjustments are discussed in more detail below.

A. <u>Production Net Salvage Rates</u>

Q. Please describe the net salvage rates for production plant proposed by Mr. Watson.

A. Mr. Watson is proposing an overall increase to the negative net salvage rates for OG&E's production plant, which has an increasing effect to depreciation rates and expense.

Q. Please describe the analyses that is typically conducted to develop net salvage rate estimates for production plant.

A. There are two main components of production plant net salvage rates: interim net salvage and terminal net salvage. Terminal net salvage refers to costs associated with the ultimate dismantlement of the production unit, whereas interim net salvage refers to the costs associated with the retirement of assets during the service life of the production unit.

Q. Did OG&E conduct a dismantlement study to support the terminal net salvage rate component in this case?

A. No. OG&E typically provides site-specific demolition studies to support its proposed terminal net salvage rates, but it did not do so in this case. According to Mr. Watson: "In this proceeding, the Company has not conducted a dismantling study. However, we are proposing the use of conservative interim removal cost percentages as a proxy for terminal retirement closure removal costs and dismantling costs."[8] In other words, Mr. Watson is proposing net salvage rates that are not comprised of weighted interim and terminal net salvage rate components, but rather one overall rate – part of which serves as a "proxy" for the terminal net salvage rate component.

Q. Please describe the impact of OG&E's proposed net salvage rates to its annual depreciation accrual.

A. The net salvage rate component of OG&E's production plant depreciation rates accounts for about $20 million of OG&E's total annual depreciation accrual. Compared to the currently-approved net salvage rates for production plant, the rates proposed by Mr. Watson increase the Company's annual depreciation accrual by approximately $12 million.

Q. Please describe the currently approved net salvage rates for OG&E's production plant accounts.

A. OG&E's current production net salvage rates were adopted as part of a settlement agreement in OG&E's 2021 rate case.[9]

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[8] Direct Testimony of Dane A. Watson, p. 11, lines 10-13.

[9] Final Order, p. 4, Cause No. PUD 2021-000164.

Q. Do you believe OG&E has provided sufficient evidence to support its proposed increase to production net salvage rates?

A. No. The Company has provided no evidence to support the terminal net salvage rate component of its production net salvage rates. The Company did not provide dismantling studies in this proceeding, nor does Mr. Watson rely on prior dismantling studies in support of his proposed net salvage rates. Under the circumstances, the substantial impact to rates resulting from OG&E's proposed increase to production net salvage should be based on much more empirical evidence than what the Company provided.

Q. What is your recommendation regarding production net salvage rates?

A. I recommend the Company's currently approved production net salvage rates be retained at this time.

Q. Does your recommendation relate to the Company's net salvage rates for transmission, distribution, or general plant?

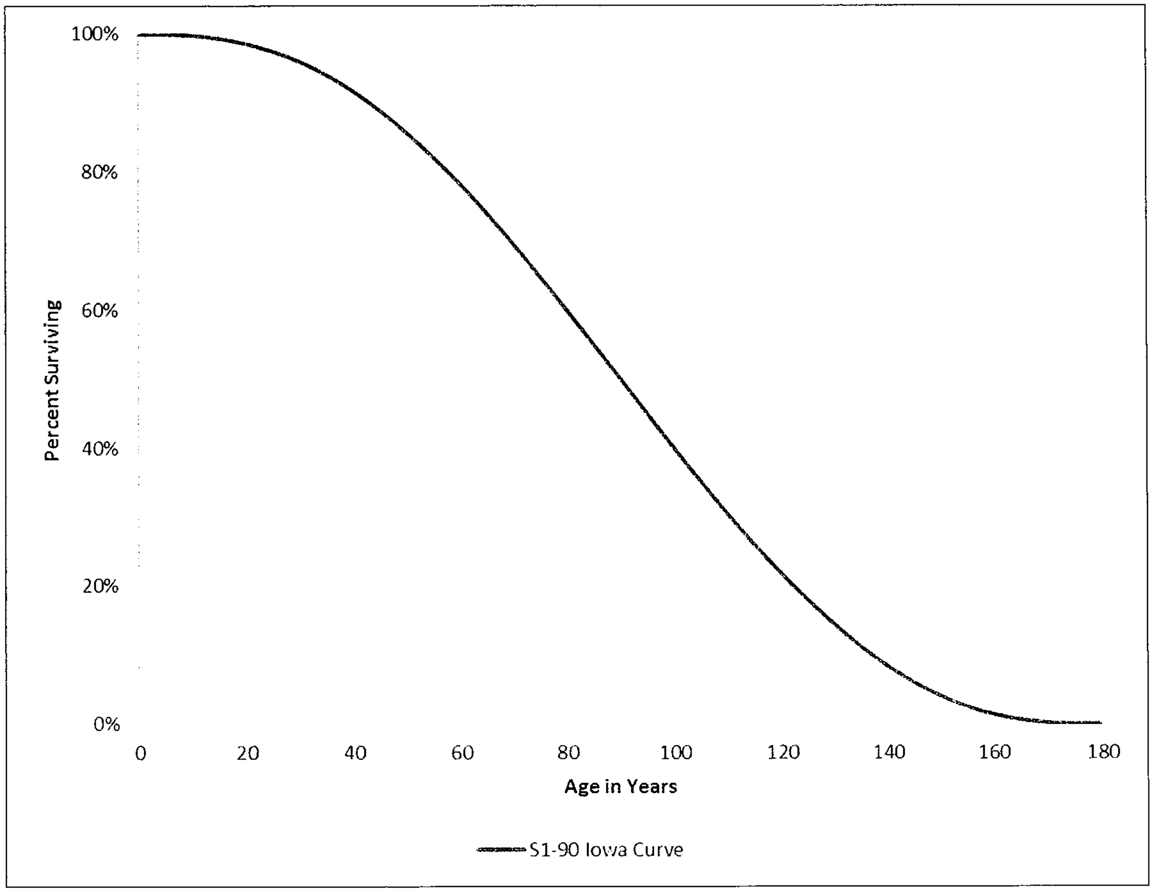
A. No. I am not proposing adjustments to the net salvage rates proposed by Mr. Watson for the Company's mass property accounts.

B. Interim Retirements

Q. Please discuss and illustrate the concept of interim retirements.

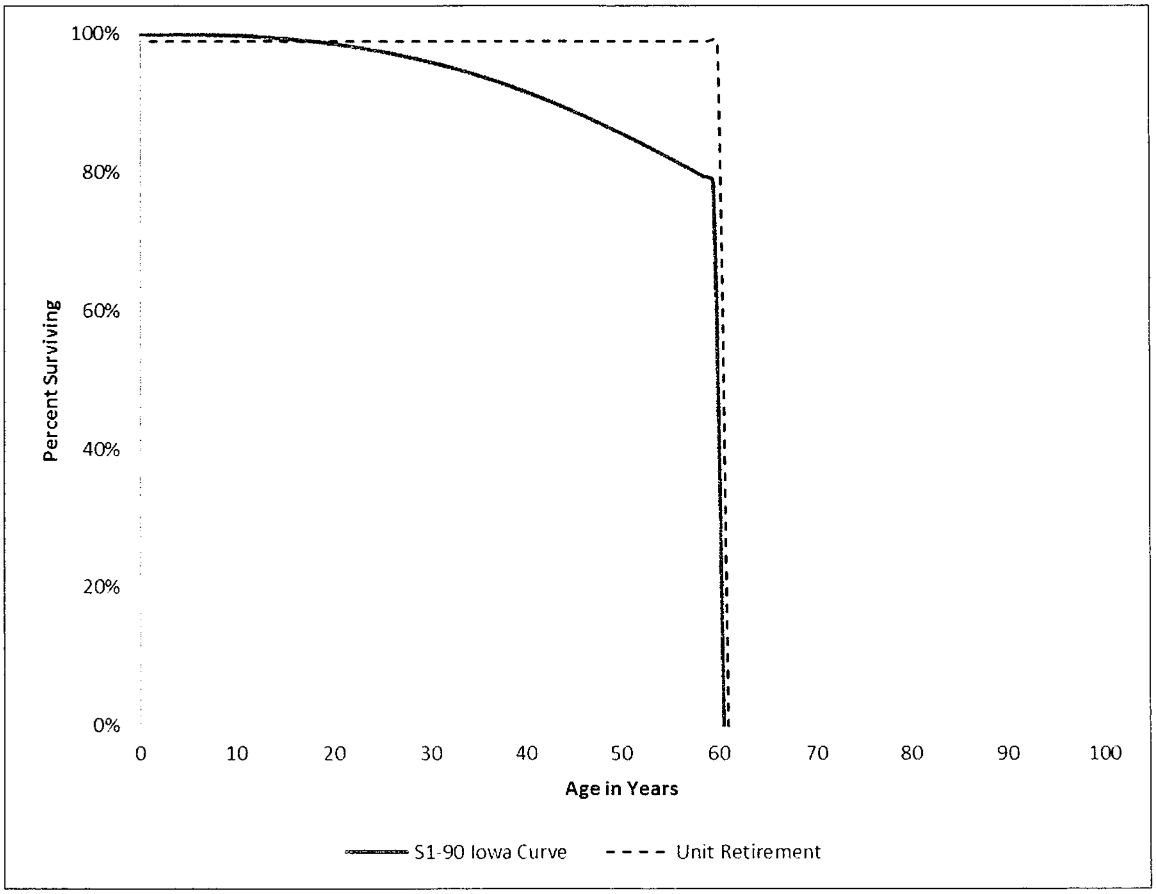
A. Interim retirements refer to the retirement of assets comprising a life-span production unit. The mortality characteristics of the individual components of life span property, such as generators and electrical equipment, could be described by interim survivor curves. The figures below illustrate this concept.

Figure 1:
S1-90 Iowa Curve



The S1-90 curve shown in this figure might be used to represent mortality characteristics of a structures and improvements account. If that account were in transmission or distribution (i.e., mass property accounts), the entirety of the S1-90 curve would be used to calculate the average life of the grouped assets. Average life is determined by calculating the area under the Iowa curve. However, if the same curve were applied to the structures and improvements of a life span account (such as Account 311), the curve would be truncated at the projected retirement date of the generating unit. This means that even if the structures and improvements comprised in the generating unit could potentially survive longer than the plant itself, we assume that those assets will nonetheless be retired concurrently with the entire generating facility. This concept is illustrated in the figure below:

Figure 2:
S1-90 Curve for Interim Retirements



The solid line represents the same S1-90 Iowa curve shown in the previous graph. However, the curve is "truncated" at 60 years, and we do not see the tail end of the curve. The black dotted line in this graph represents the survivor curve of the generating unit if there were no interim retirements. Because of its shape, this is called a "square" survivor curve. In that case, the generating unit would have a 60-year life (i.e., the area under the square curve equals 60). When interim retirements are considered, however, the average life of the unit is less than 60 years (in this case, 56 years). When average life is decreased through the application of interim retirements, it increases the current depreciation rate and expense for every asset account comprising the generating unit, all else held constant. Using a basic example, if a car has a remaining life of 10 years and interim retirements are not taken into account (i.e., my recommendation in this case), then the remaining life of the car is simply 10 years. If, on the other hand, interim retirements are accounted for, then the remaining life of the car is slightly less than 10 years because all of the smaller components with shorter lifespans (e.g., tires, belts, AC, etc.) that are retired during the interim of those 10 years are accounted for in the composite remaining life calculation for the car.

Q. What is the estimated impact to the annual depreciation accrual from the Company's inclusion of interim retirements?

A. The Company's inclusion of interim retirements adds approximately $12 million per year to the annual depreciation accrual.

Q. Are you aware of other jurisdictions that specifically exclude interim retirements?

A. Yes. The Public Utility Commission of Texas has consistently disallowed the inclusion of interim retirements for many years. In Southwestern Electric Power Company's ("SWEPCO") 2012 rate case, Docket No. 40443, the Texas commission affirmatively upheld its long-standing precedent of excluding interim retirements:

> The rate at which interim retirements will be made is not known and measurable. Incorporation of interim retirements would best be done when those retirements are actually made. It is not reasonable to incorporate interim retirements, resulting in a reduction in the depreciation expense of $1 million on a Texas retail basis.[10]

The Texas commission found that the "Commission has consistently rejected interim retirements for any production plant account under any methodology."[11]

Q. In Mr. Watson's depreciation studies filed with the Texas PUC, has he also excluded interim retirements?

A. Yes. In my experience reviewing Mr. Watson's depreciation studies filed with the Texas PUC in several proceedings, he has not included interim retirements, consistent with the PUC's preference regarding that issue.

Q. Are you aware of any Texas utility incurring financial harm as a result of the exclusion of interim retirements from depreciation rate calculations?

A. No, not to my knowledge. In addition, I am not aware of any Texas utility making this argument. As discussed above, Texas utilities typically do not even request interim retirements due to the commission's long-standing preference regarding that issue.

Q. Has the Oklahoma Commission directly addressed the issue of interim retirements in prior cases?

A. No, not to my knowledge.

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[10] *Application of Southwestern Electric Power Company for Authority to Change Rates & Reconcile Fuel Costs*, Docket No. 40443, Final Order 33 (Finding of Fact No. 195) (October 10, 2013).

[11] *Application of Southwestern Electric Power Company for Authority to Change Rates & Reconcile Fuel Costs*, Docket No. 40443, Proposal for Decision at 191 (May 20, 2013).

Q. Do you believe it is unreasonable for Mr. Watson to propose interim retirements in his depreciation rate calculations in this case?

A. No. I do not believe it is unreasonable to propose interim retirements in production plant depreciation rate calculations. However, I also believe it is not unreasonable to exclude them. In this particular case, excluding interim retirements could provide financial relief to current ratepayers in light of the significant overall rate increase proposed by OG&E.

Q. Does your recommendation to exclude interim retirements in this case contemplate any less cost recovery for OG&E than the Company would have if interim retirements were included?

A. No. Excluding interim retirements pursuant to my recommendation simply means they are not acted for in the remaining life calculations for the assets at issue. In other words, OG&E would still recover its total investment and negative net salvage as it would if interim retirements are included in the remaining life calculations. Rather, under my recommendation the Company's cost recovery would be allocated over a slightly longer period of time for each production facility.

Q. Do your recommended depreciation rates for the Company's production accounts exclude interim retirements?

A. Yes.

Q. What is the estimated impact on the depreciation accrual resulting from the removal of interim retirements?

A. About $12 million.

C. Wind Facility Retirement Dates

Q. Please describe OG&E's proposed service life spans of its wind facilities.

A. The Company proposes retirement dates of 2034, 2031, and 2037 for OU Spirit, Centennial, and Crossroads wind facilities, respectively.[12] These equate to 25-year life spans.

Q. What service life spans for these wind facilities are OG&E's currently approved depreciation rates based on?

A. OG&E's currently approved rates for its wind facilities are based on 30-year service lives, which were adopted as part of a settlement agreement in OG&E's 2021 rate case.[13]

Q. In OG&E's last rate case, did multiple intervenors propose 30-year lifespans for OG&E's wind facilities?

A. Yes. Both FEA witness Brian Andrews and AG witness William Dunkel proposed 30-year lifespans for the Company's wind facilities in OG&E's last rate case.[14] In that case Mr. Andrews demonstrated that "[r]ecent industry trends indicate that 30 years is a more likely life than 25 years."[15] Likewise, Mr. Dunkel cited a survey of Anticipated Wind Project Lifetimes sponsored by the U.S. Department of Energy finding "[p]roject developers,

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[12] Direct Testimony of Dane A. Watson, Direct Exhibit DAW-2, p. 118.

[13] Final Order, p. 4, Cause No. PUD 2021-000164; *see also* Direct Testimony of William W. Dunkel, Exhibit WWD-29, Cause No. PUD 202100164.

[14] See Direct Testimony of Brian C. Andrews, pp. 18-20, Cause No. PUD 202100164; *see also* Direct Testimony of William W. Dunkel, pp. 42-44, Cause No. PUD 202100164.

[15] Direct Testimony of Brian C. Andrews, p. 18, lines 15-16, Cause No. PUD 202100164

sponsors, and long-term owners now most commonly assume 30-year useful project lives."[16]

Q. Has OG&E provided any convincing evidence to shorten the lifespans of its wind facilities from 30 years to 25 years?

A. No.

Q. What is your recommendation regarding the lifespans of OG&E's wind facilities for depreciation cost recovery?

A. I recommend that the currently-approved 30-year lifespans be retained for the purpose of determining the appropriate depreciation rates for these units, as is reflected in my proposed rates in this case.

V. MASS PROPERTY ANALYSIS

Q. Describe mass property.

A. Unlike life span property accounts, "mass" property accounts usually contain a large number of small units that will not be retired concurrently. For example, poles, conductors, transformers, and other transmission and distribution plant are usually classified as mass property. Estimating the service life of any single unit contained in a mass account would not require any actuarial analysis or curve-fitting techniques. Since we must develop a single rate for an entire group of assets, however, actuarial analysis is required to calculate the average remaining life of the group.

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[16] Direct Testimony of William W. Dunkel, p. 42, lines 13-15.

Q. Please summarize the adjustments you are proposing to OG&E's proposed depreciation rates for its mass property accounts.

A. I am proposing service life and net salvage adjustments to several of the Company's mass property accounts. These adjustments are summarized in the following figure.

Figure 3:
Mass Property Parameter Comparison

Account No.	Description	Company Position Iowa Curve	Company Position Depr Rate	Company Position Annual Accrual	OIEC Position Iowa Curve	OIEC Position Depr Rate	OIEC Position Annual Accrual
	Intangible Plant						
303.10	MISC INTANGIBLE PLANT	SQ - 5	20.70%	23,579,985	SQ - 10	7.78%	8,865,713
303.20	MISC INTANGIBLE PLANT	SQ - 10	10.18%	15,153,799	SQ - 15	5.02%	7,474,628
	Transmission Plant						
355.00	POLES AND FIXTURES	R1 - 75	2.12%	23,667,775	R1.5 - 81	1.97%	21,998,180
356.00	OH CONDUCTORS AND DEVICES	R3 - 75	2.01%	13,942,116	R3 - 79	1.89%	13,089,700
	Distribution Plant						
364.00	POLES, TOWERS AND FIXTURES	R1 - 55	2.94%	23,115,215	R1.5 - 62	2.60%	20,429,355
367.00	UG CONDUCTORS AND DEVICES	R2.5 - 55	3.07%	29,833,686	R2.5 - 60	2.74%	26,668,468
368.00	LINE TRANSFORMERS	R0.5 - 40	4.70%	31,544,550	R1 - 48	3.88%	26,040,210
373.00	STREET LIGHTING AND SIGNAL SYSTEMS	R0.5 - 33	5.35%	16,957,364	R1 - 42	4.12%	13,048,528

I will discuss each of these accounts in more detail.

Q. Please describe the process you used to estimate the Company's service lives for its mass property accounts.

A. To develop depreciation rates for the Company's mass property accounts, I obtained the Company's historical plant data to develop observed life tables for each account. I used Iowa curves to smooth and complete the observed data to calculate the average remaining life of each account. Finally, I analyzed the Company's proposed net salvage rates for each mass account by reviewing the historical salvage data. After estimating the remaining life and salvage rates for each account, I calculated the corresponding depreciation rates.

Further details about the actuarial analysis and curve-fitting techniques involved in this process are presented in the attached appendices.

Q. Please describe your approach in estimating the service lives of mass property.

A. I used all of the Company's property data and created an observed life table ("OLT") for each account. The data points on the OLT can be plotted to form a curve (the "OLT curve"). The OLT curve is not a theoretical curve, rather, it is actual observed data from the Company's records that indicate the rate of retirement for each property group. An OLT curve by itself, however, is rarely a smooth curve, and is often not a "complete" curve (i.e., it does not end at zero percent surviving). In order to calculate average life (the area under a curve), a complete survivor curve is needed. The Iowa curves are empirically-derived curves based on the extensive studies of the actual mortality patterns of many different types of industrial property. The curve-fitting process involves selecting the best Iowa curve to fit the OLT curve. This can be accomplished through a combination of visual and mathematical curve-fitting techniques, as well as professional judgment. Mathematical curve fitting involves measuring the distance between the OLT curve and the selected Iowa curve in order to get an objective, mathematical assessment of how well the curve fits. After selecting an Iowa curve, I observe the OLT curve along with the Iowa curve on the same graph to determine how well the curve fits. I may repeat this process several times for any given account to ensure that the most reasonable Iowa curve is selected.

Q. Do you always select the mathematically best-fitting curve?

A. Not necessarily. Mathematical fitting is an important part of the curve-fitting process because it promotes objective, unbiased results. While mathematical curve fitting is important, however, it may not always yield the optimum result; therefore, it should not necessarily be adopted without further analysis. In fact, for some of the accounts in this case I selected Iowa curves that were not the mathematical best fit, and in every such instance, this decision resulted in shorter curves (i.e., higher depreciation rates) being selected, as further illustrated below.

Q. Discuss the general differences between your service life estimates and the Company's service life estimates for the accounts to which you propose adjustments.

A. While the Company and I used similar curve-fitting approaches in this case, the curves I selected for these accounts provide a better mathematical fit to the observed data and provide a more reasonable and accurate representation of the mortality characteristics for each account in my opinion. In each of the following accounts, the Company has selected a curve that underestimates the average remaining life of the assets in the account, which results in unreasonably high depreciation rates. An analysis of each selected account is presented below.

Q. What periods of time do the following graphs include for the accounts in dispute?

A. OLT curve are comprised of retirement data which include a certain number of "placement" years as well as a number of retirement "experience" years. Ideally, these periods of time, known as "bands," should be sufficiently long to develop a retirement dispersion pattern with enough retirement experience to provide relatively confident indication of average remaining life using conventional Iowa curve fitting techniques. In

OG&E's case, the Company has maintained an adequate amount of historical retirement data such that this type of analyses can be performed. For the graphs shown below, the retirement experience years are from 1972-2022, and the placement years are from 1958-2022 (except for Account 356 with a starting placement year of 1956).[17]

Q. Did you also look at different combinations of banding years as part of your service life analyses?

A. Yes. However, since there are numerous combinations of banding periods for each account, it is not practical to present separate graphs for each banding combination in testimony. As indicated in the depreciation study, Mr. Watson also considered a variety of banding combinations as part of his analyses.

A. <u>Account 355 – Poles and Fixtures</u>

Q. Describe your service life estimate for this account and compare it with Mr. Watson's estimate.

A. The OLT curve for this account and other accounts discussed in this section is constructed using the Company's historical retirement data. The graph below shows the two different Iowa curves selected by Mr. Watson and me to best represent the average remaining life for the assets in this account. For this account, Mr. Watson selected the R1-75 Iowa curve, and I selected the R1.5-81 Iowa curve. Both Iowa curves and the OLT curve are shown in the following graph.

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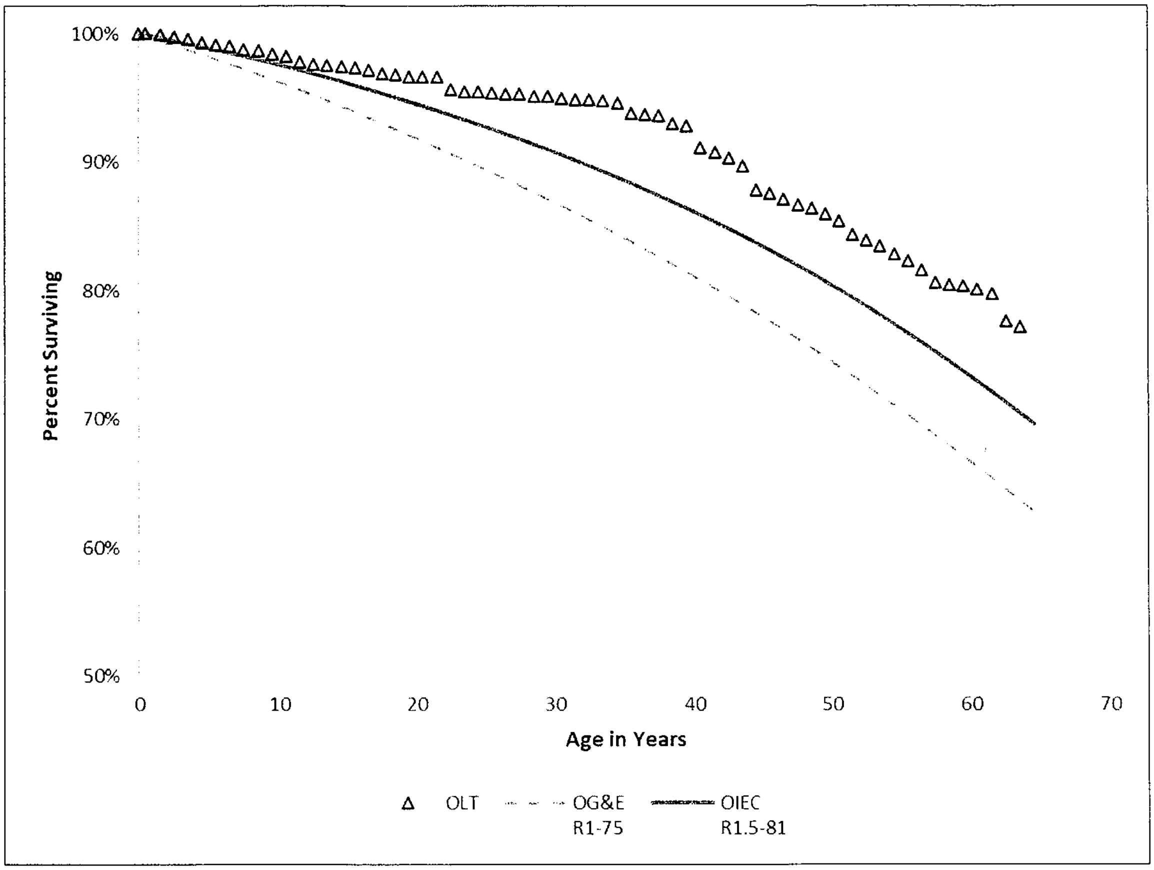
[17] See Exhibit DJG-2-12 for observed life tables.

Figure 4:
Account 355 – Poles and Fixtures



As shown in the graph, both selected Iowa curves have relatively similar shapes, however, the Iowa curve proposed by Mr. Watson is notably shorter than the retirement pattern indicated in this OLT curve. As a result, his proposed service life for this account is much shorter than the average life indicated by the Company's historical retirement data at this time. For similar reasons, the Iowa curve I proposed is conservative and reasonable in that it is not the longest Iowa curve that could have been selected for this account (i.e., a longer Iowa curve would have resulted in a closer fit to this OLT curve). Mathematical curve fitting can be used to verify the results, as further discussed below.

Q. Does the Iowa curve you selected result in a closer fit to the OLT curve for this account?

A. Yes. Mathematical curve fitting involves measuring the distance between the selected Iowa curve and the OLT curve at each age interval and adding the results using the "sum-of-squared differences" ("SSD") technique. The Iowa curve that produces the lower SSD is the one that results in a closer mathematical fit. For this account, the SSD between Mr. Watson's Iowa curve and the OLT curve is 0.4802, and the SSD between the R1.5-81 curve I selected and the OLT curve is 0.1179, which means it results in the closer fit.[18]

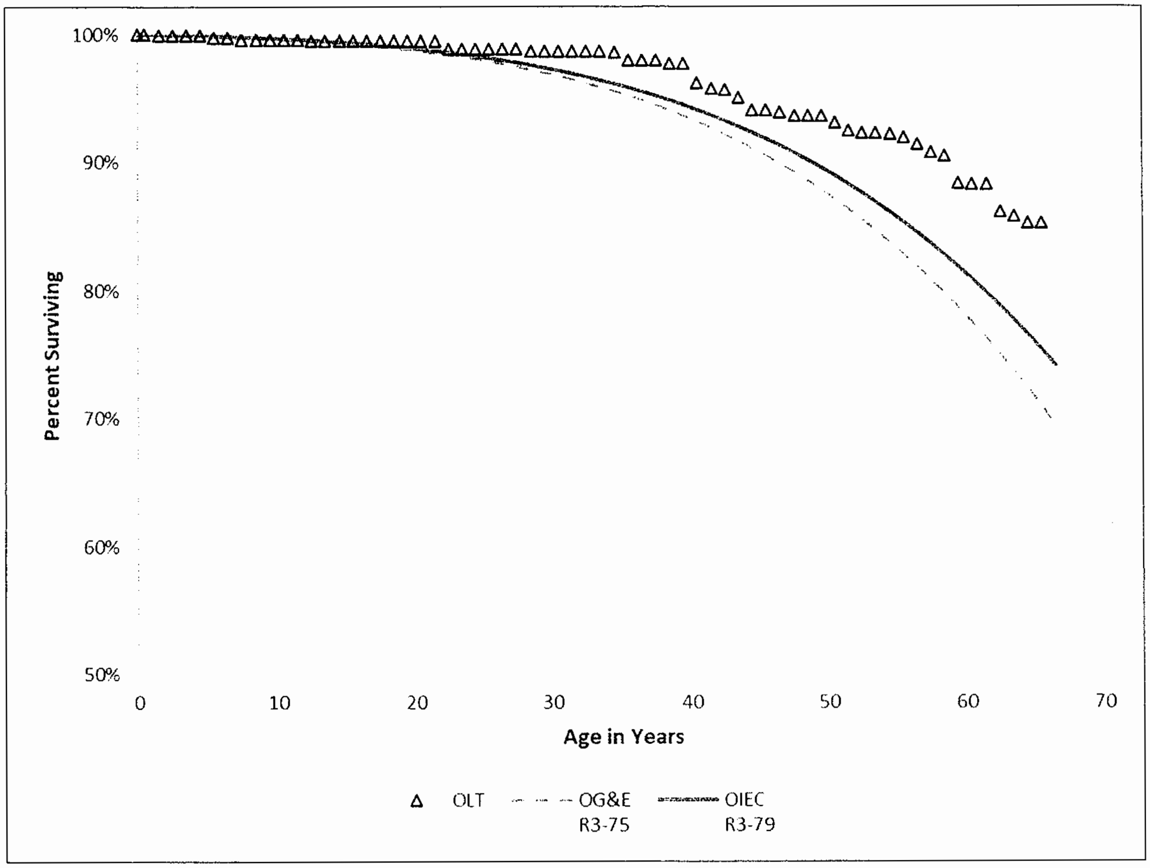
B. Account 356 – Overhead Conductors and Devices

Q. Please describe your service life estimate for this account and compare it with the Company's estimate.

A. For this account, Mr. Watson selected the R3-75 curve, and I selected the R3-70 curve. Both of these Iowa curves are shown in the following graph with the OLT curve.

[18] Exhibit DJG-2-7.

Figure 5:
Account 362 – Station Equipment



For this account, both of the selected Iowa curves have the same curve shape (R3), with a four-year difference in average life. Ideally, OLT curves drop below 80% surviving to provide more confident indications of a retirement dispersion patter or curve shape. Regardless, the data comprising the OLT curve (under any banding combination) is the only empirical evidence provided by the Company to support its proposed service lives. Effectively, both Iowa curves are suggesting that the retirement rate going forward in this account may be greater than the historical rate observed thus far, which means that the OLT curve will likely decline relative to its current position. Nonetheless, the evidence presented is more supportive of the R3-79 Iowa curve I selected for this account. Mathematical curve fitting can be used to further assess the results.

Q. Does the Iowa curve you selected result in a closer mathematical fit to the OLT curve for this account?

A. Yes. The SSD between the Company's Iowa curve and the OLT curve is 0.1913, and the SSD between the R3-79 curve I selected and the OLT curve is 0.0751, which means it results in the closer fit.[19]

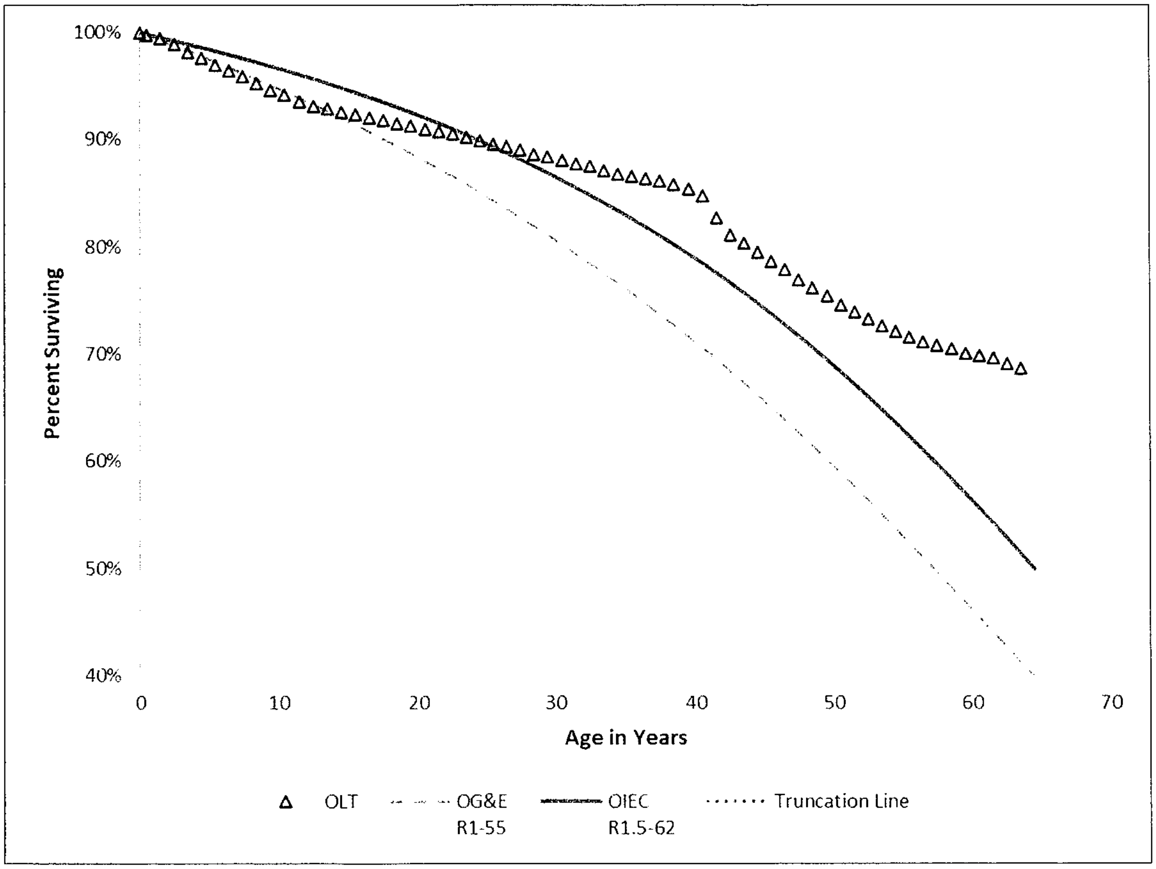
C. Account 364 – Poles, Towers, and Fixtures

Q. Please describe your service life estimate for this account and compare it with Mr. Watson's estimate.

A. For this account, Mr. Watson selected the R1-55 curve, and I selected the R1.5-62 curve. Both of these Iowa curves are shown in the following graph with the OLT curve.

[19] Exhibit DJG-2-8.

Figure 6:
Account 364 – Poles, Towers, and Fixtures



For this account, the Iowa curve selected by Mr. Watson is again notably shorter than the retirement pattern indicated in this OLT curve. The only portion of the OLT curve to which the R1-55 Iowa curve results in a close fit are during the earliest age intervals. While the OLT curve shape for this account is relatively unusual, it is still the only empirical evidence for which service life estimate should be based. In that regard, it is clear even from a visual perspective that the R1.5-62 Iowa curve I selected results in a better fit to the OLT curve, and thus results in a more reasonable depreciation rate for this account compared to Mr. Watson's proposal.

Q. Does the Iowa curve you selected result in a closer mathematical fit to the OLT curve for this account?

A. Yes. The SSD between Mr. Watson's Iowa curve and the OLT curve is 0.9923, and the SSD between the R1.5-62 curve I selected and the OLT curve is 0.2425, which means it results in the closer fit.[20]

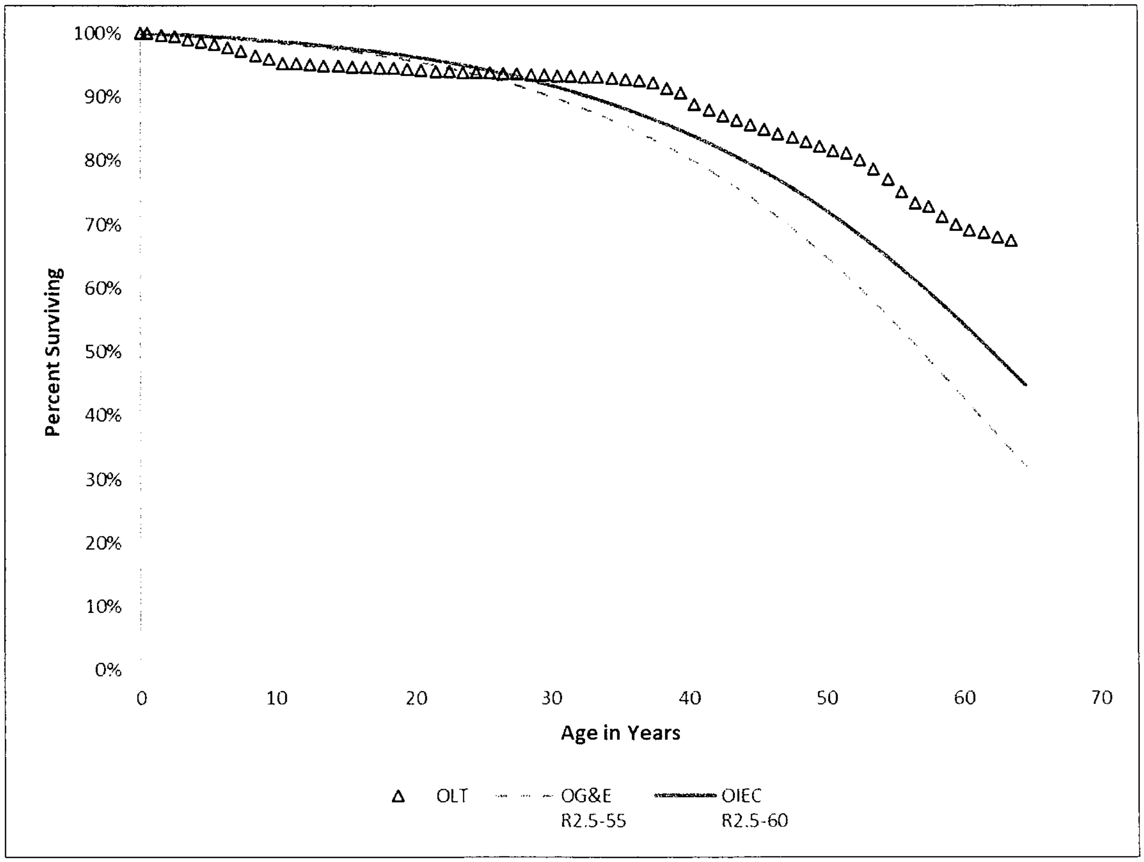
D. Account 367 – Underground Conductors and Devices

Q. Please describe your service life estimate for this account and compare it with Mr. Watson's estimate.

A. For this account, Mr. Watson selected the R2.5-55 curve, and I selected the R2.5-60 curve. Both of these Iowa curves are shown in the following graph with the OLT curve.

[20] Exhibit DJG-2-9.

Figure 7:
Account 367 – Underground Conductors and Devices



As with the accounts discussed above, the Iowa curve selected by Mr. Watson is again notably shorter than the retirement pattern indicated in this OLT curve. The R2.5-60 Iowa curve I selected strikes a good balance between the indicated retirement pattern based on the available data at this time and the notion that the retirement rate could increase in the future, as is implied by Mr. Watson's proposed Iowa curve. Regardless, the data are more supportive of my proposed Iowa curve. Mathematical curve fitting can be used to verify the results.

Q. Does the Iowa curve you selected result in a closer mathematical fit to the OLT curve for this account?

A. Yes. The SSD between Mr. Watson's Iowa curve and the OLT curve is 1.0759, and the SSD between the R2.5-60 curve I selected and the OLT curve is 0.3666, which means it results in the closer fit.[21]

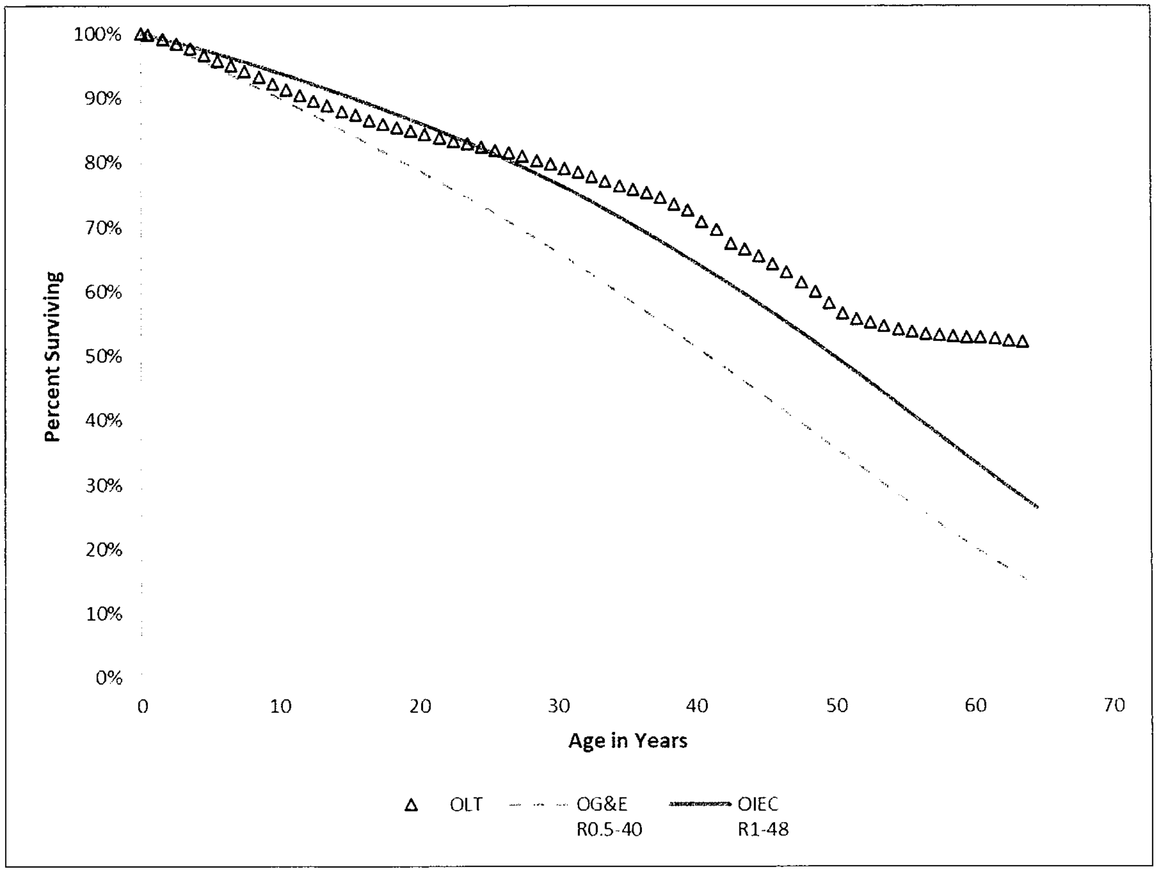
E. Account 368 – Line Transformers

Q. Please describe your service life estimate for this account and compare it with Mr. Watson's estimate.

A. For this account, Mr. Watson selected the R0.5-40 curve, and I selected the R1-48 curve. Both of these Iowa curves are shown in the following graph with the OLT curve.

[21] Exhibit DJG-2-10.

Figure 8:
Account 368 – Line Transformers



As with the accounts discussed above, the Iowa curve selected by Mr. Watson is again notably shorter than the retirement pattern indicated in this OLT curve. The portion of the OLT curve in which the R0.5-40 curve appears to result in a closer fit than the R1-48 curve are the earliest few age intervals. The higher mode and longer average life inherent in the R1-48 curve clearly reflect a more accurate representation of the mortality characteristics of the assets in this account given the data presented at this time.

Q. Does the Iowa curve you selected result in a closer mathematical fit to the OLT curve for this account?

A. Yes. The SSD between Mr. Watson's Iowa curve and the OLT curve is 2.0666, and the SSD between the R1-48 curve I selected and the OLT curve is 0.4620, which means it results in the closer fit.[22]

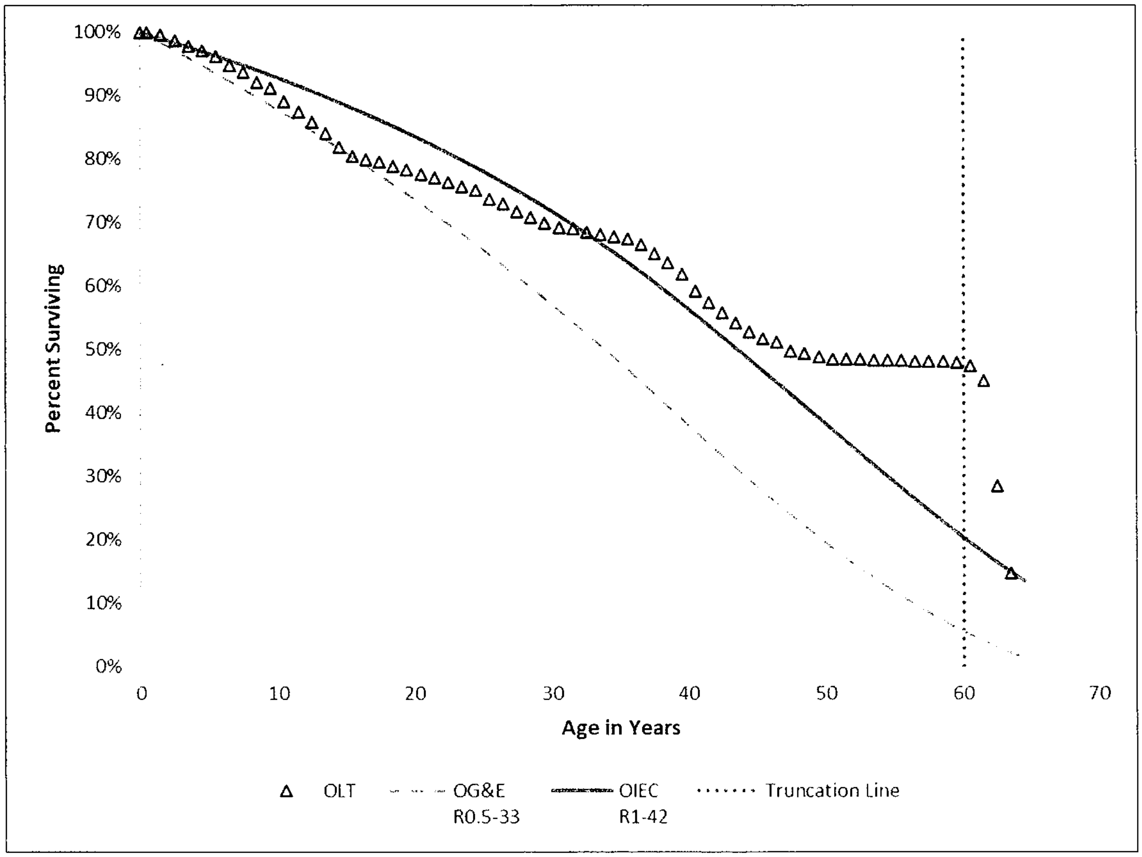
F. Account 373 – Street Lighting and Signal Systems

Q. Please describe your service life estimate for this account and compare it with Mr. Watson's estimate.

A. For this account, Mr. Watson selected the R0.5-33 curve, and I selected the R1-42 curve. Both of these Iowa curves are shown in the following graph with the OLT curve.

[22] Exhibit DJG-2-11.

Figure 9:
Account 373 – Street Lighting and Signal Systems



1 As with the accounts discussed above, the Iowa curve selected by Mr. Watson is again notably shorter than the retirement pattern indicated in this OLT curve. The vertical line represents a truncation point for this OLT curve based on a benchmark that would exclude the data points associated with dollar amounts less than one percent of the dollars exposed to retirement at age zero. Regardless of the truncation line, it is clear that the R1-42 curve I selected results in a closer fit to the OLT curve.

Q. Does the Iowa curve you selected result in a closer mathematical fit to the OLT curve for this account?

A. Yes. The SSD between Mr. Watson's Iowa curve and the OLT curve is 2.8339, and the SSD between the R1-42 curve I selected and the OLT curve is 0.6593, which means it results in the closer fit.[23]

G. Account 303 – Software

Q. Please describe the Company's proposed service lives for its software accounts.

A. The Company proposes a five-year average life for Account 303.10 and a ten-year average life for Account 303.20; this results in proposed annual accruals of $23.6 million, and $15,1 million, respectively.[24]

Q. Has OG&E provided any convincing evidence to support its proposed service lives for these accounts?

A. No. Unlike the Company's other mass property accounts, in which retirement data are provided that can indicate an average estimated service life for the assets in a particular account, no such data were provided for software assets. In discovery, the Company was asked to identify each software system included in Account 303.1, the year it was installed, and whether it is still physically in service. In response, the Company identified more than $400 million of software systems still in service, with some systems dating back to 1998.[25]

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[23] Exhibit DJG-2-12.

[24] Direct Testimony of Dane A. Watson, Direct Exhibit DAW-2, p. 107.

[25] Response to OIEC 06-21.

Q. Are you aware of other utilities that utilize longer amortization periods for their Account 303 assets?

Yes. For example, NSTAR Electric Company uses 15-year and 20-year amortization periods for two of its subaccounts in Account 303. Although NSTAR also utilizes a 5-year subaccount as well, the vast majority of the total plant balance in the account is allocated to the 10-year and 15-year subaccounts.[26] Likewise, in Chesapeake Utilities Corporations's ("CUC") pending rate case before the Maryland commission, the company specifically requested the Commission to authorize 15-year and <u>20-year</u> subaccounts for its software assets, which had already been approved for its Florida operations. According to the company's depreciation witness, CUC "reviewed historical, current, and prospective intangible software information to determine a reasonable amortization period for recovery of the software investments. The proposed amortization periods are in line with the experienced lives of the previous software. To date, these accounts and amortization periods have been approved by the [Florida Commission] in the last CUC Florida Public Utilities Company's consolidated electric division Depreciation Study."[27] Thus, the Florida commission has already approved CUC's request for a 20-year subaccount for its software assets, and no party to CUC's Maryland case has opposed the company's request for the same 20-year subaccount in that pending proceeding.

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[26] See Direct Testimony of John J. Spanos, Exhibit ES-JJS-2, Case No. D. P. U. 22-22 before the Commonwealth of Massachusetts (Jan. 14, 2022).

[27] Direct Testimony of Patricia Lee, p. 13, lines 9-14, Case No. 9721 before the Maryland Public Service Commission.

Q. Have utility companies recognized that some of their software systems can last at least 20 years?

A. Yes. In 2011, Florida Power & Light ("FP&L") implemented an enterprise resource planning ("ERP") system to replace its previous accounting system.[28] FP&L had previously amortized its software over a five-year period. FP&L, however, requested that the amortization period be extended to 20 years in order to reflect the much longer lifespan of the new ERP system.[29] Kim Ousdahl, FP&L's Vice President, Controller and Chief Accounting Officer, gave the following testimony regarding FP&L's software account:

> In 2011, the Company implemented a new general ledger accounting system (SAP) to replace its legacy system. . . . FPL's policy for accounting for new software requires . . . amortization on a straight-line basis over a period of five years, which is the current amortization period approved for this account. The Company is requesting to extend the amortization period of this system from five to twenty years in order to more appropriately recognize the longer benefit period expected from this major business system.[30]

While a 10-year average life may have been appropriate for older, more basic software systems, it does not reflect the much longer service life of newer, more complex systems.

Q. Has the Oklahoma Commission approved a service life of 10 years for software assets in prior cases?

A. Yes. In Public Service Company of Oklahoma's ("PSO") 2017 rate case before the Commission, PSO proposed a five-year service life for Account 303. I testified in that case

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[28] Petition for Rate Increase by Florida Power & Light Company, Docket No. 120015-EI, Testimony & Exhibits of Kim Ousdahl. p. 14.

[29] *Id.*

[30] *Id.*

and proposed a five-year increase to the service life of PSO's software account. The Commission adopted my position and found:

> "[Mr. Garrett] recommended a 10-year amortization period instead of the 5-year amortization period PSO proposed. Mr. Garrett's analysis was clear and convincing. . . . Based upon the evidence in the record, the Commission accepts the recommendation of Mr. David Garrett pertaining to Account 303.[31]

As in PSO's 2017 rate case, OG&E has not provided any convincing evidence supporting its proposed services lives for software.

Q. What is your recommendation to the Commission regarding OG&E's software service lives.

A. In this case, OG&E has not provided any empirical evidence indicating that its proposed service lives for its software assets are accurate and reasonable. Therefore, I recommend the Commission authorize a five-year increase in service life for Accounts 303.10 and 303.20 – extending them to 10-year and 15-year service lives, respectively. Adopting these service lives would reduce the Company's proposed depreciation accrual by about $22 million.

Q. Does this conclude your testimony?

A. Yes.

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[31] Report and Recommendation of the Administrative Law Judge, p. 29, ¶ 110, Cause No. PUD 201700151 (Dec. 11, 2017).

CERTIFICATE OF MAILING

This is to certify that on this 26th day of April, 2024, a true and correct copy of the above and foregoing was emailed, addressed to:

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