STATE OF CONNECTICUT

PUBLIC UTILITIES REGULATORY AUTHORITY

Docket No. 26-05-10

APPLICATION OF THE CONNECTICUT LIGHT AND POWER COMPANY
D/B/A EVERSOURCE ENERGY
TO AMEND ITS RATE SCHEDULES

REBUTTAL TESTIMONY OF

NED W. ALLIS

Depreciation

On behalf of

Connecticut Light & Power Company
d/b/a Eversource Energy

November 18, 2026

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REBUTTAL TESTIMONY OF

NED W. ALLIS

I. INTRODUCTION

Q. Please state your name and address.

A. My name is Ned W. Allis. My business address is 300 Sterling Parkway, Suite 200, Mechanicsburg, PA 17050.

Q. Are you the same Ned W. Allis who submitted direct testimony in this proceeding?

A. Yes. My qualifications were provided in my direct testimony and Exhibit CLP-DEPRECIATION-3.

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

A. I am testifying on behalf of The Connecticut Light & Power Company ("CL&P" or the "Company").

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to respond to the depreciation recommendations presented by David J. Garrett on behalf of the Office of Consumer Counsel ("OCC") in this proceeding. I address his proposed service life and survivor curve estimates and net salvage recommendations and explain why the Company's proposed depreciation estimates should be adopted. I have not attempted to respond to

every position offered by the OCC, and the fact that I may not have responded to any particular position or statement made by the witness does not indicate my agreement with that position or statement.

II. PURPOSE AND SUMMARY

Q. What are your principal conclusions regarding Mr. Garrett's depreciation recommendations?

A. Mr. Garrett proposes several adjustments to the service life and net salvage estimates in the depreciation study, each of which should be rejected. His proposals, while based on appropriate types of analyses of historical data used for depreciation studies, do not adequately consider the factors needed to develop realistic estimates of future service lives and net salvage. He instead selectively extrapolates or ignores the available data in a manner that consistently results in longer lives or less negative net salvage, each of which has the effect of reducing depreciation expense. The result of his recommendations would recover capital too slowly, deferring costs to future periods and future customers. Although his proposals reduce annual depreciation expense in the current case by approximately $71.1 million relative to the Company's proposals, they do not eliminate the underlying costs. Depreciation rates that are too low leave future customers responsible for both higher depreciation and a higher return on the investment remaining in rate base.

Mr. Garrett accomplishes his adjustments through several unrealistic assumptions. First, he unrealistically assumes that a portion of the assets in several accounts will live far longer than most assets in the account, which in turn artificially increases the

average service life he proposes.[1] In each case, the result is to reduce depreciation expense.

Mr. Garrett then turns to the net salvage analysis, where he is supportive of the Traditional Method of net salvage I consistently recommend. Rather than analyze the data as part of a considered process that factors other relevant information to determine the most reasonable estimate of the future cost to remove assets, for most accounts he merely recommends limiting increasing net salvage based on the principle of gradualism to half the increase I have recommended.[2] However, he does not apply this approach to gradualism consistently. In the event that a subset of the available data would support less negative net salvage, he recommends large changes.

In summary, Mr. Garrett's overall approach is not consistent, balanced or reasonable. He makes large or unusual changes to lower depreciation for several accounts, while arguing to limit changes when the result would be higher depreciation. As a result, Mr. Garrett's adjustments understate depreciation and should be rejected.

Q. What is the overall impact of his recommendations?

A. His recommendations would reduce the Company's proposed annual depreciation accrual by approximately $71.1 million. Of this amount, approximately $55 million

[1] This assumption is contrary to the Company's actual data, which indicates that, as with almost all other utility property I have studied, the maximum life of a group of property is rarely more than double the average life. Mr. Garrett assumes some assets will live more than three times the average and that many will remain in service for more than 120 years.

[2] As I explain, he recommends "gradualism" to be applied to estimates for which my recommendations were often gradual changes to begin with. To the extent gradualism is a reasonable consideration for the Company's depreciation rates, it already forms one of my considerations in developing my recommendations.

results from his service life recommendations and approximately $16 million results from his net salvage recommendations. As I will discuss in further detail, neither his service life nor his net salvage estimates are reasonable.

III. SERVICE LIFE ESTIMATES

A. Introduction

Q. Please summarize the service life recommendations made by Mr. Garrett that you address in this section.

A. A summary of the recommended service lives for each account at issue are shown in Table 1 below. Mr. Garrett recommends changes to the Company's service life estimates for Accounts 364.00, Poles, Towers and Fixtures; 365.00, Overhead Conductors and Devices; 366.00, Underground Conduit; 367.00, Underground Conductors and Devices; and 373.00, Street Lighting and Signal Systems. For each of these accounts, his recommendation would increase the average service life relative to the Company's proposal. For Accounts 364.00, 367.00, and 373.00, he also recommends materially different survivor curve shapes, including L0 curves for Accounts 364.00 and 367.00 and an O3 curve for Account 373.00. As I discuss below, I have significant concerns with both the average service lives and, more importantly, the retirement patterns represented by these curves.

Table 1: Current, Company Proposed, and Garrett's Proposed Survivor Curves

Account	Description	Current Estimate	Company Proposed	Garrett Proposed
364.00	Poles, Towers and Fixtures	53-R0.5	48-R0.5	53-L0
365.00	Overhead Conductors and Devices	52-R0.5	46-R0.5	52-R0.5
366.00	Underground Conduit	75-R1.5	75-R1.5	82-R1.5
367.00	Underground Conductors and Devices	50-R0.5	50-R0.5	55-L0
373.00	Street Lighting and Signal Systems	25-L0	18-L0	25-O3

Q. What is your primary concern with Mr. Garrett's service life recommendations?

A. My primary concern is that Mr. Garrett has not exercised the requisite judgment needed to evaluate the results of his curve fitting analysis. He selects survivor curve estimates that are unreasonable for the property being studied, rarely used in the industry for similar property, and disregards relevant historical data, current Company programs and known future plans that affect expected retirement pattern.

Q. Why must one exercise judgment and consider factors beyond the statistical analysis?

A. One must consider all relevant factors and exercise judgment because a survivor curve is a forecast of the future, not simply a description of historical data. A mathematical fitting process compares standardized survivor curves to historical retirement experience, but the curve ultimately selected for depreciation is used to estimate the future retirement pattern of the property. Accordingly, the analyst must consider whether the average service life and the retirement dispersion represented by a

particular curve are reasonable for the property being studied. A curve should not be selected merely because it produces the lowest mathematical fitting error.

Q. Does the survivor curve shape matter independently of the average service life?

A. Yes. Two survivor curves can have the same average service life but represent materially different retirement patterns. The curve type determines the dispersion of retirements around the average service life, including the proportion of property expected to retire at younger ages and the extent to which property is expected to remain in service at advanced ages. Therefore, selecting a survivor curve requires judgement regarding both the average service life and the expected pattern of retirements around the average.

Q. How does that consideration relate to Mr. Garrett's recommendations in this proceeding?

A. It is particularly important because several of Mr. Garrett's recommendations are not simply modest changes in average service life. For Accounts 364.00 and 367.00, he recommends L0 curves, and for Account 373.00 he recommends an O3 curve. These curve types produce retirement patterns that are far outside the range that is reasonable for these types of utility property. Mr. Garrett does not provide any basis for why the Company's property would experience very unusual retirement patterns for these accounts.

B. Service Life Estimation Should Incorporate Reasonable Judgment

Q. What factors need to be considered when estimating service lives?

A. Estimating service lives requires consideration of many factors from different sources, as well as the experience of the analyst making estimates. Generally, we should first consider the different forces of retirement that act upon utility assets and how these will impact retirements in the future. Retirements of assets can occur due to physical reasons, such as wear and tear or decay. However, they also occur for reasons such as capacity. For example, one force of retirement for an existing transformer would be due to load growth resulting in the need for a larger capacity transformer. Other forces of retirement may be attributed to equipment obsolescence or requirements of public authorities. These forces of retirement are dynamic and can change both in nature and in their relative importance. For example, if there are more replacements due to capacity in the future, this would increase the rate of retirements and, all else equal, result in a shorter average service life than has occurred historically. In contrast, if newer, stronger poles are installed and physical forces of retirement will occur at a lower rate, then the overall average service life would, all else equal, increase.

Consideration of the forces of retirement is also important when determining the survivor curve shape. The rate of retirements for most utility property tends to increase with age. This occurs because physical forces of retirement, including wear and tear and deterioration, are a function of age and most utility assets have a maximum life. It is unlikely, for example, that many wood poles will remain in service for more than

100 years. For this reason, it is uncommon for utility property to experience curve shapes such as the L0 or O3 curves, which forecast that a percentage of assets will remain in service for much longer than the majority of the group of property.

Q. Do depreciation textbooks discuss the need to consider different forces of retirement when estimating service lives?

A. Yes. For example, the National Association of Regulatory Utility Commissioners ("NARUC") textbook *Public Utility Depreciation Practices* explains on page 67:

> …physical property is subject to forces of retirement. These forces include those related to the property's physical condition (e.g., wear and tear, accident), functional obsolescence or inadequacy, or termination of the need or enterprise.

The Federal Energy Regulatory Commission's ("FERC") Uniform System of Accounts also lists several forces of retirement to consider:

> Depreciation, as applied to depreciable electric plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric 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 the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities.[3]

NARUC also explains that these forces, and changes in the future, should be considered when forecasting service lives on page 128:

> The use of informed judgment can be a major factor in forecasting. A logical process of examining and prioritizing the usefulness of information must be employed, since there are many sources of data that

[3] F ERC Electric Uniform System of Accounts, Definition 12

> must be considered and weighed by importance. For example, the following forces of retirement need to be considered: Do the past and current service life dispersions represent the future? Will scrap prices rise or fall? What will be the impact of future technological obsolescence? Will the Company be in existence in the future? The analyst must rank the factors and decide the relative weight to apply to each. The final estimate might not resemble any one of the specific factors; however, the result would be a decision based on a combination of the components.

Similarly, *Depreciation Systems* by Frank Wolf and Chester Fitch ("Wolf and Fitch") explains on page 277:

> Decisions to replace industrial property are, to some extent, a function of the laws of nature that determine the physical characteristics and properties of materials and processes used to provide service. Many models used in engineering reflect natural phenomena and are based on the work of mathematicians, physicists, chemists, and other scientists. For example, the failure of railroad track caused by wear and tear may be a highly predictable function of the cumulative tons of traffic carried by the track. Models that develop this functional relationship can be very useful in developing maintenance policy, planning operations, and, to some extent, predicting service life.
>
> However, most retirements are more subtle functions of factors such as the economy, changing technology, or government regulations, all of which significantly influence management decisions. Other factors such as maintenance policy or organizational goals are a direct result of management decisions. It is accurate to think of retirement as a management decision and realize that when forecasting service life, the various factors that mold management thought and action must be considered.

Q. What role does informed judgment play in estimating service lives?

A. Informed judgment is necessary to translate the results of historical analysis into a reasonable estimate of future service lives. The statistical analysis measures how property has retired in the past. The analyst must then determine whether that experience reasonably represents how the property currently in service will retire in the

future. That determination requires consideration of the historical analysis together with the nature of the property, the forces of retirement, relevant Company information, industry experience and the analyst's knowledge and experience. As the NARUC discussion quoted above explains, the final estimate reflects a weighing of the relevant information and need not correspond to any single statistical indication.

Q. Does the use of informed judgment mean that the historical retirement data should be disregarded?

A. No. Historical retirement data are an important part of the analysis. Informed judgment involves interpreting the data, not disregarding the data. For example, the analyst should consider whether the observed retirement pattern is consistent across different periods, whether observations at advanced ages are supported by sufficient exposures, and whether the indicated retirement pattern is reasonable for the property. Where the data are irregular or incomplete, the analyst must consider those limitations when determining the weight to give the statistical results. A mathematical fitting calculation does not resolve those limitations merely by identifying the curve with the lowest fitting error.

Importantly, the analyst exercising judgment must interpret the data in addition to performing analysis. Curve fitting techniques are a function of their input and if outliers, irregularities or trends are not given the appropriate consideration, then statistical algorithms will produce inaccurate or unreasonable results. As I discuss further below, Mr. Garrett's selection of the unusual L0 and O3 curve types results

from his failure to exercise appropriate judgment and to properly interpret the historical data before relying on the results of his curve-fitting analysis.

Q. How should informed judgment be applied when mathematical curve fitting identifies an unusual survivor curve?

A. The analyst should evaluate what the curve actually predicts before accepting the mathematical result. This includes considering the proportion of property expected to retire at younger ages, the proportion expected to survive to advanced ages, and the maximum life represented by the curve. Those characteristics must be reasonable for the property being studied. An unusual curve is not necessarily inappropriate merely because it is uncommon, though often curves are uncommon for a reason if they depict retirement patterns that rarely occur in the real world. More importantly, a closer mathematical fit does not, by itself, establish that its retirement pattern is reasonable. Where the resulting mortality characteristics are not reasonable for the property, the analyst should not select the curve simply because it produces a lower fitting error.

C. Mr. Garrett's Proposals Do Not Produce Reasonable Results

Q. How do these principles apply to Mr. Garrett's service life recommendations?

A. Mr. Garrett's approach produces retirement projections that extend beyond what is reasonable for the property studied. For Accounts 364.00 and 367.00, he replaces the Company's recommended R0.5 curves with L0 curves whose exceptionally long tails imply unreasonable service lives. For Account 365.00, his curve extends beyond the maximum life indicated by the statistical service life analysis. For Account 366.00, his estimate is beyond the typical industry ranges for similar assets for other utilities. His

O3 selection for Account 373.00 presents a different but related concern, producing an inappropriate retirement pattern with unusual remaining life results. The L0 and O3 characteristics require further explanation before turning to the account-specific comparisons.

Q. What is your concern with the L0 curves Mr. Garrett proposes for Accounts 364.00 and 367.00?

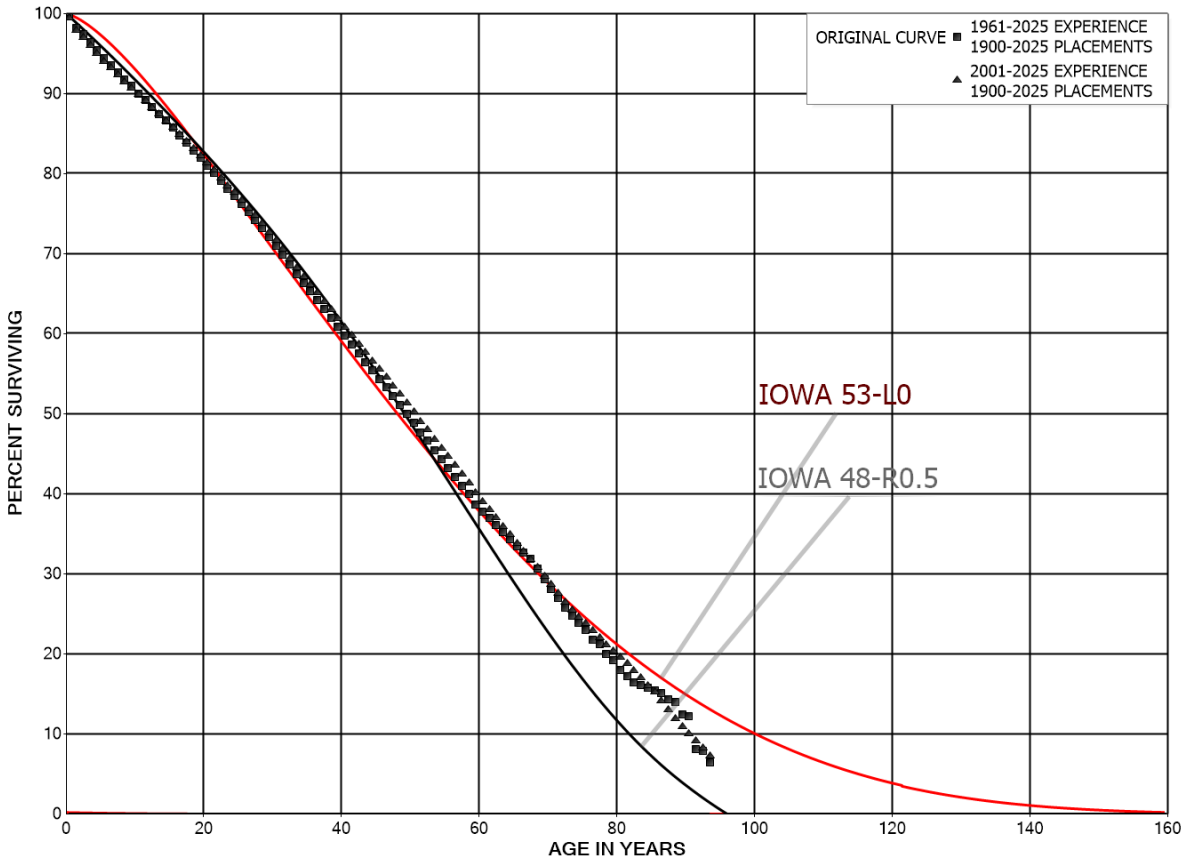
A. The biggest issue with these recommendations is exceptionally long tails of these curves. Mr. Garrett proposes a 53-L0 curve for poles and a 55-L0 curve for underground conductors and devices. The 53-L0 curve projects around 5 percent of poles remaining in service beyond 120 years and the 55-L0 curve projects an even higher percentage surviving beyond that age. In my judgment, the service durations implied by these selections do not reasonably represent the expected retirement characteristics of the property in either account.

Q. Why is the long tail of an L0 curve important when evaluating its reasonableness?

A. At any given age, the height of the survivor curve represents the portion of the original group expected to remain in service. An extended tail therefore assumes that some of the investment will continue providing service at advanced ages. Figure 1 shows the 53-L0 curve compared to my recommended 48-R0.5. As the chart shows, Mr. Garrett projects that most assets that reach age 80 are likely to remain in service for another 20 years more and on average will have lives of greater than 100 years. This is quite different from what the data shows, as the significant data points shown in Figure 1

below produce a realistic trend towards all poles being retired by age 100.[4]

Figure 1: Account 364.00 - Poles, Towers and Fixtures



Essentially, the difference between my estimate and that of Mr. Garrett is that he assumes a very long tail for the survivor curve. Again, this survivor pattern is not common for poles, or most other utility property for that matter. The 48-R0.5 survivor both better represents the historical data and provides a more realistic forecast of the

[4] While there may be some data points at older ages in the original life tables, these are based on very small balances of older assets and are well-beyond the 1% of exposure threshold Mr. Garrett discusses for curve matching. The data points in Figure 1 are close to 5 percent surviving around age 95, which suggests a decline to zero percent surviving around age 100.

future retirement pattern of the assets.

Q. Do other factors also support your conclusion that Mr. Garrett's estimate is unreasonable?

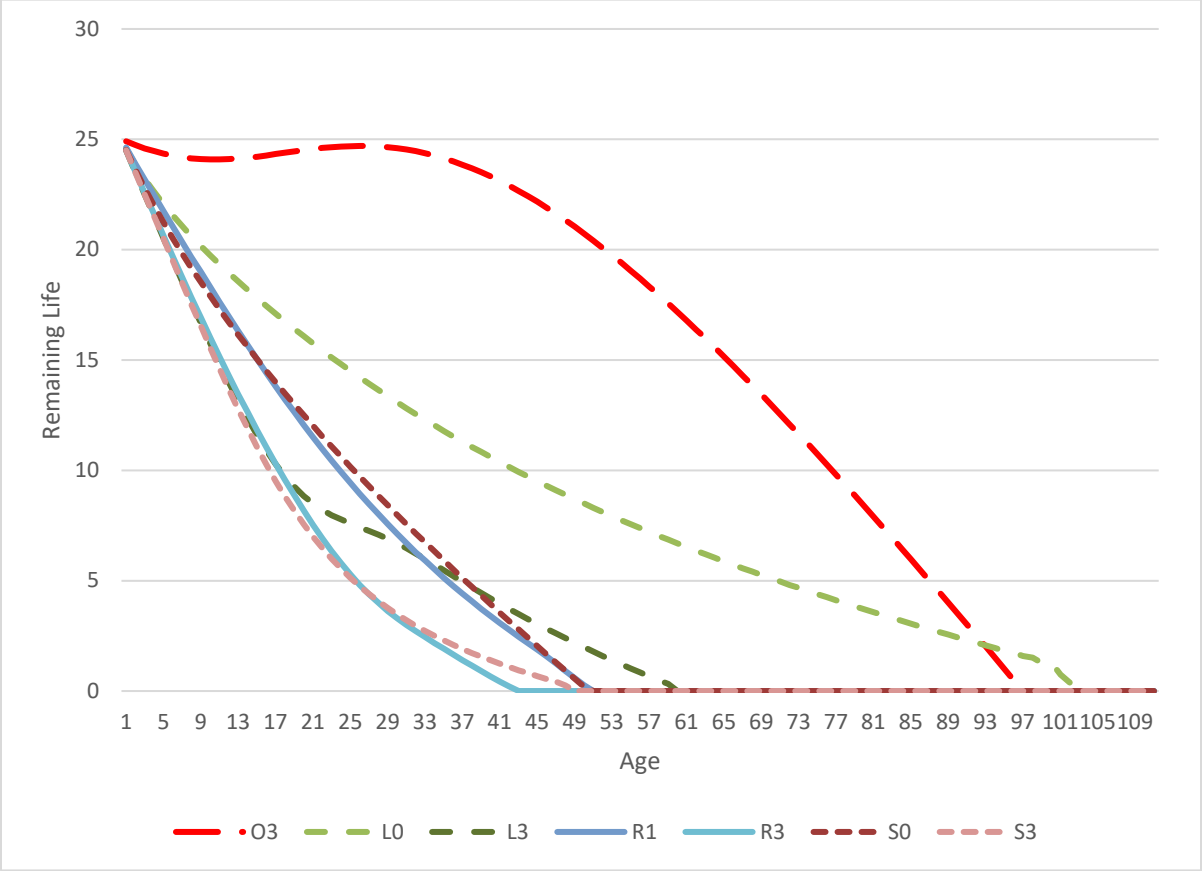
A. Yes. The Company's actual pole inspection and replacement practices further illustrate why such a long tail is not reasonable. CL&P inspects its pole population on a 10-year cycle, which was recently shortened from 15 years. Poles are replaced following failures and are also retired for reliability, reconductoring and capacity reasons. As poles reach older ages, these inspection and replacement activities increase the likelihood that deteriorated or otherwise inadequate poles will be identified and retired. Thus, even if an individual pole can remain physically capable of providing service for a very long period, it is not reasonable to assume that a significant portion of the pole population will avoid the various forces of retirement and remain in service to the extremely advanced ages represented by Mr. Garrett's L0 curve.

Q. You have shown the unusual characteristics for the L0 curve. Are there even worse issues with the O3 survivor curve?

A. Yes. In my 20-year career, I do not recall an example in which an O3 curve reasonably describes the survivor characteristics of utility property. This can be seen not only in an extremely long tail but also in the results in Mr. Garrett's workpapers. His own calculations show that the 25-O3 curve expects the remaining life of property to increase with age and for the remaining life to barely decline with age until assets are more than 50 years old.

These unusual phenomena can be seen in the chart below, which shows the remaining lives by age from several of the Iowa curves, each with a 25-year average service life. For each type of curve, even the L0 curves discussed above, the remaining life generally declines with age.[5] However, the O3 actually increases from age 15 to age 35.

Figure 2: Remaining Life by Age for 25-O3 Survivor Curve



[5] I note here that the low-mode L curves are also outliers when compared to most other curve types in that the remaining life declines very slowly at older ages. However, the degree to which they are outliers is masked by the rather extreme irregularity of the O3 curve.

Mr. Garrett's workpapers similarly show unusual results, indicating that the reasonableness of the O3 curve warranted further consideration. For example, older property has a greater estimated remaining life than younger property for many ages. Exhibit DJG-26, pages 20–21, reports a remaining life of 23.76 years for the 2015 vintage, 23.94 years for the 2010 vintage, 24.22 years for the 2005 vintage, and 24.36 years for the 2000 vintage, all as of December 31, 2025. Thus, his calculation assigns the 2000 vintage to a longer remaining life than the 2015 vintage, even though the former has already been in service for 15 additional years. I do not find these results reasonable for utility property.

Q. What do you believe Mr. Garrett's proposed L0 and O3 curves reveal about his analysis?

A. Mr. Garrett's use of these curves suggest that his analysis relies almost entirely on the outputs generated by his software without sufficient consideration of whether the resulting estimates are reasonable and appropriate, particularly where those estimates resulted in lower depreciation expense. As I discussed previously, his inconsistent application of concepts, combined with these unusual curve selections, shows that he has not taken a balanced or considered approach to developing his recommendations.

D. Account by Account Discussion

Q. Why do you disagree with Mr. Garrett's proposed 53-L0 survivor curve for Account 364.00?

A. Mr. Garrett's proposed curve does not reasonably represent the expected retirement characteristics of utility poles. As discussed in the previous section, Mr. Garrett's

proposal is based on selecting an unusual L0 curve type. Both his estimate and mine are similar through 60 years of age but my estimate more accurately reflects the maximum life indicated by a considered interpretation of the statistical data. In contrast as Figure 1 illustrated, the L0 curve selected by Mr. Garrett has an exceptionally long tail and projects that some poles will remain in service beyond 120 years. The L0 curve is very uncommon for utility pole accounts. Mr. Garrett has not identified any other utility for which this curve was used for poles.

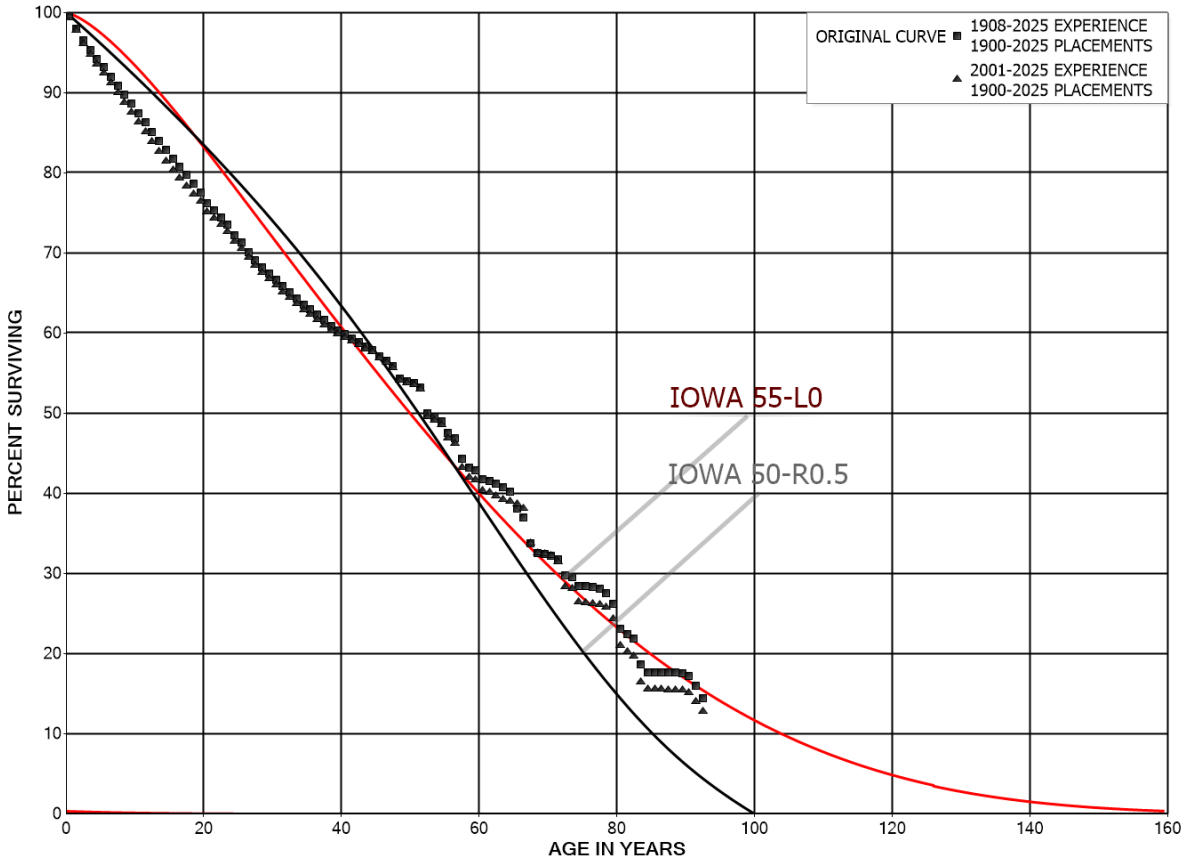
Q. Why do you disagree with Mr. Garrett's proposed 55-L0 survivor curve for Account 367.00?

A. His recommendation presents the same fundamental problem as his L0 selection for poles: an exceptionally long tail that does not reasonably represent the expected retirement characteristics of the property. Mr. Garrett increases the Company's proposed average service life from 50 years to 55 years and changes the dispersion from R0.5 to L0. The increase in average service life he recommends is driven entirely by changing to an L0 curve.

Figure 3 shows the resulting extension of projected survival to advanced ages. Similar to Account 364.00, Mr. Garrett extrapolates a long tail beyond the indications of the historical data. A more reasonable trend from the actual data would extrapolate to a maximum life of close to 100 years. Mr. Garrett's projection would assume extending the lives of certain assets by an additional 50 years beyond this age, resulting in conductors remaining in service to approximately 150 years of age. I do not believe it

is reasonable to assume that conductors could remain in service for 150 years while continuing to provide safe and reliable electric service to customers.

Figure 3: Account 367.00 - Underground Conductors and Devices



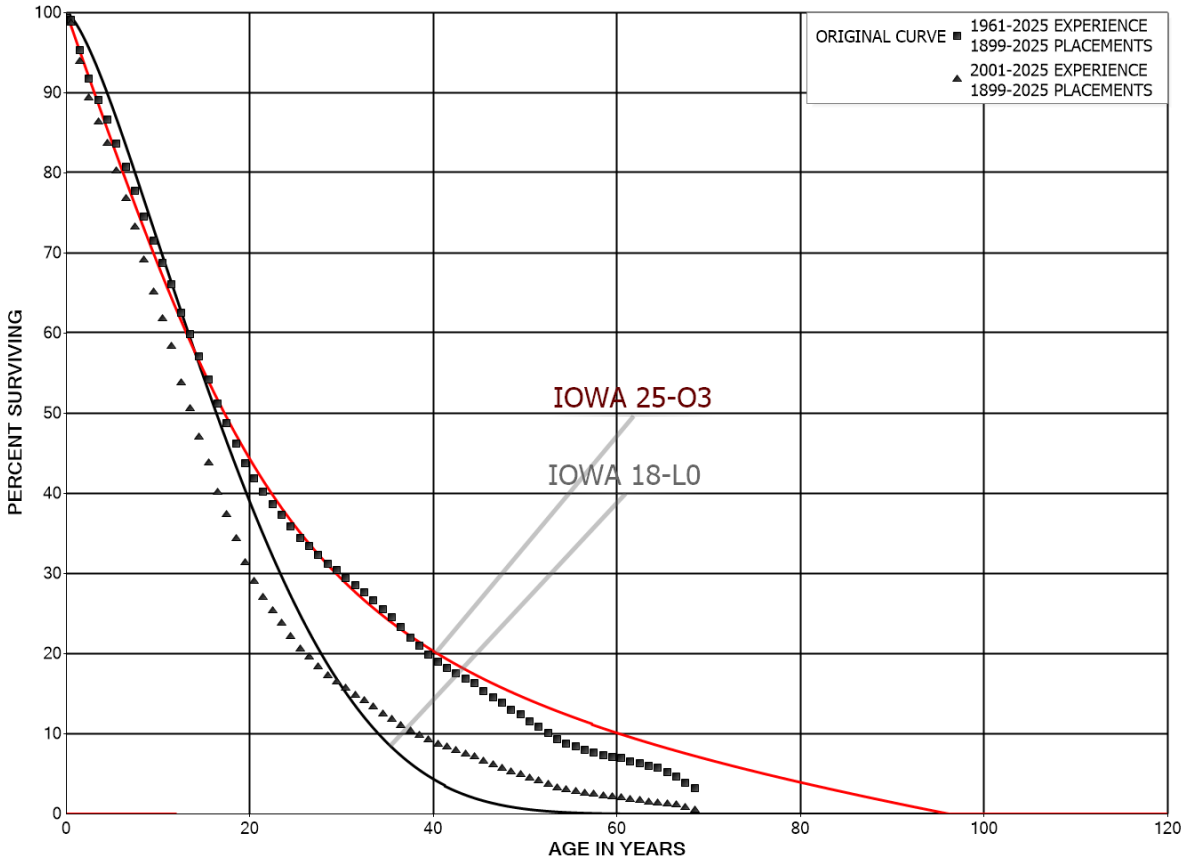
Underground conductors and devices are subject to both physical and functional forces of retirement. In my experience, L0 is very uncommon for this type of property, and I do not consider the extended survival represented by Mr. Garrett's curve a reasonable prospective expectation.

Q. Why do you disagree with Mr. Garrett's proposed 25-O3 survivor curve for Account 373.00?

A. I have discussed the problems with the O3 curve in detail in the previous section. Figure 4 below also shows that Mr. Garrett has not considered more recent data for this account. Additional information and analysis, which Mr. Garrett does not appear to have considered, supports the Company's proposal. The Company began converting its street lighting to LED technology in 2016, resulting in a change in the composition and expected retirement characteristics of this account. The operating characteristics of the newer LED fixtures are also different from the street lighting equipment they replaced. The LED light source cannot be replaced independently, such that replacement of the LED requires replacement of the fixture, and the Company expects LED fixtures to have lives in approximately the 15-year range.

Accordingly, additional weight should be placed on the more recent retirement experience. The overall experience band includes substantial experience associated with the older street lighting technology, while the more recent experience increasingly reflects the LED fixtures that will drive future retirements. Therefore, the 2001–2025 experience band should be considered along with the overall band when estimating the future retirement characteristics of the account. As Figure 4 illustrates, the more recent experience supports a shorter service life and provides additional support for the Company's proposed 18-L0 curve.

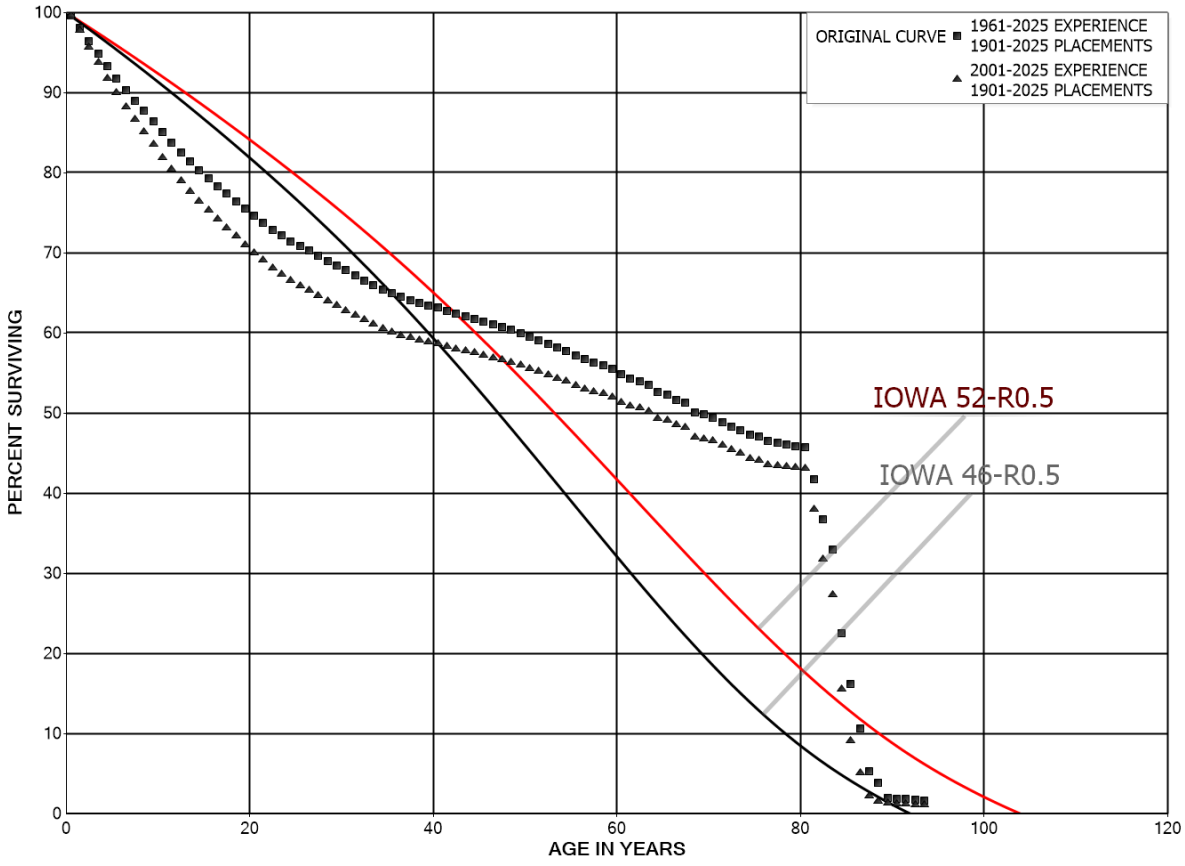
Figure 4: Account 373.00 - Street Lighting and Signal Systems



Q. Why do you disagree with Mr. Garrett's proposed 52-R0.5 survivor curve for Account 365.00?

A. Mr. Garrett's recommendation extends the projected retirement pattern beyond the maximum life indicated by the life analysis. Both the Company and Mr. Garrett select an R0.5 dispersion, but he increases the average service life from the Company's proposed 46 years to 52 years. As Figure 5 illustrates, that change extends the tail of his curve beyond the approximately 90-year maximum life indicated by the analysis.

Figure 5: Account 365.00 - Overhead Conductors and Devices



The historical data for this account does not have a pattern that closely follows a single Iowa curve throughout the observed experience. That limitation makes it particularly important to consider the reasonableness of the entire projected retirement pattern, including its endpoint. My recommendation matches the data better than Mr. Garrett's through age 40 and declines to 0 percent surviving at the approximate age that the historical data does the same. Moreover, Mr. Garrett's estimate does not fit the data particularly well for any range, but it does project that assets will survive longer than the maximum life indicated by the historical data.

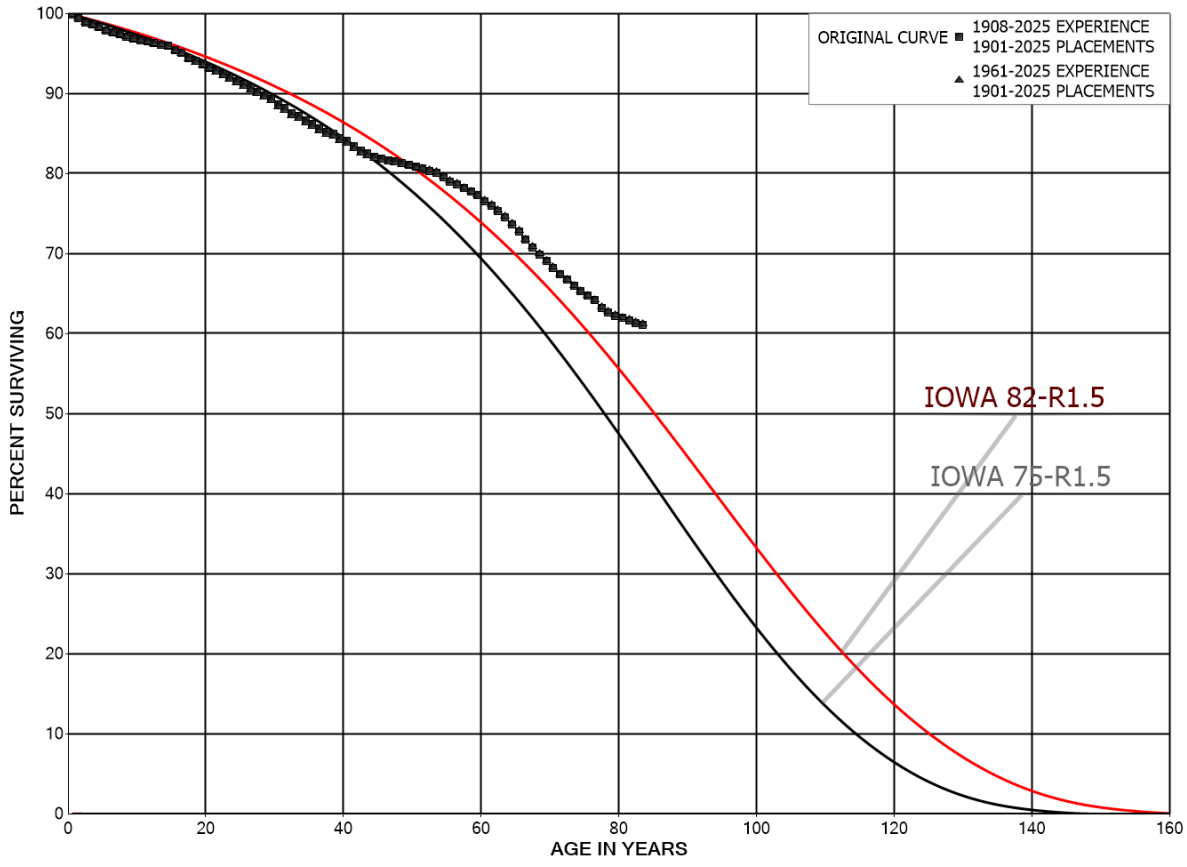
Company information regarding the actual forces of retirement for this account further supports my recommendation. Reliability and capacity are important drivers of overhead conductor retirements, and the Company has an ongoing program to replace older copper conductor. As conductors reach advanced ages, physical survival is not the only factor affecting whether they remain in service and it is common for utilities to have programmatic replacement of older assets which tend to limit the maximum life of assets in an account. There are several reasons to replace older conductor, including condition, reliability, capacity or other system needs. These considerations further support a retirement pattern that approaches zero surviving at a reasonable maximum life rather than continuing to extrapolate survival beyond the maximum life indicated by the historical analysis.

Q. Why do you disagree with Mr. Garrett's proposed 82-year average service life for Account 366.00?

A. In my experience, an 82-year average service life is outside the typical industry range for electric utility underground conduit. The Company's proposed 75-year average service life already recognizes that conduit is long-lived property. Mr. Garrett's recommendation extends that estimate by another seven years while retaining the same R1.5 dispersion. Figure 6 compares the two curves. Mr. Garrett projects that approximately one third of the account will be in service more than 100 years and around 15 percent will be in service more than 120 years. These are very long lives, and there is not historical data demonstrating that a large share of assets will be in service for that long. My recommendation is already for a fairly long service life. Mr.

Garrett has not provided justification for an even longer life.

Figure 6: Account 366.00 - Underground Conduit



E. Account 370.48 Meters

Q. What does Mr. Garrett propose for Account 370.48, Meters?

A. Mr. Garrett proposes to retain the Company's Iowa survivor curves and net salvage estimates but remove the shorter-term probable retirement date used in the Company's depreciation calculation. He instead calculates remaining lives using a mass-property approach. Mr. Garrett acknowledges that the Company currently plans to replace its

existing meters with AMI meters in the short-term[6] but argues that the Company's use of a probable retirement date accelerates depreciation recovery beyond what is supported by a normal mass-property analysis. He further recommends waiting for the AMI program to progress and actual retirement experience to develop, at which point PURA could recognize shorter remaining lives in a future depreciation study or rate proceeding.

Q. Do you agree with Mr. Garrett's proposed treatment?

A. No. His recommendation is fundamentally inconsistent with the prospective nature of depreciation. The purpose of estimating service lives and remaining lives is to forecast when the property currently in service is expected to retire. We should not wait until an expected retirement has occurred before incorporating it into the depreciation estimate. Such a delay could result in the customers of tomorrow paying for the equipment used by the customers of today. If Mr. Garrett believes a mass property approach is most appropriate for the account, he would need to incorporate the planned retirement of meters into his recommended survivor curve and average service life. He did not do so.

Q. Why should the planned AMI conversion be reflected in the depreciation calculation?

A. Depreciation should reflect the period over which the property is expected to provide service. A planned technology replacement can shorten that period even where the

[6] See Garrett at 78:15-16.

existing equipment remains physically capable of operating. Obsolescence and management decisions concerning replacement are forces of retirement, just as deterioration and failure are forces of retirement. Mr. Garrett's proposal would result in future customers paying the unrecovered costs of legacy meters in addition to the cost of new meters. This would be inequitable.

Q. Do you agree that PURA should wait until the AMI program progresses before recognizing its effect on depreciation?

A. No. Mr. Garrett acknowledges that the Company currently plans to replace its existing meters in the short-term, which means he proposes to recover the costs of these assets over a longer time than they will be in service. His recommendation to calculate depreciation without that expected retirement date and to recognize any shortening of remaining lives in a future depreciation study or rate proceeding if the retirement experience develops would defer cost recovery to future customers who will have to pay for retired meters and the new AMI meters.

Q. Do you agree that PURA should wait until the AMI program progresses before recognizing its effect on depreciation?

A. No. Mr. Garrett acknowledges that the Company currently plans to replace its existing meters with AMI meters in the short-term. Nevertheless, he recommends calculating depreciation without that expected retirement date and recognizing shorter remaining lives in a future study or rate proceeding if the retirement experience develops. Mr. Garrett's approach is not appropriate because it ignores known information concerning the expected retirement of the legacy meters. Historical retirement data cannot reflect

a replacement program that has not yet occurred, and waiting for that experience to develop would extend remaining lives beyond the period the meters are expected to provide service. This would leave costs unrecovered at retirement and shift those costs to future customers who are also paying for the replacement AMI meters.[7] Moreover, delaying recognition of the meter retirement date does not avoid the cost; it merely compresses recovery into fewer years and creates a larger future increase in depreciation expense. Recognizing the short-term probable retirement date now more appropriately aligns cost recovery with the expected service period and provides a more gradual recovery. If the AMI program timing changes, the remaining life calculation can be updated accordingly.

Q. Have other regulators recognized the need to align legacy meter depreciation with planned AMI replacement?

A. Yes. There are examples of cost recovery for AMI programs. For example, the Company's affiliates used a similar probable retirement date and approach in Massachusetts.[8]

The Florida Public Service Commission addressed Florida Power & Light Company's meters that were being made obsolete by AMI by establishing capital recovery schedules. Under that mechanism, "the investment and associated reserve of installations facing near-term retirement are separated out as sub-accounts, and the

[7] As outlined in Exhibit CLP-AMI-1, the Company is also proposing to securitize stranded meter costs, as permitted by Public Act No. 25-173, Section 10.
[8] Massachusetts Order D.P.U. 22-22 (pp.186)

unrecovered net amounts are amortized over the period of their remaining service to the public." The Commission explained the consequences of failing to align recovery with an early retirement (p. 23 of Order No. PSC-10-0153-FOF-EI):

> If assets retire earlier than the average life of the group without recovery being afforded, a negative reserve component is created. The negative reserve component translates into a positive rate base element. From the Company's standpoint, it will continue to earn a return on this non-existent plant over the life of the group. From the ratepayers' standpoint, they will continue paying for plant no longer providing service until the situation is corrected. Negative reserve amounts are non-life related net investments that we have historically corrected as fast as practicable to remedy the existing intergenerational inequity.

The shorter-term probable retirement date aligns the remaining life of the legacy meters with their planned replacement, allowing the remaining investment to be recovered through depreciation while the meters are still providing service. This avoids an unrecovered balance at retirement, prevents future customers from paying for assets no longer in service, and eliminates the need for a separate recovery mechanism.

Other regulators have similarly recognized the need to recover the remaining investment in meters replaced through AMI programs. The North Carolina Commission provided for recovery of Duke Energy Progress's[9] and Duke Energy Carolinas'[10] legacy meter investment, as did the Nevada[11], California[12] and South Carolina[13] commissions likewise provided for recovery of meters retired through

9 Order in North Carolina Docket Nos. E-2, Sub 1131, 1142, 1103 and 1153
10 Order in North Carolina Docket Nos. E-7, Sub 1146, 819, 1152 and 1110
11 Nevada Order Dockets 10-02009, 10-03022 and 10-03023
12 California Decision 11-05-018
13 South Carolina Joint Proposed Order Docket No. 2020-125-E

advanced metering programs.

Mr. Garrett's approach would do the opposite. Removing the probable retirement date would extend the assumed lives of the legacy meters beyond their planned replacement, leaving costs unrecovered at retirement and shifting those costs to future customers who will also be paying for the new AMI meters.

IV. NET SALVAGE ESTIMATES

Q. Please summarize Mr. Garrett's net salvage recommendations.

A. Mr. Garrett recommends changes to the Company's proposed net salvage estimates for several distribution and general plant accounts. For most of the disputed accounts, he selects an estimate halfway between the currently approved estimate and the Company's proposal, which he supports as incorporating the concept of "gradualism." For example, for Account 364.00, Poles, Towers and Fixtures, the current estimate is negative 90 percent, the Company proposes negative 100 percent, and Mr. Garrett recommends negative 95 percent.

However, he only applies "gradualism" when the result is to reduce depreciation expense. He takes a different approach for Accounts 365.00 and 369.00, selecting negative 19 percent and negative 57 percent, respectively, based on recent historical experience. Table 2 compares the current estimates, the Company's proposals, and Mr. Garrett's recommendations with the overall and most recent five-year historical net salvage averages.

Table 2: Comparison of Net Salvage Estimates and Historical Experience

Account	Description	Current Estimate	Company Proposed	Garrett Proposed	Overall Historical Average	2021–2025 Average
362.00	Station Equipment	(50)	(55)	(53)	(75)	(124)
364.00	Poles, Towers and Fixtures	(90)	(100)	(95)	(128)	(134)
365.00	Overhead Conductors and Devices	(40)	(30)	(19)	(32)	(19)
366.00	Underground Conduit	(15)	(30)	(23)	(43)	(85)
367.00	Underground Conductors and Devices	(35)	(40)	(38)	(47)	(38)
368.00	Line Transformers	(12)	(15)	(14)	(15)	(26)
369.00	Services	(85)	(100)	(57)	(119)	(57)
371.00	Installations on Customers' Premises	(25)	(30)	(28)	(34)	(36)
390.10	Structures and Improvements	(5)	(15)	(10)	(27)	(70)
392.10	Cars	20	15	18	15	12
392.11	Light Trucks	20	15	18	15	12
392.12	Medium Trucks	20	15	18	15	12
392.13	Heavy Trucks	20	15	18	15	12

Q. What is the concept of gradualism?

A. The concept of gradualism refers to an approach of allowing changes to occur over time rather than all at once. Gradualism can be a consideration when making estimates, as there is uncertainty in historical data and making changes over successive depreciation studies may allow for confirmation of trends as more data becomes available. To the extent that gradualism mitigates large changes that are reversed in subsequent studies,

the use of gradualism can lead to reasonable estimates over time. If, instead, it is used simply to limit change in one direction, as Mr. Garrett does, the results are often unreasonable and result instead in artificially low depreciation.

Q. Do you agree with Mr. Garrett's use of gradualism to modify the Company's proposed estimates?

A. No. The Company's proposals already incorporate judgment and, for certain accounts, gradual movement toward the historical indications. For example, for Account 364.00 I recommend changing from the current estimate of negative 90 percent to negative 100 percent, while the data supports estimates of negative 125 percent or more. I have, therefore, already incorporated gradualism. Mr. Garrett's proposal to be even more gradual has no credible basis.

Account 367.00 provides another example. Its overall historical average is negative 47 percent and its most recent five-year average is negative 38 percent, compared with the current estimate of negative 35 percent. The Company proposes negative 40 percent after considering both the historical results and information concerning removal costs. Indeed, the depreciation study expressly explains that a more gradual change is recommended in light of the somewhat less negative recent experience. Mr. Garrett's additional midpoint adjustment does not introduce a consideration that the Company's study overlooked.

Q. Why is it important not to apply excessive gradualism to net salvage estimates?

A. Moderating the net salvage estimate does not eliminate the future cost of retiring the property. To the extent that a less negative estimate understates the net removal costs ultimately incurred, those costs remain to be recovered. Collecting less while the property provides service can leave a greater amount for recovery in later periods, again resulting in the customers of tomorrow paying higher costs than they otherwise should because they are paying for the benefits received by customers of today.

Q. Does Mr. Garrett apply his gradualism approach consistently?

A. No. Mr. Garrett's application of gradualism is inconsistent. He invokes gradualism to limit changes that would increase depreciation expense yet does not apply that same principled approach to Accounts 365.00 and 369.00, where his recommendations substantially reduce the magnitude of negative net salvage. Those recommendations are also based solely on the most recent five years of data and disregard the more negative longer-term overall historical averages for both accounts.

Q. How does his recommendation for Account 365.00 illustrate this difference?

A. The current net salvage estimate for Account 365.00 is negative 40 percent, and the Company proposes negative 30 percent. Applying the midpoint approach Mr. Garrett uses for other accounts would produce negative 35 percent. Instead, he recommends negative 19 percent. His recommendation therefore moves 21 percentage points from the current net salvage estimate. For each of the accounts Mr. Garrett applies "gradualism," my proposal changed the current net salvage estimate by 15 percentage

points or less. Mr. Garrett believes these were not gradual enough and recommends more limited changes. Yet, for Account 365.00, he proposes to change the current net salvage estimate by more than 15 percentage points. I can see no reason for this inconsistency other than that Mr. Garrett's primary objective is to reduce depreciation expense rather than attempt to develop the most reasonable net salvage estimates.

Q. How does his recommendation for Account 369.00 further illustrate the inconsistency?

A. The current net salvage estimate for Account 369.00 is negative 85 percent, and the Company proposes negative 100 percent, which is less negative than the overall historical average of negative 119 percent. Mr. Garrett would move in the opposite direction, reducing the net salvage estimate by 28 percentage points from the current net salvage estimate. Here, again, Mr. Garrett's proposed change moves far more than 15 percentage points. Moreover, his basis for this large movement is only the most recent five years, which were different from the overall historical average. The Company's proposal would support a more gradual rather than less gradual change and, instead, Mr. Garrett does the opposite.

Q. What do you recommend that PURA conclude regarding Mr. Garrett's depreciation recommendations?

A. I recommend that PURA reject Mr. Garrett's proposed service life and net salvage adjustments and retain the Company's proposed depreciation parameters, including the shorter-term probable retirement date for Account 370.48. His service life recommendations project retirement characteristics beyond what I consider reasonable

and realistic for the Company's property, and his net salvage recommendations apply gradualism inconsistently. His adjustments produce artificially low depreciation expense but do not eliminate the underlying costs. Instead, Mr. Garrett's proposal defers these costs into future periods, thereby increasing the unrecovered utility plant and rate base to be included in future base distribution rate case proceedings for which future customers will be required to pay a return and fund depreciation associated with current property not recovered under a reasonable and realistic approach. The result will be incrementally higher costs and an inequitable intergenerational transfer of these costs from the current customers receiving the benefit of the existing property to future customers served by replacement property in later periods. The Company's proposal provides a more reasonable and realistic basis for prospective recovery over the period in which the property is expected to provide service, thereby avoiding an inequitable shift of the recovery burden to customers in periods beyond the property's service life.

V. CONCLUSION

Q. Does this conclude your rebuttal testimony?

A. Yes.