1

CLECO

ELECTRIC UTILITY PLANT

DEPRECIATION RATE STUDY

AT DECEMBER 31, 2021

CLECO®

ALLIANCE CONSULTING GROUP

http://www.utilityalliance.com

CLECO
ELECTRIC UTILITY PLANT
DEPRECIATION RATE STUDY
EXECUTIVE SUMMARY

CLECO Power ("Company" or "CLECO") engaged Alliance Consulting Group to conduct a depreciation study of the Company's Electric utility plant depreciable assets as of December 31, 2021.

This study was conducted under the traditional depreciation study approach. The net salvage analysis in this study has paralleled the approach previously used by CLECO in LPSC Docket U-30989.

For Production accounts, the overall increase in depreciation expense is driven primarily by the increased investment to be recovered in production plant, as well as updated terminal retirement dates and dismantling estimates.

For Transmission, Distribution, Regional Transmission and Market Operations, and General Plant accounts, the lives of the accounts generally moved longer. There are fifteen accounts that have increasing lives, five accounts that have decreasing lives, and sixteen accounts that remain unchanged. The accounts with the most significant life decreases are Account 395 Laboratory Equipment and 371 Distribution Installation on Customer Premises, which decreased by 15 and 14 years respectively. Account 352 Transmission Structures and Improvements and Account 361 Distribution Structures and Improvement had the largest life increases, with both increasing by 18 years. Net salvage analysis indicated a trend toward lower net salvage (more negative). There are four accounts that have higher net salvage (less negative) and 18 accounts that have more negative net salvage (higher negative). The remaining accounts remain unchanged.

This study recommends an overall increase of $23.1 million in annual depreciation expense for all accounts. This consists of an increase of $9.9 million in annual depreciation expense for Production facilities compared to the depreciation rates currently in effect, a decrease in annual depreciation expense of $0.1 million for Other Production facilities compared to the depreciation rates currently in effect, and an increase of $13.3 million in Transmission, Distribution Plant, Regional Transmission and Market Operation Plant, and General Plant annual depreciation expense compared to the depreciation rates currently in effect. Appendix B demonstrates the change in depreciation expense for the various accounts.

CLECO
ELECTRIC UTILITY PLANT
DEPRECIATION RATE STUDY
AT DECEMBER 31, 2021
Table of Contents

PURPOSE

The purpose of this study is to develop depreciation rates for the depreciable property as recorded on CLECO's books at December 31, 2021. The account-based depreciation rates were designed to recover the total remaining undepreciated investment, adjusted for net salvage, over the remaining life of CLECO's property on a straight-line basis. CLECO was approved to use FERC AR-15 general plant amortization in LPSC Docket U-30989. Non-depreciable property and property that is amortized, such as intangible software, were excluded from this study.

CLECO Corporate Holdings is a regional energy holding company that conducts its business through two subsidiaries, CLECO Power and CLECO Cajun. Headquartered in Central Louisiana and in business since 1935, CLECO has approximately 1,330 employees. CLECO Power is a regulated electric public utility that owns 9 generating units with a rated capacity of 3,035 megawatts and operates 946 megawatts on behalf of its generation partners. Assets also include 1,384 miles of transmission lines and 12,236 of distribution lines. CLECO Power uses multiple generating sources and multiple fuels to serve approximately 293,000 customers through its retail business and supplies wholesale power in Louisiana and Mississippi. CLECO Cajun is an unregulated utility company that owns 14 generating units with a total rated capacity of 3,379 megawatts and supplies wholesale power and capacity in Arkansas, Louisiana and Texas. CLECO has associated equipment such as feeders, primary switches, poles, conductor, line transformers, services, meters, and streetlights to serve its customers. General property such as buildings, office furniture, transportation equipment, and other miscellaneous property is located throughout CLECO's service territory. The scope of this study is CLECO Power, the regulated entity.

STUDY RESULTS

Overall depreciation rates for all CLECO depreciable property are shown in Appendix A. These rates translate into an annual depreciation accrual of $162.4 million based on CLECO's depreciable investment at December 31, 2021. The annual equivalent depreciation expense calculated by the same method using the approved rates was $139.3 million. These rates translate into an annual depreciation accrual for Steam Production of $68.8 million, Other Production of $1.3 million, Transmission of $20.1 million, Distribution of $55.2 million, Regional and Transmission and Market Operation Plant of $92 thousand, Electric General Plant of $7.0 million, General Amortized Plant of $6.9 million, and an addition $3.0 million for the imbalance in the general plant amortized function between theoretical and book reserve. Appendix A demonstrates the development of the annual depreciation for all function except general plant amortized property. Appendix A-1 presents the computation of general plant amortization rates and accruals. Appendix B presents a comparison of approved rates versus proposed rates by account. Appendix C presents a summary of mortality and net salvage estimates by account. Appendix D presents the terminal retirement dates and the development of net salvage percentages for Production facilities. Appendix E presents the net salvage analysis for all accounts. Appendix F presents the composite net salvage for production and other production plant, combining interim retirement and removal activity as well as the estimated terminal dismantling costs. Appendix G presents the allocation of estimated terminal dismantling costs. The overall increase in depreciation expense is driven by the terminal removal costs related to generation plant facilities and by correction of the historically under accrued reserve position. Appendix H presents a comparison of the per book depreciation reserve to the reallocated depreciation reserve.

GENERAL DISCUSSION

Definition

The term "depreciation" as used in this study is considered in the accounting sense, that is, a system of accounting that distributes the cost of assets, less net salvage (if any), over the estimated useful life of the assets in a systematic and rational manner that is consistent with recovery periods approved in the regulatory process. It is a process of allocation, not valuation. This expense is systematically allocated to accounting periods over the life of the properties. The amount allocated to any one accounting period does not necessarily represent the loss or decrease in value that will occur during that particular period. The Company accrues depreciation on the basis of the original cost of all depreciable property included in each functional property group. At retirement, the full cost of depreciable property, less the net salvage value, is charged to the depreciation reserve.

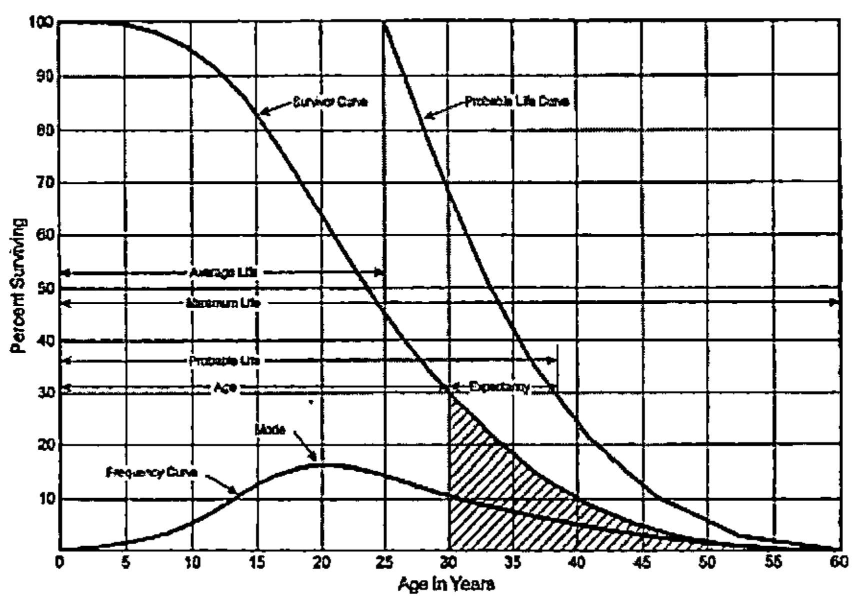
Basis of Depreciation Estimates

The straight-line, broad (average) life group, remaining-life depreciation system was employed to calculate annual and accrued depreciation in this study. In this system, the annual depreciation expense for each group is computed by dividing the original cost of the asset less allocated depreciation reserve less estimated net salvage by its respective average life group's remaining life. The resulting annual accrual amounts of all depreciable property within a function were accumulated, and the total was divided by the original cost of all functional depreciable property to determine the depreciation rate. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group. The computations of the annual functional depreciation rates are shown in Appendix A.

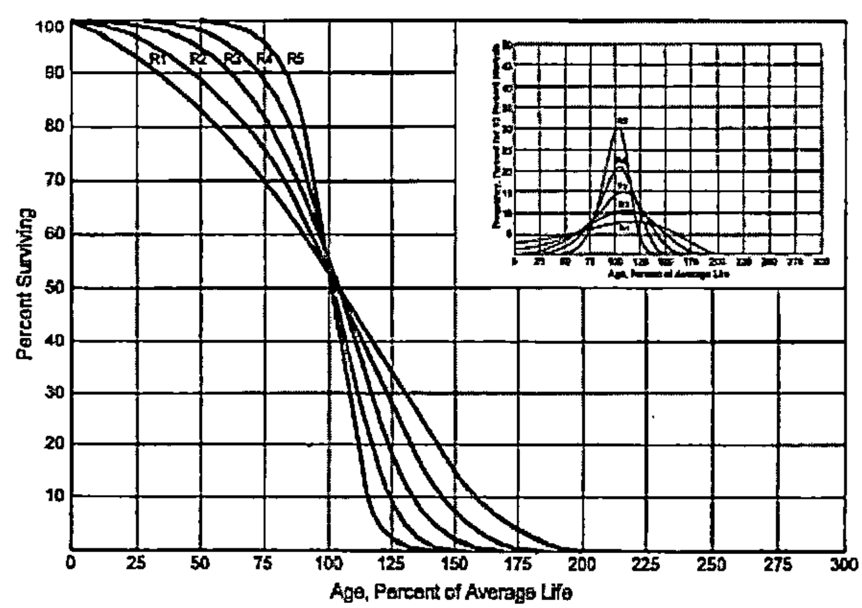
Actuarial analysis was used with each account within a function where sufficient data was available, and judgment was used to some degree on all accounts.

Survivor Curves

To fully understand depreciation projections in a regulated utility setting, there must be a basic understanding of survivor curves. Individual property units within a group do not normally have identical lives or investment amounts. The average life of a group can be determined by first constructing a survivor curve which is plotted as a percentage of the units surviving at each age. A survivor curve represents the percentage of property remaining in service at various age intervals. The Iowa Curves are the result of an extensive investigation of life characteristics of physical property made at Iowa State College Engineering Experiment Station in the first half of the prior century. Through common usage, revalidation and regulatory acceptance, these curves have become a descriptive standard for the life characteristics of industrial property. An example of an Iowa Curve is shown below.



There are four families in the Iowa Curves which are distinguished by the relation of the age at the retirement mode (largest annual retirement frequency) and the average life. For distributions with the mode age greater than the average life, an "R" designation (i.e., ,Right modal) is used. The family of "R" moded curves is shown below.



Similarly, an "S" designation (i.e., Symmetric modal) is used for the family whose mode age is symmetric about the average life. An "L" designation (i.e., Left modal) is used for the family whose mode age is less than the average life. A special case of left modal dispersion is the "O" or origin modal curve family. Within each curve family, numerical designations are used to describe the relative magnitude of the retirement frequencies at the mode. A "6" indicates that the retirements are not greatly dispersed from the mode (i.e., high mode frequency) while a "1" indicates a large dispersion about the mode (i.e., low mode frequency).

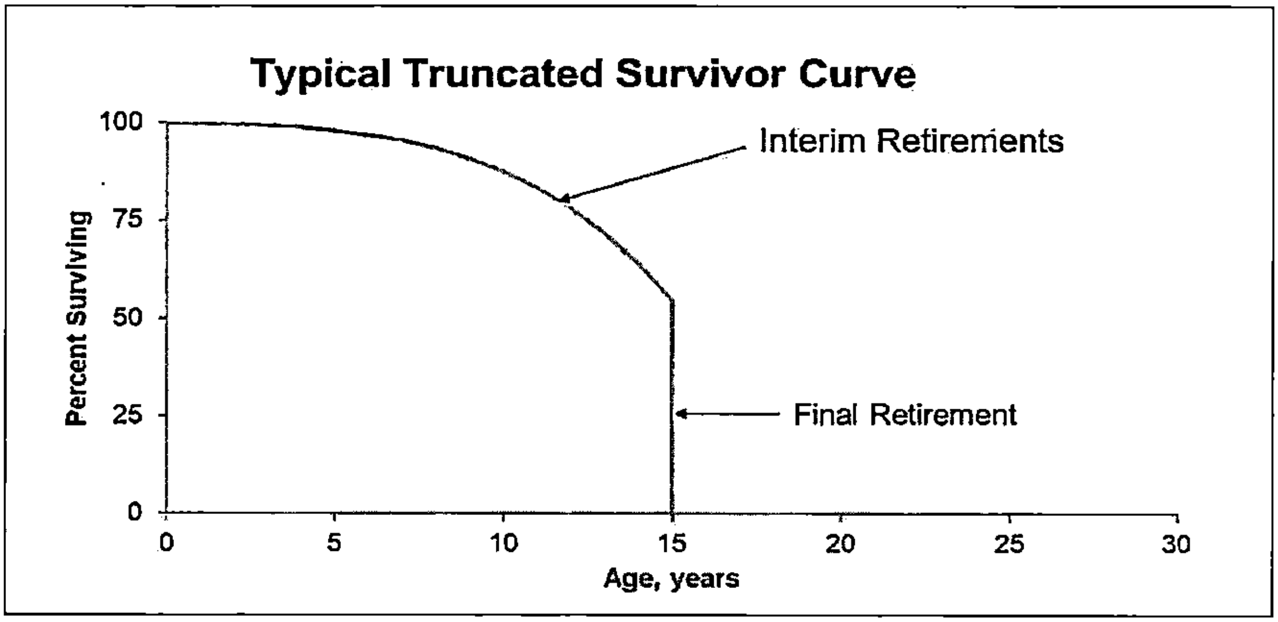
For example, a curve with an average life of 30 years and an "L3" dispersion is a moderately dispersed, left modal curve that can be designated as a 30 L3 Curve. An SQ, or square, survivor curve occurs where no dispersion is present (i.e., units of common age retire simultaneously).

Most property groups can be closely fitted to one Iowa Curve with a unique average service life. The blending of judgment concerning current conditions and future trends along with the matching of historical data permits the depreciation analyst to make an informed selection of an account's average life and retirement dispersion pattern.

Life Span Procedure

The life span procedure was used for production facilities for which most components are expected to have a retirement date concurrent with the planned retirement date of the generating unit. The terminal retirement date refers to the year that each unit will cease operations. The terminal retirement date, along with the interim retirement characteristics of the assets that will retire prior to the facility ceasing operation; describe the pattern of retirement of the assets that comprise a generating unit. The estimated terminal retirement dates for the various generating units were determined based on consultation with Company management, financial, and engineering staff. Those estimated terminal retirement dates are shown in Appendix D.

An example of a life span and interim retirement application is shown below.



Interim Retirement Curves

Interim retirement curves were used to model the retirement of individual assets within primary plant accounts for each generating unit prior to the terminal retirement of the facility. The life span procedure assumes all assets are depreciated (straight-line) for the same number of periods and retire at the same time (the terminal retirement date). Adding interim retirement curves to the procedure reflects the fact that some of the assets at a power plant will not survive to the end of the life of the facility and should be depreciated (straight-line) more quickly and retired earlier than the terminal life of the facility. The goal of interim retirement curves is to project how many of the assets that are currently in service will retire each year in the future using historical analysis and judgment. These curves were chosen based primarily on an analysis of the historical retirement pattern of the Generation assets and consultation with Company personnel. Interim retirements for each plant account were modeled using Iowa Curves as discussed above. By applying interim retirements, recognition is given to the obvious fact that generating units will have retirements of depreciable property before the end of their lives.

Although interim retirements have been recognized in the study, interim additions (i.e., future additions) have been excluded from the study. The estimated amount of future additions might or might not occur. However, there is no uncertainty as to whether the full level of interim retirements will happen. The assets that are being modeled for retirement are already in rate base. Depreciation rates using interim retirements are known and measurable in the same way that setting depreciation rates for transmission or distribution property using Iowa Curves is known and measurable. There is no depreciable asset that is expected to live forever. All assets at a power plant will retire at some point. Interim retirements simply model when those retirements will occur in the same way that is done for transmission and distribution assets.

Actuarial Analysis

Actuarial analysis (retirement rate method) was used in evaluating historical asset retirement experience where vintage data was available and sufficient retirement activity was present. In actuarial analysis, interval exposures (total property subject to retirement at the beginning of the age interval, regardless of vintage) and age interval retirements are calculated. The complement of the ratio of interval retirements to interval exposures establishes a survivor ratio. The survivor ratio is the fraction of property surviving to the end of the selected age interval, given that it has survived to the beginning of that age interval. Survivor ratios for all of the available age intervals were chained by successive multiplications to establish a series of survivor factors, collectively known as an observed life table. The observed life table shows the experienced mortality characteristic of the account and may be compared to standard mortality curves such as the Iowa Curves. Where data was available, accounts were analyzed using this method. Placement bands were used to illustrate the composite history over a specific era, and experience bands were used to focus on retirement history for all vintages during a set period. The results from these analyses for those accounts which had data sufficient to be analyzed using this method are shown in the Life Analysis section of this report.

Judgment

Any depreciation study requires informed judgment by the analyst conducting the study. A knowledge of the property being studied, company policies and procedures, general trends in technology and industry practice, and a sound understanding of depreciation theory are needed to apply this informed judgment. Judgment was used in areas such as survivor curve modeling and selection, depreciation method selection, simulated plant record method analysis, and actuarial analysis.

Judgment is not defined as something used in cases where there are specific, significant pieces of information that influence the choice of a life or curve. Those cases would simply be a reflection of specific facts into the analysis. Where there are multiple factors, activities, actions, property characteristics, statistical inconsistencies, implications of applying certain curves, property mix in accounts or a multitude of other considerations that impact the analysis (potentially in various directions), judgment is used to take all of these factors and synthesize them into a general direction or understanding of the characteristics of the property. Individually, no one factor in these cases may have a substantial impact on the analysis, but overall, the factors may shed light on the utilization and characteristics of assets. Judgment may also be defined as deduction, inference, wisdom, common sense, or the ability to make sensible decisions. There is no single correct result from statistical analysis; hence, there is no answer absent judgment. At the very least for example, any analysis requires choosing which bands to place more emphasis upon.

The establishment of appropriate average service lives and retirement dispersions for the Production interim retirements, Transmission, Distribution, and General Plant accounts requires judgment to incorporate the understanding of the operation of the system with the available accounting information analyzed using the Retirement Rate actuarial methods. The appropriateness of lives and curves depends not only on statistical analyses, but also on how well future retirement patterns will match past retirements.

Current applications and trends in use of the equipment also need to be factored into life and survivor curve choices in order for appropriate mortality characteristics to be chosen.

Average Life Group (ALG) Depreciation

At the request of CLECO, this study continues to use the ALG depreciation procedure to group the assets within each account. After an average service life and dispersion were selected for each account, those parameters were used to estimate what portion of the surviving investment of each vintage was expected to retire. The depreciation of the group continues until all investment in the vintage group is retired. ALG is defined by their respective account dispersion, life, and salvage estimates. A straight-line rate for each ALG is calculated by computing a composite remaining life for each group across all vintages within the group, dividing the remaining investment to be recovered by the remaining life to find the annual depreciation expense and dividing the annual depreciation expense by the surviving investment. The resultant rate for each ALG group is designed to recover all retirements less net salvage when the last unit retires. The ALG procedure recovers net book cost over the life of each account by averaging many components.

Theoretical Depreciation Reserve

The book depreciation reserve was derived from Company records and was reallocated from a functional level to individual accounts. This study used a reserve model that relied on a prospective concept relating future retirement and accrual patterns for property, given current life and salvage estimates. The theoretical reserve of a group is developed from the estimated remaining life, total life of the property group, and estimated net salvage. The theoretical reserve represents the portion of the group cost that would have been accrued if current forecasts were used throughout the life of the group for future depreciation accruals. The computation involves multiplying the vintage balances within the group by the theoretical reserve ratio for each vintage. The ALG method requires an estimate of dispersion and service life to establish how much of each vintage is expected to be retired in each year until all property within the group is retired. Estimated average service lives and dispersion determine the amount within each ALG. The straight-line remaining-life theoretical reserve ratio at any given age (RR) is calculated as:

$$RR = 1 - \frac{(Average\ Remaining\ Life)}{(Average\ Service\ Life)} * (1 - Net\ Salvage\ Ratio)$$

DETAILED DISCUSSION

Depreciation Study Process

This depreciation study encompassed four distinct phases. The first phase involved data collection and field interviews. The second phase was where the initial data analysis occurred. The third phase was where the information and analysis was evaluated. After the first three stages were complete, the fourth phase began. This phase involved the calculation of deprecation rates and the documenting of the corresponding recommendations.

During the Phase 1 data collection process, historical data was compiled from continuing property records and general ledger systems. Data was validated for accuracy by extracting and comparing to multiple financial system sources. Audit of this data was validated against historical data from prior periods, historical general ledger sources, and field personnel discussions. This data was reviewed extensively so that it could be put in the proper format for a depreciation study. Further discussion on data review and adjustment is found in the Salvage Analysis section of this study. Also as part of the Phase 1 data collection process, numerous discussions were conducted with engineers and field operations personnel to obtain information that would be helpful in formulating life and salvage recommendations in this study. One of the most important elements in performing a proper depreciation study is to understand how the Company utilizes assets and the environment of those assets. Interviews with engineering and operations personnel are important data gathering operations that allow the analyst to obtain information that is helpful when evaluating the output from the life and net salvage programs in relation to the Company's actual asset utilization and environment. Information that was gleaned in these discussions is found both in the Detailed Discussion of this study in the life analysis and salvage analysis sections and also in workpapers.

Phase 2 is where the actuarial analysis is performed. Phase 2 and Phase 3 overlap to a significant degree. The detailed property record information is used in Phase 2 to develop observed life tables for life analysis. These tables are visually compared to industry standard tables to determine historical life characteristics. It is possible that the analyst would cycle back to this phase based on the evaluation process performed in Phase 3. Net salvage analysis consists of compiling historical salvage and removal data by functional group to determine values and trends in gross salvage and removal cost. This information was then carried forward into Phase 3 for the evaluation process.

Phase 3 is the evaluation process which synthesizes analysis, interviews, and operational characteristics into a final selection of asset lives and net salvage parameters. The historical analysis from Phase 2 is further enhanced by the incorporation of recent or future changes in the characteristics or operations of assets that were revealed in Phase 1. Phases 2 and 3 allow the depreciation analyst to validate the asset characteristics as seen in the accounting transactions with actual Company operational experience.

Finally, Phase 4 involves the calculation of accrual rates, making recommendations, and documenting the conclusions in a final report. The calculation of accrual rates is found in Appendix A. Recommendations for the various accounts are contained within the Detailed Discussion of this study. The depreciation study flow diagram shown as Figure 1[1] documents the steps used in conducting this study. Depreciation Systems[2], a well-respected scholarly treatise on the topic of depreciation, documents the same basic processes in performing a depreciation study, namely: statistical analysis, evaluation of statistical analysis, discussions with management, forecast assumptions, and document recommendations.

---

[1] American Gas Association and Edison Electric Institute, *Introduction to Depreciation for Public Utilities and Other Industries* (2013).
[2] W. C. Fitch and F. K. Wolf, *Depreciation Systems* 298 (Iowa State Press 1994).

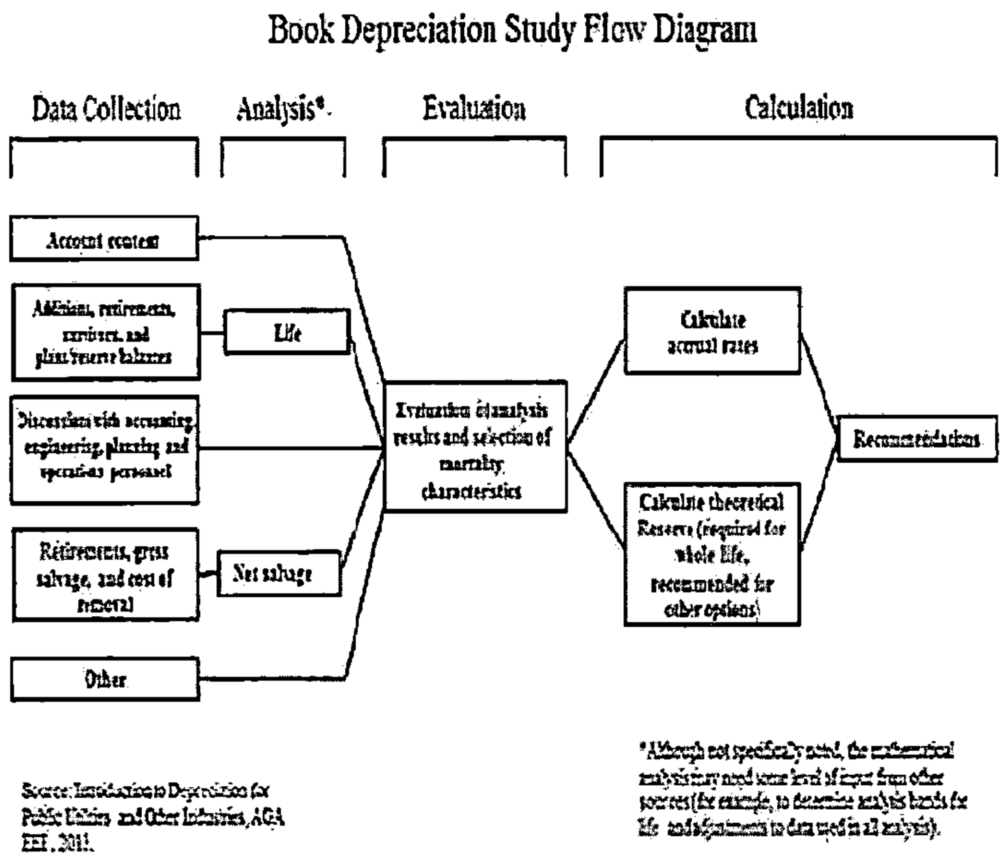


Figure 1

CLECO DEPRECIATION STUDY PROCESS

Depreciation Rate Calculation

Annual depreciation expense amounts for the depreciable accounts of CLECO were calculated by the straight-line method, average life group procedure, and remaining-life technique. With this approach, remaining lives were calculated according to standard ALG expectancy techniques, using the Iowa Curves noted in the calculation. For each plant account, the difference between the surviving investment, adjusted for estimated net salvage, and the allocated book depreciation reserve, was divided by the average remaining life to yield the annual depreciation expense. These calculations are shown in Appendix A.

Remaining Life Calculation

The establishment of appropriate average service lives and retirement dispersions for each account within a functional group was based on engineering judgment that incorporated available accounting information analyzed using the Retirement Rate actuarial methods. After establishment of appropriate average service lives and retirement dispersion, remaining life was computed for each account. Theoretical depreciation reserve with zero net salvage was calculated using theoretical reserve ratios as defined in the theoretical reserve portion of the General Discussion section. The difference between plant balance and theoretical reserve was then spread over the ALG depreciation accruals. Remaining life computations are found for each account in workpapers.

Production Depreciation Calculation Process

Annual depreciation expense amounts for the Steam, Hydraulic, and Other Production accounts were calculated by the straight line, remaining life procedure. In a whole life representation, the annual accrual rate is computed by the following equation,

$$AnnualAccrualRate = \frac{(100\% - NetSalvagePercent)}{AverageServiceLife}$$

In the case of steam production facilities with a terminal life and interim retirement curve, each vintage within the group has a unique average service life and remaining life determined by computing the area under the truncated Iowa Curve coupled with the group's terminal life.

Use of the remaining life depreciation system adds a self-correcting mechanism, which accounts for any differences between theoretical and book depreciation reserve over the remaining life of the group. For each vintage modeled with an interim retirement curve and terminal life,

$$\mathrm{Re}\,mainingLife(i) = \frac{AreaUnderSurvivorCurvetotheRightofAge(i)}{Survivors(i)}, \text{ and}$$

$$AverageServiceLife = \frac{AreaUnderSurvivorCurve}{Survivorsatagezero}$$

With the straight line, remaining life, average life group system using Iowa Curves, composite remaining lives were calculated by computing a direct weighted average of each remaining life by vintage within the group. Within each group (plant account/ unit), for each plant account, the difference between the surviving investment, adjusted for estimated net salvage, and the allocated book depreciation reserve, was divided by the composite remaining life to yield the annual depreciation expense as noted in this equation.

$$\text{Annual Depreciation Expense} = \frac{\text{Original Cost} - \text{Book Reserve} - (\text{Original Cost} * \text{Net Salvage \%})}{\text{Remaining Life}}$$

where the net salvage percent represents future net salvage.

Within a group, the sum of the group annual depreciation expense amounts, as a percentage of the depreciable original cost investment summed, gives the annual depreciation rate depreciation rate as shown below:

$$AnnualDepreciationRate = \frac{\sum AnnualDepreciationExpense}{\sum OriginalCost}$$

These calculations are shown in Appendix A. The calculations of the theoretical depreciation reserve values and the corresponding remaining life calculations are shown in the workpapers. Book depreciation reserves were reallocated from specific functional groups to a plant account/unit level basis within that specific functional group and theoretical reserve computations were used to compute remaining life for each group.

Other Accounts Calculation Process

Annual depreciation expense amounts for accounts other than production were calculated by the straight line, remaining life procedure.

Use of the remaining life depreciation system adds a self-correcting mechanism, which accounts for any differences between theoretical and book depreciation reserve over the remaining life of the group. With the straight line, remaining life, average life group system using Iowa Curves, composite remaining lives were calculated according to standard broad group expectancy techniques, noted in the formula below:

$$CompositeRemainingLife = \frac{\sum OriginalCost - TheoreticalReserve}{\sum WholeLifeAnnualAccrual}$$

For each plant account, the difference between the surviving investment, adjusted for estimated net salvage, and the allocated book depreciation reserve, was divided by the composite remaining life to yield the annual depreciation expense as noted in this equation.

$$\textit{Annual Depreciation Expense} = \frac{\textit{Original Cost} - \textit{Book Reserve} - (\textit{Original Cost} * \textit{Net Salvage \%})}{\textit{Remaining Life}}$$

where the net salvage percent represents future net salvage.

Within a group, the sum of the group annual depreciation expense amounts, as a percentage of the depreciable original cost investment summed, gives the annual depreciation rate as shown below:

$$AnnualDepreciationRate = \frac{\sum AnnualDepreciationExpense}{\sum OriginalCost}$$

These calculations are shown in Appendix A. The calculations of the theoretical depreciation reserve values and the corresponding remaining life calculations are shown in workpapers. Book depreciation reserves were allocated from a functional level to individual accounts and the theoretical reserve computation was used to compute a composite remaining life for each account.

Life Analysis

The retirement rate actuarial analysis method was applied to all accounts for CLECO. For each account, an actuarial retirement rate analysis was made with placement and experience bands of varying width. The historical observed life table was plotted and compared with various Iowa Curves to obtain the most appropriate match. A selected curve for each account is shown in the Life Analysis Section of this report. The observed life tables for all analyzed placement and experience bands are provided in workpapers.

For each account on the overall band (i.e., placement from earliest vintage year which varied for each account through 2021), approved survivor curves from LPSC Docket U-30989, if applicable modified by subsequent orders, were used as a starting point. Then using the same average life, various dispersion curves were plotted. Frequently, visual matching would confirm one specific dispersion pattern (e.g., L, S, or R) as an obviously better match than others. The next step was to determine the most appropriate life using that dispersion pattern. Then, after looking at the overall placement and experience band, different placement bands were plotted and analyzed: in increments of approximately 25 years, for instance 1962-2021 and 1992-2021. The Company has experience years from 2008-2021, so that experience band was used which each placement band discussed above. Next, placement bands were plotted with each experience band discussed above. Repeated matching usually pointed to a focus on one dispersion family and a small range of service lives. The goal of visual matching was to minimize the differential between the observed life table and Iowa Curve in top- and mid-range of the plots. These results are used in conjunction with all other factors that may influence asset lives.

Production Plant

Today, CLECO owns and operates nine generating units with 3,035 megawatts of nameplate[3] generating capacity. CLECO operates an additional 946 megawatts for its partners. CLECO uses multiple generating sources and multiple fuels to serve its customers. The table below shows the generating units owned by CLECO.

Generating Station	Generating Unit #	Initial Operating Year	Name Plate Capacity (MW)	Fuel for Generation
Coughlin Power Station	6 & 7	2000	775	natural gas
Acadia Power Station	1	2002	580	natural gas
Brame Energy Center	Nesbitt 1	1975	440	natural gas
	Rodemacher 2	1982	157	coal/natural gas
	Madison 3	2010	641	petcoke
St. Mary Clean Energy Center		2019	50	waste heat
Teche Power Station	3	1971	359	natural gas
	4	2011	33	natural gas
Total			**3,035**	

The table below shows generating units that CLECO operates for its partners.

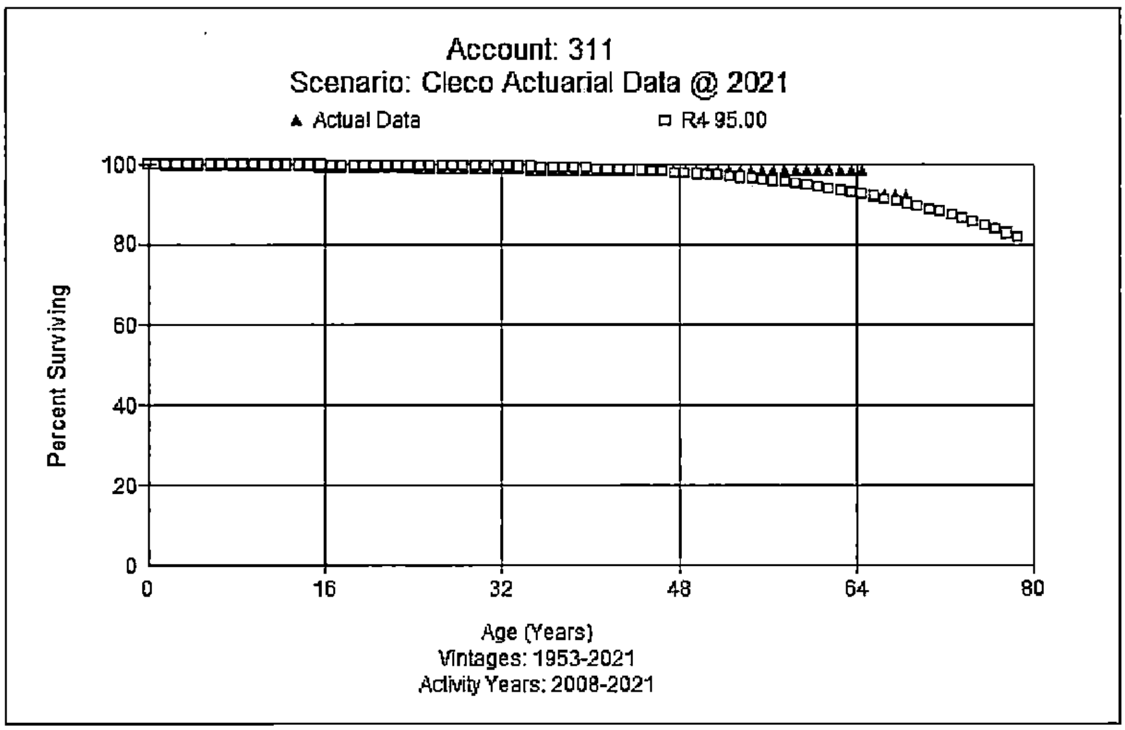
Generating Station	Generating Unit #	Initial Operating Year	Name Plate Capacity (MW)	Fuel for Generation
Acadia Power Station	2	2002	580	natural gas
Brame Energy Center	2	1982	366	coal/natural gas
Total			**946**	

[3] Nameplate capacity represents the unit's capacity at the start of commercial operations.

Steam Production

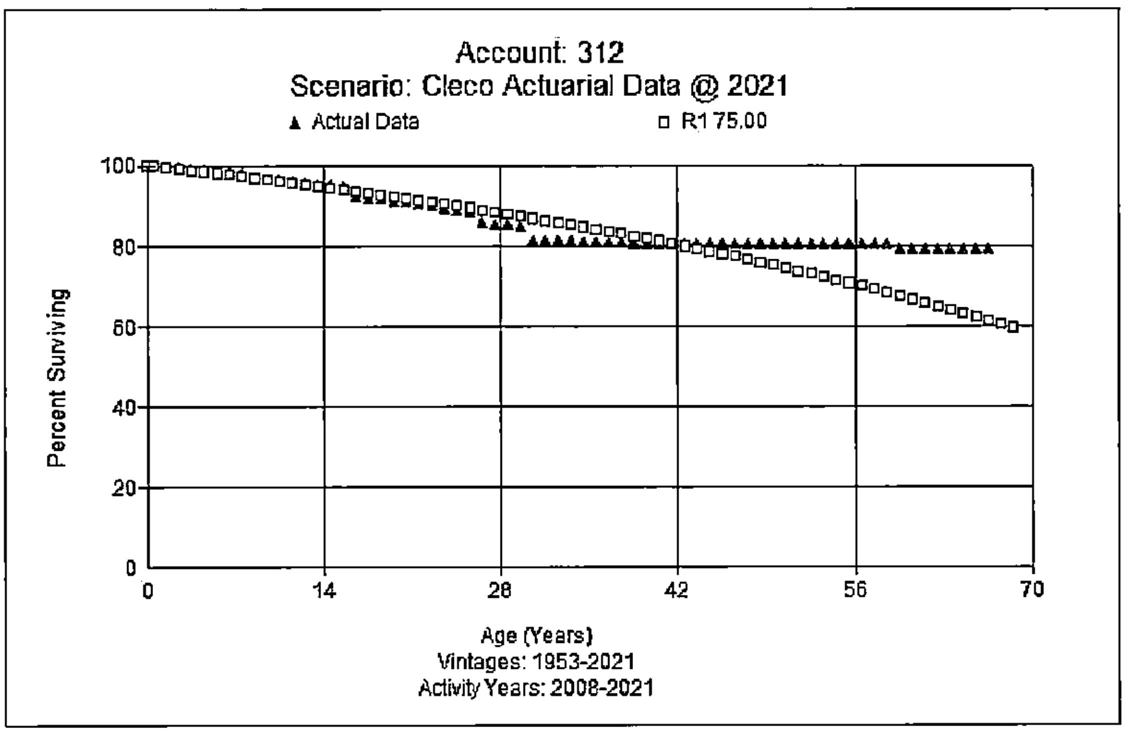
FERC Account 311 Structures and Improvements (95 R4)

This account consists of buildings, structures, fences, lighting systems, and other related assets at each power plant. Retirement dates for each unit are found in Appendix D. The plant balance in this account at December 31, 2021 is $190.7 million. The current interim retirement curve for this account is 95 R2.5. Based on the limited actuarial analysis and judgment, this study recommends a slight change to 95 years with an R4 dispersion for this account as shown below.



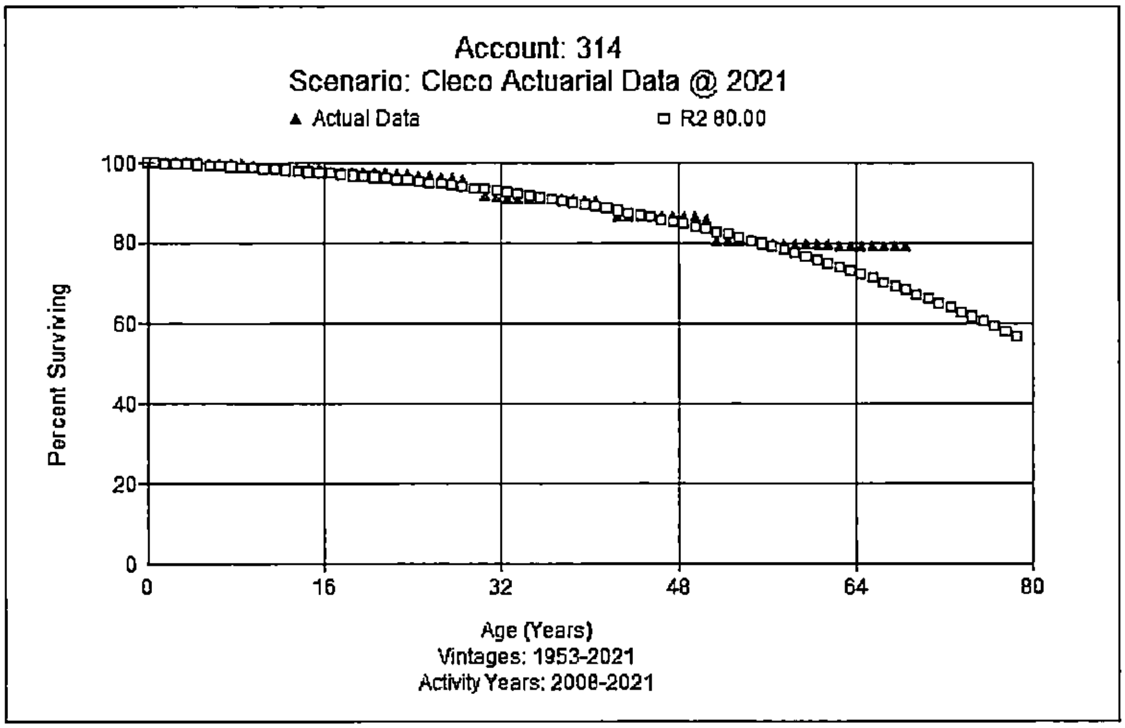
FERC Account 312 Boiler Plant Equipment (75 R1)

This account consists of boiler plant equipment, bag houses, preheaters, and other related equipment. Retirement dates for each unit are found in Appendix D. The plant balance in this account at December 31, 2021 is $1.35 billion. The current interim retirement curve for this account is 75 R1. There is no retirement activity after age 30, so data after age 30 is not relevant to estimating a life for this account. After considering the type of assets in this account and various actuarial analysis, this study recommends retention of the approved 75 R1 dispersion for this account. A graph of the recommended interim retirement curve for this account is shown below.



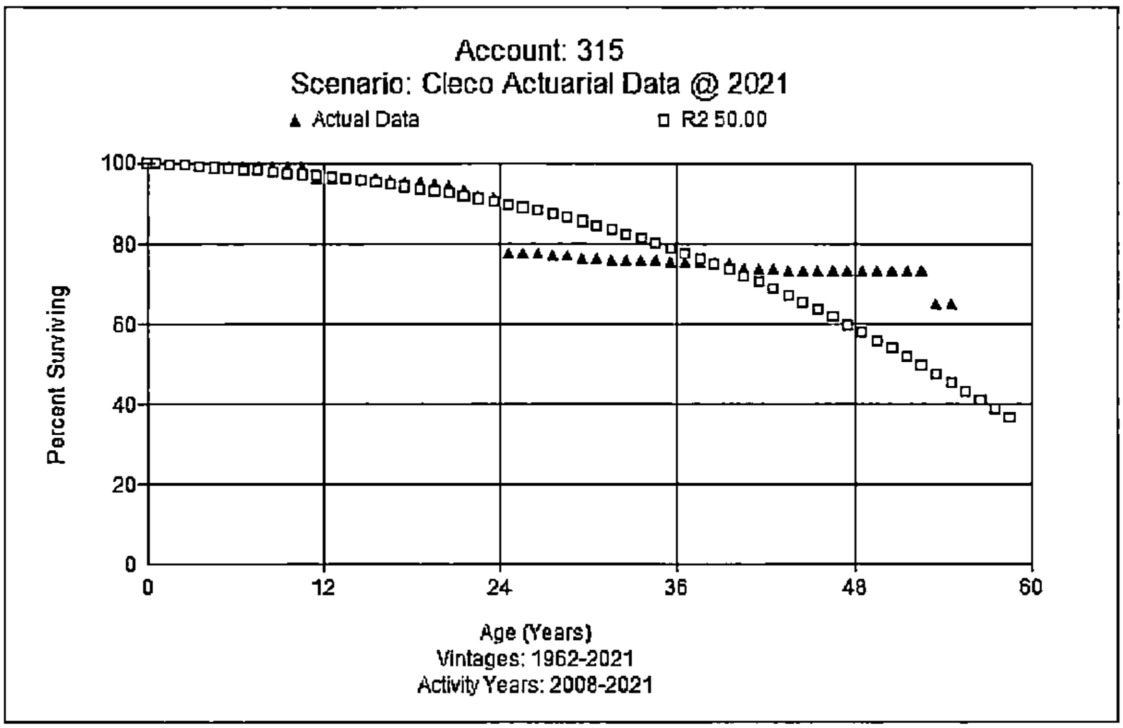
FERC Account 314 Turbogenerator Equipment (80 R2)

This account consists of turbogenerator equipment, stationary blades, turbine control systems, and other related assets at each power plant. Retirement dates for each unit are found in Appendix D. The plant balance in this account at December 31, 2021 is $489.6 million. The currently approved interim retirement curve is an 80 R1.5. This depreciation study recommends the 80 R2 dispersion curve for interim retirements based on the actuarial analysis and judgment. The recommended curve with full band experience is shown below.



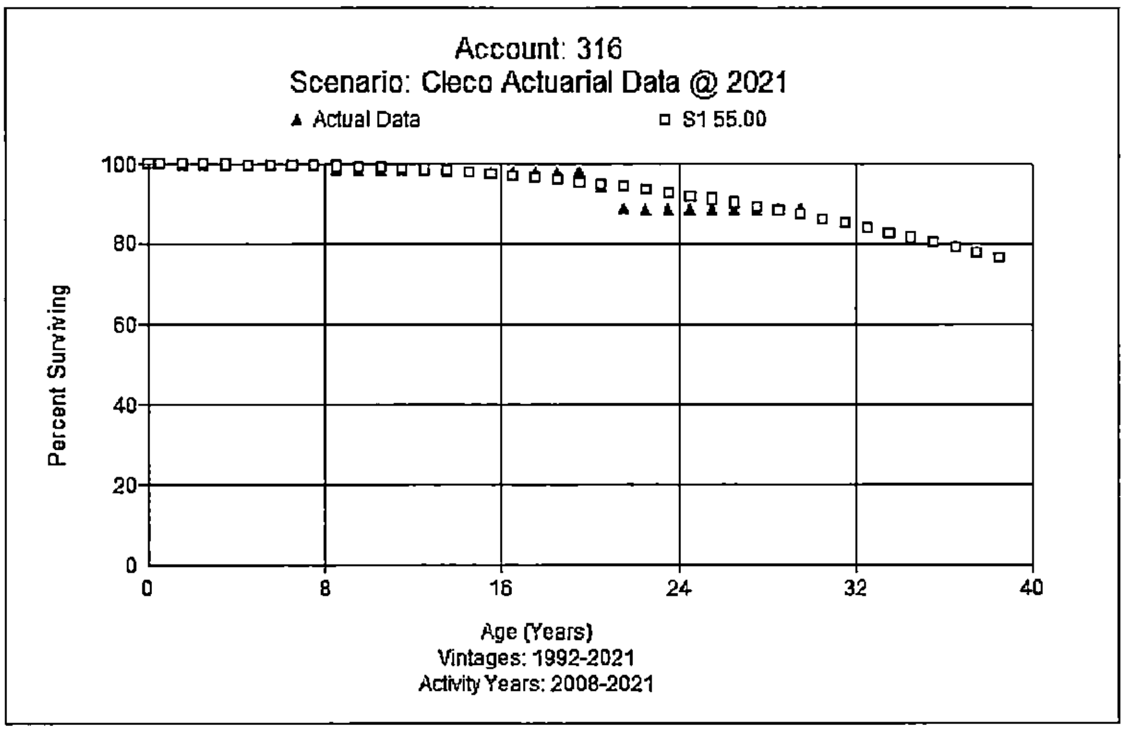
FERC Account 315 Accessory Electric Equipment (50 R2)

This account consists of power transformer, regulators, and related assets at each power plant. Retirement dates for each unit are found in Appendix D. The plant balance in this account at December 31, 2021 is $50.7 million. The currently approved interim retirement curve is 50 L0. The longest band shows a much longer life than the existing approved 50 L0 dispersion. The intermediate bands exhibit a life closer to expectations (55 R0.5). Judgment does not support a dramatic interim retirement life change in this account. This depreciation study recommends retaining the 50 year life and moving to an R2 dispersion curve for interim retirements based on the actuarial analysis and judgment. The recommended curve and experience are shown below



FERC Accounts 316 Miscellaneous Power Plant Equipment (55 S1)

This account consists of tanks, pumps, work equipment, and other related assets at each power plant. Retirement dates for each unit are found in Appendix D. The plant balance in this account at December 31, 2021 is $45.8 million. The currently approved interim retirement curve is 55 years with an R4 dispersion. This depreciation study recommends the 55 S1 dispersion curve (which retains the existing life while shifting the dispersion) for interim retirements based on the limited actuarial analysis and judgment, which is shown below.



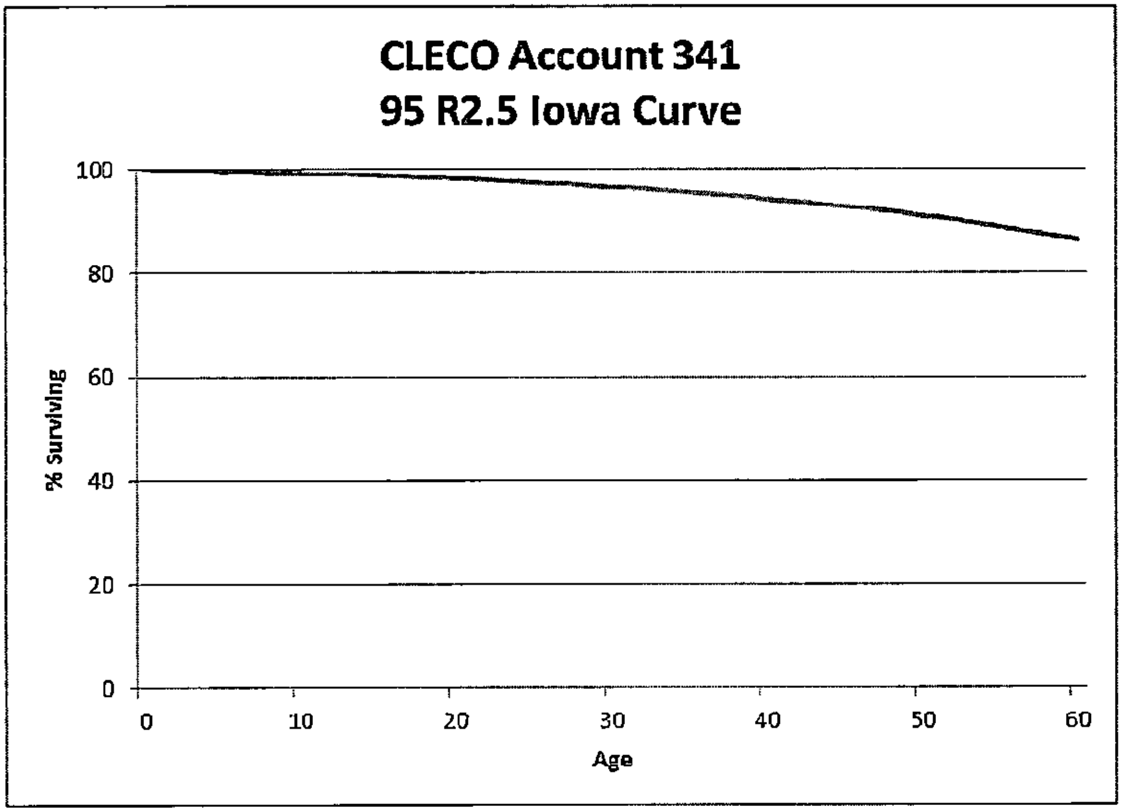
Other Production

In the last depreciation study, the only asset in the other production function was the Franklin CT, which has since been retired. Since the asset base from the prior depreciation study is no longer in service, this study uses interim retirement and life span methodology, which is employed in Steam Production.

Some assets in this function are planned to be retired in the current transaction year. After discussing these assets with the Company, the amounts of plant and accumulated depreciation reserve for those assets were not included in the depreciation study.

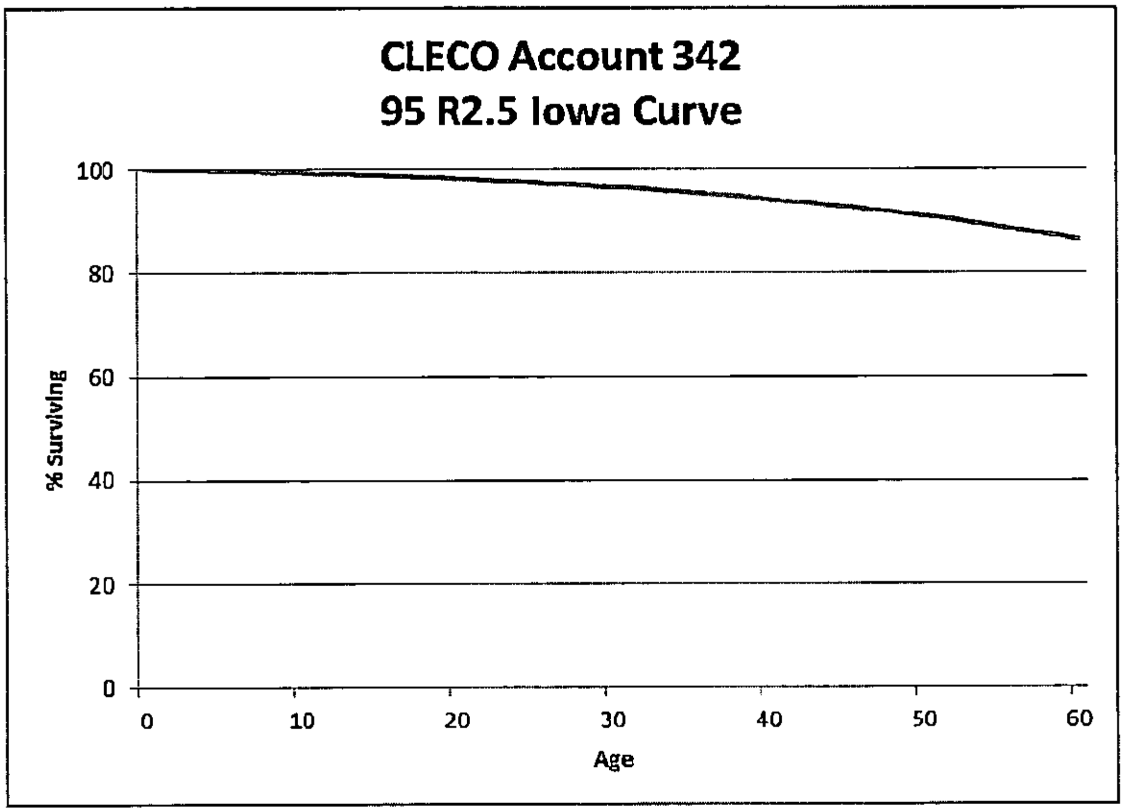
FERC Account 341 Structures and Improvements (95 R2.5)

This account consists of buildings, structures, fences, lighting systems, and other related assets at each power plant. Retirement dates for each unit are found in Appendix D. The plant balance in this account at December 31, 2021 is $7.6 million. No interim retirement curve was used for this account in the last depreciation study. Based on experience with Account 311, this study recommends the 95 R2.5 curve. A representative curve shape is shown below.


CLECO Account 341
95 R2.5 Iowa Curve
100
80
60
40
20
0
% Surviving
0
10
20
30
40
50
60
Age

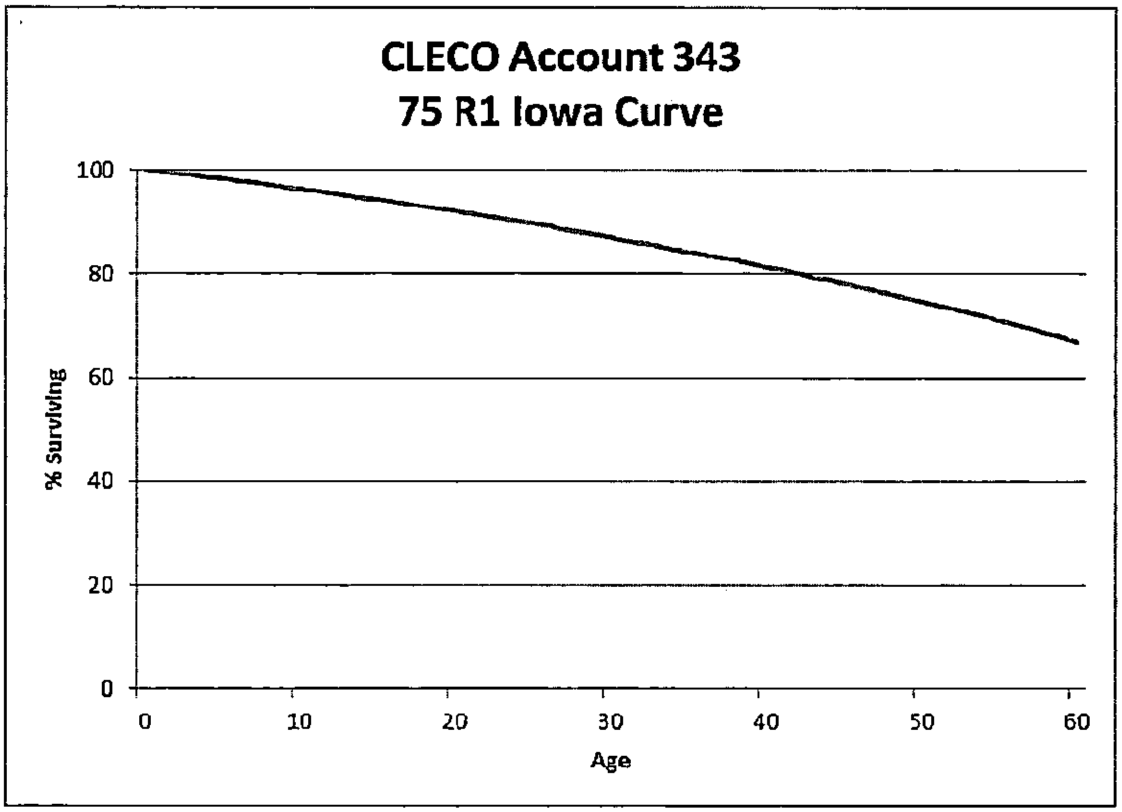
FERC Account 342 Fuel Holders, Producers, and Accessories (95 R2.5)

This account consists of pumps, storage tanks, natural gas/fuel oil piping, and other related assets at each power plant. Retirement dates for each unit are found in Appendix D-1. The plant balance in this account at December 31, 2021 is $1.3 million. No interim retirement curve was used for this account in the last depreciation study. Based on experience with Account 311, this study recommends the 95 R2.5 curve. A representative curve shape is shown below.



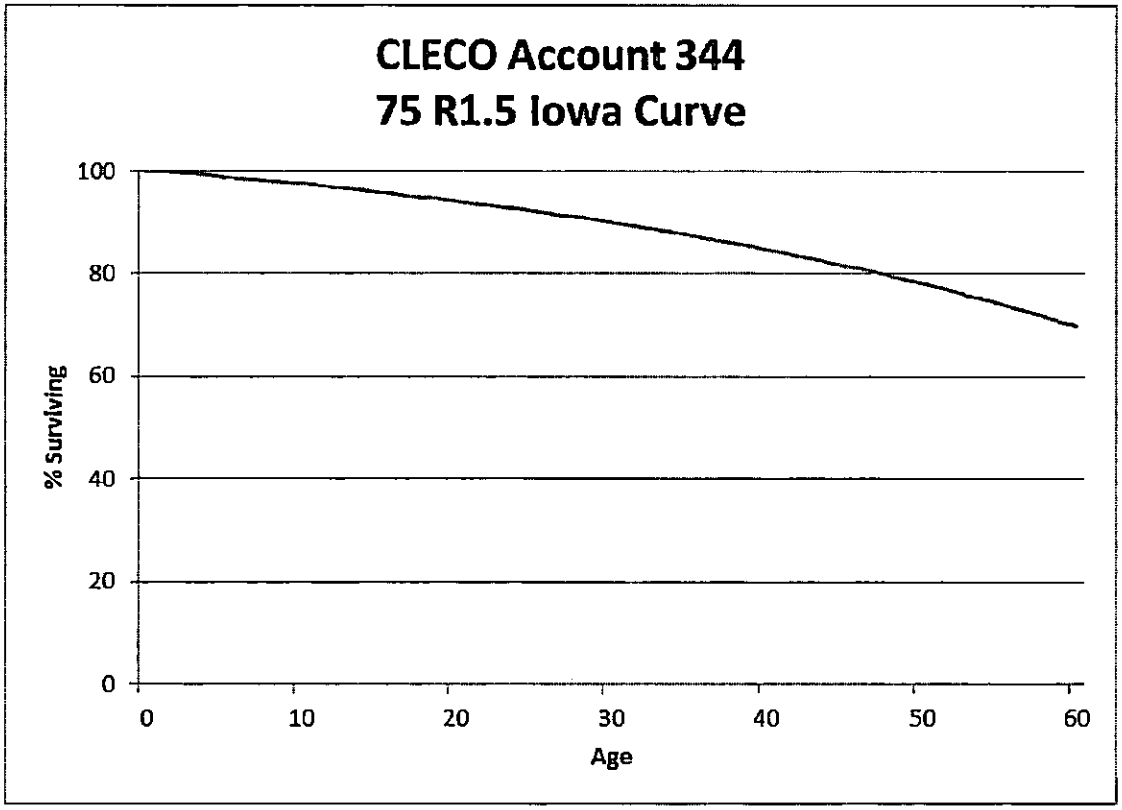
FERC Account 343 Prime Movers (75 R1)

This account consists of foundations, chimneys, demineralizers, fire protection systems, and other related assets at each power plant. Retirement dates for each unit are found in Appendix D. The plant balance in this account at December 31, 2021 is $2.3 million. No interim retirement curve was used for this account in the last depreciation study. Based on experience with Account 312, this study recommends the 75 R1 curve. A representative curve shape is shown below.



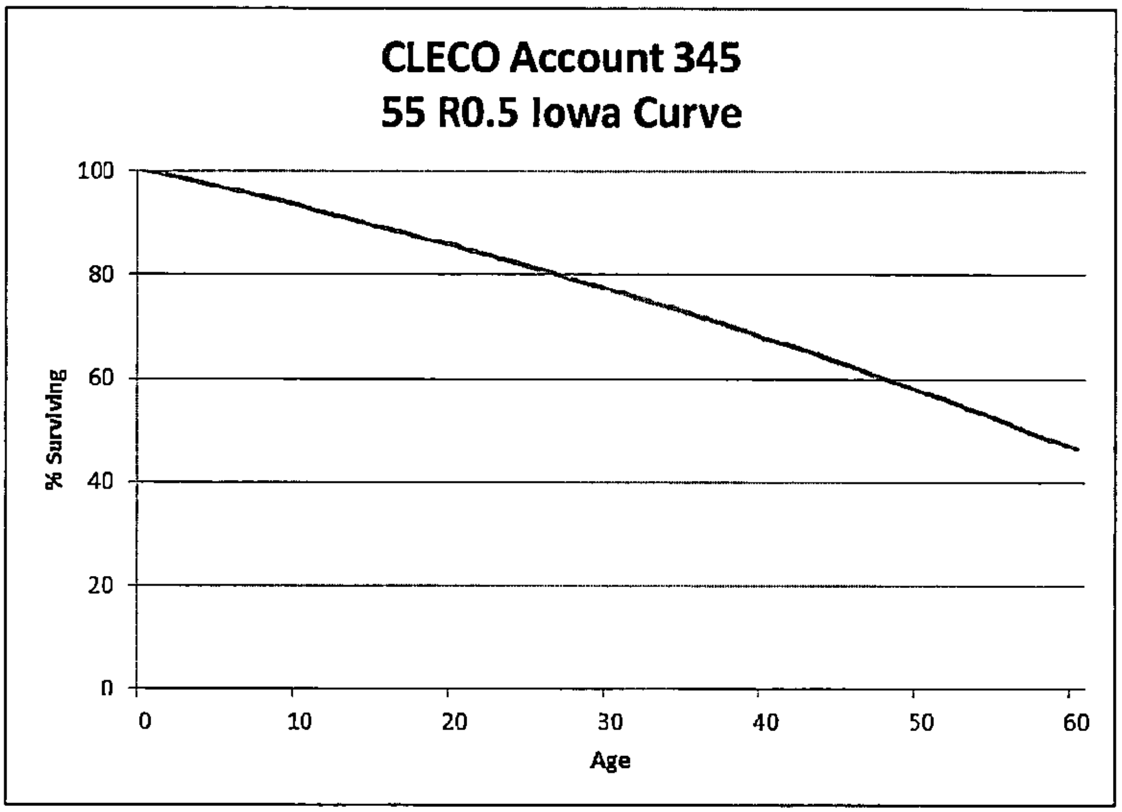
FERC Account 344 Generators (75 R1.5)

This account consists of generators and other related assets at each power plant. Retirement dates for each unit are found in Appendix D. The plant balance in this account at December 31, 2021 is $20.0 million. No interim retirement curve was used for this account in the last depreciation study. Based on experience with Account 314, this study recommends 75 R1.5 curve. A representative curve shape is shown below.



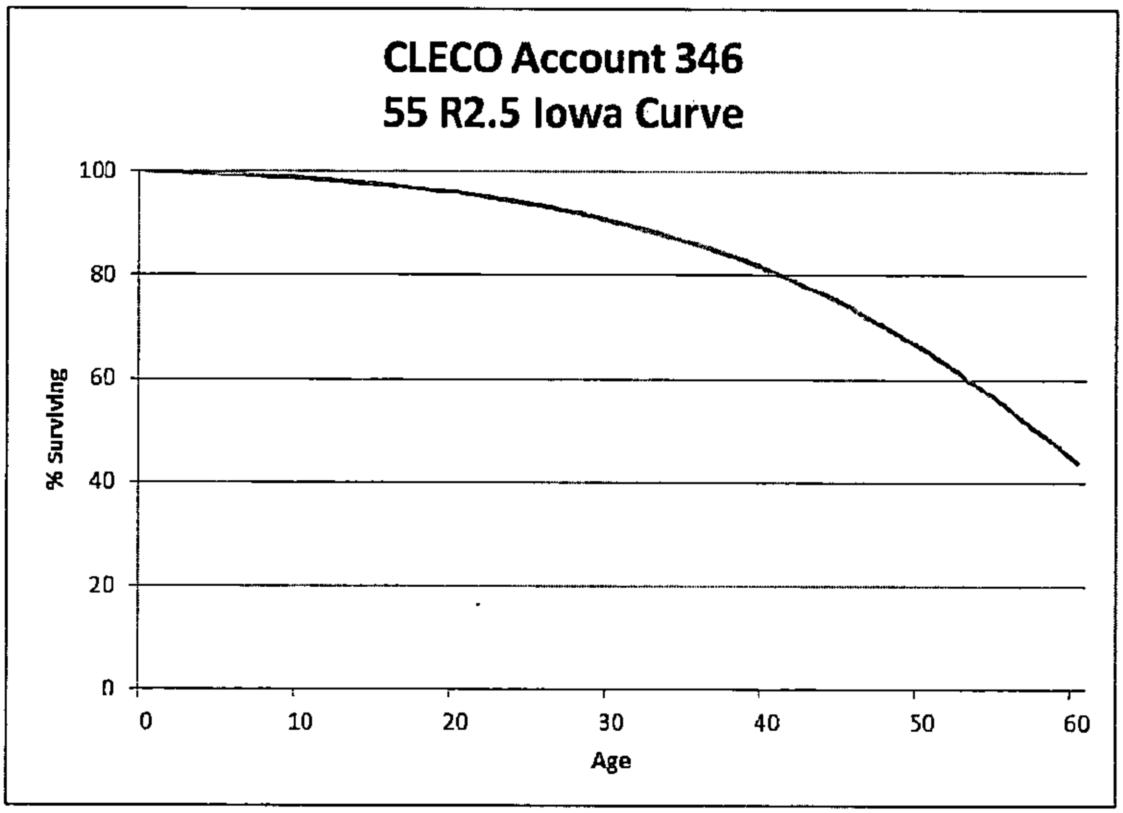
FERC Account 345 Accessory Electrical Equipment (55 R0.5)

This account consists of power transformers, conduit, and other related assets at each power plant. Retirement dates for each unit are found in Appendix D. The plant balance in this account at December 31, 2021 is $5.0 million. No interim retirement curve was used for this account in the last depreciation study. Based on experience with Account 315, this study recommends the 55 R0.5 curve. A representative curve shape is shown below.



FERC Account 346 Miscellaneous Power Plant Equipment (55 R2.5)

This account consists of work equipment, test equipment, pumps, fire protection systems, and other related assets at each power plant. Retirement dates for each unit are found in Appendix D. The plant balance in this account at December 31, 2021 is $715 thousand. No interim retirement curve was used for this account in the last depreciation study. Based on experience with Account 316, this study recommends the 55 R2.5 curve. A representative curve shape is shown below.



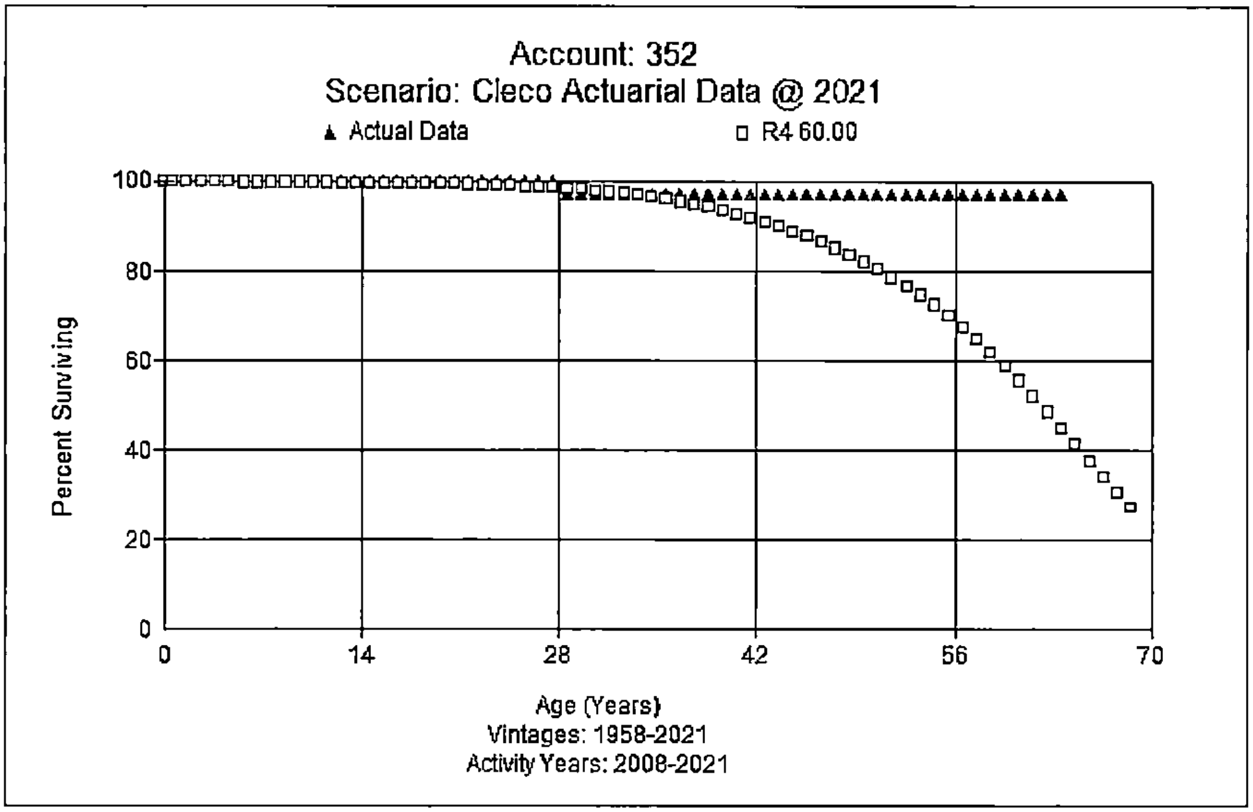
Transmission Plant

Transmission Accounts 352-359

CLECO has a service territory that is divided into four districts: Northern, Central, Southern, and Eastern. There are significant Transmission assets in substation equipment as well as poles and overhead conductor.

FERC Account 352 Structures and Improvements (60 R4)

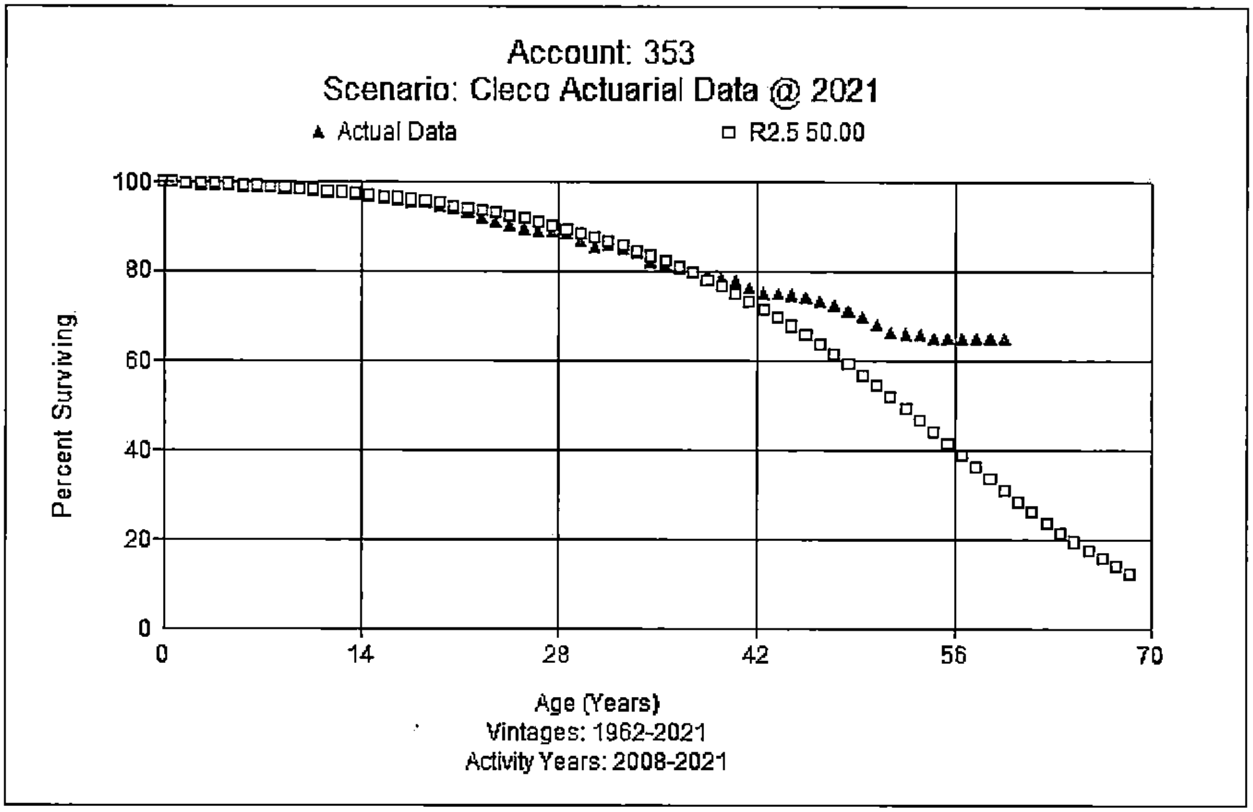
This account consists of buildings, structures, fences, lighting systems, and other related assets related to transmission plant. The account balance is $2.4 million. The current approved life is 42 years with a dispersion curve of R0.5. The largest components in this account are buildings, security systems, bulkheads, and landscaping. Some assets, such as HVAC systems, fences, and security systems, will have a much shorter life than the buildings. The expectation is that structures will live as long as or longer than the station equipment. There are few retirements that have occurred in this account. After reviewing various actuarial bands and judgment, this study recommends moving to a 60 R4, which is shown below.


Account: 352
Scenario: Cleco Actuarial Data @ 2021
Actual Data
R4 60.00
100
80
60
40
20
0
Percent Surviving
0
14
28
42
56
70
Age (Years)
Vintages: 1958-2021
Activity Years: 2008-2021

FERC Account 353 Station Equipment (50 R2.5)

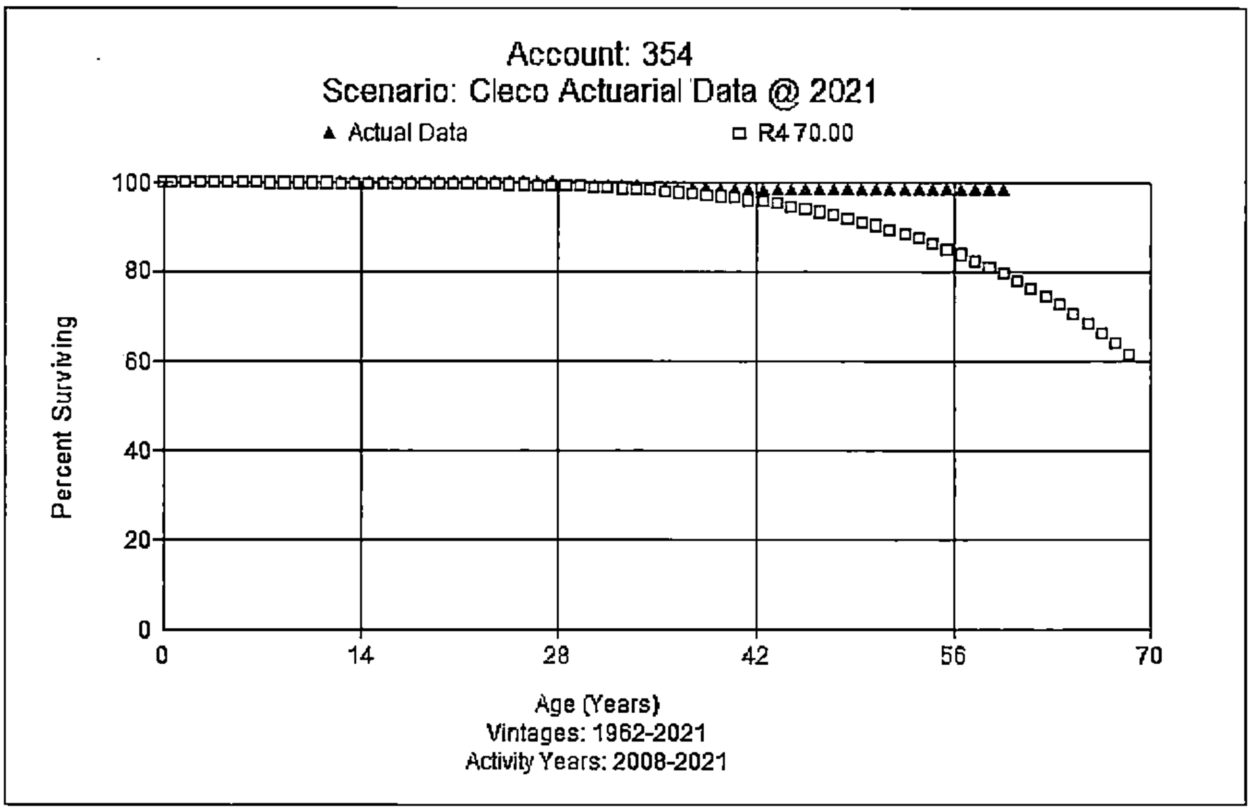
This account consists of conductors, switches, grounding systems, panels, breakers, and other assets related to station equipment. The account balance is $437.4 million. The current approved life is 50 years with a dispersion curve of R2.5. Company personnel report that they now hope to get 45 years or more from a transformer. Decades ago, transformers were overbuilt, but now those assets have tighter tolerances. Company personnel also discussed the life of circuit breakers, which are a major component in this account, stating that SF6 breakers are not expected to last as long as OCB (approximately 40 years for SF6 as compared to 50 for OCB). The Company proactively changes 10 breakers per year from OCB to SF6. Company personnel state that they have seen failures of SF6 breakers that are not readily explainable. Company personnel provided estimates of life for various components in this account: potential and current transformers will last about 50 years, CCVTs (coupling capacitor voltage transformers) are estimated to have a 25-30 year life, and switches are estimated to last 50 years. Some of the shorter-lived assets in this account will be RTUs with a 20 year life expectation, relays which will last 20 years, and batteries which will last 12-15 years.

Giving consideration to Company input and the indications in the life analysis across intermediate bands, with a good curve fit as shown below, this study recommends retaining a 50 R2.5.


Account: 353
Scenario: Cleco Actuarial Data @ 2021
▲ Actual Data
□ R2.5 50.00
Percent Surviving
100
80
60
40
20
0
0
14
28
42
56
70
Age (Years)
Vintages: 1962-2021
Activity Years: 2008-2021

FERC Account 354 Towers and Fixtures (70 R4)

This account consists of towers and lighting systems across the transmission service area. The balance in this account is nearly $20.9 million. The current approved life is 55 years with a dispersion curve of R4. About 150 miles of the structures for the Company's transmission lines (which includes a total of 1200 miles) is in Account 354; the rest is in Account 355. Company personnel state that they use hot dipped galvanized construction. The assets are showing some rust issues at the base but there are no plans for any major replacements. There have been few retirements in this account. The Company expects a life of approximately 70 years. Based on historical indications and discussions with Company personnel, this study recommends moving to a 70 year life and an R4 dispersion, which is shown below.

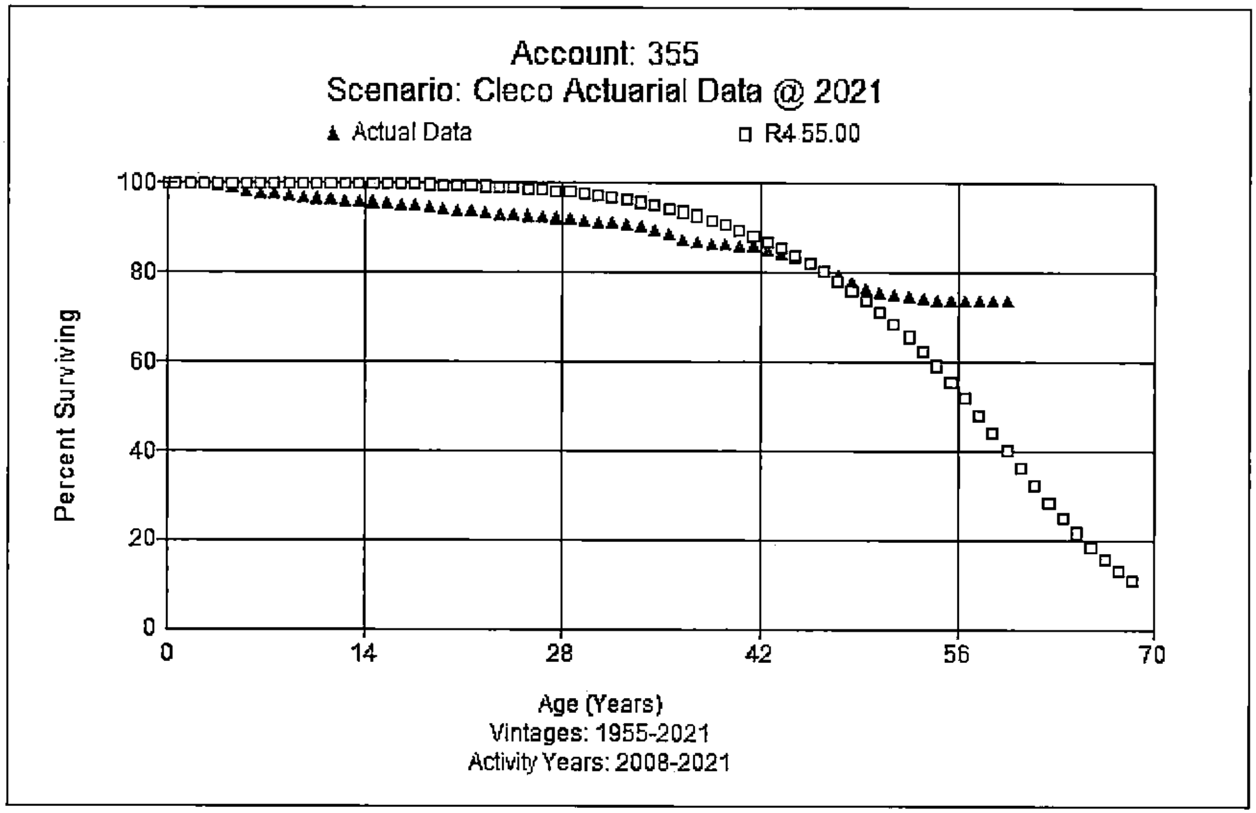


FERC Account 355 Poles and Fixtures (55 R4)

This account consists of wood and steel poles, frames, wood cross arms, and other related fixtures. The balance in this account is $385.7 million. The current approved life is 42 years with a dispersion curve of R4. Company personnel state that are a small number of concrete poles. Company personnel state that, in their experience, steel poles will have a longer life than wood, and that wood poles will have historically had around a 30 years life in the CLECO service area. Due to dedication in the treatment of poles, Company personnel believe that poles will show a longer life in the future. The Company has an Osmose inspection program in place which treats poles at the ground line. The Company also looks for woodpecker damage during the inspections. Company experts report other items that may help to extend the life of assets in this account: the Company installs caps on the top to protect from rot (which began 20 years ago) and they treat for microbial ground line attacks every 10 years.

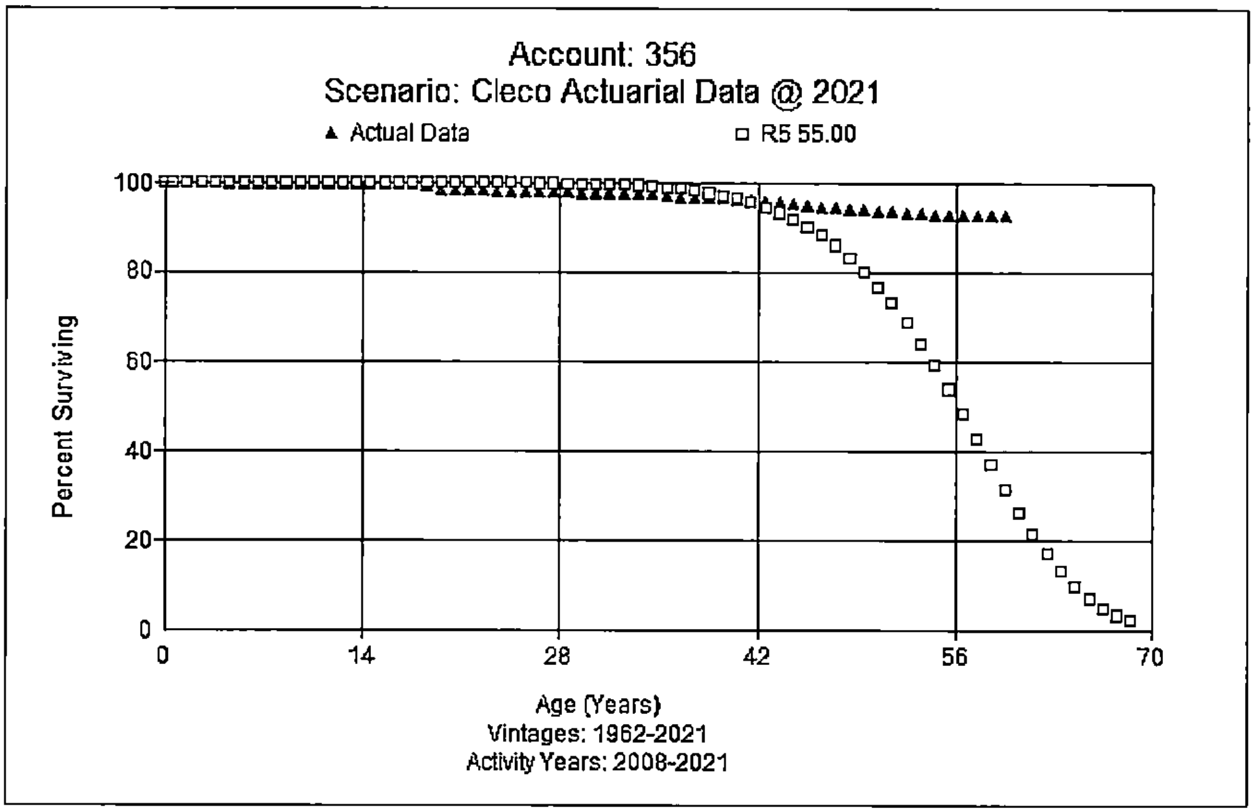
Company personnel state that all new poles are steel. The Company has begun using steel arms, and cross arm failures are a primary cause of failure of assets in this account. Company personnel think that the life of steel poles might last up to the life of towers. Company personnel support an extension in life for this account due to the much higher percentage of steel on the system and the preventative maintenance on wood poles.

Although the analysis has some indications of a shorter life, based on the analysis, discussions, and expectations of the Company, this study recommends moving to a 55 R4 dispersion, which is shown below.


Account: 355
Scenario: Cleco Actuarial Data @ 2021
Actual Data
R4 55.00
Percent Surviving
100
80
60
40
20
0
0
14
28
42
56
70
Age (Years)
Vintages: 1955-2021
Activity Years: 2008-2021

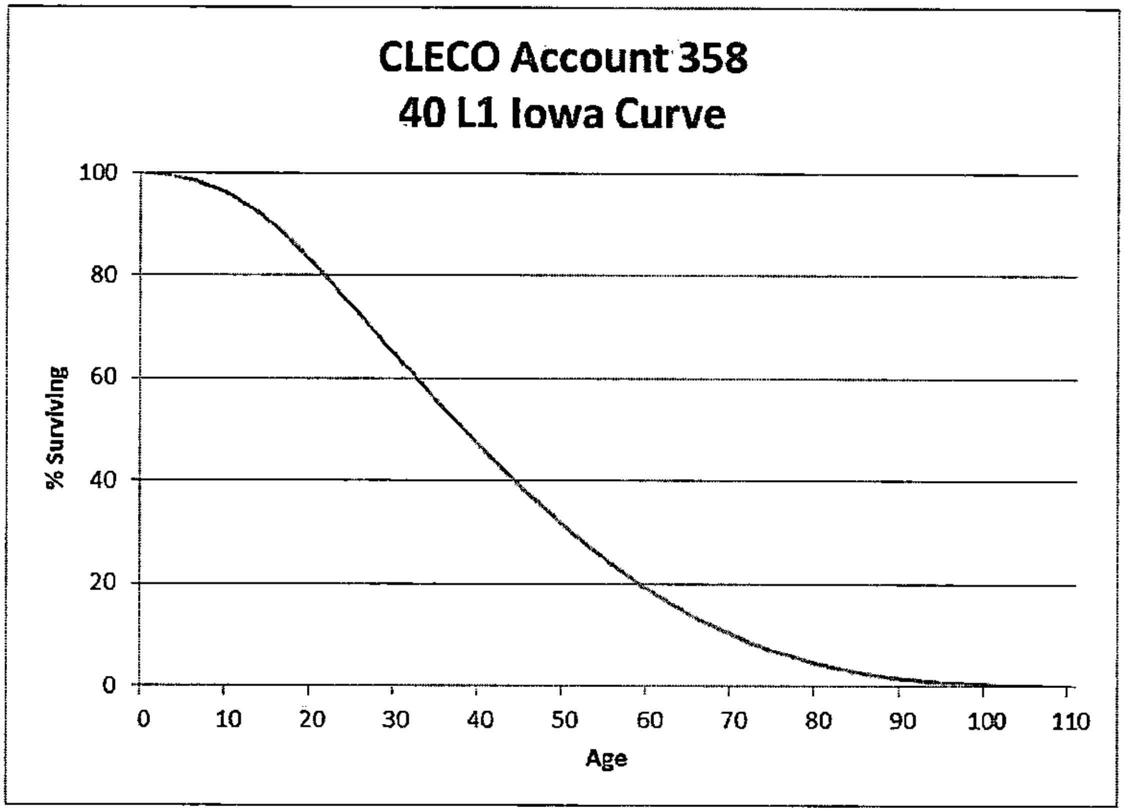
FERC Account 356 Overhead Conductors and Devices (55 R5)

This account consists of conductors, arrestors, switches, and other related devices. The balance in this account is $92.6 million. The current approved life is 50 years with a dispersion curve of R5. Discussions with Company personnel indicate that conductors should last longer than poles and as long as towers in some cases, but overloads, lightning strikes, contact, and re-conductoring are significant forces of retirement. Other causes of retirement include capacity increases, or failures due to installation, splice or oscillation issues. Company personnel believe that a 55 year life for this account is reasonable. There is limited history on which to perform an actuarial analysis. Based on the full band analysis and discussions with Company personnel, this study recommends increasing the life to a 55 R5, which is shown below.



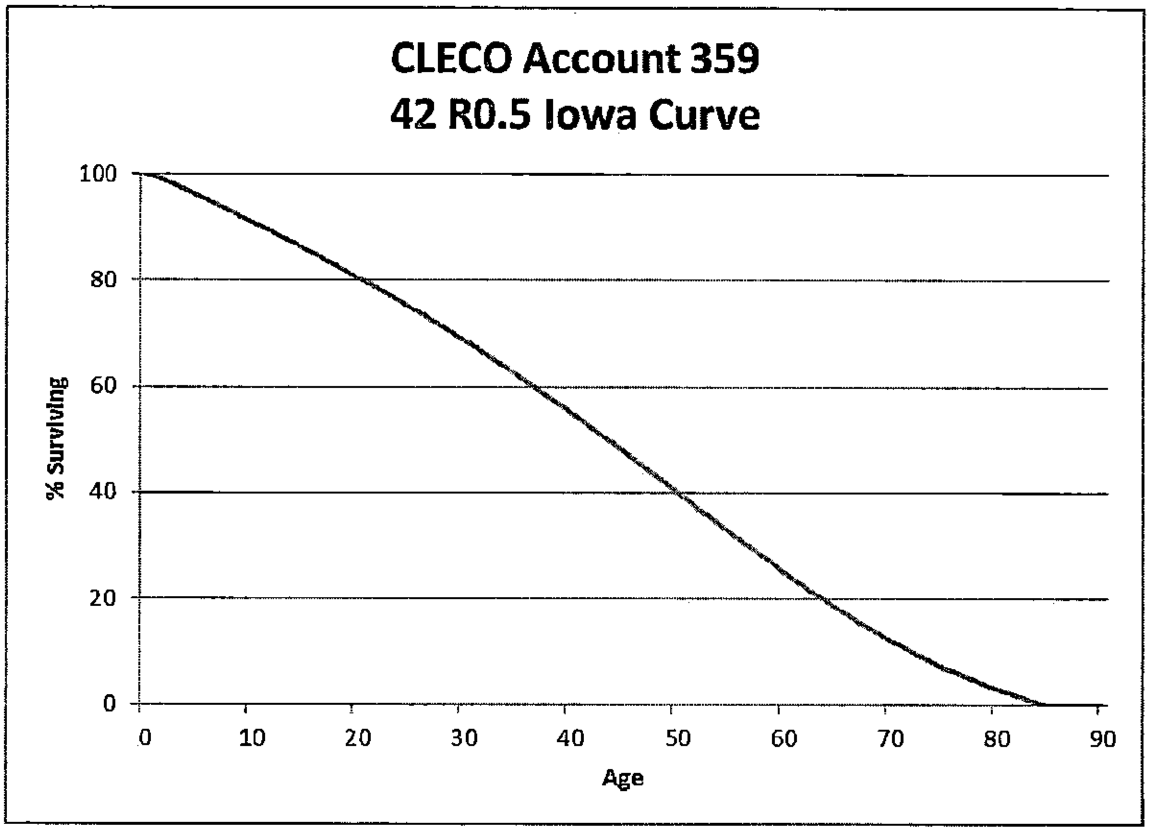
FERC Account 358 Underground Conduit and Devices (40 L1)

This account consists of underground cable and other related devices. The balance in this account is $634 thousand. The current approved life is 40 years with a dispersion curve of L1. There has only been one small retirement, which occurred in 2016. Company personnel believe that the life of this equipment would be similar or shorter than Account 367 in the distribution function, which is estimated to have a 48 year life in this study. Based on the analysis and discussions, this study recommends retaining the existing life of 40 years and an L1 dispersion, which is shown below.



FERC Account 359 Road and Trails (42 R0.5)

This account contains various roads and dirt trails to various lines and substations. The balance in this account is $2.7 million. The current approved life is 42 years with a dispersion curve of R0.5. There has been no recent activity retirement activity. Based on judgment, this study recommends retaining the existing life of 42 years with an R0.5 dispersion, which is shown below.



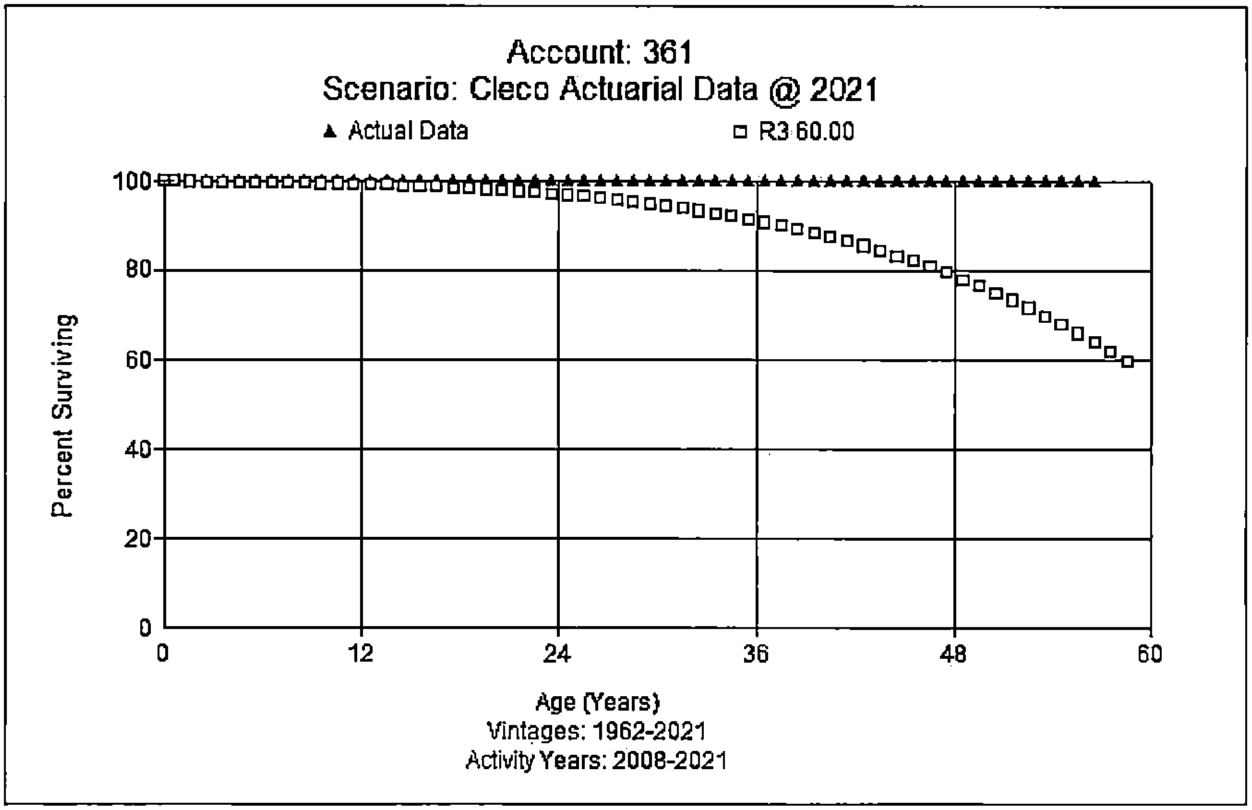
Distribution Plant

Distribution Accounts, FERC Accounts 361-373

CLECO has a service territory that is divided into four districts: Northern, Central, Southern, and Eastern. There are significant Distribution assets in substation equipment, poles, overhead conductor, services, line transformers, meters, and street lighting.

FERC Account 361 Structures & Improvements (60 R3)

This grouping contains facilities ranging from fencing to other structures found in distribution substations. The current account balance is $364 thousand. The approved curve and life is a 42 R0.5. Company personnel believe a longer life for this account is reasonable (up to 60 years). There are few different types of assets in this account and many of the assets within this account have long lives. Based on the expectations of Company personnel, the types and characteristics of the assets in the account and the limited actuarial analysis, the current study recommendation is to increase the life to 60 years and change from the R0.5 to the R3 dispersion pattern. A graph of the observed data versus the proposed curve is shown below.


Account: 361
Scenario: Cleco Actuarial Data @ 2021
Actual Data
R3 60.00
Percent Surviving
100
80
60
40
20
0
0
12
24
36
48
60
Age (Years)
Vintages: 1962-2021
Activity Years: 2008-2021

FERC Account 362 Station Equipment (55 R0.5)

This grouping contains a wide variety of distribution substation equipment, from circuit breakers to switchgear. The current balance is $116.7 million for this account. The existing approved life is 50 years with an R1 dispersion curve. Discussions with Company personnel indicated the Company would see more faults in distribution substations than transmission. Otherwise, the Company expects transmission and distribution substations would have around the same life. (The proposed life for Account 353 Transmission Station Equipment in this study is 53 years.) The current depreciation study recommendation for this account is a 55 year life with the R0.5 dispersion which is shown below.