Exhibit NMP-3 – Depreciation Rate Study – NYPSC Staff

BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of

Niagara Mohawk Power Corporation d/b/a National Grid

Cases 17-E-0238 and 17-G-0239

August 25, 2017

Prepared Testimony of:

Paul J. Darmetko Jr.
Utility Engineer 3
Office of Electric, Gas, & Water

State of New York
Department of Public Service
Three Empire State Plaza
Albany, New York 12223-1350

Q. Please state your name, employer, and business addresses?

A. My name is Paul J. Darmetko Jr., I am employed by the New York State Department of Public Service (Department). My business address is Three Empire State Plaza, Albany, New York 12223-1350.

Q. Mr. Darmetko, what is your position at the Department?

A. I am employed as a Utility Engineer 3 in the Electric Rates and Tariff Section of the Office of Electric, Gas, and Water.

Q. Please summarize your educational and professional experience.

A. I graduated from the State University of New York Institute of Technology at Utica/Rome with a Bachelor of Science Degree in Civil Engineering Technology in 2003. I have been employed by the Department since October 2005 in the Office of Electric, Gas and Water, mainly in the Electric Rates and Tariff Section. While with the Department, I have analyzed and reviewed filings, and prepared reports and studies. These filings and reports relate to

utility operating revenues, operation and maintenance expense, capital budgets, depreciation, cost of service, revenue allocation, rate design, and sales forecasts.

Q. Mr. Darmetko, please describe your present responsibilities with the Department.

A. My current responsibilities include providing engineering analysis and recommendations in rate proceedings, reviewing and making recommendations to the Commission on filed petitions, and examining utility processes and operations to ensure that utilities provide safe and adequate service at just and reasonable rates in accord with the policies of the Department.

Q. Have you previously provided testimony before the Commission?

A. Yes, I provided testimony in Cases 15-E-0283, and 09-E-0715, New York State Electric & Gas Corporation; Cases 15-E-0285, and 09-E-0717, Rochester Gas and Electric Corporation; Case 14-E-0318, Central Hudson Gas & Electric Corporation; Case 14-E-0270, R.E. Ginna Nuclear Power Plant, LLC; Cases 10-E-0050 and 08-G-0609,

Niagara Mohawk Power Corporation d/b/a National Grid (Niagara Mohawk, NMPC or the Company), 10-E-0362, Orange and Rockland Utilities, Inc.; 16-E-0060 and 08-E-0539, Consolidated Edison Company of New York, Inc. (Con Edison); and Case 08-E-1227, Plattsburgh Municipal Lighting Department. In these proceedings, I provided testimony regarding cost of service, capital budgets, rate base, depreciation, rate design, and other revenue requirement and policy issues.

Q. What is the purpose of your testimony in these proceedings?

A. In my testimony I will: (1) provide a summary of recommended changes from the Company's proposed depreciation expense levels for the 12 months ending March 31, 2019, the Rate Year, based on my review of the depreciation study prepared by Foster Associates Consultants, LLC (FAC); (2) explain basic depreciation terms and concepts and their respective roles; (3) present my recommendations for average service lives, survivor curves and average net salvage for several of Niagara Mohawk's accounts that differ from what the Company has proposed; (4) provide

my recommended treatment of the calculated electric book to theoretical reserve surplus; and (5) discuss the Company's proposal to recover the stranded book cost for electric meters that will be retired due to the implementation of advanced metering infrastructure (AMI).

Q. In this testimony, will you refer to, or otherwise rely upon, any information produced during the discovery phase of this proceeding?

A. Yes, I will refer to, and have relied upon, several responses to Department Staff's Information Requests (IRs). These responses are included in Exhibit___(PJD-1) and are referred to by the designation assigned by the Department, for example "DPS-123."

Q. Are you sponsoring any other exhibits?

A. Yes, I am also sponsoring the following exhibits: Exhibit___(PJD-2) contains current, Company proposed and Staff recommended depreciation rates and expenses for all depreciable electric plant accounts, based on gross plant balances as of December 31, 2015. Exhibit___(PJD-3) contains a comparison of

present, Company proposed, and Staff recommended average service lives, as well as a short description of the rationale behind my recommended changes. Exhibit___(PJD-4) contains a survivor curve comparison between current, Company proposed and Staff recommended curves. Exhibit___(PJD-5) contains a comparison of present, Company proposed, and Staff recommended net salvage factors as well as a short description of the rationale behind my recommended changes. Exhibit___(PJD-6) contains a comparison of the book reserve to the Company proposed and Staff recommended theoretical reserves. Finally, Exhibit___(PJD-7) contains a visual comparison of the Company proposed smooth survivor curves and Staff recommended smooth survivor curves, plotted against the observed curves.

Q. Please briefly summarize your recommendations regarding depreciation expense associated with electric plant.

A. Based on the depreciation factors I recommend for electric plant, the Company’s proposed increase in depreciation expense forecast for

the Rate Year should be reduced by $26.2 million, from $249.0 million to $222.8 million. These figures include my recommendation to amortize the amount of electric reserve surplus above the 10 percent tolerance band, Staff's recommended changes to Rate Year plant-in-service balances and the allocation of Common plant.

Q. Please explain the terms "depreciation" and "net salvage" as used in ratemaking.

A. Depreciation is a method of recovering capital costs, less net salvage, related to plant-in-service over the expected life of the plant. Net salvage is any cash received for a removed asset, less the cost to remove it.

Q. Please explain the term "net salvage factor."

A. Net salvage factor refers to the component of the depreciation rate that allows recovery of estimated net salvage. It is expressed as a percentage, based on original cost of plant. For example, let us assume that a unit of property has a total installed cost of $1,000, $0 estimated future salvage, and estimated cost of removal of $500. The net salvage factor is

calculated as follows: Rate = ($0 + (-$500)) / $1,000. This equates to a negative 0.50, or negative 50 percent net salvage factor.

Q. Please explain the term “average service life.”

A. Average service life is the arithmetic average of the length of the lives of the units of property in a specific account. It equates to the area under the survivor curve from age zero to the maximum life, divided by 100 percent.

Q. Please explain the term “depreciation rate.”

A. A depreciation rate is a percentage rate that is applied to the value of gross plant-in-service, by account, in order to determine the annual depreciation expense.

Q. Please explain the term “depreciation expense.”

A. Depreciation expense, in any given year, is the product of gross plant-in-service multiplied by the applicable depreciation rate. Depreciation expense allows for the recovery of an investment, less net salvage, over the expected life of the investment.

Q. What is the “book reserve”?

A. The book reserve is the accumulation of the annual depreciation expense accruals, less

retirements. The book reserve is calculated by plant account and subtracted from the gross plant, or the original cost of the plant, to calculate the net plant, or the remaining plant balance that is not yet depreciated.

Q. What is the “theoretical reserve?”

A. The theoretical reserve is the cumulative amount of depreciation expense that should have been collected as of a particular date, given the average service lives, survivor curves, and net salvage factors used to determine the depreciation rates.

Q. How are the depreciation rates calculated?

A. The rates are calculated differently depending on the depreciation system used. Each system is composed of a method, a procedure, and a technique.

Q. What depreciation system did Niagara Mohawk use for its plant accounts in the study submitted in this case?

A. Niagara Mohawk used the straight line method, broad group procedure, and whole life technique for its depreciable accounts.

Q. Please explain how the depreciation rate is

calculated following the whole life technique.

A. Under the whole life technique, the depreciation rate is calculated using the following formula:

Rate = (1-Net Salvage)/(Average Service Life)

For example, if the net salvage factor is negative 50 percent and the average service life for a plant account is 50 years, then the depreciation rate would be: R = (1-(-0.5)) / 50. In such a case, the depreciation rate would equal 0.03, or 3.0 percent for a specific plant account. The next step in the process for ratemaking purposes is to compute composite rates, which are weighted average rates based on gross plant-in-service as of a specific date. In this proceeding both the Company and Staff used the plant balances as of March 31, 2017. These composite rates were computed and used by the Staff Electric Infrastructure and Operations Panel to calculate the adjustments to Rate Year depreciation expense. These adjustments were provided to the Staff Revenue Requirements Panel for inclusion in the Staff proposed revenue requirement.

Q. Based on your review of the information

contained in the electric and common depreciation study Niagara Mohawk provided, what do you recommend?

A. After evaluating the data for the electric plant accounts, I recommend that the Commission adopt different rates than the Company proposed for 23 of 48 electric plant accounts. I also reviewed the common accounts and concur with the Company's proposed modification to one of the eleven common plant accounts, as well as the retention of the present depreciation rates for the remaining ten common accounts.

Survivor Curves and Average Service Lives

Q. How did you arrive at your recommended average service lives and survivor curves?

A. I reviewed the mortality data provided in the depreciation study, as well as plots of the original and smooth survivor curves proposed by the Company. The study also contains rolling and shrinking bands, as well as fit indices for the best fitting Iowa and h-curves, which I also reviewed. I also reviewed the account descriptions and FAC's assessments of each account included in the depreciation study, as

well as had several informal discussions with Staff transmission and distribution personnel to gauge the opinions included in the Company's selection of its proposed average service lives and survivor curves.

Q. What information can you obtain from reviewing the rolling and shrinking bands and fit indexes?

A. The rolling and shrinking bands provide more information regarding trends in service lives than just the visual fitting, while the fit indices provide statistical information regarding how well the selected smooth survivor curve fits the mortality data. In a number of instances, a different smooth survivor curve better fit the actual historic data points, i.e., the curve hugged the data much tighter, than the Company proposed curves either visually or statistically, or in some cases in both respects. In certain instances, the Company states in the study that there is insufficient retirement history to modify the average service life. Where this assertion is made, such as for accounts 354.00, 356.01, 357.01, 358.00, 361.00, 369.20, and 369.21, I reviewed the age

distribution summaries to determine if there is a sufficient quantity of assets that have survived beyond the present or Company proposed average service life, as well as leading up to it. For accounts where I conclude that sufficient facilities that have lived beyond the present or Company proposed average service life, and there has been limited retirements of younger assets, I recommend extending the average service lives, as it is likely similar equipment will exhibit a similarly long service life.

Q. What adjustments do you recommend to the survivor curves and average service lives for the electric accounts, compared to what the Company has proposed?

A. I reviewed all 48 electric transmission and distribution as well as general electric plant accounts. Of the 10 electric transmission accounts, I recommend increasing the average service lives for five accounts, specifically accounts 353.55, 354.00, 356.01, 357.01, and 358.00. I recommend using different survivor curves for four of them, accounts 353.55,

354.00, 356.01, and 357.01. I also recommend increasing the average service lives for 11 of the 25 electric distribution accounts, specifically accounts 361.00, 362.01, 362.55, 362.75, 365.00, 368.01, 368.30, 369.20, 369.21, 373.12, and 373.22. I recommend using different survivor curves for three of them, accounts 362.5, 362.75, and 368.01. Exhibit___(PJD-3), contains a comparison, by account, between the current, Company proposed and my recommended average service lives for the electric transmission, distribution, and general plant accounts as well as a short summary of my basis for selecting them. Exhibit___(PJD-4) contains a comparison by account, between the current, Company proposed and my recommended survivor curves.

Q. Did the Company propose to reduce the average service lives of any street lighting plant accounts?

A. Yes. The Company proposed to reduce the average service lives of all six of the street lighting plant accounts.

Q. Do you agree with the proposed changes?

A. Based on my review, I agree with the proposed reductions to four of the six street lighting accounts, specifically accounts 373.11, 373.21, 373.30, and 373.40.

Q. What do you recommend for the other two accounts?

A. In response to DPS-200, the Company provided the observed and best fitting survivor curves for the combined overhead street lighting accounts, as well as the combined underground street lighting accounts. These curves indicate that the average service life of overhead facilities is about 45 years, and the average service life of underground facilities is about 48 years. As the Company has split these accounts between non-LED luminaires and Other street lighting equipment, and reduced the average service life of non-LED luminaires to 20 years, the Other equipment must have an average service life much greater than 45 and 48 years. Therefore, I recommend using an average service life of 60 years for both overhead and underground Other street lighting plant accounts, 373.12 and 373.22, respectively. I estimate that 60 years

is reasonable based on the gross plant dollars split between the non-LED luminaire plant accounts and the Other street lighting plant accounts.

Net Salvage

Q. Please describe the information contained in the depreciation study regarding net salvage.

A. The study contains, for each plant account, the original cost of plant retired, the amount of salvage booked, the cost the Company incurred to remove the assets, and the net salvage amount, which is the sum of the amount of savage received by the Company and the cost to remove for a number of years. For each year the study also shows, as a percent of original cost retired, the salvage received, the cost of removal, and net salvage, as well as the five year rolling average of each.

Q. Please discuss the method used to determine the average net salvage factors you recommend.

A. I reviewed the present net salvage amounts, as well as prior Commission decisions with regard to net salvage factors, and net salvage factors for other utilities throughout the State. I

reviewed the salvage figures provided in the study for trends in the historic net salvage data, including the relationship between net salvage as a percentage of the original cost of plant retired each year, as well as the five-year average of the actual cost of removal. For accounts where trends indicate that net salvage is becoming more or less negative, I recommend modifying the net salvage factors contained in the computation of the deprecation rate. For example, for account 364, Poles, Towers and Fixtures, I recommend that the Commission decrease the negative net salvage factor by ten percentage points, i.e., making the net salvage factor more negative. Where no trends are apparent and net salvage has been negative, I compared the five-year average of annual net salvage, to the annual net salvage accrual presently being recovered through the depreciation rate. If the five-year average of net salvage is more negative than what is presently being recovered through the depreciation rate, I recommend making the net salvage rate more negative. In instances where

the data demonstrates that the Company annually accrues significantly more than what is presently needed for net salvage cost, or the trend indicates that the Company is experiencing less negative net salvage, I recommend making the net salvage factors less negative. I also recommend limiting the changes to the net salvage factors for each plant account to no more than 10 percentage points.

Q. Why do you recommend limiting the change in the net salvage factors used in calculating the depreciation rates?

A. Net salvage can and does vary significantly between depreciation studies due to a variety of factors including, but not limited to: the age of the assets retired, the quantity of the assets retired, the quality, or value, of the assets retired, the cost of labor needed to remove the assets, type of equipment utilized to remove assets, as well as others. I recommend making gradual changes to minimize the significant fluctuations in depreciation rates from case to case. Because net salvage can be variable, where, for a given account, the

Company may experience significant negative net salvage in some years, little to no negative net salvage, or even positive net salvage, in other years, it is reasonable to avoid drastic changes. I recommend taking limited steps in the indicated direction based on the results of the depreciation study. For all accounts, I recommend moving in the same direction that the Company proposed movement, however, I have limited the movement to no more than 10 percentage points.

Q. Please discuss the net salvage adjustments you propose for electric accounts.

A. Compared to the Company's proposed average net salvage rates, I recommend increasing, i.e., making less negative, the net salvage rates on six of the 10 electric transmission accounts, specifically accounts 352.00, 354.00, 355.00, 356.01, 357.01, and 358.00, and eight of the 24 electric distribution accounts, specifically accounts 361.00, 364.00, 365.00, 366.01, 367.10, 368.30, 369.10, and 369.21. I recommend decreasing, i.e., making more negative, the net salvage rate on one electric transmission

account, 353.01, and two distribution accounts, 362.01 and 368.01. A comparison of the present, Company proposed and my recommended net salvage factors, as well as a short description of my rationale for my recommendation can be found in Exhibit___(PJD-5).

Book Reserve Surplus

Q. Please explain the process of comparing the book reserve to the theoretical reserve.

A. When a depreciation study is performed, the current book reserve is compared to the proposed theoretical reserve. The proposed theoretical reserve incorporates any changes to the survivor curves, average service lives, and net salvage rates associated with the study. Typically, if the difference between the book reserve and the theoretical reserve is within plus or minus 10 percent, no adjustment is made to amortize the over or under-accruals. However, if the difference is greater than 10 percent, an adjustment can be made to amortize some or all of the difference between theoretical and book reserves. An adjustment should be made when the difference is too large to be corrected on its

own, going forward, with appropriate changes to the average service lives and net salvage rates.

Q. How is the adjustment incorporated into a utility's rates?

A. If the book reserve is larger than the theoretical reserve, some or all of the difference could be used for other ratemaking treatments, rather than a reduction to depreciation expense. The use of a 10 percent margin and the rate treatment are discretionary.

Q. What effect do your recommended changes to the depreciation rates have on the book to theoretical reserve differences?

A. My adjustments to depreciation rates will increase the Company's proposed electric book to theoretical reserve surplus from approximately $84 million to $336 million, a difference of $252 million. Exhibit___(PJD-6) contains a comparison of plant surpluses or deficiencies by account. The changes I recommend for result in a book to theoretical reserve surplus of approximately 13.0 percent. Because the book to theoretical reserve surplus falls outside the 10 percent tolerance band generally supported by

the Commission, I recommend that the surplus in excess of the 10 percent band be amortized over a period of 15 years. This results in an adjustment of $5.4 million per year to depreciation expense. Reserve variations can be subject to much volatility due to changes in Commission-approved service lives, survivor curves, and net salvage factors, as well as actual retirements deviating from the past experience and net salvage deviating from historic levels. Because Niagara Mohawk includes depreciation studies with almost every rate case filing, Staff will be able to keep track of the surplus, if one continues to exist, and recommend adjustments, if necessary, in future rate proceedings.

Treatment of Stranded Automated Meter Reading (AMR) Costs

Q. In the Corrections and Updates filed by the Company, the Revenue Requirements Panel discuss its proposed Company's proposed treatment of AMR meter costs that will be stranded with deployment of AMI meters on pages 27 through 30. Have you reviewed this proposal?

A. Yes.
Q. Do you agree with the Company's proposed treatment of stranded AMR meter costs.
A. Yes, with one exception. I agree that the Company should be allowed to continue to recover depreciation expense on AMR meters, even after the meters have been removed from service. This will reduce the stranded costs of the assets, that, absent an amortization will remain on the Company's books indefinitely, exacerbating intergenerational inequities. This method of amortization was recently recommended and accepted in Case 16-E-0060, with regard to Con Edison.
Q. What is the exception?
A. In this case, Niagara Mohawk states that it will examine the relationship between the theoretical reserve and book reserve across all plant accounts prior to its next rate filing and, depending on this relationship, it may propose to adjust either the total reserve deficiency or excess balance, i.e., the deficiency or excess for all plant accounts, or the meter specific reserve balance. In Case 16-E-0060, an

amortization period was established specifically for the stranded meter costs.

Q. Do you agree with NMPC's proposed treatment?

A. No. The decision to pre-maturely retire meters that could otherwise continue to provide service for a number of years creates known stranded costs on the Company's books that will remain there unless they are amortized. This is unlike setting depreciation rates too high or too low, thus causing a book to theoretical deficiency or surplus. Intentionally removing assets from service due to technological advancements or policy considerations before the assets are fully depreciated exacerbates intergenerational inequities if the stranded costs of those assets remain on the utility's books.

Q. What do you mean by intergenerational inequities?

A. When customers have to pay for assets used to serve customers in a prior era, because those customers did not cover the entire cost of the assets. Intergenerational inequities should be minimized to the greatest extent possible.

Q. What do you recommend?

A. I recommend that once AMI is fully deployed, a reasonable amortization period be established to remove the remaining stranded AMR meter costs from the Company's books. This treatment should also be applied to the now existing gas encoder receiver transmitters (ERT) that will be removed prematurely to allow replacement with AMI compatible ERTs.

Q. Are you aware that the Staff Policy Panel recommends that the Company be directed to write off the stranded costs associated with the pre-AMR meters?

A. Yes. As such, any amortization of the AMR meters should be net of that adjustment.

Q. Has the Company has proposed to establish separate AMI meter accounts when it begins the rollout of AMI.

A. Yes, I agree with the proposal.

Q. Does this conclude your testimony at this time?

A. Yes.

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Prepared Exhibits of:

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List of Exhibits

Exhibit PJD-1

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Date of Request: May 31, 2017 Request No. DPS-200 PD-2
Due Date: June 12, 2017 NMPC Req. No. NM-640

NIAGARA MOHAWK POWER CORPORATION d/b/a NATIONAL GRID
Case No. 17-E-0238 and 17-G-0239 –
Niagara Mohawk Power Corporation d/b/a National Grid – Electric and Gas Rates

Request for Information

FROM: DPS Staff, Paul J. Darmetko Jr.

TO: National Grid, Dr. Kimbugwe A. Kateregga

SUBJECT: ***DEPRECIATION***

Request:

In this interrogatory, all requests for data, workpapers or supporting calculations should be construed as also requesting any associated Word, Excel, or other models in original electronic format with all formulae intact.

With reference to the plant accounts listed below:

1. Using the Staff-proposed factors specified below, provide the following information for each account marked with "*":
   a. Graphical plot of the Actual, Current, Company Recommended, and Staff Recommended Life curves; and
   b. Fit index (or conformance index) of the Staff Recommended Curves.

2. For each account, calculate the theoretical reserve balance derived using the Staff-proposed factors.

		Staff Life	Staff Curve Shape	Staff Salvage
352.00*	Structures and Improvements	60	R-3	-30
353.55*	Station Equipment – RTU	25	S3 and H5	-5
354.00	Towers and Fixtures	70	H4	-30
356.01*	Overhead Conductors and Devices	80	R2.5	-30
357.01*	Underground Conduit	80	R3	-5
358.00*	Underground Conductors and Devices	80	R3	-20
362.01*	Station Equipment	60	H2	-15

		Staff Life	Staff Curve Shape	Staff Salvage
362.55*	Station Equipment - RTU	25	S 3.5	-5
362.75*	Station Equipment - EMS	20	O1	0
364.00	Poles, Towers and Fixtures	65	R 1.5	-15
365.00*	Overhead Conductors and Devices	60	R4	-35
367.10	Underground Conductors and Devices	75	R 3	-25
368.01*	Line Transformers - Bare Cost	40	R 1.5	-5
368.30*	Line Transformers - Install Cost	40	R 2	-30
369.20*	Underground Services - Conduit	80	H4	-5
369.21*	Underground Services - Cable	80	H 3	-20
373.11*	OH Street Lighting - Luminaires - Non-LED	40	S3	-30
373.12*	OH Street Lighting - Other	60	H1.5	-30
373.21*	UG Street Lighting - Luminaires - Non-LED	40	S3	-30
373.22*	UG Street Lighting - Other	80	H1.5	-30
392.21*	Transportation Equipment - Aircraft	15	SQ	25

Response:

With reference to the plant accounts listed below:

1. a.

Attachment 1 contains graphs showing observed proportions surviving, current curves, and Staff's proposed projection lives and curves. Foster Associates' depreciation system software can only display two projection curves against the observed proportions surviving. Corresponding graphs showing the Company's proposed projection lives and curves are contained in Exhibit ___ (KAK-3). The S3.5 Staff dispersion requested for account 362.55 is not one of the 31 standard Iowa curves provided in Foster Associates' depreciation system software. As discussed with Staff, an S3 dispersion is substituted for an S3.5 curve. The O1 curve requested by Staff for account 362.75 is identified as the SC curve in Foster Associates' depreciation system software.

In reviewing Exhibit __ (KAK-3), Foster Associates discovered that graphs showing the statistically best fitting dispersion and derived projection lives for the full placement and observation bands, the associated observed hazard rates and graduated hazard functions, and the Company's proposed projection lives and curves were inadvertently omitted for five accounts. The omitted graphs are included in Attachment 1. The Company will include the missing graphs as part of its Corrections and Updates filing.

Accounts 362.75, 373.11, 373.12, 373.21, and 373.22 were created with transfers in 2015. Absent the availability of historical retirement data for these accounts, graphs

cannot be plotted and therefore are not included in Attachment 1. As discussed in the Direct Testimony of the Outdoor Lighting Panel, the Company is proposing to segregate the non-LED luminaires from other major components of the street lighting plant accounts and to reduce the projection lives of non-LED luminaires to 20 years. The Panel explains that this proposal will increase depreciation and accelerate the reduction in the net book value of high-intensity discharge (HID) facilities. Retirement data, however, is available for the previously combined Overhead Street Lighting Account 373.10 (now segregated into Account 373.11 and Account 373.12) and Underground Street Lighting account 373.20 (now segregated into Account 373.21 and Account 373.22). Graphs showing the statistically best fitting dispersion and derived projection lives for the full placement and observation bands of Account 373.10 and Account 373.20 and Staff's proposed projection lives and curves for the associated segregated accounts are included as Attachment 2. Finally, it should be noted that the aircraft accounted for in Account 392.21 is fully depreciated.

b. As discussed with Staff, a fit index (or conformance index) of Staff's requested curves cannot be provided. Foster Associates' depreciation system software provides an index of the best fitting dispersion and service life in the statistical service life analysis of a given data sample and the derived best fitting curve cannot to be overridden.

2. As discussed with Staff, the net salvage factors provided by Staff are average net salvage rates. A correct computation of a theoretical reserve requires both an average and future net salvage rate. Foster Associates, therefore, derived the future net salvage rates implicit in Staff's average net salvage rates and used the derived future net salvage rates and Staff's average net salvage rates to calculate theoretical reserve balances provided in Attachment 3.

   Note: Common Transportation Equipment – Aircraft account 392.21 includes the Company's aircraft that at this time is fully depreciated and no longer being depreciated on the Company's books or in the rate case depreciation expense forecast.

Name of Respondent: Dr. Kimbugwe A. Kateregga

Date of Reply: June 12, 2017

NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 352.00 Structures and Improvements

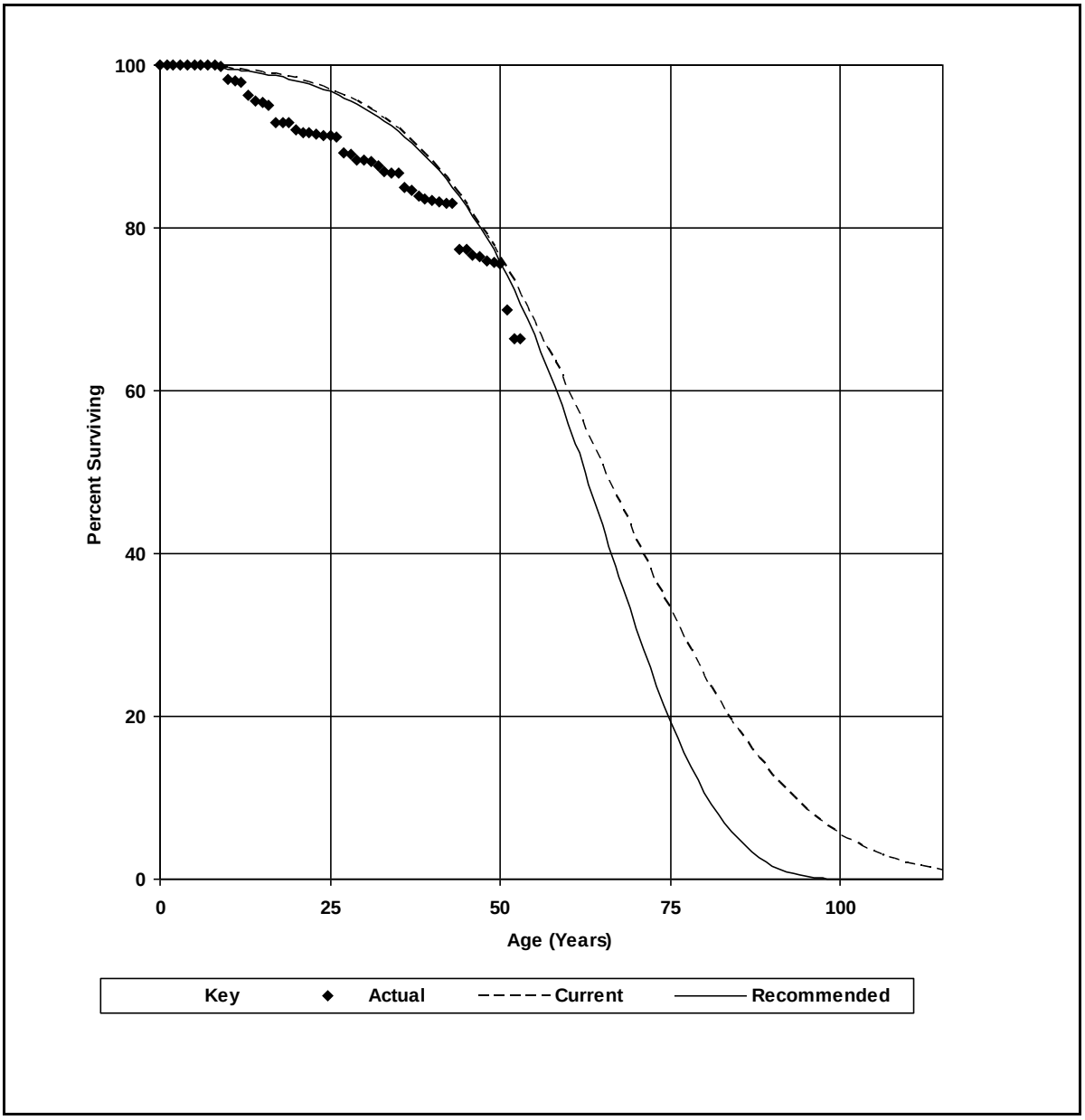
T-Cut: None

Placement Band: 1963-2014

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves

Current: 65.0-H3 Recommended: 60.0-R3



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 353.55 Station Equipment - RTU

T-Cut: None

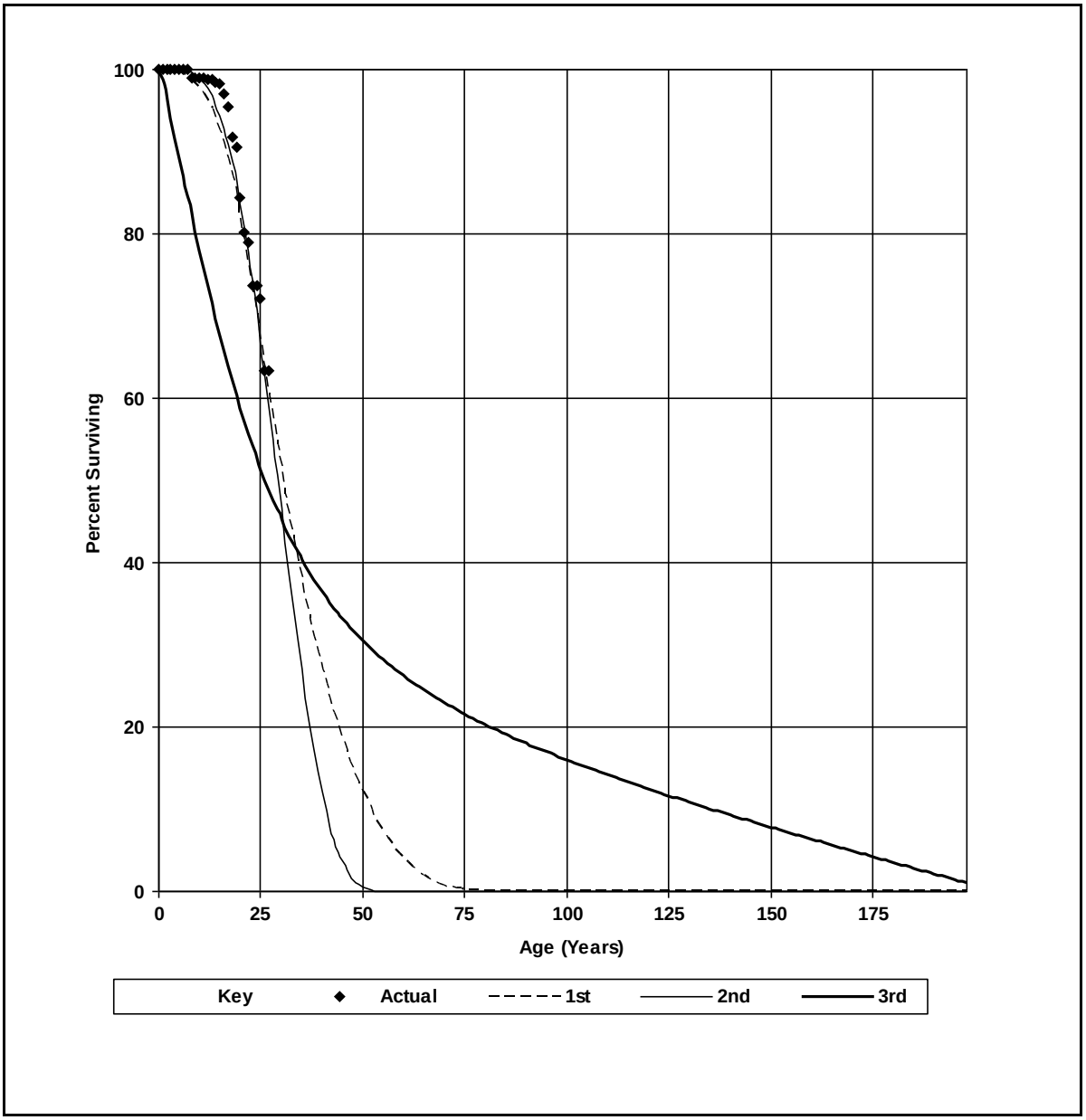
Placement Band: 1989-2015 Observation Band: 1996-2015

Hazard Function: Proportion Retired

Weighting: Exposures

Survivorship Functions

1st: 32.0-L2 2nd: 28.7-S2 3rd: 46.8-O4



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

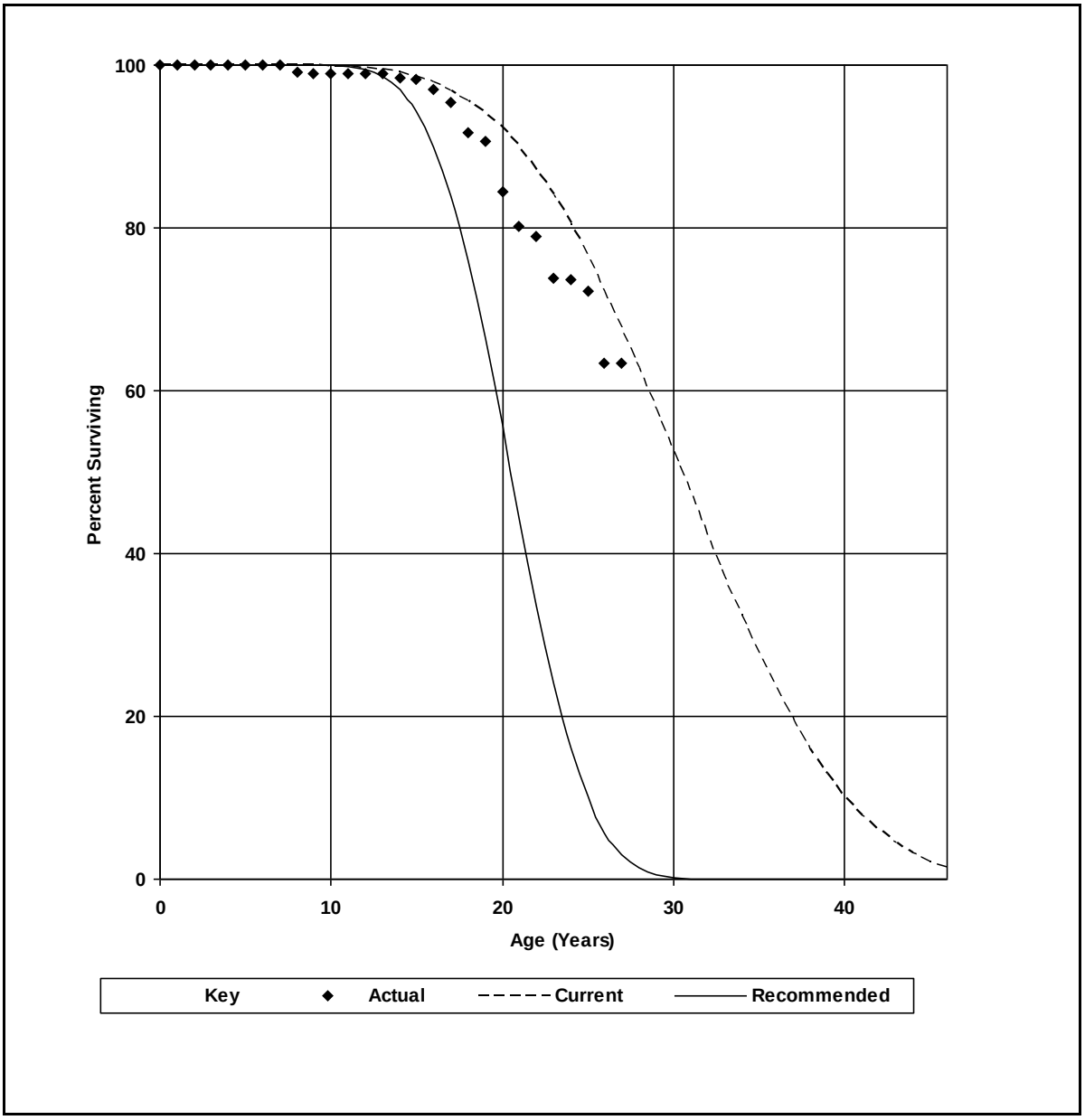
Transmission Plant

Account: 353.55 Station Equipment - RTU

T-Cut: None
Placement Band: 1989-2015
Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 30.0-S3 **Recommended: 20.0-S4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

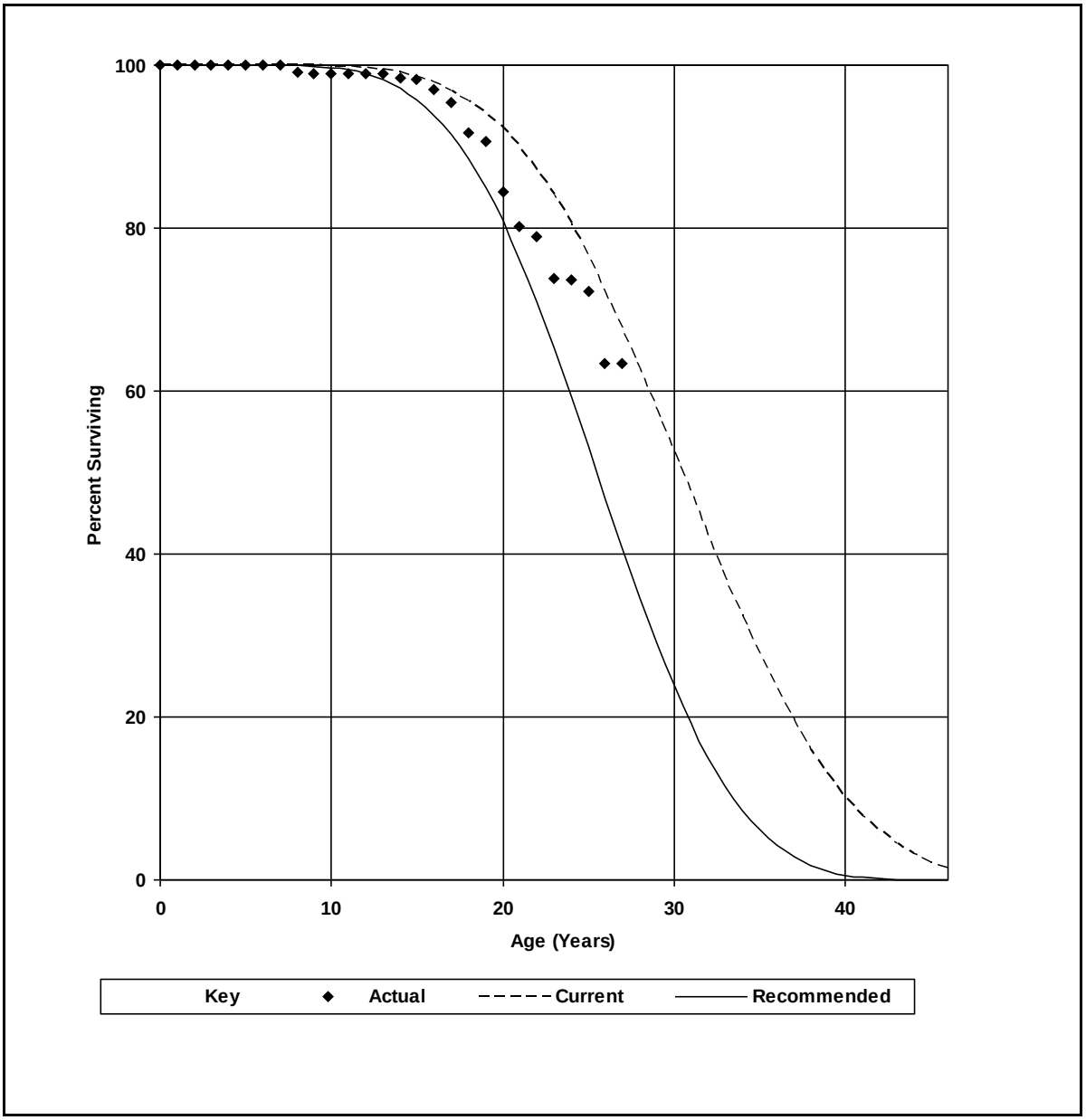
Account: 353.55 Station Equipment - RTU

T-Cut: None

Placement Band: 1989-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 30.0-S3 Recommended: 25.0-S3**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

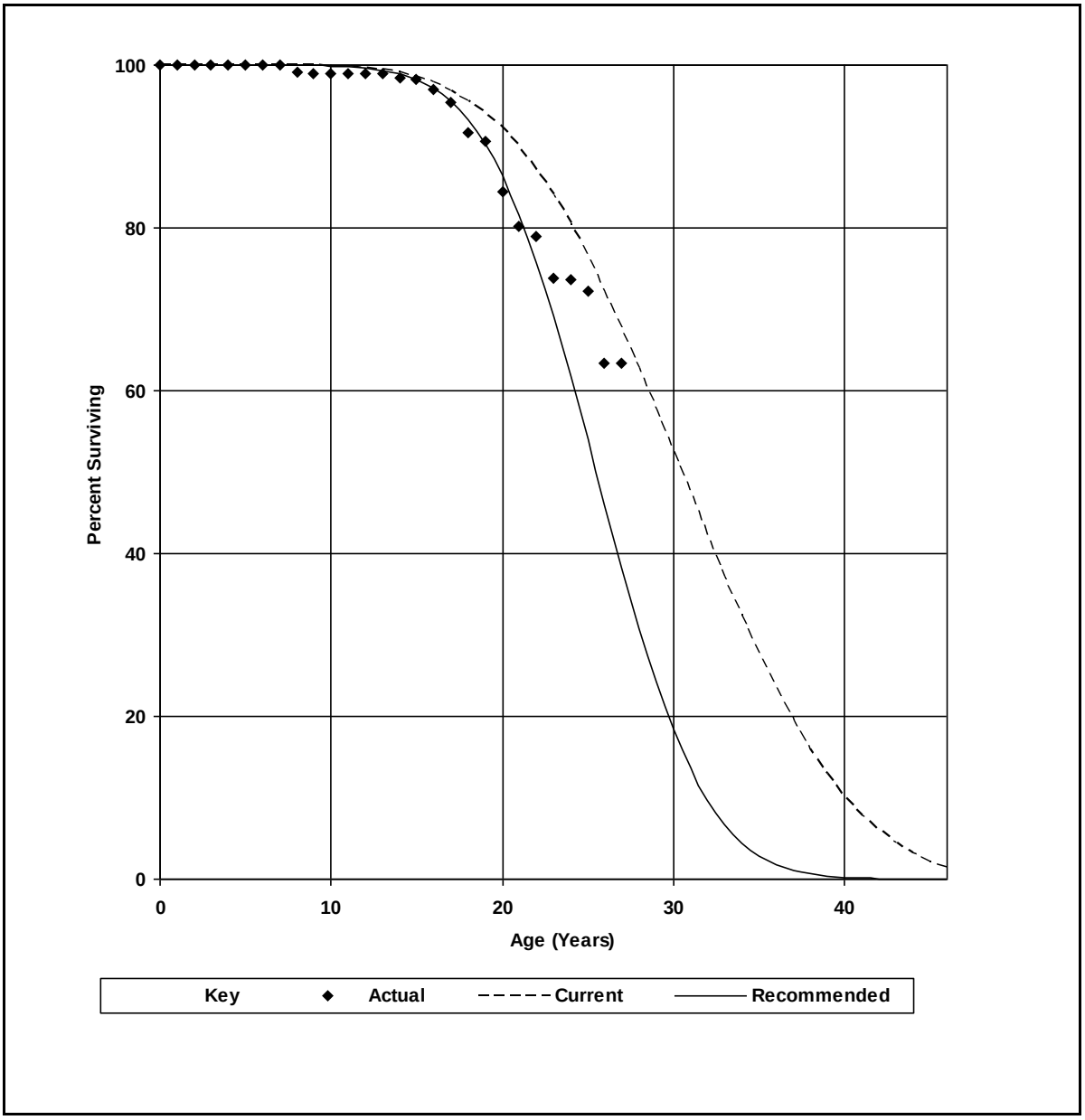
Account: 353.55 Station Equipment - RTU

T-Cut: None

Placement Band: 1989-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 30.0-S3 Recommended: 25.0-H5**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 356.01 Overhead Conductors and Device

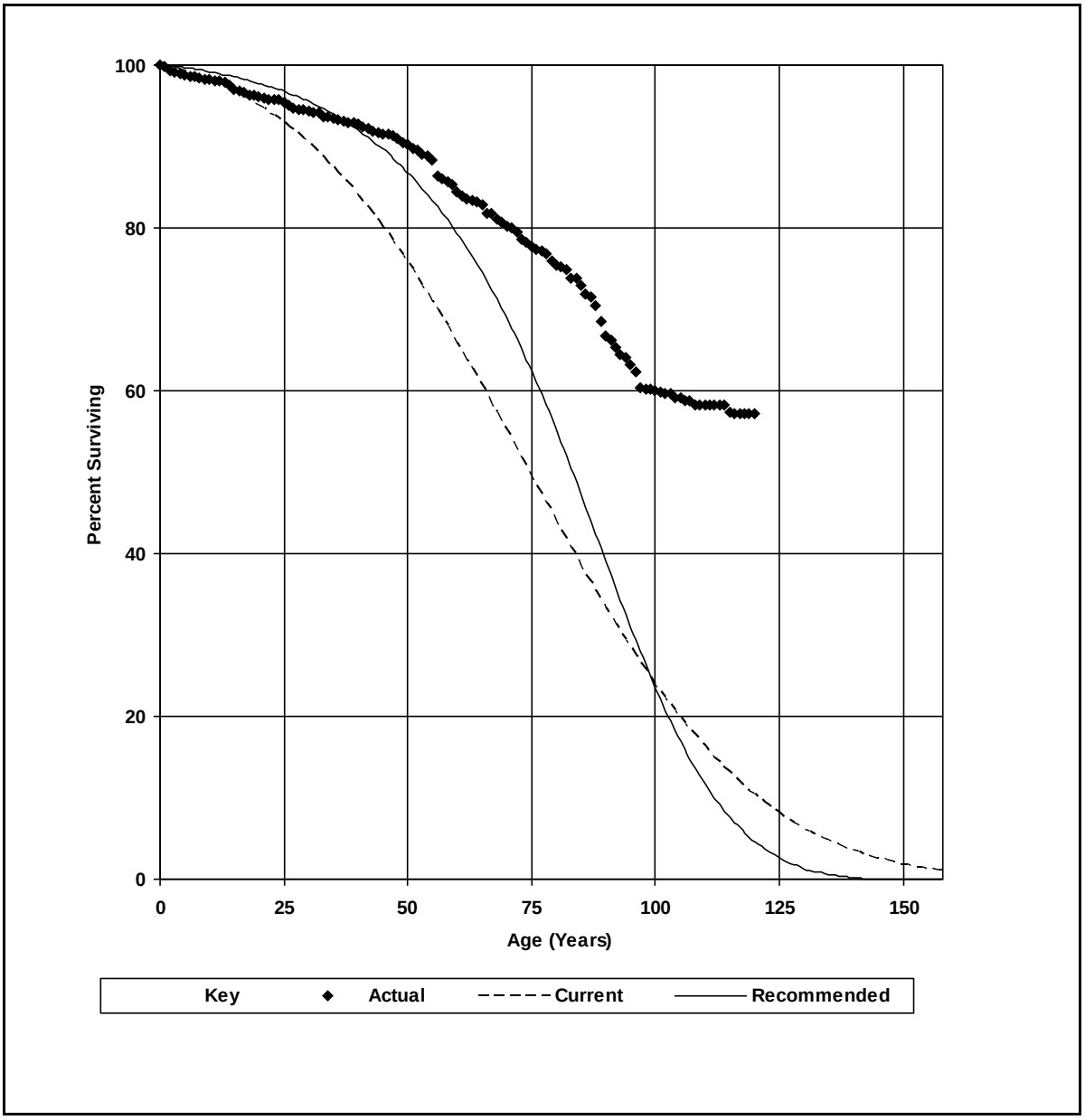
T-Cut: None

Placement Band: 1896-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves

Current: 75.0-H2 Recommended: 80.0-R2.5



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 357.01 Underground Conduit

T-Cut: None

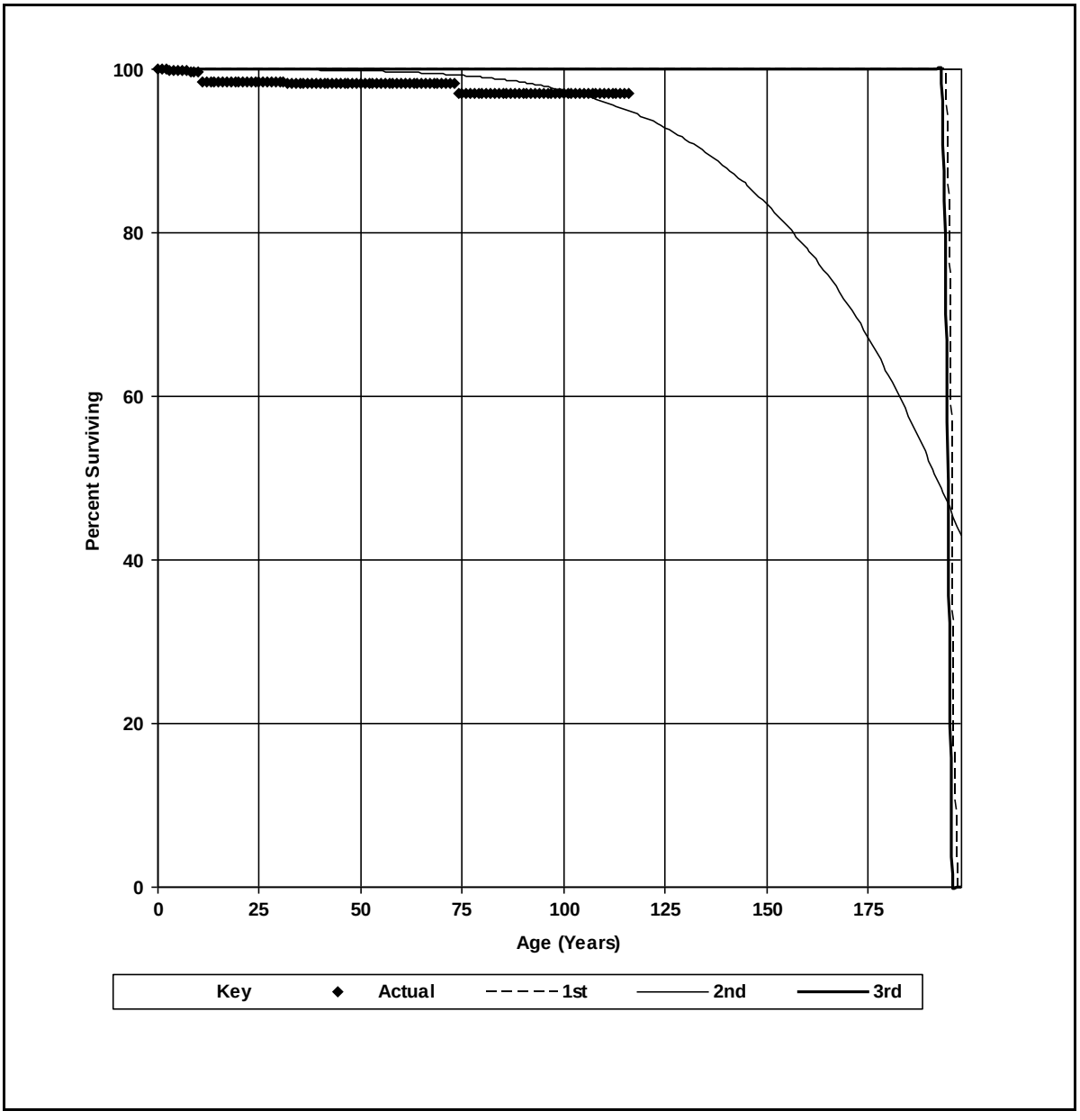
Placement Band: 1900-2015 Observation Band: 1996-2015

Hazard Function: Proportion Retired

Weighting: Exposures

1st: 195.9-SQ 2nd: 186.6-R4 3rd: 195.0-SQ

Survivorship Functions



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

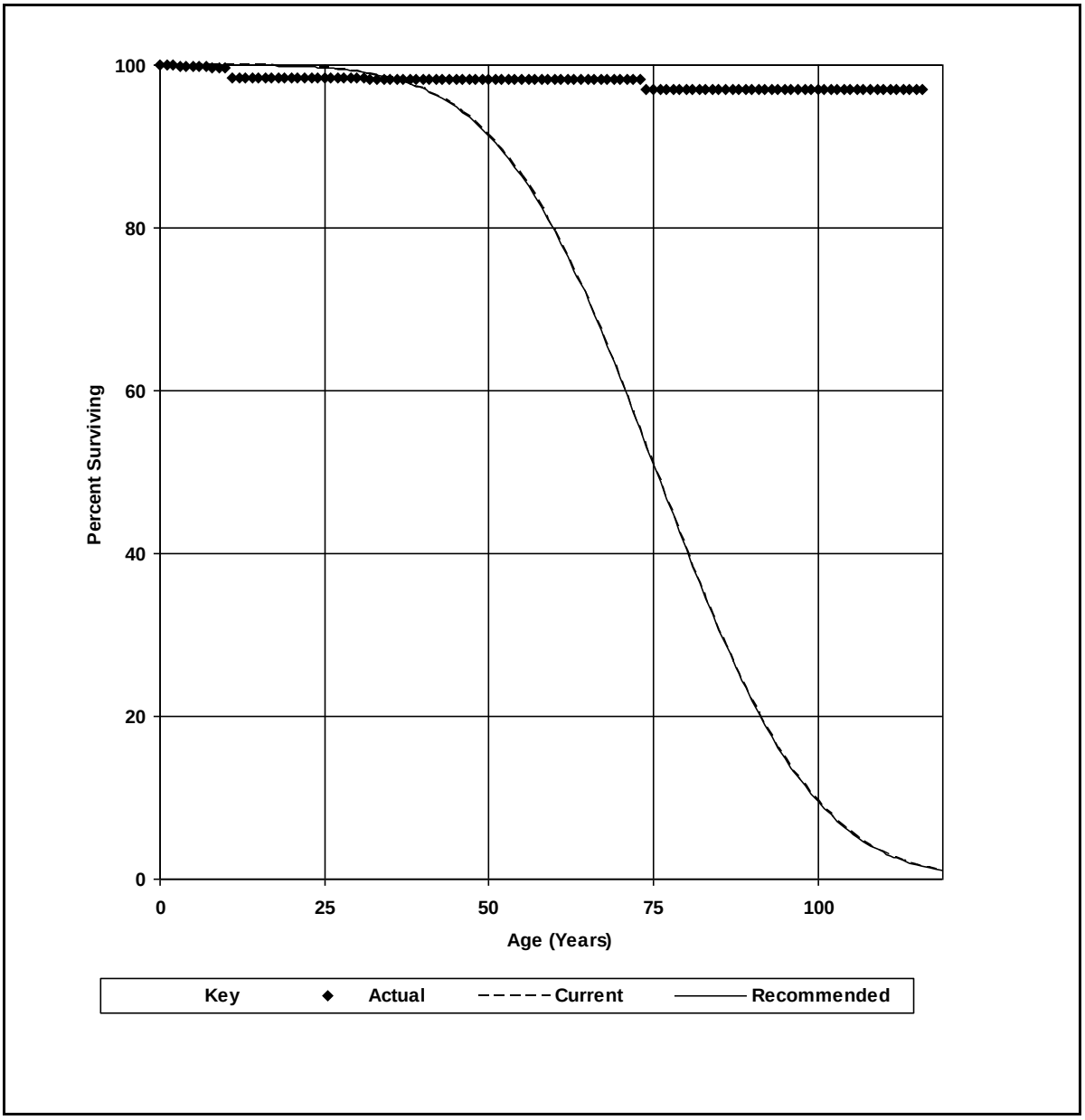
Transmission Plant

Account: 357.01 Underground Conduit

T-Cut: None
Placement Band: 1900-2015
Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-H4 Recommended: 75.0-H4



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 357.01 Underground Conduit

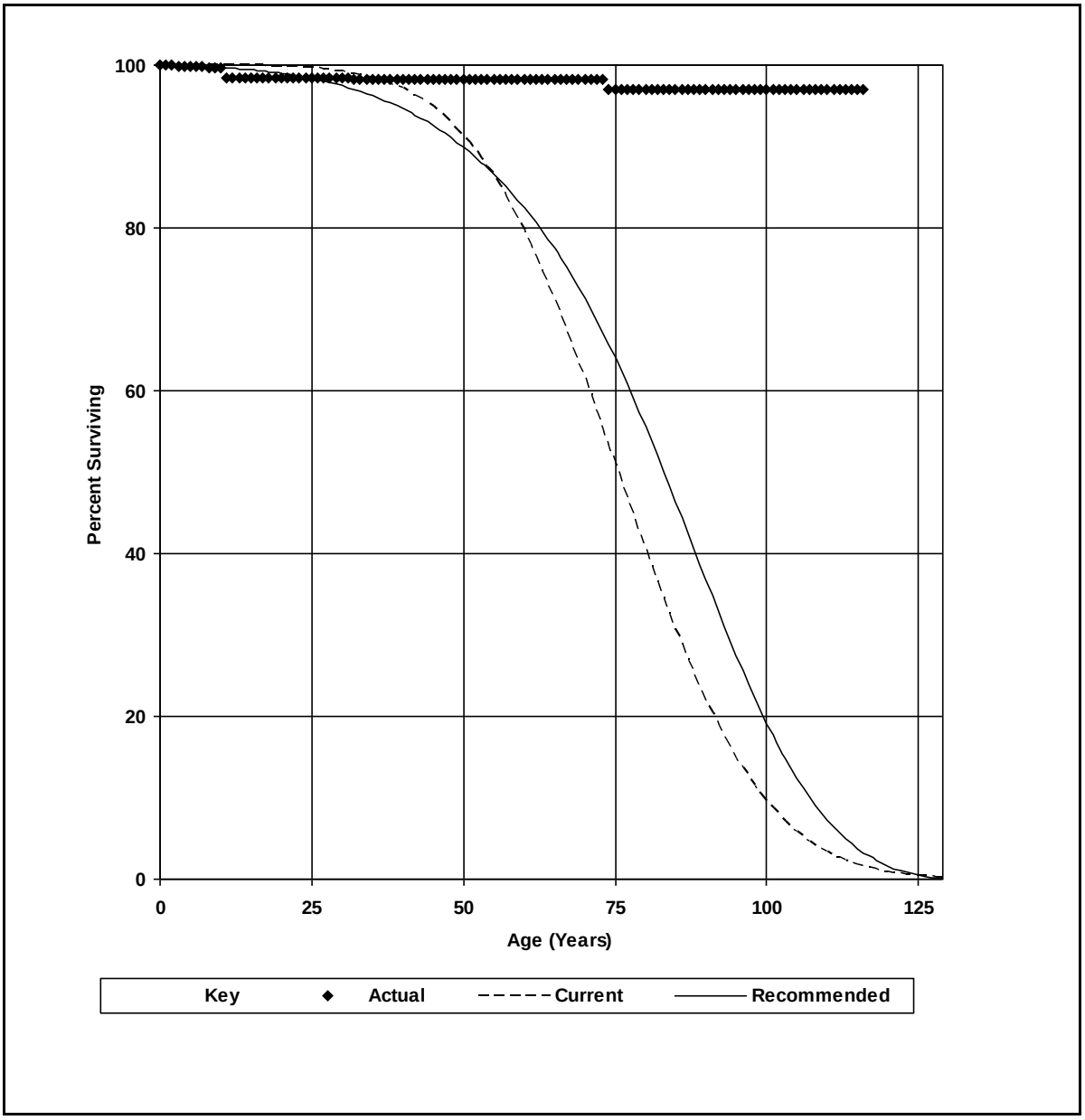
T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves

Current: 75.0-H4 Recommended: 80.0-R3



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 358.00 Underground Conductors and Devices

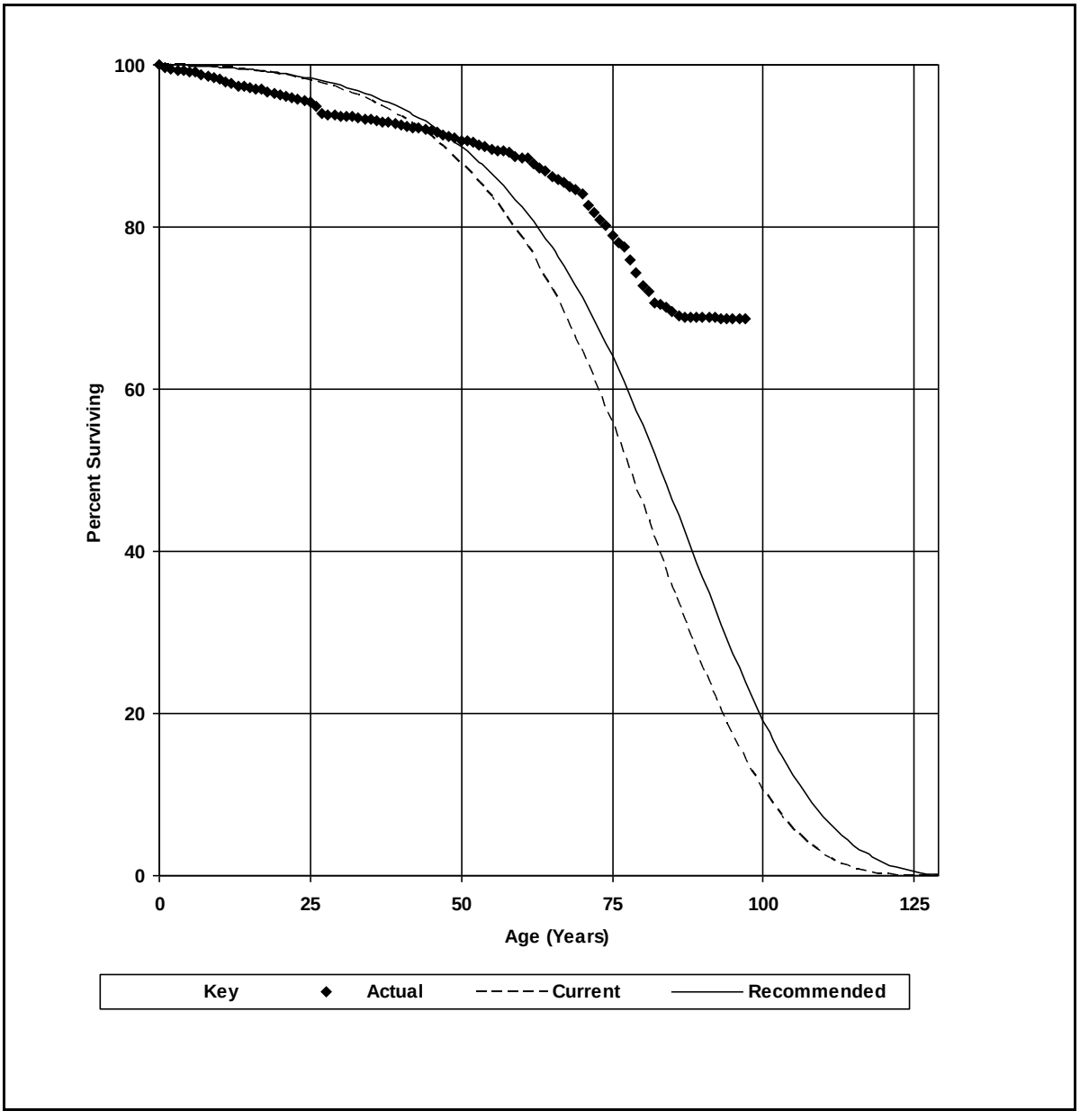
T-Cut: None

Placement Band: 1919-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves

Current: 75.0-R3 Recommended: 80.0-R3



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 362.01 Station Equipment

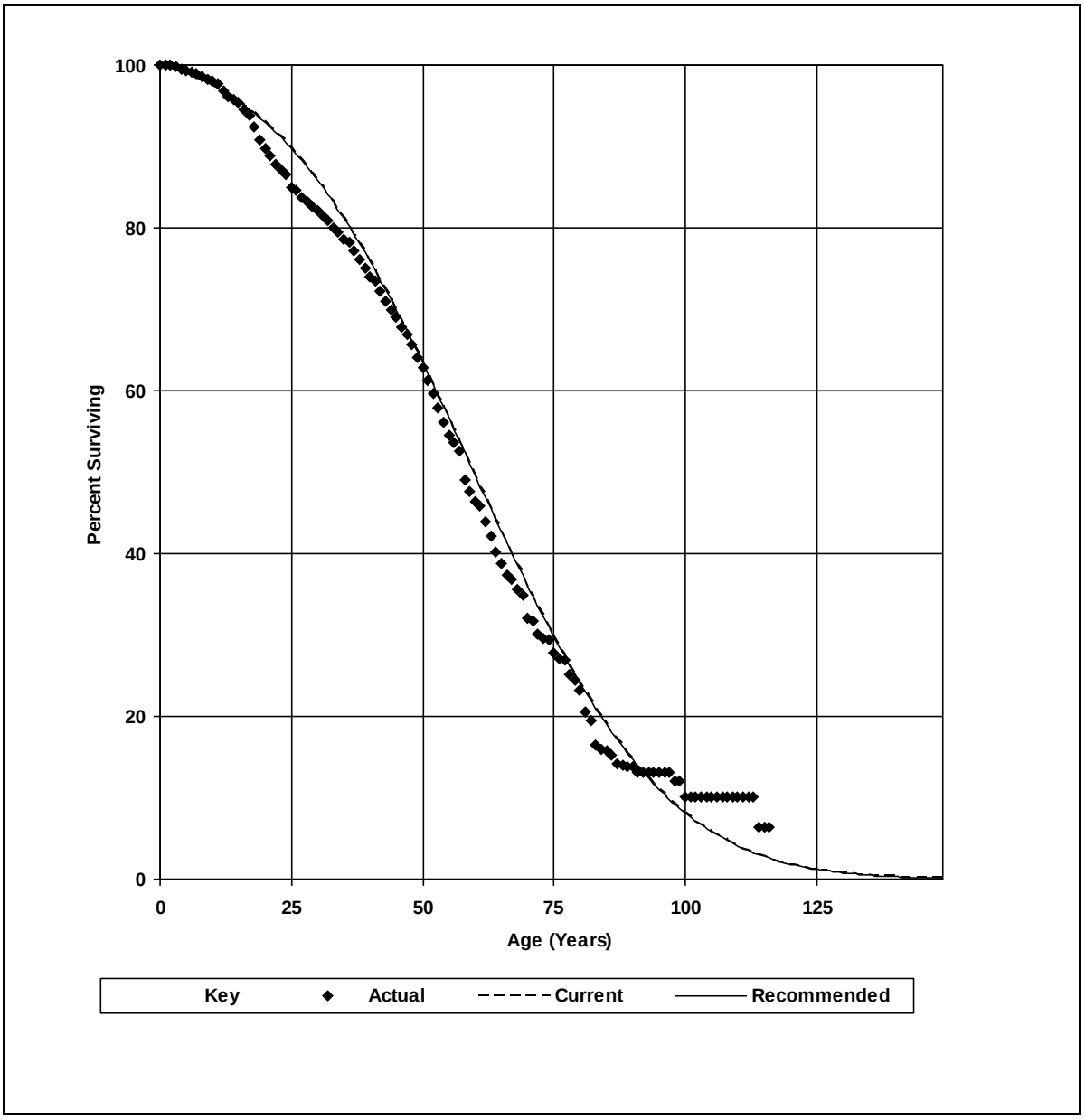
T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves

Current: 60.0-H2 Recommended: 60.0-H2



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 362.55 Station Equipment - RTU

T-Cut: None

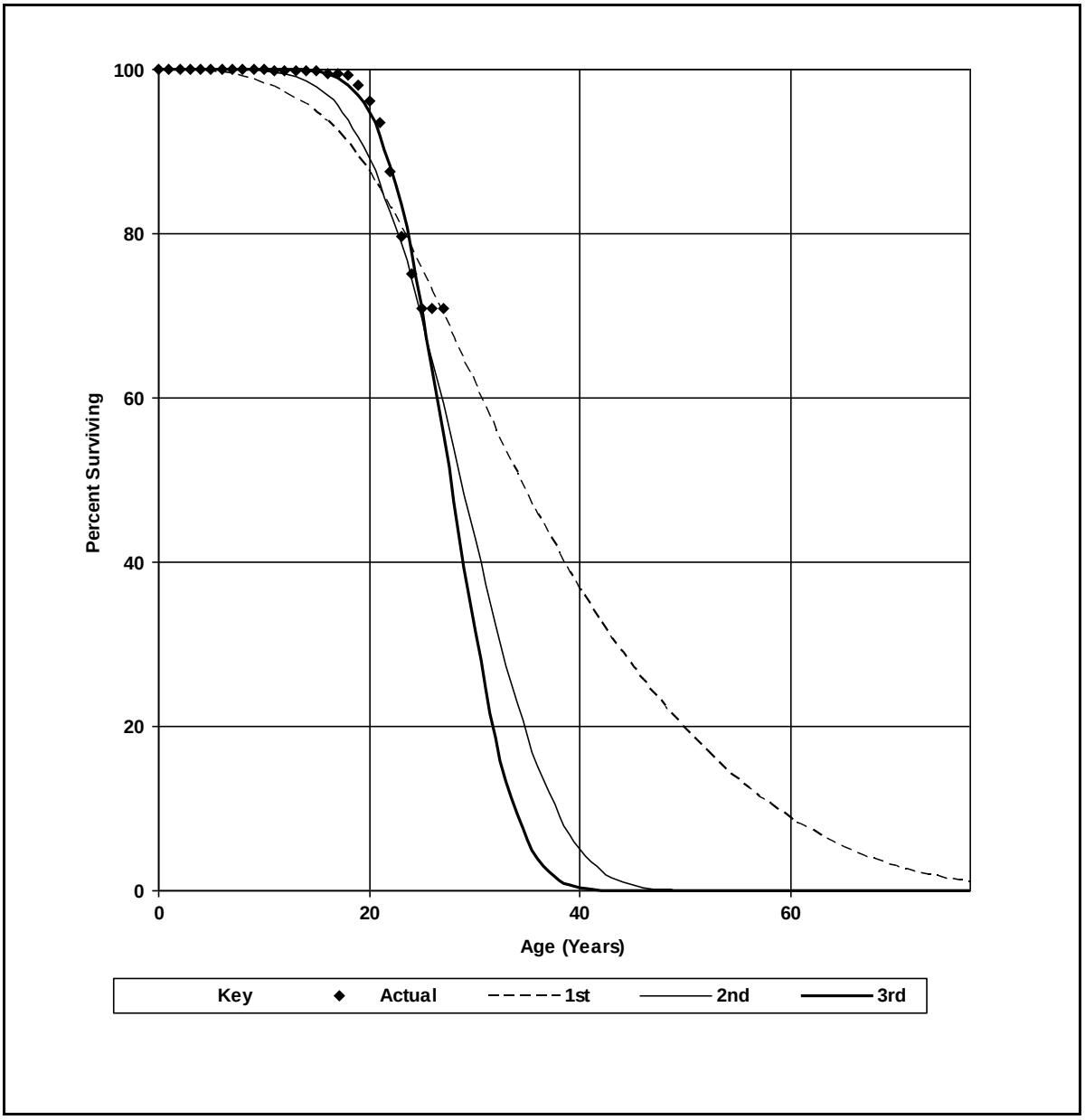
Placement Band: 1989-2015 Observation Band: 1996-2015

Hazard Function: Proportion Retired

Weighting: Exposures

1st: 36.1-L2 2nd: 28.2-S3 3rd: 27.2-S4

Survivorship Functions



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

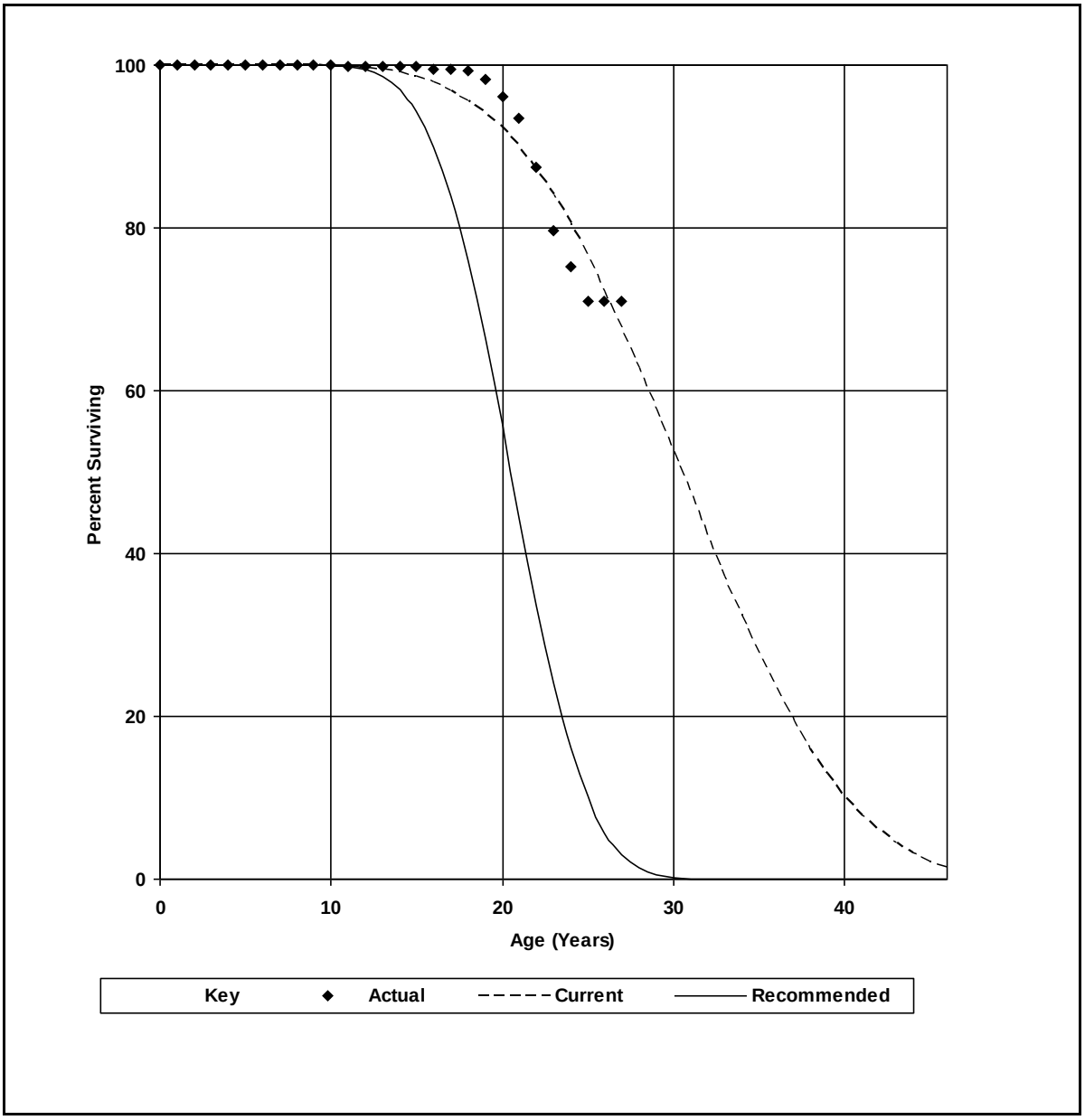
Distribution Plant

Account: 362.55 Station Equipment - RTU

T-Cut: None
Placement Band: 1989-2015
Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 30.0-S3 **Recommended: 20.0-S4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

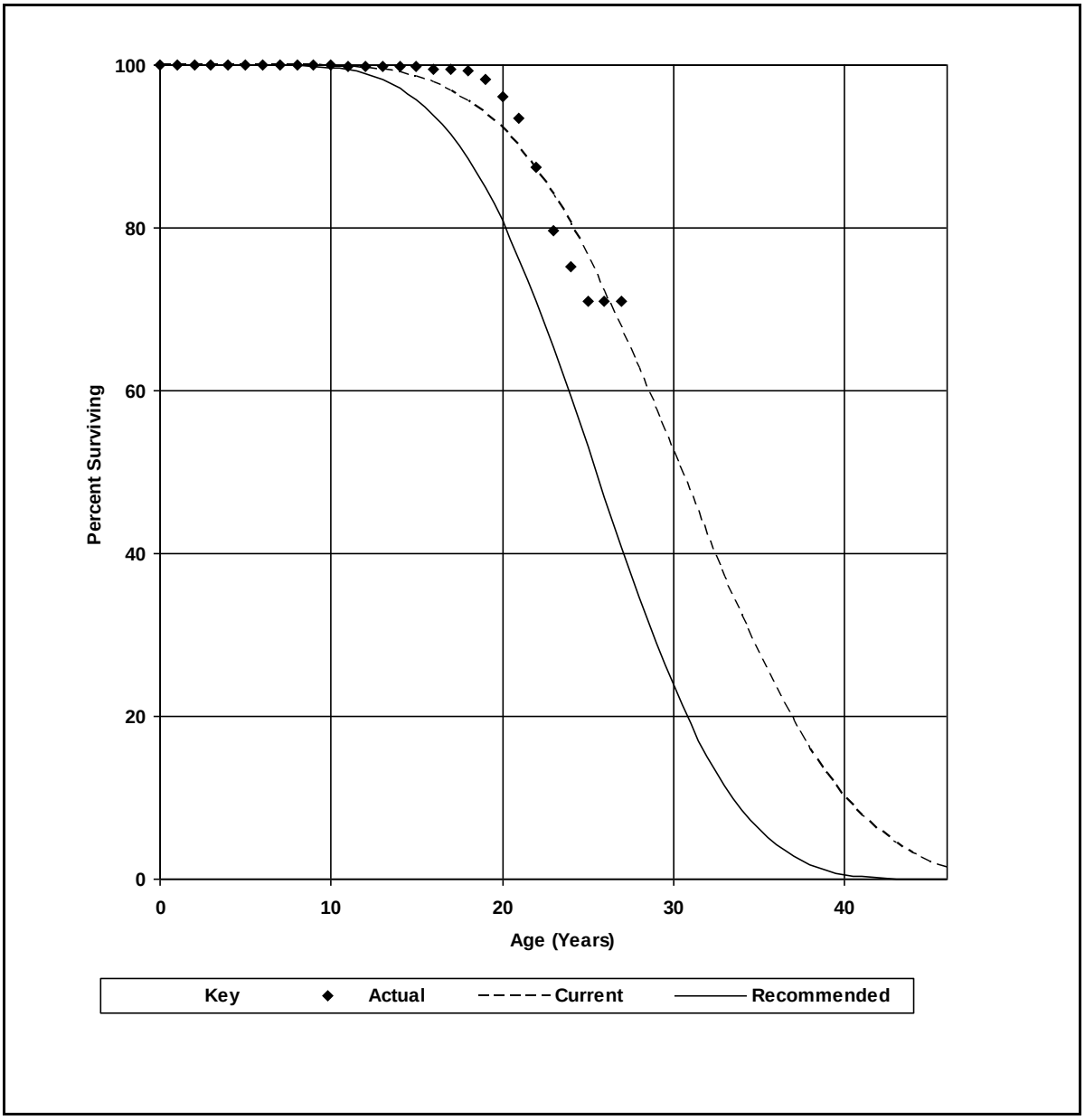
Account: 362.55 Station Equipment - RTU

T-Cut: None

Placement Band: 1989-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 30.0-S3 Recommended: 25.0-S3**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 365.00 Overhead Conductors and Devices

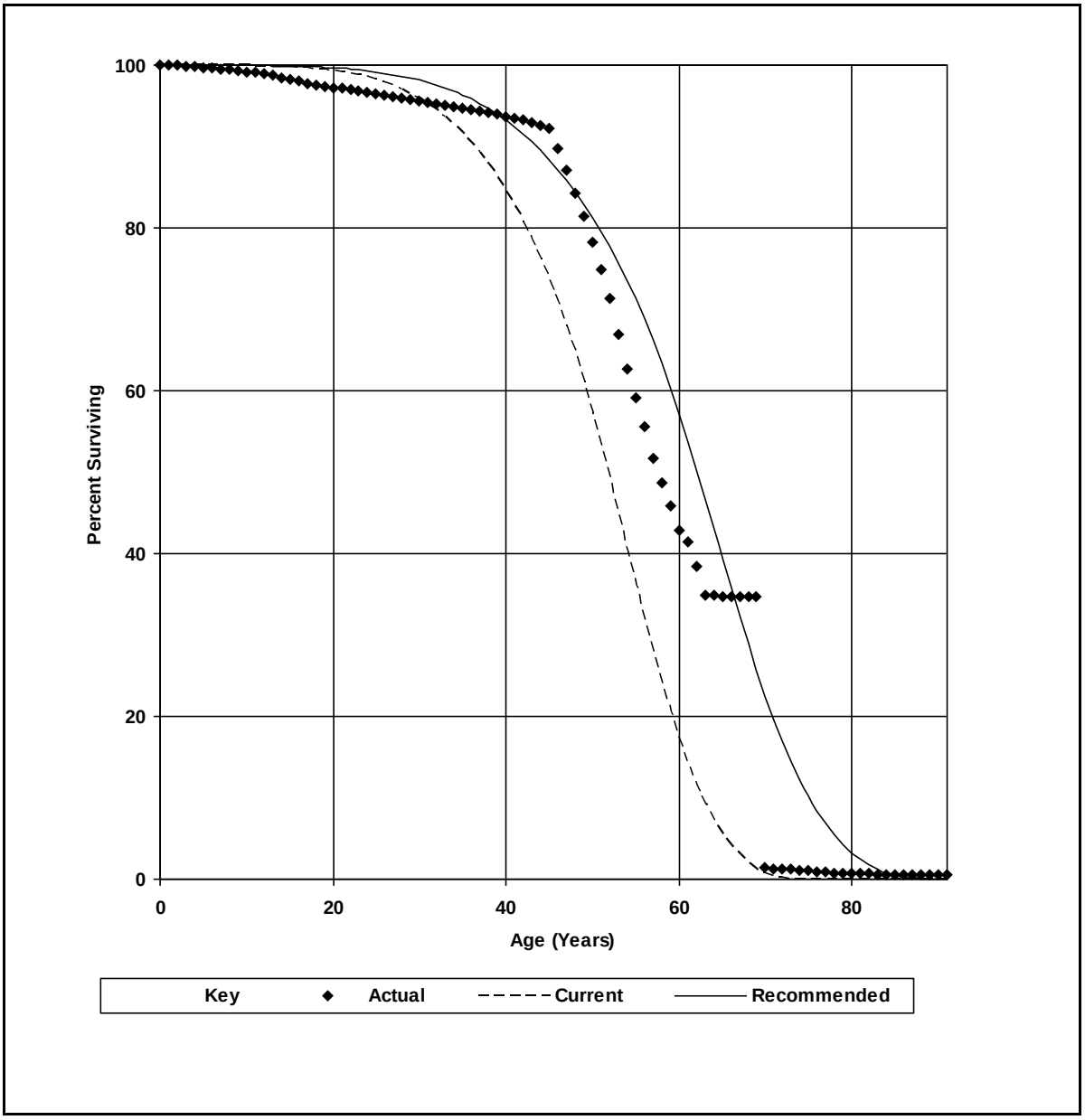
T-Cut: None

Placement Band: 1925-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves

Current: 50.0-R4 Recommended: 60.0-R4



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 368.01 Line Transformers - Bare Cost

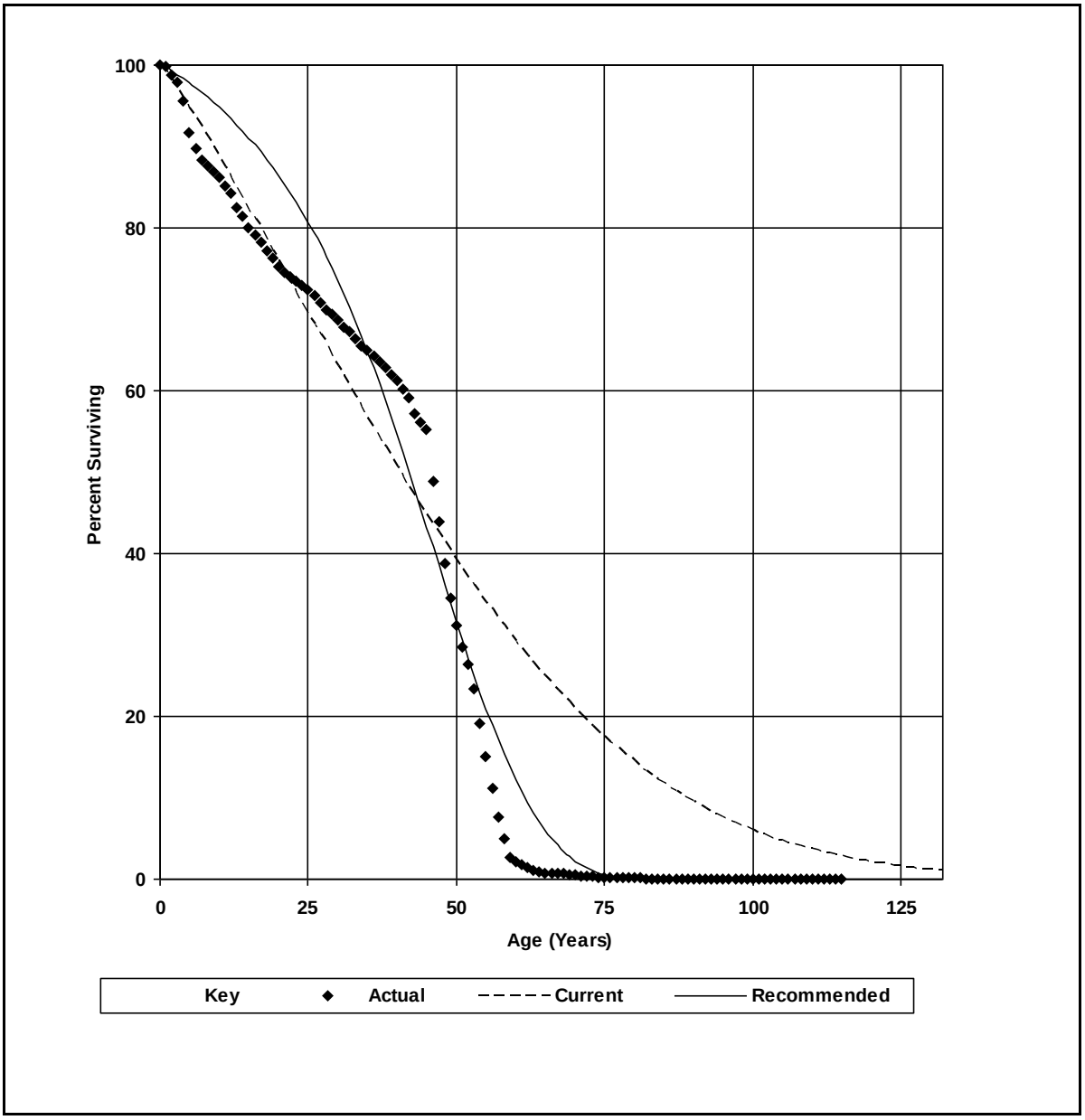
T-Cut: None

Placement Band: 1901-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves

Current: 45.0-H0.5 Recommended: 40.0-R1.5



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 368.30 Line Transformers - Install Cost

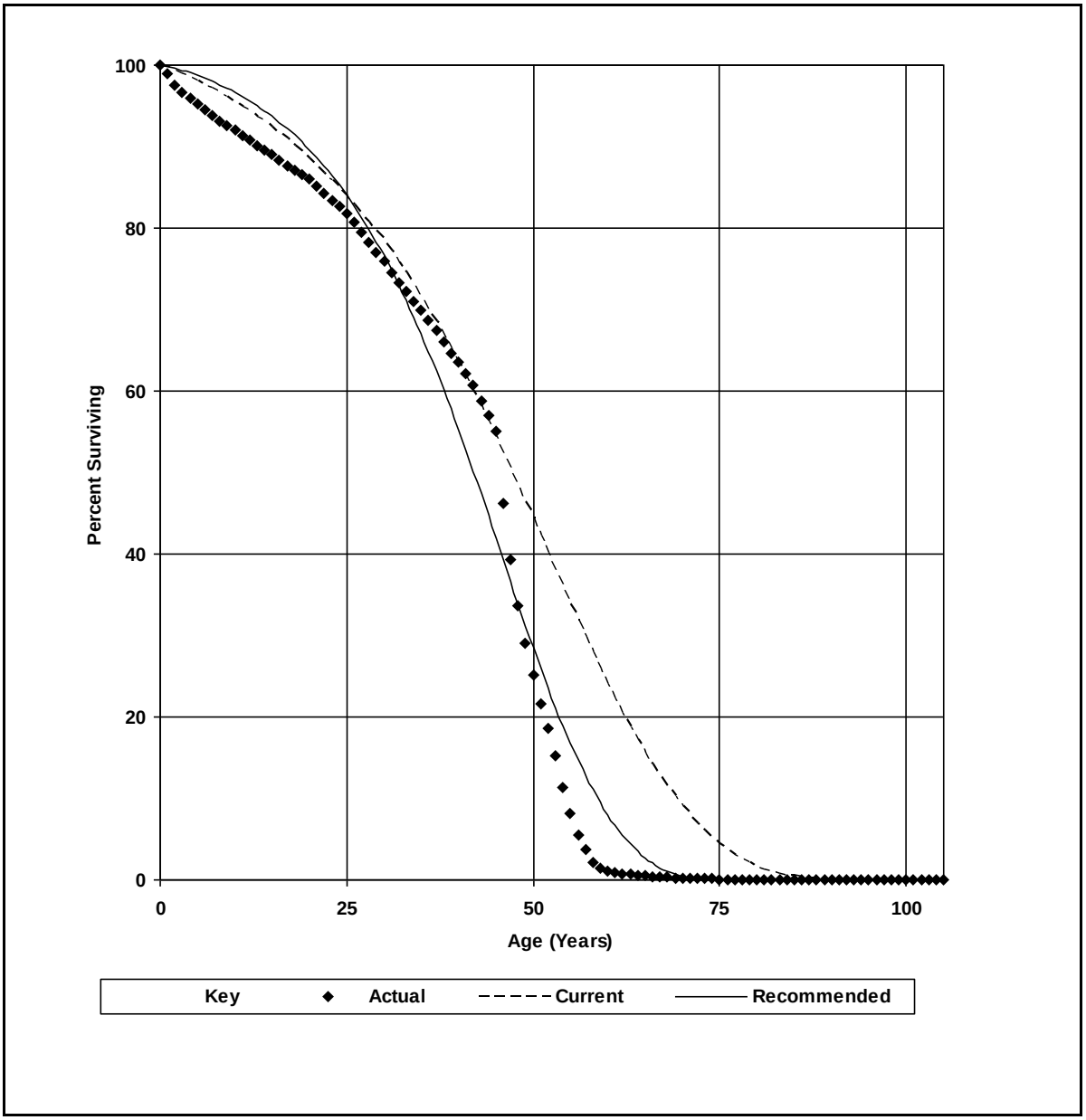
T-Cut: None

Placement Band: 1901-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves

Current: 45.0-R1.5 Recommended: 40.0-R2



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 369.20 Underground Services - Conduit

T-Cut: None

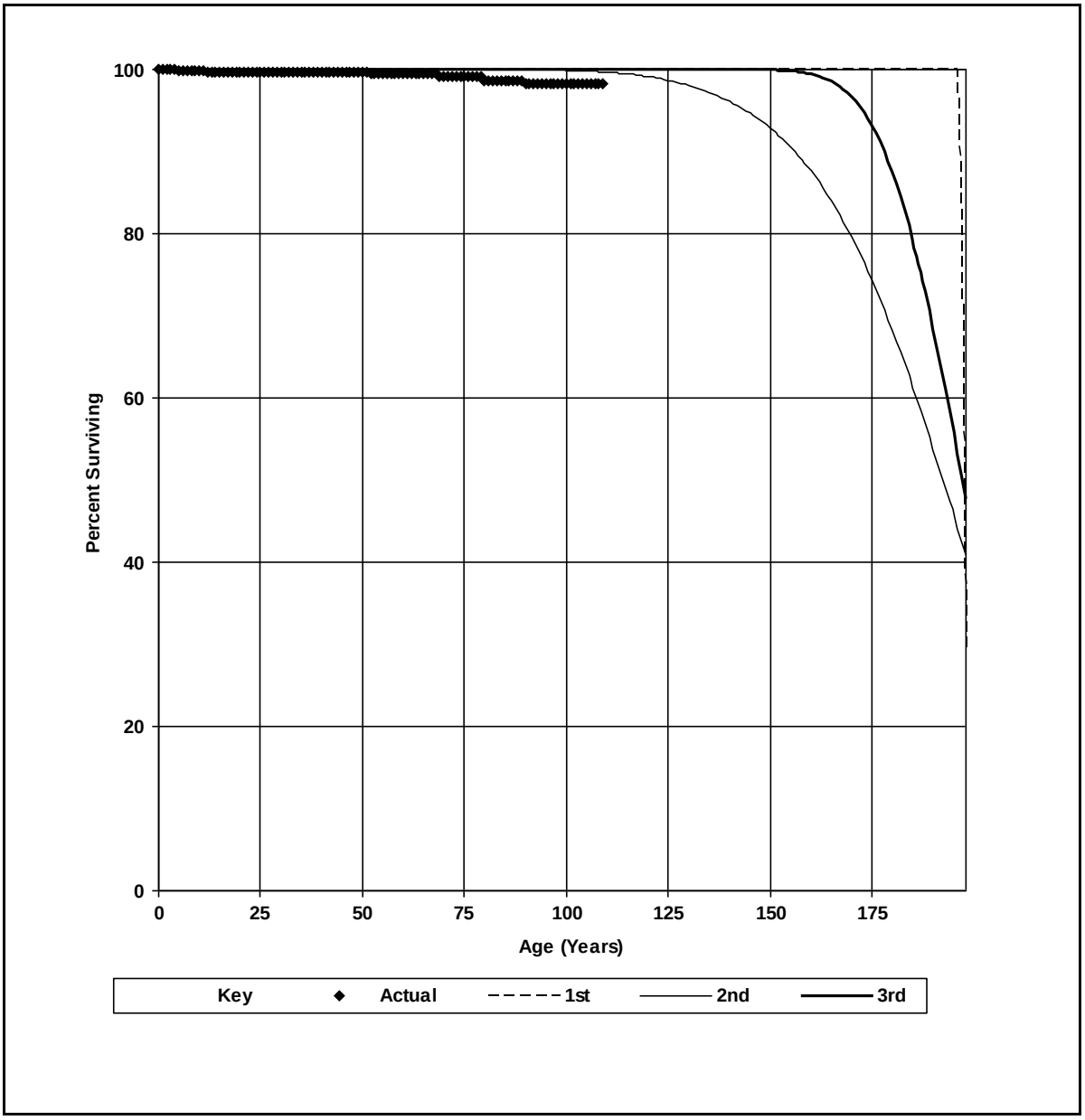
Placement Band: 1907-2015 Observation Band: 1996-2015

Hazard Function: Proportion Retired

Weighting: Exposures

Survivorship Functions

1st: 198.1-SQ 2nd: 189.6-R5 3rd: 196.7-S6



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

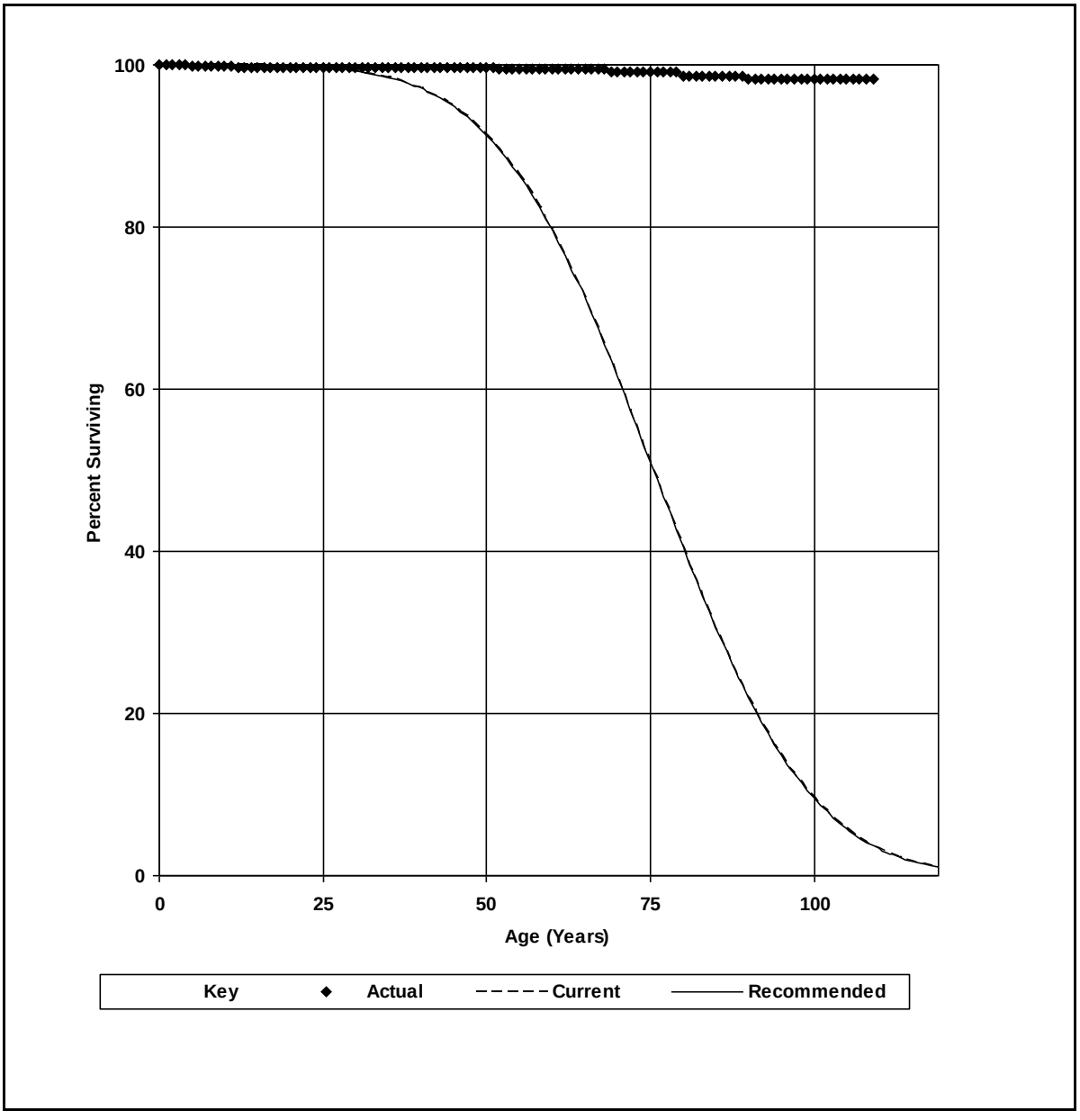
Distribution Plant

Account: 369.20 Underground Services - Conduit

T-Cut: None
Placement Band: 1907-2015
Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-H4 **Recommended: 75.0-H4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

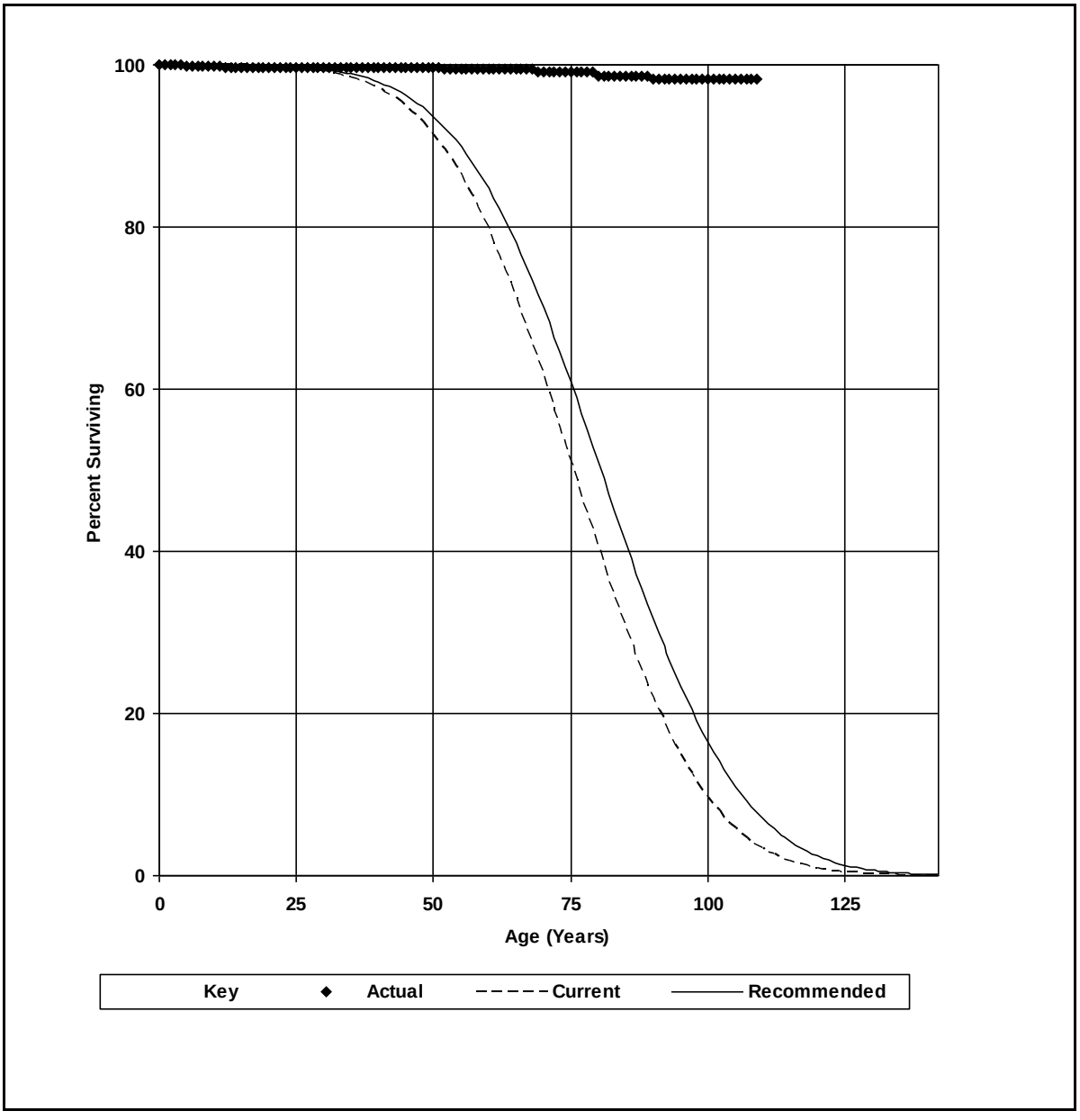
Account: 369.20 Underground Services - Conduit

T-Cut: None

Placement Band: 1907-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 75.0-H4 Recommended: 80.0-H4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 369.21 Underground Services - Cable

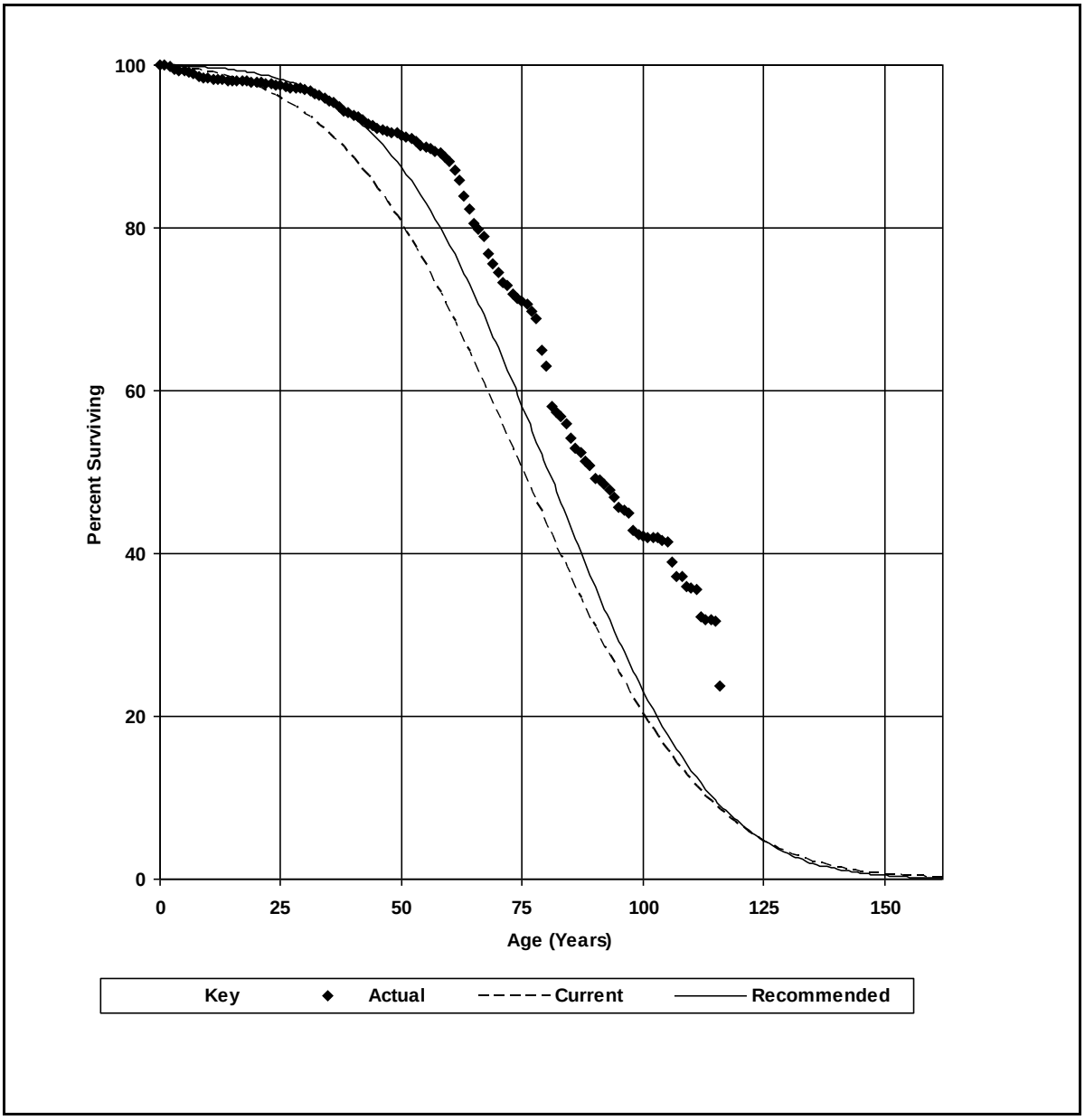
T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves

Current: 75.0-H2.5 Recommended: 80.0-H3



NIAGARA MOHAWK POWER CORPORATION - COMMON

Schedule E
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General Plant

Depreciable

Account: 392.21 Transportation Equipment - Aircraft

T-Cut: None

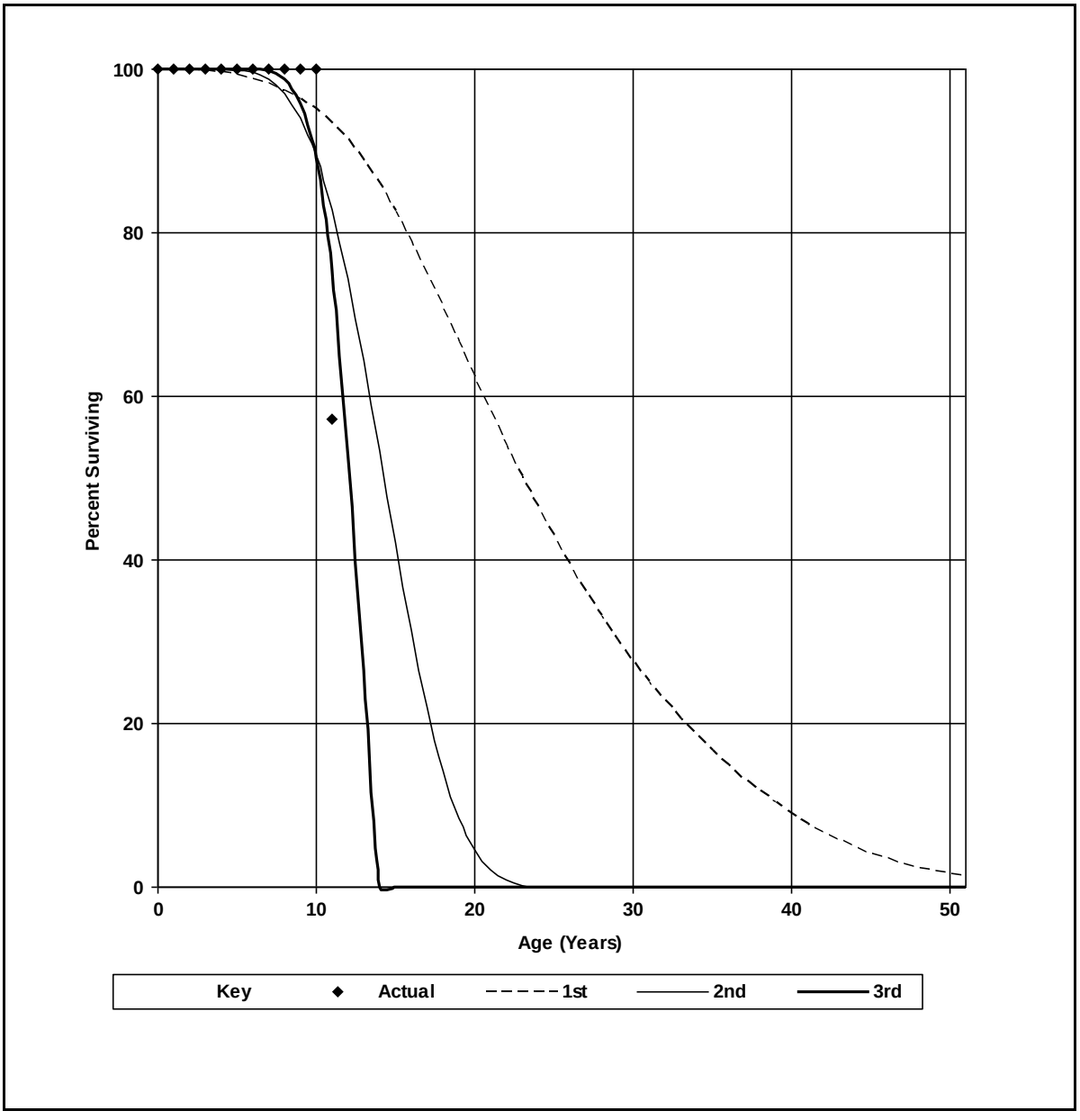
Placement Band: 1994-2008 Observation Band: 1996-2015

Hazard Function: Proportion Retired

Weighting: Exposures

Survivorship Functions

1st: 24.1-L2 2nd: 13.8-S3 3rd: 11.5-R5



NIAGARA MOHAWK POWER CORPORATION - COMMON

Schedule E
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General Plant

Depreciable

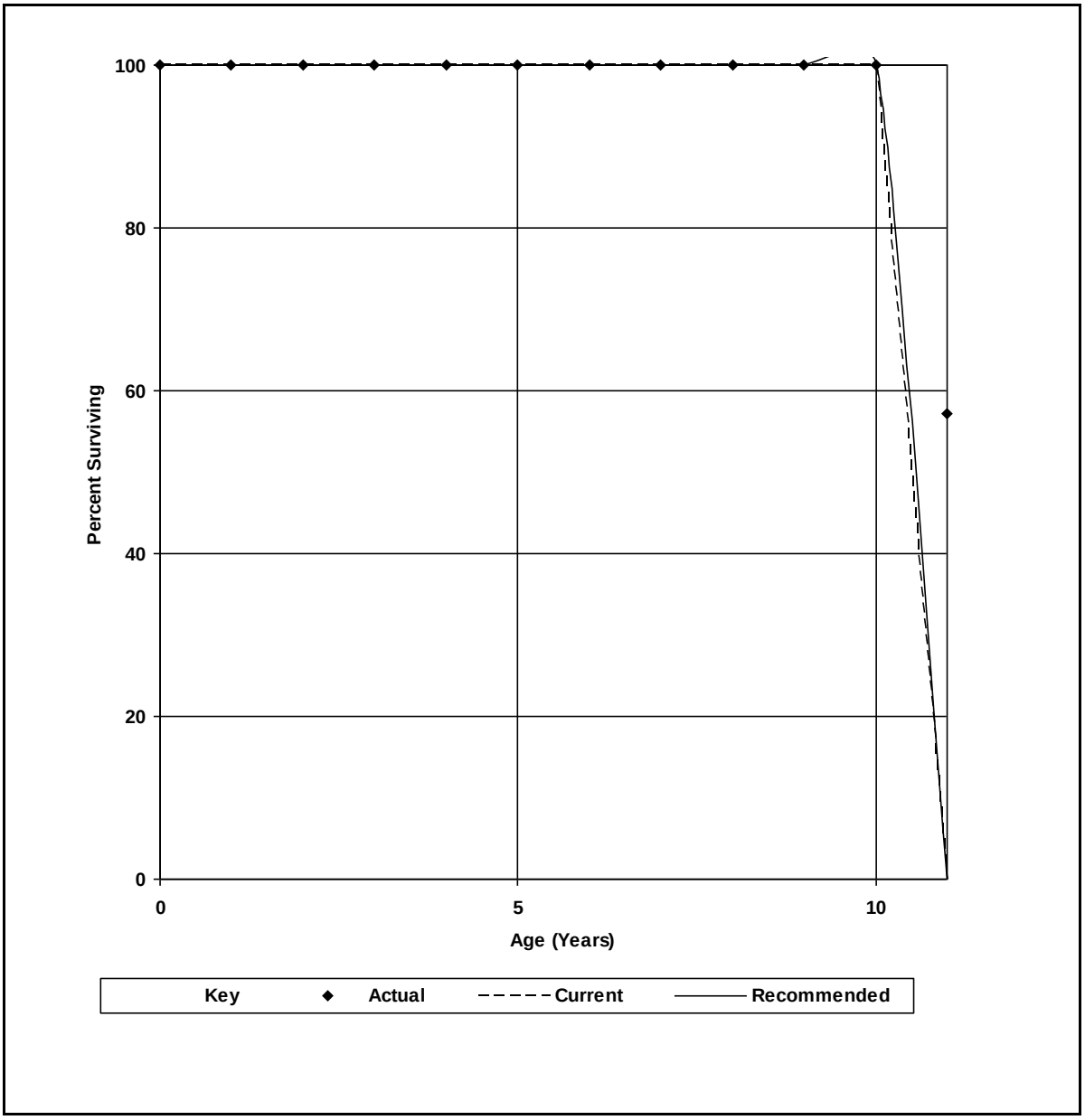
Account: 392.21 Transportation Equipment - Aircraft

T-Cut: None

Placement Band: 1994-2008

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 10.0-SQ** **Recommended: 10.0-SQ**



NIAGARA MOHAWK POWER CORPORATION - COMMON

Schedule E
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General Plant

Depreciable

Account: 392.21 Transportation Equipment - Aircraft

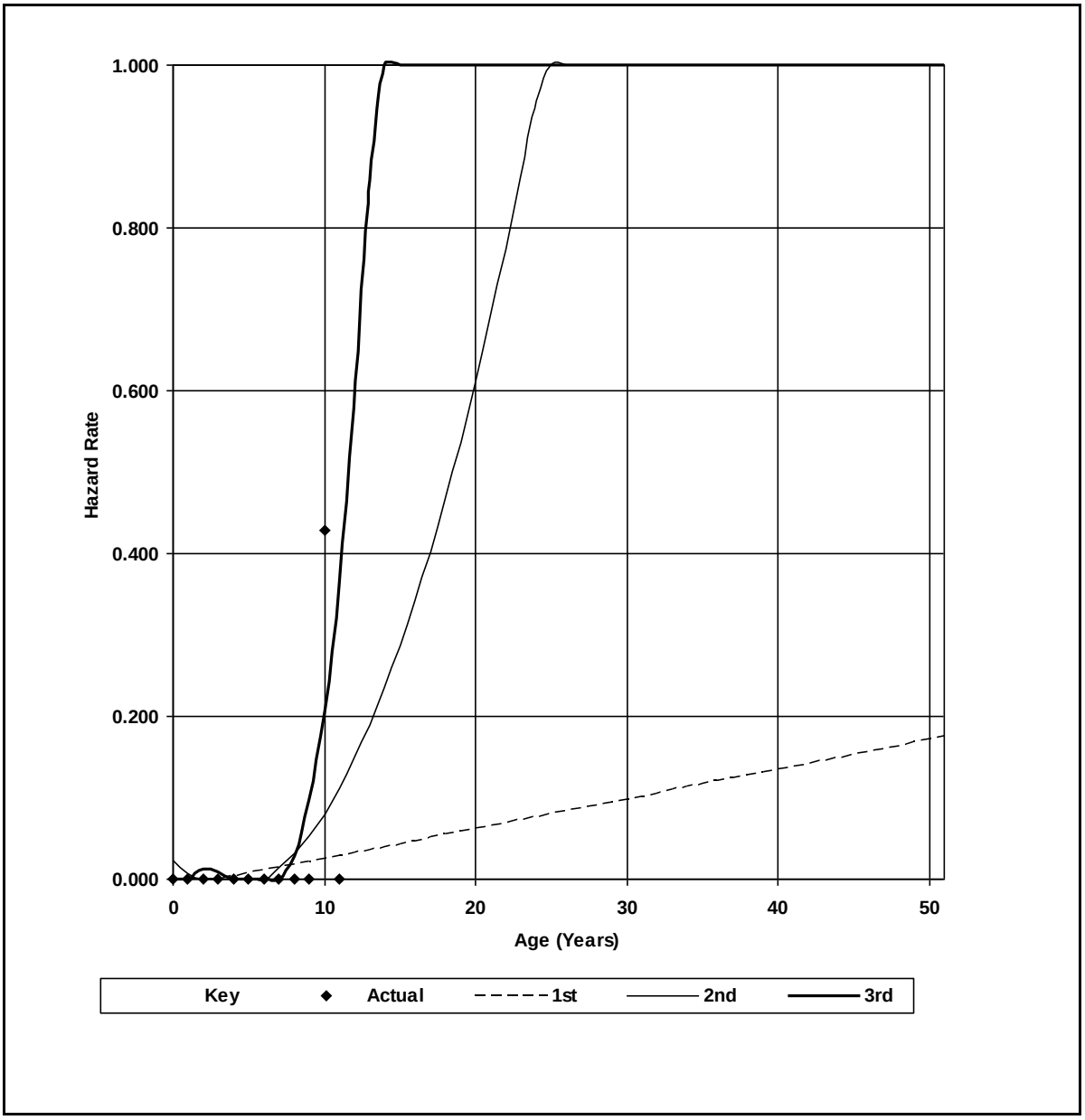
T-Cut: None

Placement Band: 1994-2008 Observation Band: 1996-2015

Hazard Function: Proportion Retired

Weighting: Exposures

Polynomial Hazard Functions **1st: 24.1-L2 2nd: 13.8-S3 3rd: 11.5-R5**



NIAGARA MOHAWK POWER CORPORATION - COMMON

STAFF - Sch. E
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General Plant

Depreciable

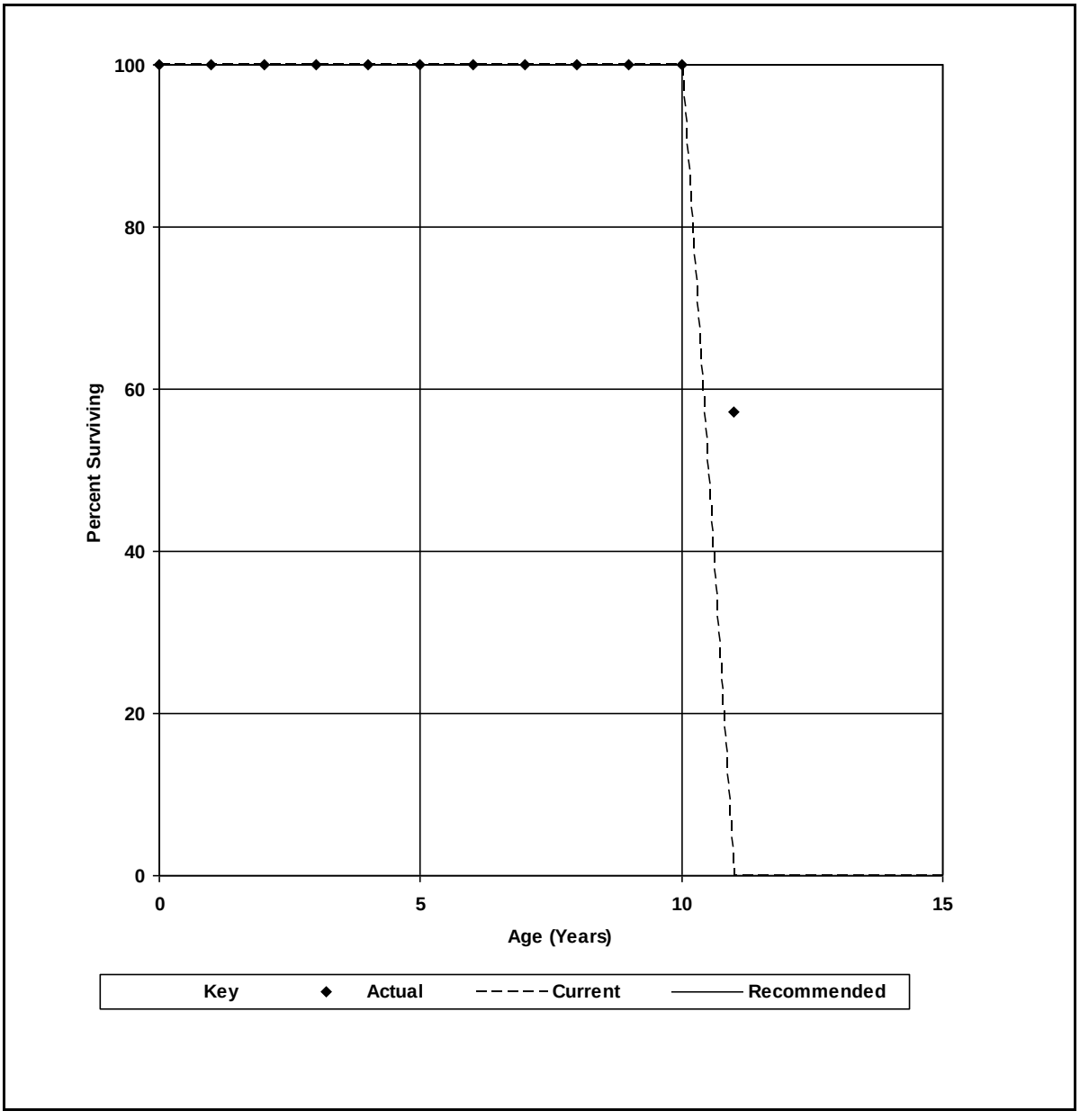
Account: 392.21 Transportation Equipment - Aircraft

T-Cut: None

Placement Band: 1994-2008

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 10.0-SQ Recommended: 15.0-SQ**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 373.10 OH Street Lighting

T-Cut: None

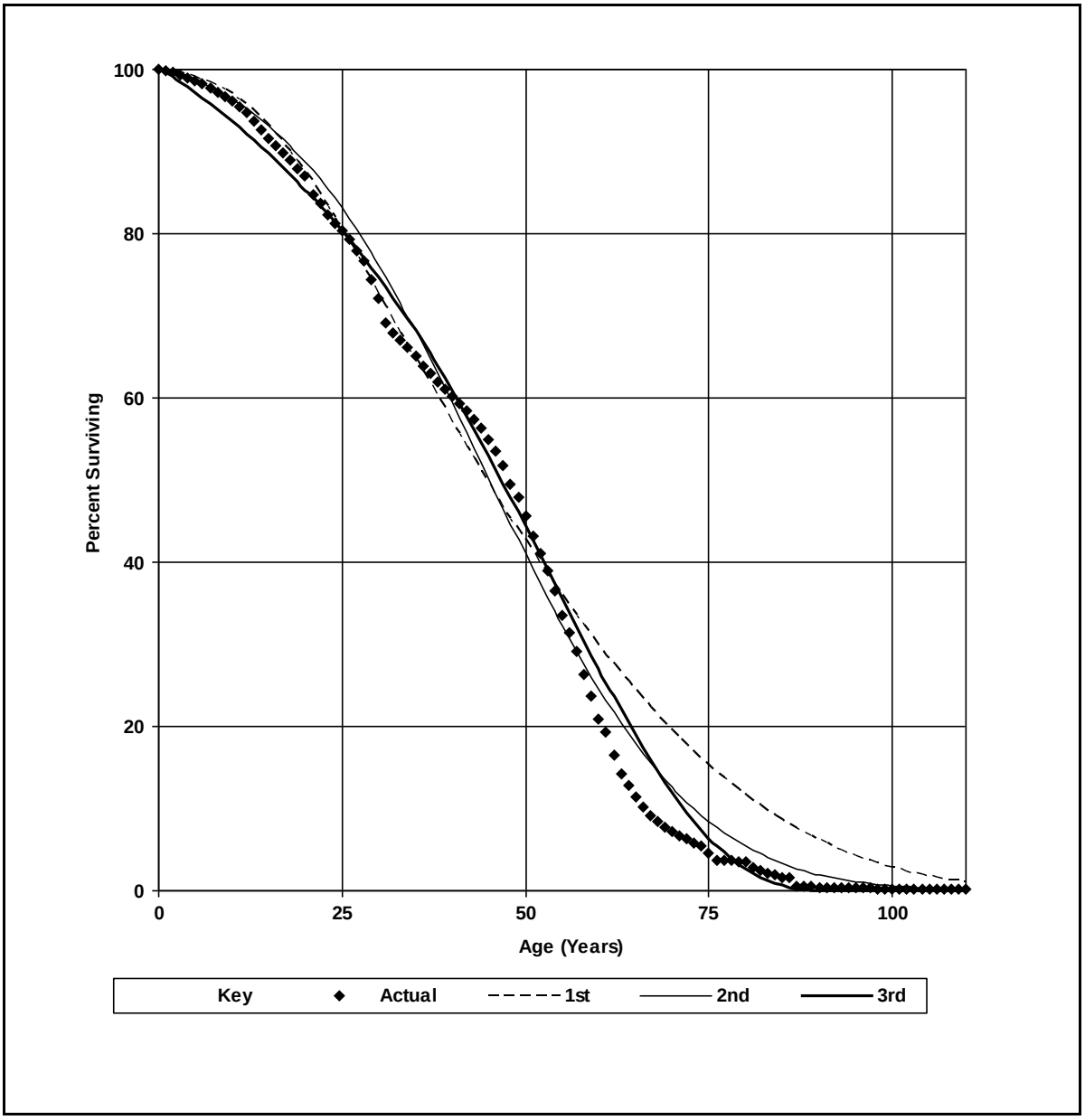
Placement Band: 1900-2015 Observation Band: 1996-2015

Hazard Function: Proportion Retired

Weighting: Exposures

Survivorship Functions

1st: 47.3-L1 2nd: 45.2-H2 3rd: 44.5-R1



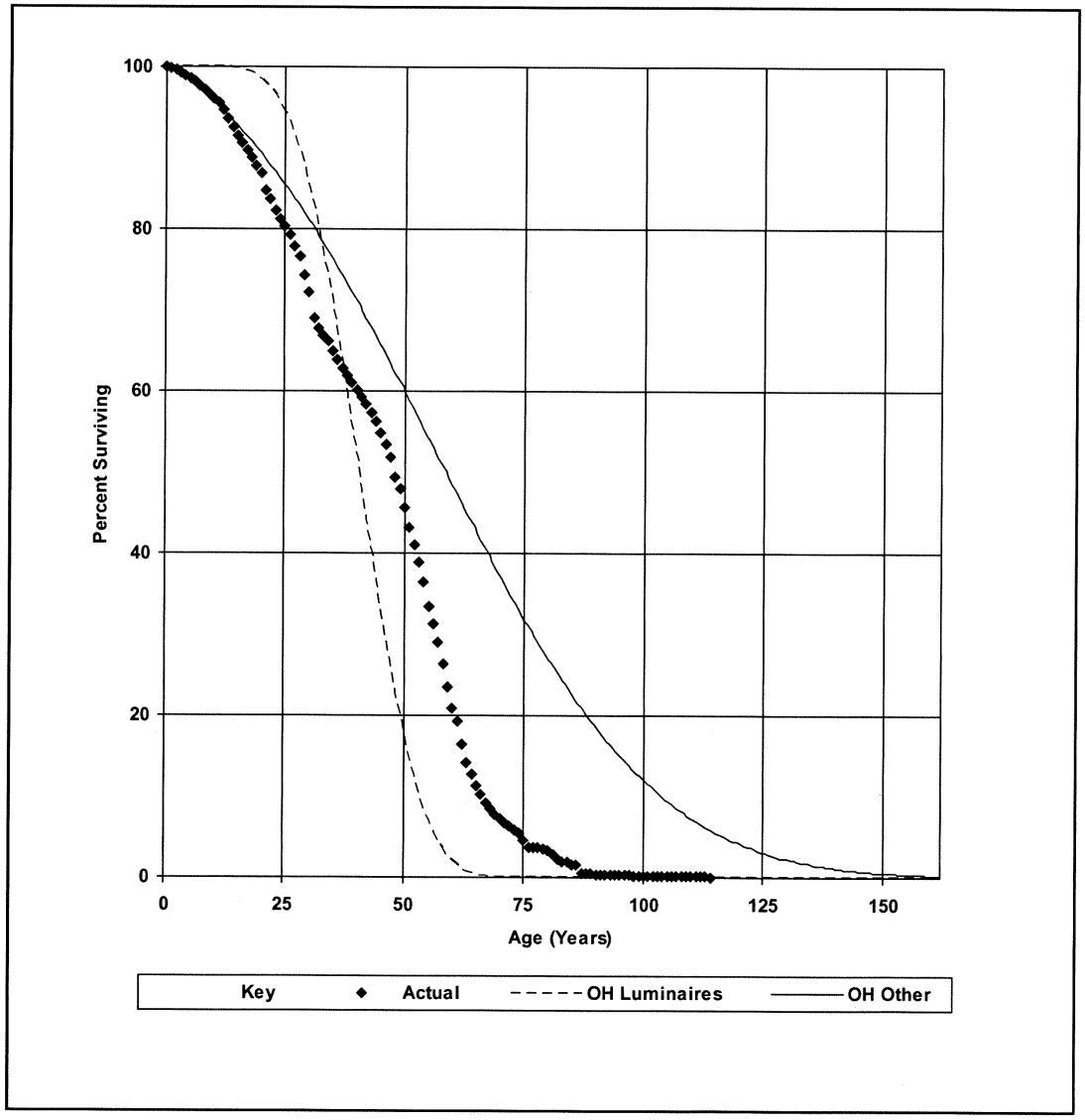
NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 373.10 OH Street Lighting

T-Cut: None
Placement Band: 1900-2015
Observation Band: 1996-2015
OH Luminaires: 40.0-S3 OH Other: 60.0-H1.5

Staff Recommended Projection Life Curves



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 373.20 UG Street Lighting

T-Cut: None

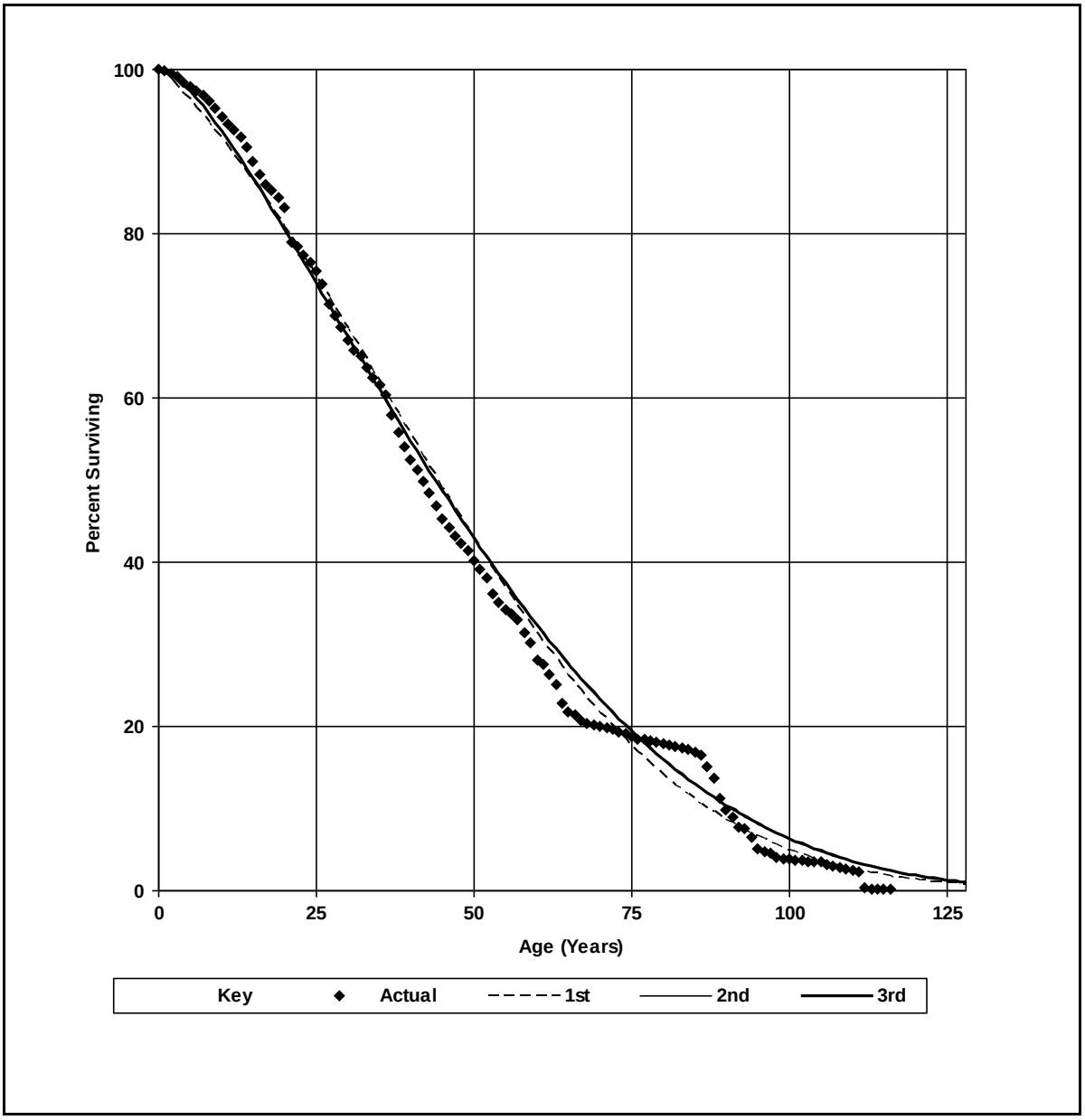
Placement Band: 1900-2015 Observation Band: 1996-2015

Hazard Function: Proportion Retired

Weighting: Exposures

1st: 46.9-H1 2nd: 47.8-L0 3rd: 47.8-L0

Survivorship Functions



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 373.20 UG Street Lighting

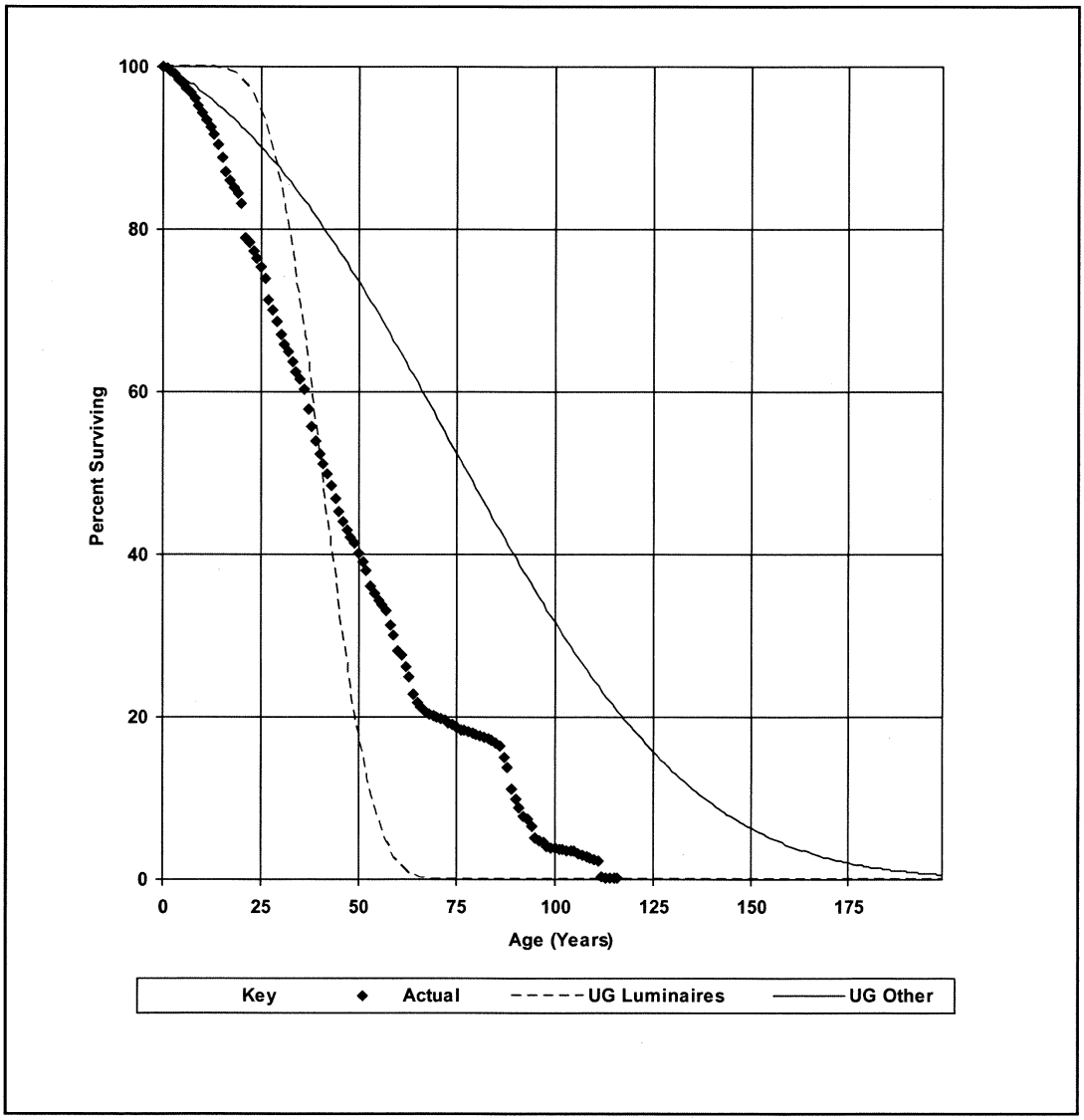
T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

UG Luminaires: 40.0-S3 UG Other: 80.0-H1.5

Staff Recommended Projection Life Curves



Niagara Mohawk Power Corporation
d/b/a National Grid
Case 17-E-0238 & 17-G-0239
Attachment 3 to DPS-200 PD-2
Page 1 of 1

December 31, 2015 Theoretical Reserves From Staff Proposed Parameters

	Projection Parameters		Net Salvage (%)		
Account_ID	Life (Yrs)	Curve	Future	Average	Theoretical Reserve
35200	60	R3	-26.7	-30.0	$17,005,723
35355	25	S3	-5.0	-5.0	$29,065,449
35355	25	H5	-5.0	-5.0	$30,181,699
35400	70	H4	-21.7	-30.0	$80,375,880
35601	80	R2.5	-22.1	-30.0	$83,482,954
35701	80	R3	-4.9	-5.0	$12,515,113
35800	80	R3	-18.2	-20.0	$39,622,868
36201	60	H2	-15.3	-15.0	$148,050,798
36255	25	S3	-5.0	-5.0	$21,559,556
36275	20	SC	0.0	0.0	$563,027
36400	65	R1.5	-10.2	-15.0	$209,084,259
36500	60	R4	-27.7	-35.0	$369,326,584
36710	75	R3	-23.4	-25.0	$140,728,833
36801	40	R1.5	-3.8	-5.0	$173,760,694
36830	40	R2	-23.8	-30.0	$99,849,303
36920	80	H4	-5.0	-5.0	$3,449,486
36921	80	H3	-19.1	-20.0	$31,856,808
37311	40	S3	-30.0	-30.0	$18,153,615
37312	60	H1.5	-30.0	-30.0	$14,004,317
37321	40	S3	-30.0	-30.0	$18,614,809
37322	80	H1.5	-30.0	-30.0	$22,021,194
39221	15	SQ	26.3	25.0	$2,194,738

Date of Request: June 14, 2017 Request No. DPS-342 PD-3
Due Date: June 26, 2017 NMPC Req. No. NM-821

NIAGARA MOHAWK POWER CORPORATION d/b/a NATIONAL GRID
Case No. 17-E-0238 and 17-G-0239 –
Niagara Mohawk Power Corporation d/b/a National Grid – Electric and Gas Rates

Request for Information

FROM: DPS Staff, Paul J. Darmetko, Jr.

TO: National Grid, Dr. Kimbugwe A. Kateregga

SUBJECT: **DEPRECIATION**

Request:

In this interrogatory, all requests for data, workpapers or supporting calculations should be construed as also requesting any associated Word, Excel, or other models in original electronic format with all formulae intact.

With reference to the plant accounts listed below:

1. Using the Staff-proposed factors specified below, provide a graphical plot of the Actual, Current, and Staff Recommended Life curves for each account marked with "*".

2. For each account, calculate the theoretical reserve balance derived using the Staff-proposed factors utilizing the same methodology used to provide the response to DPS-200.

		Staff Life	Staff Curve Shape	Staff Average Net Salvage
350.40*	Land Rights - Transmission Lines	85	SQ	1.2
352.00*	Structures and Improvements	65	H2	-30
353.55*	Station Equipment - RTU	30	S2.5 and S3.5	-5
354.00*	Towers and Fixtures	75	H4	-30
355.00*	Poles and Fixtures	70	R2	-40
356.01*	Overhead Conductors and Devices	85	R1	-30
357.01*	Underground Conduit	85	R3	-5
358.00*	Underground Conductors and Devices	85	R2	-20
360.01*	Land Rights	85	SQ	0
361.00*	Structures and Improvements	80	R 2.5	-30

		Staff Life	Staff Curve Shape	Staff Average Net Salvage
362.55*	Station Equipment - RTU	28	S 3.5	-5
362.75	Station Equipment - EMS	10	SC	0
365.00*	Overhead Conductors and Devices	55	R4	-35
366.01*	Underground Conduit	74	R 0	-15
367.10*	Underground Conductors and Devices	80	R 3	-25
368.01*	Line Transformers - Bare Cost	40	R4 and H4	-5
368.30*	Line Transformers - Install Cost	45	R3	-30
369.10*	Overhead Services	55	R4	-40
369.20*	Underground Services - Conduit	85	SQ	-5
369.21*	Underground Services - Cable	85	H2.5	-20

Response:

1. Attachment 1 contains graphs showing observed proportions surviving, current curves and Staff proposed projection lives and curves. The S2.5 and S3.5 dispersions requested for account 353.55 and 362.55 and the R0 dispersion requested for account 366.01 are not available in the set of 31 standard Iowa curves in Foster Associates' depreciation system software. As discussed with Staff, S2, S3, and R0.5 dispersions have been substituted respectively. A graph cannot be generated for account 360.01 because there are no recorded retirements.

2. As discussed with Staff, the net salvage factors provided by Staff are average net salvage rates. A correct computation of a theoretical reserve requires both an average and future net salvage rate. Foster Associates, therefore, derived the future net salvage rates implicit in Staff's average net salvage rates and used the derived future net salvage rates and Staff's average net salvage rates to calculate the theoretical reserve balances provided in Attachment 2.

Name of Respondent:
Dr. Kimbugwe A. Kateregga

Date of Reply:
June 26, 2107

NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 350.40 Land Rights - Transmission Lines

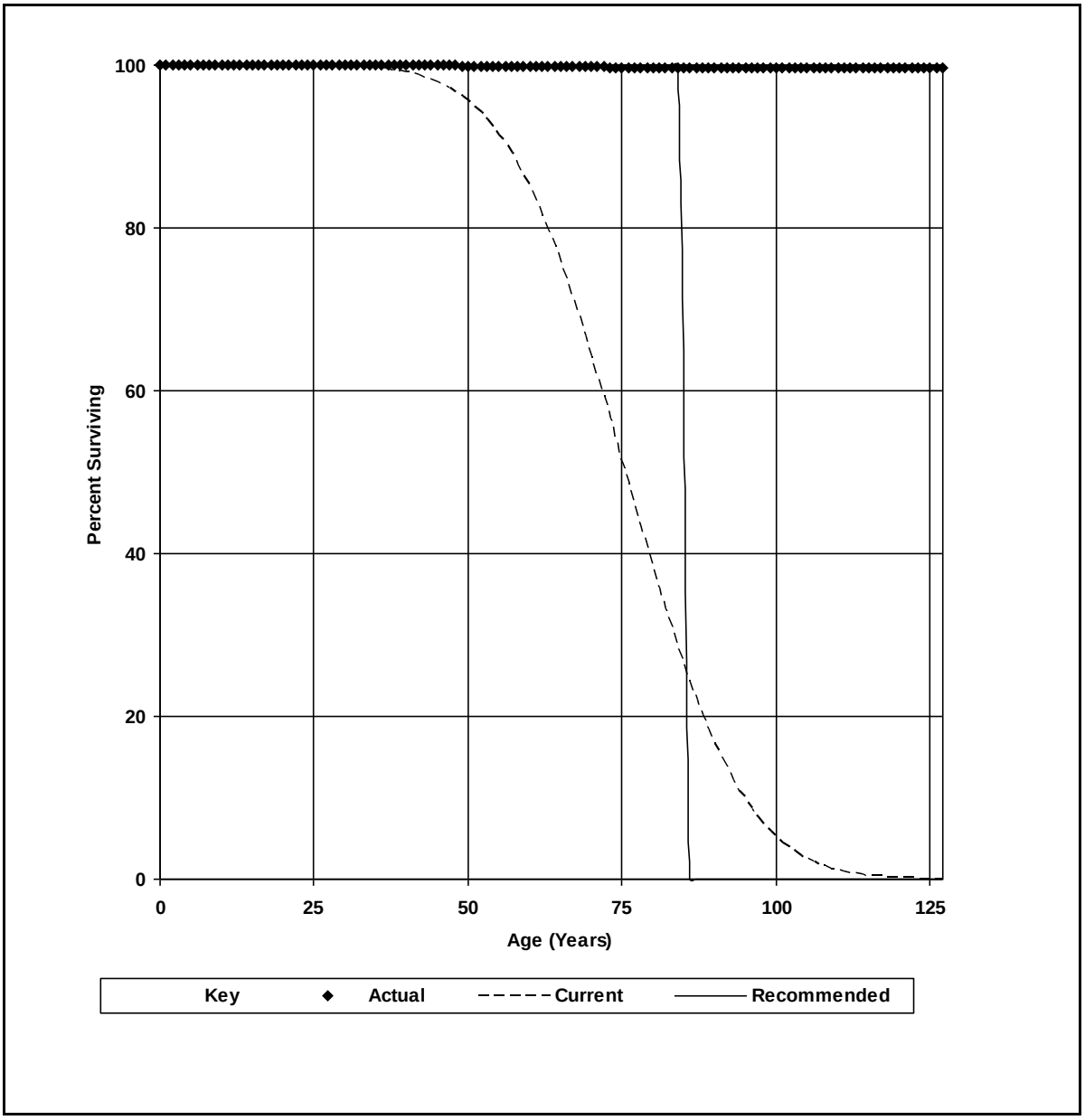
T-Cut: None

Placement Band: 1889-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-H5 **Recommended: 85.0-SQ**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 352.00 Structures and Improvements

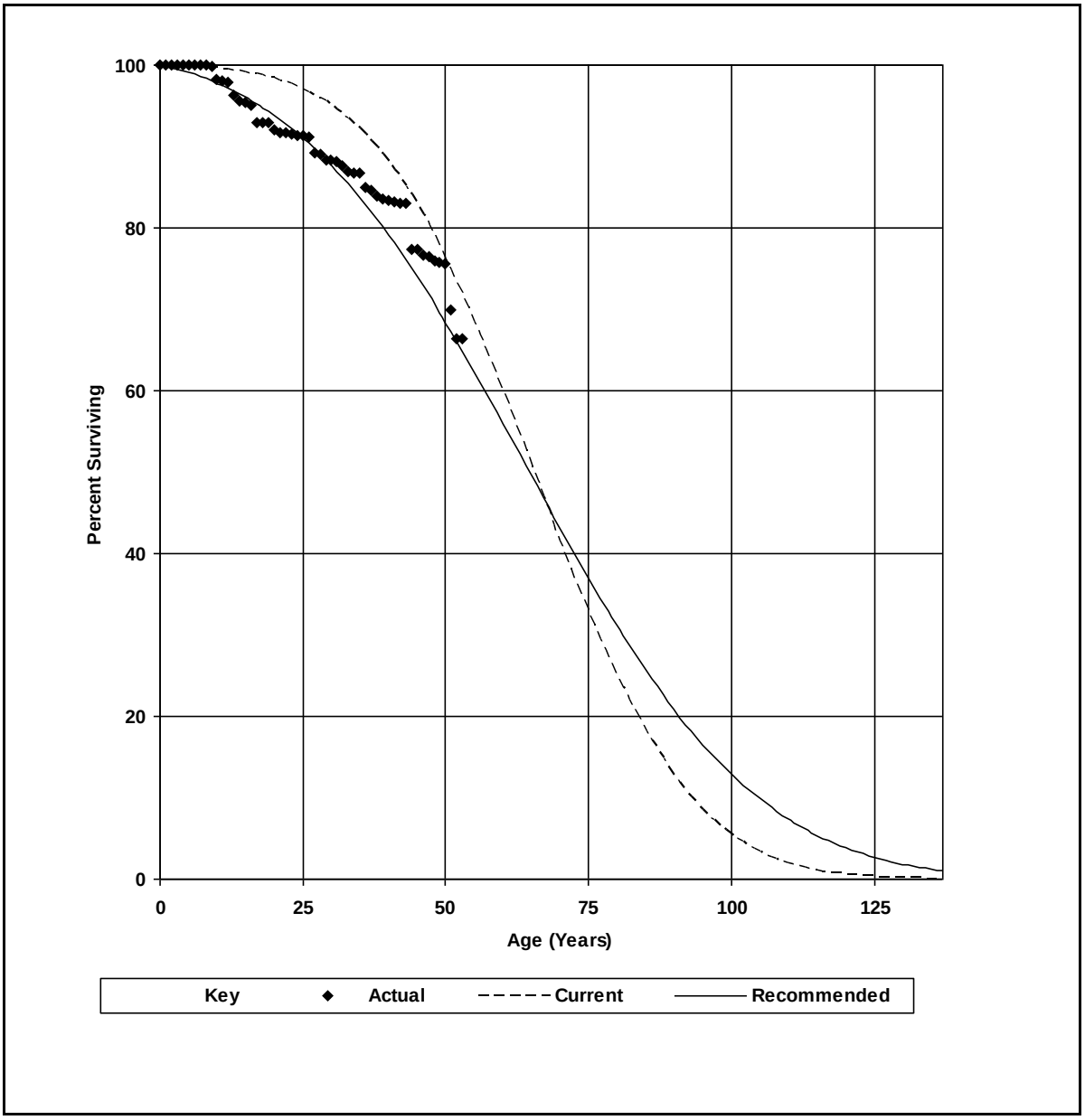
T-Cut: None

Placement Band: 1963-2014

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 65.0-H3 **Recommended: 65.0-H2**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 353.55 Station Equipment - RTU

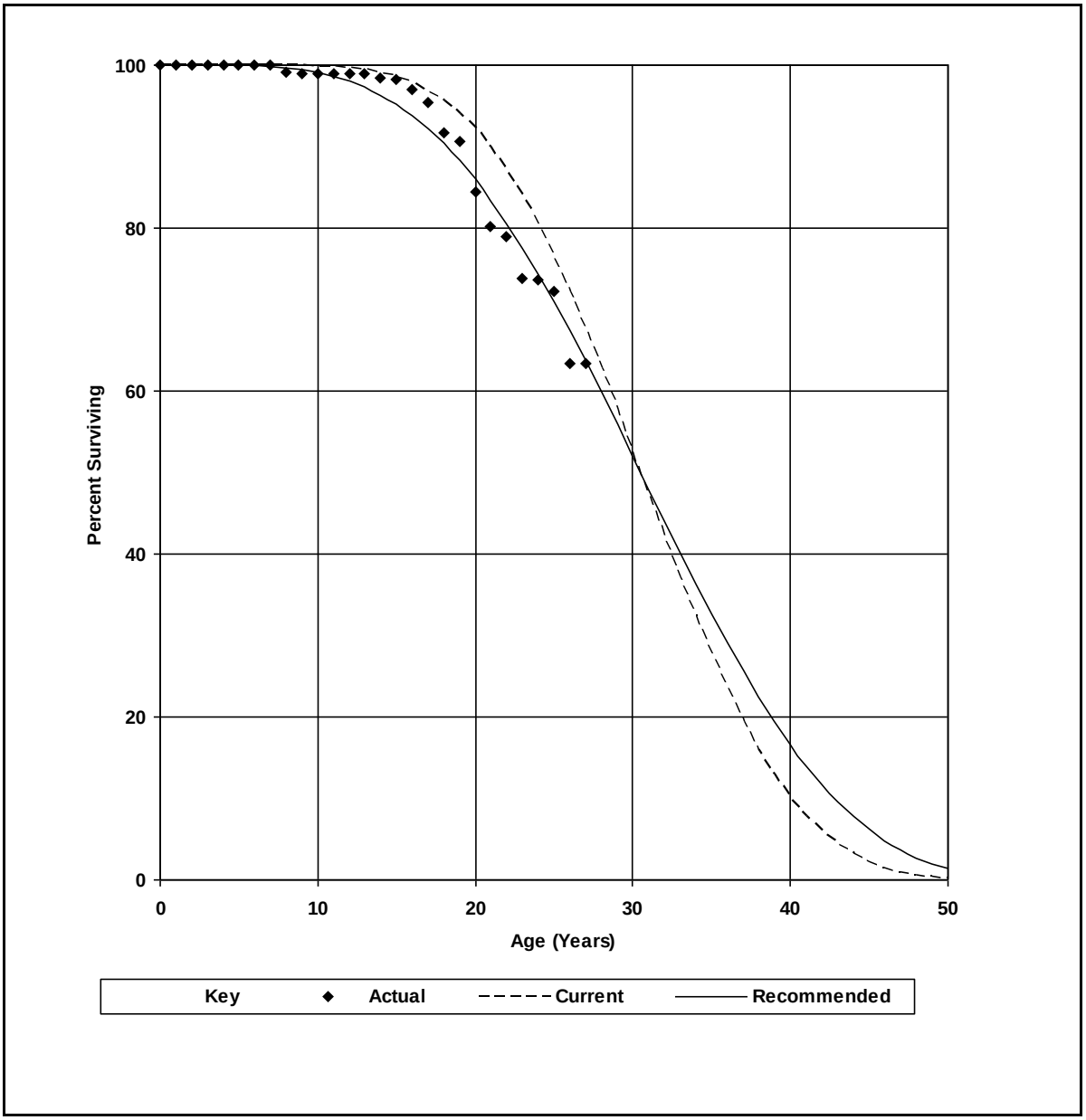
T-Cut: None

Placement Band: 1989-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 30.0-S3 Recommended: 30.0-S2



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 353.55 Station Equipment - RTU

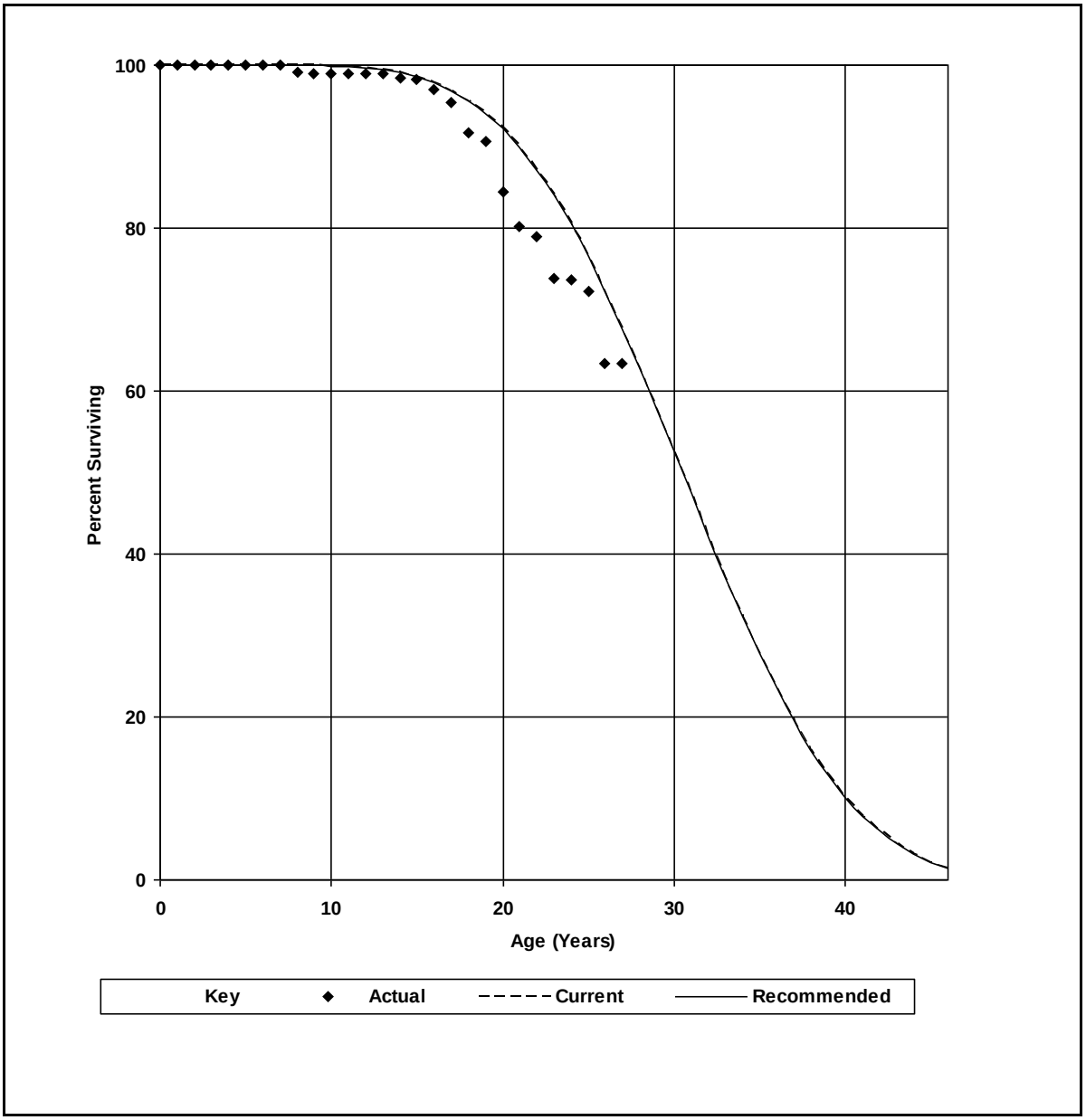
T-Cut: None

Placement Band: 1989-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 30.0-S3 **Recommended: 30.0-S3**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 354.00 Towers and Fixtures

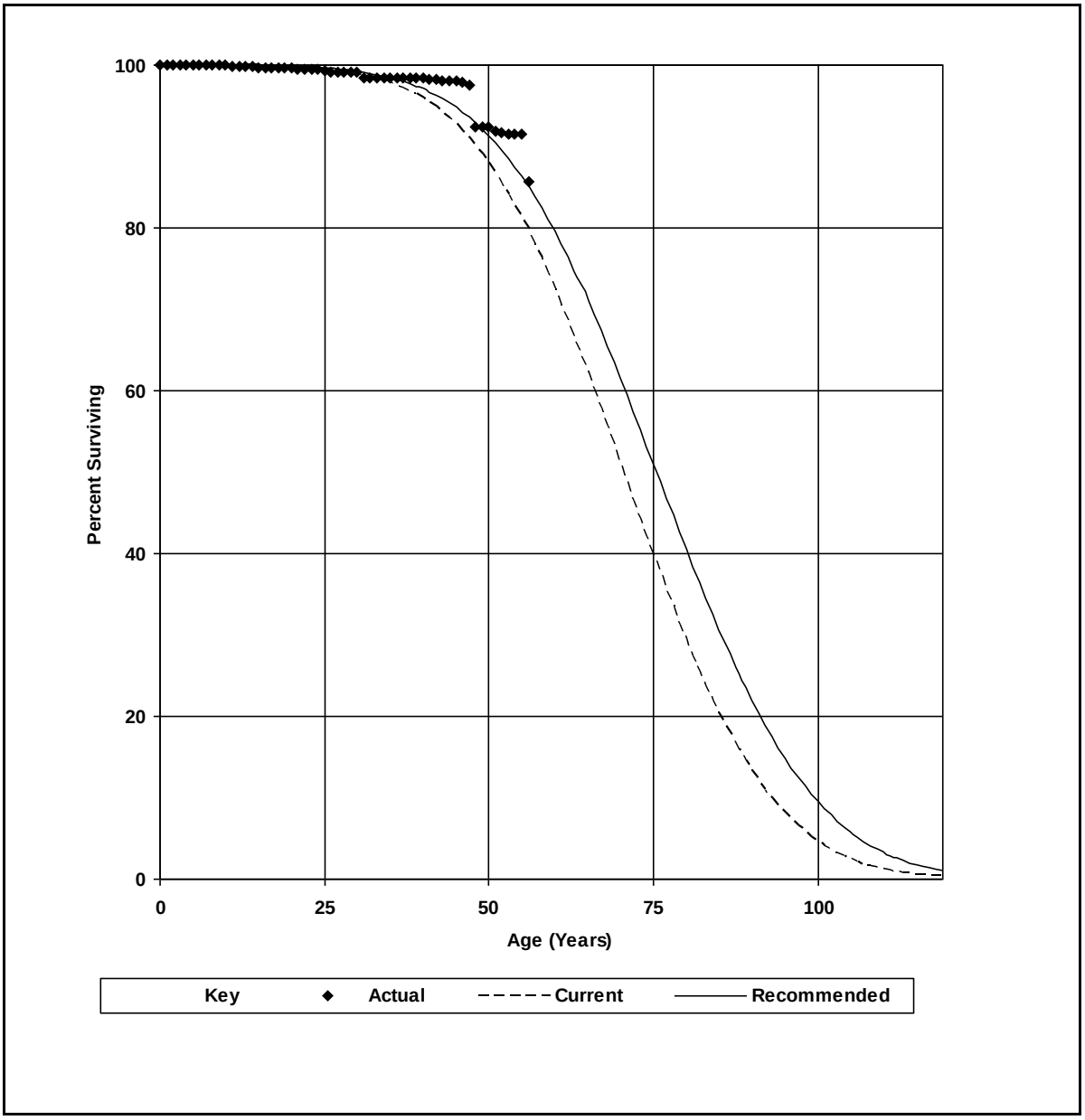
T-Cut: None

Placement Band: 1960-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 70.0-H4 **Recommended: 75.0-H4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 355.00 Poles and Fixtures

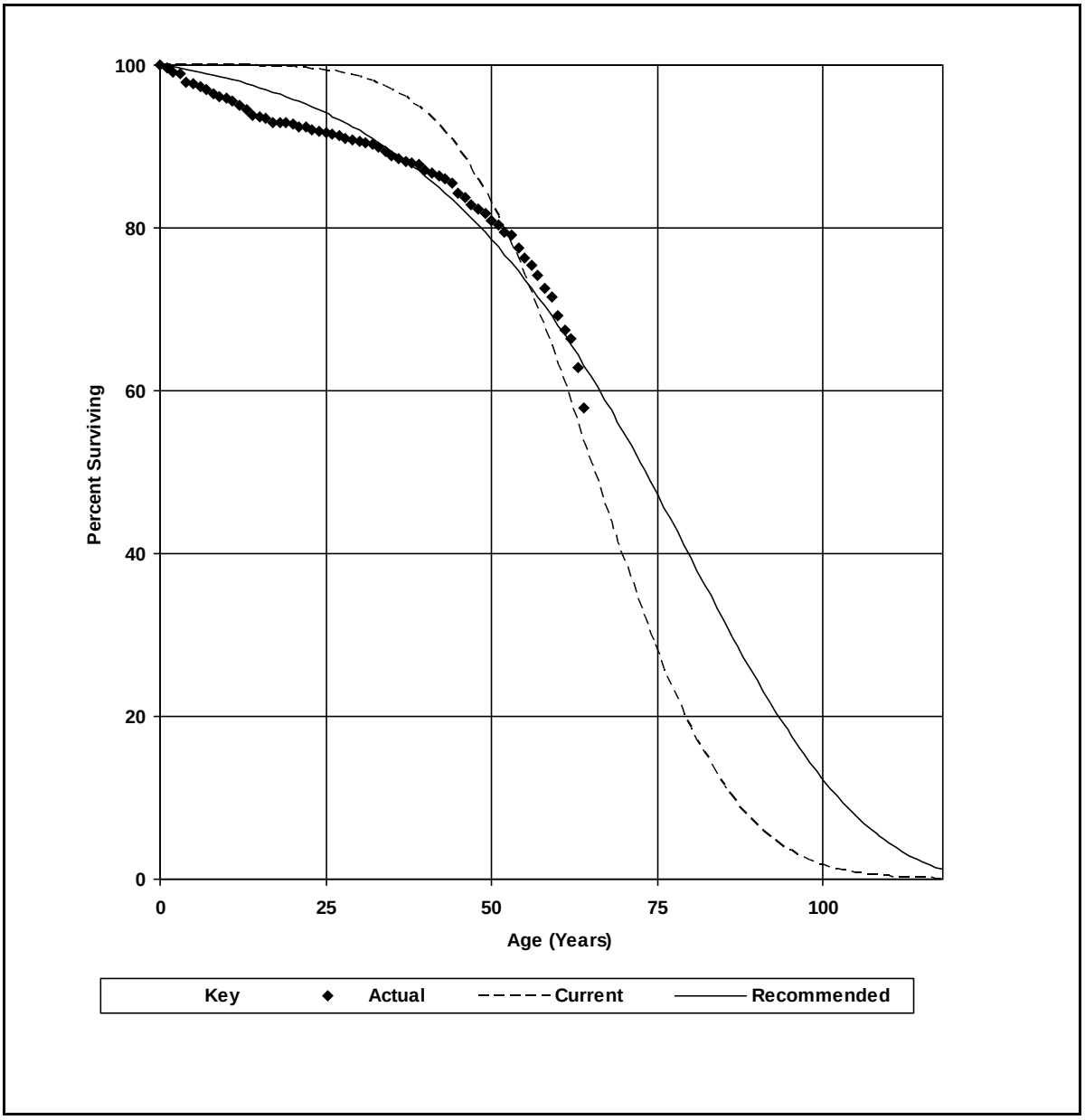
T-Cut: None

Placement Band: 1952-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 65.0-H4 **Recommended: 70.0-R2**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 356.01 Overhead Conductors and Device

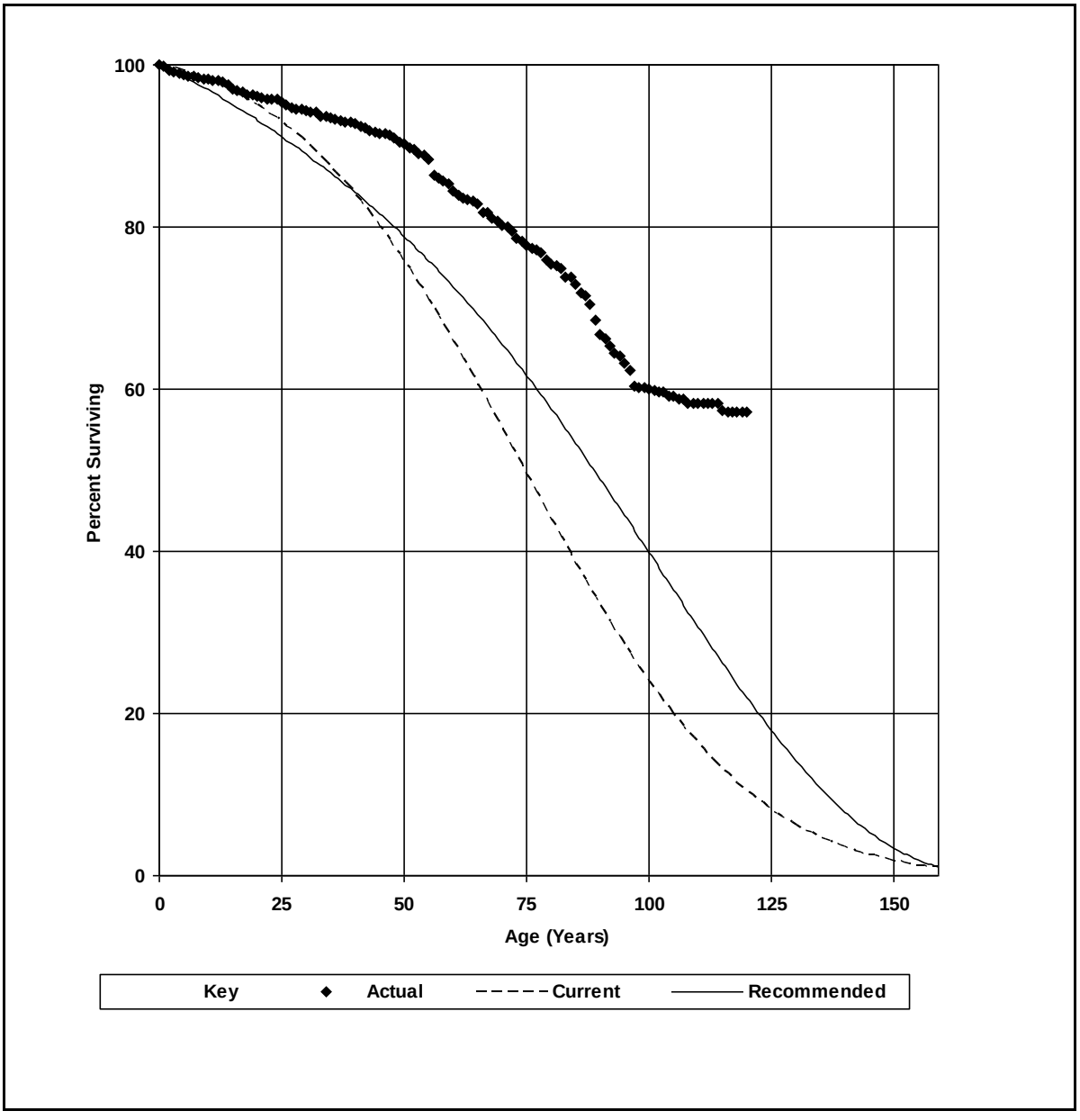
T-Cut: None

Placement Band: 1896-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-H2 **Recommended: 85.0-R1**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 357.01 Underground Conduit

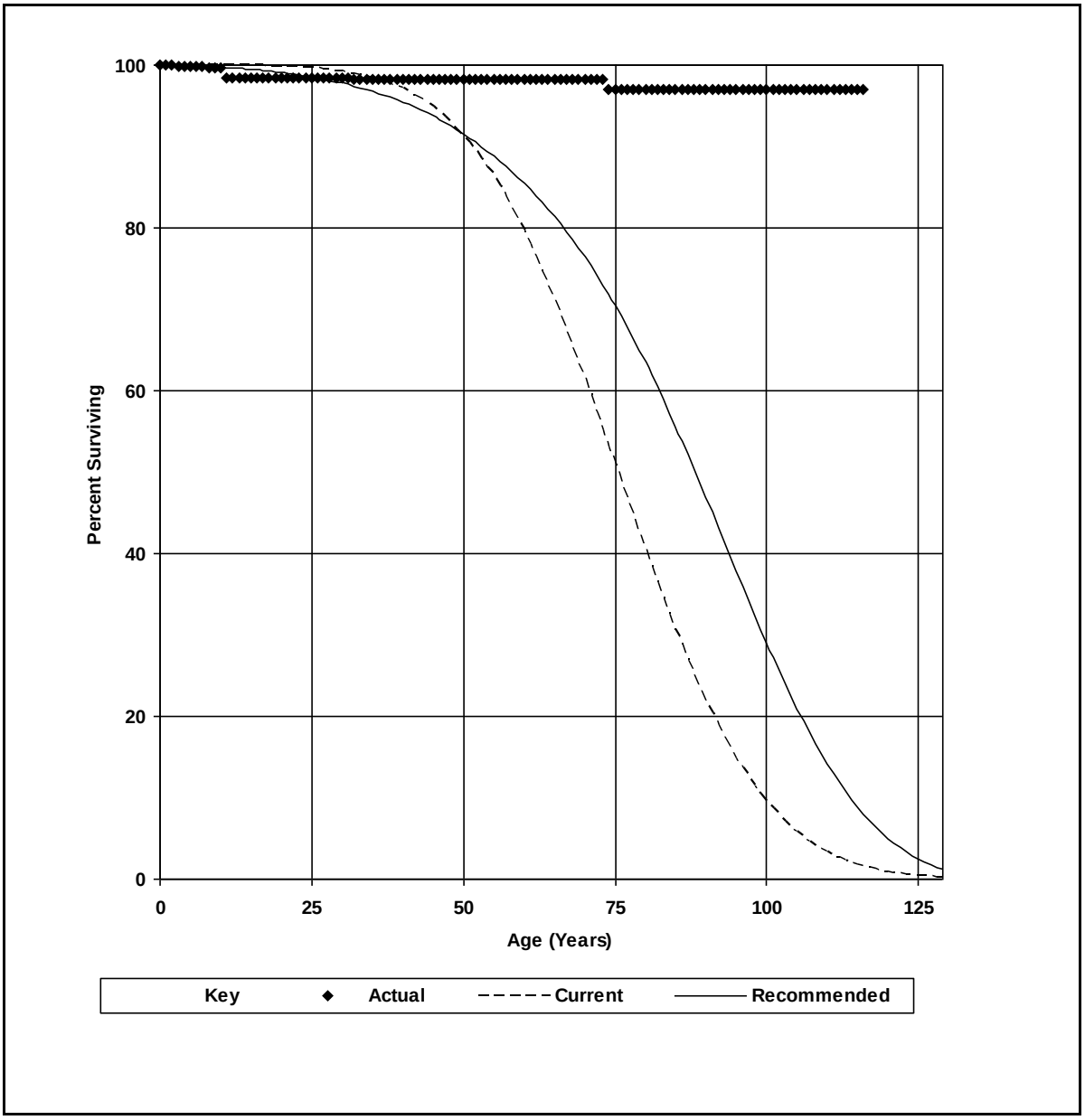
T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-H4 **Recommended: 85.0-R3**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 358.00 Underground Conductors and Devices

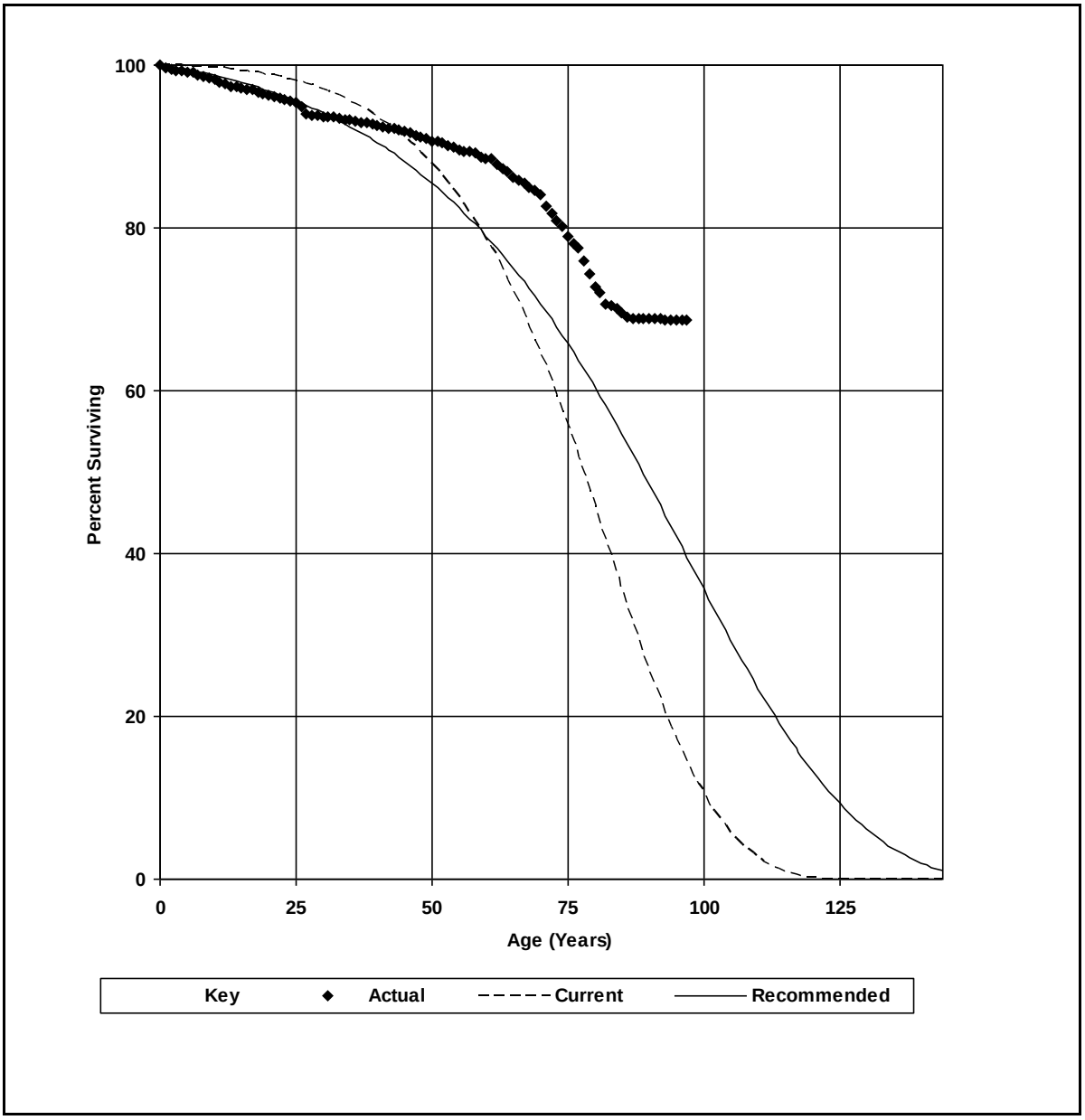
T-Cut: None

Placement Band: 1919-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-R3 **Recommended: 85.0-R2**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 361.00 Structures and Improvements

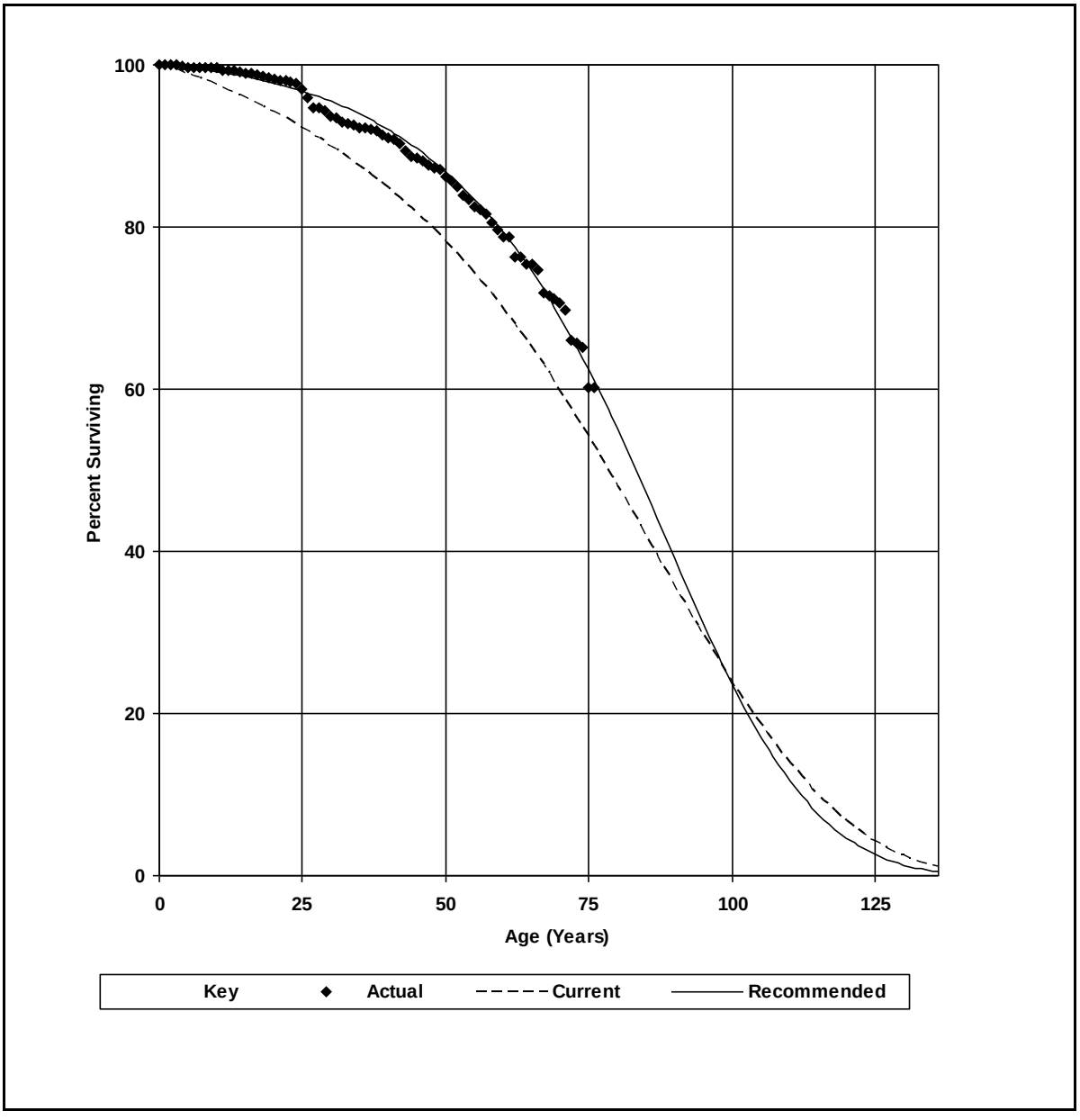
T-Cut: None

Placement Band: 1940-2014

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-R1.5 **Recommended: 80.0-R2.5**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 362.55 Station Equipment - RTU

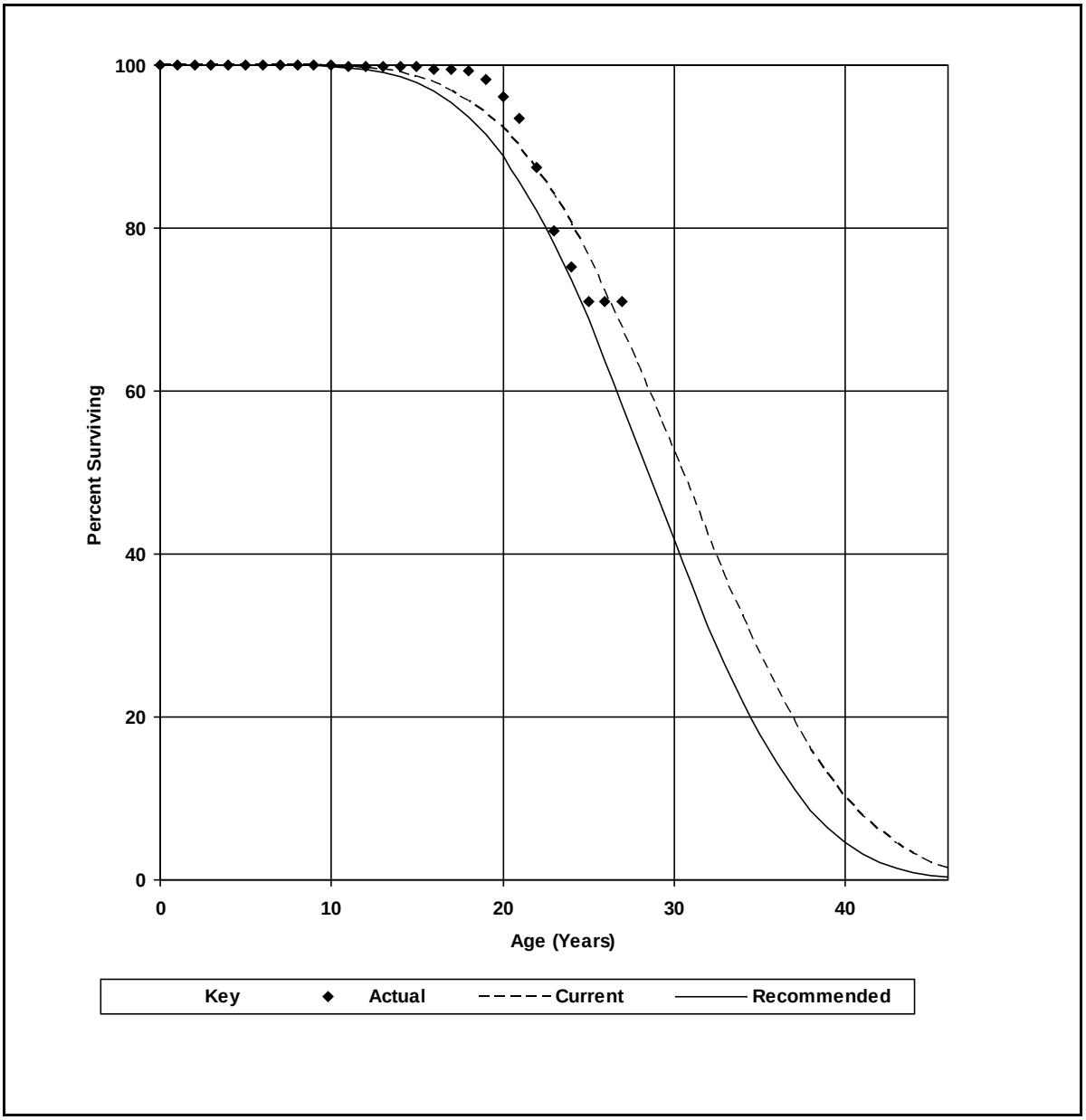
T-Cut: None

Placement Band: 1989-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 30.0-S3 **Recommended: 28.0-S3**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 365.00 Overhead Conductors and Devices

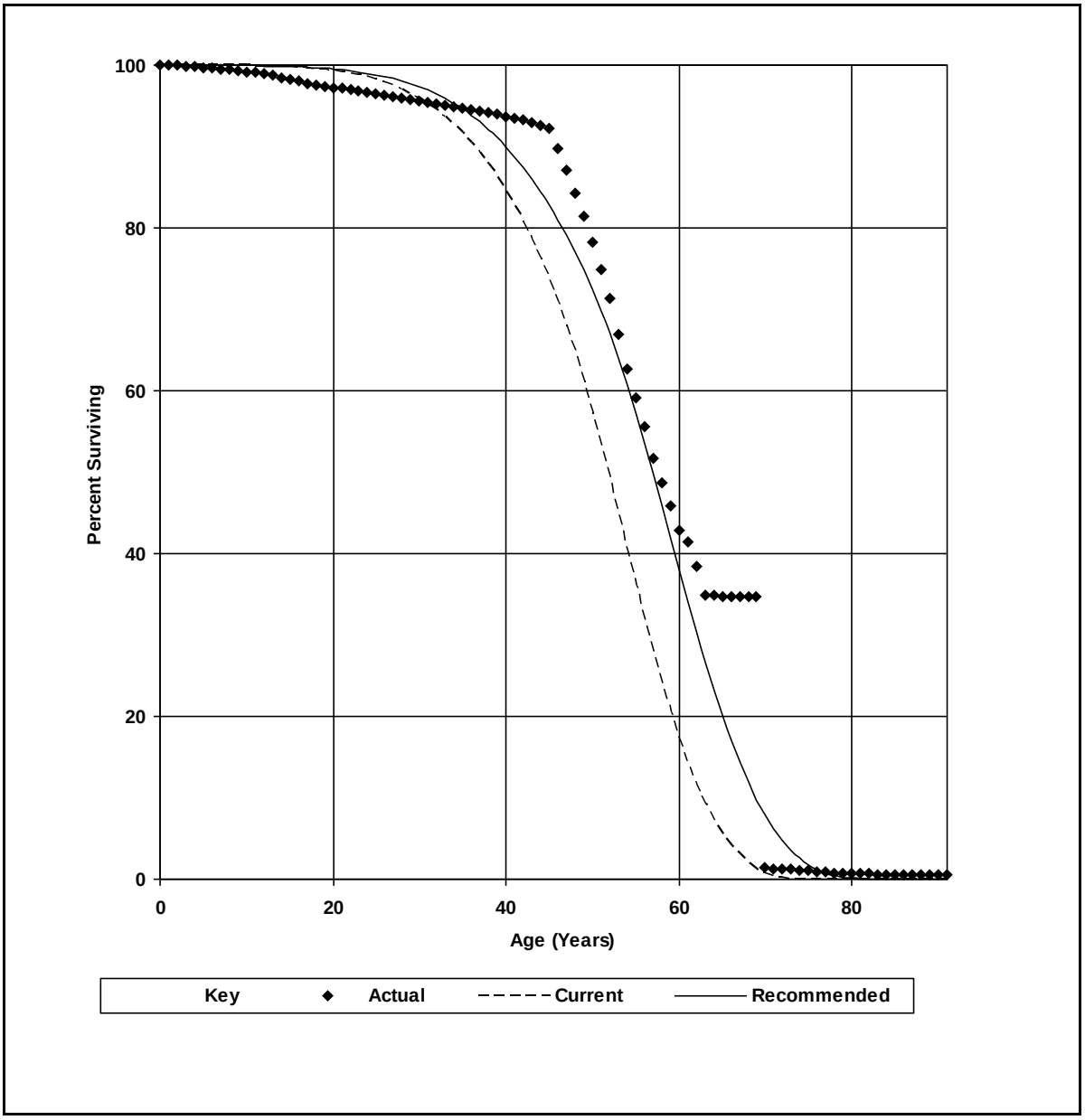
T-Cut: None

Placement Band: 1925-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 50.0-R4 **Recommended: 55.0-R4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 366.01 Underground conduit

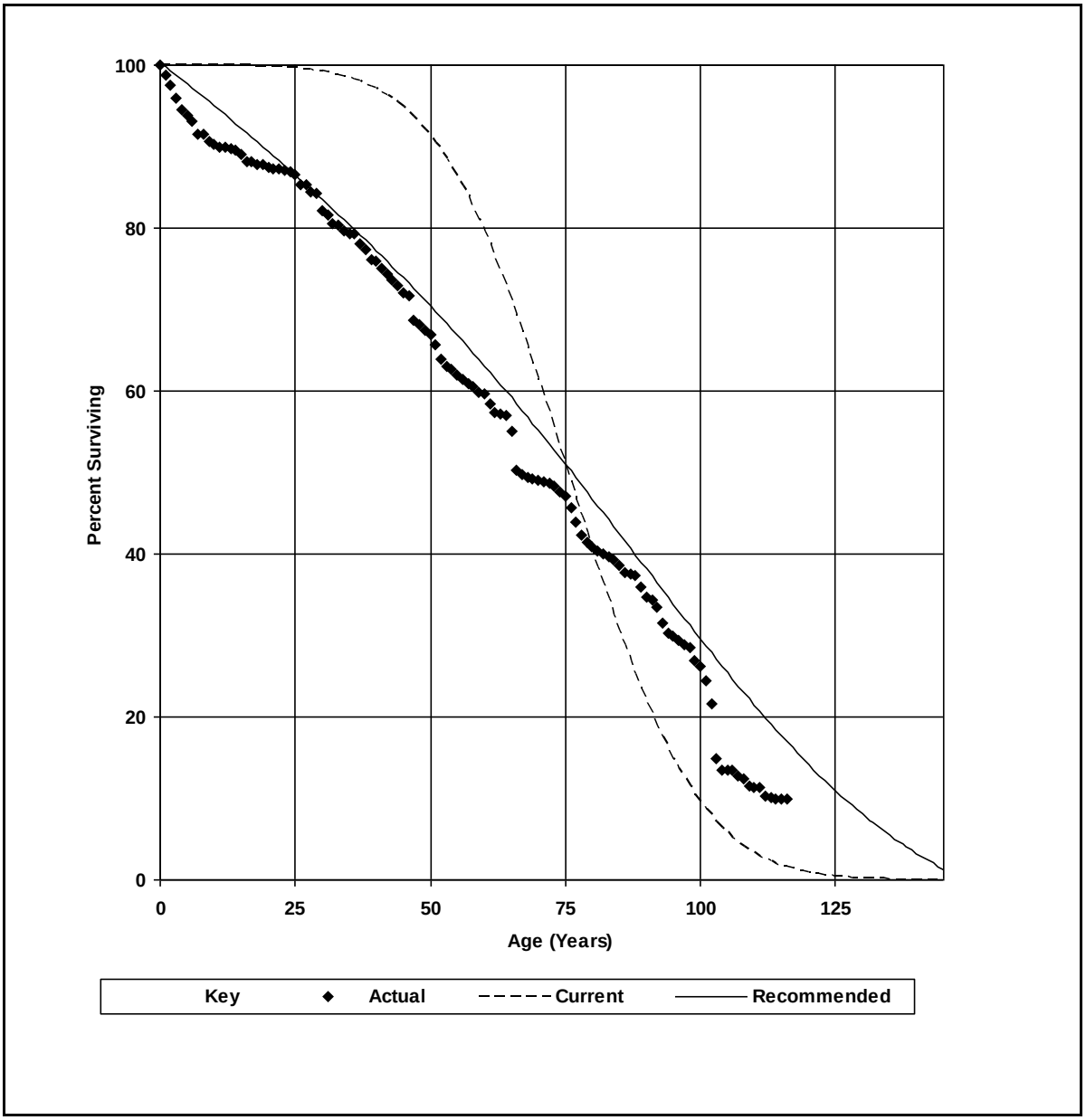
T-Cut: None

Placement Band: 1900-2015

Observation Band: 2010-2015

Current and Recommended Projection Life Curves

Current: 75.0-H4 **Recommended: 74.0-R0.5**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 367.10 Underground Conductors and Devices

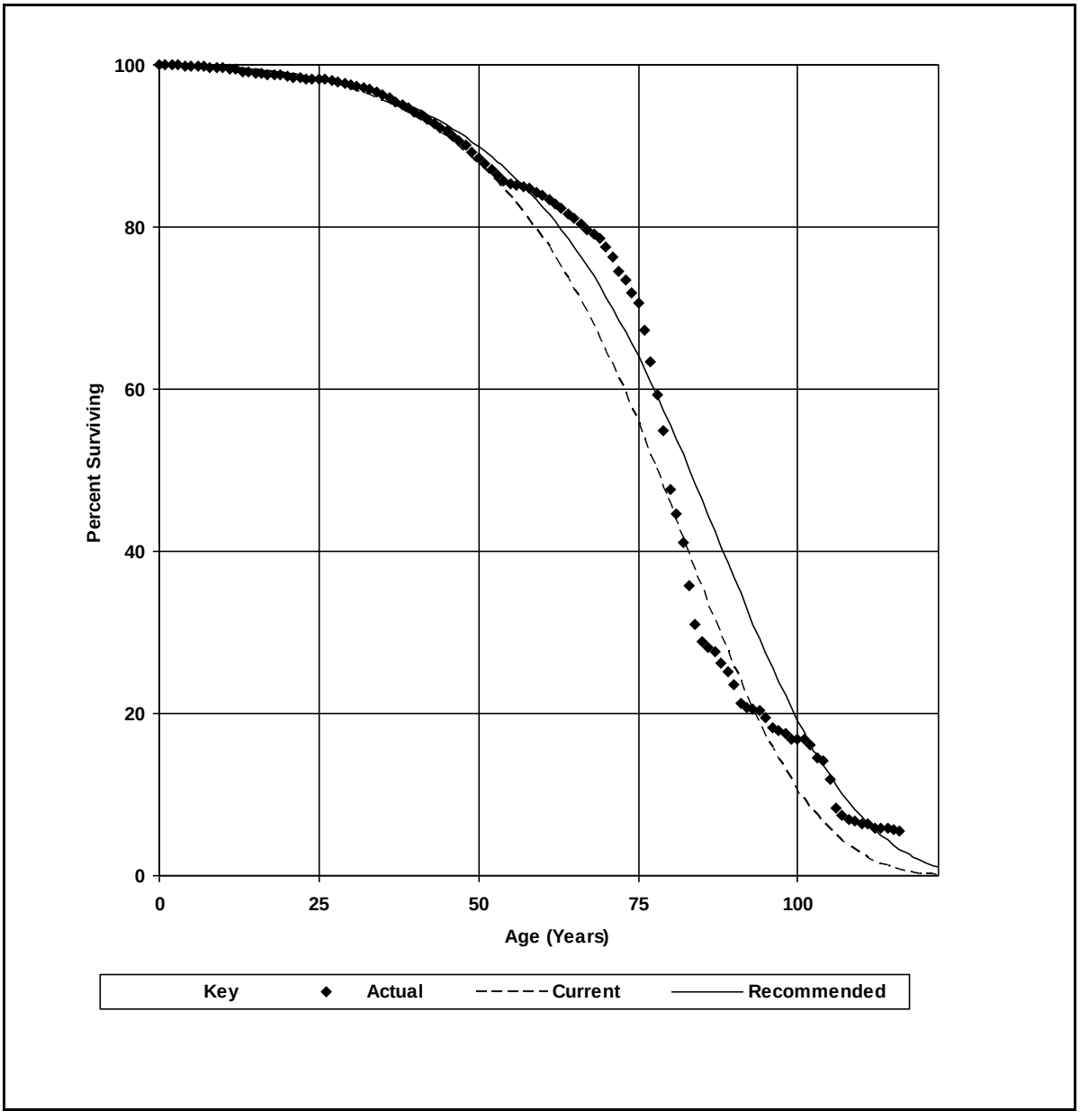
T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-R3 **Recommended: 80.0-R3**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 368.01 Line Transformers - Bare Cost

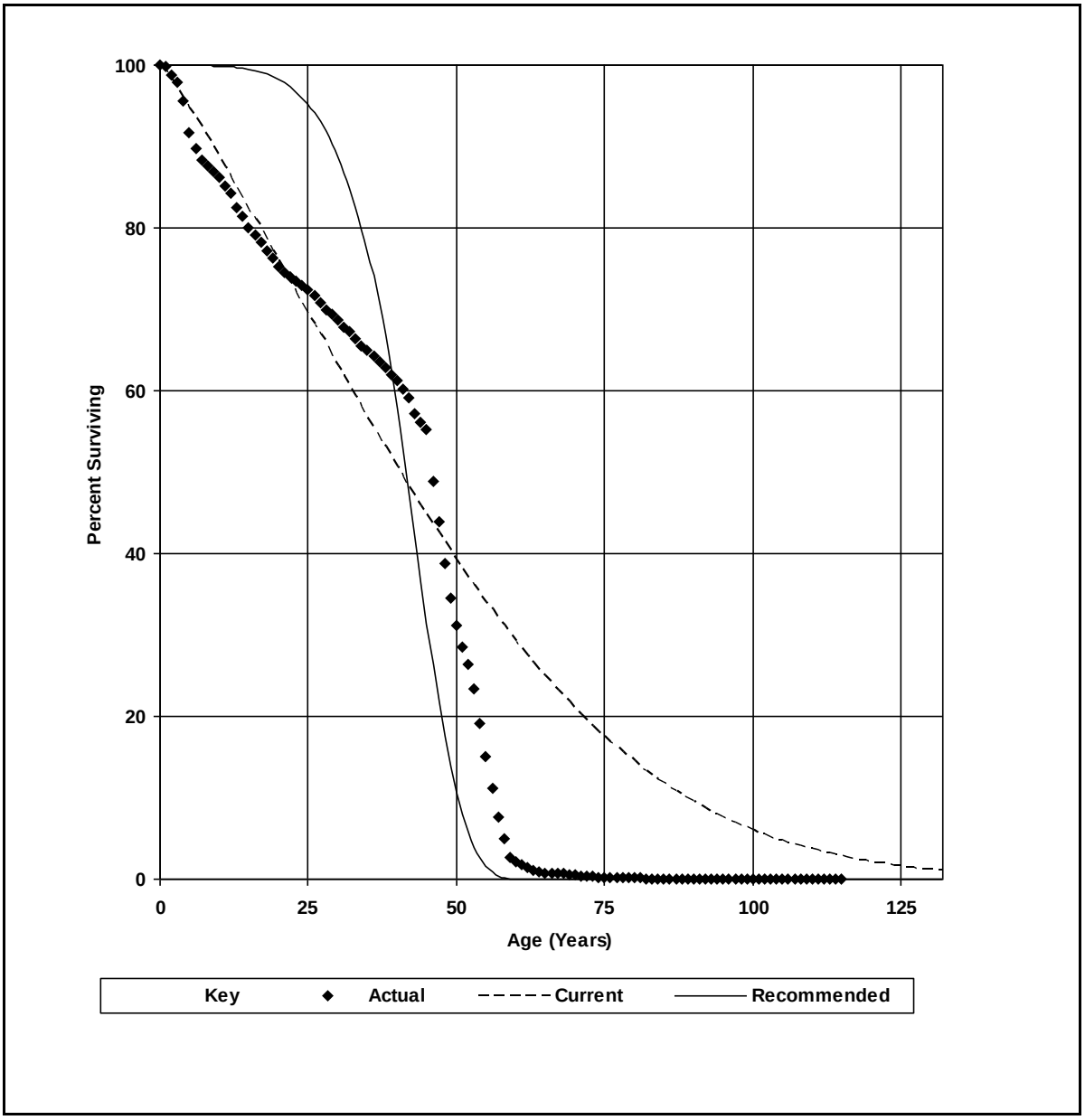
T-Cut: None

Placement Band: 1901-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 45.0-H0.5 **Recommended: 40.0-R4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 368.01 Line Transformers - Bare Cost

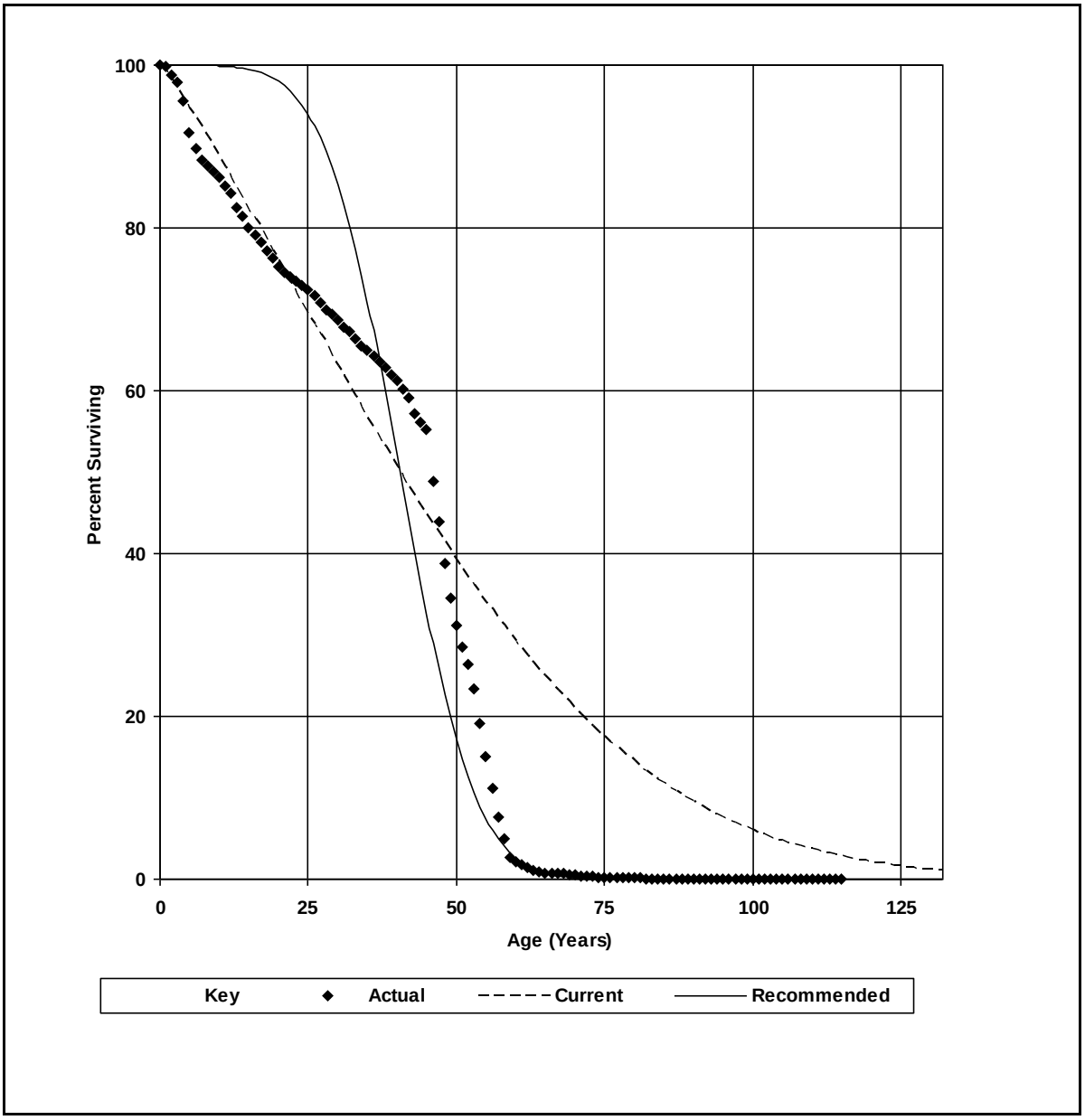
T-Cut: None

Placement Band: 1901-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 45.0-H0.5 **Recommended: 40.0-H4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

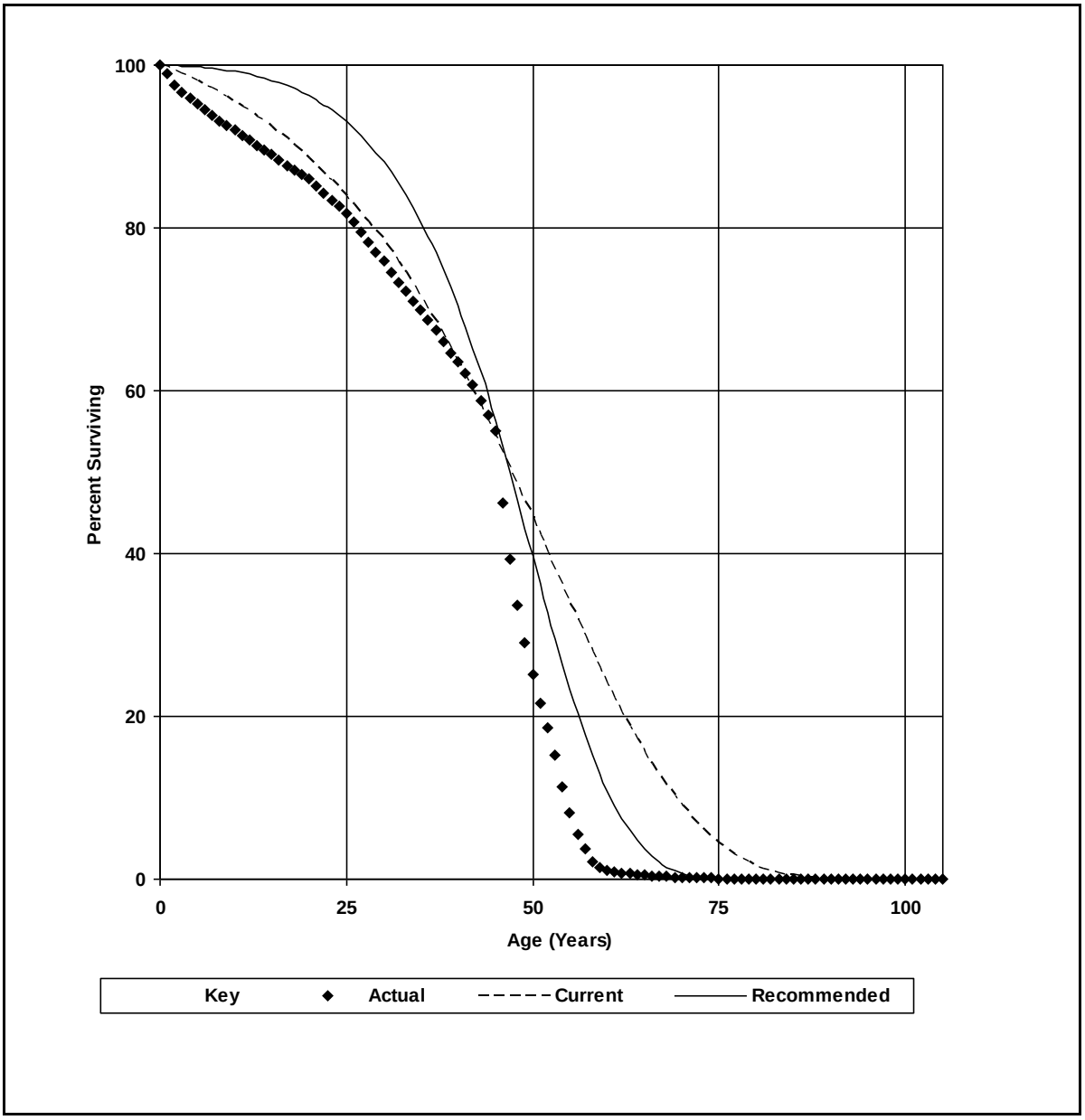
Account: 368.30 Line Transformers - Install Cost

T-Cut: None

Placement Band: 1901-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 45.0-R1.5** **Recommended: 45.0-R3**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 369.10 Overhead Services

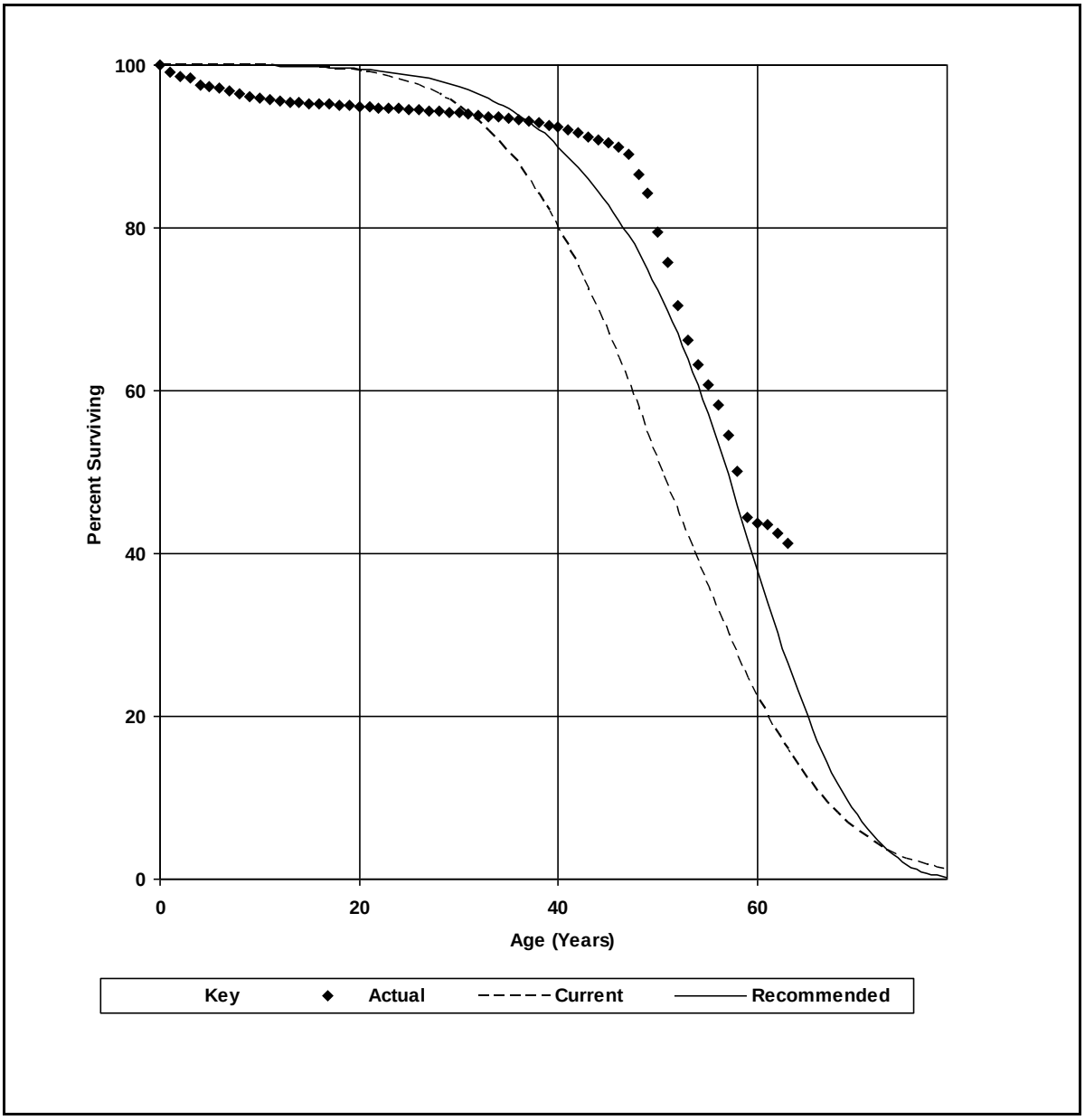
T-Cut: None

Placement Band: 1950-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 50.0-H4 **Recommended: 55.0-R4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 369.20 Underground Services - Conduit

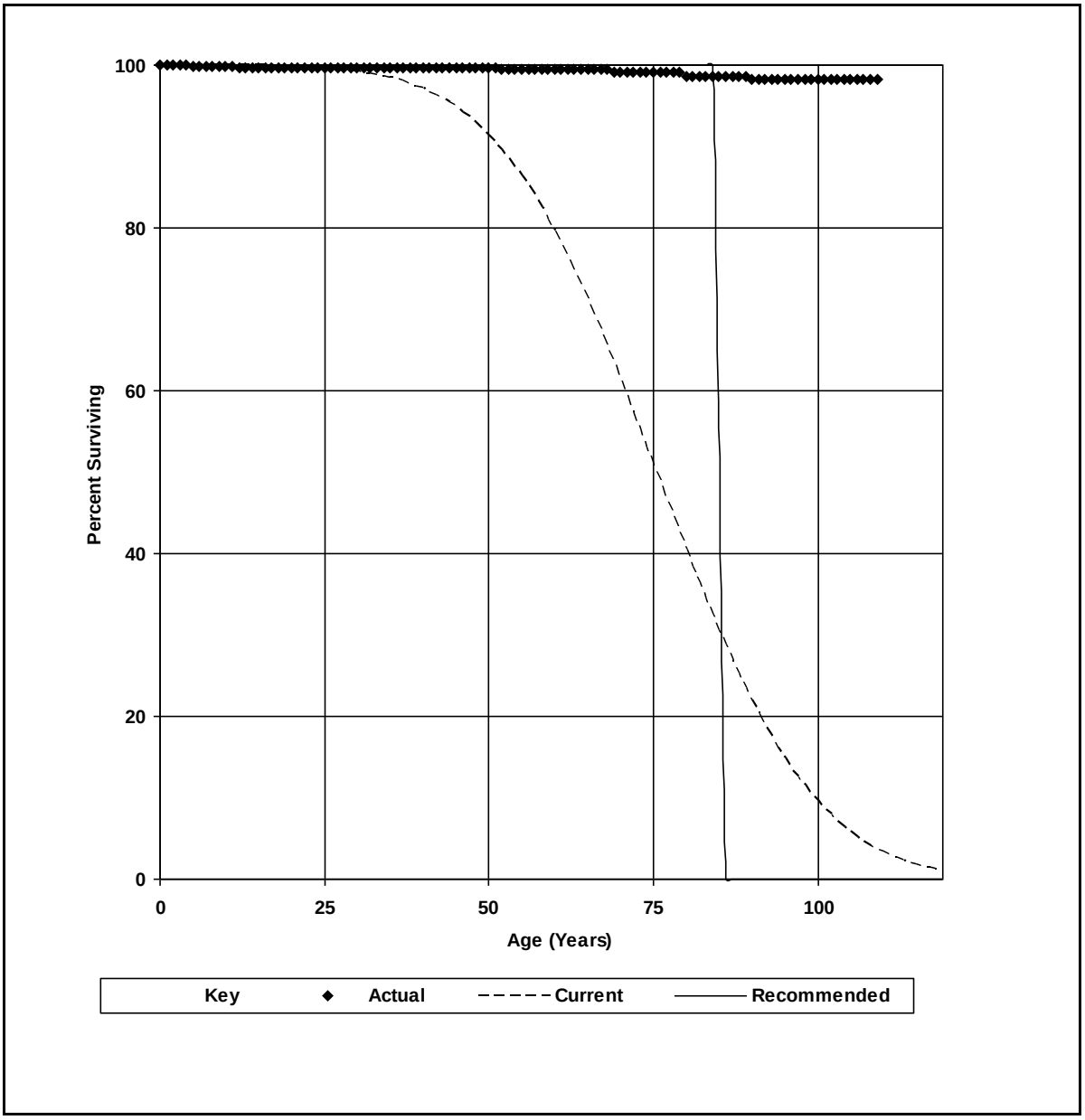
T-Cut: None

Placement Band: 1907-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-H4 **Recommended: 85.0-SQ**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 369.21 Underground Services - Cable

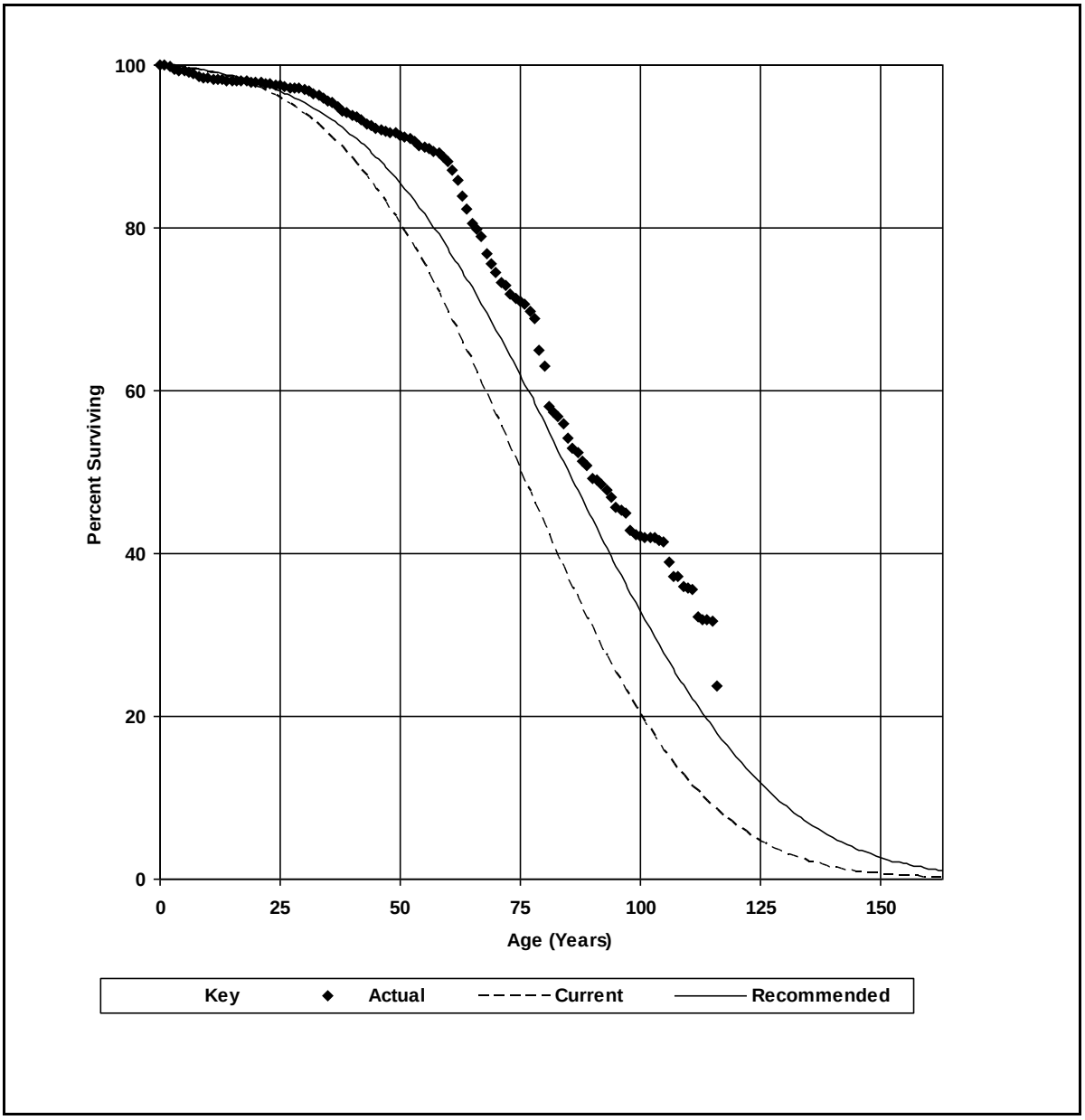
T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-H2.5 **Recommended: 85.0-H2.5**



Niagara Mohawk Power Corporation
d/b/a National Grid
Case 17-E-0238 & 17-G-0239
Attachment 2 to DPS-342 PD-3
Page 1 of 1

December 31, 2015 Theoretical Reserves From Staff Proposed Parameters

	Projection Parameters		Net Salvage (%)		
Account_ID	Life (Yrs)	Curve	Future	Average	Theoretical Reserve
35040	85	SQ	0.0	1.2	$12,836,206
35200	65	H2	-26.7	-30.0	$12,917,010
35355	30	S2	-5.0	-5.0	$24,149,653
35355	30	S3	-5.0	-5.0	$25,723,852
35400	75	H4	-21.7	-30.0	$75,890,638
35500	70	R2	-35.1	-40.0	$139,094,614
35601	85	R1	-22.1	-30.0	$53,031,703
35701	85	R3	-4.9	-5.0	$11,859,947
35800	85	R2	-18.2	-20.0	$33,575,810
36001	85	SQ	0.0	0.0	$2,725,677
36100	80	R2.5	-27.1	-30.0	$13,449,564
36255	28	S3	-5.0	-5.0	$19,957,310
36275	10	SC	0.0	0.0	$1,126,055
36500	55	R4	-27.7	-35.0	$407,019,178
36601	74	R0.5	-13.7	-15.0	$36,902,697
36710	80	R3	-23.4	-25.0	$131,895,906
36801	40	R4	-3.8	-5.0	$221,741,038
36801	40	H4	-3.8	-5.0	$217,266,987
36830	45	R3	-23.8	-30.0	$99,950,752
36910	55	R4	-32.9	-40.0	$153,651,316
36920	85	SQ	-5.0	-5.0	$3,293,279
36921	85	H2.5	-19.1	-20.0	$28,394,889

Date of Request: June 30, 2017 Request No. DPS-467 PD-4
Due Date: July 10, 2017 NMPC Req. No. NM-1044

NIAGARA MOHAWK POWER CORPORATION d/b/a NATIONAL GRID
Case No. 17-E-0238 and 17-G-0239 –
Niagara Mohawk Power Corporation d/b/a National Grid – Electric and Gas Rates

Request for Information

FROM: DPS Staff, Paul J. Darmetko, Jr.

TO: National Grid, Dr. Kimbugwe A. Kateregga

SUBJECT: **DEPRECIATION**

Request:

In this interrogatory, all requests for data, workpapers or supporting calculations should be construed as also requesting any associated Word, Excel, or other models in original electronic format with all formulae intact.

With reference to the plant accounts listed below:

1. Using the Staff-proposed factors specified below, provide a graphical plot of the Actual, Current, and Staff Recommended Life curves for each account marked with an "*".

2. For each account, calculate the theoretical reserve balance derived using the Staff-proposed factors utilizing the same methodology used to provide the response to DPS-200.

		Staff Life	Staff Curve Shape	Staff Average Net Salvage
352.00*	Structures and Improvements	55	R 2.5	-30
353.01	Station Equipment	45	L 0.5	-15
354.00*	Towers and Fixtures	75	R 4	-30
355.00	Poles and Fixtures	65	R 2.5	-40
366.01	Underground Conduit	70	R 0.5	-15
369.20*	Underground Services - Conduit	85	H 4	-5
373.22*	UG Street Lighting - Other	60	H 1.5	-30

Response:

1. Attachment 1 contains graphs showing observed proportions surviving, current curves, and Staff- proposed projection lives and curves for accounts 354.00 and 369.20. The graph requested for account 352.00 was provided in Exhibit__(KAK-3), Page 40 of 653. The graph requested for account 373.22 cannot be provided as explained in response to DPS-200 (PD-2), Question 1(a).

2. As discussed with Staff, the net salvage factors provided by Staff are average net salvage rates. A correct computation of a theoretical reserve requires both an average and future net salvage rate. Foster Associates, therefore, derived the future net salvage rates implicit in Staff's average net salvage rates and used the derived future net salvage rates and Staff's average net salvage rates to calculate theoretical reserve balances provided in Attachment 2.

Name of Respondent:
Dr. Kimbugwe A. Kateregga

Date of Reply:
July 10, 2017

NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 354.00 Towers and Fixtures

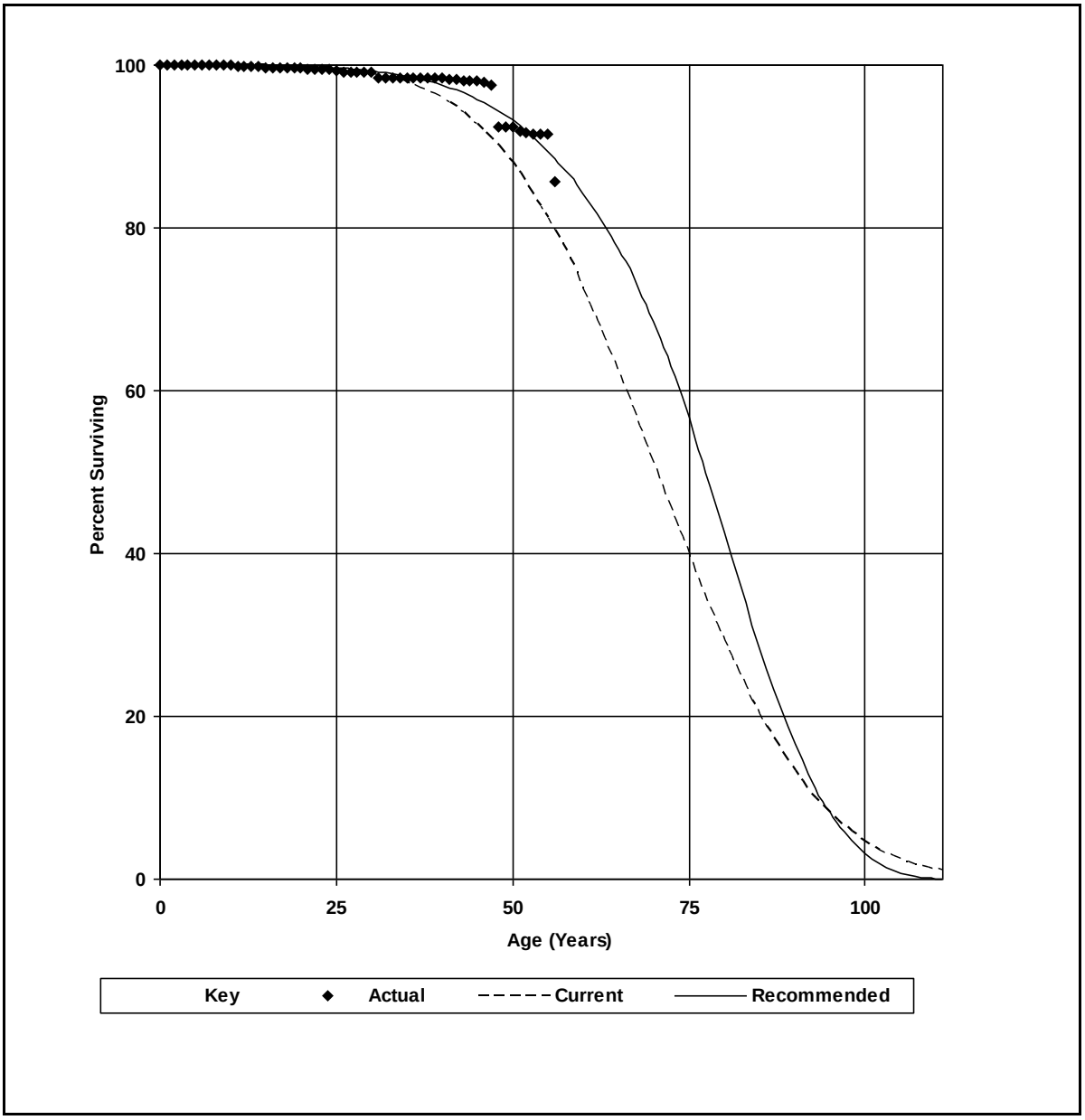
T-Cut: None

Placement Band: 1960-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 70.0-H4 **Recommended: 75.0-R4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 369.20 Underground Services - Conduit

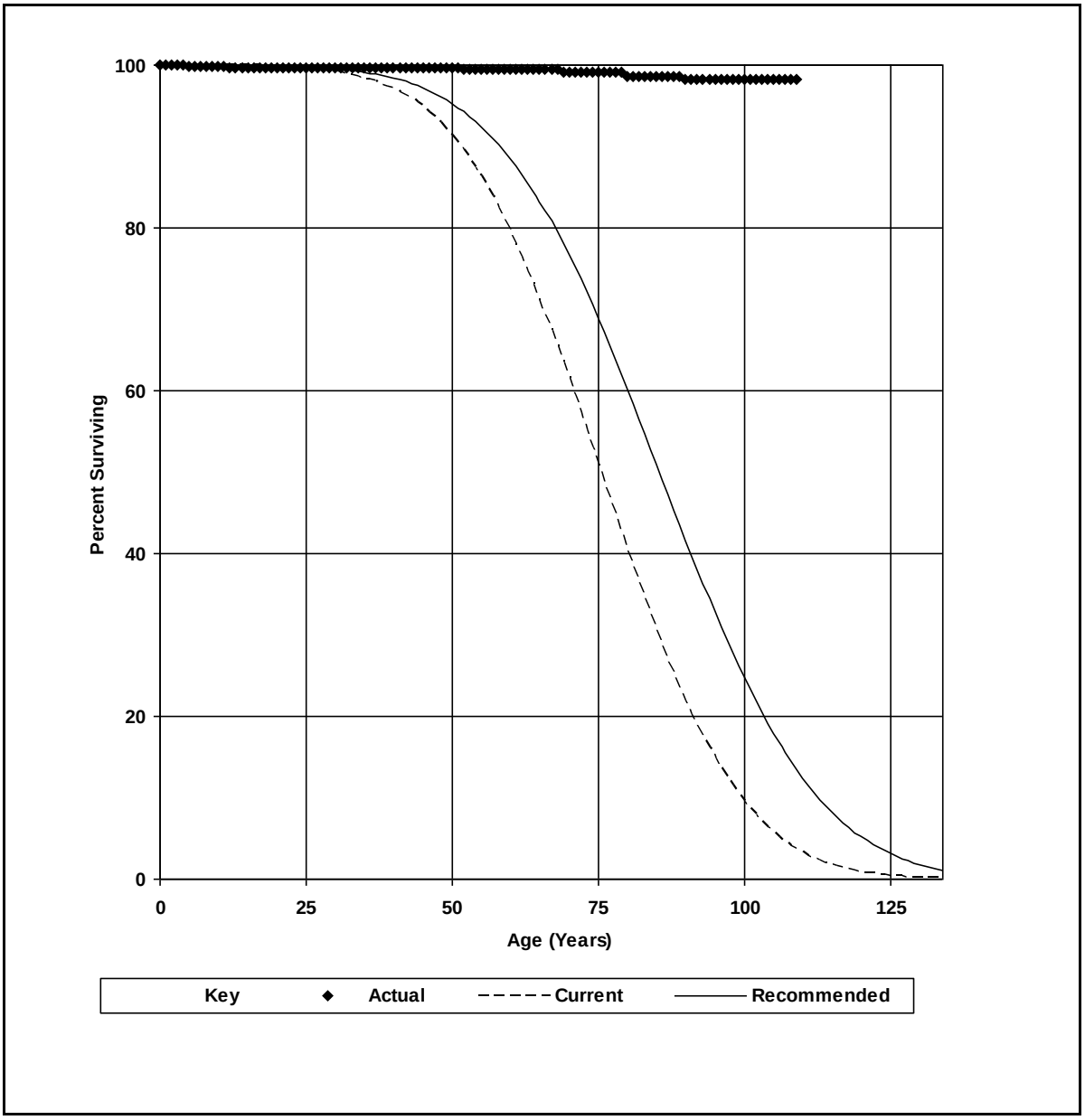
T-Cut: None

Placement Band: 1907-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-H4 **Recommended: 85.0-H4**



Niagara Mohawk Power Corporation
d/b/a National Grid
Case 17-E-0238 & 17-G-0239
Attachment 2 to DPS-467 PD-4
Page 1 of 1

December 31, 2015 Theoretical Reserves From Staff Proposed Parameters

	Projection Parameters		Net Salvage (%)		
Account_ID	Life (Yrs)	Curve	Future	Average	Theoretical Reserve
35200	55	R2.5	-26.7	-30.0	$17,387,857
35301	45	L0.5	-16.2	-15.0	$235,364,007
35400	75	R4	-21.7	-30.0	$77,696,000
35500	65	R2.5	-35.1	-40.0	$161,229,450
36601	70	R0.5	-13.7	-15.0	$38,967,074
36920	85	H4	-5.0	-5.0	$3,268,131
37322	60	H1.5	-30.0	-30.0	$28,079,743

Date of Request: July 13, 2017 Request No. DPS-586 PD-5
Due Date: July 24, 2017 NMPC Req. No. NM-1172

NIAGARA MOHAWK POWER CORPORATION d/b/a NATIONAL GRID
Case No. 17-E-0238 and 17-G-0239 –
Niagara Mohawk Power Corporation d/b/a National Grid – Electric and Gas Rates

Request for Information

FROM: DPS Staff, Paul J. Darmetko Jr.

TO: National Grid, Dr. Kimbugwe A. Kateregga

SUBJECT: **DEPRECIATION**

Request:

In this interrogatory, all requests for data, workpapers or supporting calculations should be construed as also requesting any associated Word, Excel, or other models in original electronic format with all formulae intact.

With reference to the plant accounts listed below:

1. Provide all documentation, meeting notes with Company personnel, or other information that justifies the use of a 7-year ASL for account 362.75 Station Equipment – EMS.

2. For each account below, calculate the theoretical reserve balance derived using the Staff-proposed factors utilizing the same methodology used to provide the response to DPS-200.

		Staff Life	Staff Curve Shape	Staff Average Net Salvage
362.75	Station Equipment - EMS	10	S 3	0
362.75	Station Equipment - EMS	15	S 3	0
362.75	Station Equipment - EMS	20	S 3	0
368.01	Line Transformers – Bare Cost	40	R 1.5	-10
369.21	Underground Services - Cable	85	H 2.5	-15

Response:

1. The use of a seven year ASL is appropriate for account 362.75 Station Equipment – EMS because EMS is largely software and software development. The Company procured the EMS software and hardware in the early phases of the project (2009 – 2010) and the technology and applications associated with the systems are changing rapidly. The Company is currently in the process of replacing EMS equipment that went into service in February 2015. The deployment is currently scheduled for 2018. This will allow the Company to keep up with product development so that there is not a large step change in software applications at refresh and to ensure hardware does not impact availability of the critical system. The software will have some advancement in applications and the hardware will be updated with newer models that increase memory and processing power. Therefore, based on the Company's current experience and plans, seven years is a viable life expectancy for this equipment. To maintain consistency, the Company determined that the EMS system should remain as one system on the Company's books in account 303 Intangible Plant and be depreciated over seven years as is the standard practice with software related IS assets on the Service Company's books.

Please see the Company's response to DPS-079 (IS-3) that presents the seven year ASL that is currently being utilized for IS systems on the Service Company's books.

2. Please see Attachment 1

Name of Respondent:
Joan Godlewski
Joe Farella
Nate Purdy
Plant Accounting
Kimbugwe A. Kateregga

Date of Reply:
July 24, 2017

Niagara Mohawk Power Corporation
d/b/a National Grid
Case 17-E-0238 & 17-G-0239
Attachment 1 to DPS-586 PD-5
Page 1 of 1

December 31, 2015 Theoretical Reserves From Staff Proposed Parameters

	Projection Parameters		Net Salvage (%)		
Account_ID	Life (Yrs)	Curve	Future	Average	Theoretical Reserve
36275	10	S3	0.0	0.0	$2,252,109
36275	15	S3	0.0	0.0	$1,501,406
36275	20	S3	0.0	0.0	$1,126,055
36801	40	R1.5	-10.1	-10.0	$190,011,271
36921	85	H2.5	-14.0	-15.0	$27,012,844

Depreciation Rate and Expense Summary

		Rate			Expense			Expense Difference	
			Company	Staff		Company	Staff	Present to	Company to
TRANSMISSION PLANT		Present	Proposed	Proposed	Present	Proposed	Proposed	Staff Proposed	Staff Proposed
350.40	Land Rights - Transmission Lines	1.32%	1.32%	1.32%	$384,394	$384,394	$384,394	$0	$0
352.00	Structures and Improvements	2.08%	2.42%	2.36%	$745,902	$867,828	$846,312	$100,410	($21,516)
353.01	Station Equipment	2.44%	2.53%	2.56%	$22,931,779	$23,777,623	$24,059,571	$1,127,792	$281,948
353.55	Station Equipment - RTU	3.40%	5.25%	4.20%	$1,737,753	$2,683,295	$2,146,636	$408,883	($536,659)
354.00	Towers and Fixtures	1.71%	2.11%	1.73%	$2,047,194	$2,526,070	$2,071,138	$23,944	($454,932)
355.00	Poles and Fixtures	2.00%	2.23%	2.15%	$14,064,167	$15,681,546	$15,118,980	$1,054,813	($562,567)
356.01	Overhead Conductors and Devices	1.60%	1.97%	1.63%	$7,943,074	$9,779,910	$8,092,007	$148,933	($1,687,903)
357.01	Underground Conduit	1.33%	1.40%	1.24%	$527,892	$555,676	$492,170	($35,722)	($63,506)
358.00	Underground Conductors and Devices	1.49%	1.69%	1.50%	$1,946,524	$2,207,802	$1,959,588	$13,064	($248,214)
359.00	Roads and Trails	1.33%	1.33%	1.33%	$31,109	$31,109	$31,109	$0	$0
Total Transmission		2.05%	2.30%	2.17%	$52,359,788	$58,495,254	$55,201,904	$2,842,116	($3,293,350)
DISTRIBUTION PLANT									
360.01	Land Rights	1.33%	1.33%	1.33%	$469,722	$469,722	$469,722	$0	$0
361.00	Structures and Improvements	1.67%	1.77%	1.63%	$697,892	$739,682	$681,176	($16,716)	($58,506)
362.01	Station Equipment	1.83%	1.98%	1.92%	$11,248,644	$12,170,664	$11,801,856	$553,212	($368,808)
362.55	Station Equipment - RTU	3.30%	5.25%	4.20%	$1,383,958	$2,201,752	$1,761,402	$377,443	($440,350)
362.75	Station Equipment - EMS	3.30%	14.29%	10.00%	$1,486,392	$6,436,528	$4,504,218	$3,017,826	($1,932,310)
364.00	Poles, Towers and Fixtures	1.62%	2.05%	1.77%	$17,666,257	$22,355,448	$19,302,021	$1,635,765	($3,053,427)
365.00	Overhead Conductors and Devices	2.50%	2.67%	2.25%	$29,875,957	$31,907,522	$26,888,362	($2,987,596)	($5,019,161)
366.01	Underground Conduit	1.47%	1.66%	1.64%	$2,684,416	$3,031,381	$2,994,858	$310,443	($36,523)
367.10	Underground Conductors and Devices	1.53%	1.75%	1.67%	$9,149,367	$10,464,963	$9,986,565	$837,197	($478,398)
368.01	Line Transformers - Bare Cost	2.67%	2.94%	2.75%	$15,692,239	$17,279,095	$16,162,419	$470,179	($1,116,676)
368.30	Line Transformers - Install Cost	2.67%	3.76%	3.25%	$8,334,432	$11,736,878	$10,144,908	$1,810,476	($1,591,970)
369.10	Overhead Services	2.60%	2.67%	2.55%	$8,383,432	$8,609,140	$8,222,213	($161,220)	($386,928)
369.20	Underground Services - Conduit	1.35%	1.40%	1.24%	$130,876	$135,723	$120,212	($10,664)	($15,511)
369.21	Underground Services - Cable	1.40%	1.68%	1.35%	$2,025,410	$2,430,492	$1,953,074	($72,336)	($477,418)
370.10	Small Meters - Bare Cost	6.25%	6.25%	6.25%	$3,638,559	$3,638,559	$3,638,559	$0	$0
370.20	Small Meters - Install Cost	6.25%	6.25%	6.25%	$2,514,977	$2,514,977	$2,514,977	$0	$0
370.30	Large Meters - Bare Cost	5.05%	5.05%	5.05%	$658,664	$658,664	$658,664	$0	$0
370.35	Large Meters - Install Cost	5.05%	5.05%	5.05%	$1,608,781	$1,608,781	$1,608,781	$0	$0
371.00	Installations on Customers' Premises	3.50%	2.65%	2.65%	$269,408	$203,981	$203,981	($65,428)	$0
373.11	OH Street Lighting - Luminaires - Non-LED	2.60%	6.50%	6.50%	$1,294,375	$3,235,938	$3,235,938	$1,941,563	$0
373.12	OH Street Lighting - Other	2.60%	2.60%	2.17%	$1,010,534	$1,010,534	$843,407	($167,127)	($167,127)
373.21	UG Street Lighting - Luminaires - Non-LED	1.86%	6.50%	6.50%	$964,108	$3,369,196	$3,369,196	$2,405,088	$0
373.22	UG Street Lighting - Other	1.86%	2.60%	2.17%	$2,076,260	$2,902,299	$2,422,303	$346,043	($479,996)
373.30	OH Street Lighting - Luminaires - LED	1.86%	5.20%	5.20%	$0	$0	$0	$0	$0
373.40	UG Street Lighting - Luminaires - LED	1.86%	5.20%	5.20%	$0	$0	$0	$0	$0
Total Distribution		2.19%	2.65%	2.37%	$123,264,662	$149,111,919	$133,488,811	$10,224,149	($15,623,108)
GENERAL PLANT									
Depreciable									
390.00	Structures and Improvements	2.00%	2.51%	2.51%	$2,042,279	$2,563,060	$2,563,060	$520,781	$0
392.22	Transportation Equipment - Helicopter	7.50%	3.33%	3.33%	$603,513	$267,960	$267,960	($335,553)	$0
Amortizable									
391.01	Office Furniture and Equipment	4.55%	4.55%	4.55%	$362,636	$362,636	$362,636	$0	$0
391.20	Office Data Processing Equipment	20.00%	20.00%	20.00%	$456,003	$456,003	$456,003	$0	$0
393.00	Stores Equipment	4.55%	4.55%	4.55%	$97,518	$97,518	$97,518	$0	$0
394.01	Tools, Shop and Garage Equipment	4.55%	4.55%	4.55%	$2,872,160	$2,872,160	$2,872,160	$0	$0
395.01	Laboratory Equipment	4.55%	4.55%	4.55%	$1,107,601	$1,107,601	$1,107,601	$0	$0
396.00	Power Operated Equipment	4.55%	4.55%	4.55%	$12,707	$12,707	$12,707	$0	$0
397.01	Communication Equip. - Radio	4.55%	4.55%	4.55%	$2,710,941	$2,710,941	$2,710,941	$0	$0
397.02	Communication Equip. - Telephone	12.50%	12.50%	12.50%	$3,977	$3,977	$3,977	$0	$0
397.50	Communication Equip. - Network NY	4.55%	4.55%	4.55%	$304,032	$304,032	$304,032	$0	$0
397.60	Communication Equip. - Network Site NY	4.55%	4.55%	4.55%	$401,009	$401,009	$401,009	$0	$0
398.01	Miscellaneous Equipment	4.55%	4.55%	4.55%	$2,253,639	$2,253,639	$2,253,639	$0	$0
Total General		3.95%	4.00%	4.00%	$13,228,016	$13,413,244	$13,413,244	$185,228	$0
Total Electric (excluding common)					**$188,852,466**	**$221,020,417**	**$202,103,959**	**$13,251,493**	**($18,916,458)**
						Diff from Comp	($18,916,458)		
						Diff from Pres	$13,251,493		

Average Service Life Summary

			Company	Staff	
TRANSMISSION PLANT		Present	Proposed	Proposed	Basis for Staff Recommendation
350.40	Land Rights - Transmission Lines	75.00	75.00	75.00	Agree with Company, Set ASL to longer of account 354.00 or 355.00.
352.00	Structures and Improvements	65.00	55.00	55.00	Agree with Company, Best statistical and visual fitting ASL and Survivor Curve.
353.01	Station Equipment	45.00	45.00	45.00	Agree with Company, Best statistical and visual fitting ASL and Survivor Curve.
353.55	Station Equipment - RTU	30.00	20.00	25.00	Better visual fit than the Company selected ASL and survivor curve. Discussions with DPS transmission engineers familiar with the equipment indicate 25 year ASL is reasonable.
354.00	Towers and Fixtures	70.00	70.00	75.00	Better Conf. Index and visual fitting ASL and Survivor Curve. The depreciation study Schedule B for this account shows that a significant amount of these assets live well beyond 70 years. Rolling and shrinking bands also indicate a significantly longer life than 75 years, however with limited retirements.
355.00	Poles and Fixtures	65.00	65.00	65.00	Agree with Company, Best statistical and visual fitting ASL and Survivor Curve.
356.01	Overhead Conductors and Devices	75.00	75.00	80.00	Better visual fit than the Company selected ASL and survivor curve. The depreciation study Schedule B for this account shows that a significant amount of these assets live well beyond 75 years. Rolling and shrinking bands also indicate a significantly longer life than 75 years, however with limited retirements.
357.01	Underground Conduit	75.00	75.00	85.00	Better visual fit than the Company selected ASL and survivor curve, The depreciation study Schedule B for this account shows that a significant amount of these assets live well beyond 80 years. Rolling and shrinking bands also indicate a significantly longer life than 80 years, however with limited retirements.
358.00	Underground Conductors and Devices	75.00	75.00	80.00	Better visual fit than the Company selected ASL and survivor curve. The depreciation study Schedule B for this account shows that a significant amount of these assets live well beyond 75 years. Rolling and shrinking bands also indicate a significantly longer life than 75 years, however with limited retirements.
359.00	Roads and Trails	75.00	75.00	75.00	Agree with the Company. No retirement information. 75 years is a reasonable estimate.
DISTRIBUTION PLANT					
360.01	Land Rights	75.00	75.00	75.00	Agree with the Company. No retirement information. 75 years is a reasonable estimate.
361.00	Structures and Improvements	75.00	75.00	80.00	Better visual fit than the Company selected ASL and survivor curve. The depreciation study Schedule B for this account shows that a significant amount of these assets live well beyond 75 years. Rolling and shrinking bands also indicate a significantly longer life than 75 years.
362.01	Station Equipment	60.00	58.00	60.00	No need to make such a minor change. Study incicates that 60 is still reasonable.
362.55	Station Equipment - RTU	30.00	20.00	25.00	Better visual fit than the Company selected ASL and survivor curve. 30 is still reasonable based on the study. Discussions with DPS distribution engineers familiar with the equipment indicate 25 year ASL is more reasonable.
362.75	Station Equipment - EMS	30.00	7.00	10.00	DPS Staff Distribution engineers familiar with this equipment suggest that a 10 year ASL is reasonable.
364.00	Poles, Towers and Fixtures	65.00	65.00	65.00	Agree with Company, very good statistical and visual fitting ASL and Survivor Curve.
365.00	Overhead Conductors and Devices	50.00	55.00	60.00	Good visual fit. 60 reasonable based on the rolling and shrinking bands.
366.01	Underground Conduit	75.00	70.00	70.00	Agree with Company, good visual fit as well as Conf. Index.
367.10	Underground Conductors and Devices	75.00	75.00	75.00	Agree with Company, good visual fit as well as Conf. Index.
368.01	Line Transformers - Bare Cost	45.00	36.00	40.00	Better visual fit than the Company selected ASL and survivor curve.
368.30	Line Transformers - Install Cost	45.00	36.00	40.00	Better visual fit than the Company selected ASL and survivor curve.
369.10	Overhead Services	50.00	55.00	55.00	Agree with Company, good visual fit as well as Conf. Index.
369.20	Underground Services - Conduit	75.00	75.00	85.00	Better visual fit than the Company selected ASL and survivor curve, The depreciation study Schedule B for this account shows that a significant amount of these assets live well beyond 80 years. Rolling and shrinking bands also indicate a significantly longer life than 80 years, however with limited retirements.
369.21	Underground Services - Cable	75.00	75.00	85.00	Better visual fit than the Company selected ASL and survivor curve, The depreciation study Schedule B for this account shows that a significant amount of these assets live well beyond 80 years. Rolling and shrinking bands also indicate a significantly longer life than 80 years, however with limited retirements.
370.10	Small Meters - Bare Cost	20.00	20.00	20.00	Discussion with Distribution engineers, estimate is reasonable
370.20	Small Meters - Install Cost	20.00	20.00	20.00	Discussion with Distribution engineers, estimate is reasonable
370.30	Large Meters - Bare Cost	20.00	20.00	20.00	Discussion with Distribution engineers, estimate is reasonable
370.35	Large Meters - Install Cost	20.00	20.00	20.00	Discussion with Distribution engineers, estimate is reasonable
371.00	Installations on Customers' Premises	40.00	42.00	42.00	Agree with Company, good visual fit as well as Conf. Index.
373.11	OH Street Lighting - Luminaires - Non-LED	50.00	20.00	20.00	Data provided from the Company on historic failure rates and replacement cycles indicate 20 year ASL reasonable
373.12	OH Street Lighting - Other	50.00	50.00	60.00	Depreciation study - split out from OH - logic dictates that if ASL of luminaires is 20 - remaining ASL of the "Other" is higher. Used Ratio of plant split from OH account and plot provided by the Company.
373.21	UG Street Lighting - Luminaires - Non-LED	70.00	20.00	20.00	Data provided from the Company on historic failure rates and replacement cycles indicate 20 year ASL reasonable
373.22	UG Street Lighting - Other	70.00	50.00	60.00	Depreciation study - split out from UG - logic dictates that if ASL of luminaires is 20 - remaining ASL of the "Other" is higher. Used Ratio of plant split from UG account and plot provided by the Company.
373.30	OH Street Lighting - Luminaires - LED	70.00	25.00	25.00	Generally accepted ASL for LED Luminaires, no retirement history to indicate something different
373.40	UG Street Lighting - Luminaires - LED	70.00	25.00	25.00	Generally accepted ASL for LED Luminaires, no retirement history to indicate something different
GENERAL PLANT					
Depreciable					
390.00	Structures and Improvements	55.00	45.00	45.00	Agree with Company, good visual fit as well as Conf. Index.
392.22	Transportation Equipment - Helicopter	10.00	15.00	15.00	Agree with Company based on summary provided in study.
Amortizable					
391.01	Office Furniture and Equipment	22.00	22.00	22.00	Amortization period still reasonable
391.20	Office Data Processing Equipment	5.00	5.00	5.00	Amortization period still reasonable
393.00	Stores Equipment	22.00	22.00	22.00	Amortization period still reasonable
394.01	Tools, Shop and Garage Equipment	22.00	22.00	22.00	Amortization period still reasonable
395.01	Laboratory Equipment	22.00	22.00	22.00	Amortization period still reasonable
396.00	Power Operated Equipment	22.00	22.00	22.00	Amortization period still reasonable
397.01	Communication Equip. - Radio	22.00	22.00	22.00	Amortization period still reasonable
397.02	Communication Equip. - Telephone	8.00	8.00	8.00	Amortization period still reasonable
397.50	Communication Equip. - Network NY	22.00	22.00	22.00	Amortization period still reasonable
397.60	Communication Equip. - Network Site NY	22.00	22.00	22.00	Amortization period still reasonable
398.01	Miscellaneous Equipment	22.00	22.00	22.00	Amortization period still reasonable

Survivor Curve Summary

		Present	Company Proposed	Staff Proposed	Basis for Staff Recommendation
TRANSMISSION PLANT					
350.40	Land Rights - Transmission Lines	H5	H5	H5	See ASL summary
352.00	Structures and Improvements	H3	R2.5	R2.5	See ASL summary
353.01	Station Equipment	H0.5	L0.5	L0.5	See ASL summary
353.55	Station Equipment - RTU	S3	S4	H5	See ASL summary
354.00	Towers and Fixtures	H4	H4	R4	See ASL summary
355.00	Poles and Fixtures	H4	R2.5	R2.5	See ASL summary
356.01	Overhead Conductors and Devices	H2	H2	R2.5	See ASL summary
357.01	Underground Conduit	H4	H4	R3	See ASL summary
358.00	Underground Conductors and Devices	R3	R3	R3	See ASL summary
359.00	Roads and Trails	H4	H4	H4	See ASL summary
DISTRIBUTION PLANT					
360.01	Land Rights	H5	H5	H5	See ASL summary
361.00	Structures and Improvements	R1.5	R2.5	R2.5	See ASL summary
362.01	Station Equipment	H2	H2	H2	See ASL summary
362.55	Station Equipment - RTU	S3	S4	S3	See ASL summary
362.75	Station Equipment - EMS	S3	S6	S3	See ASL summary
364.00	Poles, Towers and Fixtures	R1.5	R1.5	R1.5	See ASL summary
365.00	Overhead Conductors and Devices	R4	R4	R4	See ASL summary
366.01	Underground Conduit	H4	R0.5	R0.5	See ASL summary
367.10	Underground Conductors and Devices	R3	R3	R3	See ASL summary
368.01	Line Transformers - Bare Cost	H0.5	R1	R1.5	See ASL summary
368.30	Line Transformers - Install Cost	R1.5	R2	R2	See ASL summary
369.10	Overhead Services	H4	R4	R4	See ASL summary
369.20	Underground Services - Conduit	H4	H4	H4	See ASL summary
369.21	Underground Services - Cable	H2.5	H2.5	H2.5	See ASL summary
370.10	Small Meters - Bare Cost	H0.5	H0.5	H0.5	See ASL summary
370.20	Small Meters - Install Cost	H0.5	H0.5	H0.5	See ASL summary
370.30	Large Meters - Bare Cost	H3	H3	H3	See ASL summary
370.35	Large Meters - Install Cost	H3	H3	H3	See ASL summary
371.00	Installations on Customers' Premises	H1.5	R1.5	R1.5	See ASL summary
373.11	OH Street Lighting - Luminaires - Non-LED	H1.5	S3	S3	See ASL summary
373.12	OH Street Lighting - Other	H1.5	H1.5	H1.5	See ASL summary
373.21	UG Street Lighting - Luminaires - Non-LED	H1	S3	S3	See ASL summary
373.22	UG Street Lighting - Other	H1	H1.5	H1.5	See ASL summary
373.30	OH Street Lighting - Luminaires - LED	H1	S3	S3	See ASL summary
373.40	UG Street Lighting - Luminaires - LED	H1	S3	S3	See ASL summary
GENERAL PLANT					
Depreciable					
390.00	Structures and Improvements	H0.5	H0.5	H0.5	See ASL summary
392.22	Transportation Equipment - Helicopter	SQ	SQ	SQ	See ASL summary
Amortizable					
391.01	Office Furniture and Equipment	SQ	SQ	SQ	See ASL summary
391.20	Office Data Processing Equipment	SQ	SQ	SQ	See ASL summary
393.00	Stores Equipment	SQ	SQ	SQ	See ASL summary
394.01	Tools, Shop and Garage Equipment	SQ	SQ	SQ	See ASL summary
395.01	Laboratory Equipment	SQ	SQ	SQ	See ASL summary
396.00	Power Operated Equipment	SQ	SQ	SQ	See ASL summary
397.01	Communication Equip. - Radio	SQ	SQ	SQ	See ASL summary
397.02	Communication Equip. - Telephone	SQ	SQ	SQ	See ASL summary
397.50	Communication Equip. - Network NY	SQ	SQ	SQ	See ASL summary
397.60	Communication Equip. - Network Site NY	SQ	SQ	SQ	See ASL summary
398.01	Miscellaneous Equipment	SQ	SQ	SQ	See ASL summary

Average Net Salvage Summary

		Present	Company Proposed	Staff Proposed	Basis for Staff Recommendation
TRANSMISSION PLANT					
350.40	Land Rights - Transmission Lines	1	1.2	1.2	Reasonable minor move
352.00	Structures and Improvements	-35	-33	-30	Slightly reduced to recover closer to the 5 year average. No obvious trend.
353.01	Station Equipment	-10	-14	-15	Minor revision proposed based on recent slight trend Net Salvage being more negative.
353.55	Station Equipment - RTU	-2	-5	-5	Minor revision proposed based on recent slight trend Net Salvage being more negative.
354.00	Towers and Fixtures	-20	-47.7	-30	Trending more negative. Move in right direction - limit move due to gradualism principal
355.00	Poles and Fixtures	-30	-44.7	-40	Trending more negative. Move in right direction - limit move due to gradualism principal
356.01	Overhead Conductors and Devices	-20	-47.4	-30	Trending more negative. Move in right direction - limit move due to gradualism principal
357.01	Underground Conduit	0	-5.1	-5	Not a great trend, but more recently has been more negative. Move -5 % age points from present.
358.00	Underground Conductors and Devices	-12	-26.5	-20	Move in right direction - limit move due to gradualism principal - rounded to nearest 5 %age pts.
359.00	Roads and Trails	0	0	0	No historic Net salvage
DISTRIBUTION PLANT					
360.01	Land Rights				No historic Net salvage
361.00	Structures and Improvements	-25	-32.8	-30	Minor revision proposed based on recent slight trend Net Salvage being more negative.
362.01	Station Equipment	-10	-14.7	-15	Minor revision proposed based on recent slight trend Net Salvage being more negative.
362.55	Station Equipment - RTU	1	-5	-5	Minor revision proposed based on recent slight trend Net Salvage being more negative.
362.75	Station Equipment - EMS	1	0	0	No historic Net salvage yet
364.00	Poles, Towers and Fixtures	-5	-33.5	-15	Trending more negative. Move in right direction - limit move due to gradualism principal
365.00	Overhead Conductors and Devices	-25	-47	-35	Trending more negative. Move in right direction - limit move due to gradualism principal
366.01	Underground Conduit	-10	-16.3	-15	Minor revision proposed based on recent slight trend Net Salvage being more negative.
367.10	Underground Conductors and Devices	-15	-31.5	-25	Trending more negative. Move in right direction - limit move due to gradualism principal
368.01	Line Transformers - Bare Cost	-20	-6	-10	Trending less negative. Move in right direction - limit move due to gradualism principal
368.30	Line Transformers - Install Cost	-20	-35.4	-30	Trending more negative. Move in right direction - limit move due to gradualism principal
369.10	Overhead Services	-30	-46.8	-40	Trending more negative. Move in right direction - limit move due to gradualism principal
369.20	Underground Services - Conduit	-1	-5	-5	Minor revision proposed based on recent slight trend Net Salvage being more negative.
369.21	Underground Services - Cable	-5	-25.8	-15	Trending more negative. Move in right direction - limit move due to gradualism principal
370.10	Small Meters - Bare Cost	-25	-25	-25	No historic basis, but reasonable estimate
370.20	Small Meters - Install Cost	-25	-25	-25	No historic basis, but reasonable estimate
370.30	Large Meters - Bare Cost	-1	-1	-1	No historic basis, but reasonable estimate
370.35	Large Meters - Install Cost	-1	-1	-1	No historic basis, but reasonable estimate
371.00	Installations on Customers' Premises	-40	-11.4	-11.4	Deviated from gradualism principal due to account being over depreciated. FA selected reasonable Net salvage
373.11	OH Street Lighting - Luminaires - Non-LED	-30	-30	-30	No historic net salvage history exclusive to these facilities, retention of present average net salvage is reasonable until data is available
373.12	OH Street Lighting - Other	-30	-30	-30	No historic net salvage history exclusive to these facilities, retention of present average net salvage is reasonable until data is available
373.21	UG Street Lighting - Luminaires - Non-LED	-30	-30	-30	No historic net salvage history exclusive to these facilities, retention of present average net salvage is reasonable until data is available
373.22	UG Street Lighting - Other	-30	-30	-30	No historic net salvage history exclusive to these facilities, retention of present average net salvage is reasonable until data is available
373.30	OH Street Lighting - Luminaires - LED	-30	-30	-30	No historic net salvage history exclusive to these facilities, retention of present average net salvage is reasonable until data is available
373.40	UG Street Lighting - Luminaires - LED	-30	-30	-30	No historic net salvage history exclusive to these facilities, retention of present average net salvage is reasonable until data is available
GENERAL PLANT					
Depreciable					
390.00	Structures and Improvements	-10	-13	-13	Move in right direction - Company proposed level reasonable
392.22	Transportation Equipment - Helicopter	25	50	50	Company proposed level reasonable
Amortizable					
391.01	Office Furniture and Equipment	0	0	0	These plant accounts are amortized over expected usefull life, no salvage.
391.20	Office Data Processing Equipment	0	0	0	These plant accounts are amortized over expected usefull life, no salvage.
393.00	Stores Equipment	0	0	0	These plant accounts are amortized over expected usefull life, no salvage.
394.01	Tools, Shop and Garage Equipment	0	0	0	These plant accounts are amortized over expected usefull life, no salvage.
395.01	Laboratory Equipment	0	0	0	These plant accounts are amortized over expected usefull life, no salvage.
396.00	Power Operated Equipment	0	0	0	These plant accounts are amortized over expected usefull life, no salvage.
397.01	Communication Equip. - Radio	0	0	0	These plant accounts are amortized over expected usefull life, no salvage.
397.02	Communication Equip. - Telephone	0	0	0	These plant accounts are amortized over expected usefull life, no salvage.
397.50	Communication Equip. - Network NY	0	0	0	These plant accounts are amortized over expected usefull life, no salvage.
397.60	Communication Equip. - Network Site NY	0	0	0	These plant accounts are amortized over expected usefull life, no salvage.
398.01	Miscellaneous Equipment	0	0	0	These plant accounts are amortized over expected usefull life, no salvage.

Reserve Summary

		Book Reserve	Company Proposed Theoretical	Staff Proposed Theoretical
TRANSMISSION PLANT				
350.40	Land Rights - Transmission Lines	$ 15,600,004	$ 14,842,526	$ 14,842,526
352.00	Structures and Improvements	$ 13,538,388	$ 17,924,006	$ 17,387,857
353.01	Station Equipment	$ 220,280,879	$ 231,535,778	$ 235,364,007
353.55	Station Equipment - RTU	$ 33,895,295	$ 34,560,836	$ 30,181,699
354.00	Towers and Fixtures	$ 68,614,213	$ 93,390,595	$ 77,696,000
355.00	Poles and Fixtures	$ 123,490,718	$ 169,205,347	$ 161,229,450
356.01	Overhead Conductors and Devices	$ 71,985,154	$ 91,662,020	$ 83,482,954
357.01	Underground Conduit	$ 17,828,696	$ 13,782,008	$ 11,859,947
358.00	Underground Conductors and Devices	$ 33,724,787	$ 44,863,677	$ 39,622,868
359.00	Roads and Trails	$ 449,655	$ 469,363	$ 469,363
		$ 599,407,789	$ 712,236,157	$ 672,136,671
DISTRIBUTION PLANT				
360.01	Land Rights		$ 3,155,027	$ 3,155,027
361.00	Structures and Improvements	$ 15,392,075	$ 14,687,230	$ 13,449,564
362.01	Station Equipment	$ 147,435,668	$ 151,725,383	$ 148,050,798
362.55	Station Equipment - RTU	$ 23,211,163	$ 25,936,640	$ 21,559,556
362.75	Station Equipment - EMS	$ 3,102,015	$ 3,217,299	$ 563,027
364.00	Poles, Towers and Fixtures	$ 339,223,188	$ 265,316,810	$ 209,084,259
365.00	Overhead Conductors and Devices	$ 602,284,275	$ 454,538,246	$ 369,326,584
366.01	Underground Conduit	$ 55,717,091	$ 39,434,407	$ 38,967,074
367.10	Underground Conductors and Devices	$ 141,473,203	$ 149,142,265	$ 140,728,833
368.01	Line Transformers - Bare Cost	$ 228,867,415	$ 177,038,890	$ 173,760,694
368.30	Line Transformers - Install Cost	$ 20,797,722	$ 118,862,248	$ 99,849,303
369.10	Overhead Services	$ 225,126,188	$ 163,193,655	$ 153,651,316
369.20	Underground Services - Conduit	$ 4,737,377	$ 3,649,592	$ 3,268,131
369.21	Underground Services - Cable	$ 35,619,068	$ 33,761,890	$ 28,394,889
370.10	Small Meters - Bare Cost	$ (26,155,854)	$ 14,990,865	$ 14,990,865
370.20	Small Meters - Install Cost	$ (23,344,421)	$ 8,777,269	$ 8,777,269
370.30	Large Meters - Bare Cost	$ 6,340,081	$ 4,696,272	$ 4,696,272
370.35	Large Meters - Install Cost	$ 11,799,216	$ 17,648,322	$ 17,648,322
371.00	Installations on Customers' Premises	$ 8,002,505	$ 2,976,112	$ 2,976,112
373.11	OH Street Lighting - Luminaires - Non-LED	$ 27,047,147	$ 29,770,634	$ 18,153,615
373.12	OH Street Lighting - Other	$ 14,615,961	$ 16,087,702	$ 14,004,317
373.21	UG Street Lighting - Luminaires - Non-LED	$ 26,812,506	$ 32,276,900	$ 18,614,809
373.22	UG Street Lighting - Other	$ 27,002,611	$ 32,505,749	$ 28,079,743
373.30	OH Street Lighting - Luminaires - LED	$ -	$ -	$ -
373.40	UG Street Lighting - Luminaires - LED	$ -	$ -	$ -
		$ 1,918,802,442	$ 1,763,389,406	$ 1,531,750,379
GENERAL PLANT				
Depreciable				
390.00	Structures and Improvements	$ 16,984,181	$ 24,632,836	$ 24,632,836
392.22	Transportation Equipment - Helicopter	$ 488,343	$ 134,114	$ 134,114
		$ 17,472,524	$ 24,766,950	$ 24,766,950
Amortizable				
391.01	Office Furniture and Equipment	$ 4,838,344	$ 6,946,486	$ 6,946,486
391.20	Office Data Processing Equipment	$ 1,605,809	$ 1,645,233	$ 1,645,233
393.00	Stores Equipment	$ 1,400,788	$ 2,079,271	$ 2,079,271
394.01	Tools, Shop and Garage Equipment	$ 28,133,167	$ 37,230,048	$ 37,230,048
395.01	Laboratory Equipment	$ 12,154,238	$ 18,388,426	$ 18,388,426
396.00	Power Operated Equipment	$ 100,730	$ 67,145	$ 67,145
397.01	Communication Equip. - Radio	$ 36,234,026	$ 35,276,035	$ 35,276,035
397.02	Communication Equip. - Telephone	$ 4,174,521	$ 30,994	$ 30,994
397.50	Communication Equip. - Network NY	$ 3,599,184	$ 3,493,889	$ 3,493,889
397.60	Communication Equip. - Network Site NY	$ 20,923,641	$ 6,857,039	$ 6,857,039
398.01	Miscellaneous Equipment	$ 96,442,118	$ 48,905,159	$ 48,905,159
	Total Amortizable	$ 209,606,567	$ 160,919,725	$ 160,919,725
	Total General	$ 227,079,091	$ 185,686,675	$ 185,686,675
	Total Electric (excluding Common)	**$ 2,745,289,321**	**$ 2,661,312,238**	**$ 2,389,573,725**
	Book to theoretical Reserve Excess		$ 83,977,083	$ 355,715,596
	10% of book	$274,528,932		
	Amount over book to amortize, to bring to 10 % band			$ 81,186,664
	Spread over 15 years (adj)			$ 5,412,444

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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

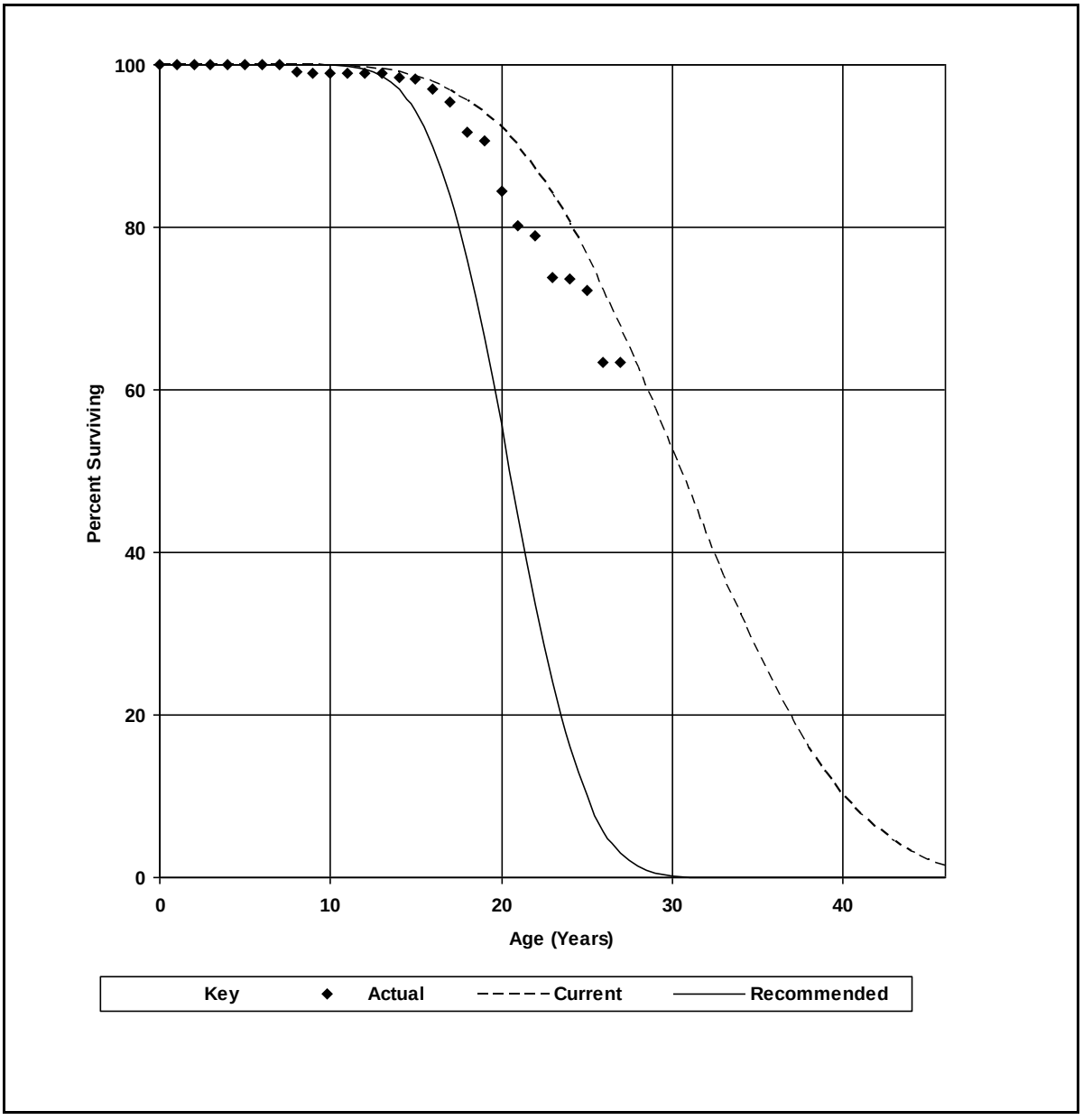
Account: 353.55 Station Equipment - RTU

T-Cut: None

Placement Band: 1989-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 30.0-S3** **Recommended: 20.0-S4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

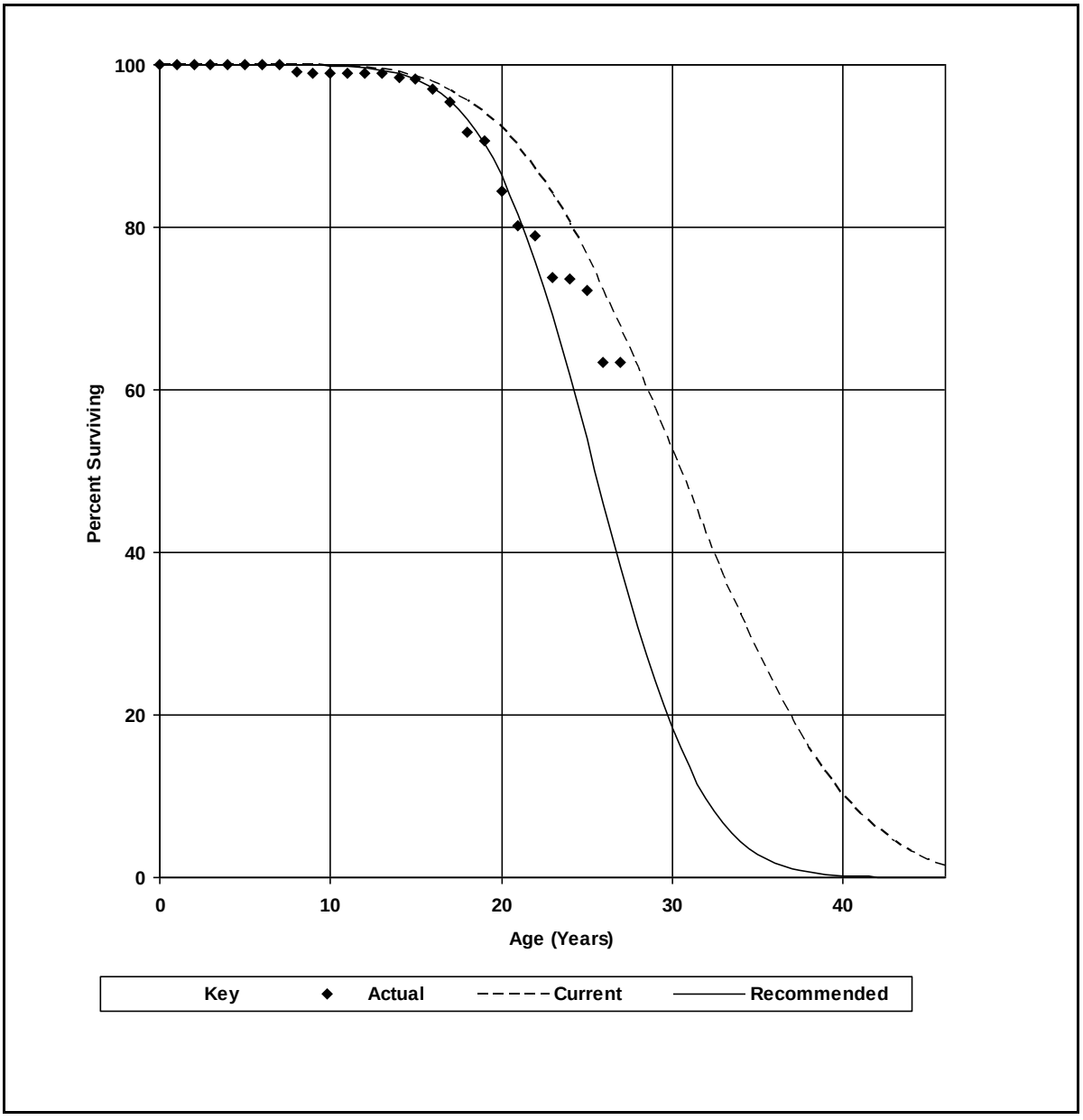
Account: 353.55 Station Equipment - RTU

T-Cut: None

Placement Band: 1989-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 30.0-S3 Recommended: 25.0-H5**



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

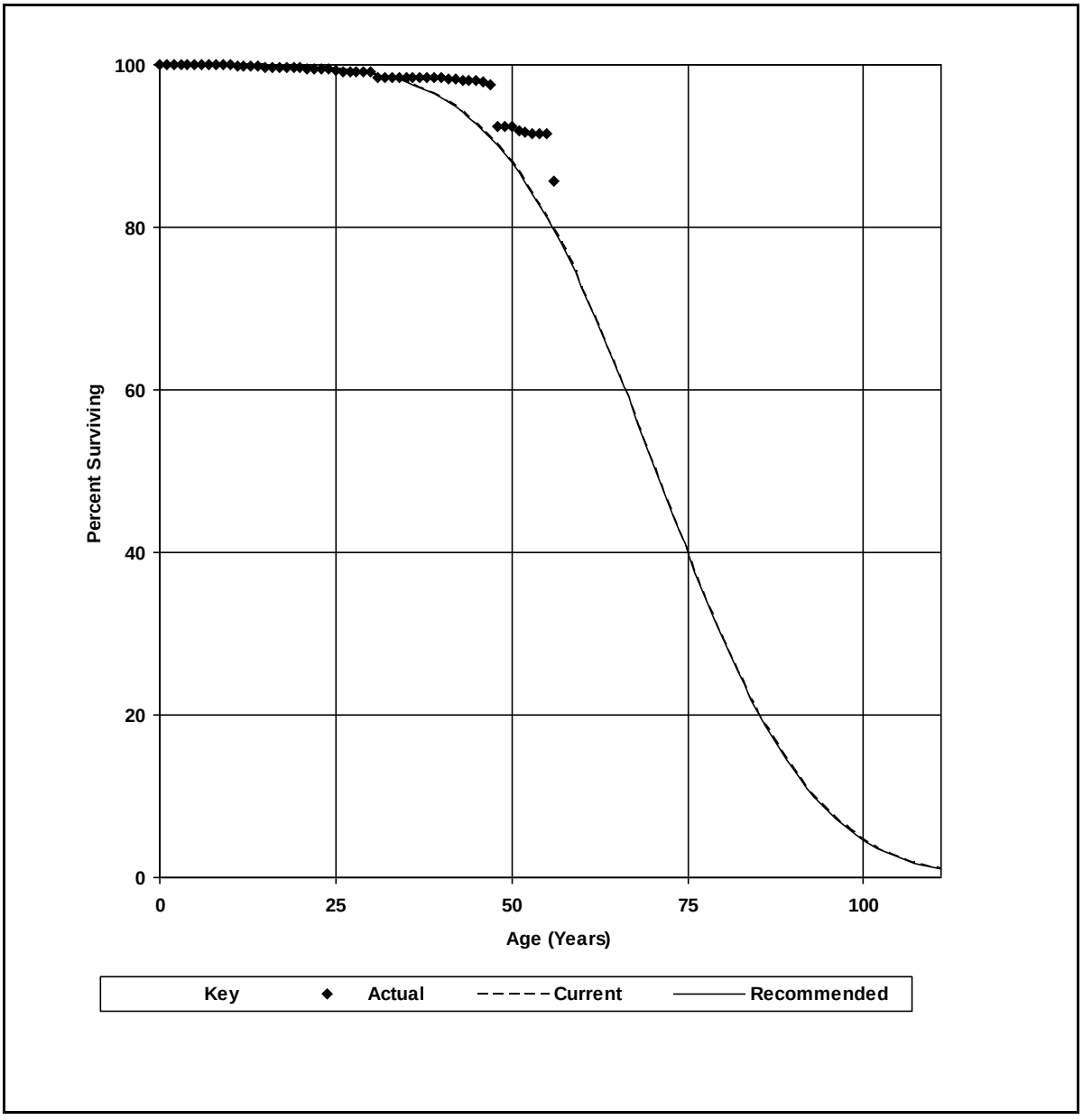
Transmission Plant

Account: 354.00 Towers and Fixtures

T-Cut: None
Placement Band: 1960-2015
Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 70.0-H4 **Recommended: 70.0-H4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

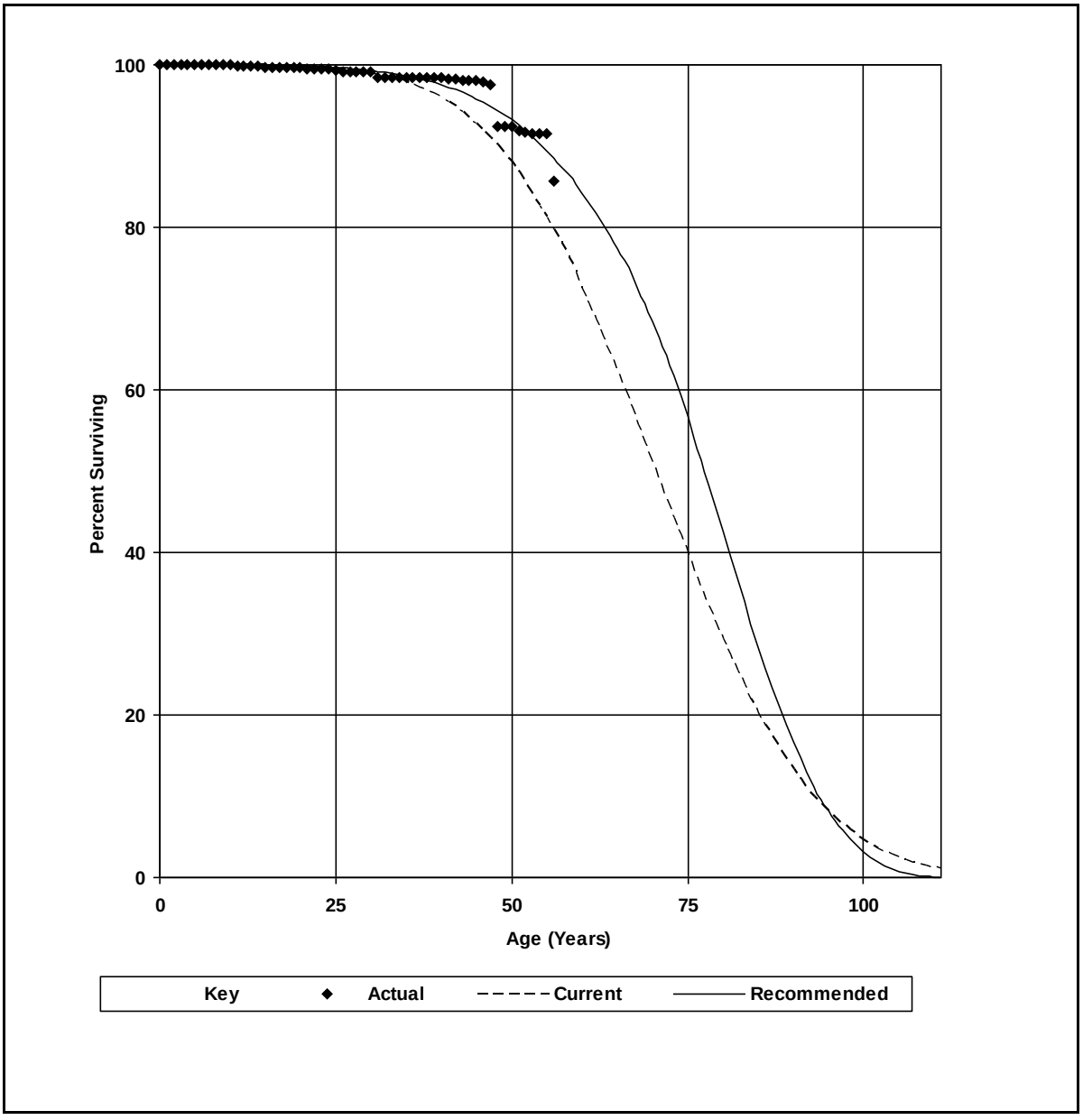
Account: 354.00 Towers and Fixtures

T-Cut: None

Placement Band: 1960-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 70.0-H4** **Recommended: 75.0-R4**



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

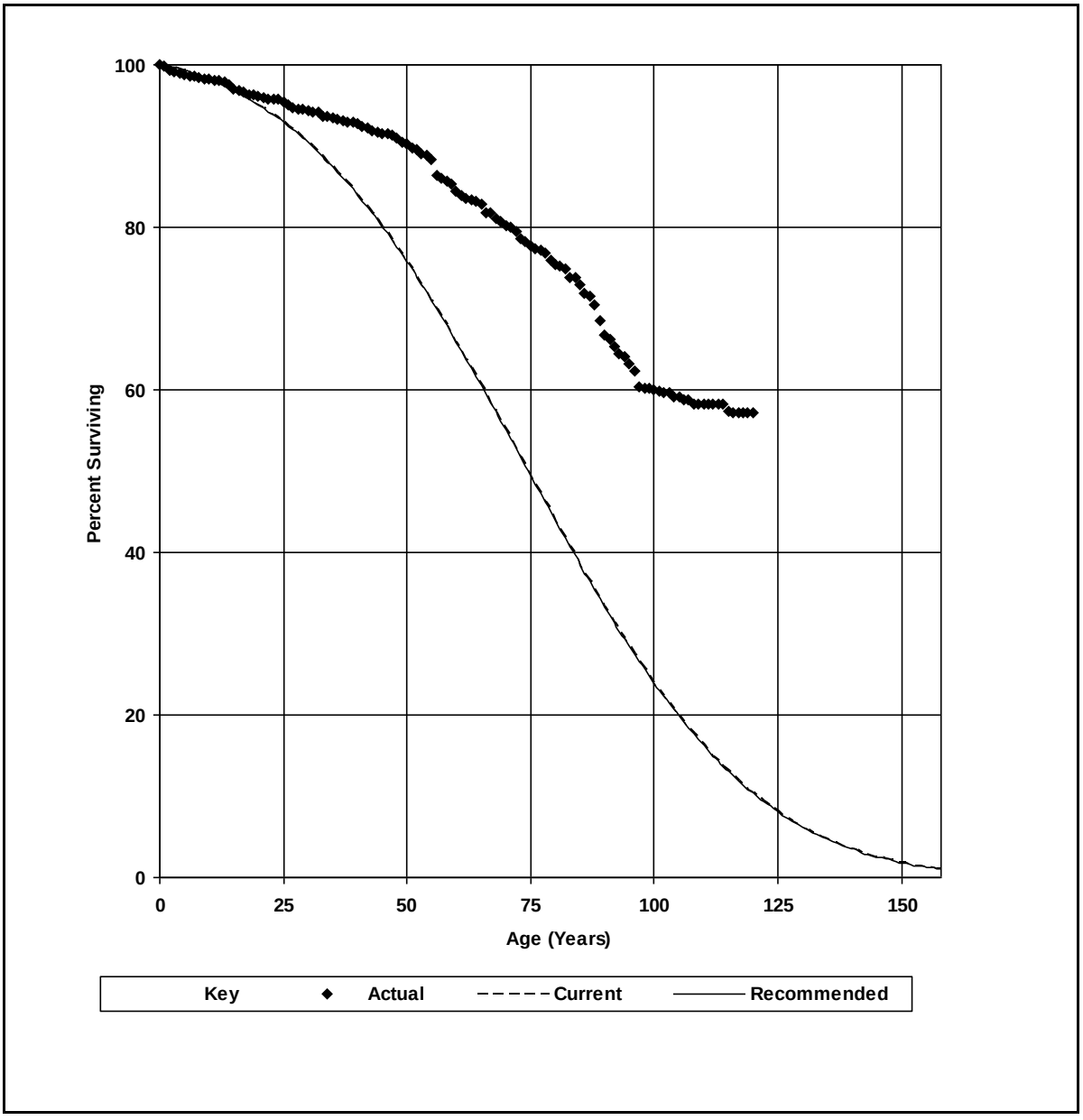
Account: 356.01 Overhead Conductors and Device

T-Cut: None

Placement Band: 1896-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 75.0-H2** **Recommended: 75.0-H2**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

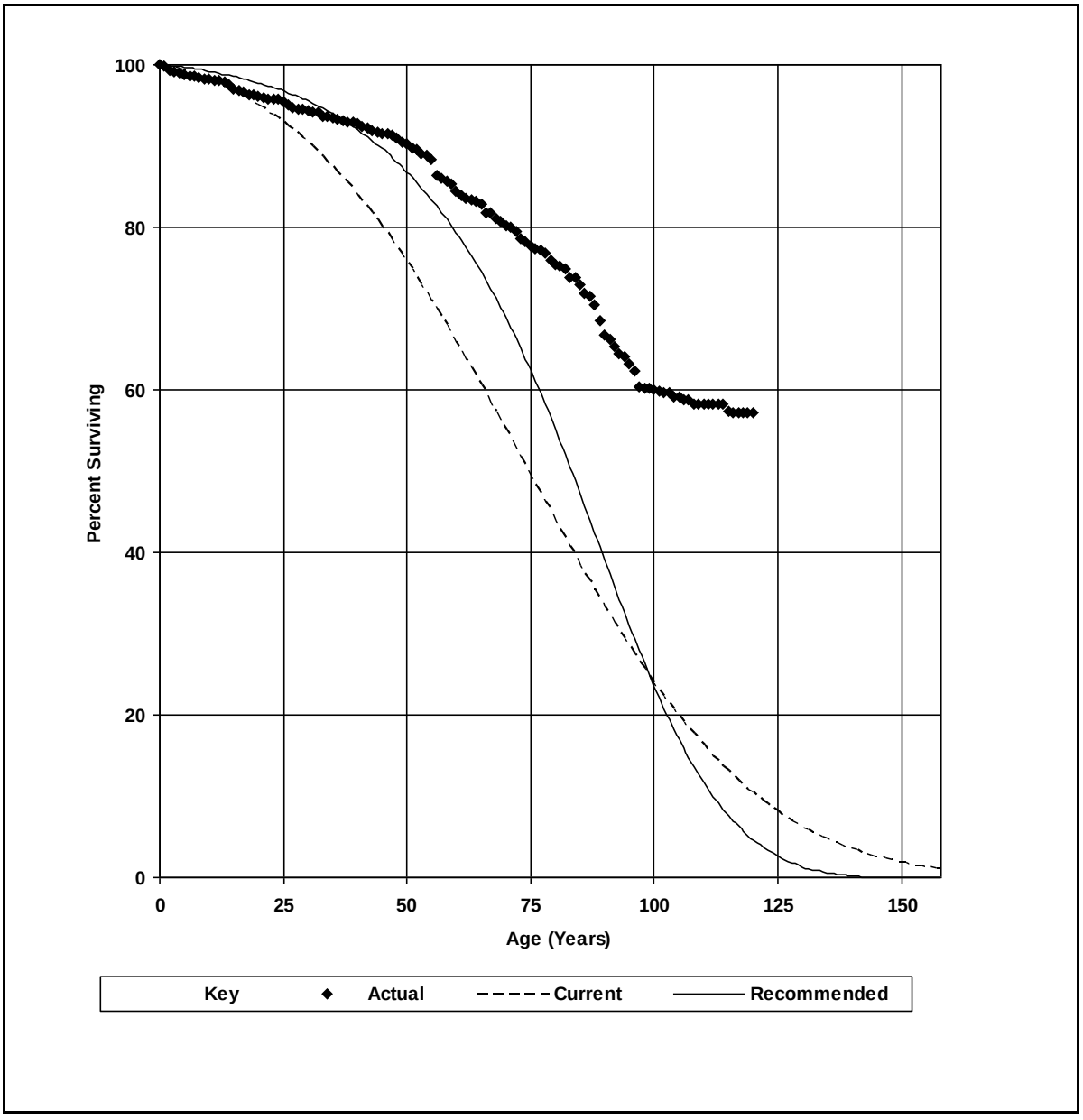
Account: 356.01 Overhead Conductors and Device

T-Cut: None

Placement Band: 1896-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 75.0-H2 Recommended: 80.0-R2.5**



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

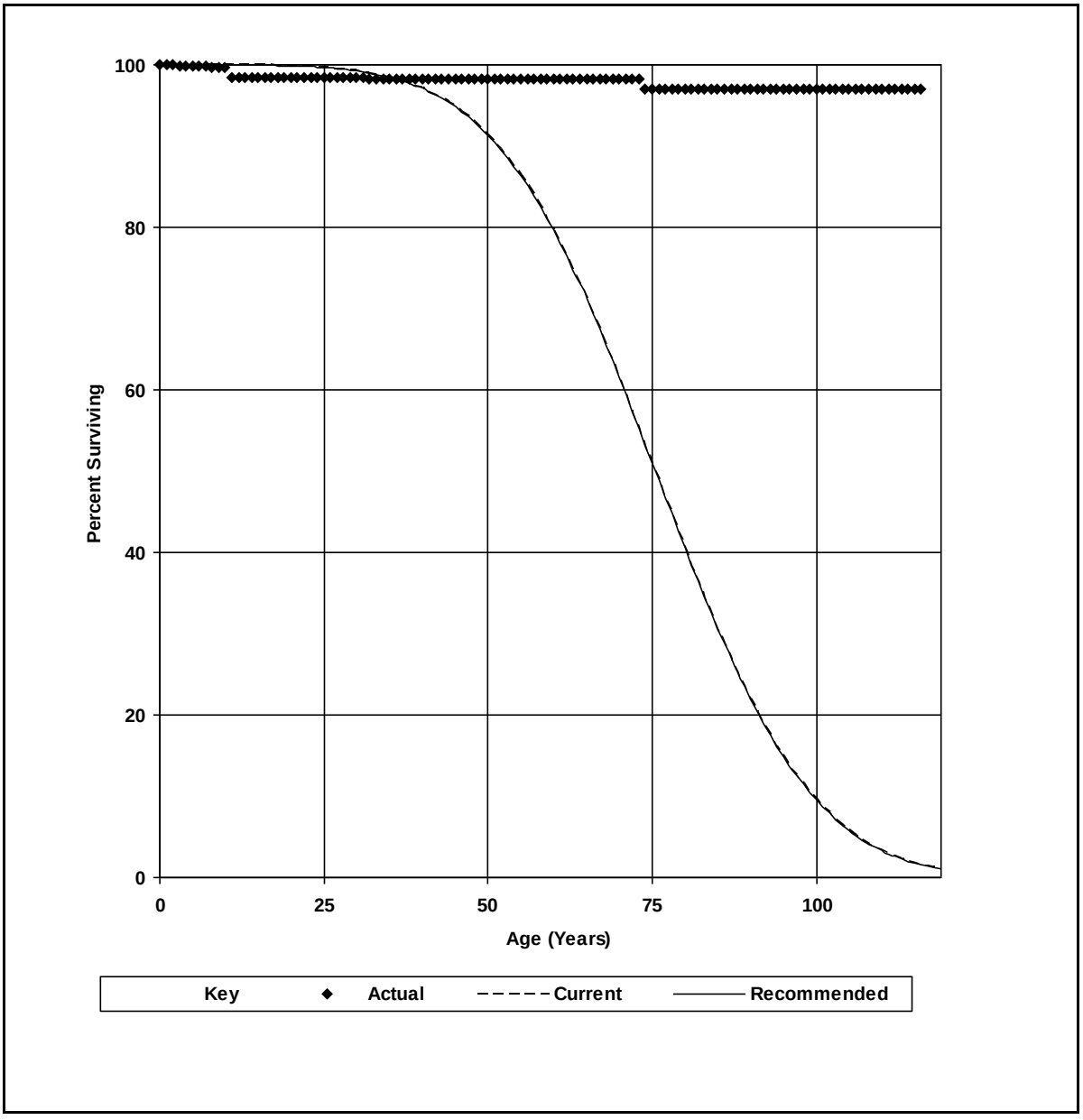
Account: 357.01 Underground Conduit

T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 75.0-H4** **Recommended: 75.0-H4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 357.01 Underground Conduit

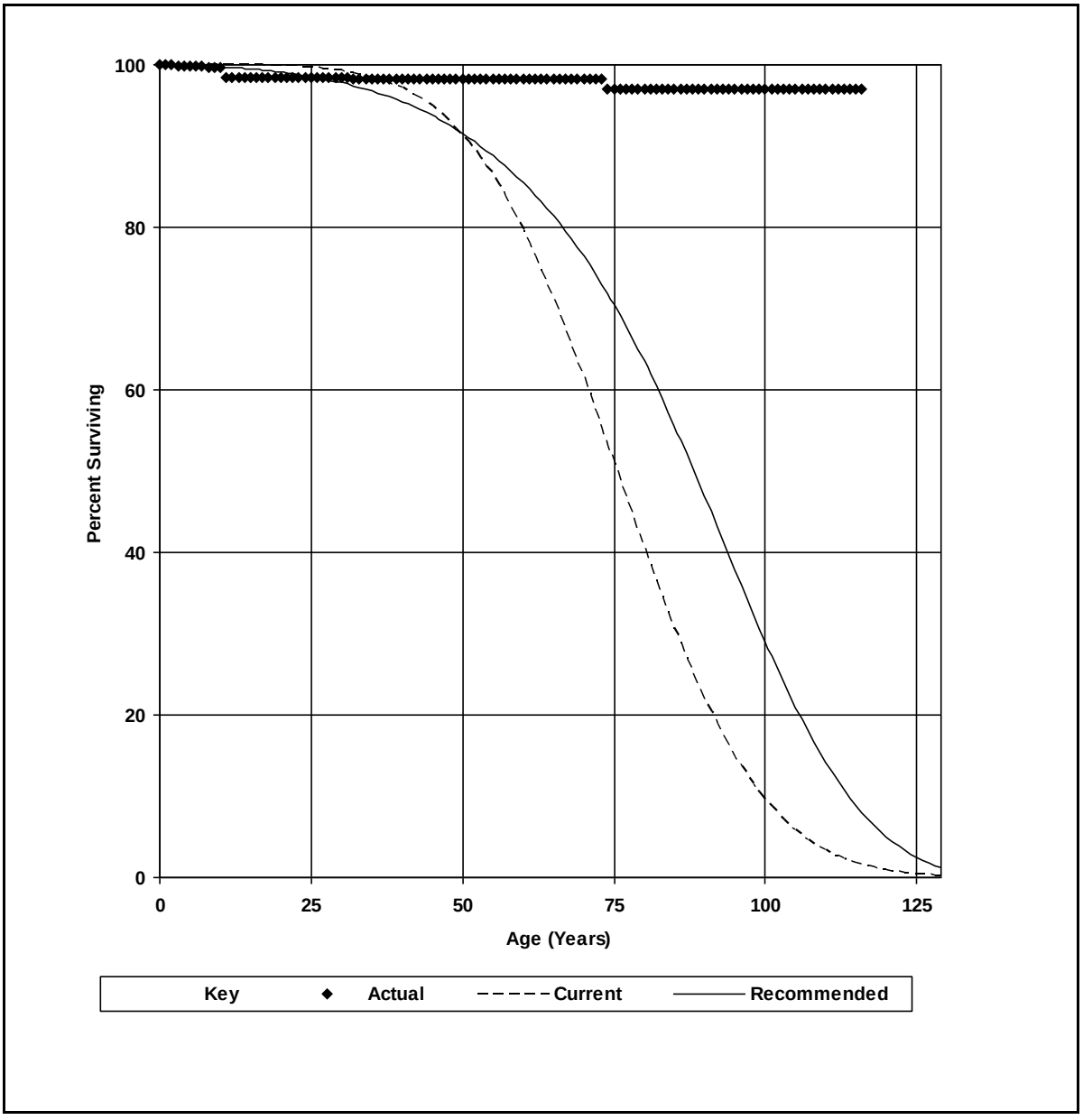
T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-H4 **Recommended: 85.0-R3**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

Account: 358.00 Underground Conductors and Devices

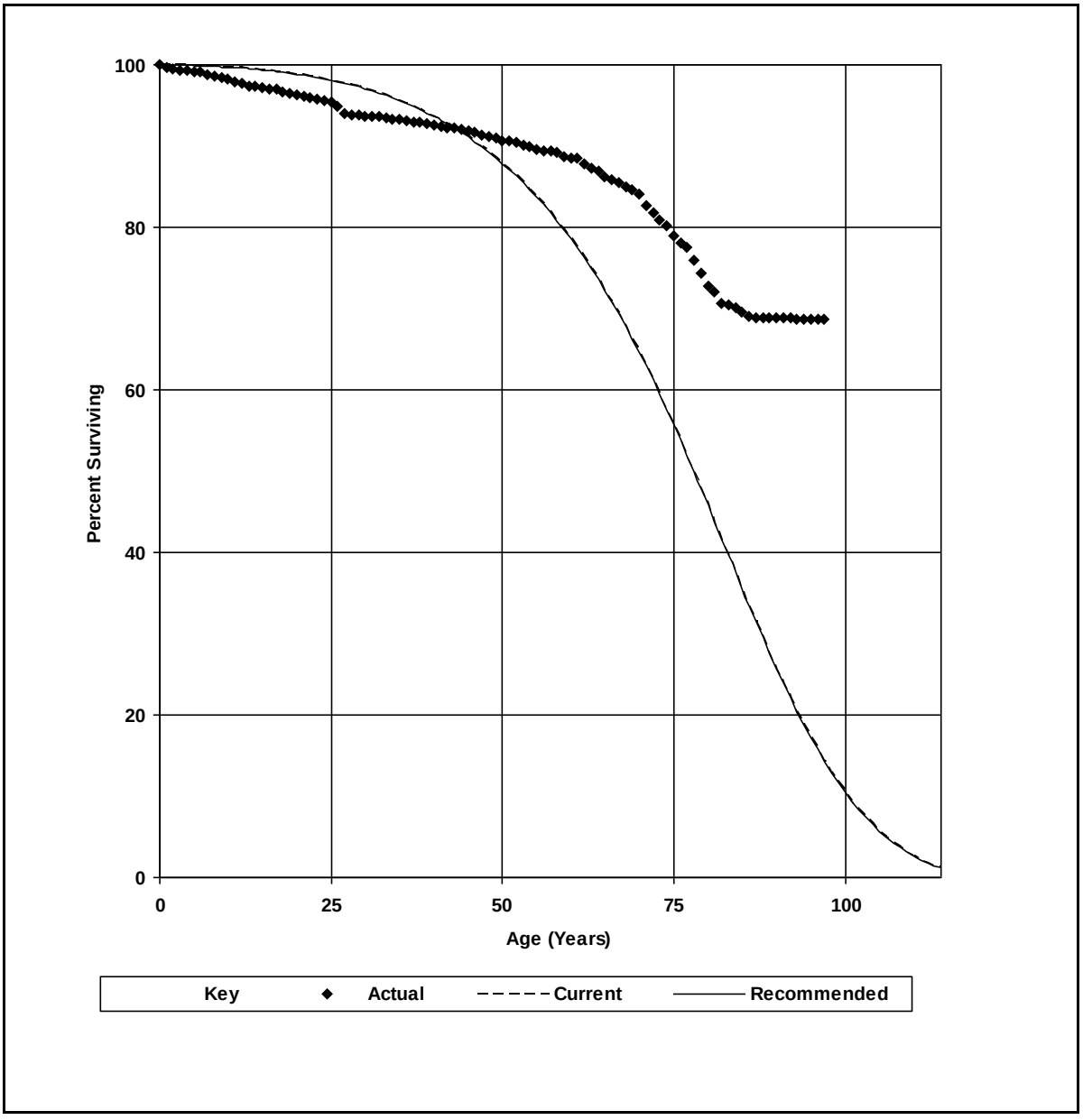
T-Cut: None

Placement Band: 1919-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-R3 **Recommended: 75.0-R3**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Transmission Plant

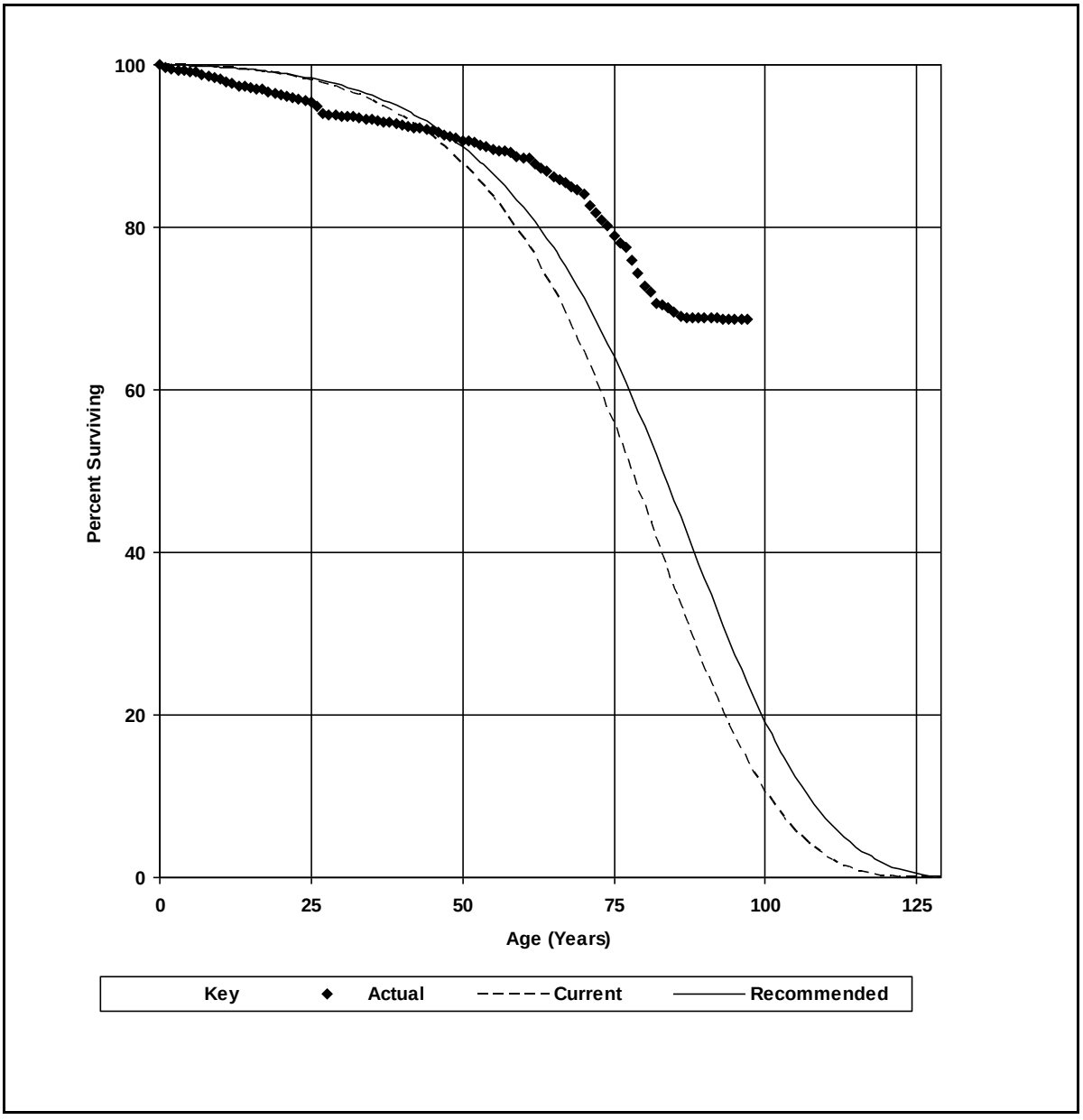
Account: 358.00 Underground Conductors and Devices

T-Cut: None

Placement Band: 1919-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 75.0-R3 Recommended: 80.0-R3**



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

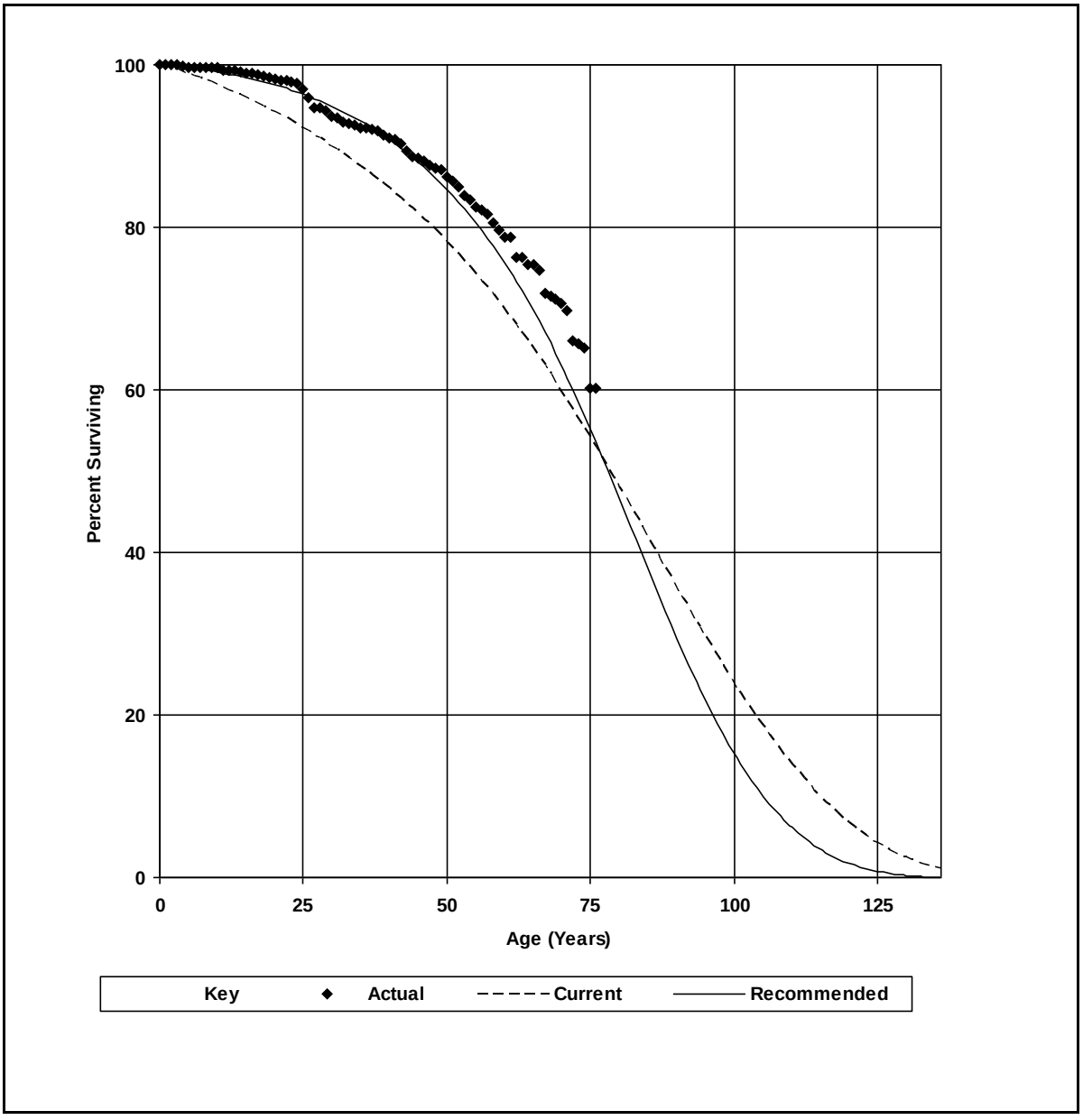
Account: 361.00 Structures and Improvements

T-Cut: None

Placement Band: 1940-2014

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 75.0-R1.5** **Recommended: 75.0-R2.5**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

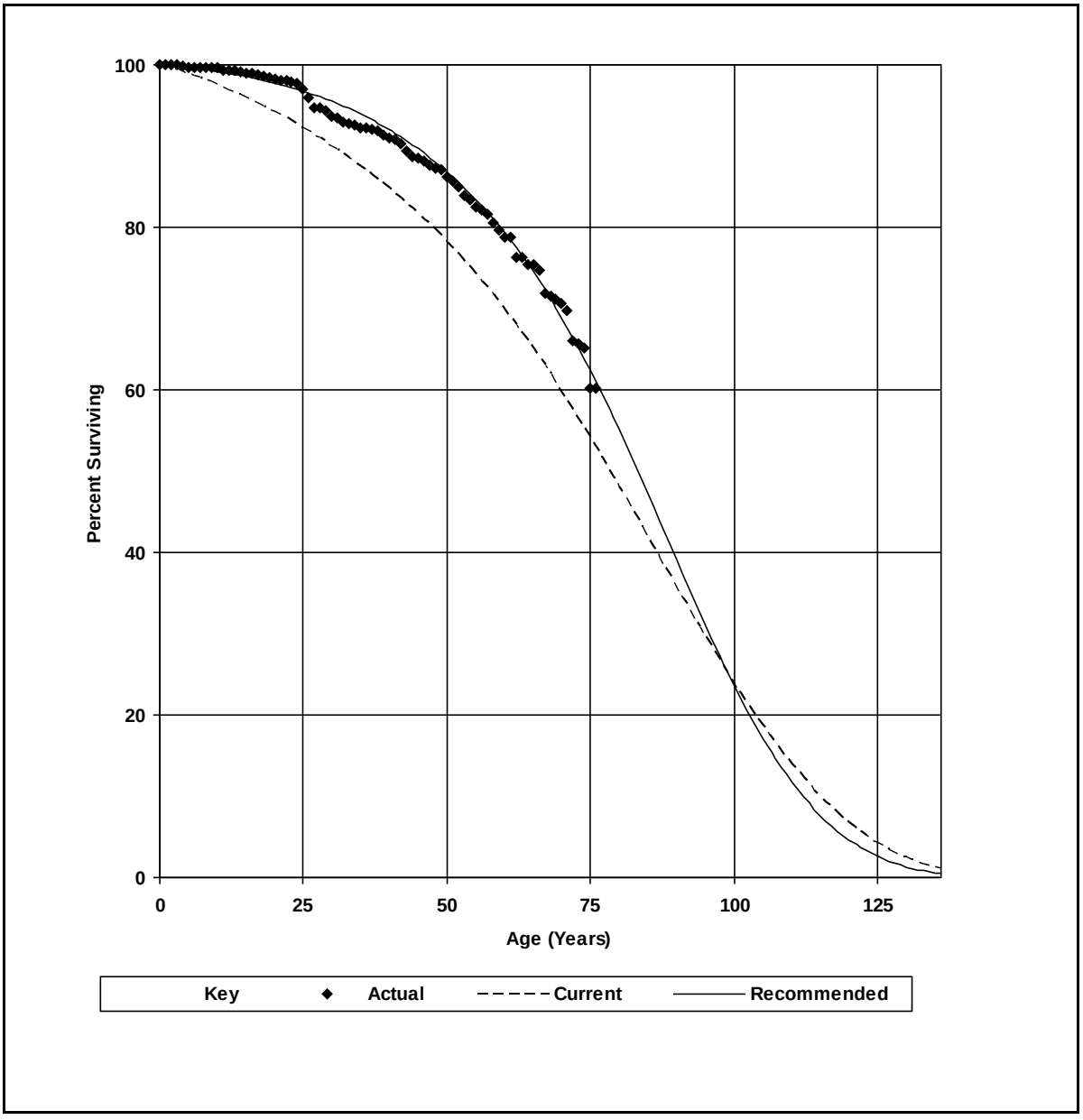
Account: 361.00 Structures and Improvements

T-Cut: None

Placement Band: 1940-2014

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 75.0-R1.5** **Recommended: 80.0-R2.5**



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

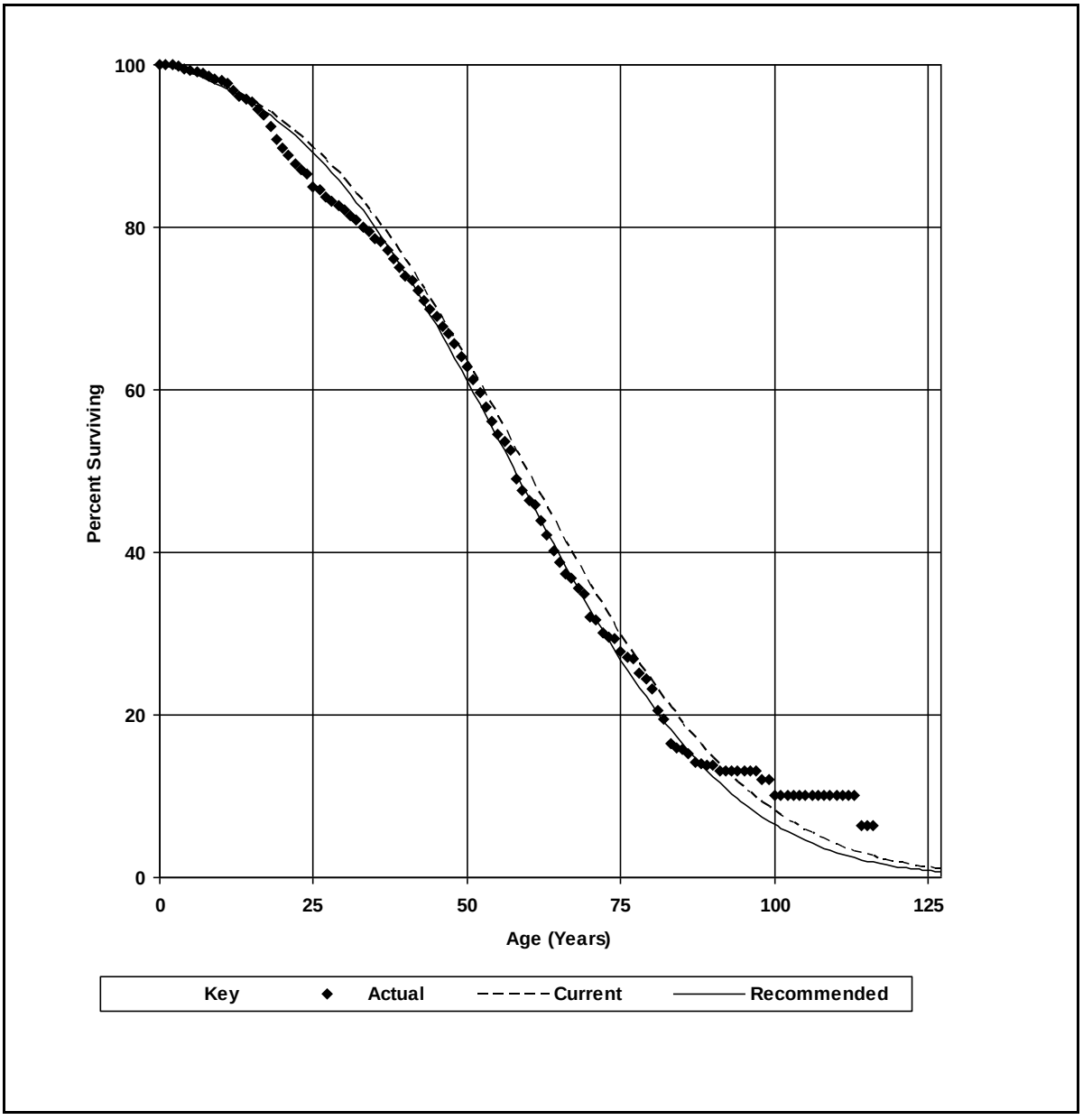
Account: 362.01 Station Equipment

T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 60.0-H2** **Recommended: 58.0-H2**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

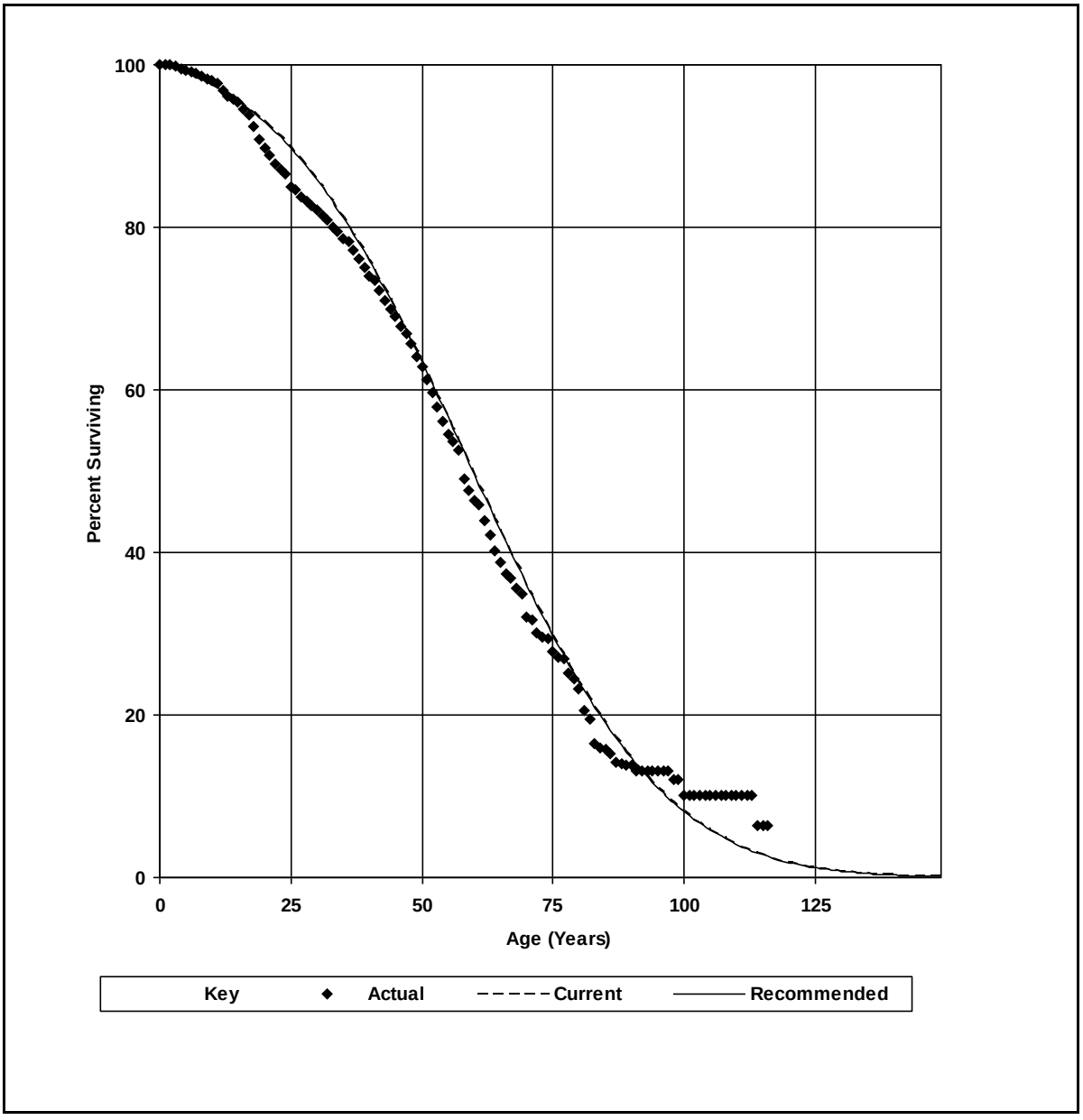
Account: 362.01 Station Equipment

T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 60.0-H2 Recommended: 60.0-H2**



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

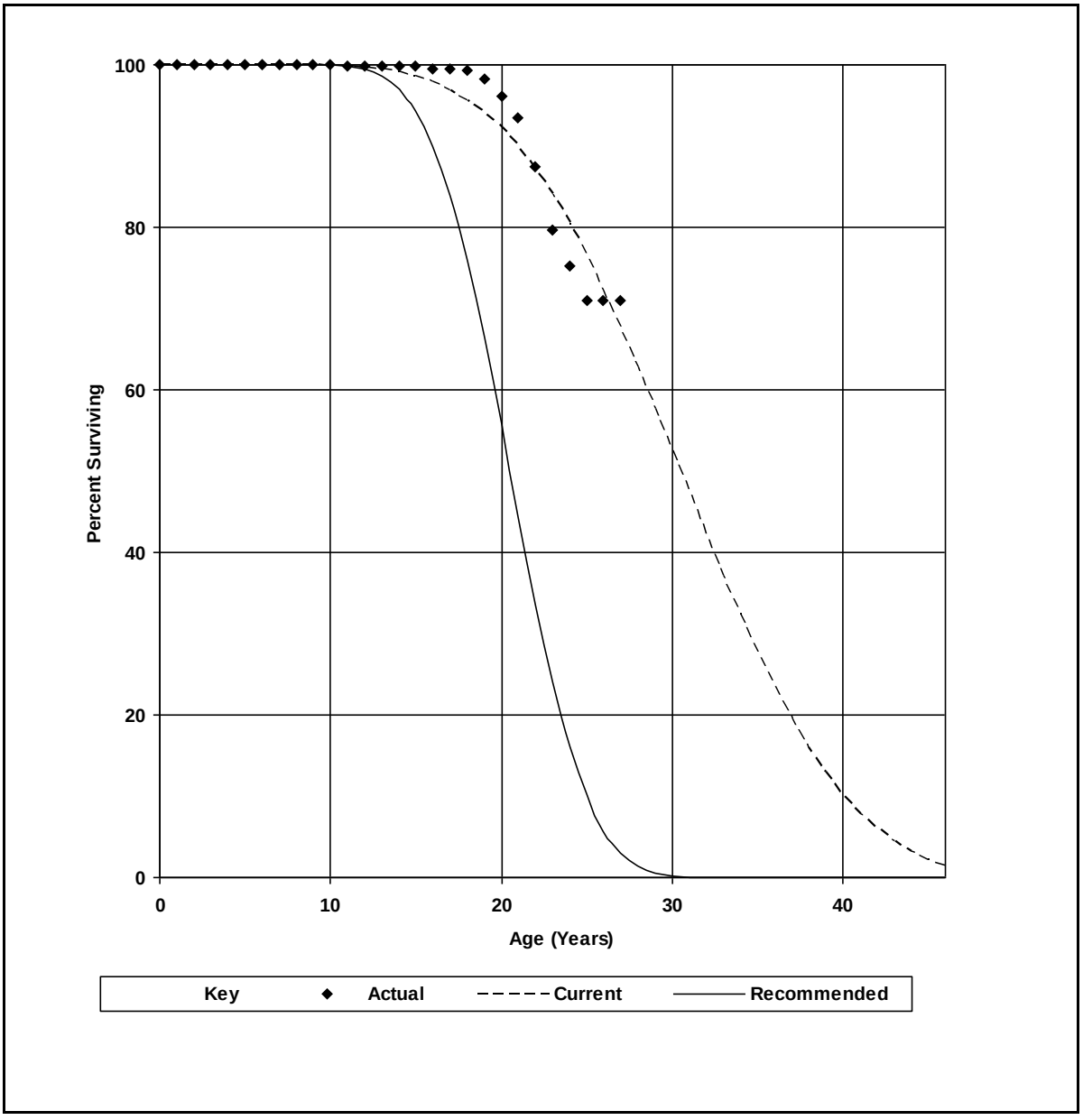
Account: 362.55 Station Equipment - RTU

T-Cut: None

Placement Band: 1989-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 30.0-S3** **Recommended: 20.0-S4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

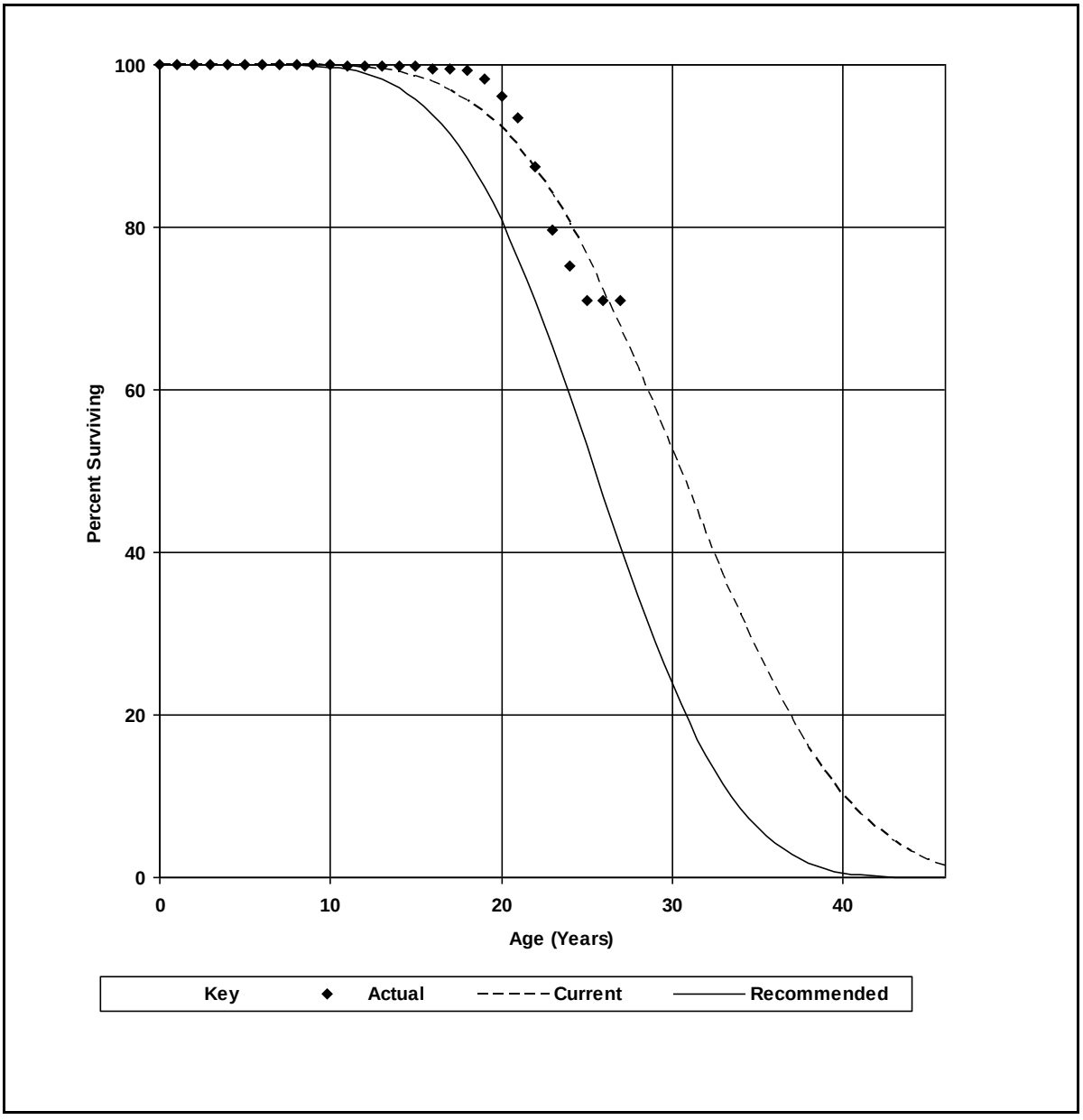
Account: 362.55 Station Equipment - RTU

T-Cut: None

Placement Band: 1989-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 30.0-S3 Recommended: 25.0-S3**



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

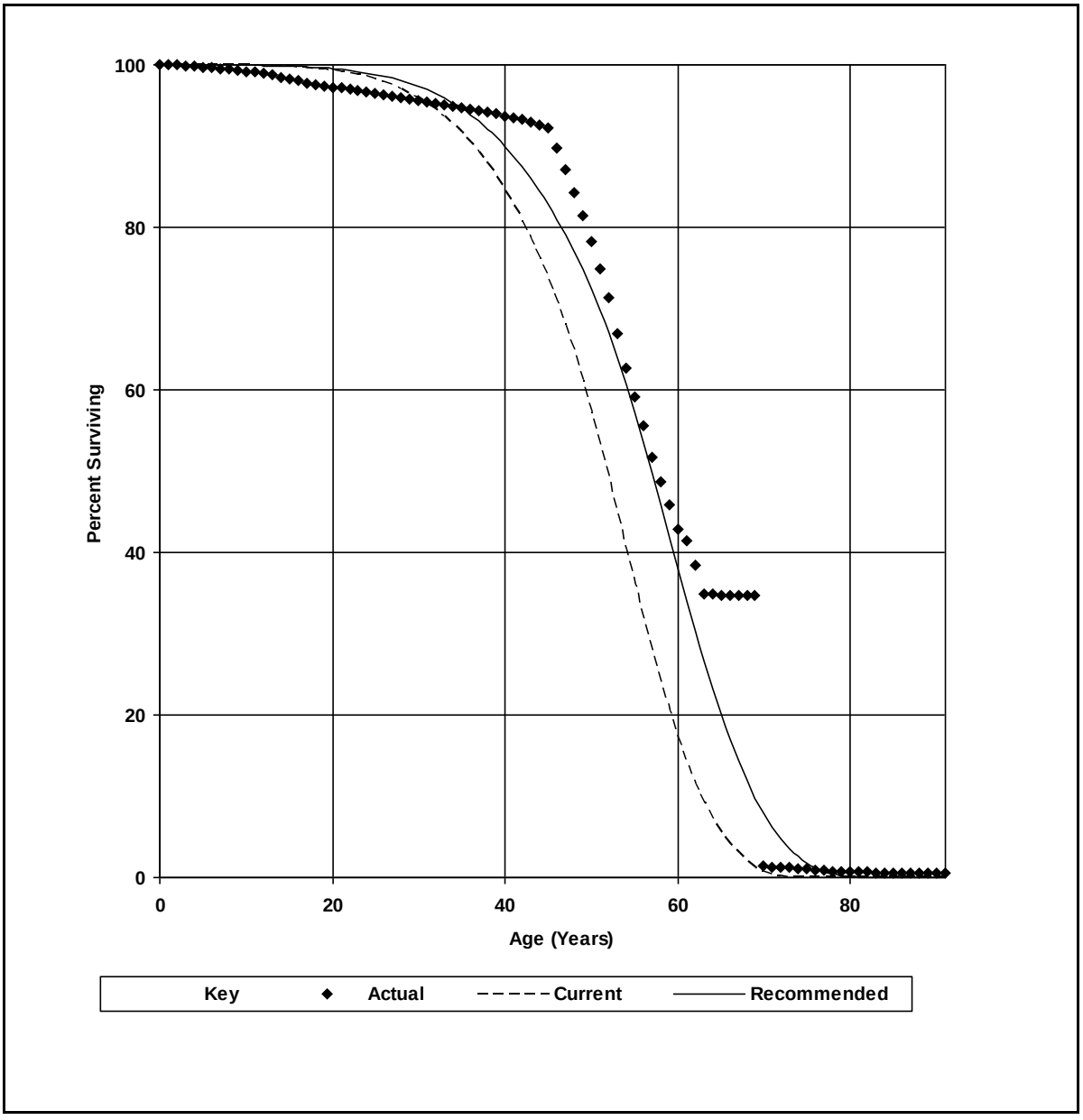
Account: 365.00 Overhead Conductors and Devices

T-Cut: None

Placement Band: 1925-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 50.0-R4** **Recommended: 55.0-R4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

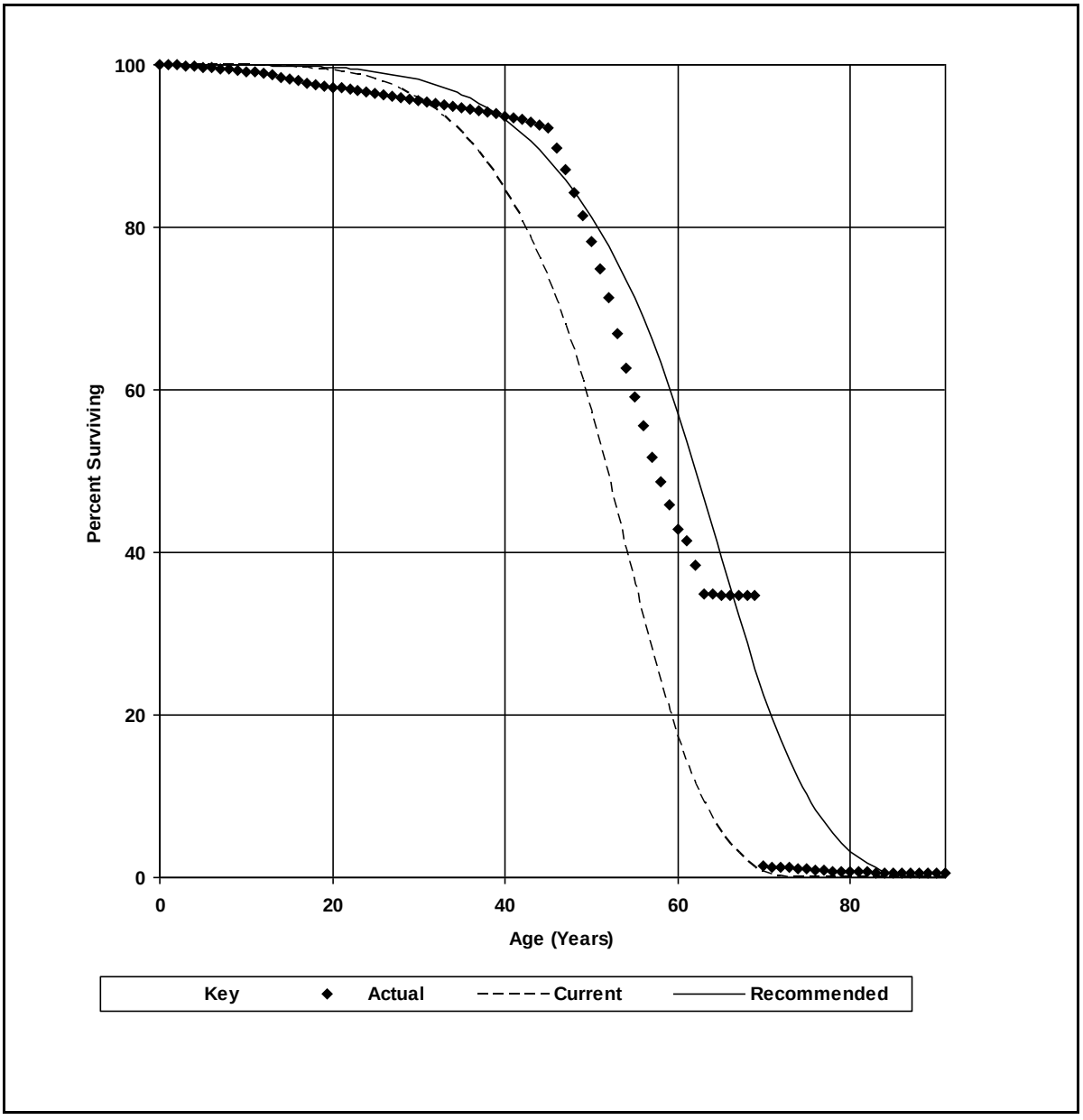
Account: 365.00 Overhead Conductors and Devices

T-Cut: None

Placement Band: 1925-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 50.0-R4 Recommended: 60.0-R4**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 368.01 Line Transformers - Bare Cost

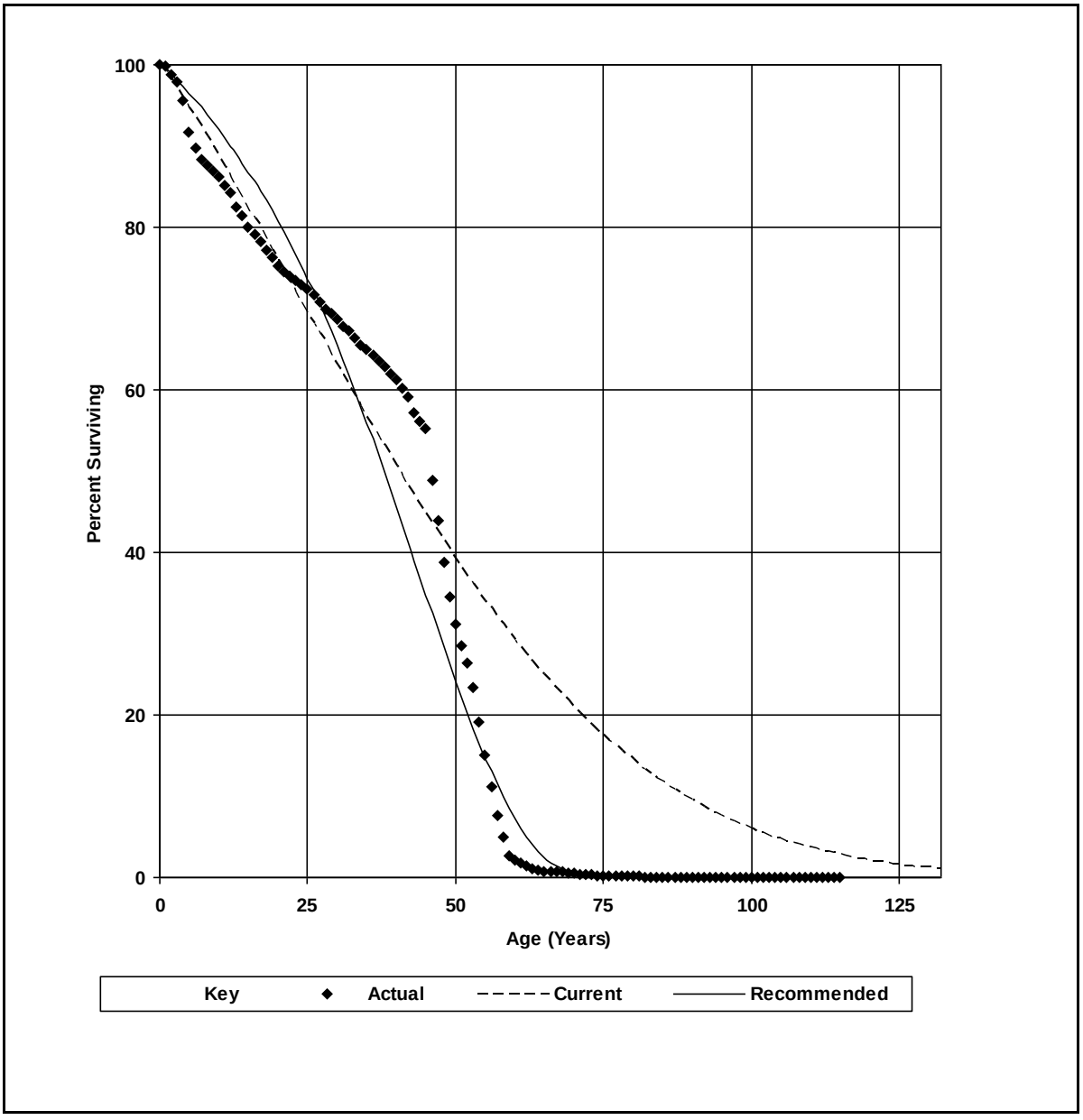
T-Cut: None

Placement Band: 1901-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 45.0-H0.5 **Recommended: 36.0-R1**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

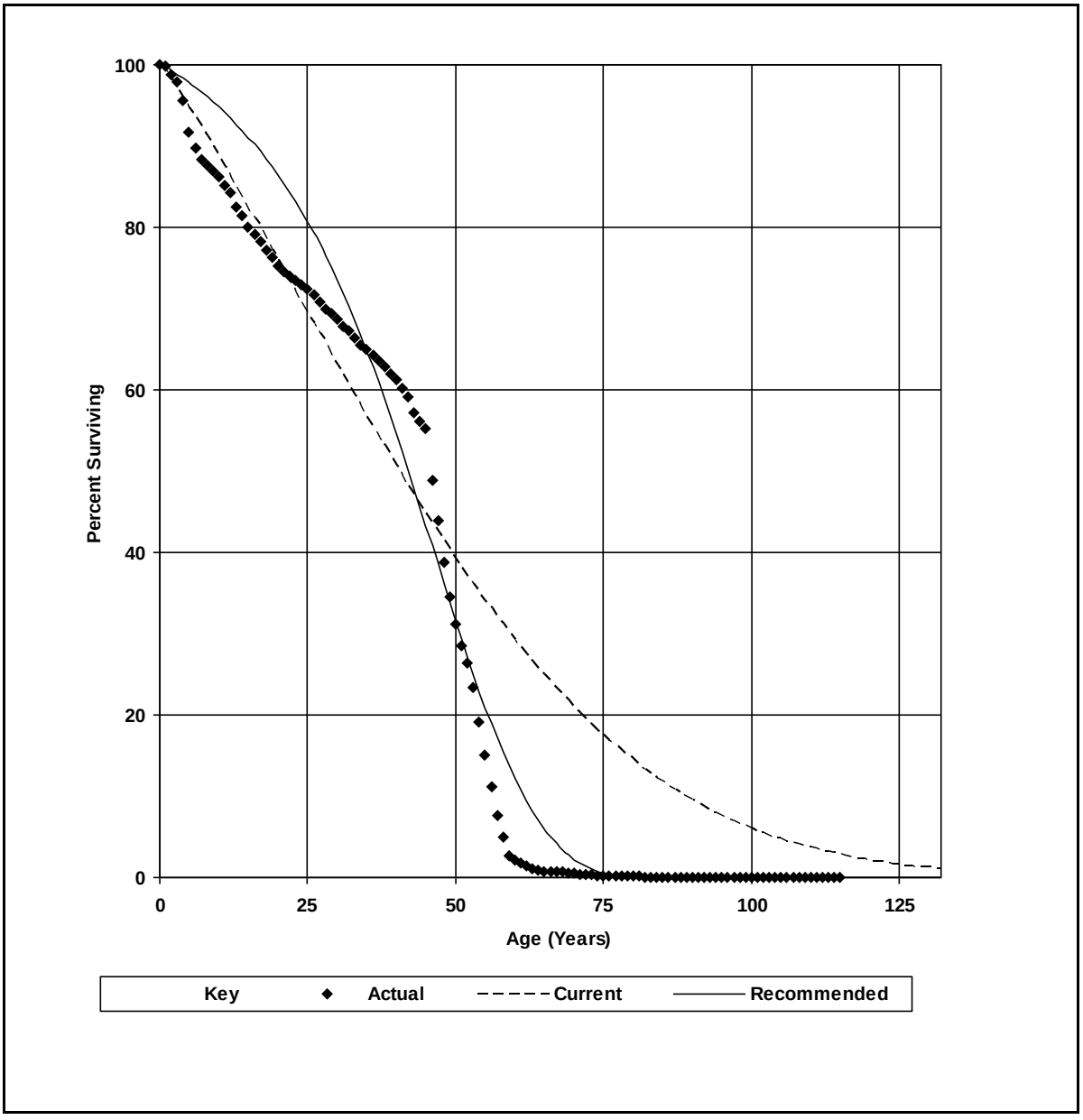
Account: 368.01 Line Transformers - Bare Cost

T-Cut: None

Placement Band: 1901-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 45.0-H0.5 Recommended: 40.0-R1.5**



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

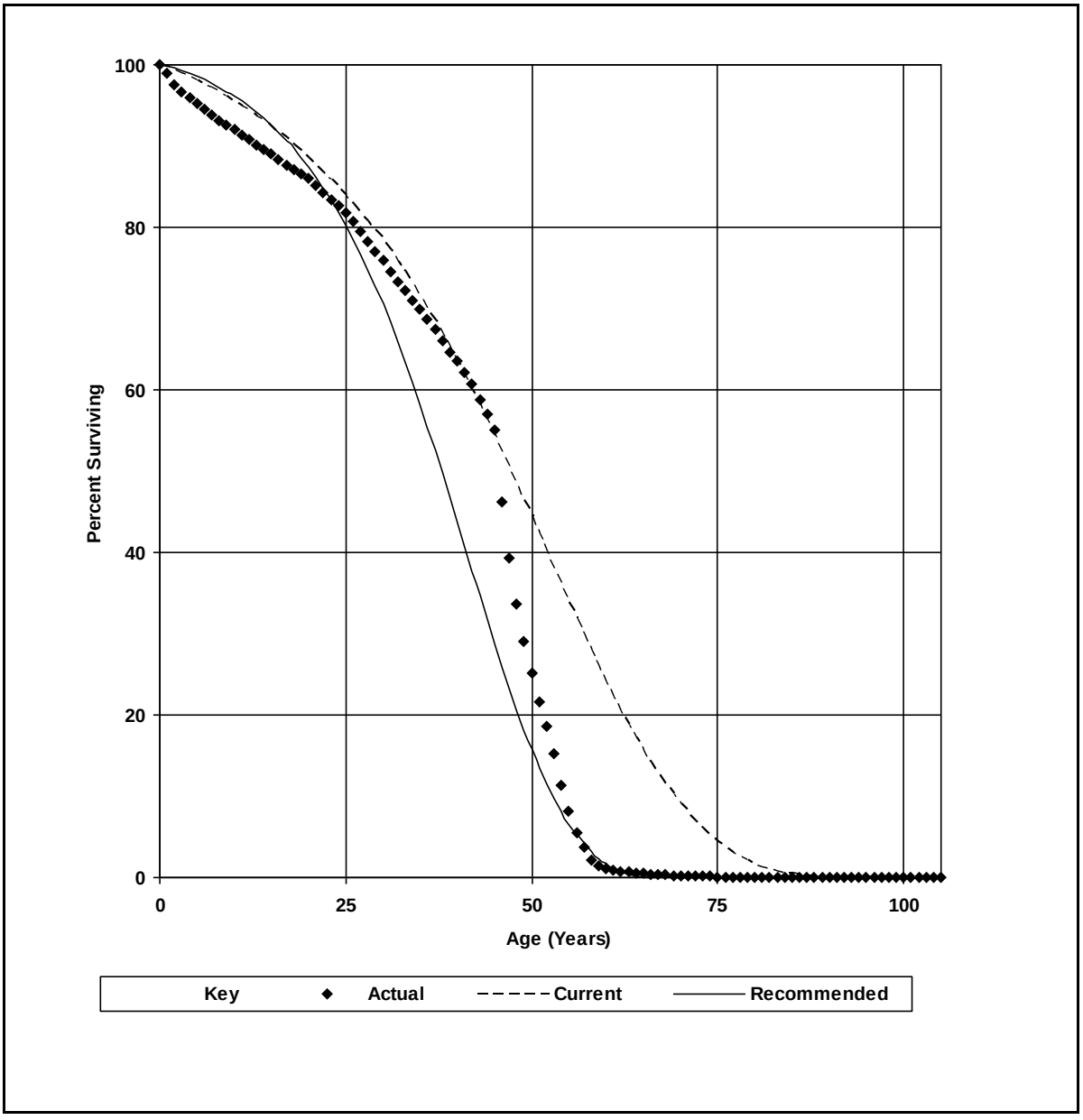
Account: 368.30 Line Transformers - Install Cost

T-Cut: None

Placement Band: 1901-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 45.0-R1.5** **Recommended: 36.0-R2**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

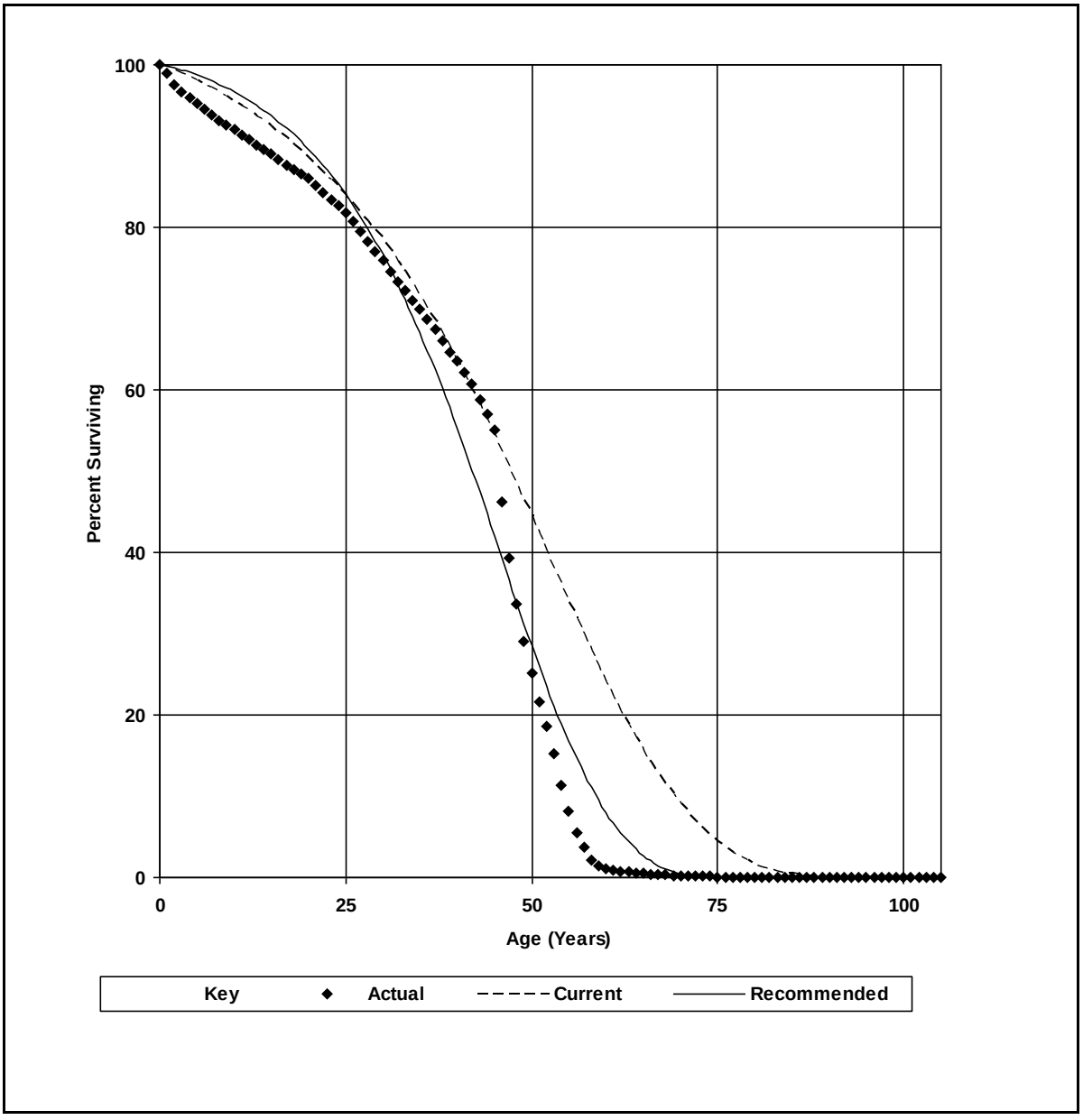
Account: 368.30 Line Transformers - Install Cost

T-Cut: None

Placement Band: 1901-2015

Observation Band: 1996-2015

Current and Staff Recommended Projection Life Curves **Current: 45.0-R1.5 Recommended: 40.0-R2**



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 369.20 Underground Services - Conduit

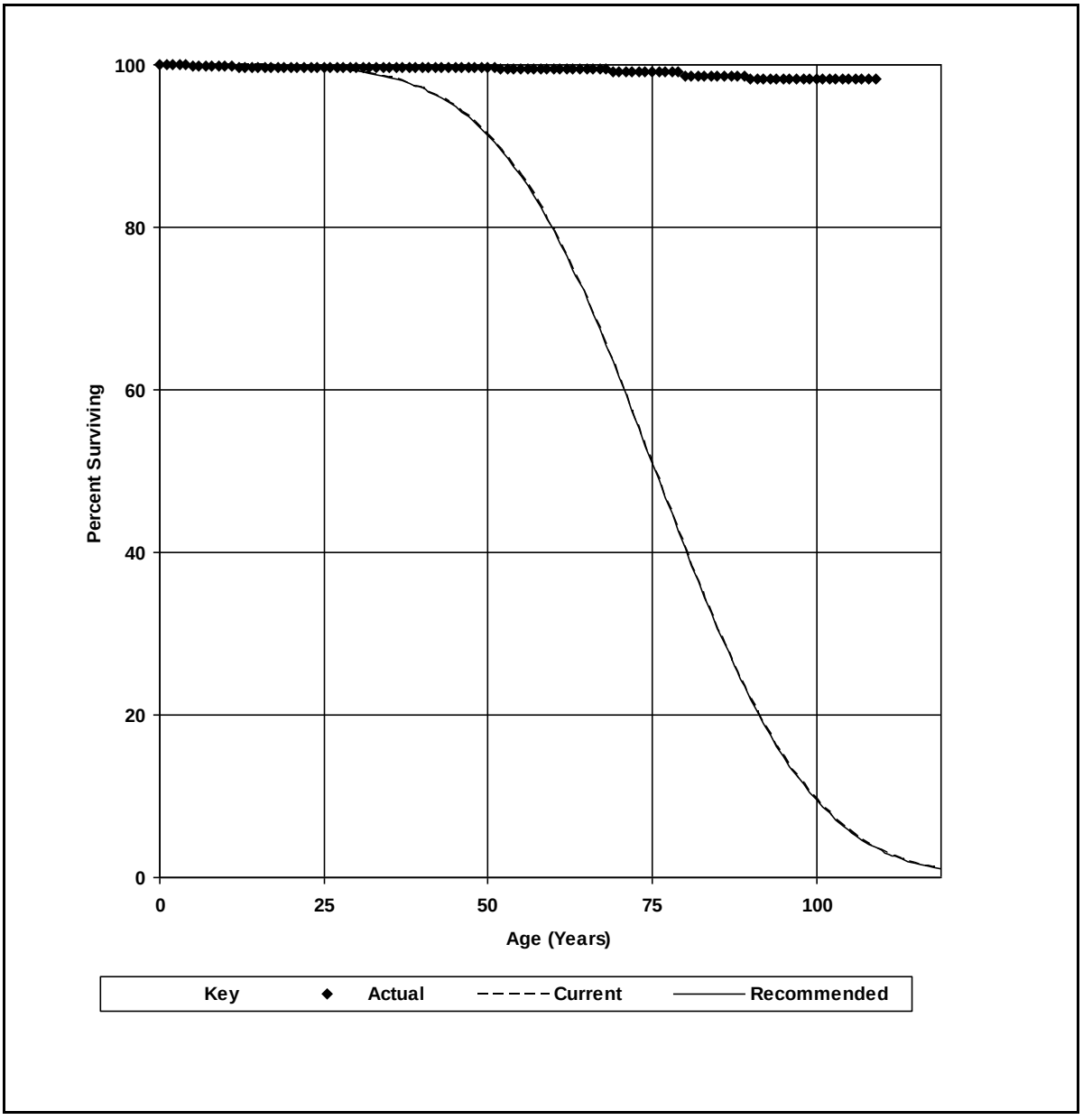
T-Cut: None

Placement Band: 1907-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves

Current: 75.0-H4 Recommended: 75.0-H4



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

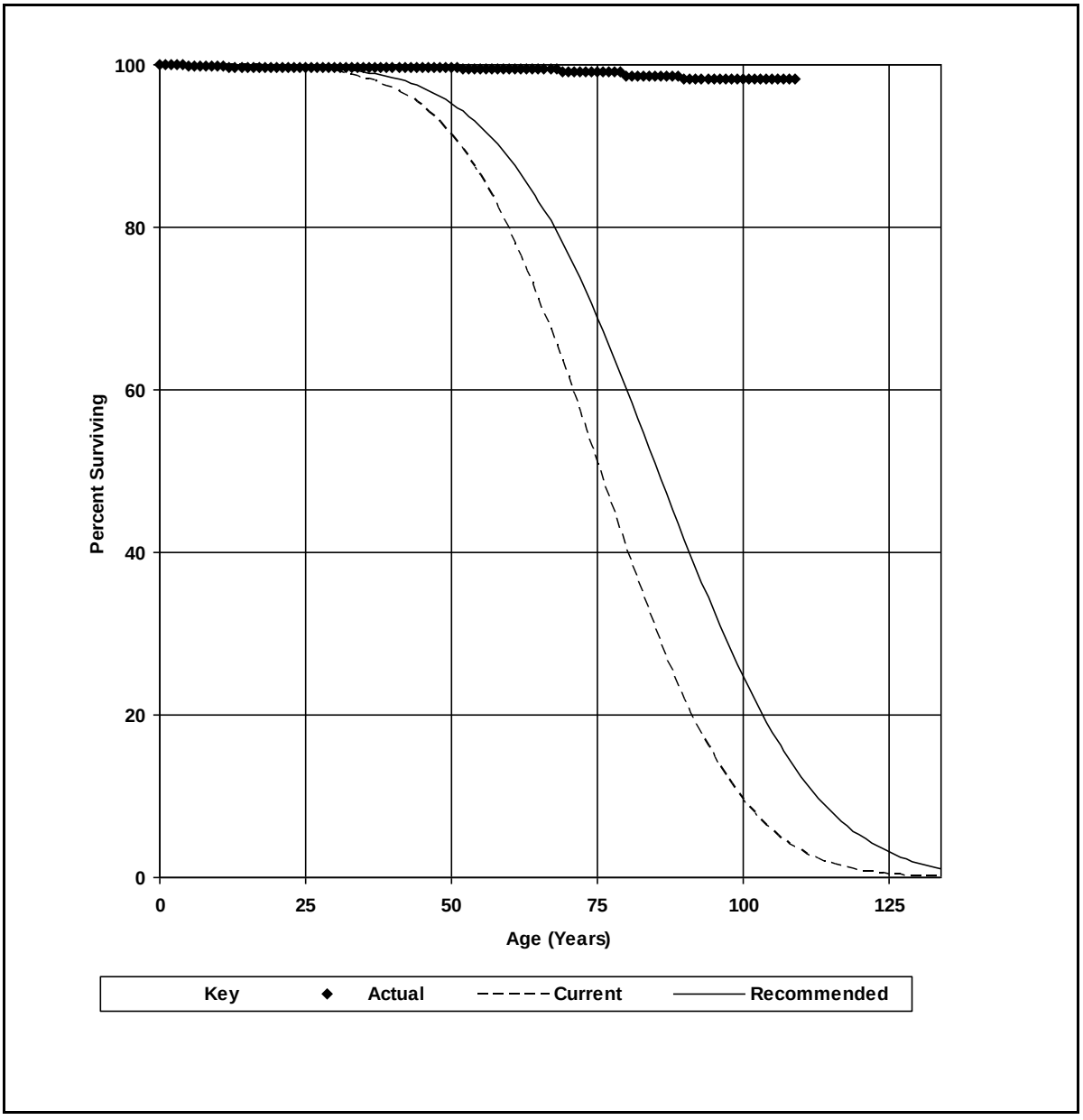
Account: 369.20 Underground Services - Conduit

T-Cut: None

Placement Band: 1907-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 75.0-H4** **Recommended: 85.0-H4**



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NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

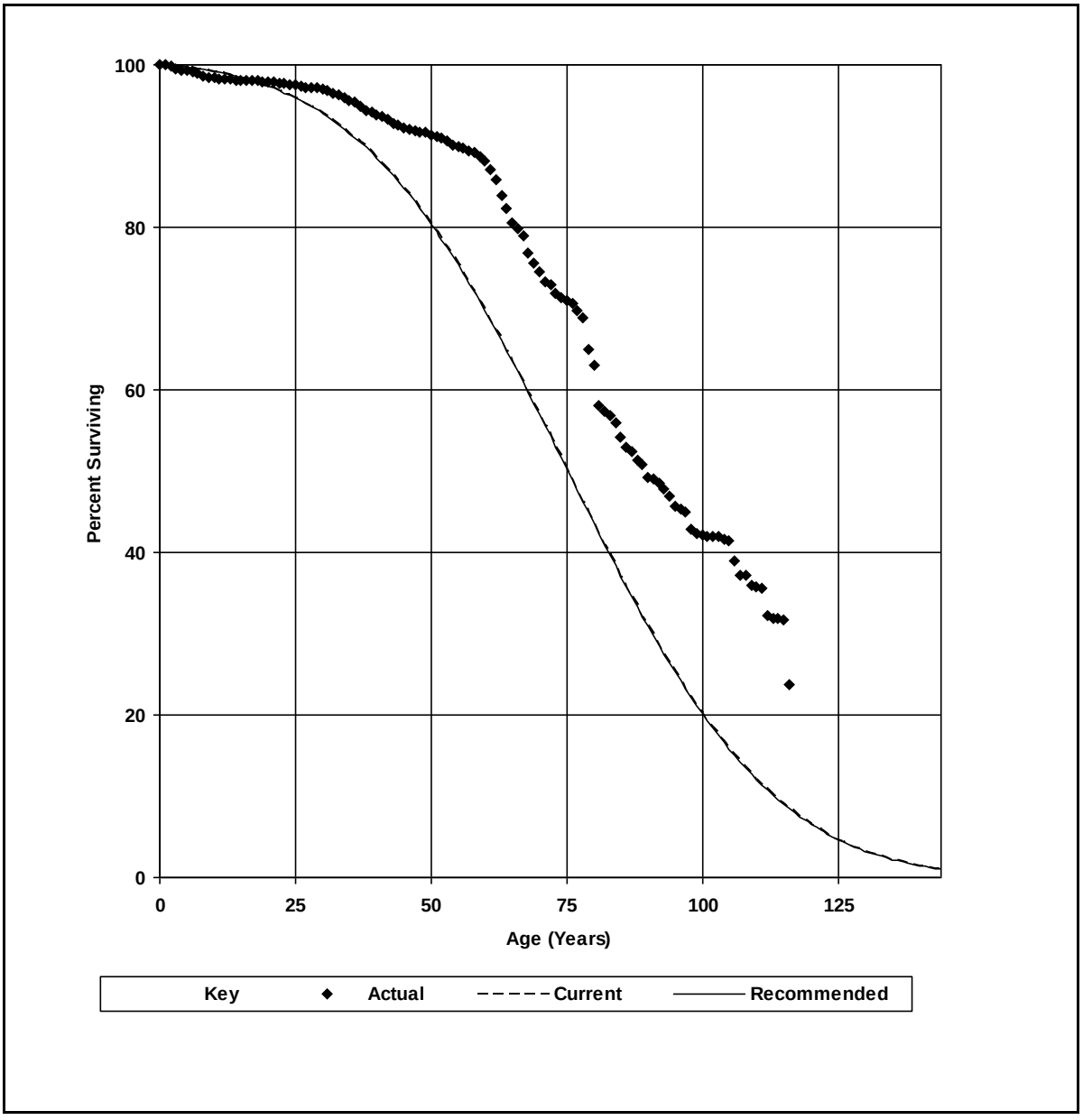
Account: 369.21 Underground Services - Cable

T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 75.0-H2.5** **Recommended: 75.0-H2.5**



NIAGARA MOHAWK POWER CORPORATION - ELECTRIC

Distribution Plant

Account: 369.21 Underground Services - Cable

T-Cut: None

Placement Band: 1900-2015

Observation Band: 1996-2015

Current and Recommended Projection Life Curves **Current: 75.0-H2.5** **Recommended: 85.0-H2.5**