# Attachment C

**UNITED STATES OF AMERICA**
**BEFORE THE**
**FEDERAL ENERGY REGULATORY COMMISSION**

| | | |
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| New York Independent System Operator, Inc. | ) ) | Docket No. ER17-____-000 |

# PREPARED DIRECT TESTIMONY OF DANE A. WATSON ON BEHALF OF THE NEW YORK POWER AUTHORITY

**Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.**

**A.** My name is Dane A. Watson. I am a Partner of Alliance Consulting Group. Our business address is 101 E. Park Blvd., Suite 220, Plano, TX 75074. Alliance Consulting Group provides consulting and expert services to the utility industry.

## I. POSITION AND QUALIFICATIONS

**Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

**A.** I hold a Bachelor of Science degree in Electrical Engineering from the University of Arkansas at Fayetteville and a Master's Degree in Business Administration from Amberton University.

**Q. DO YOU HOLD ANY SPECIAL CERTIFICATION AS A DEPRECIATION EXPERT?**

**A.** Yes. The Society of Depreciation Professionals ("SDP") has established national standards for depreciation professionals. The SDP administers an examination and has certain required qualifications to become certified in this field. I met all requirements and hold a Certified Depreciation Professional certification.

**Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.**

**A**. Since graduation from college in 1985, I have worked in the area of depreciation and valuation. I founded Alliance Consulting Group in 2004 and am responsible for conducting depreciation, valuation, and certain accounting-related studies for clients in various industries. My duties related to depreciation studies include the assembly and analysis of historical and simulated data, conducting field reviews, determining service life and net salvage estimates, calculating annual depreciation, presenting recommended depreciation rates to utility management for its consideration, and supporting such rates before regulatory bodies.

My prior employment from 1985 to 2004 was with Texas Utilities Electric Company and successor companies ("TXU"). During my tenure with TXU, I was responsible for, among other things, conducting valuation and depreciation studies for the domestic TXU companies. During that time, I served as Manager of Property Accounting Services and Records Management in addition to my depreciation responsibilities.

I have twice been Chair of the Edison Electric Institute ("EEI") Property Accounting and Valuation Committee and have been Chairman of EEI's Depreciation and Economic Issues Subcommittee. I am a Registered Professional Engineer ("PE") in the State of Texas and a CDP. I am a Senior Member of the Institute of Electrical and Electronics Engineers ("IEEE") and have held numerous offices on the Executive Board of the Dallas Section of IEEE as well as national and worldwide offices. I have twice served as Past President of the Society of Depreciation Professionals most recently in 2015. I also teach depreciation seminars on an annual basis for EEI and

the American Gas Association (both basic and advanced levels) and I developed and teach the advanced training for the Society of Depreciation Professionals and other venues.

**Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY REGULATORY COMMISSIONS?**

A. Yes. In my 32 year career, I have conducted more than 190 depreciation studies and testified before approximately 35 regulatory commissions across the United States. A listing of the various proceedings in which I have appeared is provided in Exhibit No. NYP-002. I also appeared in Federal Energy Regulatory Commission ("FERC") Docket No. RM02-7-000 as an industry panelist on asset retirement obligations.

## II. PURPOSE AND SUMMARY OF TESTIMONY

**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

**A.** The Alliance Consulting Group was retained by the New York Power Authority ("NYPA") to conduct a depreciation rate study ("Depreciation Study") for assets subject to the Commission's jurisdiction. The purpose of my testimony is to sponsor and explain the recent Depreciation Study completed for NYPA and to support and justify the recommended depreciation rate changes for NYPA's facilities based on the results of the Depreciation Study.

**Q. ARE YOU SPONSORING ANY EXHIBITS IN THIS PROCEEDING?**

**A.** Yes. I am sponsoring the Depreciation Study conducted by Alliance Consulting Group for NYPA. The Depreciation Study is Exhibit No. NYP-003.

**Q. WAS THE NYPA DEPRECIATION STUDY PREPARED BY YOU OR UNDER YOUR SUPERVISION AND CONTROL?**

**A.** Yes.

**Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS REGARDING DEPRECIATION EXPENSE.**

**A.** This study recommends a set of new depreciation rates that will result in an overall decrease in annual depreciation expense for transmission and general plant compared to rates currently in effect. The table on pages 14-17 of my testimony provides the recommended rates for current projects/locations and accounts. Exhibit No. NYP-003, Appendix A shows the computation of the proposed depreciation rates. Exhibit No. NYP-003, Appendix B demonstrates the change in depreciation expense for the various accounts if the proposed depreciation rates were applied to 2015 plant balances. The table on pages 18-19 shows the depreciation rates that should be applied to new projects that are not covered by the proposed depreciation rates for existing projects/locations. These rates would also apply to new plant that is added to accounts for a particular project where NYPA lacked depreciable plant as of 12/31/2015 (or all plant has been fully depreciated). The “new project” rates are based on the life and net salvage parameters used for the existing projects/locations and accounts.

**Q. WHAT ARE THE PRIMARY FACTORS THAT HAVE INFLUENCED THE CHANGE IN NYPA'S DEPRECIATION RATES?**

**A.** The primary factors influencing the change in depreciation rates are changes in the terminal retirement dates for transmission assets and the lives for general plant assets. These factors decreased depreciation expense for both Transmission and General assets.

## III. DEVELOPMENT OF DEPRECIATION RATES FOR NYPA

**Q. WHY ARE DEPRECIATION STUDIES NEEDED FOR ACCOUNTING AND RATEMAKNG PURPOSES?**

**A.** Over time, life and net salvage characteristics of various assets may change. The purpose of updating depreciation studies periodically is to ensure the most accurate possible projection of future lives and net salvage to appropriately recover the costs of assets over their lives.

**Q. WHAT ARE THE STEPS INVOLVED IN CONDUCTING A DEPRECIATION STUDY?**

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

During the Phase 1 data collection process, historical data was compiled from continuing property records and general ledger systems. Data was validated for

accuracy by extracting and comparing to multiple financial system sources. Audit of this data was validated against historical data from prior periods, historical general ledger sources, and field personnel discussions. This data was reviewed extensively to put it in the proper format for a depreciation study. Further discussion on data review and adjustment is found in the Salvage Analysis section of the study. Also as part of the Phase 1 data collection process, numerous discussions were conducted with engineers and field operations personnel to obtain information that would assist in formulating life and salvage recommendations in this study. One of the most important elements of performing a proper depreciation study is to understand how the company utilizes assets and the environment of those assets. Interviews with engineering and operations personnel are important ways to allow the analyst to obtain information that is beneficial when evaluating the output from the life and net salvage programs in relation to NYPA's actual asset utilization and environment. Information that was gleaned in these discussions is found both in the Detailed Discussion (starting on page 11) of this study in the Life Analysis and Salvage Analysis sections.

Phase 2 is where the actuarial analysis is performed. Phase 2 and 3 overlap to a significant degree. The detailed property records information is used in Phase 2 to develop observed life tables for life analysis. These tables are visually compared to industry standard tables to determine historical life characteristics. It is possible that the analyst would cycle back to this phase based on the evaluation process performed in Phase 3. Net salvage analysis consists of compiling historical salvage and removal

data by group to determine values and trends in gross salvage and removal cost. This information was then carried forward into Phase 3 for the evaluation process.

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

Finally, Phase 4 involved the calculation of accrual rates, making recommendations, and documenting the conclusions in a final report.

## IV. 2016 DEPRECIATION RATE STUDY FOR NYPA

**Q. DID NYPA PROVIDE YOU WITH THE APPROPRIATE PLANT ACCOUNTING DATA FOR YOU TO CONDUCT THE DEPRECIATION STUDY?**

**A.** Yes. NYPA maintains its plant accounting records according to the Uniform System of Accounts. For many years, NYPA has maintained vintage plant accounting records by plant account for plant in service. They also have maintained depreciation reserves at the account and subaccount level with gross salvage and cost of removal history.

**Q. WHAT ANALYSES DID YOU CONDUCT WITH NYPA'S PLANT ACCOUNTING DATA?**

**A.** As part of the Depreciation Study, I conducted a statistical life study, a net salvage analysis, and an analysis of recorded depreciation reserves for all NYPA's plant and equipment.

**Q. PLEASE DESCRIBE THE BASIS OF YOUR DEPRECIATION ESTIMATES IN THIS STUDY.**

**A.** The straight-line, broad (average) life group, remaining-life depreciation system was employed to calculate annual and accrued depreciation in this study. In this system, the annual depreciation expense for each group is computed by dividing the original cost of the asset less accumulated depreciation reserve less estimated net salvage by its respective average life group remaining life. The resulting annual accrual amounts of all depreciable property within an account by location were accumulated, and the total was divided by the original cost of all depreciable property within each account and location to determine the depreciation rate. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group. The computations of the annual account level depreciation rates are shown in Exhibit No. NYP-003, Appendix A, pages 1-3.

**Q. DID YOU FOLLOW THE CALCULATION PROCESS PREVIOUSLY USED FOR NYPA?**

**A.** Yes. In this study, the calculation for transmission line assets is the same as used in previous NYPA studies, although slightly different than the normal transmission

remaining life calculation. NYPA has used a life-span calculation for individual transmission lines in the past. The life of each line was tied to the generation asset that it was serving. In this study, it became clear that there may be continued use of a transmission line after the generation that it is tied to is retired. Therefore, based on feedback from NYPA experts and NYPA experience, an 80-year life-span was set for each transmission line. The assumption (and experience) was that by the 80-year point, the transmission line would be completely rebuilt. This is happening currently for two lines (St. Lawrence MA1 and MA2). A more detailed explanation of the life-span calculation can be found in Exhibit No. NYP-003.

**Q. PLEASE DESCRIBE THE LIFE-SPAN CALCULATION PROCESS YOU USED FOR TRANSMISSION LINE ASSETS.**

A. The life span procedure was used for transmission line facilities for which most components are expected to have a retirement date concurrent with the expected life cycle of the entire transmission line. The terminal retirement date refers to the year that each transmission line will cease operations or be replaced. The terminal retirement date along with the interim retirement characteristics of the assets (where applicable) that will retire prior to the facility ceasing operation are used to describe the pattern of retirement of the assets that comprise a unit. The estimated terminal retirement dates for the various transmission lines were determined based on consultation with NYPA management, financial, and engineering staff. Those estimated terminal retirement dates are shown in Exhibit No. NYP-003, Appendix C, page 2 of 2. These terminal retirement dates will be applied to Accounts 354-356:

Transmission Towers and Fixtures, Transmission Poles and Fixtures, and Transmission Overhead Conductors and Devices.

**Q. DID YOU APPLY THE LIFE-SPAN APPROACH TO ALL TRANSMISSION AND GENERAL PLANT ASSET GROUPS?**

A. No, just to Account 354 through Account 356 as previously applied to develop NYPA's currently existing depreciation rates. All other Transmission accounts (352 Structures & Improvements, 353 Station Equipment, 357 Underground Conduit, and 358 Underground Conductors and Devices) and certain General Plant accounts (390 General Plant Structures & Improvements, 392 Transportation Equipment, 393 Stores Equipment, 394 Tools, Shop and Garage Equipment, 395 Laboratory Equipment, 396 Power Operated Equipment, and 398 Miscellaneous Equipment) used average service lives to determine the remaining life for the depreciation rate calculations as described in Exhibit No. NYP-003.

**Q. IS THERE A DIFFERENT METHODOLOGY USED IN THE STUDY TO ACCOUNT FOR THE REMAINING LIFE FOR CERTAIN GENERAL PLANT ACCOUNTS?**

A. Yes. For NYPA, I recommend Vintage Group Accounting for General Plant Accounts 391 (all subaccounts – Office Furniture and Equipment and Computer Equipment), 397 Communication Equipment, and 399 Other Tangible Property. Vintage Group Accounting is described in FERC Accounting Release 15 ("AR 15"), commonly referred to as General Plant Amortization, Vintage Year Accounting For General Plant Accounts, dated January 1, 1997. AR 15 allowed utilities to use a simplified method of accounting for General Plant assets, excluding structures and

improvements. The AR 15 release allowed high-volume, low-cost assets to be amortized over the associated useful life, eliminated the need to track individual assets, and allows a retirement to be booked at the end of the depreciable life. This method is often referred to as "amortization of General Plant." One of the components of the implementation of AR 15 is the need to have an accrued depreciation reserve at the level necessary to fully recover (not over or under recover) the assets' cost over the remaining life of the asset groups under the General Plant amortization. To do this, it is necessary to calculate the difference between the theoretical and actual depreciation reserves and recover (or return) the net difference over a period of time. This Depreciation Study uses the remaining life of the asset group to recover the differential cost, mimicking the remaining life methodology used for other assets in the Depreciation Study. This approach is the standard implementation method used in the industry.

**Q. HOW DID YOU ADDRESS REMOVAL COST IN THE STUDY?**

A. NYPA does not charge removal cost for replacement activity as a normal practice for transmission lines. Removal cost is charged by NYPA with the total replacement of a transmission line. The removal cost for the current transmission replacement project (St. Lawrence MA1 and MA2) was calculated and that information was used as a proxy for the terminal removal cost for the replacement of NYPA's transmission lines. Appendix D-1 of Exhibit No. NYP-003 shows the calculation of the removal cost based on the current transmission line replacement project. The removal cost percentages for transmission line structures and conductor (Account 354 – Towers

and Fixtures, Account 355 – Poles and Fixtures, and Account 356 – Overhead Conductors and Devices) were capped at negative 100 percent for this study. Even though NYPA believes the St. Lawrence MA1/MA2 transmission project is representative of future replacement projects, recognition is given to the fact that NYPA only has one project on which to base its removal cost estimate. The transmission line asset removal cost estimate recommended in Alliance's Depreciation Study is an extremely conservative recommendation as compared to the actual net salvage based on the project estimate. The actual net salvage calculated from the projected retirement of the two lines is negative 768 percent compared to the recommended negative 100 percent net salvage. Station structures and substations (Accounts 352 - Structures and Improvements and Account 353 – Station Equipment) were set to the estimated negative three percent net salvage found in the St. Lawrence MA1/MA2 project removal cost calculation. Using judgment, the net salvage for Account 357 – Underground Conduit was set at the negative five percent currently being used for underground conduit, and the net salvage for Account 358 – Underground Conductors and Devices was increased from a negative fifteen percent net salvage to the proposed negative five percent net salvage. Exhibit No. NYP-003, Appendix C provides a comparison of existing and proposed net salvage percentages for each account.

**Q. ARE YOU RECOMMENDING A REBALANCING OF DEPRECIATION RESERVES FOR NYPA?**

**A.** No. The calculation of depreciation rates uses the book reserve for each account or subaccount as recorded on the books of NYPA.

**Q. PLEASE DESCRIBE THE DEPRECIATION SYSTEM USED TO DERIVE NYPA'S DEPRECIATION RATES?**

**A.** Annual depreciation expense amounts for the depreciable accounts of NYPA were calculated by the straight-line method, average life group (broad group or life-span) procedure, and remaining-life technique. With this approach, remaining lives were calculated according to standard ALG expectancy techniques, using the Iowa Survivor Curves noted in the calculation. For each plant account, the difference between the original cost at 12/31/15, adjusted for estimated net salvage, and the accumulated book depreciation reserve, was divided by the average remaining life to yield the annual depreciation expense.

**Q. PLEASE SUMMARIZE THE DEPRECIATION RATES AND ACCRUALS RECOMMENDED FOR NYPA.**

**A**. This study recommends a set of new depreciation rates that will produce an overall decrease in annual depreciation expense for transmission and general plant compared to rates currently in effect. The recommended change in depreciation rates would produce an overall decrease of $4.6 million in annual depreciation expense for all accounts compared to rates currently in effect (based on December 31, 2015 plant balances), if the proposed rates were used to develop calendar year 2015 depreciation accruals. This overall decrease consists of a decrease of $833 thousand in depreciation expense for transmission accounts and a decrease of $3.8 million for general plant accounts, as shown in Exhibit No. NYP-003, Appendix B. The following table shows the depreciation rates and accruals recommended for NYPA's existing assets. The accruals are annualized based on investment at December 31,

2015. The detailed analysis and recommended lives and net salvage are found in Exhibit No. NYP-003.

**Table 1 – Recommended Depreciation Rates (Existing Assets)**

| Account | Account Description | Plant Balance at 12/31/2015 $ | Proposed Accrual Rate % | Proposed Accrual Amount $ |
|---|---|---|---|---|
| **TRANSMISSION** | | | | |
| **Blenheim Gilboa** | | | | |
| 352 | Structures & Improvements | 4,317,717 | 0.65% | 27,938 |
| 353 | Station Equipment | 51,222,730 | 1.57% | 803,987 |
| 354 | Towers & Fixtures | 22,612,274 | 2.49% | 562,919 |
| 355 | Poles & Fixtures | 1,953,118 | 2.07% | 40,493 |
| 356 | Overhead Conductors & Devices | 9,403,929 | 2.46% | 231,636 |
| 359 | Roads & Trails | 670,808 | 0.64% | 4,296 |
| | Total Blenheim Gilboa | 90,180,576 | | 1,671,269 |
| **J. A. FitzPatrick *** | | | | |
| 354 | Towers & Fixtures | 10,051,183 | 1.95% | 195,615 |
| 356 | Overhead Conductors & Devices | 5,926,677 | 2.23% | 132,302 |
| 359 | Roads & Trails | 80,335 | 0.13% | 108 |
| | Total J. A. Fitzpatrick | 16,058,195 | | 328,025 |
| * No 2015 accrual - assets in J.A. FitzPatrick were fully accrued in last depreciation study | | | | |
| **Marcy South** | | | | |
| 353 | Station Equipment | 23,088,723 | 1.29% | 298,768 |
| 354 | Towers & Fixtures | 75,439,776 | 2.71% | 2,040,834 |
| 355 | Poles & Fixtures | 210,096,383 | 2.43% | 5,115,401 |
| 356 | Overhead Conductors & Devices | 105,799,660 | 2.69% | 2,845,218 |
| 357 | Underground Conduit | 43,951,419 | 1.23% | 542,354 |
| 358 | Underground Conductors & Devices | 12,314,493 | 1.86% | 229,581 |
| 359 | Roads & Trails | 22,421,909 | 0.90% | 202,137 |
| | Total Marcy South | 493,112,363 | | 11,274,292 |
| **Marcy Massena** | | | | |
| 352 | Structures & Improvements | 40,268,127 | 0.92% | 370,188 |
| 353 | Station Equipment | 191,779,559 | 1.21% | 2,323,860 |
| 354 | Towers & Fixtures | 64,465,654 | 2.66% | 1,716,446 |
| 355 | Poles & Fixtures | 19,615,058 | 2.22% | 435,641 |
| 356 | Overhead Conductors & Devices | 42,480,940 | 3.24% | 1,374,802 |

| | | | | |
|---|---|---|---|---|
| 359 | Roads & Trails | 5,105,433 | 0.73% | 37,255 |
| | Total Marcy Massena | 363,714,771 | | 6,258,193 |
| **Niagara** | | | | |
| 352 | Structures & Improvements | 24,449,344 | 0.73% | 178,618 |
| 353 | Station Equipment | 93,379,948 | 1.32% | 1,236,826 |
| 354 | Towers & Fixtures | 18,743,984 | 3.32% | 621,770 |
| 355 | Poles & Fixtures | 19,726 | 3.25% | 641 |
| 356 | Overhead Conductors & Devices | 28,672,314 | 3.77% | 1,079,756 |
| 359 | Roads & Trails | 42,797 | 0.28% | 122 |
| | Total Niagara | 165,308,113 | | 3,117,733 |
| **St. Lawrence** | | | | |
| 352 | Structures & Improvements | 12,343,417 | 0.96% | 119,106 |
| 353 | Station Equipment | 137,716,425 | 1.27% | 1,752,454 |
| 354 | Towers & Fixtures | 15,185,237 | 4.63% | 702,672 |
| 355 | Poles & Fixtures | 6,427,665 | 3.65% | 234,325 |
| 356 | Overhead Conductors & Devices | 15,472,585 | 4.54% | 702,921 |
| 357 | Underground Conduit | 61,047 | 0.18% | 110 |
| 358 | Underground Conductors & Devices | 1,186,661 | 0.41% | 4,917 |
| 359 | Roads & Trails | 193,299 | 0.55% | 1,070 |
| | Total St. Lawrence | 188,586,336 | | 3,517,576 |
| Total Transmission | | 1,316,960,353 | | 26,167,088 |
| **GENERAL PLANT** | | | | |
| **Blenheim Gilboa** | | | | |
| 390 | Structures and Improvements | 30,224,468 | 1.85% | 559,464 |
| 392 | Transportation Equipment | 5,338,747 | 9.23% | 492,846 |
| 393 | Stores Equipment | 379,493 | 3.21% | 12,185 |
| 394 | Tools, Shop, and Garage Equipment | 1,809,969 | 3.67% | 66,422 |
| 395 | Laboratory Equipment | 819,371 | 2.30% | 18,850 |
| 396 | Power Operated Equipment | 2,497,644 | 7.23% | 180,512 |
| 398 | Miscellaneous Equipment | 1,896,665 | 3.67% | 69,617 |
| **Headquarters** | | | | |
| 390 | Structures and Improvements | 74,177,492 | 1.53% | 1,136,559 |
| 392 | Transportation Equipment | 11,806,296 | 6.48% | 765,188 |
| 394 | Tools, Shop, and Garage Equipment | 766,953 | 2.88% | 22,104 |
| 395 | Laboratory Equipment | 2,961,576 | 4.82% | 142,839 |

| | | | | |
|---|---|---|---|---|
| 398 | Miscellaneous Equipment Note (2) | 22,316,280 | 0.002% | 396 |
| **Marcy South** | | | | |
| 396 | Power Operated Equipment | 763 | Note (1) | 0 |
| **Massena Marcy** | | | | |
| 390 | Structures and Improvements | 2,602,692 | 1.62% | 42,168 |
| 392 | Transportation Equipment | 6,522,896 | 8.65% | 564,204 |
| 393 | Stores Equipment | 129,292 | 3.33% | 4,306 |
| 394 | Tools, Shop, and Garage Equipment | 742,377 | 1.20% | 8,888 |
| 395 | Laboratory Equipment | 959,056 | 1.52% | 14,605 |
| 396 | Power Operated Equipment | 3,739,914 | 4.81% | 179,718 |
| 398 | Miscellaneous Equipment | 991,162 | 0.02% | 212 |
| **Niagara** | | | | |
| 390 | Structures and Improvements | 29,145,371 | 1.34% | 390,987 |
| 392 | Transportation Equipment | 8,453,942 | 7.12% | 601,871 |
| 393 | Stores Equipment | 315,500 | Note (1) | |
| 394 | Tools, Shop, and Garage Equipment | 5,171,828 | 4.14% | 214,178 |
| 395 | Laboratory Equipment | 1,722,115 | 1.57% | 27,089 |
| 396 | Power Operated Equipment | 4,288,696 | 6.51% | 279,335 |
| 398 | Miscellaneous Equipment | 7,415,152 | 0.86% | 63,800 |
| **St. Lawrence** | | | | |
| 390 | Structures and Improvements | 20,710,197 | 1.82% | 376,935 |
| 392 | Transportation Equipment | 12,984,613 | 9.83% | 1,276,434 |
| 393 | Stores Equipment | 317,287 | 2.65% | 8,417 |
| 394 | Tools, Shop, and Garage Equipment | 6,073,189 | 6.45% | 391,682 |
| 395 | Laboratory Equipment | 2,119,586 | 5.48% | 116,119 |
| 396 | Power Operated Equipment | 5,159,241 | 5.47% | 282,161 |
| 398 | Miscellaneous Equipment | 16,718,022 | 11.04% | 1,845,607 |

Note 1: Fully accrued. If plant is added to Marcy South Account 396, the recommended accrual rate is 8.33%

If plant is added to Niagara Account 393, the recommended accrual rate is 3.33%

Note 2: Nearly Fully accrued. If new plant is added to 398 Headquarters, the recommended Accrual rate is 5.00%

**Amortized Accounts after Retirement of Fully Accrued Assets**

| | | | | |
|---|---|---|---|---|
| **Blenheim Gilboa** | | | | |
| 391 | Office Furniture and Equipment | 38,398 | 10.00% | 3,840 |
| 391 | Computer Equipment 5 yr | 130,982 | 20.00% | 26,196 |

| | | | | |
|---|---|---|---|---|
| 391 | Computer Equip 10 Yr | 236,190 | 10.00% | 23,619 |
| 397 | Communication Equipment | 7,003 | 6.67% | 467 |
| 399 | Other Tangible Property | 0 | 6.67% | 0 |
| **Headquarters** | | | | |
| 391 | Office Furniture and Equipment | 10,417,362 | 10.00% | 1,041,736 |
| 391 | Computer Equipment 5 yr | 15,698,134 | 20.00% | 3,139,627 |
| 391 | Computer Equip 10 Yr | 50,072,107 | 10.00% | 5,007,211 |
| 397 | Communication Equipment | 553,697 | 6.67% | 36,913 |
| **Marcy South** | | | | |
| 397 | Marcy South | 0 | 6.67% | 0 |
| **Massena Marcy** | | | | |
| 391 | Office Furniture and Equipment | 41,182 | 10.00% | 4,118 |
| 391 | Computer Equipment 5 yr | 356,802 | 20.00% | 71,360 |
| 391 | Computer Equip 10 Yr | 2,213,258 | 10.00% | 221,326 |
| 397 | Communication Equipment | 113,375 | 6.67% | 7,558 |
| **Niagara** | | | | |
| 391 | Office Furniture and Equipment | 14,895 | 10.00% | 1,489 |
| 391 | Computer Equipment 5 yr | 204,980 | 20.00% | 40,996 |
| 391 | Computer Equip 10 Yr | 0 | 10.00% | 0 |
| 397 | Communication Equipment | 1,144,762 | 6.67% | 76,317 |
| 399 | Other Tangible Property | 3,201,209 | 6.67% | 213,414 |
| **St. Lawrence** | | | | |
| 391 | Office Furniture and Equipment | 24,050 | 10.00% | 2,405 |
| 391 | Computer Equipment 5 yr | 235,825 | 20.00% | 47,165 |
| 391 | Computer Equip 10 Yr | 7,081,808 | 10.00% | 708,181 |
| 397 | Communication Equipment | 5,457,758 | 6.67% | 363,851 |
| 399 | Other Tangible Property | 1,126,419 | 6.67% | 75,095 |
| | Accrual for Reserve Imbalance | | | (631,766) |
| | Total General | 389,648,042 | | 20,636,816 |
| | Total NYPA | 1,706,608,395 | | 46,803,904 |

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**Q. SINCE THE RECOMMENDED DEPRECIATION RATES ARE SPECIFIC TO INDIVIDUAL PROJECTS/LOCATIONS, ARE YOU RECOMMENDING "GENERIC" DEPRECIATION RATES FOR ANY NEW PROJECT OR LOCATION THAT IS CURRENTLY NOT COVERED IN THE EXISTING DEPRECIATION RATES?**

**A.** Yes. Below are depreciation rates that should be used in the event of capital additions that are not covered by the current project or location depreciation rates. These rates are based on the life and net salvage parameters recommended for NYPA's assets shown on Exhibit No. NYP-003, Appendix C page 1 of 2 (columns under the "Proposed" heading). These rates were calculated by dividing (1-Net Salvage Percentage) by the life of the account. In other words, the generic depreciation rate for Account 352 Structures & Improvements is (1-(-0.03))/75 = 1.37%.

**Table 2 – Recommended Depreciation Rates for New Projects/Locations**

| Acct | Description | Life | Curve | Net Salvage | Whole Life Accrual Rate |
|---|---|---|---|---|---|
| **Depreciated Accounts** | | | | | |
| 352 | Structures & Improvements | 75 | R5 | -3% | 1.37% |
| 353 | Station Equipment | 60 | R5 | -3% | 1.72% |
| 354 | Towers & Fixtures | 80 | SQ | -100% | 2.50% |
| 355 | Poles & Fixtures | 80 | SQ | -100% | 2.50% |
| 356 | Overhead Conductors & Devices | 80 | SQ | -100% | 2.50% |
| 357 | Underground Conduit | 75 | R5 | -5% | 1.40% |
| 358 | Underground Conductors & Devices | 50 | R5 | -5% | 2.10% |
| 359 | Roads & Trails | 100 | SQ | 0% | 1.00% |
| 390 | Structures and Improvements | 50 | R3 | 0% | 2.00% |
| 392 | Transportation Equipment | 7 | L2 | 0% | 14.29% |
| 393 | Stores Equipment | 30 | SQ | 0% | 3.33% |
| 394 | Tools, Shop, and Garage Equipment | 20 | SQ | 0% | 5.00% |
| 395 | Laboratory Equipment | 20 | SQ | 0% | 5.00% |

| | | | | | |
|---|---|---|---|---|---|
| 396 | Power Operated Equipment | 12 | S2.5 | 0% | 8.33% |
| 398 | Miscellaneous Equipment | 20 | SQ | 0% | 5.00% |
| **Amortized Accounts** | | | | | |
| 391 | Office Furniture and Equipment | 10 | SQ | 0% | 10.00% |
| 391.2 | Computer Equipment | 5 | SQ | 0% | 20.00% |
| 391.3 | Computer Equipment 10 Year | 10 | SQ | 0% | 10.00% |
| 397 | Communication Equipment | 15 | SQ | 0% | 6.67% |
| 399 | Other Tangible Property | 15 | SQ | 0% | 6.67% |

**Q. SHOULD THE ABOVE NEW PROJECT/LOCATION DEPRECIATION RATES BE USED IN ANY OTHER INSTANCE?**

**A.** Yes. There are some existing projects where there was no depreciable plant (or all plant was fully depreciated) in certain accounts at the Depreciation Study date of 12/31/15. Therefore, the Depreciation Study did not recommend project-specific depreciation rates for those project accounts. However, if new plant corresponding to these accounts (where no depreciation rate is listed) is subsequently added for the relevant projects, it is reasonable to apply the "New Project" depreciation rates, and the "New Project" depreciation rate for the relevant account should be used.

**Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

**A.** Yes, it does.

REGULATORY PROCEEDING APPEARANCES OF DANE A. WATSON

| Asset Location | Commission | Docket (If Applicable) | Company | Year | Description |
|---|---|---|---|---|---|
| Texas | Railroad Commission of Texas | GUD 10567 | CenterPoint Texas | 2016 | Gas Depreciation Study |
| MultiState | FERC | ER17-191-000 | American Transmission Company | 2016 | Electric Depreciation Study |
| New Jersey | New Jersey Public Utilities Board | GR16090826 | Elizabethtown Natural Gas | 2016 | Gas Depreciation Study |
| North Carolina | North Carolina Utilities Commission | Docket G-9 Sub 77H | Piedmont Natural Gas | 2016 | Gas Depreciation Study |
| Michigan | Michigan Public Service Commission | U-18195 | Consumers Energy/DTE Electric | 2016 | Ludington Pumped Storage Depreciation Study |
| Alabama | FERC | ER16-2313-000 | SEGCO | 2016 | Electric Depreciation Study |
| Alabama | FERC | ER16-2312-000 | Alabama Power Company | 2016 | Electric Depreciation Study |
| Michigan | Michigan Public Service Commission | U-18127 | Consumers Energy | 2016 | Natural Gas Depreciation Study |
| Mississippi | Mississippi Public Service Commission | 2016 UN 267 | Willmut Natural Gas | 2016 | Natural Gas Depreciation Study |
| Iowa | Iowa Utilities Board | RPU-2016-0003 | Liberty-Iowa | 2016 | Natural Gas Depreciation Study |
| Illinois | Illinois Commerce Commission | GRM #16-208 | Liberty-Illinois | 2016 | Natural Gas Depreciation Study |
| Kentucky | FERC | RP16-097-000 | KOT | 2016 | Natural Gas Depreciation Study |
| | | | | | |

REGULATORY PROCEEDING APPEARANCES OF DANE A. WATSON

| Asset Location | Commission | Docket (If Applicable) | Company | Year | Description |
|---|---|---|---|---|---|
| Alaska | Regulatory Commission of Alaska | U-16-067 | Alaska Electric Light and Power | 2016 | Generating Unit Depreciation Study |
| Florida | Florida Public Service Commission | 160170-EI | Gulf Power | 2016 | Electric Depreciation Study |
| California | California Public Utilities Commission | A 16-07-002 | California American Water | 2016 | Water and Waste Water Depreciation Study |
| Arizona | Arizona Corporation Commission | G-01551A-16-0107 | Southwest Gas | 2016 | Gas Depreciation Study |
| Texas | Public Utility Commission of Texas | 45414 | Sharyland | 2016 | Electric Depreciation Study |
| Colorado | Colorado Public Utilities Commission | 16A-0231E | Public Service of Colorado | 2016 | Electric Depreciation Study |
| Multi-State NE US | FERC | 16-453-000 | Northeast Transmission Development, LLC | 2015 | Electric Depreciation Study |
| Arkansas | Arkansas Public Service Commission | 15-098-U | CenterPoint Arkansas | 2015 | Gas Depreciation Study and Cost of Removal Study |
| New Mexico | New Mexico Public Regulation Commission | 15-00296-UT | SPS NM | 2015 | Electric Depreciation Study |
| Atmos Energy Corporation | Tennessee Regulatory Authority | 14-00146 | Atmos Tennessee | 2015 | Natural Gas Depreciation Study |
| New Mexico | New Mexico Public Regulation Commission | 15-00261-UT | Public Service Company of New Mexico | 2015 | Electric Depreciation Study |
| Hawaii | NA | NA | Hawaii American Water | 2015 | Water/Wastewater Depreciation Study |

REGULATORY PROCEEDING APPEARANCES OF DANE A. WATSON

| Asset Location | Commission | Docket (If Applicable) | Company | Year | Description |
|---|---|---|---|---|---|
| Kansas | Kansas Corporation Commission | 16-ATMG-079-RTS | Atmos Kansas | 2015 | Gas Depreciation Study |
| Texas | Public Utility Commission of Texas | 44704 | Entergy Texas | 2015 | Electric Depreciation Study |
| Alaska | Regulatory Commission of Alaska | U-15-089 | Fairbanks Water and Wastewater | 2015 | Water and Waste Water Depreciation Study |
| Arkansas | Arkansas Public Service Commission | 15-031-U | Source Gas Arkansas | 2015 | Underground Storage Gas Depreciation Study |
| New Mexico | New Mexico Public Regulation Commission | 15-00139-UT | SPS NM | 2015 | Electric Depreciation Study |
| Texas | Public Utility Commission of Texas | 44746 | Wind Energy Transmission Texas | 2015 | Electric Depreciation Study |
| Colorado | Colorado Public Utilities Commission | 15-AL-0299G | Atmos Colorado | 2015 | Gas Depreciation Study |
| Arkansas | Arkansas Public Service Commission | 15-011-U | Source Gas Arkansas | 2015 | Gas Depreciation Study |
| Texas | Railroad Commission of Texas | GUD 10432 | CenterPoint-Texas Coast Division | 2015 | Gas Depreciation Study |
| Kansas | Kansas Corporation Commission | 15-KCPE-116-RTS | Kansas City Power and Light | 2015 | Electric Depreciation Study |
| Alaska | Regulatory Commission of Alaska | U-14-120 | Alaska Electric Light and Power | 2014-2015 | Electric Depreciation Study |
| Texas | Public Utility Commission of Texas | 43950 | Cross Texas Transmission | 2014 | Electric Depreciation Study |

REGULATORY PROCEEDING APPEARANCES OF DANE A. WATSON

| **Asset Location** | **Commission** | **Docket (If Applicable)** | **Company** | **Year** | **Description** |
|---|---|---|---|---|---|
| New Mexico | New Mexico Public Regulation Commission | 14-00332-UT | Public Service of New Mexico | 2014 | Electric Depreciation Study |
| Texas | Public Utility Commission of Texas | 43695 | Xcel Energy | 2014 | Electric Depreciation Study |
| Multi State – SE US | FERC | RP15-101 | Florida Gas Transmission | 2014 | Gas Transmission Depreciation Study |
| California | California Public Utilities Commission | A.14-07-006 | Golden State Water | 2014 | Water and Waste Water Depreciation Study |
| Michigan | Michigan Public Service Commission | U-17653 | Consumers Energy Company | 2014 | Electric and Common Depreciation Study |
| Colorado | Public Utilities Commission of Colorado | 14AL-0660E | Public Service of Colorado | 2014 | Electric Depreciation Study |
| Wisconsin | Wisconsin | 05-DU-102 | WE Energies | 2014 | Electric, Gas, Steam and Common Depreciation Studies |
| Texas | Public Utility Commission of Texas | 42469 | Lone Star Transmission | 2014 | Electric Depreciation Study |
| Nebraska | Nebraska Public Service Commission | NG-0079 | Source Gas Nebraska | 2014 | Gas Depreciation Study |
| Alaska | Regulatory Commission of Alaska | U-14-055 | TDX North Slope Generating | 2014 | Electric Depreciation Study |
| Alaska | Regulatory Commission of Alaska | U-14-054 | Sand Point Generating LLC | 2014 | Electric Depreciation Study |

REGULATORY PROCEEDING APPEARANCES OF DANE A. WATSON

| Asset Location | Commission | Docket (If Applicable) | Company | Year | Description |
|---|---|---|---|---|---|
| Alaska | Regulatory Commission of Alaska | U-14-045 | Matanuska Electric Coop | 2014 | Electric Generation Depreciation Study |
| Texas, New Mexico | Public Utility Commission of Texas | 42004 | Xcel Energy | 2013-2014 | Electric Production, Transmission, Distribution and General Plant Depreciation Study |
| New Jersey | Board of Public Utilities | GR13111137 | South Jersey Gas | 2013 | Gas Depreciation Study |
| Various | FERC | RP14-247-000 | Sea Robin | 2013 | Gas Depreciation Study |
| Arkansas | Arkansas Public Service Commission | 13-078-U | Arkansas Oklahoma Gas | 2013 | Gas Depreciation Study |
| Arkansas | Arkansas Public Service Commission | 13-079-U | Source Gas Arkansas | 2013 | Gas Depreciation Study |
| California | California Public Utilities Commission | Proceeding No.: A.13-11-003 | Southern California Edison | 2013 | Electric Depreciation Study |
| North Carolina/South Carolina | FERC | ER13-1313 | Progress Energy Carolina | 2013 | Electric Depreciation Study |
| Wisconsin | Public Service Commission of Wisconsin | 4220-DU-108 | Northern States Power- Wisconsin | 2013 | Electric, Gas and Common Transmission, Distribution and General |
| Texas | Public Utility Commission of Texas | 41474 | Sharyland | 2013 | Electric Depreciation Study |
| Kentucky | Kentucky Public Service Commission | 2013-00148 | Atmos Energy Corporation | 2013 | Gas Depreciation Study |

REGULATORY PROCEEDING APPEARANCES OF DANE A. WATSON

| Asset Location | Commission | Docket (If Applicable) | Company | Year | Description |
|---|---|---|---|---|---|
| Minnesota | Minnesota Public Utilities Commission | 13-252 | Allete Minnesota Power | 2013 | Electric Depreciation Study |
| New Hampshire | New Hampshire Public Service Commission | DE 13-063 | Liberty Utilities | 2013 | Electric Distribution and General |
| Texas | Railroad Commission of Texas | 10235 | West Texas Gas | 2013 | Gas Depreciation Study |
| Alaska | Regulatory Commission of Alaska | U-12-154 | Alaska Telephone Company | 2012 | Telecommunications Utility |
| New Mexico | New Mexico Public Regulation Commission | 12-00350-UT | SPS | 2012 | Electric Depreciation Study |
| Colorado | Colorado Public Utilities Commission | 12AL-1269ST | Public Service of Colorado | 2012 | Gas and Steam Depreciation Study |
| Colorado | Colorado Public Utilities Commission | 12AL-1268G | Public Service of Colorado | 2012 | Gas and Steam Depreciation Study |
| Alaska | Regulatory Commission of Alaska | U-12-149 | Municipal Power and Light City of Anchorage | 2012 | Electric Depreciation Study |
| Texas | Texas Public Utility Commission | 40824 | Xcel Energy | 2012 | Electric Depreciation Study |
| South Carolina | Public Service Commission of South Carolina | Docket 2012-384-E | Progress Energy Carolina | 2012 | Electric Depreciation Study |
| Alaska | Regulatory Commission of Alaska | U-12-141 | Interior Telephone Company | 2012 | Telecommunications Utility |
| Michigan | Michigan Public Service Commission | U-17104 | Michigan Gas Utilities Corporation | 2012 | Gas Depreciation Study |
| | | | | | |

REGULATORY PROCEEDING APPEARANCES OF DANE A. WATSON

| Asset Location | Commission | Docket (If Applicable) | Company | Year | Description |
|---|---|---|---|---|---|
| North Carolina | North Carolina Utilities Commission | E-2 Sub 1025 | Progress Energy Carolina | 2012 | Electric Depreciation Study |
| Texas | Texas Public Utility Commission | 40606 | Wind Energy Transmission Texas | 2012 | Electric Depreciation Study |
| Texas | Texas Public Utility Commission | 40604 | Cross Texas Transmission | 2012 | Electric Depreciation Study |
| Minnesota | Minnesota Public Utilities Commission | 12-858 | Minnesota Northern States Power | 2012 | Electric, Gas and Common Transmission, Distribution and General |
| Texas | Railroad Commission of Texas | 10170 | Atmos Mid-Tex | 2012 | Gas Depreciation Study |
| Texas | Railroad Commission of Texas | 10174 | Atmos West Texas | 2012 | Gas Depreciation Study |
| Texas | Railroad Commission of Texas | 10182 | CenterPoint Beaumont/ East Texas | 2012 | Gas Depreciation Study |
| Kansas | Kansas Corporation Commission | 12-KCPE-764-RTS | Kansas City Power and Light | 2012 | Electric Depreciation Study |
| Nevada | Public Utility Commission of Nevada | 12-04005 | Southwest Gas | 2012 | Gas Depreciation Study |
| Texas | Railroad Commission of Texas | 10147, 10170 | Atmos Mid-Tex | 2012 | Gas Depreciation Study |
| Kansas | Kansas Corporation Commission | 12-ATMG-564-RTS | Atmos Kansas | 2012 | Gas Depreciation Study |
| Texas | Texas Public Utility Commission | 40020 | Lone Star Transmission | 2012 | Electric Depreciation Study |

REGULATORY PROCEEDING APPEARANCES OF DANE A. WATSON

| **Asset Location** | **Commission** | **Docket (If Applicable)** | **Company** | **Year** | **Description** |
|---|---|---|---|---|---|
| Michigan | Michigan Public Service Commission | U-16938 | Consumers Energy Company | 2011 | Gas Depreciation Study |
| Colorado | Public Utilities Commission of Colorado | 11AL-947E | Public Service of Colorado | 2011 | Electric Depreciation Study |
| Texas | Texas Public Utility Commission | 39896 | Entergy Texas | 2011 | Electric Depreciation Study |
| MultiState | FERC | ER12-212 | American Transmission Company | 2011 | Electric Depreciation Study |
| California | California Public Utilities Commission | A1011015 | Southern California Edison | 2011 | Electric Depreciation Study |
| Mississippi | Mississippi Public Service Commission | 2011-UN-184 | Atmos Energy | 2011 | Gas Depreciation Study |
| Michigan | Michigan Public Service Commission | U-16536 | Consumers Energy Company | 2011 | Wind Depreciation Rate Study |
| Texas | Public Utility Commission of Texas | 38929 | Oncor | 2011 | Electric Depreciation Study |
| Texas | Railroad Commission of Texas | 10038 | CenterPoint South TX | 2010 | Gas Depreciation Study |
| Alaska | Regulatory Commission of Alaska | U-10-070 | Inside Passage Electric Cooperative | 2010 | Electric Depreciation Study |
| Texas | Public Utility Commission of Texas | 36633 | City Public Service of San Antonio | 2010 | Electric Depreciation Study |
| Texas | Texas Railroad Commission | 10000 | Atmos Pipeline Texas | 2010 | Gas Depreciation Study |
| Multi State – SE US | FERC | RP10-21-000 | Florida Gas Transmission | 2010 | Gas Depreciation Study |
| Maine/ New Hampshire | FERC | 10-896 | Granite State Gas Transmission | 2010 | Gas Depreciation Study |

REGULATORY PROCEEDING APPEARANCES OF DANE A. WATSON

| Asset Location | Commission | Docket (If Applicable) | Company | Year | Description |
|---|---|---|---|---|---|
| Texas | Public Utility Commission of Texas | 38480 | Texas New Mexico Power | 2010 | Electric Depreciation Study |
| Texas | Public Utility Commission of Texas | 38339 | CenterPoint Electric | 2010 | Electric Depreciation Study |
| Texas | Texas Railroad Commission | 10041 | Atmos Amarillo | 2010 | Gas Depreciation Study |
| Georgia | Georgia Public Service Commission | 31647 | Atlanta Gas Light | 2010 | Gas Depreciation Study |
| Texas | Public Utility Commission of Texas | 38147 | Southwestern Public Service | 2010 | Electric Technical Update |
| Alaska | Regulatory Commission of Alaska | U-09-015 | Alaska Electric Light and Power | 2009-2010 | Electric Depreciation Study |
| Alaska | Regulatory Commission of Alaska | U-10-043 | Utility Services of Alaska | 2009-2010 | Water Depreciation Study |
| Michigan | Michigan Public Service Commission | U-16055 | Consumers Energy/DTE Energy | 2009-2010 | Ludington Pumped Storage Depreciation Study |
| Michigan | Michigan Public Service Commission | U-16054 | Consumers Energy | 2009-2010 | Electric Depreciation Study |
| Michigan | Michigan Public Service Commission | U-15963 | Michigan Gas Utilities Corporation | 2009 | Gas Depreciation Study |
| Michigan | Michigan Public Service Commission | U-15989 | Upper Peninsula Power Company | 2009 | Electric Depreciation Study |
| Texas | Railroad Commission of Texas | 9869 | Atmos Energy | 2009 | Shared Services Depreciation Study |
| Mississippi | Mississippi Public Service Commission | 09-UN-334 | CenterPoint Energy Mississippi | 2009 | Gas Depreciation Study |

REGULATORY PROCEEDING APPEARANCES OF DANE A. WATSON

| Asset Location | Commission | Docket (If Applicable) | Company | Year | Description |
|---|---|---|---|---|---|
| Texas | Railroad Commission of Texas | 9902 | CenterPoint Energy Houston | 2009 | Gas Depreciation Study |
| Colorado | Colorado Public Utilities Commission | 09AL-299E | Public Service of Colorado | 2009 | Electric Depreciation Study |
| Tennessee | Tennessee Regulatory Authority | 11-00144 | Piedmont Natural Gas | 2009 | Gas Depreciation Study |
| Louisiana | Louisiana Public Service Commission | U-30689 | Cleco | 2008 | Electric Depreciation Study |
| Texas | Public Utility Commission of Texas | 35763 | SPS | 2008 | Electric Production, Transmission, Distribution and General Plant Depreciation Study |
| Wisconsin | Wisconsin | 05-DU-101 | WE Energies | 2008 | Electric, Gas, Steam and Common Depreciation Studies |
| North Dakota | North Dakota Public Service Commission | PU-07-776 | Northern States Power | 2008 | Net Salvage |
| New Mexico | New Mexico Public Regulation Commission | 07-00319-UT | SPS | 2008 | Testimony – Depreciation |
| Multiple States | Railroad Commission of Texas | 9762 | Atmos Energy | 2007-2008 | Shared Services Depreciation Study |
| Minnesota | Minnesota Public Utilities Commission | E015/D-08-422 | Minnesota Power | 2007-2008 | Electric Depreciation Study |
| Texas | Public Utility Commission of Texas | 35717 | Oncor | 2008 | Electric Depreciation Study |

REGULATORY PROCEEDING APPEARANCES OF DANE A. WATSON

| Asset Location | Commission | Docket (If Applicable) | Company | Year | Description |
|---|---|---|---|---|---|
| Texas | Public Utility Commission of Texas | 34040 | Oncor | 2007 | Electric Depreciation Study |
| Michigan | Michigan Public Service Commission | U-15629 | Consumers Energy | 2006-2009 | Gas Depreciation Study |
| Colorado | Colorado Public Utilities Commission | 06-234-EG | Public Service of Colorado | 2006 | Electric Depreciation Study |
| Arkansas | Arkansas Public Service Commission | 06-161-U | CenterPoint Energy – Arkla Gas | 2006 | Gas Distribution Depreciation Study and Removal Cost Study |
| Texas, New Mexico | Public Utility Commission of Texas | 32766 | Xcel Energy | 2005-2006 | Electric Production, Transmission, Distribution and General Plant Depreciation Study |
| Texas | Railroad Commission of Texas | 9670/9676 | Atmos Energy Corp | 2005-2006 | Gas Distribution Depreciation Study |
| Texas | Railroad Commission of Texas | 9400 | TXU Gas | 2003-2004 | Gas Distribution Depreciation Study |
| Texas | Railroad Commission of Texas | 9313 | TXU Gas | 2002 | Gas Distribution Depreciation Study |
| Texas | Railroad Commission of Texas | 9225 | TXU Gas | 2002 | Gas Distribution Depreciation Study |
| Texas | Public Utility Commission of Texas | 24060 | TXU | 2001 | Line Losses |
| Texas | Public Utility Commission of Texas | 23640 | TXU | 2001 | Line Losses |

REGULATORY PROCEEDING APPEARANCES OF DANE A. WATSON

| Asset Location | Commission | Docket (If Applicable) | Company | Year | Description |
|---|---|---|---|---|---|
| Texas | Railroad Commission of Texas | 9145-9148 | TXU Gas | 2000-2001 | Gas Distribution Depreciation Study |
| Texas | Public Utility Commission of Texas | 22350 | TXU | 2000-2001 | Electric Depreciation Study, Unbundling |
| Texas | Railroad Commission of Texas | 8976 | TXU Pipeline | 1999 | Pipeline Depreciation Study |
| Texas | Public Utility Commission of Texas | 20285 | TXU | 1999 | Fuel Company Depreciation Study |
| Texas | Public Utility Commission of Texas | 18490 | TXU | 1998 | Transition to Competition |
| Texas | Public Utility Commission of Texas | 16650 | TXU | 1997 | Customer Complaint |
| Texas | Public Utility Commission of Texas | 15195 | TXU | 1996 | Mining Company Depreciation Study |
| Texas | Public Utility Commission of Texas | 12160 | TXU | 1993 | Fuel Company Depreciation Study |
| Texas | Public Utility Commission of Texas | 11735 | TXU | 1993 | Electric Depreciation Study |

Ex. No. NYP-003

# NEW YORK POWER AUTHORITY

## ELECTRIC TRANSMISSION AND

## GENERAL UTILITY PLANT

### DEPRECIATION RATE STUDY

### AT DECEMBER 31, 2015


http://www.utilityalliance.com

# NEW YORK POWER AUTHORITY
# ELECTRIC TRANSMISSION AND
# GENERAL PLANT
# DEPRECIATION RATE STUDY
# EXECUTIVE SUMMARY

New York Power Authority ("NYPA" or "Company") engaged Alliance Consulting Group to conduct a depreciation study of the Company's Transmission and General utility plant depreciable assets as of December 31, 2015.

This study was conducted under a traditional depreciation study approach for life and net salvage. The broad group, average life, remaining life depreciation system was used. This methodology has been adopted by numerous state commissions and FERC.

NYPA's last depreciation study was performed in 1996. This study recommends an overall decrease of $4.6 million annual depreciation expense for all accounts compared to rates currently in effect. This consists of the following changes: a decrease of $833 thousand in depreciation expense for transmission accounts and a decrease of $3.8 million for general plant accounts. Appendix A shows the computation of the proposed depreciation rates. Appendix B demonstrates the change in depreciation expense for the various accounts.

# NEW YORK POWER AUTHORITY
# ELECTRIC TRANSMISSION AND GENERAL PLANT
# DEPRECIATION RATE STUDY
# AT DECEMBER 31, 2015

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## PURPOSE

The purpose of this study is to develop depreciation rates for the depreciable transmission and general property as recorded on NYPA's books at December 31, 2015. The account based depreciation rates were designed to recover the total remaining undepreciated investment, adjusted for net salvage, over the remaining life of NYPA's property on a straight-line basis. Hydro production, other production, and non-depreciable property were excluded from this study. Also excluded were hydro relicensing costs that are booked in Account 398, Miscellaneous Equipment.

The New York Power Authority provides transmission service in various parts of New York State over more than 1,400 circuit-miles of transmission facilities, which account for one-third of the state's high-voltage lines. They operate and maintain our power lines with a strong commitment to safety and the environment and work closely with the New York Independent System Operator (NYISO), other transmission owners and the New York State Public Service Commission to help ensure a high level of power-system reliability. NYPA also has various other general plant assets utilized to serve its customers.

## STUDY RESULTS

Overall depreciation rates for all NYPA depreciable transmission and general property are shown in Appendix A. These rates translate into an annual depreciation accrual of $46.8 million based on NYPA's depreciable investment at December 31, 2015. The annual equivalent depreciation expense calculated by the same method using the approved rates for surviving assets at December 31, 2015 was $51.4 million. These proposed rates translate into an annual depreciation accrual Transmission Plant of $26.2 million, and General Plant of $20.6 million.

Appendix A demonstrates the development of the annual depreciation rates and accruals. Appendices A-1 and A-2 show the amortization rates for accounts that are recommended to adopt general plant amortization. Appendix B presents a comparison of approved rates versus proposed rates by account. Appendix C presents a summary of mortality and net salvage estimates by account. Appendix D presents the net salvage analysis for all accounts. The change in depreciation expense is recognizing the unique depreciation parameters associated with NYPA assets.

## GENERAL DISCUSSION

### Definition

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

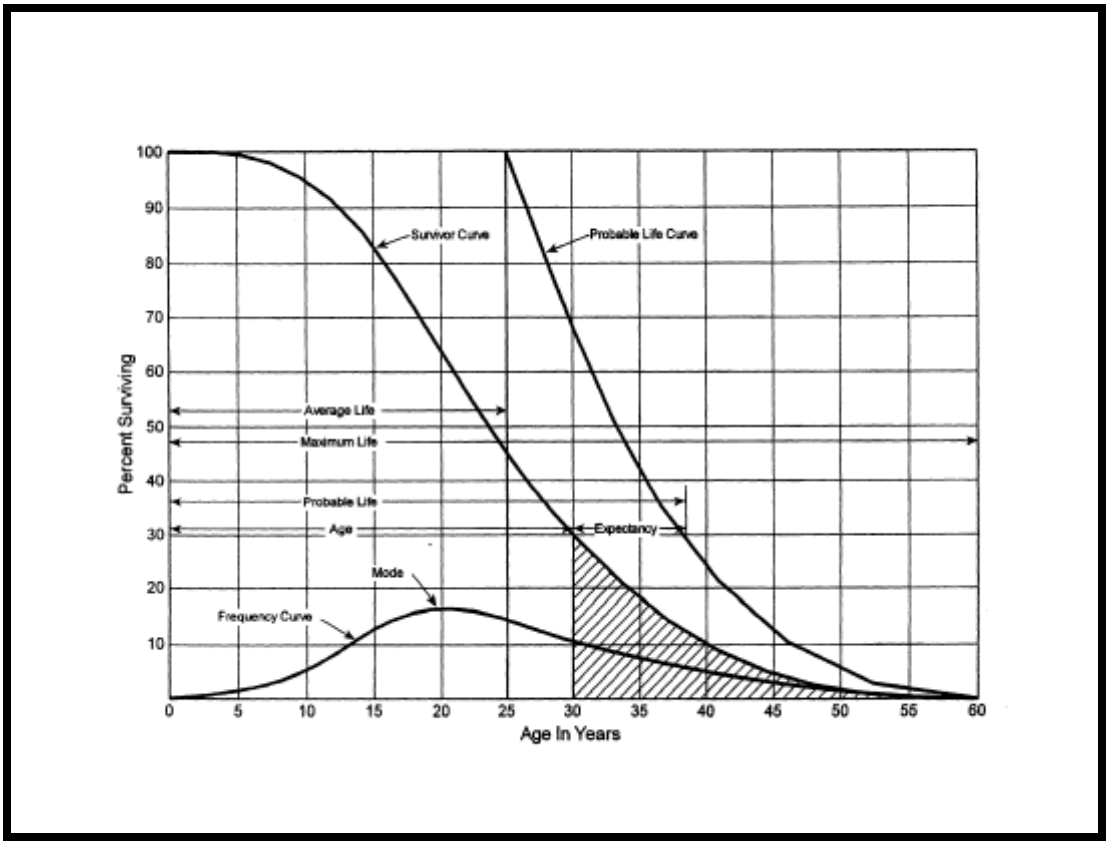
### Basis of Depreciation Estimates

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

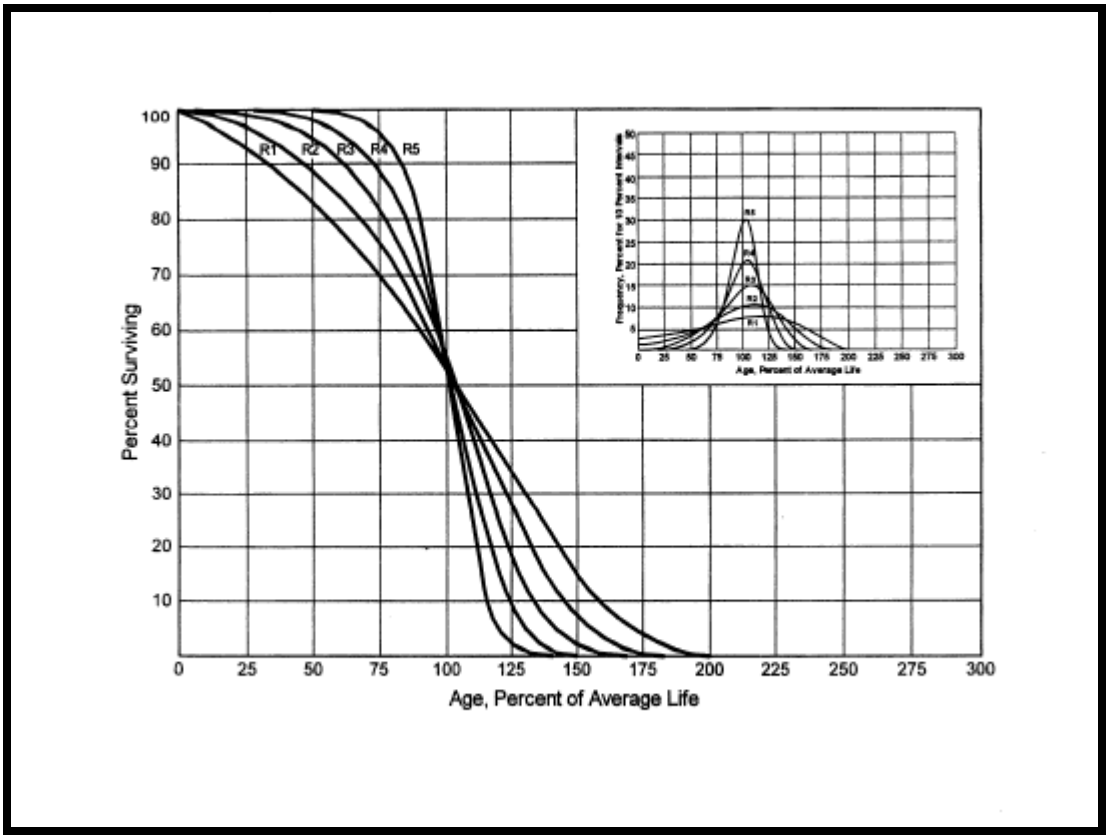
Actuarial analysis was used with each account within a function where sufficient data was available, and judgment was used to some degree on all accounts.

## Survivor Curves

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



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




Similarly, an "S" designation (i.e., Symmetric modal) is used for the family whose mode age is symmetric about the average life. An "L" designation (i.e., Left modal) is used for the family whose mode age is less than the average life. A special case of left modal dispersion is the "O" or origin modal curve family. Within each curve family, numerical designations are used to describe the relative magnitude of the retirement frequencies at the mode. A "6" indicates that the retirements are not greatly dispersed from the mode (i.e., high mode frequency) while a "1" indicates a large dispersion about the mode (i.e., low mode frequency). For example, a curve with an average life of 30 years and an "L3" dispersion is a

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

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

**Life Span Procedure**

The life span procedure was used for transmission line facilities for which most components are expected to have a retirement date concurrent with the planned retirement date of a generating unit or the expected life cycle of the entire transmission line. The terminal retirement date refers to the year that each transmission line will cease operations. The terminal retirement date along with the interim retirement characteristics of the assets (where applicable) that will retire prior to the facility ceasing operation are used to describe the pattern of retirement of the assets that comprise a unit. The estimated terminal retirement dates for the various transmission lines were determined based on consultation with NYPA management, financial, and engineering staff. Those estimated terminal retirement dates are shown in Appendix C. These terminal retirement dates will be applied to Accounts 354-356: Transmission Towers and Fixtures, Transmission Poles, and Transmission Overhead Conductor. Each line was assumed to have a life-span of 80 year life from the initial installation of the assets.

**Interim Retirements**

Interim retirements are generally used to model the retirement of individual assets within plant accounts that are modeled using the life-span methodology. The life span procedure assumes all assets are depreciated (straight-line) for the same number of periods and retire at the same time (the terminal retirement date). This

life-span approach was used for Accounts 354, 355 and 356. Adding interim retirement rates to the procedure would reflect some of the assets on a transmission line will be retired prior to the end of the life of the facility and should be depreciated (straight-line) more quickly and retired earlier than the terminal life of the facility. However, NYPA's practice has been to retire few or none of the capital assets in Accounts 354-356 over the history available. For this reason, no interim retirements were assumed for those accounts. The depreciation rates adopted in the Company's previous depreciation study incorporated this for some of NYPA's transmission lines. This study recommends no interim retirements for Accounts 354-356.

## Actuarial Analysis

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

**Judgment**

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

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

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

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

**Average Life Group Depreciation**

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

**Theoretical Depreciation Reserve**

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

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

The accumulated book depreciation reserve by account was compared to the theoretical reserve model based on the proposed life and net salvage parameters. Differences between book and theoretical reserves are recovered over the remaining life for each group.

## DETAILED DISCUSSION

### Depreciation Study Process

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

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

Phase 2 is where the actuarial analysis is performed. Phase 2 and 3 overlap to a significant degree. The detailed property records information is used in phase 2 to develop observed life tables for life analysis. These tables are visually compared

to industry standard tables to determine historical life characteristics. It is possible that the analyst would cycle back to this phase based on the evaluation process performed in phase 3. Net salvage analysis consists of compiling historical salvage and removal data by functional group to determine values and trends in gross salvage and removal cost. This information was then carried forward into phase 3 for the evaluation process.

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

Finally, Phase 4 involved the calculation of accrual rates, making recommendations and documenting the conclusions in a final report. The calculation of accrual rates is found in Appendix A. Recommendations for the various accounts are contained within the Detailed Discussion of this report. The depreciation study flow diagram shown as Figure 1[1] documents the steps used in conducting this study. Depreciation Systems[2], page 289 documents the same basic processes in performing a depreciation study which are: Statistical analysis, evaluation of statistical analysis, discussions with management, forecast assumptions, and document recommendations.

[1] INTRODUCTION TO DEPRECIATION FOR PUBLIC UTILITIES & OTHER INDUSTRIES, AGA EEI (2013).
[2] Depreciation Systems, F.K. Wolf & W.C. Fitch, Iowa State University Press, 1994.

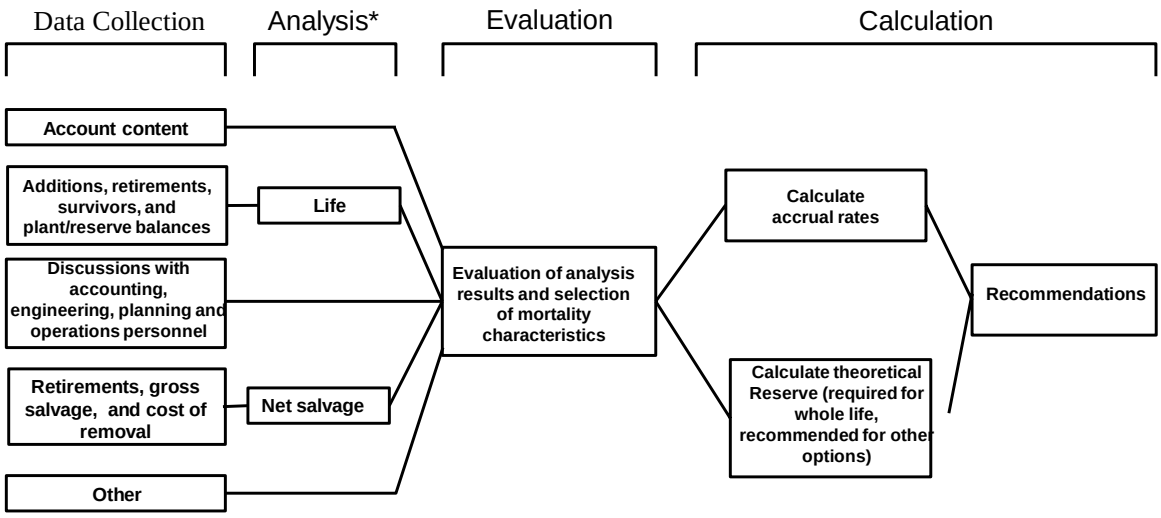



Figure 1

***NEW YORK POWER AUTHORITY***

***DEPRECIATION STUDY PROCESS***

## Depreciation Rate Calculation

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

## Remaining Life Calculation

The establishment of appropriate average service lives and retirement dispersions for each account within a functional group was based on engineering judgment that incorporated available accounting information analyzed using the Retirement Rate actuarial methods. After establishment of appropriate average service lives and retirement dispersions, a remaining life was computed for each account. The composite remaining life for each account was determined by direct weighting (i.e. by multiplying vintage investment by the vintage remaining life and dividing by the plant balance for each account).

## Account Calculation Process

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

In a whole life representation, the annual accrual rate is computed by the following equation,

$$\text{Annual Accrual Rate} = \frac{(100\% - \text{Net Salvage Percent})}{\text{Average Service Life}}$$

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

$$\text{Composite Remaining Life} = \frac{\sum \text{Original Cost} - \text{Theoretical Reserve}}{\sum \text{Whole Life Annual Accrual}}$$

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

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

where the net salvage percent represents future net salvage.

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

$$\text{Annual Depreciation Rate} = \frac{\sum \text{Annual Depreciation Expense}}{\sum \text{Original Cost}}$$

These calculations are shown in Appendix A.

## Life Analysis

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

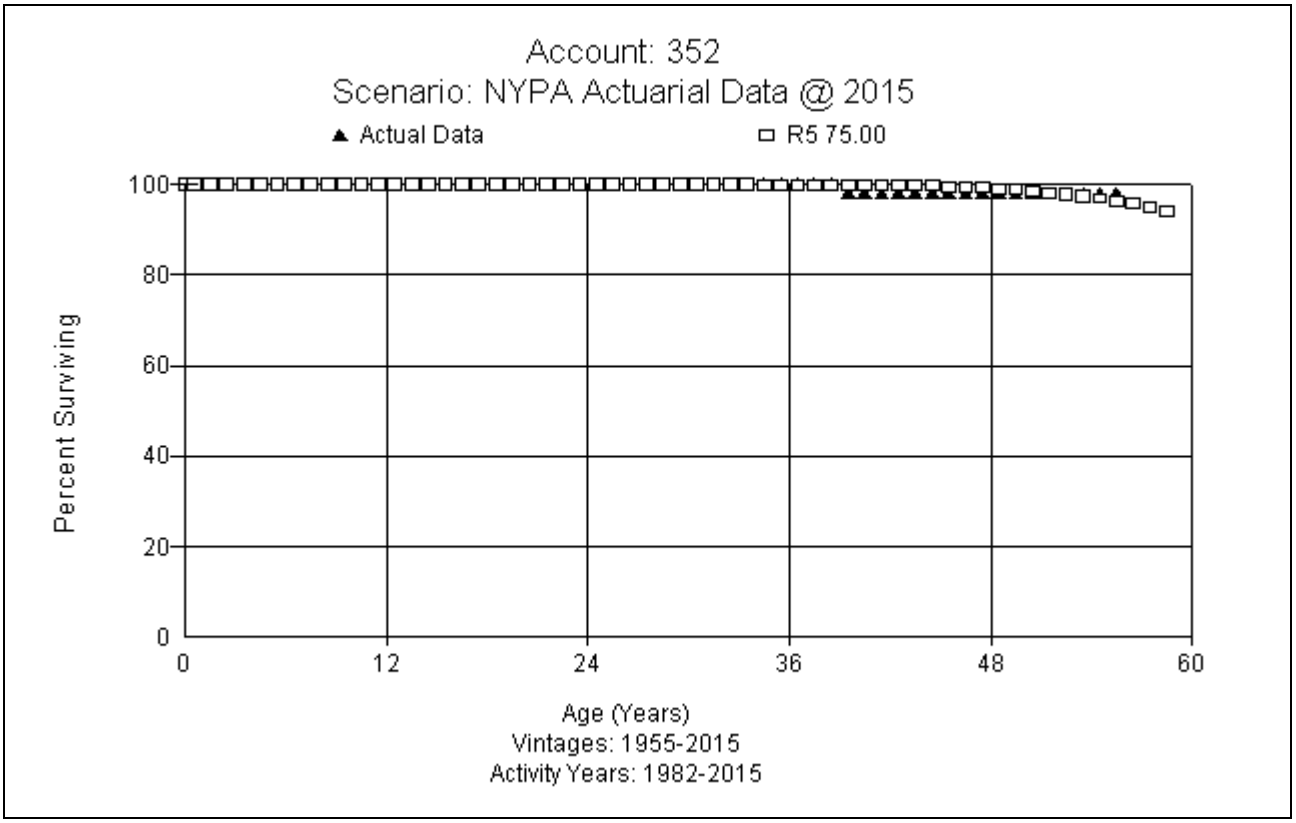
For each account on the overall band (i.e. placement from earliest vintage year which varied for each account through 2015), approved lives were used as a starting point. Then using the same average life, various dispersion curves were plotted. Frequently, visual matching would confirm one specific dispersion pattern (i.e. L, S. or R) as an obviously better match than others. The next step would be to determine the most appropriate life using that dispersion pattern. Retirement experience began in 1982. For each account, the overall experience band, 1982-2015 was analyzed. Next placement bands of varying width were plotted with each experience band discussed above. For most accounts an overall placement band was analyzed along with shorter bands of approximately 20 and 50 years respectively. Repeated matching usually pointed to a focus on one dispersion family and small range of service lives. The goal of visual matching was to minimize the differential between the observed life table and Iowa curve in top and mid range of the plots. These results are used in conjunction with all other factors that may influence asset lives.

## TRANSMISSION PLANT

### Transmission Plant Accounts, FERC Accounts 352.00-359.00

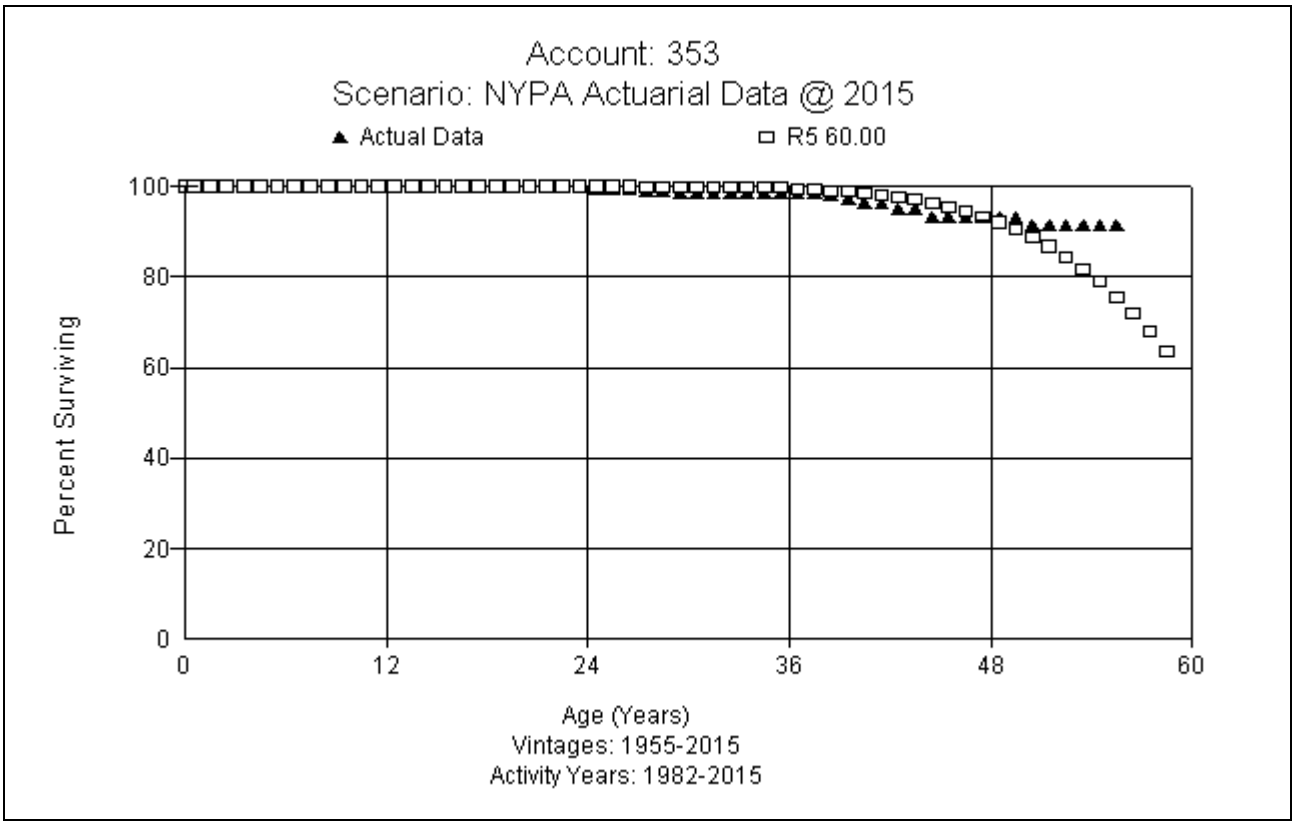
### FERC Account 352.00 Substation Structures & Improvements 75 R5

This account consists of control building, fencing, landscaping/yard surfacing and station lighting. The current balance is $81.4 million for this account. This account has an existing life of 75 R5. After considering the type and characteristics of assets in this account and reviewing various limited analysis bands, this study recommends retaining a 75 R5 dispersion curve. The appropriate life and dispersion curve was selected for this account based on the actuarial analysis of the range of lives and curves applicable to the historical activity for this account. A graph of the proposed curve and the actual data are shown below.



**FERC Account 353.00 Station Equipment 60 R5**

This account includes the cost of transformers, capacitor banks, circuit breakers, cubicle switchgear, equipment foundation, station controls and station wiring for transmission plant. The current balance is $497.2 million for this account. This account has an existing life of 50 R5. Based on the type of assets in this group and the available actuarial analysis, this study recommends a 60 R5 dispersion curve. The appropriate life and dispersion curve was selected for this account based on the actuarial analysis of the range of lives and curves applicable to the historical activity for this account. A graph of the proposed curve and the actual data are shown below.



**FERC Account 354.00 Transmission Towers & Fixtures 80 SQ**

This account consists of concrete foundations and lattice transmission structures. The current balance is $206.5 million for this account. This account has an existing life of 65 R5. NYPA has historically retired very little investment in this account and treats individual transmission lines as life-cycle or lifespan types of assets. The Company projects a reasonable life span for its existing transmission lines is 80 years. Considering the assets in the account as well as the Company's practices and subject matter expert input, this study recommends an 80 SQ dispersion curve. No graph is provided below.

**FERC Account 355.00 Poles & Fixtures 80 SQ**

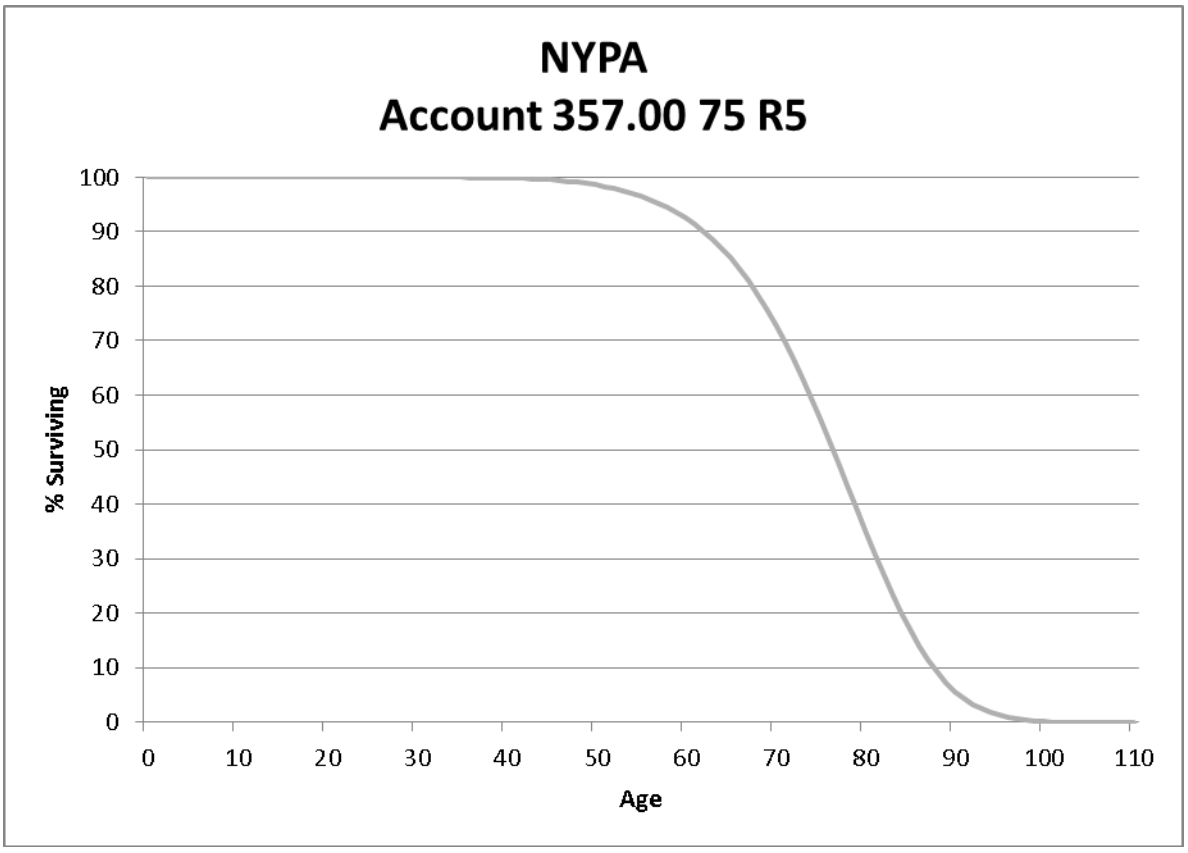
This account includes equipment foundation and many kinds of poles for transmission plant. The current balance is $238.1 million for this account. This account has an existing life of 55 R4. NYPA has historically retired very little investment in this account and treats individual transmission lines as life-cycle or lifespan types of assets. The Company projects a reasonable life span for its existing transmission lines is 80 years. Considering the assets in the account as well as the Company's practices and subject matter expert input, this study recommends an 80 SQ dispersion curve. No graph is provided below.

**FERC Account 356.00 Overhead Conductor and Devices 80 SQ**

This account consists of conductors and insulators. The current balance is $207.8 million for this account. This account has an existing life of 55 R5. NYPA has historically retired very little investment in this account and treats individual transmission lines as life-cycle or lifespan types of assets. The Company projects a reasonable life span for its existing transmission lines is 80 years. Considering the assets in the account as well as the Company's practices and subject matter expert input, this study recommends an 80 SQ dispersion curve. No graph is provided below.

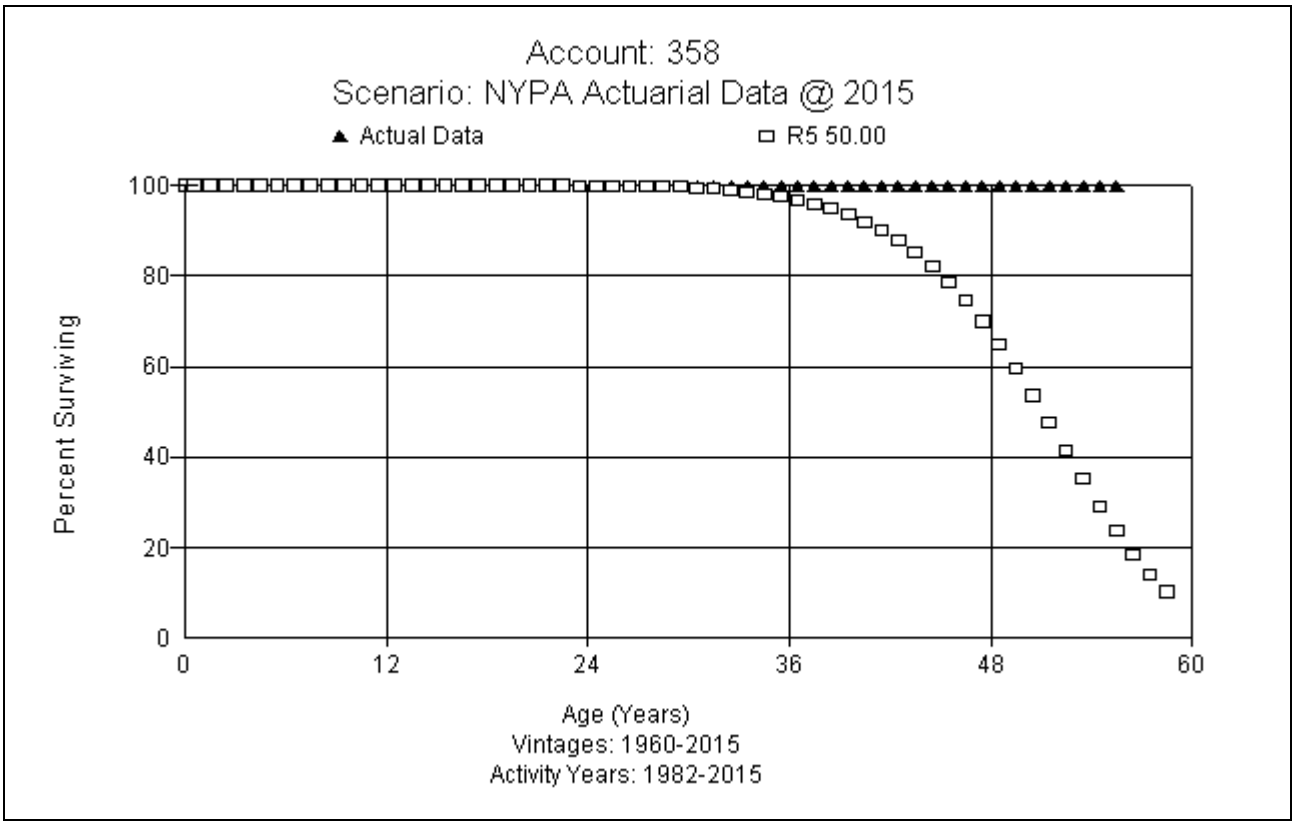
**FERC Account 357.00 Underground Conduit 75 R5**

This account consists of electric transmission conduit, electric manholes, vaults, tunnels, and spreader head assembly. The current balance is $44.0 million for this account. This account has an existing life of 75 R5. After reviewing the types of assets in the account and considering the life of the conductor contained in this conduit, this study recommends retaining a 75 R5 dispersion curve. The recommended life and dispersion curve is shown below.



**FERC Account 358.00 Underground Conductors and Devices 50 R5**

This account consists of conductors, line potheads, pipeline oil pumps, and underground cable. The current balance is $13.5 million for this account. This account has an existing life of 50 R5. After reviewing various analysis bands and the account's asset characteristics, this study recommends retaining a 50 R5 dispersion curve. The appropriate life and dispersion curve (an example of which is shown below) was selected for this account based on the characteristics of the assets within this account and the actuarial analysis of the range of lives and curves applicable to the historical activity for this account. A graph of the proposed curve versus the actual data is shown below.



### FERC Account 359.00 Roads and Trails 100 SQ

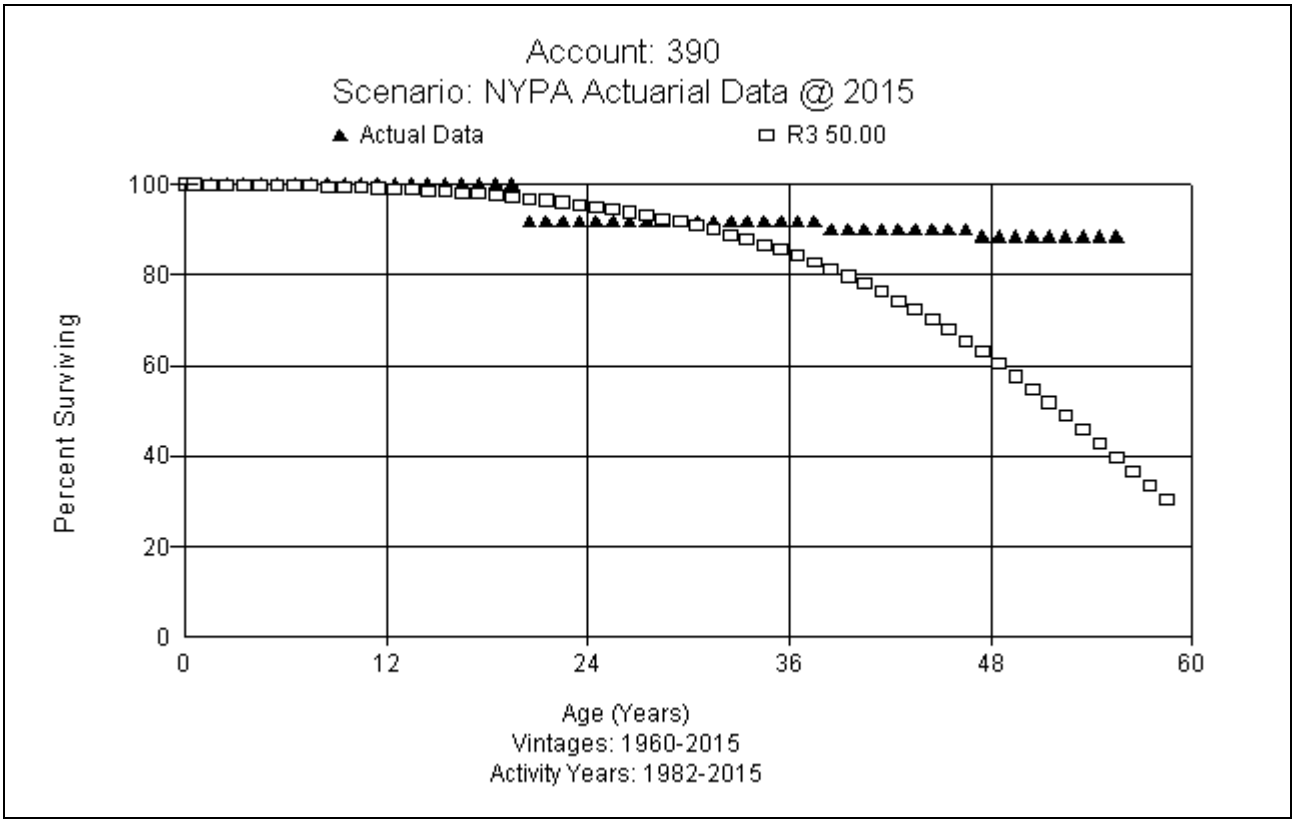
This account consists of bridges, trails, and roads. The current balance is $28.5 million for this account. There is insufficient history to analyze this account with actuarial analysis. This account has an existing life of 100 SQ. Based on the characteristics of the assets in this account, this study recommends retaining a 100 SQ dispersion curve. No graph is provided below.

## GENERAL PLANT

**General Plant Depreciated Accounts, FERC Accounts 390.00, 392.00-396.00, and 398.00**

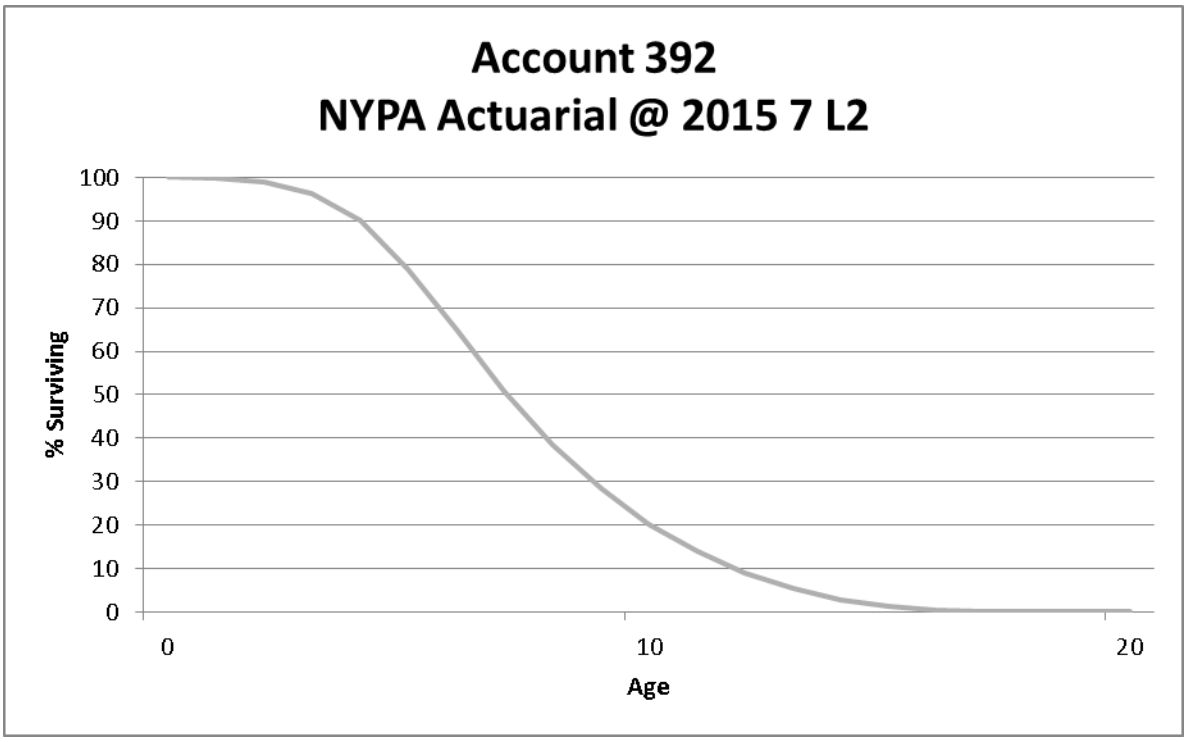
**FERC Account 390.00 General Plant Structures & Improvements 50 R3**

This account includes the cost of general structures and improvements used for utility service. There is approximately $156.9 million in this account. The current life of this account is 50 R3. Based on actuarial analysis and understanding of the assets in the account, this study recommends retention of 50 R3 dispersion curve. A graph of the actual data versus the proposed survivor curve is shown below.



**FERC Account 392.00 Transportation Equipment 7 L2**

This account consists of transportation equipment such as trailers used for general utility service. There is approximately $45.1 million in this account. The existing life for this account is a 10 L2. Based on the assets in the account and review of actuarial analysis for these assets, this study recommends a 7 L2 dispersion curve. A graph of the proposed survivor curve is shown below.



**FERC Account 393.00 Stores Equipment 30 SQ**

This account consists of stores equipment such as shelving used for general utility service. There is approximately $1.1 million in this account. The existing life for this account is 30 R2.5. Based on the assets in the account and knowledge of the characteristics of similar assets, this study recommends a 30 SQ dispersion curve.

**FERC Account 394.00 Tools, Shop, and Garage Equipment 20 SQ**

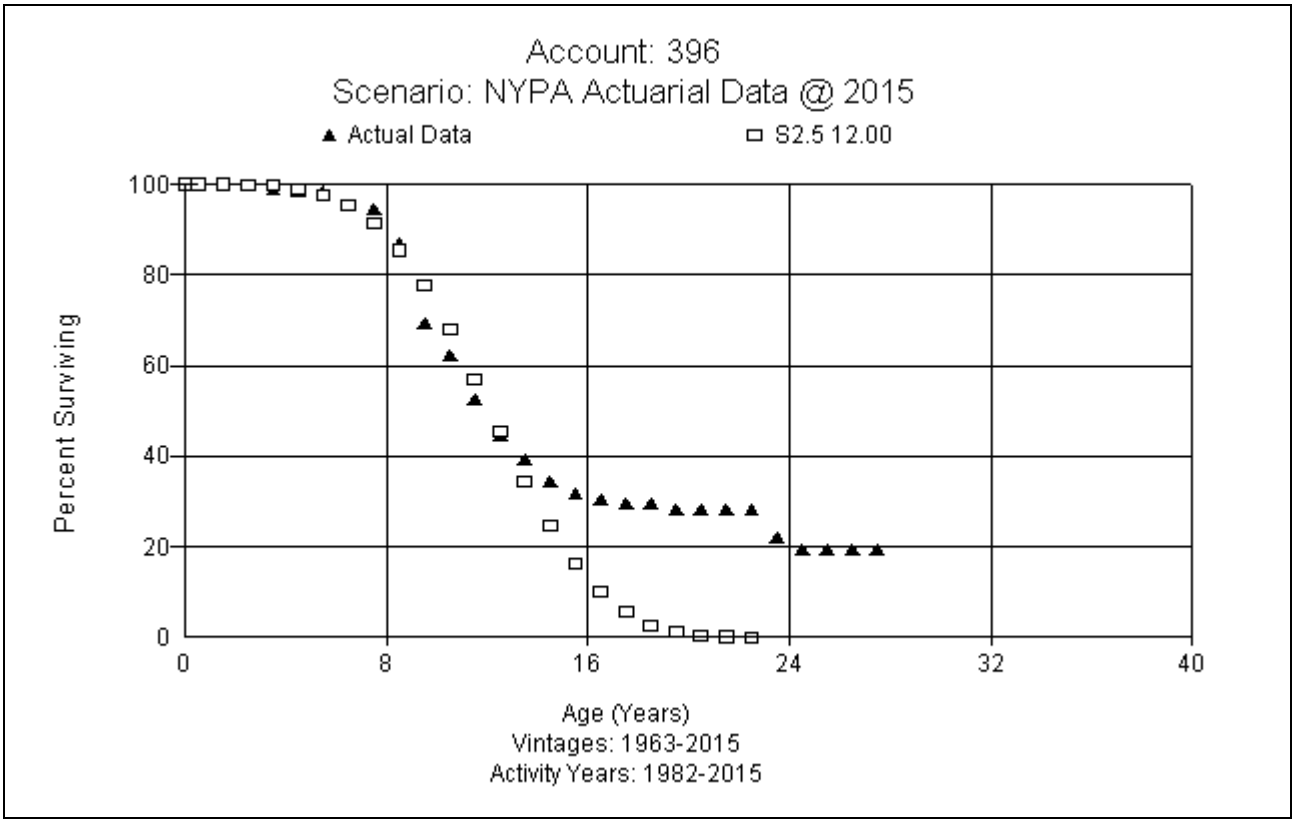
This account consists of various items or tools used in shop and garages such as air compressors, grinders, mixers, hoists, and cranes. There is approximately $14.6 million in this account. The existing life for this account is 20 R1.5. Based on limited retirement data and knowledge of the characteristics of similar assets, this study recommends a 20 SQ dispersion curve.

**FERC Account 395.00 Laboratory Equipment 20 SQ**

This account consists of laboratory equipment such as test equipment used for general utility service. There is approximately $28.2 million in this account. The existing life for this account is 25 S3. Based on the assets in the account and knowledge of the characteristics of similar assets, this study recommends a 20 SQ dispersion curve.

**FERC Account 396.00 Power Operated Equipment 12 S2.5**

This account consists of power operated equipment used in general utility service. There is approximately $15.7 million in this account. The existing life for this account is 10 L3. Based on the assets in the account and review of actuarial analysis for these assets, this study recommends an 12 S2.5 dispersion curve. A graph of the actual data versus the proposed survivor curve is shown below.



**FERC Account 398.00 Miscellaneous Equipment 20 SQ**

This account consists of miscellaneous equipment used for general utility service. There is approximately $49.0 million in this account. The existing life for this account is 25 S2. After considering the types and characteristic of assets in this account and reviewing various analysis bands, this study recommends a 20 SQ dispersion curve.

## GENERAL PLANT AMORTIZED ACCOUNTS

### General Plant Amortized Accounts 391.00-391.30, 397.00 and 399.00

**Adoption of Vintage Group Amortization**

This study recommends the adoption of vintage group amortization for certain General plant accounts. In the case of NYPA, this study recommends amortization for accounts 391, 391.2, 391.3, 397, and 399.

FERC adopted Accounting Release 15 in 1997 using the following criteria:

1. The individual classes of assets for which vintage year accounting is followed are high volume, low value items;

2. There is no change in existing retirement unit designations, for purposes of determining when expenditures are capital or expense;

3. The cost of the vintage groups is amortized to depreciation expense over their useful lives and there is no change in depreciation rates resulting from the adoption of the vintage year accounting;

4. Interim retirements are not recognized;

5. Salvage and removal cost relative to items in the vintage categories are included in the accumulated depreciation account and assigned to the oldest vintage first; and

6. Properties are retired from the affected accounts that, at the date of the adoption of vintage year accounting, meet or exceed the average service life of properties in that account.

A vintage year method of accounting for the general plant accounts that meets all of the foregoing requirements may be implemented without obtaining specific authorization from the Commission to do so.

To implement this amortization mechanism, it is necessary to first retire the assets whose age is longer than the recommended service life for each group. It will no longer be necessary to track of the location and retirement of those assets. Those amounts are shown for each account in Appendix A-1. After those assets are retired, the remaining

plant in service for each account will be amortized using the amortization rates shown in Appendix A-1 and A-2. Annually, assets which reach the average service life of each account will be retired when the assets reach their average service life. In addition, an additional accrual is necessary for each plant account to make up the difference between the book depreciation reserve and the theoretical depreciation reserve. Those amounts will be accrued until the total reserve difference for each account shown in Appendix A-2. For example in Blenheim GIlboa, Account 391 will require an annual accrual of $(374) annually for 3.20 years until the reserve difference of $1,197 has been accumulated. At that point the additional annual accrual will cease.

**FERC Account 391.00 Office Furniture and Fixtures 10 SQ**

This account consists of miscellaneous office furniture such as desks, chairs, filing cabinets, and tables used for general utility service. This account is recommended for implementation of AR15. There is approximately $74.9 million in this account, and after the retirement of fully accrued assets, the plant balance is $10.5 million. The existing life for this account is 30 S2. Based on judgment in analyzing similar assets, this study recommends a 10 SQ dispersion curve.

**FERC Account 391.20 Computer Equipment 5 SQ**

This account consists of computer equipment used for general utility service. This account is recommended for implementation of AR15. There is approximately $65.8 million in this account, and after the retirement of fully accrued assets, the plant balance is $16.6 million. The existing life for this account is 30 S2. Based on historical analysis and an understanding of the characteristics of assets in this account, this study recommends a 5 SQ dispersion curve.

**FERC Account 391.30 Computer Equipment 10 SQ**

This account consists of computer equipment used for general utility service. This account is recommended for implementation of AR15. There is approximately $92.1 million in this account, and after the retirement of fully accrued assets, the plant balance is $59.6

million. The existing life for this account is 30 S2. Based on historical analysis and an understanding of the characteristics of assets in this account, this study recommends a 10 SQ dispersion curve.

**FERC Account 397.00 Communication Equipment 15 SQ**

This account consists of communication equipment such as fiber optic cables, routers, and telephone/radio equipment. This account is recommended for implementation of AR15. There is approximately $28.2 million in this account, and after the retirement of fully accrued assets, the plant balance is $7.3 million. The existing life for this account is 15 S3. After considering the types and characteristic of assets in this account and reviewing various analysis bands, this study recommends a 15 SQ dispersion curve.

**FERC Account 399.00 Other Tangible Equipment 15 SQ**

This account consists of other tangible property. This account is recommended for implementation of AR15. There is approximately $4.3 million in this account, and after the retirement of fully accrued assets, the plant balance is $4.3 million. The existing life for this account is 15 SQ. After considering the types and characteristic of assets in this account and reviewing various analysis bands, this study recommends a 15 SQ dispersion curve.

## Salvage Analysis

When a capital asset is retired, physically removed from service and finally disposed of, terminal retirement is said to have occurred. The residual value of a terminal retirement is called gross salvage. Net salvage is the difference between the gross salvage (what the asset was sold for) and the removal cost (cost to remove and dispose of the asset).

Salvage and removal cost percentages are calculated by dividing the current cost of salvage or removal by the original installed cost of the asset. Some plant assets can experience significant negative removal cost percentages due to the timing of the original addition versus the retirement. For example, a transmission asset in FERC Account 355 with a current installed cost of $500 (2016) would have had an installed cost of $9.05[3] in 1936 (which is the proposed average life of the account). A removal cost of $50 for the asset calculated (incorrectly) on current installed cost would only have a negative 10 percent removal cost ($50/$500). However, a correct removal cost calculation would show a 552 percent removal cost for that asset ($50/$9.05). Inflation from the time of installation of the asset until the time of its removal must be taken into account in the calculation of the removal cost percentage because the depreciation rate, which includes the removal cost percentage, will be applied to the original installed cost of assets. The net salvage analysis uses the history of the individual accounts to estimate the future net salvage that NYPA can expect in its operations. As a result, the analysis not only looks at the historical experience of NYPA, but also takes into account recent and expected changes in operations that could reasonably lead to different future expectations for net salvage than were experienced in the past.

3 Using the Handy-Whitman Bulletin No. 183, E-1, line 36, $9.05 = $500 x 12/663.

**Salvage Characteristics**

NYPA does not book cost of removal for most of its accounts. The existing net salvage percentages were based on estimates of removal cost to remove NYPA transmission facilities in 1996. To develop data for a similar analysis, one of NYPA's largest replacement projects was used as a proxy for terminal net salvage. The summary of net salvage is shown in Appendix D.

The project used to estimate demolition costs was for the replacement of St. Lawrence MA1 and MA2 transmission lines. Included in this analysis was the St. Lawrence Moses Substation; the Adirondack Substation; the MA1 transmission line - 1 230kV oil circuit breaker, 3 disconnect switches, 1 wave trap, 1 surge arrester, 1 coupling capacitor, 1 voltage transformer with carrier accessories, 2 current transformers, and associated line supports and foundations; and the MA2 transmission line - 1 230kV oil circuit breaker, 3 disconnect switches, 1 wave trap, 1 surge arrester, 1 coupling capacitor, 1 voltage transformer with carrier accessories, 2 current transformers, and associated line supports and foundations. The summary results are shown in Appendix D-1.

**Transmission Plant and General Plant**

A brief discussion of the existing net salvage and current study recommendations for each account in those functions follow below.

**TRANSMISSION PLANT**

**Transmission Plant Accounts, FERC Accounts 352.00-359.00**

**FERC Account 352.00 Substation Structures & Improvements (- 3%)**

This account consists of control building, fencing, landscaping/yard surfacing and station lighting. The current net salvage percentage is negative 25 percent. As shown in Appendix D-1, the proxy project produces a net salvage estimate of negative 3 percent. To moderate expectations of the future, this study recommends a negative 3 percent net salvage rate for this account.

**FERC Account 353.00 Station Equipment (- 3%)**

This account consists of substation equipment. The current net salvage percentage is negative 15 percent. As shown in Appendix D-1, the proxy project produces a net salvage estimate of negative 3 percent. To moderate expectations of the future, this study recommends a negative 3 percent net salvage rate for this account.

**FERC Account 354.00 Transmission Towers & Fixtures (- 100%)**

This account consists of concrete foundations and lattice transmission structures. The current net salvage percentage is negative 40 percent. As shown in Appendix D-1, the proxy project produces a net salvage estimate of negative 768 percent. To moderate expectations of the future, this study recommends negative 100 percent net salvage rate for this account.

**FERC Account 355.00 Poles & Fixtures (- 100%)**

This account consists of transmission poles and foundations. The current net salvage percentage is negative 40 percent. As shown in Appendix D-1, the proxy project

produces a net salvage estimate of negative 768 percent. To moderate expectations of the future, this study recommends negative 100 percent net salvage rate for this account.

**FERC Account 356.00 Overhead Conductor and Devices (- 100%)**

This account consists of conductors and insulators. The current net salvage percentage is negative 20 percent. As shown in Appendix D-1, the proxy project produces a net salvage estimate of negative 768 percent. To moderate expectations of the future, this study recommends negative 100 percent net salvage rate for this account.

**FERC Account 357.00 Underground Conduit (- 5%)**

This account consists of electric transmission pipe, electric manholes, vaults, tunnels, and spreader head assembly. The current net salvage percentage is negative 5 percent. When retired, much of this equipment will be abandoned in place. Based on judgment, this study recommends retaining negative 5 percent net salvage rate for this account.

**FERC Account 358.00 Underground Conductor and Devices (- 5%)**

This account consists of conductors, line potheads, pipeline oil pumps, and underground cable. The current net salvage percentage is negative 15 percent. Based on judgment, this study recommends moving to negative 5 percent net salvage rate for this account.

**FERC Account 359.00 Roads and Trails (0%)**

This account consists of bridges, trails, and roads. The current net salvage percentage is negative 20 percent. Based on the type of assets in this account, this study recommends retention of 0 percent net salvage rate for this account.

## GENERAL PLANT

### General Plant Accounts, FERC Accounts 390.00- 399.00

**FERC Account 390.00 General Plant Structures & Improvements (0%)**

This account includes the cost of general structures and improvements used for utility service. The current net salvage percentage is 0 percent. Based on judgment and the type of assets in this account, this study recommends retention of 0 percent net salvage rate for this account.

**FERC Account 391.00 Office Furniture and Fixtures (0%)**

This account consists of miscellaneous office furniture such as desks, chairs, filing cabinets, and tables used for general utility service. The current net salvage percentage is 0 percent. Based on judgment and the type of assets in this account, this study recommends retention of 0 percent net salvage rate for this account.

**FERC Account 391.2 Computer Equipment 5 Year (0%)**

This account consists of computer equipment with a five year life used for general utility service. T The current net salvage percentage is 0 percent. Based on judgment and the type of assets in this account, this study recommends retention of 0 percent net salvage rate for this account.

**FERC Account 391.2 Computer Equipment 10 Year (0%)**

This account consists of computer equipment with a ten year life used for general utility service. The current net salvage percentage is 0 percent. Based on judgment and the type of assets in this account, this study recommends retention of 0 percent net salvage rate for this account.

**FERC Account 392.00 Transportation Equipment (0%)**

This account consists of transportation equipment such as trailers used for general utility service. Based on judgment, this study recommends a 0 percent net salvage rate for

this account.

**FERC Account 393.00 Stores Equipment (0%)**

This account consists of stores equipment such as shelving. Based on judgment and the type of assets in this account, this study recommends retention of 0 percent net salvage rate for this account.

**FERC Account 394.00 Tools, Shop, and Garage Equipment (0%)**

This account consists of various items or tools used in shop and garages such as air compressors, grinders, mixers, hoists, and cranes. The current net salvage percentage is 0 percent. Based on judgment and the type of assets in this account, this study recommends retention of 0 percent net salvage rate for this account.

**FERC Account 395.00 Laboratory Equipment (0%)**

This account consists of laboratory equipment such as testing equipment. The current net salvage percentage is 0 percent. Based on judgment and the type of assets in this account, this study recommends retention of 0 percent net salvage rate for this account.

**FERC Account 396.00 Power Operated Equipment (0%)**

This account consists of power operated equipment used in general utility service. Based on judgment, this study recommends a 0 percent net salvage rate for this account.

**FERC Account 397.00 Communication Equipment (0%)**

This account consists of communication equipment such as fiber optic cables, routers, and telephone/radio equipment. The current net salvage percentage is 0 percent. Based on judgment and the type of assets in this account, this study recommends retention of 0 percent net salvage rate for this account.

**FERC Account 398.00 Miscellaneous Equipment (0%)**

This account consists of miscellaneous equipment. The current net salvage percentage is 0 percent. Based on judgment and the type of assets in this account, this study recommends retention of 0 percent net salvage rate for this account.

**FERC Account 399.00 Other Tangible Property (0%)**

This account consists of other tangible property. The current net salvage percentage is 0 percent. Based on judgment and the type of assets in this account, this study recommends retention of 0 percent net salvage rate for this account.

# APPENDIX A

## Computation of Depreciation Accrual Rate

**NEW YORK POWER AUTHORITY**
**COMPUTATION OF ANNUAL DEPRECIATION RATE**
**At December 31, 2015**

| Account | Account Description | Plant Balance at 12/31/2015 $ | Accumulated Depreciation at 12/31/2015 $ | Net Salvage % | Net Salvage Amount $ | Unaccrued Balance $ | Remaining Life Yrs | Annual Accrual $ | Annual Accrual % |
|---|---|---|---|---|---|---|---|---|---|
| **TRANSMISSION PLANT** | | | | | | | | | |
| **Blenheim Gilboa** | | | | | | | | | |
| 352 | Structures & Improvements | 4,317,717 | 3,261,144 | -3% | (129,532) | 1,186,105 | 42.45 | 27,941 | 0.65% |
| 353 | Station Equipment | 51,222,730 | 12,375,234 | -3% | (1,536,682) | 40,384,178 | 50.23 | 803,985 | 1.57% |
| 354 | Towers & Fixtures | 22,612,274 | 19,611,752 | -100% | (22,612,274) | 25,612,796 | 45.50 | 562,919 | 2.49% |
| 355 | Poles & Fixtures | 1,953,118 | 2,063,800 | -100% | (1,953,118) | 1,842,436 | 45.50 | 40,493 | 2.07% |
| 356 | Overhead Conductors & Devices | 9,403,929 | 8,268,431 | -100% | (9,403,929) | 10,539,427 | 45.50 | 231,636 | 2.46% |
| 359 | Roads & Trails | 670,808 | 389,416 | 0% | 0 | 281,392 | 65.50 | 4,296 | 0.64% |
| | Total Blenheim Gilboa | 90,180,576 | 45,969,777 | | (35,635,534) | 79,846,333 | | 1,671,270 | |
| **J. A. FitzPatrick** | | | | | | | | | |
| 354 | Towers & Fixtures | 10,051,183 | 12,375,568 | -100% | (10,051,183) | 7,726,798 | 39.50 | 195,615 | 1.95% |
| 356 | Overhead Conductors & Devices | 5,926,677 | 6,627,436 | -100% | (5,926,677) | 5,225,918 | 39.50 | 132,302 | 2.23% |
| 359 | Roads & Trails | 80,335 | 73,914 | 0% | 0 | 6,421 | 59.50 | 108 | 0.13% |
| | Total J. A. Fitzpatrick | 16,058,195 | 19,076,918 | | (15,977,860) | 12,959,137 | | 328,025 | |
| **Marcy South** | | | | | | | | | |
| 353 | Station Equipment | 23,088,723 | 13,315,284 | -3% | (692,662) | 10,466,101 | 35.03 | 298,775 | 1.29% |
| 354 | Towers & Fixtures | 75,439,776 | 43,735,773 | -100% | (75,439,776) | 107,143,779 | 52.50 | 2,040,834 | 2.71% |
| 355 | Poles & Fixtures | 210,096,383 | 151,634,239 | -100% | (210,096,383) | 268,558,527 | 52.50 | 5,115,401 | 2.43% |
| 356 | Overhead Conductors & Devices | 105,799,660 | 62,225,351 | -100% | (105,799,660) | 149,373,969 | 52.50 | 2,845,218 | 2.69% |
| 357 | Underground Conduit | 43,951,419 | 20,285,420 | -5% | (2,197,571) | 25,863,570 | 47.69 | 542,327 | 1.23% |
| 358 | Underground Conductors & Devices | 12,314,493 | 7,712,164 | -5% | (615,725) | 5,218,054 | 22.73 | 229,567 | 1.86% |
| 359 | Roads & Trails | 22,421,909 | 7,659,769 | 0% | 0 | 14,762,140 | 73.03 | 202,138 | 0.90% |
| | Total Marcy South | 493,112,363 | 306,568,000 | | (394,841,776) | 581,386,139 | | 11,274,260 | |
| **Marcy Massena** | | | | | | | | | |
| 352 | Structures & Improvements | 40,268,127 | 24,810,486 | -3% | (1,208,044) | 16,665,685 | 45.02 | 370,184 | 0.92% |
| 353 | Station Equipment | 191,779,559 | 119,269,498 | -3% | (5,753,387) | 78,263,448 | 33.68 | 2,323,737 | 1.21% |
| 354 | Towers & Fixtures | 64,465,654 | 50,833,017 | -100% | (64,465,654) | 78,098,291 | 45.50 | 1,716,446 | 2.66% |
| 355 | Poles & Fixtures | 19,615,058 | 19,408,429 | -100% | (19,615,058) | 19,821,687 | 45.50 | 435,641 | 2.22% |
| 356 | Overhead Conductors & Devices | 42,480,940 | 22,408,371 | -100% | (42,480,940) | 62,553,509 | 45.50 | 1,374,802 | 3.24% |
| 359 | Roads & Trails | 5,105,433 | 2,656,781 | 0% | 0 | 2,448,652 | 65.73 | 37,253 | 0.73% |
| | Total Marcy Massena | 363,714,771 | 239,386,582 | | (133,523,083) | 257,851,272 | | 6,258,064 | 0 |
| **Niagara** | | | | | | | | | |
| 352 | Structures & Improvements | 24,449,344 | 18,996,925 | -3% | (733,480) | 6,185,899 | 34.63 | 178,628 | 0.73% |
| 353 | Station Equipment | 93,379,948 | 58,467,755 | -3% | (2,801,398) | 37,713,591 | 30.49 | 1,236,917 | 1.32% |

**NEW YORK POWER AUTHORITY**
**COMPUTATION OF ANNUAL DEPRECIATION RATE**
**At December 31, 2015**

| Account | Account Description | Plant Balance at 12/31/2015 $ | Accumulated Depreciation at 12/31/2015 $ | Net Salvage % | Net Salvage Amount $ | Unaccrued Balance $ | Remaining Life Yrs | Annual Accrual $ | Annual Accrual % |
|---|---|---|---|---|---|---|---|---|---|
| 354 | Towers & Fixtures | 18,743,984 | 20,389,300 | -100% | (18,743,984) | 17,098,668 | 27.50 | 621,770 | 3.32% |
| 355 | Poles & Fixtures | 19,726 | 21,820 | -100% | (19,726) | 17,632 | 27.50 | 641 | 3.25% |
| 356 | Overhead Conductors & Devices | 28,672,314 | 27,651,335 | -100% | (28,672,314) | 29,693,293 | 27.50 | 1,079,756 | 3.77% |
| 359 | Roads & Trails | 42,797 | 37,021 | 0% | 0 | 5,776 | 47.50 | 122 | 0.28% |
| | Total Niagara | 165,308,113 | 125,564,156 | | (50,970,903) | 90,714,860 | | 3,117,834 | |
| **St. Lawrence** | | | | | | | | | |
| 352 | Structures & Improvements | 12,343,417 | 7,375,543 | -3% | (370,303) | 5,338,177 | 44.82 | 119,103 | 0.96% |
| 353 | Station Equipment | 137,716,425 | 76,137,078 | -3% | (4,131,493) | 65,710,840 | 37.50 | 1,752,289 | 1.27% |
| 354 | Towers & Fixtures | 15,185,237 | 13,176,151 | -100% | (15,185,237) | 17,194,323 | 24.47 | 702,670 | 4.63% |
| 355 | Poles & Fixtures | 6,427,665 | 7,114,376 | -100% | (6,427,665) | 5,740,954 | 24.50 | 234,325 | 3.65% |
| 356 | Overhead Conductors & Devices | 15,472,585 | 13,746,685 | -100% | (15,472,585) | 17,198,485 | 24.47 | 702,840 | 4.54% |
| 357 | Underground Conduit | 61,047 | 61,829 | -5% | (3,052) | 2,270 | 20.55 | 110 | 0.18% |
| 358 | Underground Conductors & Devices | 1,186,661 | 1,211,718 | -5% | (59,333) | 34,276 | 6.97 | 4,918 | 0.41% |
| 359 | Roads & Trails | 193,299 | 125,489 | 0% | 0 | 67,810 | 63.39 | 1,070 | 0.55% |
| | Total St. Lawrence | 188,586,336 | 118,948,869 | | (41,649,668) | 111,287,135 | | 3,517,323 | |
| **GENERAL PLANT** | | | | | | | | | |
| **Blenheim Gilboa** | | | | | | | | | |
| 390 | Structures and Improvements | 30,224,468 | 6,357,766 | 0.00% | 0 | 23,866,702 | 42.66 | 559,463 | 1.85% |
| 392 | Transportation Equipment | 5,338,747 | 3,570,034 | 0.00% | 0 | 1,768,713 | 3.59 | 492,678 | 9.23% |
| 393 | Stores Equipment | 379,493 | 282,334 | 0.00% | 0 | 97,159 | 7.97 | 12,191 | 3.21% |
| 394 | Tools, Shop, and Garage Equipment | 1,809,969 | 792,785 | 0.00% | 0 | 1,017,184 | 15.31 | 66,439 | 3.67% |
| 395 | Laboratory Equipment | 819,371 | 580,245 | 0.00% | 0 | 239,126 | 12.69 | 18,844 | 2.30% |
| 396 | Power Operated Equipment | 2,497,644 | 1,436,323 | 0.00% | 0 | 1,061,321 | 5.88 | 180,497 | 7.23% |
| 398 | Miscellaneous Equipment | 1,896,665 | 909,254 | 0.00% | 0 | 987,411 | 14.18 | 69,634 | 3.67% |
| | Total Blenheim Gilboa | 42,966,357 | 13,928,741 | | 0 | 29,037,616 | | 1,399,745 | |
| **Headquarters** | | | | | | | | | |
| 390 | Structures and Improvements | 74,177,492 | 40,828,462 | 0.00% | 0 | 33,349,030 | 29.34 | 1,136,559 | 1.53% |
| 392 | Transportation Equipment | 11,806,296 | 10,311,596 | 0.00% | 0 | 1,494,700 | 1.95 | 765,188 | 6.48% |
| 394 | Tools, Shop, and Garage Equipment | 766,953 | 382,023 | 0.00% | 0 | 384,930 | 17.41 | 22,110 | 2.88% |
| 395 | Laboratory Equipment | 2,961,576 | 676,331 | 0.00% | 0 | 2,285,245 | 16.00 | 142,828 | 4.82% |
| 398 | Miscellaneous Equipment | 22,316,280 | 22,309,254 | 0.00% | 0 | 7,026 | 17.75 | 396 | 0.002% |
| | Total Headquarters | 112,028,597 | 74,507,666 | | 0 | 37,520,931 | | 2,067,080 | |

**NEW YORK POWER AUTHORITY**
**COMPUTATION OF ANNUAL DEPRECIATION RATE**
**At December 31, 2015**

| Account | Account Description | Plant Balance at 12/31/2015 $ | Accumulated Depreciation at 12/31/2015 $ | Net Salvage % | Net Salvage Amount $ | Unaccrued Balance $ | Remaining Life Yrs | Annual Accrual $ | Annual Accrual % |
|---|---|---|---|---|---|---|---|---|---|
| **Marcy South** | | | | | | | | | |
| 396 | Power Operated Equipment | 763 | 763 | 0.00% | 0 | 0 | 0.00 | 0 | 0.00% |
| **Massena Marcy** | | | | | | | | | |
| 390 | Structures and Improvements | 2,602,692 | 625,405 | 0.00% | 0 | 1,977,287 | 46.89 | 42,169 | 1.62% |
| 392 | Transportation Equipment | 6,522,896 | 4,705,072 | 0.00% | 0 | 1,817,824 | 3.22 | 564,542 | 8.65% |
| 393 | Stores Equipment | 129,292 | 99,486 | 0.00% | 0 | 29,806 | 6.92 | 4,307 | 3.33% |
| 394 | Tools, Shop, and Garage Equipment | 742,377 | 628,104 | 0.00% | 0 | 114,273 | 12.86 | 8,886 | 1.20% |
| 395 | Laboratory Equipment | 959,056 | 735,264 | 0.00% | 0 | 223,792 | 15.32 | 14,608 | 1.52% |
| 396 | Power Operated Equipment | 3,739,914 | 2,995,882 | 0.00% | 0 | 744,032 | 4.14 | 179,718 | 4.81% |
| 398 | Miscellaneous Equipment | 991,162 | 988,529 | 0.00% | 0 | 2,633 | 12.44 | 212 | 0.02% |
| | Total Marcy Massena | 15,687,389 | 10,777,742 | | 0 | 4,909,647 | | 814,441 | |
| **Niagara** | | | | | | | | | |
| 390 | Structures and Improvements | 29,145,371 | 18,971,222 | 0.00% | 0 | 10,174,149 | 26.02 | 391,013 | 1.34% |
| 392 | Transportation Equipment | 8,453,942 | 7,171,957 | 0.00% | 0 | 1,281,985 | 2.13 | 601,871 | 7.12% |
| 393 | Stores Equipment | 315,500 | 315,500 | 0.00% | 0 | 0 | | 0 | 0.00% |
| 394 | Tools, Shop, and Garage Equipment | 5,171,828 | 4,254,860 | 0.00% | 0 | 916,968 | 4.28 | 214,245 | 4.14% |
| 395 | Laboratory Equipment | 1,722,115 | 1,279,878 | 0.00% | 0 | 442,237 | 16.33 | 27,081 | 1.57% |
| 396 | Power Operated Equipment | 4,288,696 | 2,713,245 | 0.00% | 0 | 1,575,451 | 5.64 | 279,335 | 6.51% |
| 398 | Miscellaneous Equipment | 7,415,152 | 6,375,110 | 0.00% | 0 | 1,040,042 | 16.30 | 63,806 | 0.86% |
| | Total Niagara | 56,512,604 | 41,081,772 | | 0 | 15,430,832 | 71 | 1,577,351 | 0 |
| **St. Lawrence** | | | | | | | | | |
| 390 | Structures and Improvements | 20,710,197 | 6,119,635 | 0.00% | 0 | 14,590,562 | 38.71 | 376,920 | 1.82% |
| 392 | Transportation Equipment | 12,984,613 | 9,767,999 | 0.00% | 0 | 3,216,614 | 2.52 | 1,276,434 | 9.83% |
| 393 | Stores Equipment | 317,287 | 201,984 | 0.00% | 0 | 115,303 | 13.70 | 8,416 | 2.65% |
| 394 | Tools, Shop, and Garage Equipment | 6,073,189 | 3,483,669 | 0.00% | 0 | 2,589,520 | 6.61 | 391,758 | 6.45% |
| 395 | Laboratory Equipment | 2,119,586 | 1,036,734 | 0.00% | 0 | 1,082,852 | 9.33 | 116,061 | 5.48% |
| 396 | Power Operated Equipment | 5,159,241 | 3,525,965 | 0.00% | 0 | 1,633,276 | 5.79 | 282,086 | 5.47% |
| 398 | Miscellaneous Equipment | 16,718,022 | 9,596,366 | 0.00% | 0 | 7,121,656 | 3.86 | 1,844,989 | 11.04% |
| | Total St. Lawrence | 64,082,135 | 33,732,352 | | 0 | 30,349,783 | | 4,296,664 | |

**NEW YORK POWER AUTHORITY**
**COMPUTATION OF ANNUAL AMORTIZATION RATE**
**At December 31, 2015**

| Acct | Description | Plant Balance 12/31/2015 $ | Allocated Reserve 12/31/2015 $ | Theoretical Reserve 12/31/2015 $ | Reserve Difference $ | Remaining Life Yrs | Amortize Reserve Difference $ | Assets To Retire $ |
|---|---|---|---|---|---|---|---|---|
| **Blenheim Gilboa** | | | | | | | | |
| 391 | Office Furniture and Equipment | 571,180 | 560,083 | 558,887 | 1,196 | 3.20 | (374) | 532,782 |
| 391.2 | Computer Equipment 5 yr | 406,469 | 313,059 | 321,455 | (8,396) | 3.25 | 2,583 | 275,487 |
| 391.3 | Computer Equip 10 Yr | 559,078 | 555,764 | 429,174 | 126,590 | 5.50 | (23,016) | 322,888 |
| 397 | Communication Equipment | 1,602,747 | 1,596,964 | 1,596,730 | 234 | 12.89 | (18) | 1,595,744 |
| 399 | Other Tangible Property | 1,487 | 1,487 | 1,487 | 0 | 0.00 | 0 | 1,487 |
| | Total Amortized | 3,140,961 | 3,027,357 | 2,907,733 | 119,624 | | (20,825) | 2,728,388 |
| **Headquarters** | | | | | | | | |
| 391 | Office Furniture and Equipment | 68,951,583 | 61,275,911 | 60,931,008 | 344,903 | 7.70 | (44,793) | 58,534,221 |
| 391.2 | Computer Equipment 5 yr | 60,009,638 | 50,486,895 | 51,533,506 | (1,046,611) | 2.70 | 387,634 | 44,311,504 |
| 391.3 | Computer Equip 10 Yr | 77,115,156 | 58,916,753 | 49,292,945 | 9,623,808 | 5.56 | (1,730,901) | 27,043,049 |
| 397 | Communication Equipment | 11,654,475 | 11,275,390 | 11,197,129 | 78,261 | 12.39 | (6,316) | 11,100,777 |
| | Total Amortized | 217,730,852 | 181,954,949 | 172,954,588 | 9,000,361 | | (1,394,376) | 140,989,551 |
| **Marcy South** | | | | | | | | |
| 397 | Marcy South | 1,170,741 | 1,170,741 | 1,170,741 | 0 | 0.00 | 0 | 1,170,741 |
| **Massena Marcy** | | | | | | | | |
| 391 | Office Furniture and Equipment | 1,675,166 | 1,653,952 | 1,652,540 | 1,412 | 5.49 | (257) | 1,633,985 |
| 391.2 | Computer Equipment 5 yr | 3,310,376 | 3,142,309 | 3,234,003 | (91,694) | 1.07 | 85,695 | 2,953,574 |
| 391.3 | Computer Equip 10 Yr | 7,076,398 | 5,532,000 | 5,162,522 | 369,478 | 8.65 | (42,714) | 4,863,140 |
| 397 | Communication Equipment | 2,611,416 | 2,557,412 | 2,553,659 | 3,753 | 7.64 | (491) | 2,498,042 |
| | Total Amortized | 14,673,356 | 12,885,673 | 12,602,724 | 282,949 | | 42,233 | 11,948,741 |
| **Niagara** | | | | | | | | |
| 391 | Office Furniture and Equipment | 2,279,602 | 2,275,179 | 2,270,762 | 4,417 | 5.93 | (745) | 2,264,707 |
| 391.2 | Computer Equipment 5 yr | 957,877 | 805,978 | 824,175 | (18,197) | 3.26 | 5,582 | 752,897 |
| 391.3 | Computer Equip 10 Yr | 324,070 | 324,070 | 324,070 | 0 | 0.00 | 0 | 324,070 |
| 397 | Communication Equipment | 4,710,305 | 3,848,746 | 3,925,408 | (76,662) | 10.28 | 7,457 | 3,565,543 |
| 399 | Other Tangible Property | 3,201,209 | 1,676,225 | 3,201,209 | (1,524,984) | 5.00 | 304,997 | 0 |
| | Total Amortized | 11,473,063 | 8,930,198 | 10,545,624 | (1,615,426) | | 317,291 | 6,907,217 |

**NEW YORK POWER AUTHORITY**
**COMPUTATION OF ANNUAL AMORTIZATION RATE**
**At December 31, 2015**

| Acct | Description | Plant Balance 12/31/2015 $ | Allocated Reserve 12/31/2015 $ | Theoretical Reserve 12/31/2015 $ | Reserve Difference $ | Remaining Life Yrs | Amortize Reserve Difference $ | Assets To Retire $ |
|---|---|---|---|---|---|---|---|---|
| **St. Lawrence** | | | | | | | | |
| 391 | Office Furniture and Equipment | 1,387,166 | 1,373,186 | 1,383,295 | (10,109) | 1.61 | 6,279 | 1,363,116 |
| 391.2 | Computer Equipment 5 yr | 1,147,463 | 974,368 | 1,040,425 | (66,057) | 2.27 | 29,100 | 911,639 |
| 391.3 | Computer Equip 10 Yr | 7,081,808 | 1,493,898 | 982,400 | 511,498 | 8.61 | (59,407) | 0 |
| 397 | Communication Equipment | 6,407,338 | 3,887,320 | 4,971,650 | (1,084,330) | 3.95 | 274,514 | 949,580 |
| 399 | Other Tangible Property | 1,126,419 | 255,323 | 1,126,419 | (871,096) | 5.00 | 174,219 | 0 |
| | Total Amortized | 17,150,194 | 7,984,095 | 9,504,189 | (1,520,094) | | 424,705 | 3,224,335 |

**NYPA- ELECTRIC AMORTIZED GENERAL PLANT**
**COMPUTATION OF ANNUAL AMORTIZATION RATE**
**At December 31, 2015**

| Acct | Description | Plant Balance 12/31/15 $ | Allocated Reserve 12/31/15 $ | Amortization Life Yrs | Amortization Net Salv % % | Amortization Rate % | Annual Amortization $ | Accrual For Reserve Difference $ |
|---|---|---|---|---|---|---|---|---|
| **AFTER RETIREMENT OF FULLY ACCRUED ASSETS** | | | | | | | | |
| **Blenheim Gilboa** | | | | | | | | |
| 391 | Office Furniture and Equipment | 38,398 | 27,301 | 10 | 0.00% | 10.00% | 3,840 | (374) |
| 391.2 | Computer Equipment 5 yr | 130,982 | 37,572 | 5 | 0.00% | 20.00% | 26,196 | 2,587 |
| 391.3 | Computer Equip 10 Yr | 236,190 | 232,876 | 10 | 0.00% | 10.00% | 23,619 | (23,016) |
| 397 | Communication Equipment | 7,003 | 1,220 | 15 | 0.00% | 6.67% | 467 | (18) |
| 399 | Other Tangible Property | 0 | 0 | 15 | 0.00% | 6.67% | 0 | 0 |
| | Total Amortized | 412,573 | 298,969 | | | | 54,122 | (20,821) |
| **Headquarters** | | | | | | | | |
| 391 | Office Furniture and Equipment | 10,417,362 | 2,741,690 | 10 | 0.00% | 10.00% | 1,041,736 | (44,797) |
| 391.2 | Computer Equipment 5 yr | 15,698,134 | 6,175,391 | 5 | 0.00% | 20.00% | 3,139,627 | 387,673 |
| 391.3 | Computer Equip 10 Yr | 50,072,107 | 31,873,704 | 10 | 0.00% | 10.00% | 5,007,211 | (1,732,013) |
| 397 | Communication Equipment | 553,697 | 174,612 | 15 | 0.00% | 6.67% | 36,913 | (6,317) |
| | Total Amortized | 76,741,301 | 40,965,398 | | | | 9,225,487 | (1,395,454) |
| **Marcy South** | | | | | | | | |
| 397 | Marcy South | 0 | 0 | 15 | 0.00% | 6.67% | 0 | 0 |
| **Massena Marcy** | | | | | | | | |
| 391 | Office Furniture and Equipment | 41,182 | 19,968 | 10 | 0.00% | 10.00% | 4,118 | (257) |
| 391.2 | Computer Equipment 5 yr | 356,802 | 188,735 | 5 | 0.00% | 20.00% | 71,360 | 85,676 |
| 391.3 | Computer Equip 10 Yr | 2,213,258 | 668,860 | 10 | 0.00% | 10.00% | 221,326 | (42,727) |
| 397 | Communication Equipment | 113,375 | 59,371 | 15 | 0.00% | 6.67% | 7,558 | (491) |
| | Total Amortized | 2,724,616 | 936,933 | | | | 304,363 | 42,201 |
| **Niagara** | | | | | | | | |
| 391 | Office Furniture and Equipment | 14,895 | 10,472 | 10 | 0.00% | 10.00% | 1,489 | (744) |
| 391.2 | Computer Equipment 5 yr | 204,980 | 53,080 | 5 | 0.00% | 20.00% | 40,996 | 5,580 |
| 391.3 | Computer Equip 10 Yr | 0 | 0 | 10 | 0.00% | 10.00% | 0 | 0 |
| 397 | Communication Equipment | 1,144,762 | 283,203 | 15 | 0.00% | 6.67% | 76,317 | 7,454 |
| 399 | Other Tangible Property | 3,201,209 | 1,676,225 | 15 | 0.00% | 6.67% | 213,414 | 304,997 |
| | Total Amortized | 4,565,846 | 2,022,980 | | | | 332,217 | 317,286 |

**NYPA- ELECTRIC AMORTIZED GENERAL PLANT**
**COMPUTATION OF ANNUAL AMORTIZATION RATE**
**At December 31, 2015**

| Acct | Description | Plant Balance 12/31/15 $ | Allocated Reserve 12/31/15 $ | Amortization Life Yrs | Amortization Net Salv % % | Amortization Rate % | Annual Amortization $ | Accrual For Reserve Difference $ |
|---|---|---|---|---|---|---|---|---|
| **St. Lawrence** | | | | | | | | |
| 391 | Office Furniture and Equipment | 24,050 | 10,070 | 10 | 0.00% | 10.00% | 2,405 | 6,280 |
| 391.2 | Computer Equipment 5 yr | 235,825 | 62,730 | 5 | 0.00% | 20.00% | 47,165 | 29,107 |
| 391.3 | Computer Equip 10 Yr | 7,081,808 | 1,493,898 | 10 | 0.00% | 10.00% | 708,181 | (59,388) |
| 397 | Communication Equipment | 5,457,758 | 2,937,740 | 15 | 0.00% | 6.67% | 363,851 | 274,805 |
| 399 | Other Tangible Property | 1,126,419 | 255,323 | 15 | 0.00% | 6.67% | 75,095 | 174,219 |
| | Total Amortized | 13,925,860 | 4,759,761 | | | | 1,196,696 | 425,022 |

## APPENDIX B

## Comparison of Depreciation Accrual

**NEW YORK POWER AUTHORITY**
**COMPARISON OF EXISTING VS PROPOSED DEPRECIATION RATES**
**AT DECEMBER 31, 2015**

| Account | Account Description | Plant Balance at 12/31/2015 $ | 2015 Surviving Balance Annual Accrual Amount $ | Proposed Accrual Rate % | Proposed Accrual Amount $ | Difference $ |
|---|---|---|---|---|---|---|
| **TRANSMISSION** | | | | | | |
| **Blenheim Gilboa** | | | | | | |
| 352 | Structures & Improvements | 4,317,717 | 77,474 | 0.65% | 27,938 | (49,536) |
| 353 | Station Equipment | 51,222,730 | 864,993 | 1.57% | 803,987 | (61,006) |
| 354 | Towers & Fixtures | 22,612,274 | 483,926 | 2.49% | 562,919 | 78,993 |
| 355 | Poles & Fixtures | 1,953,118 | 50,180 | 2.07% | 40,493 | (9,687) |
| 356 | Overhead Conductors & Devices | 9,403,929 | 201,233 | 2.46% | 231,636 | 30,403 |
| 359 | Roads & Trails | 670,808 | 8,113 | 0.64% | 4,296 | (3,817) |
| | Total Blenheim Gilboa | 90,180,576 | 1,685,919 | | 1,671,269 | (14,650) |
| **J. A. FitzPatrick *** | | | | | | |
| 354 | Towers & Fixtures | 10,051,183 | 0 | 1.95% | 195,615 | 195,615 |
| 356 | Overhead Conductors & Devices | 5,926,677 | -1 | 2.23% | 132,302 | 132,303 |
| 359 | Roads & Trails | 80,335 | 0 | 0.13% | 108 | 108 |
| | Total J. A. Fitzpatrick | 16,058,195 | -1 | | 328,025 | 328,026 |
| * There is no 2015 accrual since assets in J.A. FitzPatrick were fully accrued in last depreciation study | | | | | | |
| **Marcy South** | | | | | | |
| 353 | Station Equipment | 23,088,723 | 524,109 | 1.29% | 298,768 | (225,341) |
| 354 | Towers & Fixtures | 75,439,776 | 1,621,961 | 2.71% | 2,040,834 | 418,873 |
| 355 | Poles & Fixtures | 210,096,383 | 5,405,407 | 2.43% | 5,115,401 | (290,006) |
| 356 | Overhead Conductors & Devices | 105,799,660 | 2,285,265 | 2.69% | 2,845,218 | 559,953 |
| 357 | Underground Conduit | 43,951,419 | 615,321 | 1.23% | 542,354 | (72,967) |
| 358 | Underground Conductors & Devices | 12,314,493 | 279,540 | 1.86% | 229,581 | (49,959) |
| 359 | Roads & Trails | 22,421,909 | 224,220 | 0.90% | 202,137 | (22,083) |
| | Total Marcy South | 493,112,363 | 10,955,823 | | 11,274,292 | 318,469 |
| **Marcy Massena** | | | | | | |
| 352 | Structures & Improvements | 40,268,127 | 717,623 | 0.92% | 370,188 | (347,435) |
| 353 | Station Equipment | 191,779,559 | 3,516,913 | 1.21% | 2,323,860 | (1,193,053) |
| 354 | Towers & Fixtures | 64,465,654 | 1,373,119 | 2.66% | 1,716,446 | 343,327 |
| 355 | Poles & Fixtures | 19,615,058 | 504,107 | 2.22% | 435,641 | (68,466) |

**NEW YORK POWER AUTHORITY**
**COMPARISON OF EXISTING VS PROPOSED DEPRECIATION RATES**
**AT DECEMBER 31, 2015**

| Account | Account Description | Plant Balance at 12/31/2015 $ | 2015 Surviving Balance Annual Accrual Amount $ | Proposed Accrual Rate % | Proposed Accrual Amount $ | Difference $ |
|---|---|---|---|---|---|---|
| 356 | Overhead Conductors & Devices | 42,480,940 | 904,835 | 3.24% | 1,374,802 | 469,967 |
| 359 | Roads & Trails | 5,105,433 | 51,055 | 0.73% | 37,255 | (13,800) |
| | Total Marcy Massena | 363,714,771 | 7,067,652 | | 6,258,193 | (809,459) |
| **Niagara** | | | | | | |
| 352 | Structures & Improvements | 24,449,344 | 422,977 | 0.73% | 178,618 | (244,359) |
| 353 | Station Equipment | 93,379,948 | 1,576,809 | 1.32% | 1,236,826 | (339,983) |
| 354 | Towers & Fixtures | 18,743,984 | 188,081 | 3.32% | 621,770 | 433,689 |
| 355 | Poles & Fixtures | 19,726 | 224 | 3.25% | 641 | 417 |
| 356 | Overhead Conductors & Devices | 28,672,314 | 659,740 | 3.77% | 1,079,756 | 420,016 |
| 359 | Roads & Trails | 42,797 | 533 | 0.28% | 122 | (411) |
| | Total Niagara | 165,308,113 | 2,848,364 | | 3,117,733 | 269,368 |
| **St. Lawrence** | | | | | | |
| 352 | Structures & Improvements | 12,343,417 | 233,977 | 0.96% | 119,106 | (114,871) |
| 353 | Station Equipment | 137,716,425 | 3,429,096 | 1.27% | 1,752,454 | (1,676,642) |
| 354 | Towers & Fixtures | 15,185,237 | 350,788 | 4.63% | 702,672 | 351,885 |
| 355 | Poles & Fixtures | 6,427,665 | 52,824 | 3.65% | 234,325 | 181,501 |
| 356 | Overhead Conductors & Devices | 15,472,585 | 345,040 | 4.54% | 702,921 | 357,881 |
| 357 | Underground Conduit | 61,047 | 60 | 0.18% | 110 | 50 |
| 358 | Underground Conductors & Devices | 1,186,661 | 27,778 | 0.41% | 4,917 | (22,861) |
| 359 | Roads & Trails | 193,299 | 3,037 | 0.55% | 1,070 | (1,967) |
| | Total St. Lawrence | 188,586,336 | 4,442,599 | | 3,517,576 | (925,024) |
| Total Transmission | | 1,316,960,353 | 27,000,357 | | 26,167,088 | (833,269) |
| **GENERAL PLANT** | | | | | | |
| **Blenheim Gilboa** | | | | | | |
| 390 | Structures and Improvements | 30,224,468 | 419,815 | 1.85% | 559,464 | 139,648 |
| 392 | Transportation Equipment | 5,338,747 | 483,375 | 9.23% | 492,846 | 9,470 |

**NEW YORK POWER AUTHORITY**
**COMPARISON OF EXISTING VS PROPOSED DEPRECIATION RATES**
**AT DECEMBER 31, 2015**

| Account | Account Description | Plant Balance at 12/31/2015 $ | 2015 Surviving Balance Annual Accrual Amount $ | Proposed Accrual Rate % | Proposed Accrual Amount $ | Difference $ |
|---|---|---|---|---|---|---|
| 393 | Stores Equipment | 379,493 | 13,412 | 3.21% | 12,185 | (1,227) |
| 394 | Tools, Shop, and Garage Equipment | 1,809,969 | 63,058 | 3.67% | 66,422 | 3,365 |
| 395 | Laboratory Equipment | 819,371 | 11,526 | 2.30% | 18,850 | 7,324 |
| 396 | Power Operated Equipment | 2,497,644 | 187,949 | 7.23% | 180,512 | (7,437) |
| 398 | Miscellaneous Equipment | 1,896,665 | 84,210 | 3.67% | 69,617 | (14,593) |
| **Headquarters** | | | | | | |
| 390 | Structures and Improvements | 74,177,492 | 2,118,744 | 1.53% | 1,136,559 | (982,185) |
| 392 | Transportation Equipment | 11,806,296 | 902,082 | 6.48% | 765,188 | (136,894) |
| 394 | Tools, Shop, and Garage Equipment | 766,953 | 43,664 | 2.88% | 22,104 | (21,560) |
| 395 | Laboratory Equipment | 2,961,576 | 270,673 | 4.82% | 142,839 | (127,834) |
| 398 | Miscellaneous Equipment Note (2) | 22,316,280 | 538,556 | 0.002% | 396 | (538,160) |
| **Marcy South** | | | | | | |
| 396 | Power Operated Equipment | 763 | 0 | Note (1) | 0 | 0 |
| **Massena Marcy** | | | | | | |
| 390 | Structures and Improvements | 2,602,692 | 207,384 | 1.62% | 42,168 | (165,216) |
| 392 | Transportation Equipment | 6,522,896 | 640,162 | 8.65% | 564,204 | (75,958) |
| 393 | Stores Equipment | 129,292 | 4,220 | 3.33% | 4,306 | 86 |
| 394 | Tools, Shop, and Garage Equipment | 742,377 | 11,924 | 1.20% | 8,888 | (3,036) |
| 395 | Laboratory Equipment | 959,056 | 31,501 | 1.52% | 14,605 | (16,896) |
| 396 | Power Operated Equipment | 3,739,914 | 263,180 | 4.81% | 179,718 | (83,462) |
| 398 | Miscellaneous Equipment | 991,162 | 991 | 0.02% | 212 | (779) |
| **Niagara** | | | | | | |
| 390 | Structures and Improvements | 29,145,371 | 885,931 | 1.34% | 390,987 | (494,943) |
| 392 | Transportation Equipment | 8,453,942 | 478,980 | 7.12% | 601,871 | 122,891 |
| 393 | Stores Equipment | 315,500 | 2,195 | Note (1) | | (2,195) |
| 394 | Tools, Shop, and Garage Equipment | 5,171,828 | 175,632 | 4.14% | 214,178 | 38,546 |
| 395 | Laboratory Equipment | 1,722,115 | 48,456 | 1.57% | 27,089 | (21,367) |
| 396 | Power Operated Equipment | 4,288,696 | 338,571 | 6.51% | 279,335 | (59,236) |

**NEW YORK POWER AUTHORITY**
**COMPARISON OF EXISTING VS PROPOSED DEPRECIATION RATES**
**AT DECEMBER 31, 2015**

| Account | Account Description | Plant Balance at 12/31/2015 $ | 2015 Surviving Balance Annual Accrual Amount $ | Proposed Accrual Rate % | Proposed Accrual Amount $ | Difference $ |
|---|---|---|---|---|---|---|
| 398 | Miscellaneous Equipment | 7,415,152 | 54,551 | 0.86% | 63,800 | 9,249 |
| **St. Lawrence** | | | | | | |
| 390 | Structures and Improvements | 20,710,197 | 632,194 | 1.82% | 376,935 | (255,259) |
| 392 | Transportation Equipment | 12,984,613 | 857,668 | 9.83% | 1,276,434 | 418,766 |
| 393 | Stores Equipment | 317,287 | 7,332 | 2.65% | 8,417 | 1,085 |
| 394 | Tools, Shop, and Garage Equipment | 6,073,189 | 221,237 | 6.45% | 391,682 | 170,445 |
| 395 | Laboratory Equipment | 2,119,586 | 67,181 | 5.48% | 116,119 | 48,938 |
| 396 | Power Operated Equipment | 5,159,241 | 402,714 | 5.47% | 282,161 | (120,553) |
| 398 | Miscellaneous Equipment | 16,718,022 | 610,843 | 11.04% | 1,845,607 | 1,234,763 |
| Note 1: | Fully accrued. If plant is added to Marcy South Account 396, the recommended accrual rate is | | | 8.33% | | |
| | If plant is added to Niagara Account 393, the recommended accrual rate is | | | 3.33% | | |
| Note 2: | Nearly Fully accrued. If new plant is added to 398 Headquarters, the recommended Accrual rate is | | | 5.00% | | |
| **Amortized Accounts after Retirement of Fully Accrued Assets** | | | | | | |
| **Blenheim Gilboa** | | | | | | |
| 391 | Office Furniture and Equipment | 38,398 | 3,842 | 10.00% | 3,840 | (2) |
| 391.2 | Computer Equipment 5 yr | 130,982 | 16,129 | 20.00% | 26,196 | 10,068 |
| 391.3 | Computer Equip 10 Yr | 236,190 | 47,238 | 10.00% | 23,619 | (23,619) |
| 397 | Communication Equipment | 7,003 | 467 | 6.67% | 467 | (0) |
| 399 | Other Tangible Property | 0 | 0 | 6.67% | 0 | 0 |
| **Headquarters** | | | | | | |
| 391 | Office Furniture and Equipment | 10,417,362 | 1,145,708 | 10.00% | 1,041,736 | (103,971) |
| 391.2 | Computer Equipment 5 yr | 15,698,134 | 2,144,897 | 20.00% | 3,139,627 | 994,730 |
| 391.3 | Computer Equip 10 Yr | 50,072,107 | 7,778,625 | 10.00% | 5,007,211 | (2,771,414) |
| 397 | Communication Equipment | 553,697 | 56,554 | 6.67% | 36,913 | (19,641) |
| **Marcy South** | | | | | | |
| 397 | Marcy South | 0 | 0 | 6.67% | 0 | 0 |

**NEW YORK POWER AUTHORITY**
**COMPARISON OF EXISTING VS PROPOSED DEPRECIATION RATES**
**AT DECEMBER 31, 2015**

| Account | Account Description | Plant Balance at 12/31/2015 $ | 2015 Surviving Balance Annual Accrual Amount $ | Proposed Accrual Rate % | Proposed Accrual Amount $ | Difference $ |
|---|---|---|---|---|---|---|
| **Massena Marcy** | | | | | | |
| 391 | Office Furniture and Equipment | 41,182 | 3,812 | 10.00% | 4,118 | 306 |
| 391.2 | Computer Equipment 5 yr | 356,802 | 37,412 | 20.00% | 71,360 | 33,948 |
| 391.3 | Computer Equip 10 Yr | 2,213,258 | 297,532 | 10.00% | 221,326 | (76,207) |
| 397 | Communication Equipment | 113,375 | 7,560 | 6.67% | 7,558 | (2) |
| **Niagara** | | | | | | |
| 391 | Office Furniture and Equipment | 14,895 | 2,643 | 10.00% | 1,489 | (1,154) |
| 391.2 | Computer Equipment 5 yr | 204,980 | 18,695 | 20.00% | 40,996 | 22,301 |
| 391.3 | Computer Equip 10 Yr | 0 | 0 | 10.00% | 0 | 0 |
| 397 | Communication Equipment | 1,144,762 | 59,558 | 6.67% | 76,317 | 16,759 |
| 399 | Other Tangible Property | 3,201,209 | 42,683 | 6.67% | 213,414 | 170,731 |
| **St. Lawrence** | | | | | | |
| 391 | Office Furniture and Equipment | 24,050 | 1,109 | 10.00% | 2,405 | 1,296 |
| 391.2 | Computer Equipment 5 yr | 235,825 | 13,509 | 20.00% | 47,165 | 33,656 |
| 391.3 | Computer Equip 10 Yr | 7,081,808 | 1,389,179 | 10.00% | 708,181 | (680,998) |
| 397 | Communication Equipment | 5,457,758 | 257,196 | 6.67% | 363,851 | 106,655 |
| 399 | Other Tangible Property | 1,126,419 | 15,019 | 6.67% | 75,095 | 60,076 |
| | Accrual for Reserve Imbalance | | | | (631,766) | (631,766) |
| | Total General | 389,648,042 | 24,419,280 | | 20,636,816 | (3,782,464) |
| | Total NYPA | 1,706,608,395 | 51,419,637 | | 46,803,904 | (4,615,733) |

## APPENDIX C

## Proposed Depreciation Parameters

**New York Power Authority**
**Comparison of Existing and Proposed Depreciation Parameters**
**At December 31, 2015**

| | | Existing | | | Proposed | | |
|---|---|---|---|---|---|---|---|
| **Acct** | **Description** | **Life** | **Curve** | **Net Salvage** | **Life** | **Curve** | **Net Salvage** |
| 352 | Structures & Improvements | 75 | R5 | -25% | 75 | R5 | -3% |
| 353 | Station Equipment | 50 | R5 | -15% | 60 | R5 | -3% |
| 354 | Towers & Fixtures | 65 | R5 | -40% | 80 | SQ | -100% |
| 355 | Poles & Fixtures | 55 | R4 | -40% | 80 | SQ | -100% |
| 356 | Overhead Conductors & Devices | 55 | R5 | -20% | 80 | SQ | -100% |
| 357 | Underground Conduit | 75 | R5 | -5% | 75 | R5 | -5% |
| 358 | Underground Conductors & Devices | 50 | R5 | -15% | 50 | R5 | -5% |
| 359 | Roads & Trails | 100 | SQ | 0% | 100 | SQ | 0% |
| 390 | Structures and Improvements | 50 | R3 | 0% | 50 | R3 | 0% |
| 391 | Office Furniture and Equipment | 30 | S2 | 5% | 10 | SQ | 0% |
| 391.2 | Computer Equipment | 30 | S2 | 5% | 5 | SQ | 0% |
| 391.3 | Computer Equipment 10 Year | 30 | S2 | 5% | 10 | SQ | 0% |
| 392 | Transportation Equipment | 10 | L2 | 5% | 7 | L2 | 0% |
| 393 | Stores Equipment | 30 | R2.5 | 0% | 30 | SQ | 0% |
| 394 | Tools, Shop, and Garage Equipment | 20 | R1.5 | 0% | 20 | SQ | 0% |
| 395 | Laboratory Equipment | 25 | S3 | 0% | 20 | SQ | 0% |
| 396 | Power Operated Equipment | 10 | L3 | 5% | 12 | S2.5 | 0% |
| 397 | Communication Equipment | 15 | S3 | 0% | 15 | SQ | 0% |
| 398 | Miscellaneous Equipment | 25 | S2 | 0% | 20 | SQ | 0% |
| 399 | Other Tangible Property | 15 | SQ | 0% | 15 | SQ | 0% |

**New York Power Authority**
**Comparison of Existing and Proposed Depreciation Parameters**
**At December 31, 2015**

| | Existing | | Proposed | |
|---|---|---|---|---|
| | Retirement Date | | Retirement Date | |
| **Transmission Line** | **In Service Yr** | **Ret Yr** | **In Service Yr** | **Ret Yr** |
| Massena- Marcy Project | 1981 | NA | 1981 | 2061 |
| Marcy-South Project | 1988 | NA | 1988 | 2068 |
| St Lawrence/FDR Project | 1960 | 2043 | 1960 | 2040 |
| Niagara Project | 1963 | 2047 | 1963 | 2043 |
| Blenheim-Gilboa Project | 1981 | 2059 | 1981 | 2061 |
| J A FitzPatrick Project | 1975 | 2014 | 1975 | 2055 |

Excluded Projects:
Indian Point No. 3 Nuclear Power Project
Charles Poletti Power Project
Long Island Sound Cable Project

# APPENDIX D

## Net Salvage Analysis

**Ex. No. NYP-003**

NEW YORK POWER AUTHORITY

ESTIMATED REMOVAL COST TRANSMISSION FACILITIES

Appendix D-1

| Asset Class | FERC | FERC Description | % | Estimated Project Cost | Estimated Retirement | Estimated Dismantling | Estimated Net Salv% (1) | Current Net Salv% |
|---|---|---|---|---|---|---|---|---|
| TRANS52S | 352 | Structures & Improvements | 7% | 15,975,177 | 1,323,910 | | | -25 |
| TRANS53S | 353 | Station Equipment | 74% | 178,236,240 | 18,951,701 | 600,000 | -2.96% | -15 |
| TRANS54S | 354 | Towers & Fixtures | 8% | 19,653,135 | 1,608,276 | | | -40 |
| TRANS55S | 355 | Poles & Fixtures | 3% | 8,318,854 | 616,211 | | | -40 |
| TRANS56S | 356 | Overhead Conductors & Devices | 8% | 20,025,029 | 1,944,768 | 32,000,000 | -767.52% | -20 |
| | | | **100%** | **242,208,434.8** | **24,444,866** | **32,600,000** | | |
| | 357 | Underground Conduit | | | | | | -5 |
| | 358 | Underground Conductors & Devices | | | | | | -15 |

(1) Estimated Net Salvage calculated separately for 352/353 and 354/355/356.