KgPCo Exhibit No. ___
Witness: JAC

DIRECT TESTIMONY OF
JASON A. CASH
ON BEHALF OF KINGSPORT POWER COMPANY
D/B/A AEP APPALACHIAN POWER
BEFORE THE TENNESSEE REGULATORY AUTHORITY
DOCKET NO. 16-_____

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION.

A. My name is Jason A. Cash. My business address is 1 Riverside Plaza, Columbus, Ohio 43215. I am employed by American Electric Power Service Corporation (AEPSC) as a Staff Accountant in Accounting Policy and Research (AP&R). AEPSC is a wholly-owned subsidiary of American Electric Power Company, Inc. (AEP) which provides centralized professional and other services to the subsidiaries of AEP. AEP is the parent company of Kingsport Power Company (KgPCo or the Company).

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.

A. I graduated with a Bachelor of Science degree with a major in accounting from The Ohio State University in 2000. In 2000, I joined AEPSC and have held several positions within the Accounting organization, including general ledger accounting and financial reporting for Ohio Power Company and AEPSC. From 2008 through 2013, I worked in AEPSC's Transmission Accounting department where I was promoted to Supervisor of Transmission Accounting in 2013. I started my current position as Staff Accountant in AP&R in 2014.

Q. PLEASE BRIEFLY DESCRIBE YOUR DUTIES AND RESPONSIBILITIES AS A STAFF ACCOUNTANT IN ACCOUNTING POLICY AND RESEARCH FOR AEPSC.

My responsibilities include providing the AEP electric operating subsidiaries with accounting support for regulatory filings, including the preparation of depreciation studies and testimony. I also monitor regulatory proceedings and legislation for accounting implications and assist in determining the appropriate regulatory accounting treatment.

Q. FOR WHOM ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of Kingsport Power Company.

Q. HAVE YOU HAD ANY FORMAL TRAINING RELATING TO DEPRECIATION AND UTILITY ACCOUNTING?

A. Yes. I am a member of the Society of Depreciation Professionals (SDP) and have completed training offered by the SDP that included Depreciation Basics, Life Analysis for Valuations, and Life and Net Salvage Analysis. These training classes included an introduction to Plant and Depreciation Accounting, Data Requirements and Collection, Depreciation Models, Life Cycle Analysis, Current Regulatory Issues, Actuarial Life Analysis, Net Salvage Analysis and Simulation Life Analysis.

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

A. The purpose of my testimony is to recommend revised depreciation accrual rates for the Company's electric plant in service based on a depreciation study for electric utility plant in service at December 31, 2014. The depreciation rates determined by the study are

intended to provide recovery of invested capital, cost of removal, and credit for salvage over the expected life of the property.

The revised depreciation rates are required due to changes in the expected life and net salvage characteristics of KgPCo's Transmission, Distribution and General property since 1984 when depreciation rates were set by an order from the Tennessee Public Service Commission (TPSC), predecessor of the Tennessee Regulatory Authority (TRA), in Docket No. U-84-7408.

Q. ARE YOU SPONSORING ANY EXHIBITS IN THIS PROCEEDING?

A. Yes. I am sponsoring Exhibit No. 1 (JAC), which consists of the depreciation study report.

Q. WERE THESE EXHIBITS PREPARED OR ASSEMBLED BY YOU OR UNDER YOUR DIRECT SUPERVISION?

A. Yes.

Q. PLEASE EXPLAIN THE DEFINITION OF DEPRECIATION AS USED IN PREPARING YOUR DEPRECIATION STUDY.

A. The definition of depreciation that I used in preparing the study is the same that is used by the FERC and the National Association of Regulatory Utility Commissioners. That definition is:

> Depreciation, as applied to depreciable electric plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities.

Service value means the difference between original cost and the net salvage value (net salvage value means the salvage value of the property retired less the cost of removal) of the electric plant.

Q. HOW DO THE DEPRECIATION STUDY RATES AND ANNUAL ACCRUALS COMPARE WITH KGPCO'S CURRENT RATES AND ACCRUALS?

A. A comparison of KgPCo's current rates and accruals to the depreciation study's rates and accruals for transmission, distribution and general plant is shown below on Table 1 and is based on total Company depreciable plant balances at December 31, 2014.

Table 1 - Depreciation Rates and Accruals
Kingsport Power Company
Based on Plant In Service at December 31, 2014

	Existing		Study		
Functional Plant Group	Rates	Accruals	Rates	Accruals	Difference
Transmission	2.59%	739,096	1.46%	415,324	(323,772)
Distribution	3.55%	4,565,120	3.80%	4,887,408	322,288
General	3.16%	71,533	3.25%	73,500	1,967
Total Depreciable Plant	3.37%	5,375,749	3.37%	5,376,232	483

Note: (1) KgPCo currently books depreciation expense using a functional composite depreciation rate for each plant account. The Company recommends that KgPCo change that procedure and begin applying a separate depreciation rate to each plant account as calculated by the study.

Based on results of the depreciation study, an increase in KgPCo's annual depreciation expense due to a change in depreciation rates of $483 using depreciable plant balances at December 31, 2014 is recommended. The depreciation rate changes

are necessary because of changes in average service lives and net salvage estimates used to calculate KgPCo's depreciation rates.

Q. PLEASE BRIEFLY DESCRIBE THE METHODS AND PROCEDURES USED IN THE STUDY.

A. All of the property included in the depreciation report was considered on a group plan. Under the group plan, depreciation is accrued upon the basis of the original cost of all property included in each depreciable plant group instead of individual items of property. Upon retirement of any depreciable property, its full cost, less any net salvage realized, is charged to the accumulated provision for depreciation regardless of the age of the particular item retired. Also under this plan, the dollars in each primary plant account are considered as a separate group for depreciation accounting purposes and an annual depreciation rate for each account is determined. In this study, the plant groups consisted of the individual primary plant accounts for transmission, distribution and general plant property.

Average service lives of KgPCo's transmission, distribution and general plant account 390 were determined by using Appalachian Power Company's (APCo) mortality analysis for the identical plant accounts since the detailed information that was used to prepare KgPCo's 1984 depreciation study was not available. Net salvage for each transmission, distribution and general property account for KgPCo were also determined by using APCo's results by plant account.

For general plant accounts 391-398, average service lives were determined by using a vintage retirement procedure for these accounts that was approved by the FERC

in Accounting Release Number 15 in 1998 when KgPCo began using the procedure. Under this procedure, interim retirements are not recognized and final retirements are recorded when the property is fully depreciated. For these accounts, the Company recommends that we continue to use a vintage retirement procedure by using a square curve (SQ) and the life by account that was approved by the TPSC in the 1984 rate case.

Q. ARE THERE ANY CHANGES IN THE METHODS OR PROCEDURES RECOMMENDED BY THE COMPANY IN THIS DEPRECIATION STUDY?

A. Yes. The Company recommends the use of the remaining life method to calculate depreciation rates versus the whole life method that was used to determine rates for KgPCo's currently approved depreciation rates.

In addition, the Company recommends applying depreciation accrual rates at the primary plant account level versus the current procedure which applies a uniform functional depreciation rate to each Transmission, Distribution and General property account.

Q. PLEASE EXPLAIN WHY IT WAS NECESSARY TO USE THE DEPRECIATION PARAMETERS FOR KGPCO THAT WERE DETERMINED BY THE LATEST DEPRECIATION STUDY PERFORMED FOR APCO.

A. A depreciation study has not been prepared for KgPCo since 1984. The data used to prepare that study is not readily available. Both APCo and KgPCo have similar operating conditions and the use of APCo data provides a robust source of retirements, removal cost and salvage. For these reasons, it is the recommendation of the Company to use the mortality curve, average service life and net salvage information for APCo

from its most recent depreciation study approved by the Public Service Commission of West Virginia in May 2015 in Case No. 14-1151-E-D.

Q. DID YOU REVIEW THE DEPRECIATION STUDY PERFORMED FOR APCO AND DO YOU AGREE WITH THE ANALYSIS WHICH RESULTED FROM THAT STUDY?

A. Yes. I have reviewed the depreciation study that was performed for APCo and I agree with the analysis and recommendations that resulted from that study.

Q. PLEASE EXPLAIN THE AVERAGE REMAINING LIFE METHOD OF CALCULATING DEPRECIATION RATES?

A. The Average Remaining Life method recovers the un-depreciated original cost less future net salvage over the remaining life of the property. This technique uses the gross plant value times a net salvage ratio less book accumulated depreciation as a numerator and the remaining life or future life expectancy as a denominator to calculate an annual depreciation accrual that is converted to a depreciation rate.

Q. ARE THE CURRENTLY APPROVED DEPRECIATION RATES FOR KGPCO CALCULATED USING THE AVERAGE REMAINING LIFE METHOD?

A. No. The currently approved depreciation rates for the KgPCo use the whole life method to calculate depreciation rates.

Q. WHY ARE YOU RECOMMENDING THE AVERAGE REMAINING LIFE METHOD INSTEAD OF THE WHOLE LIFE METHOD IN YOUR CURRENT DEPRECIATION STUDY?

A. The Whole Life depreciation method ignores accumulated depreciation or the depreciation reserve and bases the depreciation rate on the average service life of each plant account. This method results in the allocation of a gross plant base over the total life of the investment. However, the estimated service life of each plant account cannot be expected to be precise and for this reason an over or under accrual of depreciation expense will occur over time.

The average remaining life method seeks to recover the un-depreciated remaining (original cost less accumulated depreciation) cost of the property over its remaining life. By deducting the actual depreciation reserve from the property's original cost to calculate depreciation rates, the average remaining method effectively amortizes any reserve over or under accruals over the remaining life of the property.

Q. DO OTHER AEP OPERATING COMPANIES USE THE REMAINING LIFE METHOD TO CALCULATE DEPRECIATION RATES FOR ITS ELECTRIC UTILITY OPERATIONS IN OTHER JURISDICTIONS?

A. Yes. Other AEP operating companies use the remaining life method to calculate depreciation rates in Arkansas, Indiana, Kentucky, Michigan, Oklahoma, Texas, Virginia, West Virginia and Louisiana.

Q. HAVE COMMISSIONS IN THOSE STATES ACCEPTED DEPRECIATION RATES CALCULATED USING THE REMAINING LIFE METHOD?

A. Yes.

Q. DO YOU HAVE ANY RECOMMENDATIONS REGARDING HOW KGPCO APPLIES DEPRECIATION ACCRUAL RATES?

A. Yes. I recommend that the TRA authorize KgPCo to adopt and apply the proposed depreciation accrual rates at the primary plant account level, and that the accumulated depreciation by primary plant account be established as of the date the revised depreciation rates become effective. KgPCo currently applies depreciation rates and maintains accumulated depreciation by functional plant classification (Transmission, Distribution and General). Maintaining accumulated depreciation at the primary account level will facilitate monitoring depreciation accruals and actual salvage and removal activity for future depreciation study purposes.

Q. PLEASE EXPLAIN THE RESULTS OF YOUR STUDY FOR KGPCO'S TRANSMISSION PLANT?

A. The depreciation rate for transmission plant decreased from 2.59% to 1.46%. The decrease was mainly due to an increase in the average service life for accounts 352, 353, 354, 355 and 356 and a decrease in the net salvage ratio for accounts 353 and 356. The decrease was partially offset by an increase in the net salvage ratio for accounts 352, 354 and 355.

Q. PLEASE EXPLAIN THE RESULTS OF YOUR STUDY FOR KGPCO'S DISTRIBUTION PLANT?

A. The depreciation rate for distribution plant increased from 3.55% to 3.80%. The increase was primarily caused by a decrease in the average service life for accounts 361, 370, 371 and 373 combined with an increase in the net salvage ratio for accounts 361, 362, 364, 365, 367, 368, 369, 370, 371, and 373. The increase was partially offset by an increase in the average service life for accounts 362, 364, 365, 367, 368 and 369.

Q. PLEASE EXPLAIN THE RESULTS OF YOUR STUDY FOR KGPCO'S GENERAL PLANT?

A. The depreciation rate for general plant increased from 3.16% to 3.25%. The increase was mostly caused by a decrease in the average service for account 390 combined with an increase in the net salvage ratio for accounts 391 and 394. The increase was partially offset by a decrease in the net salvage ratio for accounts 390 and 397.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

KINGSPORT POWER COMPANY

DEPRECIATION STUDY REPORT

OF

ELECTRIC PLANT IN SERVICE

AT

DECEMBER 31, 2014

DEPRECIATION STUDY REPORT

Table of Contents

I. INTRODUCTION

This report presents the results of a depreciation study of Kingsport Power Company's (KGP) depreciable electric utility plant in service at December 31, 2014. The study was prepared by Jason A. Cash, Staff Accountant, Accounting Policy and Research at American Electric Power Service Corporation (AEPSC). The purpose of the depreciation study was to develop appropriate annual depreciation accrual rates for each of the primary plant accounts that comprise the functional groups for which KGP computes its annual depreciation expense.

The recommended depreciation rates are based on the Average Remaining Life Method of computing depreciation. Further explanation of this method is contained in Section II of this report.

The definition of depreciation used in my Study is the same as that used by the Federal Energy Regulatory Commission (FERC) and the National Association of Regulatory Utility Commissioners:

> "Depreciation, as applied to depreciable electric plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities."
>
> "Service value means the difference between original cost

and the net salvage value (net salvage value means the salvage value of the property retired less the cost of removal) of the electric plant." (FERC Accounting and Reporting Requirements for Public Utilities and Licensees, ¶15.001.)

Schedule I of this report shows the recommended depreciation accrual rates by primary plant accounts and composited to functional plant classifications. Schedule II compares depreciation expense using rates approved by the Tennessee Regulatory Authority (TRA) and rates recommended by the depreciation study. Schedule III shows a comparison of the current mortality characteristics that were used to compute the recommended depreciation rates and the mortality characteristics used to determine the existing depreciation rates and accruals for Transmission, Distribution and General Plant Functions. A comparison of KGP's current functional group composite depreciation rates and accruals to recommended functional group rates and accruals based on December 31, 2014 depreciable plant balances follows:

Table 1 - Depreciation Rates and Accruals
Based on Depreciable Plant In Service at December 31, 2014

	Existing		Study		
Functional Plant Group	Rates	Accruals	Rates	Accruals	Difference
Transmission	2.59%	739,096	1.46%	415,234	(323,772)
Distribution	3.55%	4,565,120	3.80%	4,887,408	322,288
General	3.16%	71,533	3.25%	73,500	1,967
Total Depreciable Plant	3.37%	5,375,749	3.37%	5,376,232	483

Based on Total Company Depreciable Plant In-Service as of December 31, 2014, I am recommending an increase in depreciation rates that result in an

increase in annual depreciation expense of $483. The depreciation rate changes are necessary because of changes in average service lives and net salvage estimates used to calculate KGP's recommended depreciation rates. KGP's current approved depreciation rates are based on a 1984 Order in Docket No. U-84-7308 dated November 15, 1984.

II. DISCUSSION OF METHODS AND PROCEDURES USED IN THE STUDY

1. Group Method

All of the depreciable property included in this report was considered on a group plan. Under the group plan, depreciation expense is accrued upon the basis of the original cost of all property included in each depreciable plant account. Upon retirement of any depreciable property, its full cost, less any net salvage realized, is charged to the accrued depreciation reserve regardless of the age of the particular item retired. Also, under this plan, the dollars in each primary plant account are considered as a separate group for depreciation accounting purposes and an annual depreciation rate for each account is determined. The annual accruals by primary account were then summed, to arrive at the total accrual for each functional group. The total accrual divided by the original cost yields the functional group accrual rate.

2. Annual Depreciation Rates Using the Average Remaining Life Method

KGP's current depreciation rates were developed using the Whole Life Method.

The current depreciation study recommends the Average Remaining Life Method which recovers the original cost of the plant, adjusted for net salvage, less accumulated depreciation, over the average remaining life of

the plant. By this method, the annual depreciation rate for each account is determined on the following basis:

$$\text{Annual Depreciation Expense} = \frac{(\text{Orig. Cost} \times \text{Net Salvage Ratio}) - \text{Accumulated Depreciation}}{\text{Average Remaining Life}}$$

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

Since the Average Remaining Life Method provides a way to adjust accumulated depreciation when changes occur in estimates of service life or net salvage for depreciable property groups, I am recommending the Average Remaining Life Method be used to calculate depreciation rates for all of KGP's depreciable Transmission, Distribution and General property.

3. Methods of Life Analysis

Depending upon the type of property and the nature of the data available from the property accounting records, one of three life analyses was used to arrive at the historically realized mortality characteristics and service lives of the depreciable plant investments. The life analysis methods used for KGP were determined by using Appalachian Power Company's (APCo) mortality analysis from its recent rate filing in West Virginia in Case No. 14-1151-E-D for the identical plant accounts since the detailed information that was used to prepare KGP's 1984 depreciation study was not available. APCo, like KGP is a subsidiary of AEP. The life analysis methods used are identified and described as follows:

Actuarial Analysis

This method of analyzing past experience represents the

application to industrial property of statistical procedures developed in the life insurance field for investigating human mortality. It is distinguished from other methods of life estimation by the requirement that it is necessary to know the age of the property at the time of its retirement and the age of survivors, or plant remaining in service; that is, the installation date must be known for each particular retirement and for each particular survivor.

The application of this method involves the statistical procedure known as the "annual rate method" of analysis. This procedure relates the retirements during each age interval to the exposures at the beginning of that interval, the ratio of these being the annual retirement ratio. Subtracting each retirement ratio from unity yields a sequence of annual survival ratios from which a survivor curve can be determined. This is accomplished by the consecutive multiplication of the survivor ratios. The length of this curve depends primarily upon the age of the oldest property. Normally, if the period of years from the inception of the account to the time of the study is short in relation to the expected maximum life of the property, an incomplete or stub survivor curve results.

While there are a number of acceptable methods of smoothing and extending this stub survivor curve in order to compute the area under it from which the average life is determined, the well-known Iowa Type Curve Method was used in this study.

By this procedure, instead of mathematically smoothing and projecting the stub survivor curve to determine the average life of the group, it was assumed that the stub curve would have the same mortality

characteristics as the type curve selected. The selection of the appropriate type curve and average life is accomplished by plotting the stub curve, superimposing on it Iowa curves of the various types and average lives drawn to the same scale, and then determining which Iowa type curve and average life best matches the stub.

The Actuarial Method of Life Analysis was used for the following accounts:

352.0 Transmission Structures & Improvements

353.0 Transmission Station Equipment

361.0 Distribution Structures & Improvements

362.0 Distribution Station Equipment

390.0 General Structures & Improvements

The result of the actuarial analysis for the above accounts is detailed in the depreciation study work papers.

Simulated Plant Record Analysis

The “Simulated Plant Record” (SPR) method designates a class of statistical techniques that provide an estimate of the age distribution, mortality dispersion and average service life of property accounts whose recorded history provides no indication of the age of the property units when retired from service. For each such account, the available property records usually reveal only the annual gross additions, annual retirements and balances with no indication of the age of either plant retirements or annual plant balances. For this study, the “Balances method” of analysis was used.

The SPR Balances Method is a trial and error procedure that attempts to duplicate the annual balance of a plant account by distributing the actual annual gross additions over time according to an assumed mortality distribution. Specifically, the dollars remaining in service at any date are estimated by multiplying each year's additions by the successive proportion surviving at each age as given by the assumed survivor characteristics. For a given year, the balance indicated is the accumulation of survivors from all vintages and this is compared with the actual book balance. This process is repeated for different survivor curves and average life combinations until a pattern is discovered which produces a series of "simulated balances" most nearly equaling the actual balances shown in a company's books.

This determination is based on the distribution producing the minimum sum of squared differences between the simulated balance and the actual balances over a test period of years.

The iterative nature of the simulated method makes it ideally suited for computerized analysis. For each analysis of a given property account, the computer program provides a single page summary containing the results of each analysis indicating the "best fit" based on criteria selected by the user.

The results of my analysis using the Balance Method is shown in the depreciation study work papers. The analysis also shows the value of the Index of Variation of the difference that is calculated according to the Balances Method where a lower value for the Index of Variation indicates better agreement with the actual data.

The SPR Method of Life Analysis was utilized for the following accounts:

354.0 Transmission Towers & Fixtures

355.0 Transmission Poles & Fixtures

356.0 Transmission Overhead Conductor & Devices

364.0 Distribution Poles, Towers & Fixtures

365.0 Distribution OH Conductor & Devices

366.0 Distribution Underground Conduit

367.0 Distribution Underground Conductor & Devices

368.0 Distribution Line Transformers

369.0 Distribution Services

370.0 Distribution Meters

371.0 Installation on Customers Premises

373.0 Street Lighting & Signal Systems

Vintage Year Accounting

In 1998, the Company began using a vintage year accounting method for general plant accounts 391 to 398 in accordance with Federal Energy Regulatory Commission Accounting Release Number 15 (AR-15). This accounting method requires the amortization of vintage groups of property over their useful lives. AR-15 also requires that property be retired when it meets its average service life.

As a result, my recommendation for these accounts is that the current useful life approved by the TRA be retained and used to continue amortization of the account balances.

4. Final Selection of Average Life and Curve Type

The final selection of average life and curve type for each depreciable plant account analyzed by the Actuarial and SPR Methods was primarily based on the results of the mortality analyses of APCo's past retirement history.

III. NET SALVAGE

1. Net Salvage

The net salvage percentages used in this report for Transmission, Distribution and General Plant were based on APCo's results by plant account combined with the judgment of the analyst. These percentages are expressed as percent of original cost. To determine gross salvage, gross removal and net salvage percentages for individual plant accounts, original cost retirements, salvage and removal were taken from APCo's account history which detailed these amounts by account for the period 2001 to 2013. Gross salvage and cost of removal percentages were calculated using the data from this thirteen year time period for each account. The salvage and removal percentages for each account were then netted to determine a net salvage percentage for each account.

The net salvage percentages were converted to net salvage ratios (1 minus the net salvage percentage) and appear in Column IV on Schedule I and were used to determine the total amount to be recovered through depreciation. The same net salvage was also reflected in the determination of the calculated depreciation requirement, which was used to allocate accumulated depreciation at the functional group to the accounts comprising each group.

2. Net Salvage Ratios

The net salvage ratios shown on Schedule I of this report may be explained as follows:

a. Where the ratio is shown as unity (1.00), it was assumed that the net salvage in that particular account would be zero.

b. Where the ratio is less than unity, it was assumed that the salvage exceeded the removal costs. For example, if the net salvage were 20%, the net salvage ratio would be expressed as .80.

c. Where the ratio is greater than unity, it was assumed that the salvage was less than the cost of removal. For example, if the net salvage were minus 5%, the net salvage ratio would be expressed as 1.05.

IV. CALCULATION OF DEPRECIATION REQUIREMENT AT DECEMBER 31, 2014

The accumulated depreciation by functional group was allocated to individual plant accounts based on the calculation of a depreciation requirement (theoretical reserve) for each plant account using the average service life, curve type and net salvage amount recommended in this study.

V. STUDY RESULTS

Transmission, Distribution and General Plant results are discussed below. In addition, Transmission, Distribution and General Plant average service life, retirement dispersion pattern and net salvage percentages used to calculate each primary plant account depreciation rate are shown on Schedule III where

the mortality characteristics and net salvage values for the current rates are also shown. The changes to the mortality characteristics follow trends shown by historical retirement experience. Gross salvage and gross cost of removal percentages were based on APCo's historical experience for each account for the period 2001-2013.

Transmission Plant

The depreciation rate for transmission plant decreased from 2.59% to 1.46%. The decrease was mainly due to an increase in the average service life for accounts 352, 353, 354, 355 and 356 and a decrease in the net salvage ratio for accounts 353 and 356. The decrease was partially offset by an increase in the net salvage ratio for accounts 352, 354 and 355.

Distribution Plant

The depreciation rate for distribution plant increased from 3.55% to 3.80%. The increase was primarily caused by a decrease in the average service life for accounts 361, 370, 371 and 373 combined with an increase in the net salvage ratio for accounts 361, 362, 364, 365, 367, 368, 369, 370, 371, and 373. The increase was partially offset by an increase in the average service life for accounts 362, 364, 365, 367, 368 and 369.

General Plant

The depreciation rate for general plant increased from 3.16% to 3.25%. The increase was mostly caused by a decrease in the average service for account 390 combined with an increase in the net salvage ratio for accounts 391 and 394. The increase was partially offset by a decrease in the net salvage ratio for accounts 390 and 397.

VI. EXPLANATION OF COLUMN HEADINGS – SCHEDULE I

Schedule I shows the determination of the recommended annual depreciation accrual rate by primary plant accounts by the straight line remaining life method. An explanation of the schedule follows:

Column I	-	Account number.
Column II	-	Account title.
Column III	-	Original Cost at December 31, 2014
Column IV	-	Net Salvage Ratio.
Column V	-	Total to be Recovered (Column III) * (Column IV).
Column VI	-	Calculated Depreciation Requirement.
Column VII	-	Allocated Accumulated Depreciation – accumulated depreciation (book reserve) spread to each account on the basis of the Calculated Depreciation Requirement shown in Column VI.
Column VIII	-	Remaining to be Recovered (Column V - Column VII).
Column IX	-	Average Remaining Life.
Column X	-	Recommended Annual Accrual Amount.
Column XI	-	Recommended Annual Accrual Percent or Depreciation Rate (Column X/Column III).

KINGSPORT POWER COMPANY
SCHEDULE I - CALCULATION OF DEPRECIATION RATES BY THE REMAINNG LIFE METHOD
BASED ON PLANT IN SERVICE AT DECEMBER 31, 2014
AVERAGE LIFE GROUP (ALG) METHOD ACCRUAL RATES

Acct. No.	Account Title	Original Cost	Net Salvg. Ratio	Total to be Recovered	Calculated Depreciation Requirement	Accumulated Depreciation	Remaining to Be Recovered	Avg. Remain Life	Annual Accrual Amount	Annual Accrual Percent
(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)	(X)	(XI)
TRANSMISSION PLANT										
352	Structures & Improvements	621,014	1.10	683,115	259,538	434,974	248,141	38.44	6,455	1.04%
353	Station Equipment	22,147,754	0.85	18,825,591	4,464,604	7,482,477	11,343,114	34.33	330,414	1.49%
354	Towers & Fixtures	765,475	1.10	842,023	486,957	816,118	25,905	28.67	904	0.12%
355	Poles & Fixtures	2,839,237	1.15	3,265,123	794,351	1,331,296	1,933,827	31.78	60,850	2.14%
356	OH Conductor & Devices	2,163,051	0.88	1,903,485	748,924	1,255,163	648,322	38.82	16,701	0.77%
	Total Transmission Plant	28,536,531	**0.89**	25,519,336	6,754,374	11,320,028	14,199,308	34.19	415,324	1.46%
DISTRIBUTION PLANT										
361	Structures & Improvements	643,788	1.12	721,043	390,536	435,964	285,079	22.92	12,438	1.93%
362	Station Equipment	15,753,488	1.02	16,068,558	3,130,672	3,494,839	12,573,719	32.21	390,367	2.48%
364	Poles, Towers, & Fixtures	22,149,499	1.60	35,439,198	12,270,594	13,697,939	21,741,259	18.31	1,187,398	5.36%
365	OH Conductor & Devices	25,590,010	1.08	27,637,211	5,989,072	6,685,735	20,951,476	27.42	764,095	2.99%
366	Underground Conduit	4,709,858	1.00	4,709,858	2,449,011	2,733,886	1,975,972	24.00	82,332	1.75%
367	Underground Conductor	7,852,007	1.00	7,852,007	1,773,258	1,979,528	5,872,479	42.58	137,916	1.76%
368	Line Transformers	24,559,070	1.15	28,242,931	9,043,847	10,095,850	18,147,081	18.35	988,942	4.03%
369	Services	11,019,556	1.21	13,333,663	3,830,384	4,275,943	9,057,720	21.38	423,654	3.84%
370	Meters	6,294,733	1.10	6,924,206	1,929,460	2,153,900	4,770,306	18.03	264,576	4.20%
371	Installations on Custs. Prem.	2,379,394	1.20	2,855,273	1,334,282	1,489,489	1,365,784	5.33	256,245	10.77%
373	Street Lighting & Signal Sys.	7,643,586	1.07	8,178,637	3,128,573	3,492,496	4,686,141	12.35	379,445	4.96%
	Total Distribution Plant	128,594,989	**1.18**	151,962,584	45,269,689	50,535,569	101,427,015	20.75	4,887,407	3.80%
GENERAL PLANT										
390	Structures & Improvements	30,195	0.75	22,646	15,265	15,567	7,079	13.69	517	1.71%
391	Office Furniture & Equipment	150,797	1.00	150,797	55,683	56,782	94,015	22.08	4,258	2.82%
393	Stores Equipment	26,341	1.00	26,341	1,691	1,725	24,616	42.11	585	2.22%
394	Tools Shop & Garage Equip.	1,084,846	1.10	1,193,331	359,118	366,209	827,122	24.47	33,801	3.12%
395	Laboratory Equipment	60,619	1.00	60,619	43,140	43,992	16,627	8.65	1,922	3.17%
397	Communication Equipment	776,033	1.01	783,793	312,568	318,740	465,053	18.04	25,779	3.32%
398	Miscellaneous Equipment	134,879	1.00	134,879	60,464	61,658	73,221	11.03	6,638	4.92%
	Total General Plant	2,263,710	**1.05**	2,372,406	847,929	864,673	1,507,733	20.51	73,501	3.25%
	Total Depreciable Plant	**159,395,230**		**179,854,326**	**52,871,992**	**62,720,270**	**117,134,056**		**5,376,232**	3.37%

Note: A depreciation study has not been prepared for Kingsport Power Company since 1983. The data used to prepare that study is not readily available and it is the recommendation of this study to use the mortality curve, average service life and net salvage information selected for APCo. Both Companies have similar operating conditions and the use of APCo data provides a robust source of retirements, removal cost and salvage.

KINGSPORT POWER COMPANY
SCHEDULE II - COMPARE DEPRECIATION EXPENSE USING CURRENT AND STUDY RATES
ANNUAL DEPRECIATION RATES AND ACCRUALS BY THE REMAINNG LIFE METHOD
BASED ON PLANT IN SERVICE AT DECEMBER 31, 2014

ACCT. NO. (1)	ACCOUNT TITLE (2)	ORIGINAL COST (3)	CURRENT APPROVED RATE (4)	ANNUAL ACCRUAL (5)	STUDY RATE (6)	STUDY ACCRUAL (7)	DIFFERENCE (DECREASE) (8)
TRANSMISSION PLANT							
352	Structures & Improvements	621,014	2.59%	16,084	1.04%	6,455	(9,629)
353	Station Equipment	22,147,754	2.59%	573,627	1.49%	330,414	(243,213)
354	Towers & Fixtures	765,475	2.59%	19,826	0.12%	904	(18,922)
355	Poles & Fixtures	2,839,237	2.59%	73,536	2.14%	60,850	(12,686)
356	OH Conductor & Devices	2,163,051	2.59%	56,023	0.77%	16,701	(39,322)
	Total Transmission Plant	**28,536,531**	**2.59%**	**739,096**	**1.46%**	**415,324**	**(323,772)**
DISTRIBUTION PLANT							
361	Structures & Improvements	643,788	3.55%	22,854	1.93%	12,438	(10,416)
362	Station Equipment	15,753,488	3.55%	559,249	2.48%	390,367	(168,882)
364	Poles, Towers, & Fixtures	22,149,499	3.55%	786,307	5.36%	1,187,398	401,091
365	Overhead Conductor & Devices	25,590,010	3.55%	908,445	2.99%	764,095	(144,350)
366	Underground Conduit	4,709,858	3.55%	167,200	1.75%	82,332	(84,868)
367	Underground Conductor	7,852,007	3.55%	278,746	1.76%	137,916	(140,830)
368	Line Transformers	24,559,070	3.55%	871,847	4.03%	988,942	117,095
369	Services	11,019,556	3.55%	391,194	3.84%	423,654	32,460
370	Meters	6,294,733	3.55%	223,463	4.20%	264,576	41,113
371	Installations on Custs. Prem.	2,379,394	3.55%	84,468	10.77%	256,245	171,777
373	Street Lighting & Signal Sys.	7,643,586	3.55%	271,347	4.96%	379,445	108,098
	Total Distribution Plant	**128,594,989**	**3.55%**	**4,565,120**	**3.80%**	**4,887,408**	**322,288**
GENERAL PLANT							
390	Structures & Improvements	30,195	3.16%	954	1.71%	517	(437)
391	Office Furniture & Equipment	150,797	3.16%	4,765	2.82%	4,258	(507)
393	Stores Equipment	26,341	3.16%	832	2.22%	585	(247)
394	Tools Shop & Garage Equipment	1,084,846	3.16%	34,281	3.12%	33,801	(480)
395	Laboratory Equipment	60,619	3.16%	1,916	3.17%	1,922	6
397	Communication Equipment	776,033	3.16%	24,523	3.32%	25,779	1,256
398	Miscellaneous Equipment	134,879	3.16%	4,262	4.92%	6,638	2,376
	Total General Plant	**2,263,710**	**3.16%**	**71,533**	**3.25%**	**73,500**	**1,967**
	Total Depreciable Plant	**159,395,230**	**3.37%**	**5,375,749**	**3.37%**	**5,376,232**	**483**

Note: A depreciation study has not been prepared for Kingsport Power Company since 1983. The data used to prepare that study is not readily available and it is the recommendation of this study to use the mortality curve, average service life and net salvage information selected for APCo. Both Companies have similar operating conditions and the use of APCo data provides a robust source of retirements, removal cost and salvage.

KINGSPORT POWER COMPANY
SCHEDULE III - COMPARISON OF MORTALITY CHARACTERISTICS
DEPRECIATION STUDY AS OF DECEMBER 31, 2014

(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Existing Rates (See note, below)					Current Study Rates				
		Average Service Life (Years)	Iowa Curve	Salvage Factor	Cost of Removal Factor	Net Salvage Factor	Average Service Life (Years)	Iowa Curve	Salvage Factor	Cost of Removal Factor	Net Salvage Factor
TRANSMISSION PLANT											
352.0	Structures & Improvements	50	R3.0	N/A	N/A	-5%	62	R4.0	5%	15%	-10%
353.0	Station Equipment	35	R2.0	N/A	N/A	10%	45	R1.5	28%	13%	15%
354.0	Towers & Fixtures	55	R4.0	N/A	N/A	-5%	68	R3.0	25%	35%	-10%
355.0	Poles & Fixtures	25	R2.0	N/A	N/A	-5%	42	R0.5	5%	20%	-15%
356.0	Overhead Conductor & Devices	40	R3.0	N/A	N/A	0%	64	R3.0	30%	18%	12%
DISTRIBUTION PLANT											
361.0	Structures & Improvements	55	R2.5	N/A	N/A	-5%	50	R3.0	4%	16%	-12%
362.0	Station Equipment	30	R1.5	N/A	N/A	15%	40	R1.0	7%	9%	-2%
364.0	Poles, Towers, & Fixtures	25	L0.0	N/A	N/A	-5%	28	R0.5	17%	77%	-60%
365.0	Overhead Conductor & Devices	30	L0.0	N/A	N/A	10%	35	L0.0	24%	32%	-8%
366.0	Underground Conduit	50	R4.0	N/A	N/A	0%	50	S4.0	0%	0%	0%
367.0	Underground Conductor	25	L4.0	N/A	N/A	10%	55	R0.5	0%	0%	0%
368.0	Line Transformers	25	R1.0	N/A	N/A	5%	27	R0.5	9%	24%	-15%
369.0	Services	25	R4.0	N/A	N/A	0%	30	R0.5	1%	22%	-21%
370.0	Meters	30	L2.0	N/A	N/A	5%	25	S6.0	10%	20%	-10%
371.0	Installations on Custs. Prem.	12	L0.5	N/A	N/A	40%	10	R0.5	3%	23%	-20%
373.0	Street Lighting & Signal Sys.	25	L1.0	N/A	N/A	0%	20	R0.5	9%	16%	-7%
GENERAL PLANT											
390.0	Structures & Improvements	50	R3.0	N/A	N/A	0%	42	R2.5	36%	11%	25%
391.0	Office Furniture & Equipment	35	R3.0	N/A	N/A	5%	35	SQ	0%	0%	0%
393.0	Stores Equipment	45	R4.0	N/A	N/A	0%	45	SQ	0%	0%	0%
394.0	Tools Shop & Garage Equipment	35	L0.0	N/A	N/A	0%	35	SQ	0%	10%	-10%
395.0	Laboratory Equipment	30	L3.0	N/A	N/A	0%	30	SQ	0%	0%	0%
397.0	Communication Equipment	30	R2.0	N/A	N/A	-15%	30	SQ	0%	1%	-1%
398.0	Miscellaneous Equipment	20	R3.0	N/A	N/A	0%	20	SQ	0%	0%	0%

Note: Kingsport Power Company's existing depreciation rates are from the Order from Docket No. U-84-7308 dated November 15, 1984. Only Net Salvage Factors are available from that Order.

Note: A depreciation study has not been prepared for Kingsport Power Company since 1983. The data used to prepare that study is not readily available and it is the recommendation of this study to use the mortality curve, average service life and net salvage information selected for APCo. Both Companies have similar operating conditions and the use of APCo data provides a robust source of retirements, removal cost and salvage.