

**BEFORE THE TENNESSEE REGULATORY AUTHORITY  
NASHVILLE, TENNESSEE**

**IN RE:**

**ATMOS ENERGY CORPORATION )  
GENERAL RATE CASE AND PETITION )  
TO ADOPT ANNUAL REVIEW )  
MECHANISM AND ARM TARIFF )**

**Docket No. ~~KX00146~~ 15-00089**

---

**NOTICE OF FILING DEPRECIATION STUDY  
AND  
REQUEST FOR APPROVAL OF NEW DEPRECIATION RATES**

---

A depreciation expert retained by Atmos Energy Corporation recently completed a Tennessee depreciation study for the Company. The Atmos Annual Review Mechanism (ARM) Tariff approved in this Docket provides:

Depreciation expenses shall reflect the depreciation rates approved by the Authority in the Company's most recent general rate case. If and when the Company performs a new depreciation study, the new study will be filed with the Authority. Following any appropriate discovery and rebuttal, and conditioned upon approval by the Authority of new rates, the Company shall calculate depreciation expenses using the newly approved rates in its subsequent Annual ARM Filing.

Atmos Tariff page 34.5, item B.b. Pursuant to this tariff provision, Atmos respectfully files the recently-completed depreciation study and requests approval of the resulting new depreciation rates. As shown in the depreciation studies and supporting testimony, the new depreciation rates represent a net decrease in depreciation expense, compared to existing depreciation rates.

In accordance with the above-referenced tariff provision, the Company is required to utilize the approved new depreciation rates in its coming Annual ARM Filing. That filing is due to be made on February 1, 2016, meaning that the supporting models must be prepared in late

2015. In order to allow those preparations to proceed without jeopardy to the February 1, 2016 filing deadline, Atmos respectfully requests that the Authority issue its final ruling on the new depreciation rates no later than the November 2015 Authority conference.

With this Notice and Request, Atmos has filed the testimony of Dane A. Watson, and the following Exhibits:

- DAW-1 – List of Regulatory Appearances
- DAW-2 – Atmos Energy Corporation – Tennessee Depreciation Rate Study at September 30, 2014
- DAW-3 – Atmos Energy Corporation – Kentucky Mid-States General Office Depreciation Rate Study at September 30, 2014
- DAW-4 - Shared Services Unit Depreciation Rate Study at September 30, 2014

**WHEREFORE**, Atmos respectfully requests:

1. That the Authority approve the new depreciation rates as set forth in the contemporaneously-filed depreciation studies;
2. That Atmos begin booking the new depreciation rates as of the date that they are finally approved;
3. That the Company will calculate depreciation expenses using the newly approved rates in its next Annual ARM Filing, due to be filed on February 1, 2016; and
4. That the Authority issue its final ruling on these matters no later than the November Authority conference so as to permit preparation of the schedules supporting February 1, 2016 Annual ARM Filing.

Respectfully submitted,

**NEAL & HARWELL, PLC**

By: 

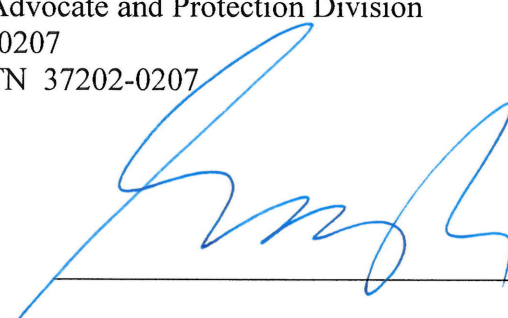
A. Scott Ross, #15634  
Blind Akrawi, #23213  
2000 One Nashville Place  
150 Fourth Avenue, North  
Nashville, TN 37219-2498  
(615) 244-1713 – Telephone  
(615) 726-0573 – Facsimile

*Counsel for Atmos Energy Corporation*

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing has been served, via the method(s) indicated below, on the following counsel of record, this the 22 day of September, 2015.

<input type="checkbox"/> Hand	Wayne M. Irvin, Esq.
<input type="checkbox"/> Mail	Vance Broemel, Esq.
<input type="checkbox"/> Fax	Rachel Newton, Esq.
<input type="checkbox"/> Fed. Ex.	Office of the Attorney General
<input checked="" type="checkbox"/> E-Mail	Consumer Advocate and Protection Division
	P. O. Box 20207
	Nashville, TN 37202-0207



BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

IN RE:

ATMOS ENERGY CORPORATION	)	
GENERAL RATE	)	
CASE AND PETITION TO ADOPT	)	
ANNUAL REVIEW MECHANISM	)	Docket No. 14-00146
AND ARM TARIFF	)	

---

DIRECT TESTIMONY OF DANE A. WATSON  
ON BEHALF OF ATMOS ENERGY CORPORATION

---

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Dane A. Watson, and my business address is 1410 Avenue K, Suite 1105B, Plano, Texas 75074. I am a Partner of Alliance Consulting Group (“Alliance”). Alliance Consulting Group provides consulting and expert services to the utility industry.

Q. WHAT IS 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 (“the Society”) has established national standards for depreciation professionals. The Society administers an

1 examination and has certain required qualifications to become certified in this field. I  
2 met all requirements and have become a Certified Depreciation Professional  
3 (“CDP”).

4 **Q. PLEASE OUTLINE YOUR EXPERIENCE IN THE FIELD OF**  
5 **DEPRECIATION.**

6 A. Since graduation from college in 1985, I have worked in the area of depreciation and  
7 valuation. I founded Alliance Consulting Group in 2004 and am responsible for  
8 conducting depreciation, valuation and certain accounting-related studies for utilities  
9 in various industries. My duties relate to preparing depreciation studies and include  
10 (1) assembling and analyzing historical and simulated data, (2) conducting field  
11 reviews, (3) determining service life and net salvage estimates, (4) calculating annual  
12 depreciation, (5) presenting recommended depreciation rates to utility management  
13 for its consideration, and (6) supporting such rates before regulatory bodies.

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

19 I have twice been Chair of the Edison Electric Institute (“EEI”) Property Accounting  
20 and Valuation Committee and have been Chairman of EEI’s Depreciation and  
21 Economic Issues Subcommittee. I am a Registered Professional Engineer (“PE”) in  
22 the State of Texas and a Certified Depreciation Professional. I am a Senior Member

1 of the Institute of Electrical and Electronics Engineers ("IEEE") and have held  
2 numerous offices on the Executive Board of the Dallas Section of IEEE. I am also  
3 Past President of the Society of Depreciation Professionals.

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

6 A. Yes. I have testified before numerous state and federal agencies in my 30 year career  
7 in performing depreciation studies. I have conducted depreciation studies, filed  
8 written testimony and/or testified before the Commissions provided in Exhibit DAW-  
9 1.

10 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE TENNESSEE**  
11 **REGULATORY AUTHORITY?**

12 A. No. I have never testified before the Tennessee Regulatory Authority (the  
13 "Authority") but depreciation studies that I have been responsible for oversight have  
14 been submitted and approved by the Authority in previous dockets. Ms. Rhonda  
15 Watts from Alliance submitted and testified to a study reviewed by me on behalf of  
16 Chattanooga Gas Company in Docket No. 09-00183. Ms. Watts also submitted a  
17 study reviewed by me on behalf of Piedmont Gas Company in Docket No. 11-00144.

18

19 **II. PURPOSE OF DIRECT TESTIMONY**

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

22 A. I sponsor and support the depreciation studies performed by Atmos Energy ("Atmos  
23 Energy" or "Company") for Atmos Energy Corporation – Tennessee ("Tennessee" or

1           “Atmos Energy Tennessee”), its Kentucky Mid-States General Office (“KY Mid-  
2           States General Office”) and the Shared Services Unit (“Shared Services” or “SSU”).  
3

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

5   A.    Yes. I am sponsoring the following exhibits:

- 6           •   DAW-1 – List of Regulatory Appearances
- 7           •   DAW-2 – Atmos Energy Corporation – Tennessee Depreciation Rate Study at  
8               September 30, 2014
- 9           •   DAW-3 – Atmos Energy Corporation – Kentucky Mid-States General Office  
10               Depreciation Rate Study at September 30, 2014
- 11          •   DAW-4 - Shared Services Unit Depreciation Rate Study at September 30,  
12               2014

13   **Q.    WERE THESE EXHIBITS PREPARED BY YOU OR UNDER YOUR**  
14   **SUPERVISION AND CONTROL?**

15   A.    Yes.

16   **Q.    PLEASE SUMMARIZE YOUR CONCLUSIONS.**

17   A.    The Atmos Energy Tennessee, KY Mid-States General Office and SSU depreciation  
18           studies and analyses that I have performed support establishing depreciation rates at  
19           the level recommended in my testimony. The Tennessee Direct depreciation rate  
20           study is attached to my testimony as Exhibit DAW–2. The Tennessee study shows  
21           that a decrease in the annual depreciation expense for Atmos Energy Tennessee’s  
22           assets of approximately \$252 thousand per year is needed to ensure that the  
23           appropriate amount of depreciation expense is collected by the Company. This

1 amount was determined by comparing the depreciation expense between the current  
2 rates and the proposed rates as shown in Appendix A of Exhibit DAW-2. Changes in  
3 life and net salvage in various accounts in Transmission, Distribution and General  
4 Plant functions are the drivers for the decrease. The KY Mid-States General Office  
5 depreciation rate study is attached as Exhibit DAW-3 and reflects a proposed  
6 unallocated annual depreciation expense of \$101 thousand. The SSU depreciation  
7 rate study is attached as Exhibit DAW-4 and reflects a proposed unallocated annual  
8 depreciation expense of \$21.8 million. .

9 **Q. DO THE DEPRECIATION STUDIES YOU SPONSOR REFLECT THE MOST**  
10 **CURRENT DATA AVAILABLE FOR THE ASSETS ANALYZED?**

11 A. Yes. The data used reflects the most recent experience and future expectations for  
12 life and net salvage characteristics for assets in Atmos Energy's Tennessee, KY Mid-  
13 States General Office, and Shared Services Unit as of September 30, 2014.

14

15 **III. ATMOS ENERGY TENNESSEE GAS DEPRECIATION STUDY**

16 **Q. WHAT PROPERTY IS INCLUDED IN THE DEPRECIATION STUDY?**

17 A. There are three general classes, or functional groups, of depreciable property: the  
18 Transmission Plant, Distribution Plant and General Plant property. The Transmission  
19 Plant functional group primarily consists of high and intermediate pressure  
20 transmission assets that deliver gas to various receipt points or city gates. The  
21 Distribution Plant functional group primarily consists of lines and associated facilities  
22 used to distribute and meter gas within the areas served by Atmos Energy. General



1 Plant property, both depreciated and amortized, is not location specific but is used to  
2 support the overall distribution of gas to its customers.

3 **Q. PLEASE DESCRIBE YOUR DEPRECIATION STUDY APPROACH.**

4 A. I conducted the depreciation studies in four phases as shown in my Exhibits DAW-2,  
5 DAW-3, and DAW-4. The four phases are: Data Collection, Analysis, Evaluation,  
6 and Calculation. During the initial phase of the study, I collected historical data to be  
7 used in the analysis. After the data was assembled, I performed analyses to determine  
8 the life and net salvage percentage for the different property groups being studied. As  
9 part of this process, I conferred with field personnel, engineers, and managers  
10 responsible for the installation, operation, and removal of the assets to gain their input  
11 into the operation, maintenance, and salvage of the assets. The information obtained  
12 from field personnel, engineers, and managerial personnel, combined with the study  
13 results, was then evaluated to determine how the results of the historical asset activity  
14 analysis, in conjunction with the Company's expected future plans should be applied.  
15 Using all of these resources, I then calculated the depreciation rate for each function.

16 **Q. WHAT DEPRECIATION METHODOLOGY DID YOU USE FOR**  
17 **TENNESSEE DIRECT PROPERTY?**

18 A. The straight-line (method), Average Life Group ("ALG") (procedure), and  
19 remaining-life (technique) depreciation system were employed to calculate annual  
20 and accrued depreciation. This methodology is consistent with the existing approved  
21 rates. The computations of the annual depreciation rates are shown in Appendix B of  
22 my Exhibit DAW-2.

1 **Q. WHAT FACTORS INFLUENCE THE DEPRECIATION RATES FOR AN**  
2 **ACCOUNT?**

3 A. The primary factors that influence the depreciation rate for an account are: (1) the  
4 remaining investment to be recovered in the account, (2) the depreciable life of the  
5 account, and (3) the net salvage for the account.

6 **Q. WHAT METHOD DID YOU USE TO ANALYZE HISTORICAL DATA TO**  
7 **DETERMINE LIFE CHARACTERISTICS?**

8 A. Accounts were analyzed using the retirement rate method (actuarial method) to  
9 estimate the life of property. In much the same manner as human mortality is  
10 analyzed by actuaries, depreciation analysts use models of property mortality  
11 characteristics that have been validated in research and empirical applications.  
12 Further detail is found in the life analysis section of Exhibits DAW-2, DAW-3, and  
13 DAW-4.

14 **Q. HOW DID YOU DETERMINE THE AVERAGE SERVICE LIVES FOR**  
15 **EACH ASSET GROUP?**

16 A. The establishment of appropriate average service lives for each account was  
17 determined by using the Actuarial. Graphs illustrating the chosen Iowa Curves used  
18 to determine the average service lives for analyzed accounts are found in the Life  
19 Analysis section of my Exhibits DAW-2, DAW-3 and DAW-4. A summary of the  
20 depreciable life for each account is shown in Appendix C of each of these Exhibits.

21 **Q. WHAT IS NET SALVAGE?**

22 A. While discussed more fully in the study itself, net salvage is the difference between  
23 the gross salvage (what the asset was sold for) and the removal cost (cost to remove

1 and dispose of the asset). Salvage and removal cost percentages are calculated by  
2 dividing the current cost of salvage or removal by the original installed cost of the  
3 asset. A more detailed description on net salvage is found in each of my Exhibits  
4 DAW-2, DAW-3 and DAW-4. A discussion on individual account net salvage  
5 parameters are found in the Net Salvage section of each of these Exhibits as well as a  
6 summary of gross salvage, cost of removal and net salvage for each account can be  
7 found in Appendix C of each Exhibit. The net salvage analysis by account is  
8 provided in Appendix D of each of these Exhibits.

9

10 **IV. KY MID-STATES GENERAL OFFICE DEPRECIATION STUDY**

11 **Q. DID ALLIANCE PREPARE A 2014 DEPRECIATION STUDY FOR ATMOS**  
12 **KY MID-STATES GENERAL OFFICE?**

13 A. Yes. We have conducted a study as of September 30, 2014. The study  
14 recommendations and results are attached to my direct testimony as Exhibit DAW-3.

15 **Q. ARE THE STEPS DESCRIBED ABOVE FOR THE TENNESSEE**  
16 **DEPRECIATION STUDY THE SAME FOR THE KY MID-STATES**  
17 **GENERAL OFFICE ASSETS?**

18 A. Yes.

19 **Q. WHAT PROPERTY IS INCLUDED IN THE KY MID-STATES GENERAL**  
20 **OFFICE DEPRECIATION STUDY?**

21 A. For KY Mid-States General Office, there is one general class of depreciable property  
22 which is related to general office activities. These assets include office buildings and  
23 leasehold improvements, office furniture, communications equipment, transportation

1 equipment, computer software and hardware and other miscellaneous general office  
2 assets. The depreciation expense for KY Mid-States General Office is allocated to  
3 each Atmos Energy entity it supports.

4 **Q. WHAT ARE THE RESULTS OF THE KY MID-STATES GENERAL OFFICE**  
5 **DEPRECIATION STUDY?**

6 A. The 2014 KY Mid-States General Office Depreciation Study is found in Exhibit  
7 DAW-3. The proposed unallocated annual depreciation expense is approximately  
8 \$101 thousand per year. More details related to the study and results are found in  
9 Exhibit DAW-3.

10

11 **V. SHARED SERVICES UNIT DEPRECIATION STUDY**

12 **Q. DID ALLIANCE PREPARE A 2014 DEPRECIATION STUDY FOR ATMOS**  
13 **ENERGY SHARED SERVICES?**

14 A. Yes. We have conducted a study as of September 30, 2014. The study  
15 recommendations and results are attached to my direct testimony as Exhibit DAW-4.

16 **Q. ARE THE STEPS DESCRIBED ABOVE FOR THE TENNESSEE AND KY**  
17 **MID-STATES GENERAL OFFICE DEPRECIATION STUDIES THE SAME**  
18 **FOR THE SHARED SERVICES ASSETS?**

19 A. Yes.

20 **Q. WHAT PROPERTY IS INCLUDED IN THE SHARED SERVICES UNIT**  
21 **DEPRECIATION STUDY?**

22 A. For Shared Services, there is one general class of depreciable property which is  
23 related to general office activities. These assets include office buildings and

1 leasehold improvements, office furniture, communications equipment, transportation  
2 equipment, computer software and hardware and other miscellaneous general office  
3 assets. The top three largest investments in SSU are the application software, server  
4 hardware, and communication equipment. These assets are primarily located in the  
5 Company's home office in Dallas, Texas and the customer service centers in  
6 Amarillo, Texas and Waco, Texas. The depreciation expense for SSU is allocated to  
7 each Atmos Energy entity it supports.

8 **Q. WHAT ARE THE RESULTS OF THE ATMOS ENERGY SSU**  
9 **DEPRECIATION STUDY?**

10 A. The 2014 Atmos Energy SSU Depreciation Study is found in Exhibit DAW-4. The  
11 proposed unallocated annual depreciation expense for Atmos Energy SSU is  
12 approximately \$21.8 million per year. More details related to the study and results  
13 are found in Exhibit DAW-4.

14 **Q. HAS THE COMPANY REQUESTED APPROVAL OF THE PROPOSED**  
15 **SHARED SERVICES DEPRECIATION RATES IN ANY OTHER STATES?**

16 A. Yes. The Company has requested approval of the SSU depreciation rates shown in  
17 DAW-4 in Colorado and Kansas since the study's completion in 2015. The SSU  
18 depreciation rates will be filed soon in Kentucky and Louisiana. Atmos Energy  
19 intends to file in each of its other jurisdictions as required under its various state  
20 regulatory requirements.

21

22

23

1 **VI. CONCLUSION**

2 **Q. WHAT ACCOUNT DEPRECIATION RATES ARE YOU PROPOSING, AND**  
3 **HOW DO THEY COMPARE WITH THE CURRENT RATES?**

4 A. The current depreciation rates and the rates I am now proposing related to Tennessee  
5 are found in Appendix A of my Exhibit DAW-2. The proposed rates for KY Mid-  
6 States General Office are in Appendix A of my Exhibit DAW-3. Finally, the  
7 proposed rates for SSU are in Appendix A of my Exhibit DAW-4. Detailed  
8 calculations of these rates are in Appendix B of each of these Exhibits.

9 **Q. MR. WATSON, DO YOU HAVE ANY CONCLUDING REMARKS?**

10 A. Yes. The depreciation studies and analysis performed under my supervision fully  
11 support setting depreciation rates at the level I have indicated in my testimony. The  
12 Company should continue to periodically review the annual depreciation rates for its  
13 property. In this way, all customers are charged for their appropriate share of the  
14 capital expended for their benefit. The depreciation study for Atmos Energy's  
15 Tennessee, KY Mid-States General Office, and SSU depreciable property as of  
16 September 30, 2014 describes the extensive analysis performed and the resulting rates  
17 that are now appropriate for Company property. The Company's depreciation rates  
18 should be set at my recommended amounts in order to recover the Company's total  
19 investment in property over the estimated remaining life of the assets.

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

21 A. Yes, it does.

BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

IN RE:

ATMOS ENERGY CORPORATION )  
GENERAL RATE )  
CASE AND PETITION TO ADOPT )  
ANNUAL REVIEW MECHANISM )  
AND ARM TARIFF )

Docket No. 14-00146

---

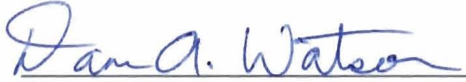
VERIFICATION

---

STATE OF TEXAS )

COUNTY OF COLLIN )

I, Dane A. Watson, being first duly sworn, state that I am a Partner of Alliance Consulting Group, that I am authorized to testify on behalf of Atmos Energy Corporation in the above referenced docket, that the Direct Testimony of Dane A. Watson in support of Atmos Energy Corporation's docket and the Exhibits thereto filed in this docket on the date of filing of this Testimony are true and correct to the best of my knowledge, information and belief.

  
Dane A. Watson

Sworn and subscribed before me this 17th day of September, 2015



  
Notary Public

My Commission Expires: 1/7/19

## List of Studies and/or Testimony Filed by Dane A. Watson

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
New Mexico	New Mexico Public Regulation Commission	15-00261-UT	Public Service Company of New Mexico	2015	Electric 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



## List of Studies and/or Testimony Filed by Dane A. Watson

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
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
Alaska	Regulatory Commission of Alaska	U-14-045	Matanuska Electric Coop	2014	Electric Generation Depreciation Study

## List of Studies and/or Testimony Filed by Dane A. Watson

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
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
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

## List of Studies and/or Testimony Filed by Dane A. Watson

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
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
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

## List of Studies and/or Testimony Filed by Dane A. Watson

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
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
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

## List of Studies and/or Testimony Filed by Dane A. Watson

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
California	California Public Utilities Commission	A1011015	Southern California Edison	2011	Electric Depreciation Study
Texas	Texas Commission on Environmental Quality	Matter 37050-R	Southwest Water Company	2011	WasteWater Depreciation Study
Texas	Texas Commission on Environmental Quality	Matter 37049-R	Southwest Water Company	2011	Water 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
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

## List of Studies and/or Testimony Filed by Dane A. Watson

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
California	California Public Utility Commission	A10071007	California American Water	2009-2010	Water and Waste Water 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
Texas	Railroad Commission of Texas	9902	CenterPoint Energy Houston	2009	Gas Depreciation Study

## List of Studies and/or Testimony Filed by Dane A. Watson

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
Wyoming	Wyoming Public Service Commission	30022-148-GR10	Source Gas	2009-2010	Gas Depreciation Study
Colorado	Colorado Public Utilities Commission	09AL-299E	Public Service of Colorado	2009	Electric 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
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

## List of Studies and/or Testimony Filed by Dane A. Watson

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
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



# **ATMOS ENERGY CORPORATION TENNESSEE PROPERTIES**

## **DEPRECIATION RATE STUDY**

**As of September 30, 2014**



<http://www.utilityalliance.com>

**ATMOS ENERGY CORPORATION  
TENNESSEE PROPERTIES  
DEPRECIATION RATE STUDY  
EXECUTIVE SUMMARY**

Atmos Energy Corporation (“Atmos” or “Company”) engaged Alliance Consulting Group to conduct a depreciation study of the Company’s Tennessee Properties (“Tennessee”) natural gas operations depreciable assets as of fiscal year end September 30, 2014.

The existing depreciation rates were based on the straight-line method, average life group (“ALG”) procedure, and remaining-life technique and the same method, procedure and technique are retained in this study. This study recommends a total decrease of \$252 thousand in annual depreciation expense when compared to the depreciation rates currently in effect. Life estimates showed the following changes: 20 accounts have an increase in life; 12 accounts have a decrease in life, 11 accounts remained unchanged and 2 accounts where no comparison is possible. Net salvage showed the following changes: 6 accounts have a decrease in net salvage (more negative), 15 accounts have an increase in net salvage (more positive or less negative), 22 accounts remained unchanged, and 2 where no comparison is possible.

The depreciation study we conducted analyzed and developed depreciation recommendations at an account level resulting in annual depreciation accrual amounts and depreciation rates at that level. The depreciation study also reflects the implementation of Vintage Group Amortization for certain General Plant accounts. Appendix A demonstrates the change in depreciation expense.

**ATMOS ENERGY CORPORATION**  
**TENNESSEE PROPERTIES**  
**DEPRECIATION RATE STUDY**  
**As of September 30, 2014**  
**Table of Contents**

<b>PURPOSE .....</b>	<b>4</b>
<b>STUDY RESULTS .....</b>	<b>5</b>
<b>GENERAL DISCUSSION .....</b>	<b>6</b>
<b>DEFINITION .....</b>	<b>6</b>
<b>BASIS OF DEPRECIATION ESTIMATES .....</b>	<b>6</b>
<b>SURVIVOR CURVES .....</b>	<b>8</b>
<b>ACTUARIAL ANALYSIS .....</b>	<b>10</b>
<b>JUDGMENT .....</b>	<b>11</b>
<b>AVERAGE LIFE GROUP DEPRECIATION .....</b>	<b>12</b>
<b>THEORETICAL DEPRECIATION RESERVE .....</b>	<b>13</b>
<b>DETAILED DISCUSSION .....</b>	<b>14</b>
<b>DEPRECIATION STUDY PROCESS .....</b>	<b>14</b>
<b>DEPRECIATION RATE CALCULATION .....</b>	<b>17</b>
<b>REMAINING LIFE CALCULATION .....</b>	<b>17</b>
<b>CALCULATION PROCESS .....</b>	<b>17</b>
<b>LIFE ANALYSIS .....</b>	<b>19</b>
<b>SALVAGE ANALYSIS .....</b>	<b>46</b>
<b>SALVAGE CHARACTERISTICS .....</b>	<b>46</b>
<b>APPENDIX A COMPARISON OF DEPRECIATION RATES .....</b>	<b>58</b>
<b>APPENDIX B CALCULATION OF EQUAL LIFE GROUP .....</b>	<b>61</b>
<b>APPENDIX C MORTALITY CHARACTERISTICS .....</b>	<b>63</b>
<b>APPENDIX D NET SALVAGE .....</b>	<b>66</b>

## **PURPOSE**

The purpose of this study is to develop depreciation rates for the depreciable property as recorded on Atmos' books at September 30, 2014. The account based depreciation rates were designed to recover the total remaining undepreciated investment, adjusted for net salvage, over the remaining life of Atmos' property on a straight-line basis. Non-depreciable property and property which is amortized such as intangible assets were excluded from this study.

Atmos Energy provides local gas distribution service to over 133,000 customers in Tennessee. Its assets currently consist of transmission, distribution, and general plant, including approximately 842 miles of steel and 2,548 miles of plastic gas distribution mains with a total of 3,398 total miles located across the service area. It has a number of receipt points or city gates, throughout the system where gas enters the distribution system and is then delivered to customers for burner tip consumption.

## STUDY RESULTS

The existing and current study of annual depreciation expense results from the use of Iowa Curve dispersion patterns with the straight-line method, average life group (“ALG”) procedure and remaining-life technique, and consideration of net salvage in the development of the study recommended depreciation rates. Detailed information for each of these factors will follow in this report.

Overall depreciation rates for Tennessee depreciable property are shown in Appendix A. The recommended rates translate into an annual depreciation accrual of approximately \$9.6 million based on Tennessee’s depreciable investment at September 30, 2014. The annual equivalent depreciation expense calculated by the same method using the currently approved rates was \$9.8 million. The primary driver for the decrease in the annual depreciation expense when compared to the existing is related to the Distribution Plant Function, more specifically the increase in life and the change (less negative) net salvage factor for mains and services

Consistent with Federal Energy Regulatory Commission Rule AR-15, this depreciation study develops depreciation expense for Vintaged Group Amortization in Accounts 391 through 398 (excluding Accounts 392 and 396). This process provides for the amortization of general plant over the same life as recommended in this study (with a separate amortization to allocate deficit or excess reserves over a 4 year period). Vintage Group Amortization recognizes timely retirement of assets by retiring property from the books at the end of its amortized life and simplifies the accounting for general property. Implementation of this approach did not affect the annual expense accrued by Atmos Energy. Both the FERC and the Tennessee Regulatory Authority have approved this approach.

Appendix A presents a comparison of the existing rates versus the recommended study rates. Appendix B presents the development of the depreciation rates and annual accruals. Appendix C presents a comparison of the existing and proposed mortality and net salvage parameters by account. Appendix D shows net salvage history by plant account.

## **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**

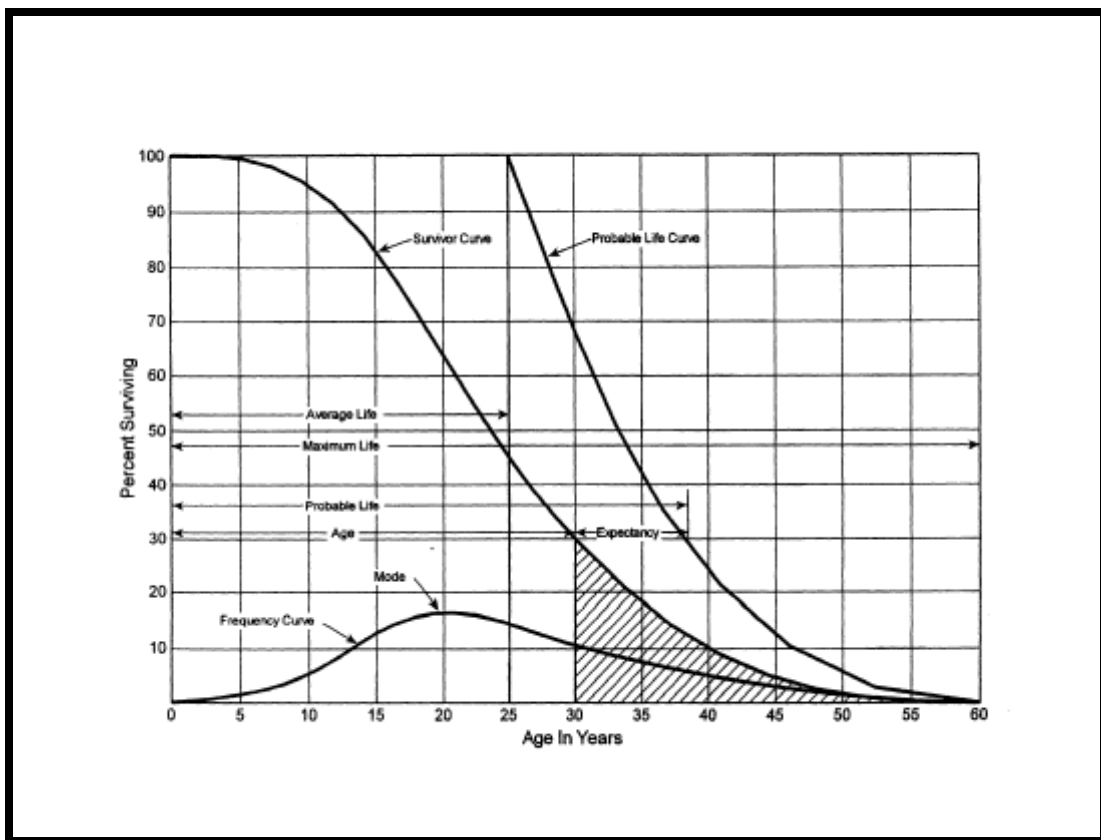
Annual and accrued depreciation were calculated in this study by the straight-line, broad group, remaining-life depreciation system. In this system, the annual depreciation expense for each group is computed by dividing the original cost of the asset group less allocated depreciation reserve less estimated net salvage by its respective average 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, and were computed in a direct weighting by multiplying each vintage or account balance times its remaining life and dividing by the plant investment in service as of September 30, 2014. The computations of the annual depreciation rates are shown in Appendix B and remaining life calculations are provided in the workpapers.

The Actuarial (retirement rate method) life estimation approach was

incorporated into the life analyses. Actuarial Analysis is one of the commonly used mortality analysis techniques for gas utility property. Historically, Atmos has used SPR analysis to evaluate lives of most asset groups. When vintage information is available, actuarial analysis is performed. For the accounts with sufficient activity using actuarial analysis experience bands varied depending on the amount of data. Judgment was used to a greater or lesser degree on all accounts. The approach used in this study is more fully described in a later section.

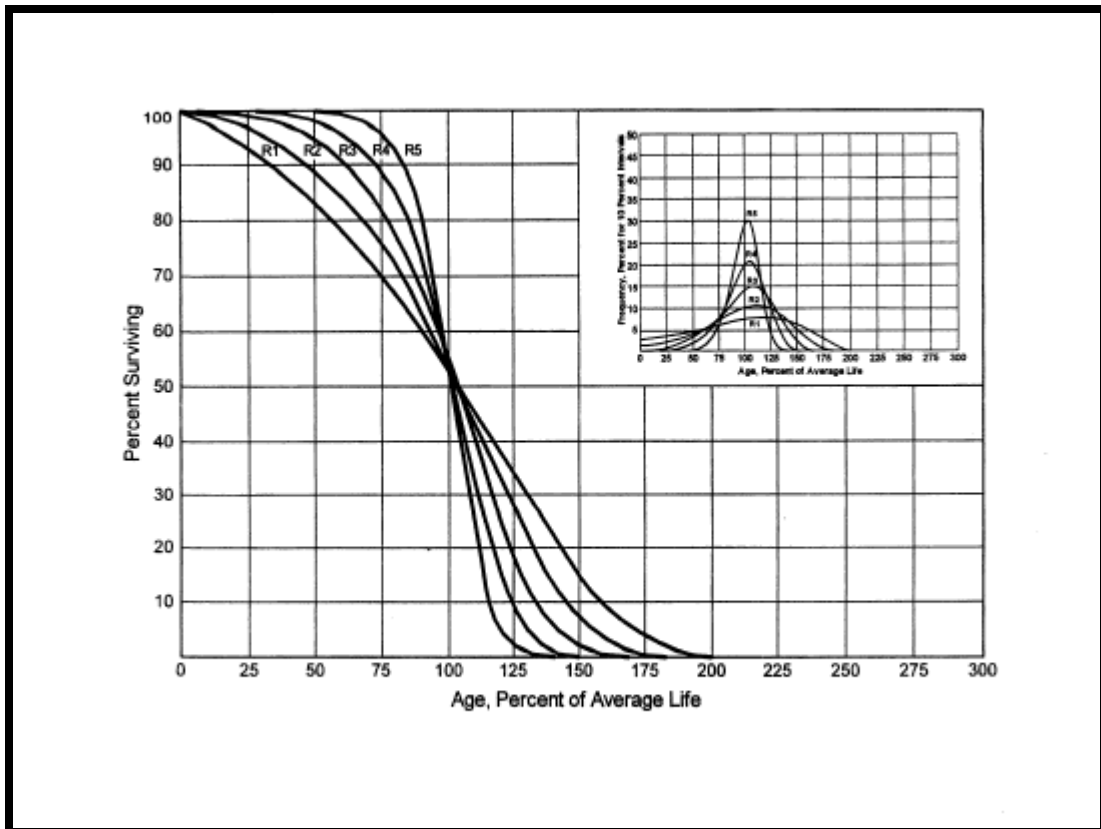
## Survivor Curves

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.

### **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. Consistent with the prior study some 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. Matching data in observed life tables for each experience and placement band to an Iowa Curve requires visual examination. As stated in Depreciation Systems by Wolf and Fitch, "the analyst must decide which points or sections of the curve should be given the most weight. Points at the end of the curve are often based on fewer exposures and may be given less weight than those points based on larger samples" (page 46). Some analysts chose to use mathematical fitting as a

tool to narrow the population of curves using a least squares technique. Use of the least squares approach does not imply a statistical validity, however, because the underlying data does not meet criteria for independence between vintages and the same average price for property units through time. Thus, Depreciation Systems cautions, "... the results of mathematical fitting should be checked visually and the final determination of best fit made by the analyst" (page 48). This study uses the visual matching approach to match Iowa Curves, since mathematical fitting produces theoretically possible curve matches. Visual examination and experienced judgment allow the depreciation professional to make the final determination as to the best curve type.

Detailed information for each account is shown later in this study and in workpapers.

### **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. In these cases, it is rare for one factor to individually have a substantial impact on the analysis. However, individual factors may shed light on the utilization and

characteristics of assets. Judgment may also be defined as deduction, inference, wisdom, common sense, or the ability to make sensible decisions. There is no single correct result from statistical analysis; hence, there is no answer absent judgment. At the very least for example, any analysis requires choosing upon which bands to place more emphasis.

The establishment of appropriate average service lives and retirement dispersions for the Transmission, Distribution and General accounts requires judgment to incorporate the understanding of the operation of the system with the available accounting information analyzed using the actuarial analysis method. 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**

At the request of Atmos, this study uses the average life group ("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 groups are defined by their respective account dispersion, life, and salvage estimates. A straight-line rate for each ALG group is calculated by computing a composite remaining life for each group across all vintages within the group, dividing the remaining investment to be recovered by the remaining life to find the annual depreciation expense and dividing the annual depreciation expense by the surviving investment. The resultant rate for each ALG group is designed to recover all retirements less net salvage when the last unit retires. The ALG procedure recovers net book cost over the life of each account by averaging many components.

### **Theoretical Depreciation Reserve**

The Company's book depreciation reserves were reallocated within each function by plant account based on the theoretical reserves for each account. 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 straight-line remaining-life theoretical reserve ratio at any given age (RR) is calculated as:

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

## **DETAILED DISCUSSION**

### **Depreciation Study Process**

This depreciation study encompassed four distinct phases. The first phase involved data collection and field interviews. The second phase was where the initial data analysis occurred. The third phase was where the information and analysis was evaluated. 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 section, the salvage analysis section, and also in workpapers.

Phase 2 was where the Actuarial analysis was 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 were 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.

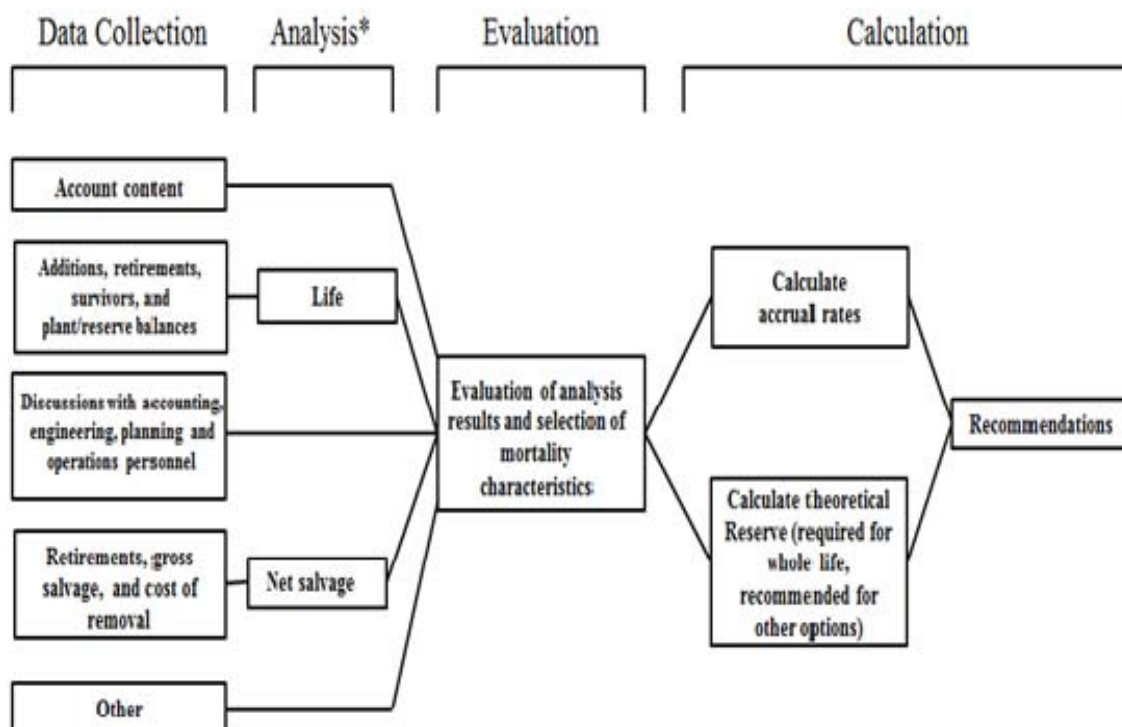
Phase 3 was the evaluation process which synthesized analysis, interviews, and operational characteristics into a final selection of asset lives and net salvage parameters. The historical analysis from phase 2 was further enhanced by the incorporation of recent or future changes in the characteristics or operations of assets that were revealed in phase 1. Phases 2 and 3 allowed 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 the final report. The calculation of accrual rates is found in Appendix B. Recommendations for the various accounts are contained within the Detailed Discussion of this report. The depreciation study flow diagram shown as Figure 1<sup>1</sup> documents the steps used in conducting this study. Depreciation Systems, 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, write logic supporting forecasts and estimation, and write final report.

---

<sup>1</sup> Public Utility Finance & Accounting, A Reader

## Book Depreciation Study Flow Diagram



Source: Introduction to Depreciation for  
Public Utilities and Other Industries, AGA  
EEI, 2013.

\*Although not specifically noted, the mathematical  
analysis may need some level of input from other  
sources (for example, to determine analysis bands for  
life and adjustments to data used in all analysis).

Figure 1

### **TENNESSEE DEPRECIATION STUDY PROCESS**



**Depreciation Rate Calculation**

Annual depreciation expense amounts for the depreciable accounts of the Company were calculated by the straight line, average life group, and remaining life system. With this approach, remaining lives were calculated according to standard group 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 B.

**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. After establishment of appropriate average service lives and retirement dispersion, remaining life was computed for each account. Theoretical depreciation reserve with zero net salvage was calculated using theoretical reserve ratios as defined in the theoretical reserve portion of the General Discussion section. The difference between plant balance and theoretical reserve was then spread over the depreciation accruals. Remaining life is shown for each account in Appendix B.

**Calculation Process**

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

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

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

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.

$$\text{Annual Depreciation Expense} = \frac{\text{Original Cost} - \text{Book Reserve} - (\text{Original Cost}) * (1 - \text{Net Salvage \%})}{\text{Composite Remaining Life}}$$

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 B. The calculations of the theoretical depreciation reserve values and the corresponding remaining life

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

### **Life Analysis**

The actuarial (retirement rate) analysis method was applied to those accounts where vintage retirement detail is available. 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. All placement and experience band analyses performed is contained in the workpapers. The recommended life and dispersion pattern are shown in Appendix C.

For each account on the overall band (i.e. placement from earliest vintage year through 2014 and experience band from earliest available experience year through 2014, most recently approved survivor curves were used as a starting point. Then using the same 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. Then, after looking at the overall experience band, different experience bands were plotted and analyzed. Repeated matching usually pointed to a focus on one dispersion family and small range of service lives. Generally, 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. When adequate activity is present a graph of the observed life table versus the proposed life and curve is provided for each account where the actuarial life analyses was used.

These results are used in conjunction with all other factors that may influence asset lives.

**Transmission Plant – FERC Accounts 365.20 – 369.00****Account 365.20 Rights-of-Way (70 R5)**

This account includes the cost of rights of way used in connection with transmission operations. There is approximately \$349 thousand in this account. The existing life is 65 R5. No retirements recorded but assets are tied to the mains account, which reflects a life increase. This study recommends increasing the life by 10 to a 70 year life and R5 dispersion. No graph is provided.

**Account 366.00, 366.01 & 366.02 Structures and Improvements (30 SQ)**

These accounts include the cost of measuring and regulating station structures and other structures used in connection with transmission operations. There is approximately \$3 thousand total for the accounts combined in this account. There is only one asset, which is a wood storage building. The existing life is 30 SQ. The current average age of investment is 16.50 years. Based on all the information, this study recommends retaining the 30 year life and SQ dispersion. No graph is provided.

**Account 367.00 Mains – Cathodic Protection (25 SQ)**

This account includes the cost of cathodic protection for mains such as anodes, rectifiers, leak clamps, and other related equipment used in connection with transmission operations. There is approximately \$92 thousand in this account. The existing life is 44 years. Current average age of the surviving assets is 2.50 years. Discussions with Company personnel indicated the assets have a life range of 20 to 25 years. This study recommends a 25 year life and the SQ dispersion to reflect the actual expected life of the anodes, rectifiers, and leak clamps that are installed with the mains but have a much lower life expectancy. No graph is provided.

**Account 367.01 Mains Steel (60 R4)**

This account includes the cost of steel mains used in connection with transmission operations. There is approximately \$11 million in this account. The existing life is 55 S4. Discussion with Company personnel indicated they have made some proactive replacement in 2012-2013 timeframe, where 42 thousand feet of 2, 4, 6, and 8 inch pipe was replaced with HPD 8 inch steel. A third of the 67 miles of pipe was installed in 1995 or 1996. Based upon all the information, this study recommends moving the life to 60 R4. Due to the limited retirement activity and continued reliance on the life of distribution mains, no graph is provided.

**Account 369.00 Measuring and Reg. Station (40 R4)**

This account includes the cost of measuring and regulating station equipment used in connection with transmission operations. There is approximately \$1.6 million total in this account. The existing life is 40 R2. The current average age of the investment is 31.70 years. Consistent with the prior study, reliance on the life indications in Distribution Account 378 due to the fact that only one retirement has been recorded in 2000. While Company personnel indicated in discussions that equipment is expected to have a life around 25 years, indications in 378 are longer. Giving consideration to the various generations still in service, this study recommends maintaining the life of 40 years and moving to a steeper R4 dispersion. As more of the older assets are retired and replaced, the life is expected to decline with more technology driven assets. Due to limited retirement activity no account specific graph is provided.

**Distribution Plant – FERC Accounts 374.00 – 385.00****Account 374.02 Land Rights (70 R5)**

This account includes the cost of land rights used in connection with distribution operations. There is approximately \$827 thousand in this account. The existing life is 65 R5. This study recommends increasing the life to 70 years while retaining the R5 dispersion. No graph is provided.

**Account 375.00 & 375.01 Structures and Improvements (45 R5)**

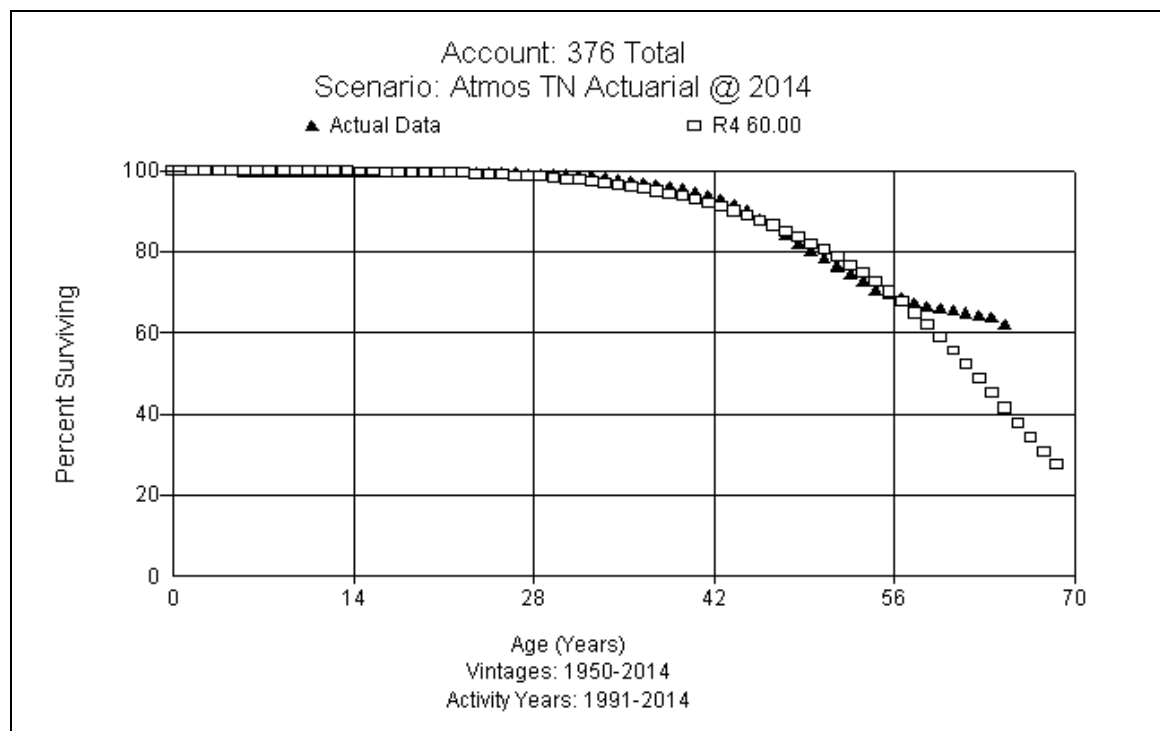
These accounts include the cost of border station and regulating station structures, fences, and other miscellaneous related assets used in connection with distribution operations. There is approximately \$42 thousand total for the accounts combined in this account. The existing life is 45 R5. The only retirements recorded occurred in 2014, which do not provide enough history for analysis. Based on the type and mix of the assets along with judgment, this study recommends retaining the 45 year life and the R5 dispersion. No graph is provided.

**Account 376.00 Mains - Cathodic Protected (25 SQ)**

This account includes the cost of rectifiers and other cathodic protection related equipment used on distribution mains. There is approximately \$905 thousand in this account. The existing life is the 55 S4 dispersion pattern based on the composite 376 account. This study reflects the segregation of anodes and leak clamps into their own accounts for amortization treatment. In addition to the segregation, the remaining assets are believed to have a much lower life expectancy than mains, which is what had been used in the past. Discussions with Company personnel indicated the remaining assets have a life expectancy of 20-25 years. Based on all the information and judgment, this study recommends moving the life to 25 years with the SQ dispersion. No graph could be provided.

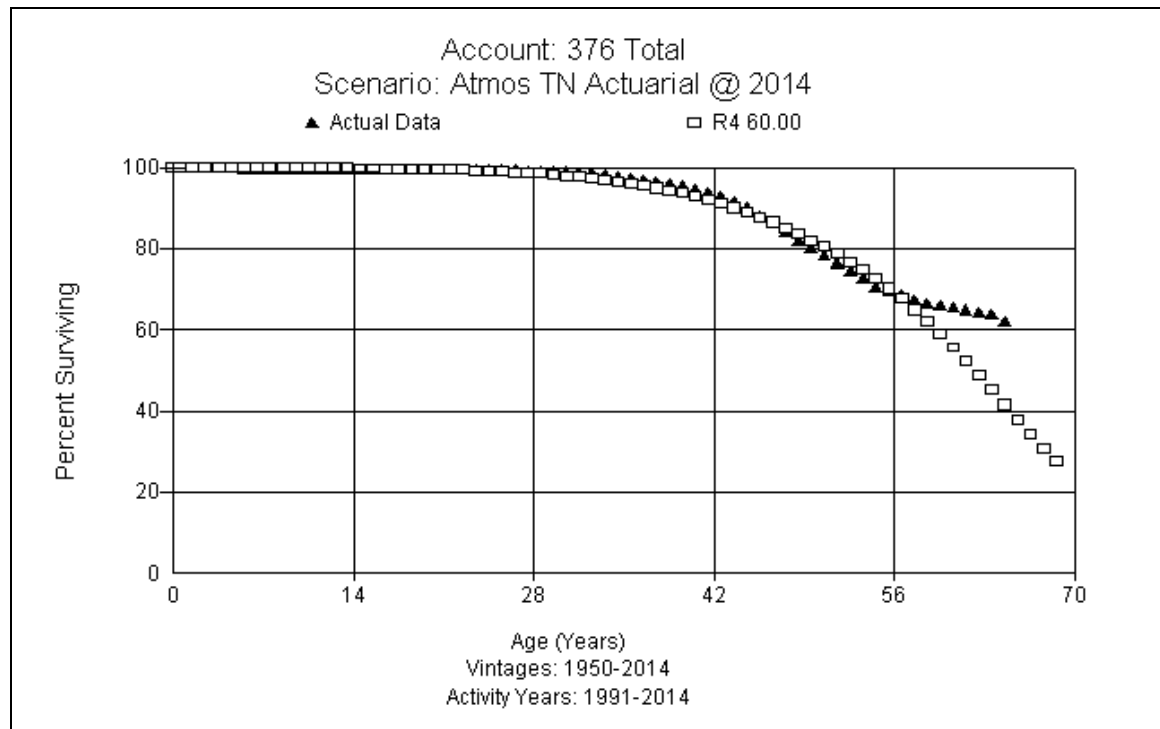
### Account 376.01 Mains - Steel (60 R4)

This account includes the cost of steel mains. There is approximately \$62.3 million in this account. The existing life is the 55 S4 dispersion pattern. There is currently is account consists of approximately 842 miles of coated steel pipe on the system. There was a mandated bare steel replacement program which is in its 9<sup>th</sup> of 10 years. Approximately 45,000 feet of pipe has been replaced each year. Over the next couple of years operations will focus on poorly coated pipe. In most cases steel pipe is replaced with plastic. Once the replacement program is completed, retirements will be driven more by relocations and capacity changes. Company personnel indicated that 55 years was a reasonable expectation considering all the various causes of retirements. A combined analysis was performed. Based on the near completion of the bare steel pipe replacement, the actuarial analysis, and expectations, this study recommends moving from 55 to 60 years and changing from the S4 to an R4 dispersion pattern. A graph of the combined accounts observed life table and recommendation is shown below for the 60 R4.



### Account 376.02 Mains - Plastic (60 R4)

This account includes the cost of plastic mains. There is approximately \$161.4 million in this account. The existing life is the 55 S4 dispersion pattern. This account consists of approximately 2,548 miles of plastic pipe. Discussions with Company personnel indicated they have not had any material issues with plastic. Only known issue is the joints where the majority of failures occur. Company expects a life longer than 55 years for plastic. Based on the combined analysis, the continued replacement of steel by plastic where possible, this study recommends the same 60 R4 as recommended for steel mains. A graph of the combined accounts observed life table and recommendation is shown below for the 60 R4.





**Account 376.03 Mains - Anodes (20 SQ)**

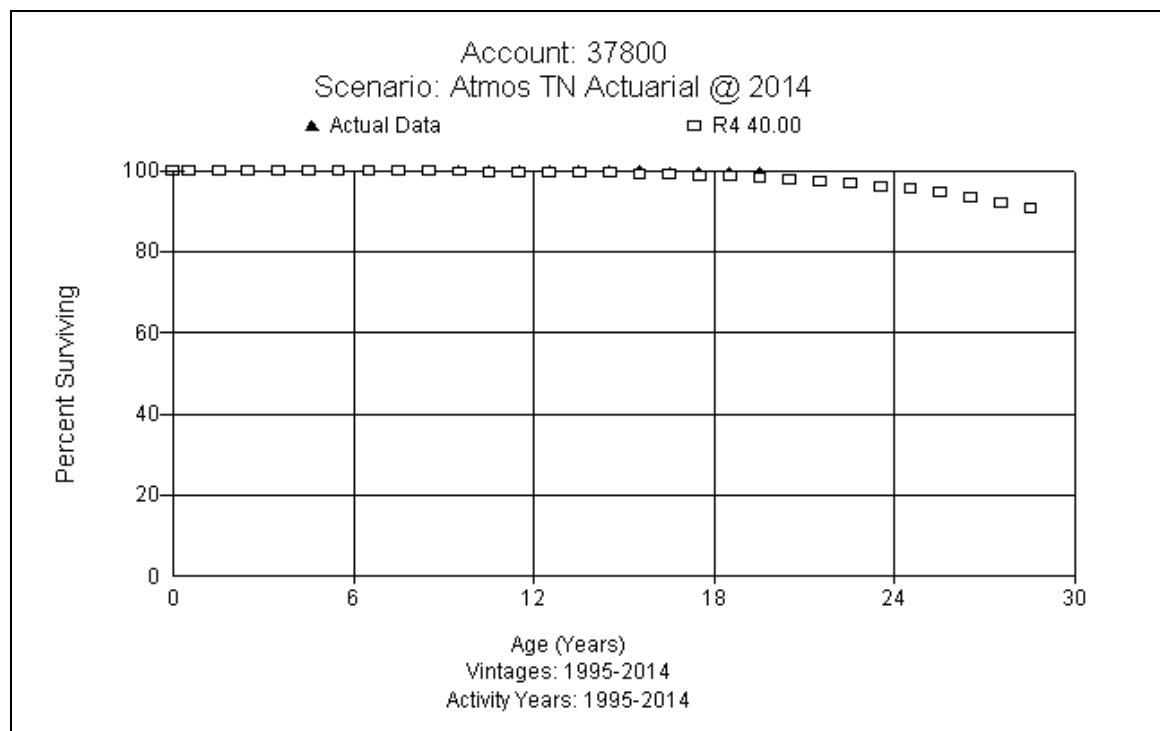
This account includes the cost of anodes. There is approximately \$576 thousand in this account. The existing life is the 55 S4. Based on discussions with the Company these assets are often missed when mains are being retired. This study has segregated and is proposing amortization accounting for better retirement recording. They try to design the anode beds for a 20-25 year but conditions in many cases may create a shorter life. Based on judgment and consistency with other jurisdictions, this study proposes a 20 year amortization. No graph is provided for this account.

**Account 376.04 Mains – Leak Clamps (20 SQ)**

This account includes the cost of leak clamps. There is approximately \$4.8 million in this account. The existing life is the 55 S4. Leak clamps are generally installed to mains in the last quarter of its life and are often missed in retirement reporting. This study has segregated and is proposing amortization accounting for better retirement recording. This study recommends moving to a 20 year amortization. No graph is provided for this account.

### Account 378.00 M&R Station Equipment (40 R4)

This account consists of various measuring equipment, regulator station and valves used in distribution operations. There is approximately \$8.9 million of investment in this account. The existing life is 40 years with the R2 dispersion. Discussions with Company personnel indicated some district regulator stations are not designed or planned for long term. Additionally, more electronic and technology based equipment is being installed, which causes the life to decrease when compared to the existing electromechanical assets. Current average age of surviving assets is 18.74 years. Average age of retirements is 31.34 years. The full bands indicate a longer life than existing and expected. However, more recent bands can support a 40 R4 but is based on limited experience. Based on the type of assets, analysis, expectations, and judgment, this study recommends retaining the 40 year life while moving to a steeper R4 dispersion pattern at this time. A graph of the combined accounts observed life table and recommendation is shown below for the 40 R4.

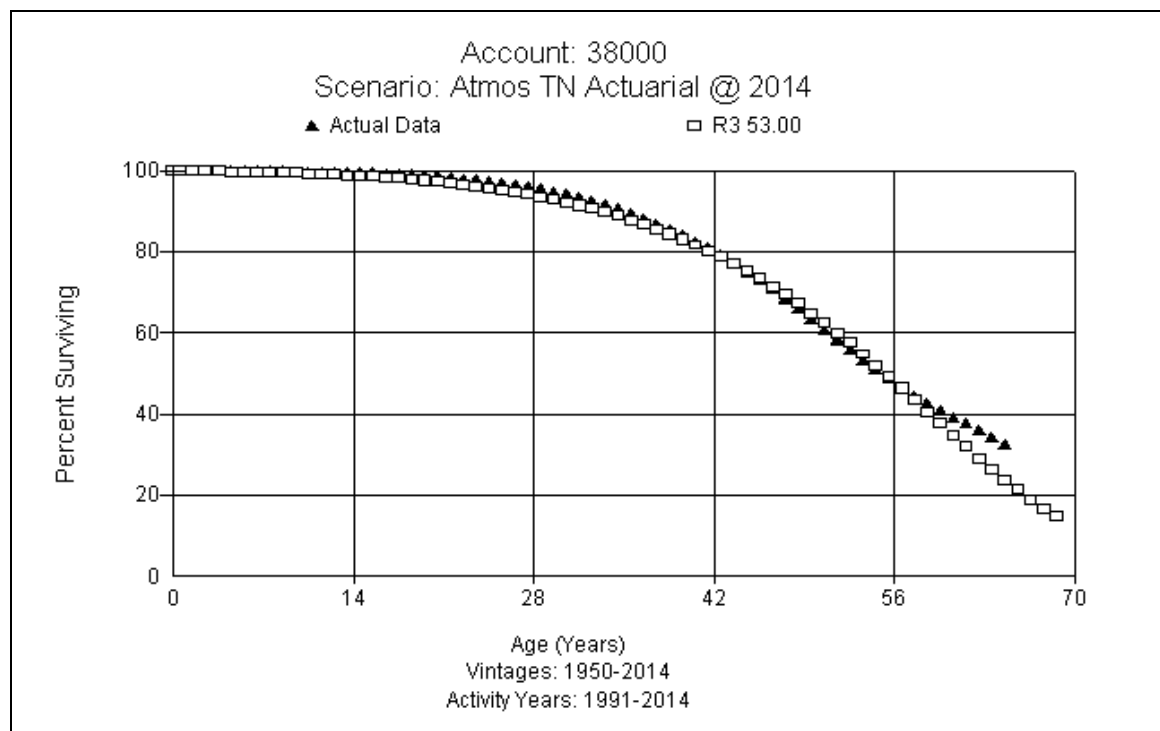


**Account 379.00, 379.03, & 379.05 M&R Station Equipment (45 R4)**

These accounts include the cost of measuring and regulating stations and other related equipment for city gate. There is approximately \$3 million total in these accounts. The existing life is 40 R2. Discussions with Company personnel indicated all measuring and regulating equipment are similar but the forces of retirement are different for each type. Company personnel expect city gate equipment to have a life longer than the district stations. The current average age of surviving assets is 15.87 years and no retirements have been recorded. Based on all the information available this study recommends moving city gate to 45 years while retaining the R4 dispersion pattern. Since no recent retirements have been recorded no graph is provided.

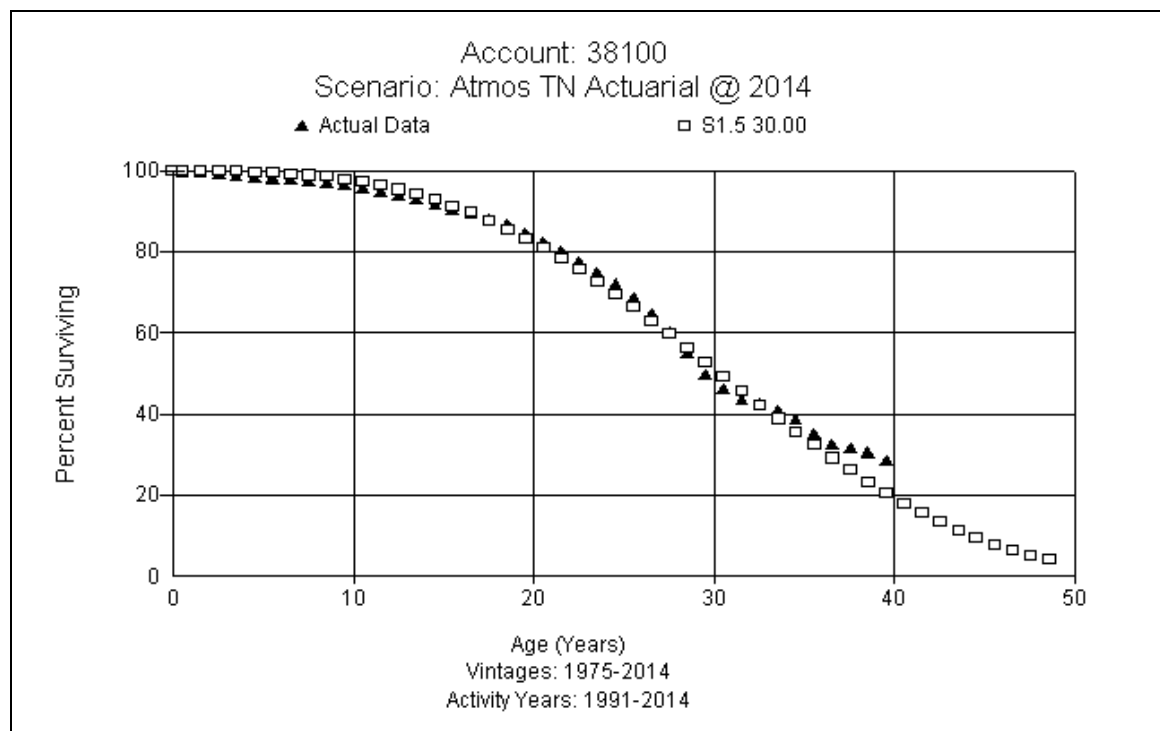
### Account 380.00 Services (53 R3)

This account consists of all types of services used in distribution operations. There is approximately \$115 million of investment in this account. There are a total of 145,103 services with 129,580 plastic. The existing life is the 48 R0.5. The actuarial analysis indicated a range of fits with lives of 45 to 57 years across the bands. The best fits are in the full band and the 53 R3 is an excellent fit. Discussions with Company personnel indicated PRP could be causing some replacement in services. However, leaks, dig-ins, abandoned buildings and moving meters are typically the causes for retirement. When replacing a main, would normally replace the service as well. All services after 1980 are plastic. Services are expected to have a life shorter than mains. Based on the analysis, temporary impact from the PRP, and input from Company personnel, this study recommends moving to the full band indications and increases the life from 48 years to 53 and change from the R0.5 to a steeper R3 dispersion. A graph of the observed life table and recommendation is shown below for the 53 R3.



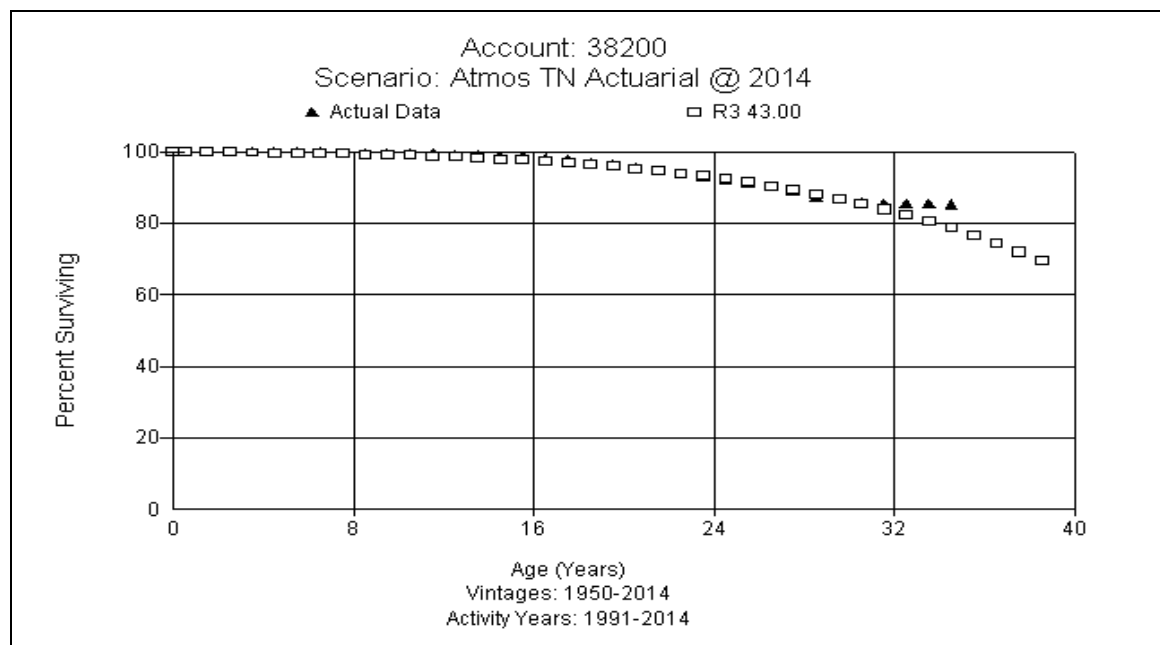
### Account 381.00 Meters (30 S1.5)

This account includes the cost of meters. The balance is \$19 million and the existing life is 36 R2.5. The current average age of investment is 10.54 years. With the introduction of automated meters, currently 41,000 installed, and with a significant increase expected in 2016 the life will begin to decrease. Discussions with Company personnel indicated the Sensus indexes should last at least 20 years based on the battery life. New meters are not as durable (plastic) and cost less so meters are no longer repaired but retired. Company performs military sampling of its meters. The analysis suggests the life to be 30 years or less. Company expects the life of meters to be around 25 years given the current mix of meters and the military sampling process in place. Based on the study indications and future plans to implement more AMR meters, which are expected to have a life around 20 years, this study recommends moving the life downward toward the current indications and closer to future expectations with the 30 S1.5. A graph of the observed life table and recommendation is shown below for the 30 S1.5.



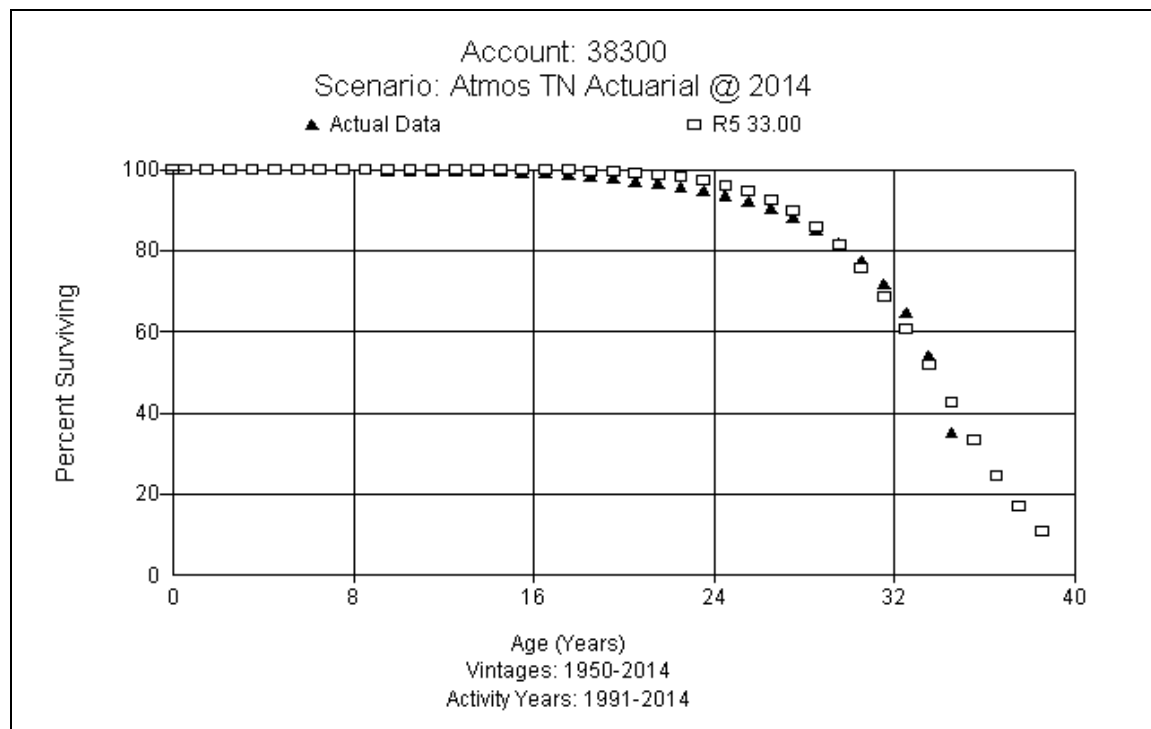
### Account 382.00 Meter Installations (43 R3)

This account includes the cost of meter installations. This account has a balance of \$32 million. The existing life is 40 R1. Discussions with Company personnel indicated these are part of what is called the meter bar, which the Company has been using for nearly 15 years. Company indicated that everything past the stopcock to the house piping is considered to be the meter bar and includes the regulator. However, inconsistent retirement reporting across 382, 383, and 385 accounts could be the reason for different life indications. While a combined analysis under the meter bar process makes sense, until the retirement reporting is consistent with the meter bar concept, a separate life for each account is more appropriate. This study recommends continued use of individual life parameters for the meter bar assets and the Company will evaluate the process for the next study. The analysis best fits range from 40 to 45 years across the bands analyzed, which is supported by Company expectations these assets would have a life closer to services than meters. Considering all the information, this study recommends moving to the 43 R3 at this time. A graph of the observed life table and recommendation is shown below for the 43 R3.



### Account 383.00 House Regulators (33 R5)

This account includes the cost of house regulators. There is approximately \$4.7 million in this account. The existing life is a 40 R3. Similar to the meter installation account, these assets are included in what is referred to as the meter bar. Discussions with Company personnel indicated they have been using the meter bar for approximately 15 years. Company personnel believe there may be some industrial regulators being charged into this account, which it plans to evaluate along with the meter bar retirement process for the next study. Based on the analysis and Company input, this study recommends moving to the 33 R5. A graph of the observed life table and recommendation is shown below for the 33 R5.



**Account 385.00 Industrial Measuring (40 R4)**

This account includes the cost of industrial rotary meters, regulator installations, regulator stations, valves and pressure recorders for industrial customers. There is approximately \$558 thousand in this account. The existing life is a 40 R2. This account has limited retirement activity being recorded and both average age of survivors and retirements is around 7 years. Discussions with Company personnel indicated there probably have been some cross reporting between this account and 381-383. They do repair certain parts of rotary meters and are pretty durable making a longer life, such as 40 years, a reasonable expectation. For now, due to only one small retirement in 2011, the same life parameter used for Account 378 is being recommended. No graph is provided.

**Account 387.00 Other Equipment**

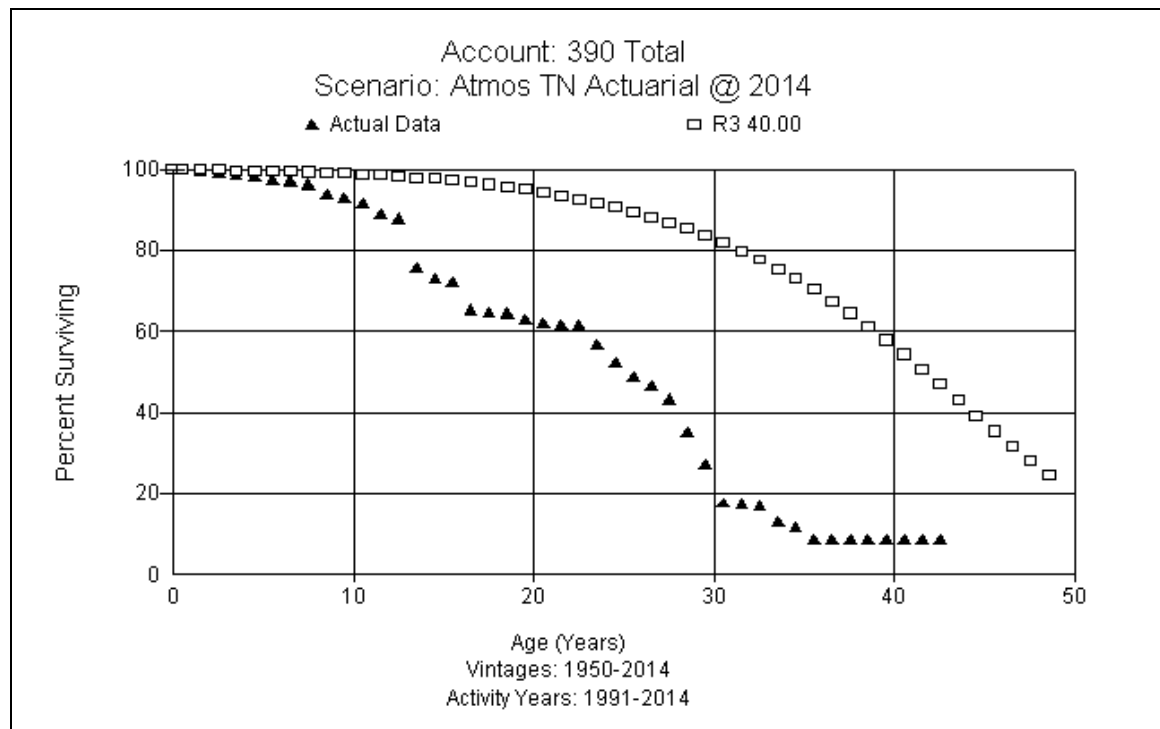
This account includes the cost of other equipment used in the distribution function. Currently there is no investment and the parameters supporting the existing rate are unknown. Should any new additions be added, this study recommends the existing rate be applied until it can be evaluated in the next study.



## **General Plant – FERC Accounts 390.00 - 399.07**

### **Account 390.00 and 390.03 Structures and Improvements (40 R3)**

These accounts include the cost of buildings, roof, heating/cooling equipment, and carpet. There is approximately \$1.5 million total in these accounts. The current life is a 40 R3. Consistent with the prior study and currently approved rates, all Account 390's, except 390.09, will be combined to calculate a depreciation rate to be applied to each account. The asset mix is approximately 60% structures and 40% improvements. The analysis indicated a life about half of the existing and was driven by Columbia and Shelbyville office repairs and Morristown roof repairs in 2006 along with more recent retirements in 2014. Considering the mix of assets, the analysis and discussions with Company personnel, despite the shorter life indications, this study recommends retention of the existing 40 R3 at this time. A graph of the observed life table and recommendation is shown below for the 40 R3.

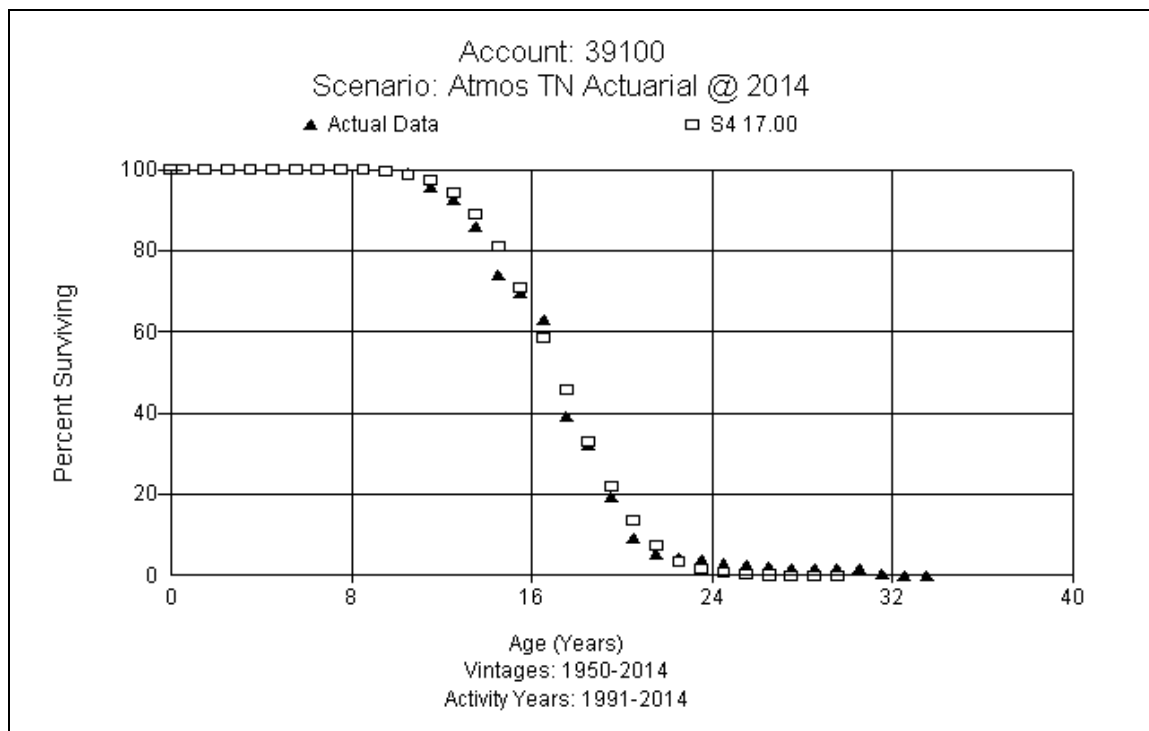


**Account 390.09 Improvements - Leased (25 SQ)**

This account includes the cost of improvements to leased buildings. There is approximately \$299 thousand in this account. The current life is a 40 R3 based on a combined analysis from the prior study. Since these assets are related to Company leased assets, this study has segregated this account and the analysis. Based on discussions with Company personnel a 25 year life is more consistent with the lease term and renewal option. This study recommends a 25 SQ at this time. No graph is provided.

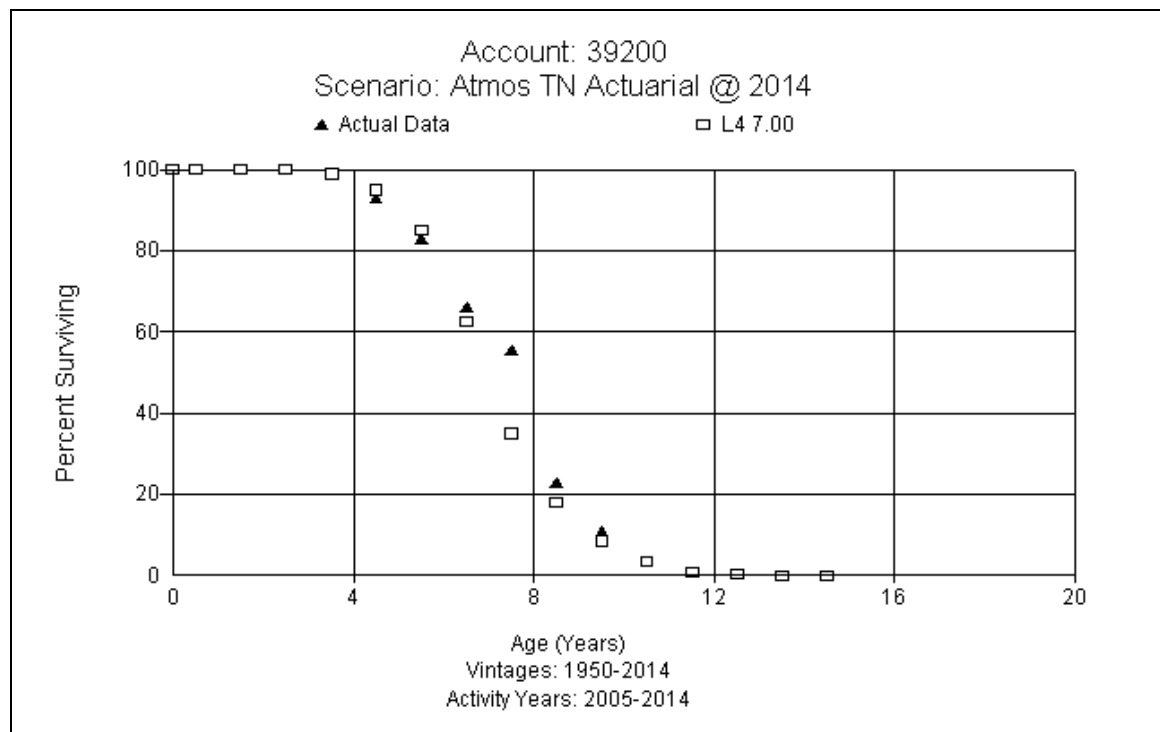
### Account 391.00 Office Furniture and Equipment (17 SQ)

This account consists of miscellaneous office furniture such as desks, chairs, filing cabinets, tables, copiers, and other office equipment used for general utility service. There is approximately \$466 thousand in this account after reflecting the retirement of assets that exceed the average service life recommendation. The existing life is 20 S6. Based on the type of assets and analysis, this study recommends reducing the life to 17 years based on the S4 dispersion pattern. This account is proposed to implement vintage group amortization, so the SQ dispersion pattern will be used for rate calculation purposes. A graph of the observed life table and recommendation is shown below for the 17 S4.



### Account 392.00 Transportation Equipment (7 L4)

This account consists of various types of transportation equipment and currently is comprised of Segway, tractor, and trailers. There is approximately \$316 thousand in this account. The current parameters are unknown. The life analysis indicates a life of 7 years across the bands analyzed except the most recent placement band analyzed where a slight increase in life was noted. Based on the surviving assets and consistent analysis across the majority of the other bands, this study recommends a 7 year life with the L4 dispersion pattern. A graph of the observed life table and recommendation is shown below for the 7 L4.

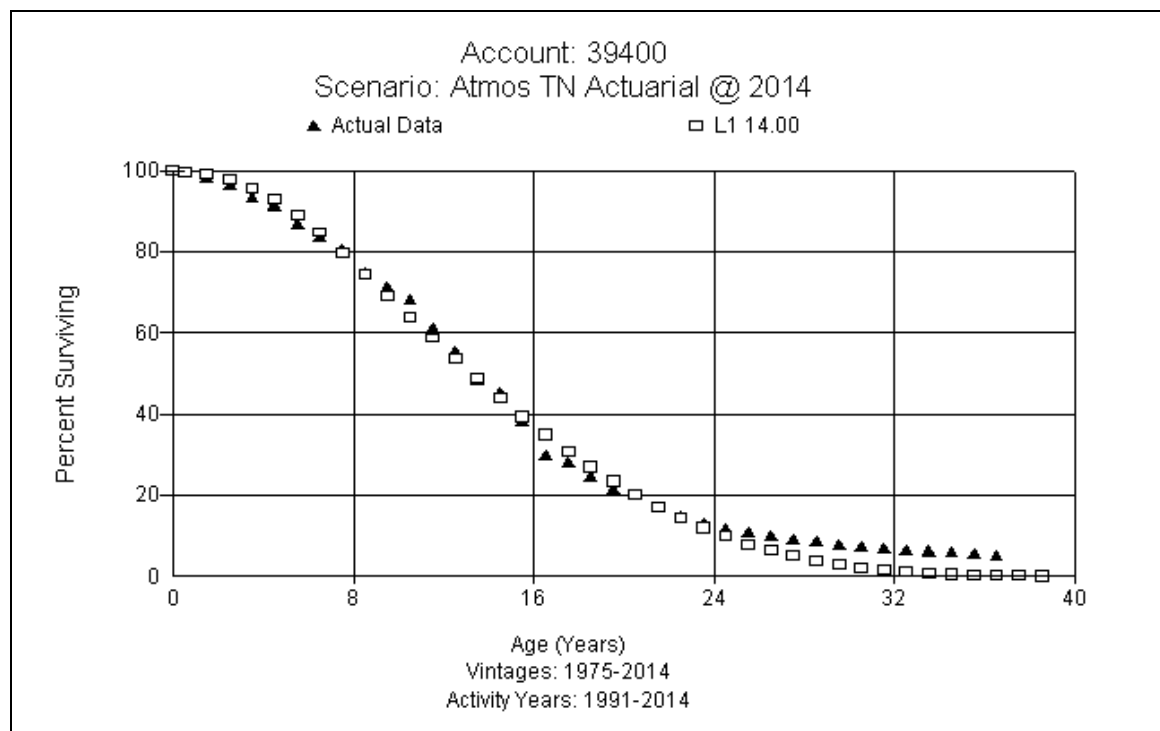


**Account 393.00 Stores Equipment (40 SQ)**

This account consists of various types of stores equipment. There is approximately \$10 thousand in this account after reflecting the retirement of assets that exceed the average service life recommendation. The current parameters are 30 R1. The average age of investment prior to AR 15 retirements is 41.90 years and is reflective of the fact the surviving assets are bins and shelving from 1960-1989 vintages. No curve fits were made due to limited retirements. Based on type of assets and judgment, this study recommends moving from the existing 30 years to 40 and retaining the R1 dispersion. This account is proposed to implement vintage group amortization, so the SQ dispersion pattern will be used for rate calculation purposes. No graph is provided.

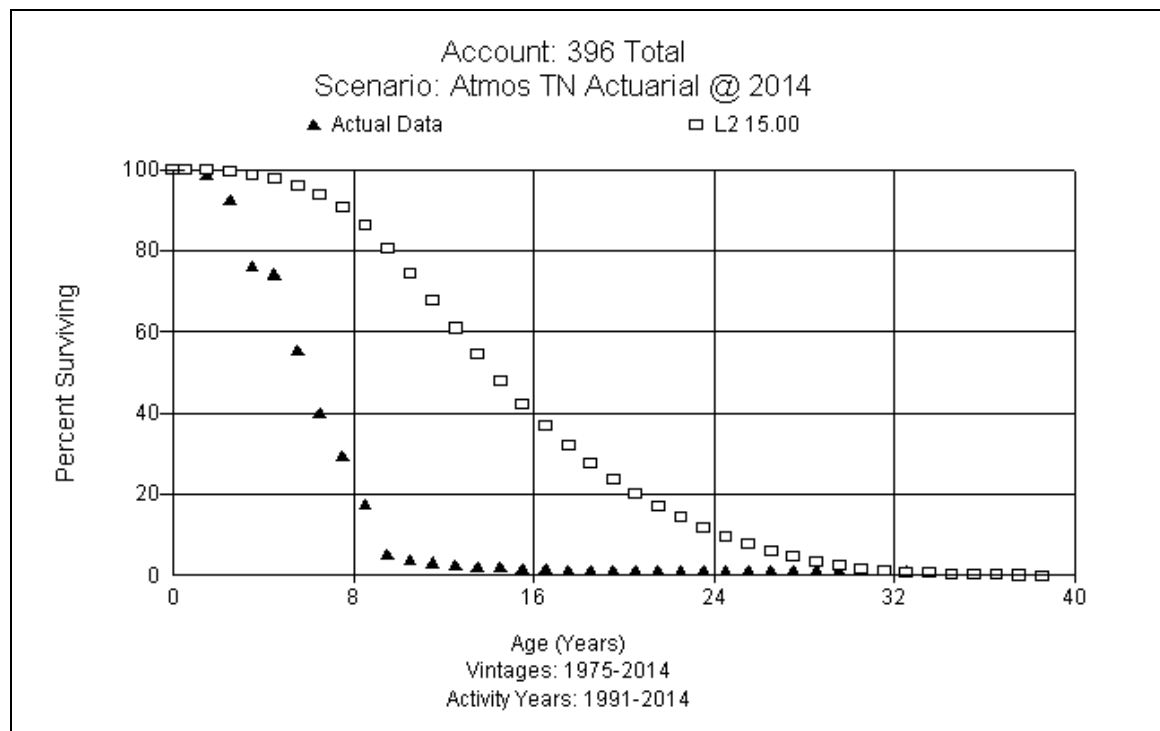
### Account 394.00 Tools, Shop, and Garage Equipment (14 SQ)

This account consists of various tools used in the shop and garages such as boring equipment, leak detectors, pipe locators, fusion, tapping, and plugging equipment. There is approximately \$1.1 million in this account after reflecting the retirement of assets that exceed the average service life recommendation. The existing life is 20 L1. The life analysis indications ranged from 10-14 years across the bands analyzed with the L1 14 an excellent fit. Based on the type of assets and the analysis, this study recommends moving from the existing 20 years to 14 based on the L1 dispersion. This account is proposed to implement vintage group amortization, so the SQ dispersion pattern will be used for rate calculation purposes. A graph of the observed life table and recommendation is shown below for the 14 L1.



### Account 396.00 Power Operated Equipment (15 L2)

This account consists of various power operated equipment. There is approximately \$110 thousand in this account. The current life is 10 years with the S5 dispersion and based on a combined analysis of all power operated equipment. Discussions with Company personnel indicated backhoes are majority of investment and they try to keep a fairly young (3-6 years) fleet for reliability reasons. In the past the Company had 3 year lease and then purchased the assets. They expect to continue leasing in the future. The combined analysis is being driven by the backhoe investment and practice of keeping assets for a shorter time. The current average age of the combined surviving assets is 9.20 years. Based on the combined analysis, type of surviving equipment and discussions with Company personnel, this study recommends increasing the life to 15 years and changing to the L2 dispersion to better reflect the life of the combined assets. A graph of the combined 396 Accounts observed life table and recommendation is shown below for the 15 L2.



**Account 396.03 Ditchers (15 L2)**

This account consists of ditchers. There is approximately \$27 thousand in this account. The current life is 10 years with the S5 dispersion. Consistent with the prior study a combined analysis was performed and a 15 L2 is recommended. See detailed discussion and graph in Account 396.00 above.

**Account 396.04 Backhoes (15 L2)**

This account consists of backhoes. There is approximately \$171 thousand in this account. The current life is 10 years with the S5 dispersion. Consistent with the prior study a combined analysis was performed and a 15 L2 is recommended. Discussions with Company personnel indicated backhoes were leased for 3 years then purchased. They expect to continue leasing backhoes in the future as well as the practice to keep the fleet young, between 3-6 years, for reliability reasons. See detailed discussion and graph in Account 396.00 above.

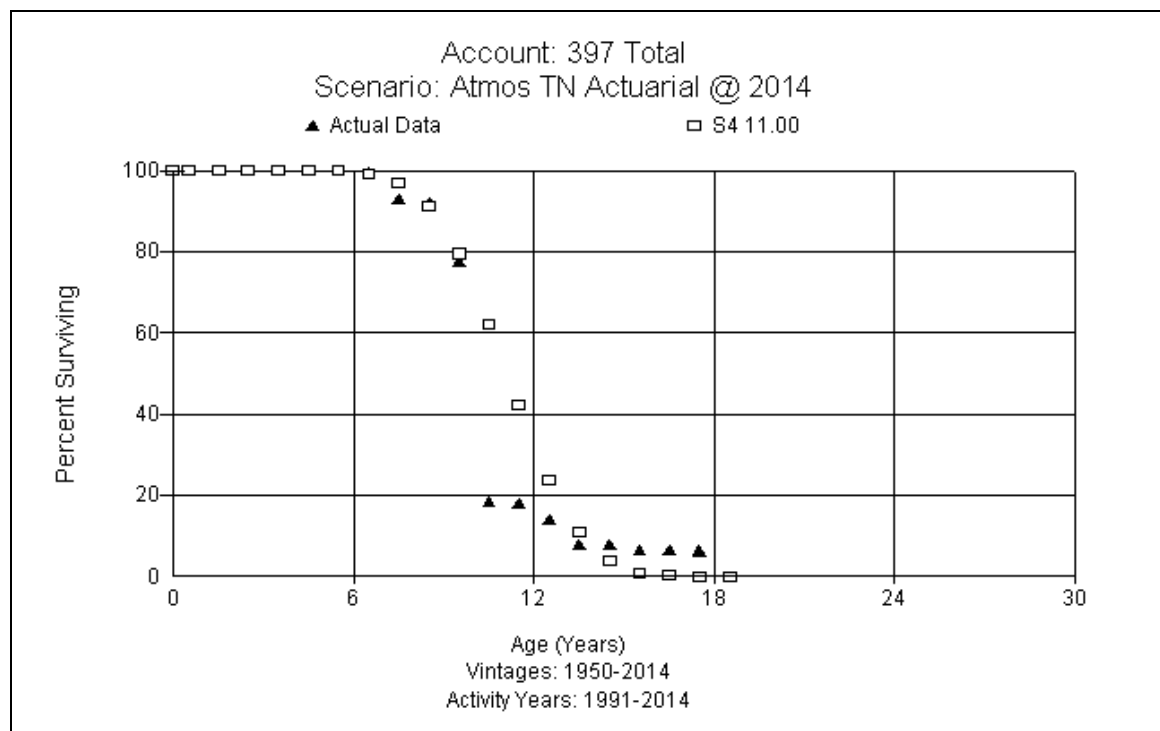
**Account 396.05 Welders (15 L2)**

This account consists of welders. There is approximately \$8 thousand in this account. The current life is 10 years with the S5 dispersion. Consistent with the prior study a combined analysis was performed and a 15 L2 is recommended. See detailed discussion and graph in Account 396.00 above.



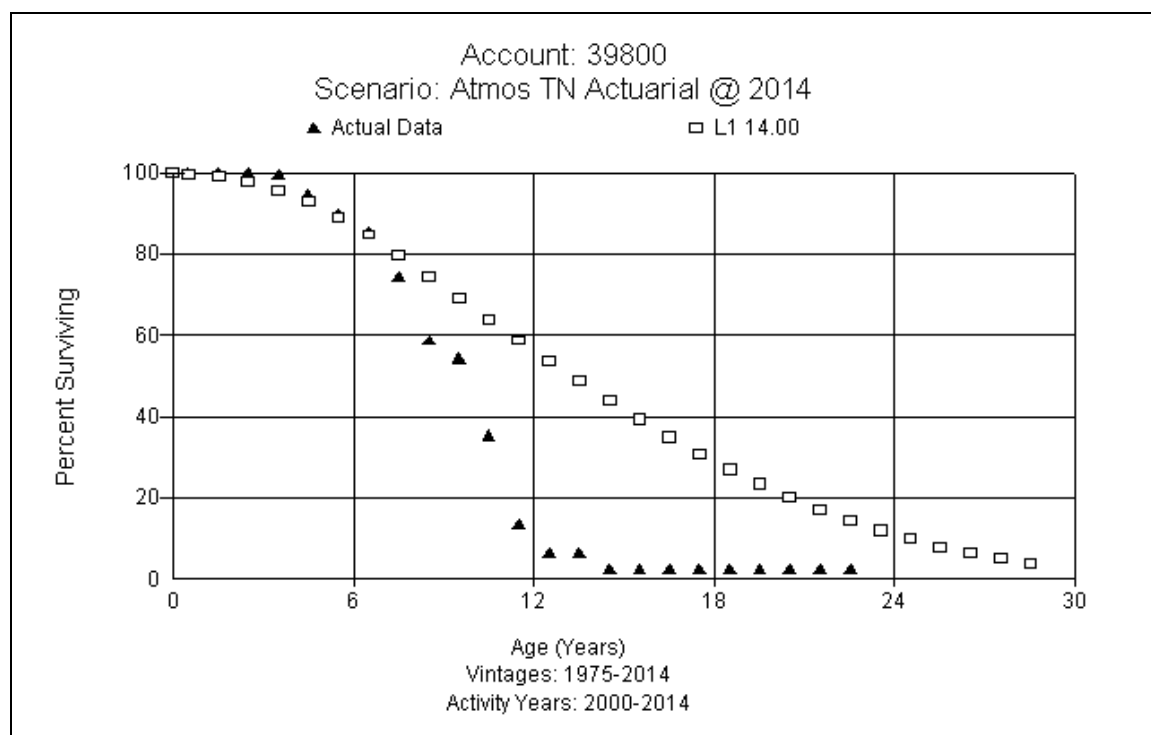
### Accounts 397.00, 397.01, 397.02, & 397.05 Communication Equipment (11 SQ)

These accounts consist of all communication equipment including mobile and fixed radio systems along with telephone, telemetering and other miscellaneous communication equipment. There is \$269 thousand total combined in these accounts after reflecting the retirement of assets that exceed the average service life recommendation. The existing life is 15 S6. The analysis indicates a life between 10-12 years across most of the bands analyzed. More recent bands indicate a slight increase to around 14 years. Discussion with Company personnel indicated majority of the account is related to phone systems. The average age of the surviving balance is 4.92 years. Based on the mix of assets, the analysis, and discussions with Company personnel, this study recommends moving to 11 years based on the S4 dispersion pattern. This account is proposed to implement vintage group amortization, so the SQ dispersion pattern will be used for rate calculation purposes. A graph of the observed life table and recommendation is shown below for the 11 S4.



### Account 398.00 Miscellaneous Equipment (14 SQ)

This account consists of kitchen, audio/video equipment, television, and other miscellaneous equipment used in general utility service. There is approximately \$1.3 million in this account after reflecting the retirement of assets that exceed the average service life recommendation. The existing life is a 10 S3. No fit across the analysis was over 10 years old, which is consistent with the existing life. However, after discussions with the Company personnel and understanding what assets would remain in the account, a life of 14 years with the L1 dispersion is being recommended. This account is proposed to implement vintage group amortization, so the SQ dispersion pattern will be used for rate calculation purposes. A graph of the observed life table and recommendation is shown below for the 14 L1.



**Account 399.00 Other Tangible Equipment (8 SQ)**

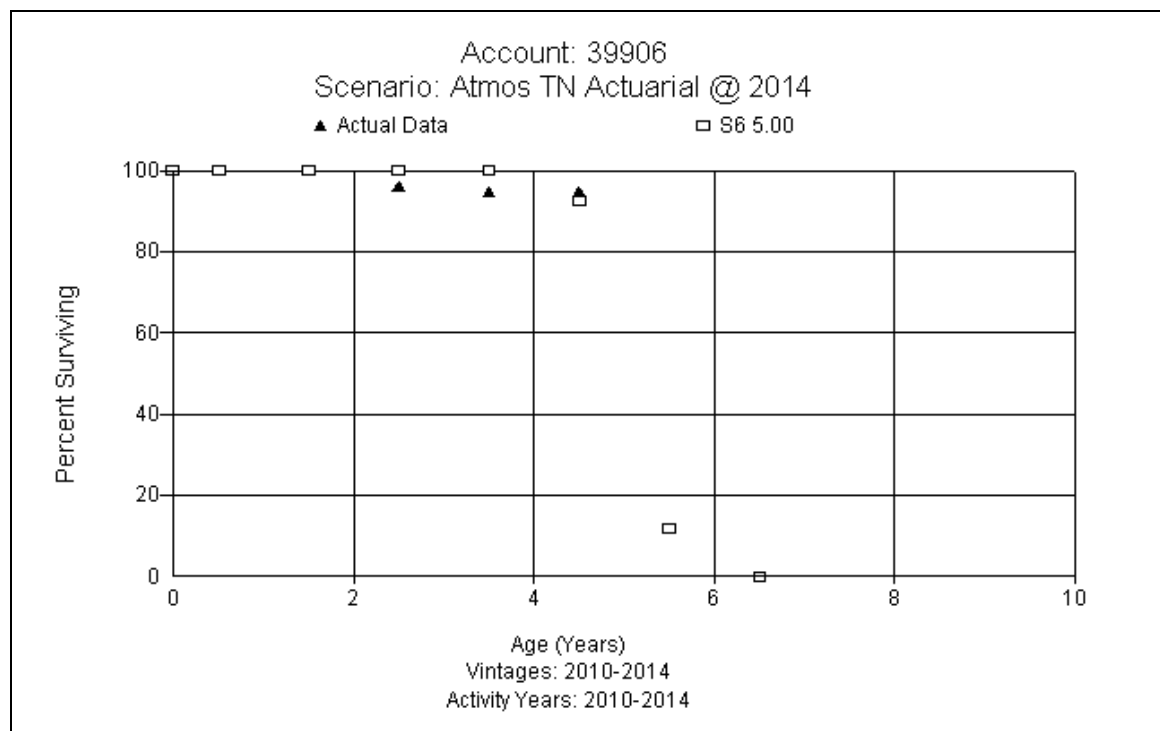
This account consists of various types of computer equipment. There is no balance in this account. The existing life is 6 S6 and was based on a combined analysis. This study has performed individual account life analysis where possible. The account historical data was too limited to produce meaningful curve fits. Based on type of equipment generally recorded into this account, Company input and judgment, this study recommends an 8 S6. This account is proposed to implement vintage group amortization, so the SQ dispersion pattern will be used for rate calculation purposes. No graph is provided.

**Account 399.01 Other Tangible Property - Server Hardware (8 SQ)**

This account consists of server hardware computer equipment. There is approximately \$13 thousand in this account. The existing life is 6 S6. The prior study was based on a combined analysis. This study has performed individual account life analysis. Servers are not expected to have as short a refresh cycle as PC equipment. The account historical data was too limited to produce meaningful curve fits. Based on type of equipment, Company input, and judgment, this study recommends the 8 S6. This account is proposed to implement vintage group amortization, so the SQ dispersion pattern will be used for rate calculation purposes. No graph is provided.

### Account 399.06 – PC Hardware (5 SQ)

This account consists of personal computer hardware, laptops, mobile data terminals (MDT), printers, monitors, and projectors. There is approximately \$437 thousand in this account after reflecting the retirement of assets that exceed the average service life recommendation. The existing life is 6 S6. The prior study was based on a combined analysis. This study has performed individual account life analysis. Discussions with Company personnel indicated the Company currently has a 4-5 year refresh cycle. The analysis suggested the life would be on the upper end of the refresh cycle. This study recommends moving to a 5 S6. This account is proposed to implement vintage group amortization, so the SQ dispersion pattern will be used for rate calculation purposes. A graph of the observed life table and recommendation is shown below for the 5 S6.



**Account 399.07 PC Software (6 SQ)**

This account consists of software for personal computers. There is currently no balance in this account. The existing life is 6 S6. The prior study was based on a combined analysis. This study has performed individual account life analysis. PC Software is not expected to have as short a life as PC equipment or it is smaller PC based software that has a slightly longer life. There are times when the software is not retired when a PC is but transferred for continued use. The account historical data was too limited to produce meaningful curve fits. Based on type of equipment, Company input and judgment, this study recommends retention of the 6 S6. This account is proposed to implement vintage group amortization, so the SQ dispersion pattern will be used for rate calculation purposes. No graph is provided.

### **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 Distribution asset in FERC Account 376 Steel Mains with a current installed cost of \$500 (2014) would have had an installed cost of \$25.56<sup>2</sup> in 1954. 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 negative 195 percent removal cost for that asset (\$50/\$25.56). 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 Tennessee can expect in its operations. As a result, the analysis not only looks at the historical experience 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. Generally, recent experience is more heavily weighted in making net salvage recommendations than experience older than 10 years.

### **Salvage Characteristics**

For each account, data for retirements, gross salvage, and cost of removal

---

<sup>2</sup> Using the Handy-Whitman Bulletin No. 181, G-2, line 44, \$25.56 = \$500 x 39/763.

were derived from 1996-2014. Moving averages, which remove timing differences between retirement and salvage and removal cost, were analyzed over periods varying from one to 19 years, which were evaluated in making the net salvage recommendations for the study. However, for purposes of printing in this report, we have limited it to a period of 10 years in Appendix D. A discussion for each account provides the recommended net salvage factor, the existing net salvage factor if known, and any specific considerations given to support the recommendations.

### **Transmission Plant – FERC Accounts 365.20 – 369.00**

#### **Account 365.20 Rights-of-Way (0%)**

This account includes any salvage and removal cost related to rights of way used in connection with transmission operations. The existing net salvage is zero percent and is retained.

#### **Account 366.00, 366.01, & 366.02 Meas. & Reg. Station Structures & Other Structures (0%)**

These accounts include any salvage and removal cost related to measuring and regulating station structures and other structures used in connection with transmission operations. The existing net salvage is zero percent. The combined account analysis for the most recent 10 years did not have any retirements, salvage or cost of removal recorded. While the expectation is that any salvage would be exceeded by cost of removal, there has been no experience. This study recommends retention of zero percent net salvage for these accounts.

#### **Account 367.00 Mains – Cathodic Protection (0%)**

This account includes any salvage and removal cost related to cathodic protection mains used in connection with transmission operations. These assets generally do not incur cost of removal and there is no salvage. Currently the net salvage for this account is negative 16 percent and was based on the combined

analysis with mains. This study has segregated the life and net salvage analysis and recommends using a zero percent net salvage for this account.

**Account 367.01 Mains – Steel (-9%)**

This account includes any salvage and removal cost related to steel mains used in connection with transmission operations. Currently, the net salvage for this account is negative 35 percent. The Company recently completed a separate Time and Motion Study to evaluate the costs related to retirement activities for its Mains and Services. The results of this study are factored into the net salvage analysis for this account. The current analysis indicates a continued pattern of negative net salvage with a negative 8 and 9 percent for the five and ten year averages, respectively. Based on the indications in the time and motion study, this study recommends moving to negative 9 percent net salvage at this time.

**Account 369.00 Measuring and Reg. Station (-4%)**

These accounts include any salvage and removal cost related to measuring and regulating station equipment used in connection with transmission operations. The existing net salvage for these accounts is negative 5 percent. The prior study performed a combined analysis. However, in the current analysis, all measuring and regulating equipment have been analyzed separate. Using the combined analysis, overall indications suggest there is no salvage and some cost of removal will be incurred. Based on the overall indications in the combined analysis, this study recommends moving to negative 4 percent net salvage for this account.

**Distribution Plant – FERC Accounts 374.00 – 387.00**

**Account 374.02 Land Rights (0%)**

This account includes any salvage and removal cost related to land rights used in connection with distribution operations. Existing net salvage is zero percent. Very small salvage was recorded, but not expected to occur in the future. This study recommends retaining the zero percent net salvage for this



account.

#### **Account 375.00 & 375.01 Structures and Improvements (All) (0%)**

These accounts consist of any salvage and removal cost related to buildings, border station and regulating station structures, fences, and other miscellaneous related assets used in connection with distribution operations. The existing net salvage is zero percent. The combined analysis indicates no salvage and no cost of removal. However, at terminal retirement, it is possible that cost of removal would exceed any salvage. The overall indications continue to support the retention of the existing. This study recommends retaining the existing zero percent net salvage for these accounts.

#### **Account 376.00 Mains - Cathodic Protected (0%)**

This account consists of any salvage and removal cost related to cathodic protected mains. The existing net salvage is negative 25 percent. The existing is due to the combined analysis with mains. This study has segregated anodes and leak clamps in this account and there is no salvage or cost of removal expected. Therefore, this study recommends a zero percent net salvage for this account.

#### **Account 376.01 Mains - Steel (-23%)**

This account consists of any salvage and removal cost related to steel mains. The existing net salvage is negative 25 percent. The Company recently completed a separate Time and Motion Study to evaluate the costs related to retirement activities for its Mains and Services. The results of this study are factored into the net salvage analysis for this account. The current analysis is consistent with the prior study and was performed on a combined basis as well as individually. The combined analysis is the basis for the recommendation in this study and it continues to indicate a pattern of negative net salvage with an overall negative 23 percent for the most recent full moving average. The Company is in the final year of a 10 year replacement program, which has increased the amount of retirements, salvage and

cost of removal. Based on the overall 10 year indications in the Time and Motion analysis, this study recommends moving from a negative 25 to negative 23 percent at this time.

**Account 376.02 Mains - Plastic (-23%)**

This account consists of any salvage and removal cost related to plastic mains. The existing net salvage is negative 25 percent. The Company recently completed a separate Time and Motion Study to evaluate the costs related to retirement activities for its Mains and Services. The results of this study are factored into the net salvage analysis for this account. The current analysis indicates a continued pattern of negative net salvage with an overall negative 23 percent for the most recent full moving average. Based on the combined analysis for both steel and plastic, this study recommends using negative 23 percent net salvage for both steel and plastic mains at this time.

**Account 376.03 Mains - Anodes (0%)**

This account consists of any salvage and removal cost related to anodes. The existing net salvage is negative 25 percent, which is based on the combined analysis for all mains. Due to the segregation, no salvage or cost of removal is expected. This study recommends moving to zero percent net salvage.

**Account 376.04 Mains – Leak Clamps & Sleeves (0%)**

This account consists of any salvage and removal cost related to leak clamps and sleeves. The existing net salvage is negative 25 percent, which is based on the combined analysis for all mains. Due to the segregation, no salvage or cost of removal is expected to occur or be reported for these assets in the future. This study recommends retention of zero percent net salvage.

**Account 378.00 M&R Station Equipment (-4%)**

This account includes any salvage and removal cost related to measuring

equipment, regulator station and valves used in distribution operations. The existing net salvage is negative 5 percent. Cost of removal is expected to exceed any salvage and is seen in the analysis. The most recent overall moving average is negative 4 percent and is consistent indication for several of the prior years. Based on these indications, this study recommends moving to a negative 4 percent net salvage at this time.

**Account 379.00, 379.03, & 379.05 M&R Station Equipment (-4%)**

These accounts include any salvage and removal cost related to station equipment used in measuring and regulating gas at the city gate. The existing net salvage is negative 5 percent. There has been no retirement, salvage or cost of removal recorded in the past 10 years. Based on the similar types of assets and process to retire, this study relies on the indications of Account 378, which is a negative 4 percent.

**Account 380.00 Services (-5%)**

This account includes any salvage and removal cost related to all types of services related to distribution operations. The existing net salvage is negative 20 percent. Consistent negative net salvage indications are shown in every year. The overall indications in the analysis indicate cost of removal is increasing. However, the Company recently completed a separate Time and Motion Study to evaluate the costs related to retirement activities for its Mains and Services. The results of this study are factored into the net salvage analysis for this account. This analysis indicates a continued pattern of negative net salvage with an overall negative 5 percent for the most recent full moving average. There are known timing differences in the recording of retirements and associated salvage and cost of removal, which we have factored into the analysis. Based on the results of the Time and Motion Study and the resulting overall indications in the most recent moving average, this study recommends moving to a negative 5 percent net salvage for this account.

**Account 381.00 Meters (-8%)**

This account includes any salvage and removal cost related to meters. The existing net salvage is negative 41 percent. The Company has been using the meter bar for a number of years but separate reporting has continued. In the prior study meters and meter installations were combined. However, the link of these assets is not clear in the activity. The Company has indicated it will research its retirement process for the next study. Based on the current study analysis, cost of removal has consistently exceeded any salvage for the past 10 years. Based on the most recent moving averages, this study recommends moving from the existing negative 41 percent to negative 8 percent.

**Account 382.00 Meter Installations (-41%)**

This account includes any salvage and removal cost related to meter installations. The existing net salvage is negative 41 percent. The prior study meters and meter installations were combined. However, the link of these assets is not clear in the activity. The Company has indicated it will research its retirement process for the next study. The current analysis indicates a more negative net salvage factor of negative 60 percent. Based on the indications, the Company agreeing to research the process for the next study, and timing differences that are known to occur there is no reason to change at this time. This study recommends retention of the existing negative 41 percent net salvage at this time.

**Account 383.00 House Regulators (-3%)**

This account includes any salvage and removal cost related to house regulators. The existing net salvage is zero percent. The prior study performed a combined analysis. The Company indicated it is using a meter bar, which would create a link between house regulators, meter installations and meters. However, this was not reflected in the activity so a separate analysis has been performed. The current analysis indicated a more negative net salvage factor of negative 10 percent in the overall moving average. However, the Company will research its

retirement process for the next study and understanding there are timing differences that occur, it is not appropriate to move fully to the current indications at this point. Based on all the information, this study recommends moving toward the current analysis indications but limiting the change. This study recommends a negative 3 percent net salvage at this time.

#### **Account 385.00 Industrial Measuring (-4%)**

This account includes any salvage and removal cost related to meters, regulator installations, regulator stations, valves and pressure recorders for industrial customers. The existing net salvage is negative 5 percent. The prior study performed a combined analysis. Based on discussions with Company personnel some of the measuring and regulating equipment do exhibit different characteristics so a separate life and net salvage analysis has been performed. However, limited activity has not allowed for a meaningful analysis, so understanding there are some similarities in the retirement, removal and salvage of the assets, this study has relied upon the indications in Account 378. This study recommends moving from negative 5 percent to negative 4 percent at this time.

#### **Account 387.00 Other Equipment (0%)**

This account includes any salvage and removal cost related to other equipment used in the distribution function. Currently there is no investment and the parameters supporting the existing rate are unknown. Should any new additions be added, this study recommends the existing rate be applied until it can be evaluated in the next study.

### **General Plant – FERC Accounts 390.00 - 399.07**

#### **Account 390.00 & 390.03 Structures and Improvements (0%)**

These accounts include the gross salvage and cost or removal for costs of structures and improvements used for utility service. The existing net salvage is 5

percent and is based on a combined analysis. This study also performed a combined analysis. There has been no salvage or cost of removal recorded in the past 10 years. This study recommends moving to zero percent net salvage at this time.

**Account 390.09 Improvements – Leased (0%)**

This account includes the gross salvage and cost or removal for costs of improvements to leased structures used for utility service. The existing net salvage is 5 percent. This study has segregated this account due to the link to leased assets. There has been no salvage or cost of removal recorded, so this study recommends a zero percent net salvage for this account at this time.

**Account 391.00 Office Furniture & Equipment (0%)**

This account includes the gross salvage and cost or removal for office furniture, equipment and office machines used for utility service. The existing net salvage is zero percent. No significant salvage or cost of removal have been recorded nor is it expected in the future. This study recommends retaining zero percent net salvage for this account at this time.

**Account 392.00 Transportation Equipment (20%)**

This account consists of gross salvage and cost of removal for cars, trucks, and other equipment. The existing net salvage is not known. The current analysis indicates some salvage is being recorded and is expected to continue in the future. Based on the most recent overall moving average indications, this study recommends a positive 20 percent net salvage.

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

This account consists of gross salvage and cost of removal for stores equipment. The existing net salvage is zero percent. Some salvage was recorded in 2007 but has not reoccurred and is not expected. This study recommends retention

of zero percent net salvage at this time.

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

This account includes the gross salvage and cost or removal for tools, shop, and garage equipment used for utility service. The existing net salvage is zero percent. Some salvage has been recorded over the years, but is minimal and has declined to zero in recent years. The expectation is that little to no salvage will be received at the end of life, this study recommends retaining a zero percent net salvage for this account at this time.

#### **Account 396.00 Power Operated Equipment (13%)**

This account includes the gross salvage and cost or removal for power operated equipment that cannot be licensed on roadways. The existing net salvage is zero percent. Consistent with the prior study both the life and net salvage analysis for all 396 accounts has been performed. Based on the combined analysis, this study sees an upward trend in salvage receipts. The most recent moving averages range from positive 2 to 14 percent. Some salvage is expected and has been recorded. This study recommends a positive 13 percent net salvage.

#### **Account 396.03 Power Operated Equipment - Ditchers (13%)**

This account includes the gross salvage and cost or removal for ditchers that cannot be licensed on roadways. The existing net salvage is zero percent. Consistent with the prior study both the life and net salvage analysis for all 396 accounts has been performed. Based on the combined analysis, this study sees an upward trend in salvage receipts. The most recent moving averages range from positive 2 to 14 percent. Some salvage is expected and has been recorded. This study recommends moving to positive 13 percent net salvage at this time.

#### **Account 396.04 Power Operated Equipment - Backhoes (13%)**

This account includes the gross salvage and cost or removal for backhoes

that cannot be licensed on roadways. The existing net salvage is zero percent. Consistent with the prior study both the life and net salvage analysis for all 396 accounts has been performed. Based on the combined analysis, this study sees an upward trend in salvage receipts. The most recent moving averages range from positive 2 to 14 percent. Some salvage is expected and has been recorded. This study recommends moving to positive 13 percent net salvage at this time.

**Account 396.05 Power Operated Equipment - Welders (13%)**

This account includes the gross salvage and cost or removal for welders that cannot be licensed on roadways. The existing net salvage is zero percent. Consistent with the prior study both the life and net salvage analysis for all 396 accounts has been performed. Based on the combined analysis, this study sees an upward trend in salvage receipts. The most recent moving averages range from positive 2 to 14 percent. Some salvage is expected and has been recorded. This study recommends moving to positive 13 percent net salvage at this time.

**Accounts 397.00, 397.01, 397.02, & 397.05 Communication Equipment (0%)**

These accounts include the gross salvage and cost or removal for radios, mobile communication equipment, telephone and other types of communication equipment. The existing net salvage is zero percent. Consistent with the prior study a combined analysis was performed. Typically, these assets do not produce any gross salvage or removal cost. This study recommends retaining zero percent net salvage for these accounts.

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

This account includes the gross salvage and cost or removal for miscellaneous equipment. The existing net salvage is zero percent. Small negative net salvage is indicated, but these assets typically will not produce any gross salvage or removal cost at end of life. This study recommends retaining zero percent net salvage for this account.



**Account 399.00 Other Tangible Equipment (0%)**

This account consists of gross salvage and cost of removal for other tangible equipment. The existing net salvage is zero percent. Typically, these assets do not produce any gross salvage or removal cost. This study recommends retaining zero percent net salvage for this account.

**Account 399.01 Other Tangible Property - Server Hardware (0%)**

This account consists of gross salvage and cost of removal for network hardware computer equipment. The existing net salvage is zero percent. Typically, these assets do not produce any gross salvage or removal cost. This study recommends retaining zero percent net salvage for this account.

**Account 399.06 PC Hardware (0%)**

This account consists of gross salvage and cost of removal for personal computer hardware, laptop, printers, monitors, and projectors. The existing net salvage is zero percent. Typically, these assets do not produce any gross salvage or removal cost. This study recommends retaining a zero percent net salvage for this account.

**Account 399.07 PC Software (0%)**

This account consists of gross salvage and cost of removal for software for personal computers. The existing net salvage is zero percent. Typically, these assets do not produce any gross salvage or removal cost. This study recommends retaining zero percent net salvage for this account.

**APPENDIX A**  
**Comparison of Depreciation Rates**

**Atmos Energy Corporation - Tennessee Properties**  
**Comparison of Depreciation Expense**  
**Existing vs Proposed Depreciation Accrual Rates**  
**As of September 30, 2014**

Account	Description	Plant Balance at 9/30/2014	Existing		Proposed		Change in Depreciation Expense
			Annual Accrual Rate	Annual Accrual	Annual Accrual Rate	Annual Accrual	
(a)	(b)	(c)	(d)	(e)	[f]	[g]	[h]
<b>TRANSMISSION PLANT</b>							
36520 Rights-Of-Way		348,971.01	1.47%	5,129.87	1.52%	5,311.11	181.24
36600 Structures & Improvements	*	2,679.36	2.47%	66.18	4.34%	116.30	50.12
36700 Mains - Cathodic Protection		91,687.07	2.92%	2,677.26	4.08%	3,740.61	1,063.34
36701 Mains - Steel		11,338,802.42	2.72%	308,415.43	2.37%	269,263.01	(39,152.42)
36900 M&R Station Equipment		1,629,190.68	2.85%	46,431.93	4.28%	69,802.03	23,370.09
<b>Total Transmission</b>		<b>13,411,330.54</b>	<b>2.70%</b>	<b>362,720.68</b>	<b>2.60%</b>	<b>348,233.05</b>	<b>(14,487.63)</b>
<b>DISTRIBUTION PLANT</b>							
37402 Land & Land Rights		826,512.32	0.48%	3,967.26	1.37%	11,362.04	7,394.78
37500 Structures & Improvements*		41,594.57	1.55%	644.72	2.09%	867.49	222.78
37600 Mains - Cathodic Protection		904,981.33	1.99%	18,009.13	3.86%	34,931.96	16,922.83
37601 Mains - Steel		62,268,635.57	1.99%	1,239,145.85	1.92%	1,196,573.18	(42,572.66)
37602 Mains - Plastic		161,360,322.33	1.99%	3,211,070.41	1.91%	3,083,592.86	(127,477.55)
37603 Mains-Anodes		576,447.74	1.99%	11,471.31	5.00%	28,822.39	17,351.08
37604 Mains-Leak Clamps		4,820,475.84	1.99%	95,927.47	5.00%	241,023.79	145,096.32
37800 M&R Station Equipment		8,946,574.36	1.81%	161,933.00	2.31%	206,923.05	44,990.06
37900 M&R Station Equipment - City Gate*		3,015,989.72	2.43%	73,288.55	2.13%	64,200.26	(9,088.29)
37903 M&R Station Equipment - City Gate		-	3.46%	-	2.13%	-	-
37905 M&R Station Equipment - City Gate		-	3.46%	-	2.13%	-	-
38000 Services		115,218,328.69	2.01%	2,315,888.41	1.85%	2,136,136.57	(179,751.84)
38100 Meters		19,251,298.70	4.00%	770,051.95	3.37%	648,549.54	(121,502.41)
38200 Meter Installations		32,041,418.58	3.03%	970,854.98	3.07%	982,092.00	11,237.01
38300 House Regulators		4,747,514.92	1.62%	76,909.74	2.73%	129,380.59	52,470.85
38500 Industrial M&R Equipment		557,853.28	2.49%	13,890.55	2.50%	13,957.77	67.23
<b>Total Distribution</b>		<b>414,577,947.95</b>	<b>2.16%</b>	<b>8,963,053.32</b>	<b>2.12%</b>	<b>8,778,413.48</b>	<b>(184,639.83)</b>
<b>GENERAL PLANT - DEPRECIATED</b>							
39000 Structures & Improvements		1,539,872.36	1.89%	29,103.59	2.59%	39,835.93	10,732.34
39003 Improvements		12,061.64	1.89%	227.96	2.59%	312.03	84.07
39009 Improvements - Leased		299,225.17	1.89%	5,655.36	4.93%	14,751.97	9,096.61
39200 Transportation Equipment		315,644.90	10.38%	32,763.94	14.74%	46,520.70	13,756.76
39600 Power Operated Equipment		110,272.48	37.47%	41,319.10	6.53%	7,195.48	(34,123.62)
39603 Power Operated -Ditchers		26,757.57	37.47%	10,026.06	6.53%	1,745.98	(8,280.08)
39604 Power Operated - Backhoes		170,986.72	37.47%	64,068.72	6.53%	11,157.19	(52,911.53)
39605 Power Operated - Welders		8,349.48	37.47%	3,128.55	6.53%	544.82	(2,583.73)
<b>Total General Depreciated</b>		<b>2,483,170.32</b>	<b>7.50%</b>	<b>186,293.28</b>	<b>4.92%</b>	<b>122,064.10</b>	<b>(64,229.18)</b>

**Atmos Energy Corporation - Tennessee Properties**  
**Comparison of Depreciation Expense**  
**Existing vs Proposed Depreciation Accrual Rates**  
**As of September 30, 2014**

Account	Description	Plant Balance at 9/30/2014	Existing		Proposed		Change in Depreciation Expense
			Annual Accrual Rate	Annual Accrual	Annual Accrual Rate	Annual Accrual	
(a)	(b)	(c)	(d)	(e)	[f]	[g]	[h]
<b>Total Depreciated Plant</b>		<b>430,472,448.81</b>	<b>2.21%</b>	<b>9,512,067.28</b>	<b>2.15%</b>	<b>9,248,710.63</b>	<b>(263,356.65)</b>
<b>GENERAL PLANT - AMORTIZED (1)</b>							
39100 Office Furniture And Equipment		466,491.80	6.36%	29,668.88	5.88%	27,440.69	(2,228.18)
39300 Stores Equipment		10,151.96	1.59%	161.42	2.50%	253.80	92.38
39400 Tools Shop And Garage		1,063,050.35	9.69%	103,009.58	7.14%	75,932.17	(27,077.41)
39700 Communication Equipment*		269,116.28	9.77%	26,292.66	9.09%	24,465.12	(1,827.54)
39800 Miscellaneous Equipment		1,346,440.79	11.64%	156,725.71	7.14%	96,174.34	(60,551.37)
39900 Other Tangible Equipment	**	-	12.69%	-	12.50%	-	-
39901 Other Tangible Property - Servers		13,144.39	12.69%	1,668.02	12.50%	1,643.05	(24.97)
39906 PC Hardware		437,160.65	12.69%	55,475.69	20.00%	87,432.13	31,956.44
39907 PC Software	**	-	12.69%	-	16.67%	-	-
<b>Total General Amortized</b>		<b>3,605,556.22</b>	<b>10.35%</b>	<b>373,001.95</b>	<b>8.69%</b>	<b>313,341.30</b>	<b>(59,660.65)</b>
<b>Total General</b>		<b>6,088,726.54</b>	<b>9.19%</b>	<b>559,295.23</b>	<b>7.15%</b>	<b>435,405.40</b>	<b>(123,889.84)</b>
<b>TOTAL PLANT IN STUDY</b>		<b>\$ 434,078,005.03</b>	<b>2.28%</b>	<b>\$ 9,885,069.23</b>	<b>2.20%</b>	<b>\$ 9,562,051.93</b>	<b>\$ (323,017.30)</b>
<b>Annual Amortization for Deficit</b>							<b>70,773.34</b>
<b>TOTAL DEPRECIATION STUDY</b>							<b>\$ (252,243.96)</b>

\*Denotes accounts with subaccounts that are combined for one parameter and resulting depreciation rate.

(1) General Plant - Amortization rate and amount does not include deficit/surplus amount.

\*\*Denotes amortization accounting is recommended and a rate (1- net salvage % / life) is recommended for possible future additions.

## **APPENDIX B**

### **Calculation of Equal Life Group**

**Atmos Energy - Tennessee Properties**  
**Computation of Depreciation Accrual Rates**  
**At September 30, 2014**

Account	Description	Plant In Service 09/30/2014	Allocated Book Depreciation 09/30/2014	Net Salvage %	Net Salvage Amount	Unaccrued Balance	Remaining Life	Annual Accrual Amount	Annual Accrual Rate
<b>TRANSMISSION PLANT</b>									
36520	Rights-Of-Way	\$ 348,971.01	\$ 54,931.40	0%	\$ -	\$ 294,039.61	55.36	\$ 5,311.11	1.52%
36600	M&R Station Structures & Improvements *	2,679.36	1,109.37	0%	0.00	1,569.99	13.50	116.30	4.34%
36700	Mains - Cathodic Protection	91,687.07	7,523.43	0%	0.00	84,163.64	22.50	3,740.61	4.08%
36701	Mains - Steel	11,338,802.42	5,155,372.44	-9%	(1,020,492.22)	7,203,922.20	26.75	269,263.01	2.37%
36900	M&R Station Equipment	1,629,190.68	923,247.96	-4%	(65,167.63)	771,110.35	11.05	69,802.03	4.28%
	<b>Total Transmission</b>	<b>13,411,330.54</b>	<b>6,142,184.59</b>		<b>(1,085,659.85)</b>	<b>8,354,805.80</b>		<b>348,233.05</b>	<b>2.60%</b>
<b>DISTRIBUTION PLANT</b>									
37402	Land Rights	826,512.32	182,273.60	0%	0.00	644,238.72	56.70	11,362.04	1.37%
37500	Structures & Improvements *	41,594.57	13,355.92	0%	0.00	28,238.65	32.55	867.49	2.09%
37600	Mains - Cathodic Protection	904,981.33	236,117.97	0%	0.00	668,863.36	19.15	34,931.96	3.86%
37601	Mains - Steel	62,268,635.57	24,963,075.98	-23%	(14,321,786.18)	51,627,345.77	43.15	1,196,573.18	1.92%
37602	Mains - Plastic	161,360,322.33	68,337,600.99	-23%	(37,112,874.14)	130,135,595.47	42.20	3,083,592.86	1.91%
37603	Mains - Anodes	576,447.74	224,187.89	0%	0.00	352,259.85	12.22	28,822.39	5.00%
37604	Mains - Leak Clamps	4,820,475.84	2,109,694.98	0%	0.00	2,710,780.86	11.25	241,023.79	5.00%
37800	M&R Station Equipment	8,946,574.36	4,566,793.54	-4%	(357,862.97)	4,737,643.80	22.90	206,923.05	2.31%
37900	M&R Station Equipment - City Gate *	3,015,989.72	1,221,613.61	-4%	(120,639.59)	1,915,015.70	29.83	64,200.26	2.13%
38000	Services	115,218,328.69	40,115,049.61	-5%	(5,760,916.43)	80,864,195.51	37.86	2,136,136.57	1.85%
38100	Meters	19,251,298.70	6,887,776.43	-8%	(1,540,103.90)	13,903,626.17	21.44	648,549.54	3.37%
38200	Meter Installations	32,041,418.58	15,140,619.47	-41%	(13,136,981.62)	30,037,780.72	30.59	982,092.00	3.07%
38300	House Regulators	4,747,514.92	2,567,087.48	-3%	(142,425.45)	2,322,852.89	17.95	129,380.59	2.73%
38500	Industrial M& R Equipment	557,853.28	127,838.60	-4%	(22,314.13)	452,328.81	32.41	13,957.77	2.50%
	<b>Total Distribution</b>	<b>414,577,947.95</b>	<b>166,693,086.08</b>		<b>(72,515,904.41)</b>	<b>320,400,766.28</b>		<b>8,778,413.48</b>	<b>2.12%</b>
<b>GENERAL PLANT DEPRECIATED</b>									
39000	Structures & Improvements *	1,551,934.00	226,219.55	0%	0.00	1,325,714.45	33.02	40,147.96	2.59%
39009	Improvements - Leased	299,225.17	146,373.81	0%	0.00	152,851.36	10.36	14,751.97	4.93%
39200	Transportation Equipment	315,644.90	134,514.53	20%	63,128.98	118,001.39	2.54	46,520.70	14.74%
39600	Power Operated Equipment *	316,366.25	99,271.18	13%	41,127.61	175,967.46	8.52	20,643.47	6.53%
	<b>Total General Depreciated</b>	<b>2,483,170.32</b>	<b>606,379.08</b>		<b>104,256.59</b>	<b>1,772,534.65</b>		<b>122,064.10</b>	<b>4.92%</b>
	<b>Total Study Depreciated</b>	<b>\$ 430,472,448.81</b>	<b>\$ 173,441,649.75</b>		<b>\$ (73,497,307.66)</b>	<b>\$ 330,528,106.72</b>		<b>\$ 9,248,710.63</b>	<b>2.15%</b>

\*Denotes accounts with subaccounts that are combined for one parameter and resulting depreciation rate .

**Atmos Energy - Tennessee Properties**  
**Computation of Depreciation Accrual Rates - General Plant Amortized**  
**At September 30, 2014**

<b>GENERAL PLANT - AMORTIZED</b>		<b>Plant</b>	<b>Reserve</b>	<b>Theoretical</b>	<b>Reserve</b>	<b>Reserve</b>	<b>Amortize</b>	<b>Assets</b>
<b>Account</b>	<b>Description</b>	<b>Balance</b>	<b>09/30/2014</b>	<b>Reserve</b>	<b>(Deficit)/Surplus</b>	<b>Recovery</b>	<b>Reserve</b>	<b>Greater Than</b>
		<b>09/30/2014</b>	<b>09/30/2014</b>	<b>09/30/2014</b>		<b>Period (Yrs)</b>	<b>Deficit/Surplus</b>	<b>ASL</b>
39100	Office Furniture and Equipment - All	\$ 479,038.59	\$ 218,390.84	\$ 258,941.84	\$ (40,551.00)	4.00	\$ 10,137.75	\$ 12,546.79
39300	Stores Equipment	19,807.05	16,546.47	17,904.06	(1,357.59)	4.00	339.40	9,655.09
39400	Tools, Shop, and Garage Equipment	1,315,770.68	535,673.00	591,414.29	(55,741.29)	4.00	13,935.32	252,720.33
39700	Communication Equipment	282,203.79	92,155.99	107,732.37	(15,576.38)	4.00	3,894.10	13,087.51
39800	Miscellaneous Equipment	1,511,127.84	787,609.22	910,324.05	(122,714.83)	4.00	30,678.71	164,687.05
39901	Network Hardware	13,144.39	7,137.73	8,543.85	(1,406.12)	4.00	351.53	-
39906	PC Hardware	876,269.49	671,324.35	717,070.50	(45,746.14)	4.00	11,436.54	439,108.84
<b>Total General Amortized</b>		<b>4,497,361.83</b>	<b>2,328,837.59</b>	<b>2,611,930.95</b>	<b>(283,093.36)</b>		<b>70,773.34</b>	<b>891,805.61</b>

**After Retirements of Assets With Age > Average Service Life**

<b>Account</b>	<b>Description</b>	<b>Plant</b>	<b>Reserve</b>	<b>Annual</b>	<b>Accrual</b>	<b>Total</b>	<b>Annual</b>
		<b>Balance</b>	<b>09/30/2014</b>	<b>Amortization</b>	<b>For Reserve</b>	<b>Amortization</b>	<b>Amortization</b>
		<b>09/30/2014</b>	<b>09/30/2014</b>	<b>(1)</b>	<b>Deficit/Surplus</b>	<b>(2)</b>	<b>%</b>
3910C	Office Furniture and Equipment - All	466,491.80	205,844.05	27,440.69			5.88%
3910C	Office Furniture and Equipment - All				10,137.75		(3)
3910C	Total					37,578.44	
39300	Stores Equipment	10,151.96	6,891.38	253.80			2.50%
39300	Stores Equipment				339.40		(3)
39300	Total					593.20	
39400	Tools, Shop, and Garage Equipment	1,063,050.35	282,952.67	75,932.17			7.14%
39400	Tools, Shop, and Garage Equipment				13,935.32		(3)
39400	Total					89,867.49	
39700	Communication Equipment	269,116.28	79,068.48	24,465.12			9.09%
39700	Communication Equipment				3,894.10		(3)
39700	Total					28,359.21	
39800	Miscellaneous Equipment	1,346,440.79	622,922.17	96,174.34			7.14%
39800	Miscellaneous Equipment				30,678.71		(3)
39800	Total					126,853.05	
39901	Network Hardware	13,144.39	7,137.73	1,643.05			12.50%
39901	Network Hardware				351.53		(3)
39901	Total					1,994.58	
39906	PC Hardware	437,160.65	232,215.51	87,432.13			20.00%
39906	PC Hardware				11,436.54		(3)
39906	Total					98,868.67	
<b>Total General Amortized After Ret</b>		<b>\$ 3,605,556.22</b>	<b>\$ 1,437,031.98</b>	<b>\$ 313,341.30</b>	<b>\$ 70,773.34</b>	<b>\$ 384,114.64</b>	

(1) Annual Amortization is 1/life of asset group excluding Deficit/Surplus accrual.

(2) Total Amortization is Annual Amortization plus Deficit/Surplus Annual Accrual that will occur over 4 years. After 4 years only annual amortization amount will be recorded.

(3) Amortization of Reserve (Deficit)/Surplus is a fixed dollar amount over a four (4) year period.

**APPENDIX C**  
**Mortality Characteristics**



**Atmos Energy Corporation - Tennessee Properties**  
**Comparison of Mortality Characteristics**  
**As of September 30, 2014**

Account	Description	EXISTING					PROPOSED					
		ASL	Curve	Salvage	COR	Net Salvage	ASL	Curve	Salvage	COR	Net Salvage	
TRANSMISSION PLANT												
36520	Rights-Of-Way	65.0	R5	0%	0%	0%	70	R5	0%	0%	0%	
36600	Structures & Improvements*	30.0	SQ	0%	0%	0%	30	SQ	0%	0%	0%	
36700	Mains - Cathodic Protection	44.0	-	0%	16%	-16%	25	SQ	0%	0%	0%	
36701	Mains - Steel	55.0	S4	0%	35%	-35%	60	R4	0%	9%	-9%	
36900	M&R Station Equipment	40.0	R2	0%	5%	-5%	40	R4	0%	4%	-4%	
DISTRIBUTION PLANT												
37402	Land Rights	65.0	R5	0%	0%	0%	70	R5	0%	0%	0%	
37500	Structures & Improvements*	45.0	R5	0%	0%	0%	45	R5	0%	0%	0%	
37600	Mains - Cathodic Protection	55.0	S4	0%	25%	-25%	25	SQ	0%	0%	0%	
37601	Mains - Steel	55.0	S4	0%	25%	-25%	60	R4	0%	23%	-23%	
37602	Mains - Plastic	55.0	S4	0%	25%	-25%	60	R4	0%	23%	-23%	
37603	Mains-Anodes	55.0	S4	0%	25%	-25%	20	SQ	0%	0%	0%	
37604	Mains-Leak Clamps	55.0	S4	0%	25%	-25%	20	SQ	0%	0%	0%	
37800	M&R Station Equipment	40.0	R2	0%	5%	-5%	40	R4	0%	4%	-4%	
37900	M&R Station Equipment - City Gate*	40.0	R2	0%	5%	-5%	45	R4	0%	4%	-4%	
37903	M&R Station Equipment - City Gate	29.7	-	0%	0%	0%	45	R4	0%	4%	-4%	
37905	M&R Station Equipment - City Gate	29.7	-	0%	0%	0%	45	R4	0%	4%	-4%	
38000	Services	48.0	R0.5	0%	20%	-20%	53	R3	0%	5%	-5%	
38100	Meters	36.0	R2.5	0%	41%	-41%	30	S1.5	0%	8%	-8%	
38200	Meter Installations	40.0	R1	0%	41%	-41%	43	R3	0%	41%	-41%	
38300	House Regulators	40.0	R3	0%	0%	0%	33	R5	0%	3%	-3%	
38500	Industrial M&R Equipment	40.0	R2	0%	5%	-5%	40	R4	0%	4%	-4%	
GENERAL PLANT												
39000	Structures & Improvements	40.0	R3	5%	0%	5%	40	R3	0%	0%	0%	
39003	Improvements	40.0	R3	5%	0%	5%	40	R3	0%	0%	0%	
39009	Improvements-Leased	40.0	R3	5%	0%	5%	25	SQ	0%	0%	0%	
39100	Office Furniture And	20.0	S6	0%	0%	0%	17	S4	**	0%	0%	
39200	Transportation Equipment		PARAMETERS UNKNOWN					7	L4		20%	20%
39300	Stores Equipment	30.0	R1	0%	0%	0%	40	R1	**	0%	0%	
39400	Tools Shop And Garage	20.0	L1	0%	0%	0%	14	L1	**	0%	0%	
39600	Power Operated Equipment	10.0	S5	0%	0%	0%	15	L2		13%	13%	
39603	Power Operated -Ditchers	10.0	S5	0%	0%	0%	15	L2		13%	13%	
39604	Power Operated - Backhoes	10.0	S5	0%	0%	0%	15	L2		13%	13%	

**Atmos Energy Corporation - Tennessee Properties**  
**Comparison of Mortality Characteristics**  
**As of September 30, 2014**

Account	Description	EXISTING					PROPOSED				
		ASL	Curve	Salvage	COR	Net Salvage	ASL	Curve	Salvage	COR	Net Salvage
39605	Power Operated - Welders	10.0	S5	0%	0%	0%	15	L2	13%	0%	13%
39700	Communication Equipment*	15.0	S6	0%	0%	0%	11	S4	**	0%	0%
39800	Miscellaneous Equipment	10.0	S3	0%	0%	0%	14	L1	**	0%	0%
39900	Other Tangible Equipment	6.0	S6	0%	0%	0%	8	S6	**	0%	0%
39901	Other Tangible Property - Servers	6.0	S6	0%	0%	0%	8	S6	**	0%	0%
39906	PC Hardware	6.0	S6	0%	0%	0%	5	S6	**	0%	0%
39907	PC Software	6.0	S6	0%	0%	0%	6	S6	**	0%	0%

\*Denotes accounts with subaccounts that are combined for one parameter and resulting depreciation rate.

\*\*Denotes accounts that fall under vintage amortization and will use an SQ dispersion pattern for rate calculation purposes.

**APPENDIX D**  
**Net Salvage**

		Retirements	Gross	Cost of	Net	Net	2-yr	3-yr	4-yr	5-yr	6-yr	7-yr	8-yr	9-yr	10-yr
Year	Account Description		Salvage	Removal	Salvage	Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %
2005	36520-Rights-Of-Way	0	0	0	0	NA									
2006	36520-Rights-Of-Way	0	0	0	0	NA	NA								
2007	36520-Rights-Of-Way	0	0	0	0	NA	NA	NA							
2008	36520-Rights-Of-Way	0	0	0	0	NA	NA	NA	NA						
2009	36520-Rights-Of-Way	0	0	0	0	NA	NA	NA	NA	NA					
2010	36520-Rights-Of-Way	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	36520-Rights-Of-Way	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2012	36520-Rights-Of-Way	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2013	36520-Rights-Of-Way	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2014	36520-Rights-Of-Way	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2005	36600-Structures & Improvements	0	0	0	0	NA									
2006	36600-Structures & Improvements	0	0	0	0	NA	NA								
2007	36600-Structures & Improvements	0	0	0	0	NA	NA	NA							
2008	36600-Structures & Improvements	0	0	0	0	NA	NA	NA	NA						
2009	36600-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA					
2010	36600-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	36600-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2012	36600-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2013	36600-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2014	36600-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2005	36700-Mains - Cathodic Protection	0	0	0	0	NA									
2006	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA								
2007	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA							
2008	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA						
2009	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA					
2010	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2012	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
201	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2013	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Time and Motion Adjusted															
2005	36700-Mains - Cathodic Protection	0	0	0	0	NA									
2006	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA								
2007	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA							
2008	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA						
2009	36700-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA	</				

**Atmos Energy - Tennessee Properties**  
**Net Salvage Analysis - Retirements, Salvage and Cost of Removal 2005-2014**  
**Depreciation Study as of September 30, 2014**

Year	Account Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2005	36701-Mains-Steel	0	0	0	0	NA									
2006	36701-Mains-Steel	0	0	0	0	NA	NA								
2007	36701-Mains-Steel	0	0	0	0	NA	NA	NA							
2008	36701-Mains-Steel	0	0	0	0	NA	NA	NA	NA						
2009	36701-Mains-Steel	0	0	1,214	-1,214	NA	NA	NA	NA	NA					
2010	36701-Mains-Steel	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	36701-Mains-Steel	0	0	307	-307	NA	NA	NA	NA	NA	NA	NA			
2012	36701-Mains-Steel	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2013	36701-Mains-Steel	0	0	11,597	-11,597	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2014	36701-Mains-Steel	677,843	0	39,216	-39,216	-5.79%	-7.50%	-7.50%	-7.54%	-7.54%	-7.72%	-7.72%	-7.72%	-7.72%	-7.72%
<b>Time and Motion Adjusted</b>															
2005	36701-Mains-Steel	-	-	-	0	NA									
2006	36701-Mains-Steel	-	-	7,784.79	-7,785	NA	NA								
2007	36701-Mains-Steel	-	-	279.69	-280	NA	NA	NA							
2008	36701-Mains-Steel	-	-	-	0	NA	NA	NA	NA						
2009	36701-Mains-Steel	-	-	-	0	NA	NA	NA	NA	NA					
2010	36701-Mains-Steel	-	-	954.99	-955	NA	NA	NA	NA	NA	NA				
2011	36701-Mains-Steel	-	-	45,415.39	-45,415	NA	NA	NA	NA	NA	NA	NA			
2012	36701-Mains-Steel	-	-	(30,588.74)	30,589	NA	NA	NA	NA	NA	NA	NA	NA		
2013	36701-Mains-Steel	-	-	38,641.23	-38,641	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2014	36701-Mains-Steel	677,843.42	-	567.60	-568	-0.08%	-5.78%	-1.27%	-7.97%	-8.11%	-8.11%	-8.11%	-8.15%	-9.30%	-9.30%
2005	36900-M&R Station Equipment	0	0	0	0	NA									
2006	36900-M&R Station Equipment	0	0	0	0	NA	NA								
2007	36900-M&R Station Equipment	0	0	0	0	NA	NA	NA							
2008	36900-M&R Station Equipment	0	0	0	0	NA	NA	NA	NA						
2009	36900-M&R Station Equipment	0	0	0	0	NA	NA	NA	NA	NA					
2010	36900-M&R Station Equipment	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	36900-M&R Station Equipment	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2012	36900-M&R Station Equipment	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2013	36900-M&R Station Equipment	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2014	36900-M&R Station Equipment	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2005	37402-Land Rights	0	0	0	0	NA									
2006	37402-Land Rights	0	0	0	0	NA	NA								
2007	37402-Land Rights	0	0	0	0	NA	NA	NA							
2008	37402-Land Rights	0	0	0	0	NA	NA	NA	NA						
2009	37402-Land Rights	0	0	0	0	NA	NA	NA	NA	NA					
2010	37402-Land Rights	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	37402-Land Rights	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2012	37402-Land Rights	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2013	37402-Land Rights	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2014	37402-Land Rights	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2005	37500-Structures & Improvements	0	0	0	0	NA									
2006	37500-Structures & Improvements	0	0	0	0	NA	NA								

**Atmos Energy - Tennessee Properties**  
**Net Salvage Analysis - Retirements, Salvage and Cost of Removal 2005-2014**  
**Depreciation Study as of September 30, 2014**

Year	Account Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2007	37500-Structures & Improvements	0	0	0	0	NA	NA	NA							
2008	37500-Structures & Improvements	0	0	0	0	NA	NA	NA	NA						
2009	37500-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA					
2010	37500-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	37500-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2012	37500-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2013	37500-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2014	37500-Structures & Improvements	577,157	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	37600-Mains - Cathodic Protection	6,878	0	0	0	0.00%									
2006	37600-Mains - Cathodic Protection	0	0	0	0	NA	0.00%								
2007	37600-Mains - Cathodic Protection	0	25	30	-5	NA	NA	-0.08%							
2008	37600-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	-0.08%						
2009	37600-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	-0.08%					
2010	37600-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA	-0.08%				
2011	37600-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA	NA	-0.08%			
2012	37600-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	-0.08%		
2013	37600-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	-0.08%	
2014	37600-Mains - Cathodic Protection	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	-0.08%
<b>Time and Motion Adjusted</b>															
2005	37600-Mains - Cathodic Protection	6,877.93	-	-	0	0.00%									
2006	37600-Mains - Cathodic Protection	-	-	2,609.88	-2,610	NA	-37.95%								
2007	37600-Mains - Cathodic Protection	-	25.26	457.94	-433	NA	NA	-44.24%							
2008	37600-Mains - Cathodic Protection	-	-	-	0	NA	NA	NA	-44.24%						
2009	37600-Mains - Cathodic Protection	-	-	-	0	NA	NA	NA	NA	-44.24%					
2010	37600-Mains - Cathodic Protection	-	-	-	0	NA	NA	NA	NA	NA	-44.24%				
2011	37600-Mains - Cathodic Protection	-	-	-	0	NA	NA	NA	NA	NA	NA	-44.24%			
2012	37600-Mains - Cathodic Protection	-	-	-	0	NA	NA	NA	NA	NA	NA	NA	-44.24%		
2013	37600-Mains - Cathodic Protection	-	-	-	0	NA	NA	NA	NA	NA	NA	NA	NA	-44.24%	
2014	37600-Mains - Cathodic Protection	-	-	-	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	-44.24%
2005	37601-Mains - Steel	23,039	0	17,284	-17,284	-75.02%									
2006	37601-Mains - Steel	299,871	36	337,333	-337,297	-112.48%	-109.81%								
2007	37601-Mains - Steel	319,252	0	60,228	-60,228	-18.87%	-64.21%	-64.60%							
2008	37601-Mains - Steel	219,258	0	38,969	-38,969	-17.77%	-18.42%	-52.06%	-52.68%						
2009	37601-Mains - Steel	18,433	0	28,676	-28,676	-155.57%	-28.46%	-22.96%	-54.29%	-54.83%					
2010	37601-Mains - Steel	0	0	11,035	-11,035	NA	-215.44%	-33.10%	-24.94%	-55.58%	-56.09%				
2011	37601-Mains - Steel	0	0	0	0	NA	NA	-215.44%	-33.10%	-24.94%	-55.58%	-56.09%			
2012	37601-Mains - Steel	0	0	0	0	NA	NA	NA	-215.44%	-33.10%	-24.94%	-55.58%	-56.09%		
2013	37601-Mains - Steel	73,417	0	36,398	-36,398	-49.58%	-49.58%	-49.58%	-64.61%	-82.86%	-36.99%	-27.81%	-55.10%	-55.59%	
2014	37601-Mains - Steel	214,637	0	62,078	-62,078	-28.92%	-34.19%	-34.19%	-34.19%	-38.02%	-45.09%	-33.70%	-28.09%	-50.20%	-50.69%
<b>Time and Motion Adjusted</b>															
2005	37601-Mains - Steel	23,038.93	-	45,030.49	-45,030	-195.45%									
2006	37601-Mains - Steel	299,871.06	35.94	43,761.19	-43,725	-14.58%	-27.49%								
2007	37601-Mains - Steel	319,251.69	-	11,746.08	-11,746	-3.68%	-8.96%	-15.65%							

**Atmos Energy - Tennessee Properties**  
**Net Salvage Analysis - Retirements, Salvage and Cost of Removal 2005-2014**  
**Depreciation Study as of September 30, 2014**

<b>Year</b>	<b>Account Description</b>	<b>Retirements</b>	<b>Gross Salvage</b>	<b>Cost of Removal</b>	<b>Net Salvage</b>	<b>Net Salv. %</b>	<b>2- yr Net Salv. %</b>	<b>3- yr Net Salv. %</b>	<b>4- yr Net Salv. %</b>	<b>5- yr Net Salv. %</b>	<b>6- yr Net Salv. %</b>	<b>7- yr Net Salv. %</b>	<b>8- yr Net Salv. %</b>	<b>9- yr Net Salv. %</b>	<b>10- yr Net Salv. %</b>
2008	37601-Mains - Steel	219,257.88	-	26,724.15	-26,724	-12.19%	-7.14%	-9.80%	-14.77%						
2009	37601-Mains - Steel	18,432.66	-	19,850.81	-19,851	-107.69%	-19.59%	-10.47%	-11.91%	-16.72%					
2010	37601-Mains - Steel	-	-	757.29	-757	NA	-111.80%	-19.91%	-10.61%	-12.00%	-16.80%				
2011	37601-Mains - Steel	-	-	17,114.54	-17,115	NA	NA	-204.65%	-27.11%	-13.68%		-18.75%			
2012	37601-Mains - Steel	-	-	7,363.51	-7,364	NA	NA	NA	-244.60%	-30.21%	-15.00%	-14.86%	-19.58%		
2013	37601-Mains - Steel	73,417.20	-	59,993.34	-59,993	-81.72%	-91.75%	-115.06%	-116.09%	-114.40%	-42.37%	-22.77%	-20.13%	-24.37%	
2014	37601-Mains - Steel	214,636.58	-	20,735.93	-20,736	-9.66%	-28.03%	-30.58%	-36.52%	-36.79%	-41.05%	-29.01%	-19.44%	-18.17%	-21.67%
2005	37602-Mains - Plastic	9,371	0	1,005	-1,005	-10.72%									
2006	37602-Mains - Plastic	11,927	197	690	-493	-4.13%	-7.03%								
2007	37602-Mains - Plastic	20,214	0	6,063	-6,063	-29.99%	-20.40%	-18.21%							
2008	37602-Mains - Plastic	19,181	0	9,431	-9,431	-49.17%	-39.33%	-31.15%	-27.99%						
2009	37602-Mains - Plastic	0	0	0	0	NA	-49.17%	-39.33%	-31.15%	-27.99%					
2010	37602-Mains - Plastic	0	0	0	0	NA	NA	-49.17%	-39.33%	-31.15%	-27.99%				
2011	37602-Mains - Plastic	0	0	0	0	NA	NA	NA	-49.17%	-39.33%	-31.15%	-27.99%			
2012	37602-Mains - Plastic	0	0	0	0	NA	NA	NA	NA	-49.17%	-39.33%	-31.15%	-27.99%		
2013	37602-Mains - Plastic	590	0	10,266	-10,266	-1739.67%	-1739.67%	-1739.67%	-1739.67%	-1739.67%	-99.62%	-64.42%	-50.57%	-44.48%	
2014	37602-Mains - Plastic	0	0	0	0	NA	-1739.67%	-1739.67%	-1739.67%	-1739.67%	-1739.67%	-99.62%	-64.42%	-50.57%	-44.48%
<b>Time and Motion Adjusted</b>															
2005	37602-Mains - Plastic	9,371.26	-	3,479.44	-3,479	-37.13%									
2006	37602-Mains - Plastic	11,927.29	197.15	6,499.01	-6,302	-52.84%	-45.92%								
2007	37602-Mains - Plastic	20,213.58	-	5,629.44	-5,629	-27.85%	-37.12%	-37.12%							
2008	37602-Mains - Plastic	19,180.83	-	6,902.23	-6,902	-35.99%	-31.81%	-36.70%	-36.76%						
2009	37602-Mains - Plastic	-	-	1,703.21	-1,703	NA	-44.86%	-36.13%	-40.02%	-39.57%					
2010	37602-Mains - Plastic	-	-	26.14	-26	NA	NA	-45.00%	-36.20%	-40.07%	-39.61%				
2011	37602-Mains - Plastic	-	-	5,246.05	-5,246	NA	NA	NA	-72.35%	-49.52%	-50.29%	-48.26%			
2012	37602-Mains - Plastic	-	-	2,434.50	-2,435	NA	NA	NA	NA	NA	-55.70%	-55.03%	-52.27%		
2013	37602-Mains - Plastic	590.10	-	5,929.29	-5,929	-1004.79%	-1417.35%	-2306.36%	-2310.79%	-2599.42%	-112.50%	-69.70%	-65.83%	-61.44%	
2014	37602-Mains - Plastic	-	-	1,042.56	-1,043	NA	-1181.47%	-1594.03%	-2483.04%	-2487.47%	-2776.10%	-117.77%	-72.31%	-67.84%	-63.14%
2001	376 Mains Total	130,583	0	437,010	-437,010	-334.66%									
2002	376 Mains Total	107,530	0	0	0	0.00%	-183.53%								
2003	376 Mains Total	59,997	0	0	0	0.00%	0.00%	-146.59%							
2004	376 Mains Total	939,083	0	0	0	0.00%	0.00%	0.00%	-35.32%						
2005	376 Mains Total	39,288	0	18,289	-18,289	-46.55%	-1.87%	-1.76%	-1.60%	-35.67%					
2006	376 Mains Total	311,798	233	338,023	-337,790	-108.34%	-101.42%	-27.60%	-26.37%	-24.43%	-49.93%				
2007	376 Mains Total	339,465	25	66,321	-66,296	-19.53%	-62.05%	-61.16%	-25.92%	-25.00%		-44.58%			
2008	376 Mains Total	238,439	0	48,399	-48,399	-20.30%	-19.85%	-50.86%	-50.68%	-25.20%	-24.42%	-23.13%	-41.91%		
2009	376 Mains Total	18,433	0	28,676	-28,676	-155.57%	-30.01%	-24.04%	-52.98%	-52.72%	-26.47%	-25.66%	-24.32%	-42.87%	
2010	376 Mains Total	0	0	11,035	-11,035	NA	-215.44%	-34.30%	-25.89%	-54.20%	-53.88%	-27.06%	-26.23%	-24.85%	-43.37%
2011	376 Mains Total	0	0	0	0	NA	NA	-215.44%	-34.30%	-25.89%	-54.20%	-53.88%	-27.06%	-26.23%	-24.85%
2012	376 Mains Total	0	0	0	0	NA	NA	NA	-215.44%	-34.30%	-25.89%	-54.20%	-53.88%	-27.06%	-26.23%
2013	376 Mains Total	74,007	0	46,663	-46,663	-63.05%	-63.05%	-63.05%	-77.96%	-93.44%	-40.73%	-29.99%	-54.87%	-54.55%	-28.42%
2014	376 Mains Total	214,637	0	62,078	-62,078	-28.92%	-37.67%	-37.67%	-37.67%	-41.50%	-48.34%	-36.09%	-29.73%	-50.21%	-50.10%

**Time and Motion Adjusted**

**Atmos Energy - Tennessee Properties**  
**Net Salvage Analysis - Retirements, Salvage and Cost of Removal 2005-2014**  
**Depreciation Study as of September 30, 2014**

Year	Account Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2005	376 Mains Total	32,410	0	48,510	-48,510	-149.67%									
2006	376 Mains Total	311,798	233	50,260	-50,027	-16.04%	-28.63%								
2007	376 Mains Total	339,465	0	17,376	-17,376	-5.12%	-10.35%	-16.95%							
2008	376 Mains Total	238,439	0	33,626	-33,626	-14.10%	-8.83%		-16.22%						
2009	376 Mains Total	18,433	0	21,554	-21,554	-116.93%	-21.48%	-12.17%	-13.50%	-18.19%					
2010	376 Mains Total	0	0	783	-783	NA	-121.18%	-21.79%	-12.30%	-13.58%	-18.27%				
2011	376 Mains Total	0	0	22,361	-22,361	NA	NA	-242.49%	-30.49%	-16.05%	-16.05%	-20.65%			
2012	376 Mains Total	0	0	9,798	-9,798	NA	NA	NA	-295.65%	-34.31%	-17.69%	-17.13%	-21.69%		
2013	376 Mains Total	74,007	0	65,923	-65,923	-89.08%	-102.32%	-132.53%	-133.59%	-130.27%	-46.56%	-25.57%	-22.55%	-26.61%	
2014	376 Mains Total	214,637	0	21,778	-21,778	-10.15%	-30.38%	-33.78%	-41.53%	-41.80%	-46.31%	-32.23%	-21.83%	-20.32%	-23.73%
2005	37800-M&R Station Equipment	0	0	0	0	NA									
2006	37800-M&R Station Equipment	0	0	0	0	NA	NA								
2007	37800-M&R Station Equipment	0	0	0	0	NA	NA	NA							
2008	37800-M&R Station Equipment	0	0	0	0	NA	NA	NA	NA						
2009	37800-M&R Station Equipment	619	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2010	37800-M&R Station Equipment	11,093	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
2011	37800-M&R Station Equipment	18,752	0	1,184	-1,184	-6.31%	-3.97%	-3.89%	-3.89%	-3.89%	-3.89%	-3.89%			
2012	37800-M&R Station Equipment	13,924	0	445	-445	-3.20%	-4.99%	-3.72%	-3.67%	-3.67%	-3.67%	-3.67%	-3.67%		
2013	37800-M&R Station Equipment	4,407	0	182	-182	-4.12%	-3.42%	-4.88%	-3.76%	-3.71%	-3.71%	-3.71%	-3.71%	-3.71%	
2014	37800-M&R Station Equipment	27,335	0	1,294	-1,294	-4.73%	-4.65%	-4.21%	-4.82%	-4.11%	-4.08%	-4.08%	-4.08%	-4.08%	-4.08%
2005	37900-Meas. & Reg. - City Gate	0	0	0	0	NA									
2006	37900-Meas. & Reg. - City Gate	0	0	0	0	NA	NA								
2007	37900-Meas. & Reg. - City Gate	0	0	0	0	NA	NA	NA							
2008	37900-Meas. & Reg. - City Gate	0	0	0	0	NA	NA	NA	NA						
2009	37900-Meas. & Reg. - City Gate	0	0	0	0	NA	NA	NA	NA	NA					
2010	37900-Meas. & Reg. - City Gate	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	37900-Meas. & Reg. - City Gate	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2012	37900-Meas. & Reg. - City Gate	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2013	37900-Meas. & Reg. - City Gate	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2014	37900-Meas. & Reg. - City Gate	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2001	38000-Services	417,372	0	61,056	-61,056	-14.63%									
2002	38000-Services	180,772	0	85,954	-85,954	-47.55%	-24.58%								
2003	38000-Services	217,455	0	77,128	-77,128	-35.47%	-40.95%	-27.48%							
2004	38000-Services	193,210	40	42,696	-42,656	-22.08%	-29.17%	-34.79%	-26.45%						
2005	38000-Services	275,890	50	19,179	-19,129	-6.93%	-13.17%	-20.23%	-25.93%	-22.26%					
2006	38000-Services	372,314	44	63,798	-63,753	-17.12%	-12.79%	-14.92%	-19.14%	-23.28%	-21.10%				
2007	38000-Services	190,612	-222	32,250	-32,473	-17.04%	-17.09%	-13.75%	-15.31%	-18.82%	-22.45%	-20.68%			
2008	38000-Services	207,015	0	239,269	-239,269	-115.58%	-68.34%	-43.57%	-33.91%	-32.06%	-32.57%	-34.23%	-30.24%		
2009	38000-Services	678,630	0	0	0	0.00%	-27.02%	-25.25%	-23.16%	-20.56%	-20.72%	-22.22%	-24.20%	-22.74%	
2010	38000-Services	353,004	0	180,648	-180,648	-51.17%	-17.51%	-33.90%	-31.65%	-28.65%	-25.77%	-25.45%	-26.33%	-27.76%	-25.99%
2011	38000-Services	423,401	0	347,706	-347,706	-82.12%	-68.05%	-36.31%	-46.19%	-43.19%	-38.83%	-35.31%	-34.36%	-34.44%	-35.21%
2012	38000-Services	558,051	0	407,166	-407,166	-72.96%	-76.91%	-70.11%	-46.47%	-52.92%	-50.08%	-45.67%	-42.18%	-40.98%	-40.64%
2013	38000-Services	1,749,371	0	262,004	-262,004	-14.98%	-29.00%	-37.24%	-38.83%	-31.83%	-36.20%	-35.32%	-33.82%	-32.28%	-31.89%
2014	38000-Services	1,984,649	0	488,837	-488,837	-24.63%	-20.11%	-26.98%	-31.93%	-33.27%	-29.34%	-32.34%	-31.87%	-31.02%	-30.05%



**Atmos Energy - Tennessee Properties**  
**Net Salvage Analysis - Retirements, Salvage and Cost of Removal 2005-2014**  
**Depreciation Study as of September 30, 2014**

Year	Account Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
<b>Time and Motion Adjusted</b>															
2005	38000-Services	275,890.39	50.00	61,002.59	-60,953	-22.09%									
2006	38000-Services	372,314.36	44.43	13,225.22	-13,181	-3.54%	-11.44%								
2007	38000-Services	190,611.78	(222.38)	2,366.91	-2,589	-1.36%	-2.80%	-9.15%							
2008	38000-Services	207,014.91	-	50,381.11	-50,381	-24.34%	-13.32%	-8.59%	-12.15%						
2009	38000-Services	678,629.75	-	19,399.72	-19,400	-2.86%	-7.88%	-6.72%	-5.91%	-8.50%					
2010	38000-Services	353,003.56	-	(252.06)	252	0.07%	-1.86%	-5.61%	-5.05%	-4.73%	-7.04%				
2011	38000-Services	423,400.93	-	29,231.77	-29,232	-6.90%	-3.73%	-3.32%	-5.94%	-5.47%	-5.15%	-7.02%			
2012	38000-Services	558,050.83	-	39,214.53	-39,215	-7.03%	-6.97%	-5.11%	-4.35%	-6.21%	-5.83%	-5.52%	-7.02%		
2013	38000-Services	1,749,371.06	-	76,576.80	-76,577	-4.38%	-5.02%	-5.31%	-4.69%	-4.36%	-5.41%	-5.22%	-5.08%	-6.06%	
2014	38000-Services	1,984,649.06	-	60,294.29	-60,294	-3.04%	-3.67%	-4.10%	-4.35%	-4.05%	-3.91%	-4.62%	-4.52%	-4.46%	-5.18%
2001	38100-Meters	13,776	0	2,373	-2,373	-17.23%									
2002	38100-Meters	0	0	0	0	NA	-17.23%								
2003	38100-Meters	10,296	0	4,361	-4,361	-42.36%	-42.36%	-27.97%							
2004	38100-Meters	4,414	0	4,830	-4,830	-109.42%	-62.48%	-62.48%	-40.60%						
2005	38100-Meters	33,595	0	-22	22	0.06%	-12.65%	-18.98%	-18.98%	-18.59%					
2006	38100-Meters	0	0	0	0	NA	0.06%	-12.65%	-18.98%	-18.98%	-18.59%				
2007	38100-Meters	130,993	0	20,231	-20,231	-15.44%	-15.44%	-12.28%	-14.82%	-16.40%	-16.40%	-16.46%			
2008	38100-Meters	67,893	0	6,318	-6,318	-9.31%	-13.35%	-13.35%	-11.41%	-13.24%	-14.45%	-14.45%	-14.60%		
2009	38100-Meters	481,987	0	17,310	-17,310	-3.59%	-4.30%	-6.44%	-6.44%	-6.14%	-6.77%	-7.27%	-7.27%	-7.46%	
2010	38100-Meters	1,157,473	0	53,032	-53,032	-4.58%	-4.29%	-4.49%	-5.27%	-5.27%	-5.17%	-5.42%	-5.62%	-5.62%	-5.71%
2011	38100-Meters	771,903	0	68,617	-68,617	-8.89%	-6.31%	-5.76%	-5.86%	-6.34%	-6.34%	-6.26%	-6.43%	-6.57%	-6.57%
2012	38100-Meters	75,069	0	50,713	-50,713	-67.55%	-14.09%	-8.60%	-7.63%	-7.67%	-8.05%	-8.05%	-7.95%	-8.12%	-8.25%
2013	38100-Meters	177,392	0	19,997	-19,997	-11.27%	-28.01%	-13.60%	-8.82%	-7.87%	-7.91%	-8.25%	-8.25%	-8.16%	-8.31%
2014	38100-Meters	344,369	0	17,267	-17,267	-5.01%	-7.14%	-14.74%	-11.44%	-8.30%	-7.54%	-7.58%	-7.90%	-7.90%	-7.82%
2001	38200-Meter Installations	61,628	0	39,348	-39,348	-63.85%									
2002	38200-Meter Installations	18,806	0	68,631	-68,631	-364.94%	-134.25%								
2003	38200-Meter Installations	131,291	0	60,408	-60,408	-46.01%	-85.97%	-79.53%							
2004	38200-Meter Installations	34,322	0	19,578	-19,578	-57.04%	-48.30%	-80.59%	-76.39%						
2005	38200-Meter Installations	15,312	0	12,501	-12,501	-81.64%	-64.63%	-51.12%	-80.67%	-76.70%					
2006	38200-Meter Installations	118,001	7	34,207	-34,199	-28.98%	-35.03%	-39.54%	-42.38%	-61.47%	-61.86%				
2007	38200-Meter Installations	313	1,749	113,445	-111,696	-35704.89%	-123.31%	-118.54%	-105.97%	-79.66%	-96.53%	-91.23%			
2008	38200-Meter Installations	3,280	0	125,500	-125,500	-3826.22%	-6601.92%	-223.20%	-207.36%	-177.23%	-120.28%	-134.60%	-123.22%		
2009	38200-Meter Installations	588,768	0	77	-77	-0.01%	-21.21%	-40.06%	-38.22%	-39.13%	-39.94%	-40.84%	-47.53%	-48.57%	
2010	38200-Meter Installations	39,375	0	185,558	-185,558	-471.26%	-29.55%	-49.28%	-66.93%	-60.96%	-61.37%	-61.19%	-59.05%	-65.10%	-65.03%
2011	38200-Meter Installations	169,818	536	87,485	-86,949	-51.20%	-130.27%	-34.16%	-49.68%	-63.60%	-59.16%	-59.52%	-59.44%	-57.84%	-63.00%
2012	38200-Meter Installations	84,904	0	83,820	-83,820	-98.72%	-67.04%	-121.16%	-40.37%	-54.38%	-66.96%	-62.50%	-62.79%	-62.60%	-60.76%
2013	38200-Meter Installations	6,987	0	-573	573	8.20%	-90.59%	-65.03%	-118.16%	-39.99%	-53.89%	-66.38%	-62.01%	-62.31%	-62.14%
2014	38200-Meter Installations	11,130	0	9,423	-9,423	-84.67%	-48.85%	-89.95%	-65.83%	-116.96%	-40.54%	-54.27%	-66.60%	-62.26%	-62.55%
2005	38300-House Regulators	0	0	0	0	NA									
2006	38300-House Regulators	0	0	0	0	NA	NA								
2007	38300-House Regulators	727	0	365	-365	-50.18%	-50.18%	-50.18%							
2008	38300-House Regulators	0	3,939	-1,274	5,213	NA	666.85%	666.85%	666.85%						
2009	38300-House Regulators	3,904	0	0	0	0.00%	133.54%	104.69%	104.69%	104.69%					

## Depreciation Study as of September 30, 2014

			Gross	Cost of	Net	Net	2- yr	3- yr	4- yr	5- yr	6- yr	7- yr	8- yr	9- yr	10- yr
Year	Account Description	Retirements	Salvage	Removal	Salvage	Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %
2010	38300-House Regulators	0	0	0	0	NA	0.00%	133.54%	104.69%	104.69%	104.69%				
2011	38300-House Regulators	0	0	0	0	NA	NA	0.00%	133.54%	104.69%	104.69%	104.69%			
2012	38300-House Regulators	89,353	0	52,214	-52,214	-58.44%	-58.44%	-55.99%	-50.40%	-50.40%	-50.40%	-50.40%	-50.40%	-50.40%	
2013	38300-House Regulators	0	0	0	0	NA	-58.44%	-58.44%	-58.44%	-55.99%	-50.40%	-50.40%	-50.40%	-50.40%	
2014	38300-House Regulators	558,131	0	17,248	-17,248	-3.09%	-3.09%	-10.73%	-10.73%	-10.73%	-10.66%	-9.86%	-9.91%	-9.91%	-9.91%
2005	381-383 Combined	75,404	0	41,721	-41,721	-55.33%									
2006	381-383 Combined	18,806	0	68,631	-68,631	-364.94%	-117.13%								
2007	381-383 Combined	142,314	0	65,134	-65,134	-45.77%	-83.02%	-74.19%							
2008	381-383 Combined	38,736	3,939	23,134	-19,195	-49.55%	-46.58%	-76.54%	-70.73%						
2009	381-383 Combined	52,810	0	12,479	-12,479	-23.63%	-34.60%	-41.40%	-65.48%	-63.15%					
2010	381-383 Combined	118,001	7	34,207	-34,199	-28.98%	-27.33%	-31.44%	-37.23%	-53.86%	-54.11%				
2011	381-383 Combined	131,306	1,749	133,676	-131,927	-100.47%	-66.64%	-59.12%	-58.03%	-54.42%	-66.05%	-64.65%			
2012	381-383 Combined	160,525	0	184,032	-184,032	-114.64%	-108.27%	-85.44%	-78.38%	-76.16%	-69.44%	-77.83%	-75.53%		
2013	381-383 Combined	1,070,755	0	17,387	-17,387	-1.62%	-16.36%	-24.46%	-24.82%	-24.78%	-25.39%	-27.08%	-30.75%	-31.78%	
2014	381-383 Combined	1,754,980	0	255,838	-255,838	-14.58%	-9.67%	-15.31%	-18.90%	-19.27%	-19.34%	-19.69%	-20.76%	-22.61%	-23.31%
2005	38500-Industrial M&R Equipment	0	0	0	0	NA									
2006	38500-Industrial M&R Equipment	0	0	0	0	NA	NA								
2007	38500-Industrial M&R Equipment	0	0	15	-15	NA	NA	NA							
2008	38500-Industrial M&R Equipment	0	0	0	0	NA	NA	NA	NA						
2009	38500-Industrial M&R Equipment	0	0	0	0	NA	NA	NA	NA	NA					
2010	38500-Industrial M&R Equipment	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	38500-Industrial M&R Equipment	4,747	0	0	0	0.00%	0.00%	0.00%	0.00%	-0.31%	-0.31%	-0.31%			
2012	38500-Industrial M&R Equipment	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	-0.31%	-0.31%	-0.31%		
2013	38500-Industrial M&R Equipment	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	-0.31%	-0.31%	-0.31%	
2014	38500-Industrial M&R Equipment	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	-0.31%	-0.31%	-0.31%
2005	39000-Structures & Improvements	0	0	0	0	NA									
2006	39000-Structures & Improvements	0	0	0	0	NA	NA								
2007	39000-Structures & Improvements	0	0	0	0	NA	NA	NA							
2008	39000-Structures & Improvements	0	0	0	0	NA	NA	NA	NA						
2009	39000-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA					
2010	39000-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	39000-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2012	39000-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2013	39000-Structures & Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2014	39000-Structures & Improvements	485,257	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	39003-Improvements	0	0	0	0	NA									
2006	39003-Improvements	0	0	0	0	NA	NA								
2007	39003-Improvements	0	0	0	0	NA	NA	NA							
2008	39003-Improvements	0	0	0	0	NA	NA	NA	NA						
2009	39003-Improvements	0	0	0	0	NA	NA	NA	NA	NA					
2010	39003-Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	39003-Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2012	39003-Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		

**Atmos Energy - Tennessee Properties**  
**Net Salvage Analysis - Retirements, Salvage and Cost of Removal 2005-2014**  
**Depreciation Study as of September 30, 2014**

Year	Account Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2013	39003-Improvements	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	39003-Improvements	37,215	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	39009-Improvements Leased	0	0	0	0	NA									
2006	39009-Improvements Leased	0	0	0	0	NA	NA								
2007	39009-Improvements Leased	0	0	0	0	NA	NA	NA							
2008	39009-Improvements Leased	0	0	0	0	NA	NA	NA	NA						
2009	39009-Improvements Leased	0	0	0	0	NA	NA	NA	NA	NA					
2010	39009-Improvements Leased	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	39009-Improvements Leased	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2012	39009-Improvements Leased	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2013	39009-Improvements Leased	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2014	39009-Improvements Leased	166,951	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	39100-Office Furniture & Equipment	0	0	0	0	NA									
2006	39100-Office Furniture & Equipment	341,438	0	0	0	0.00%	0.00%								
2007	39100-Office Furniture & Equipment	84,252	21	-4,273	4,294	5.10%	1.01%	1.01%							
2008	39100-Office Furniture & Equipment	6,196	0	0	0	0.00%	4.75%	0.99%	0.99%						
2009	39100-Office Furniture & Equipment	15,675	0	0	0	0.00%	0.00%	4.05%	0.96%	0.96%					
2010	39100-Office Furniture & Equipment	17,049	0	0	0	0.00%	0.00%	0.00%	3.49%	0.92%	0.92%				
2011	39100-Office Furniture & Equipment	0	0	0	0	NA	0.00%	0.00%	0.00%	3.49%	0.92%	0.92%			
2012	39100-Office Furniture & Equipment	4,225	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	3.37%	0.92%	0.92%		
2013	39100-Office Furniture & Equipment	1,331	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.34%	0.91%	0.91%	
2014	39100-Office Furniture & Equipment	7,311	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.16%	0.90%	0.90%
2005	39200-Transportation Equipment	112,694	2,160	-349	2,509	2.23%									
2006	39200-Transportation Equipment	12,193	3,541	0	3,541	29.04%	4.84%								
2007	39200-Transportation Equipment	238,709	4,400	-2,224	6,624	2.77%	4.05%	3.49%							
2008	39200-Transportation Equipment	0	0	-5,273	5,273	NA	4.98%	6.15%	4.94%						
2009	39200-Transportation Equipment	199,945	2,972	-10,637	13,609	6.81%	9.44%	5.81%	6.44%	5.60%					
2010	39200-Transportation Equipment	21,458	10,740	-7,068	17,808	82.99%	14.19%	16.57%	9.41%	9.92%	8.44%				
2011	39200-Transportation Equipment	0	37,664	-27,902	65,566	NA	388.53%	43.80%	46.19%	23.66%	23.80%	19.65%			
2012	39200-Transportation Equipment	13,828	0	0	0	0.00%	474.17%	236.28%	41.23%	43.47%	22.97%	23.13%	19.19%		
2013	39200-Transportation Equipment	2,373	7,011	-3,478	10,489	442.02%	64.75%	469.46%	249.24%	45.23%	47.45%	25.06%	25.16%	20.86%	
2014	39200-Transportation Equipment	21,816	0	0	0	0.00%	43.36%	27.59%	200.05%	157.82%	41.43%	43.46%	23.96%	24.08%	20.13%
2005	39300-Stores Equipment	0	0	0	0	NA									
2006	39300-Stores Equipment	8,819	0	0	0	0.00%	0.00%								
2007	39300-Stores Equipment	3,034	0	-312	312	10.28%	2.63%	2.63%							
2008	39300-Stores Equipment	0	0	0	0	NA	10.28%	2.63%	2.63%						
2009	39300-Stores Equipment	0	0	0	0	NA	NA	10.28%	2.63%	2.63%					
2010	39300-Stores Equipment	2,837	0	0	0	0.00%	0.00%	0.00%	5.31%	2.12%	2.12%				
2011	39300-Stores Equipment	0	0	0	0	NA	0.00%	0.00%	0.00%	5.31%	2.12%	2.12%			
2012	39300-Stores Equipment	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	5.31%	2.12%	2.12%		
2013	39300-Stores Equipment	877	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.62%	2.00%	2.00%	
2014	39300-Stores Equipment	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.62%	2.00%	2.00%

**Atmos Energy - Tennessee Properties**  
**Net Salvage Analysis - Retirements, Salvage and Cost of Removal 2005-2014**  
**Depreciation Study as of September 30, 2014**

Year	Account Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2001	39400-Tools, Shop, & Garage Equip.	159	750	0	750	471.70%									
2002	39400-Tools, Shop, & Garage Equip.	1,582	0	0	0	0.00%	43.08%								
2003	39400-Tools, Shop, & Garage Equip.	650,674	0	0	0	0.00%	0.00%	0.11%							
2004	39400-Tools, Shop, & Garage Equip.	1,511	0	0	0	0.00%	0.00%	0.00%	0.11%						
2005	39400-Tools, Shop, & Garage Equip.	0	0	0	0	NA	0.00%	0.00%	0.00%	0.11%					
2006	39400-Tools, Shop, & Garage Equip.	272,224	500	25	475	0.17%	0.17%	0.17%	0.05%	0.05%	0.13%				
2007	39400-Tools, Shop, & Garage Equip.	12,064	94	-27	121	1.00%	0.21%	0.21%	0.21%	0.06%	0.06%	0.14%			
2008	39400-Tools, Shop, & Garage Equip.	0	0	0	0	NA	1.00%	0.21%	0.21%	0.21%	0.06%	0.06%	0.14%		
2009	39400-Tools, Shop, & Garage Equip.	178,242	0	0	0	0.00%	0.00%	0.06%	0.13%	0.13%	0.13%	0.05%	0.05%	0.12%	
2010	39400-Tools, Shop, & Garage Equip.	27,759	0	0	0	0.00%	0.00%	0.00%	0.06%	0.12%	0.12%	0.05%	0.05%	0.05%	0.12%
2011	39400-Tools, Shop, & Garage Equip.	57,768	0	0	0	0.00%	0.00%	0.00%	0.00%	0.04%	0.11%	0.11%	0.11%	0.05%	0.05%
2012	39400-Tools, Shop, & Garage Equip.	43,083	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.10%	0.10%	0.10%	0.05%
2013	39400-Tools, Shop, & Garage Equip.	13,989	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.10%	0.10%	0.10%
2014	39400-Tools, Shop, & Garage Equip.	77,517	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.09%	0.09%
2005	39600-Power Operated Equipment	0	0	0	0	NA									
2006	39600-Power Operated Equipment	670,213	0	0	0	0.00%	0.00%								
2007	39600-Power Operated Equipment	0	0	0	0	NA	0.00%	0.00%							
2008	39600-Power Operated Equipment	5,827	1,440	-28	1,468	25.20%	25.20%	0.22%	0.22%						
2009	39600-Power Operated Equipment	20,474	0	0	0	0.00%	5.58%	5.58%	0.21%	0.21%					
2010	39600-Power Operated Equipment	0	0	0	0	NA	0.00%	5.58%	5.58%	0.21%	0.21%				
2011	39600-Power Operated Equipment	46,305	4,805	0	4,805	10.38%	10.38%	7.20%	8.64%	8.64%	0.84%	0.84%			
2012	39600-Power Operated Equipment	265,592	73,500	0	73,500	27.67%	25.11%	25.11%	23.56%	23.59%	23.59%	7.91%	7.91%		
2013	39600-Power Operated Equipment	0	0	0	0	NA	27.67%	25.11%	25.11%	23.56%	23.59%	23.59%	7.91%	7.91%	
2014	39600-Power Operated Equipment	48,156	225	-4	229	0.48%	0.48%	23.50%	21.81%	21.81%	20.64%	20.71%	20.71%	7.57%	7.57%
2005	39603-Ditchers	0	0	0	0	NA									
2006	39603-Ditchers	205,018	0	0	0	0.00%	0.00%								
2007	39603-Ditchers	0	0	0	0	NA	0.00%	0.00%							
2008	39603-Ditchers	0	0	0	0	NA	NA	0.00%	0.00%						
2009	39603-Ditchers	0	0	0	0	NA	NA	NA	0.00%	0.00%					
2010	39603-Ditchers	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%				
2011	39603-Ditchers	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%			
2012	39603-Ditchers	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%		
2013	39603-Ditchers	9,879	5,645	0	5,645	57.14%	57.14%	57.14%	57.14%	57.14%	57.14%	57.14%	2.63%	2.63%	
2014	39603-Ditchers	6,184	0	0	0	0.00%	35.14%	35.14%	35.14%	35.14%	35.14%	35.14%	35.14%	2.55%	2.55%
2005	39604-Backhoes	0	0	0	0	NA									
2006	39604-Backhoes	348,457	0	0	0	0.00%	0.00%								
2007	39604-Backhoes	0	0	0	0	NA	0.00%	0.00%							
2008	39604-Backhoes	0	0	0	0	NA	NA	0.00%	0.00%						
2009	39604-Backhoes	15,869	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2010	39604-Backhoes	27,640	0	-7,600	7,600	27.50%	17.47%	17.47%	17.47%		1.94%				
2011	39604-Backhoes	24,496	0	0	0	0.00%	14.58%	11.18%	11.18%	11.18%	1.82%	1.82%			
2012	39604-Backhoes	30,662	0	0	0	0.00%	0.00%	9.18%	7.70%	7.70%	7.70%	1.70%	1.70%		
2013	39604-Backhoes	0	0	0	0	NA	0.00%	0.00%	9.18%	7.70%	7.70%	7.70%	1.70%	1.70%	
2014	39604-Backhoes	160,105	0	0	0	0.00%	0.00%	0.00%	0.00%	3.13%	2.94%	2.94%	2.94%	1.25%	1.25%

**Atmos Energy - Tennessee Properties**  
**Net Salvage Analysis - Retirements, Salvage and Cost of Removal 2005-2014**  
**Depreciation Study as of September 30, 2014**

Year	Account Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2005	39605-Welders	0	0	0	0	NA									
2006	39605-Welders	0	0	0	0	NA	NA								
2007	39605-Welders	0	0	0	0	NA	NA	NA							
2008	39605-Welders	0	0	0	0	NA	NA	NA	NA						
2009	39605-Welders	0	0	0	0	NA	NA	NA	NA	NA					
2010	39605-Welders	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	39605-Welders	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2012	39605-Welders	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2013	39605-Welders	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2014	39605-Welders	30,826	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2001	396- Total Power Operated Equip.	16,397	0	0	0	0.00%									
2002	396- Total Power Operated Equip.	76,130	0	0	0	0.00%	0.00%								
2003	396- Total Power Operated Equip.	339,997	0	0	0	0.00%	0.00%	0.00%							
2004	396- Total Power Operated Equip.	14,484	0	0	0	0.00%	0.00%	0.00%	0.00%						
2005	396- Total Power Operated Equip.	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
2006	396- Total Power Operated Equip.	1,223,689	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
2007	396- Total Power Operated Equip.	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
2008	396- Total Power Operated Equip.	5,827	1,440	-28	1,468	25.20%	25.20%	0.12%	0.12%	0.12%	0.09%	0.09%	0.09%		
2009	396- Total Power Operated Equip.	36,343	0	0	0	0.00%	3.48%	3.48%	0.12%	0.12%	0.11%	0.09%	0.09%	0.09%	
2010	396- Total Power Operated Equip.	27,640	0	-7,600	7,600	27.50%	11.88%	12.99%	12.99%	0.70%	0.70%	0.69%	0.55%	0.53%	0.52%
2011	396- Total Power Operated Equip.	70,800	4,805	0	4,805	6.79%	12.60%	9.20%	9.87%	9.87%	1.02%	1.02%	1.01%	0.81%	0.77%
2012	396- Total Power Operated Equip.	296,254	73,500	0	73,500	24.81%	21.33%	21.76%	19.93%	20.00%	20.00%	5.26%	5.26%	5.22%	4.34%
2013	396- Total Power Operated Equip.	9,879	5,645	0	5,645	57.14%	25.85%	22.27%	22.63%	20.76%	20.82%	20.82%	5.57%	5.57%	5.52%
2014	396- Total Power Operated Equip.	245,271	225	-4	229	0.09%	2.30%	14.39%	13.53%	14.12%	13.38%	13.47%	13.47%	4.87%	4.87%
2005	39700-Communication Equipment	0	0	0	0	NA									
2006	39700-Communication Equipment	0	0	0	0	NA	NA								
2007	39700-Communication Equipment	65,981	0	0	0	0.00%	0.00%	0.00%							
2008	39700-Communication Equipment	11,968	0	0	0	0.00%	0.00%	0.00%	0.00%						
2009	39700-Communication Equipment	38,237	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2010	39700-Communication Equipment	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%				
2011	39700-Communication Equipment	7,998	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
2012	39700-Communication Equipment	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2013	39700-Communication Equipment	942	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2014	39700-Communication Equipment	41,855	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	39701-Communication Equipment	0	0	0	0	NA									
2006	39701-Communication Equipment	0	0	0	0	NA	NA								
2007	39701-Communication Equipment	146,433	0	0	0	0.00%	0.00%	0.00%							
2008	39701-Communication Equipment	11,843	0	0	0	0.00%	0.00%	0.00%	0.00%						
2009	39701-Communication Equipment	1,501	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2010	39701-Communication Equipment	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%				
2011	39701-Communication Equipment	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%			
2012	39701-Communication Equipment	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%		
2013	39701-Communication Equipment	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	

**Atmos Energy - Tennessee Properties**  
**Net Salvage Analysis - Retirements, Salvage and Cost of Removal 2005-2014**  
**Depreciation Study as of September 30, 2014**

Year	Account Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2014	39701-Communication Equipment	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
		0	0	0											
		0	0	0											
2005	39702-Communication Equipment	0	0	0	0	NA									
2006	39702-Communication Equipment	0	0	0	0	NA	NA								
2007	39702-Communication Equipment	94,355	0	0	0	0.00%	0.00%	0.00%							
2008	39702-Communication Equipment	0	0	0	0	NA	0.00%	0.00%	0.00%						
2009	39702-Communication Equipment	0	0	0	0	NA	NA	0.00%	0.00%	0.00%					
2010	39702-Communication Equipment	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%				
2011	39702-Communication Equipment	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%			
2012	39702-Communication Equipment	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%		
2013	39702-Communication Equipment	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	
2014	39702-Communication Equipment	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
		0	0	0											
		0	0	0											
2005	39705-Communication Equipment	0	0	0	0	NA									
2006	39705-Communication Equipment	0	0	0	0	NA	NA								
2007	39705-Communication Equipment	35,071	0	0	0	0.00%	0.00%	0.00%							
2008	39705-Communication Equipment	0	0	0	0	NA	0.00%	0.00%	0.00%						
2009	39705-Communication Equipment	0	0	0	0	NA	NA	0.00%	0.00%	0.00%					
2010	39705-Communication Equipment	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%				
2011	39705-Communication Equipment	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%			
2012	39705-Communication Equipment	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%		
2013	39705-Communication Equipment	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	
2014	39705-Communication Equipment	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2001	397-Total Communication Equipment.	8,866	1,000	0	1,000	11.28%									
2002	397-Total Communication Equipment.	76,408	0	0	0	0.00%	1.17%								
2003	397-Total Communication Equipment.	0	0	0	0	NA	0.00%	1.17%							
2004	397-Total Communication Equipment.	0	0	0	0	NA	NA	0.00%	1.17%						
2005	397-Total Communication Equipment.	0	0	0	0	NA	NA	NA	0.00%	1.17%					
2006	397-Total Communication Equipment.	0	0	0	0	NA	NA	NA	NA		1.17%				
2007	397-Total Communication Equipment.	341,839	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23%			
2008	397-Total Communication Equipment.	23,811	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.22%		
2009	397-Total Communication Equipment.	39,738	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	
2010	397-Total Communication Equipment.	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%
2011	397-Total Communication Equipment.	7,998	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	397-Total Communication Equipment.	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	397-Total Communication Equipment.	942	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	397-Total Communication Equipment.	41,855	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	39800-Miscellaneous Equipment	0	0	0	0	NA									
2006	39800-Miscellaneous Equipment	0	0	0	0	NA	NA								
2007	39800-Miscellaneous Equipment	3,811	121	-19	140	3.66%	3.66%	3.66%							
2008	39800-Miscellaneous Equipment	45,859	0	0	0	0.00%	0.28%	0.28%	0.28%						
2009	39800-Miscellaneous Equipment	0	0	0	0	NA	0.00%	0.28%	0.28%	0.28%					
2010	39800-Miscellaneous Equipment	0	0	0	0	NA	NA	0.00%	0.28%	0.28%	0.28%				
2011	39800-Miscellaneous Equipment	140,951	0	9,429	-9,429	-6.69%	-6.69%	-6.69%	-5.05%	-4.87%	-4.87%	-4.87%			
2012	39800-Miscellaneous Equipment	0	0	0	0	NA	-6.69%	-6.69%	-6.69%	-5.05%	-4.87%	-4.87%	-4.87%		

## Depreciation Study as of September 30, 2014

			Gross	Cost of	Net	Net	2-yr	3-yr	4-yr	5-yr	6-yr	7-yr	8-yr	9-yr	10-yr
Year	Account Description	Retirements	Salvage	Removal	Salvage	Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %	Net Salv. %
2013	39800-Miscellaneous Equipment	54,964	0	0	0	0.00%	0.00%	-4.81%	-4.81%	-4.81%	-3.90%	-3.78%	-3.78%	-3.78%	
2014	39800-Miscellaneous Equipment	670,741	0	0	0	0.00%	0.00%	0.00%	-1.09%	-1.09%	-1.09%	-1.03%	-1.01%	-1.01%	-1.01%
2005	39900-Other Tangible Property	0	0	0	0	NA									
2006	39900-Other Tangible Property	0	0	0	0	NA	NA								
2007	39900-Other Tangible Property	6,167	0	0	0	0.00%	0.00%	0.00%							
2008	39900-Other Tangible Property	0	0	0	0	NA	0.00%	0.00%	0.00%						
2009	39900-Other Tangible Property	0	0	0	0	NA	NA	0.00%	0.00%	0.00%					
2010	39900-Other Tangible Property	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%				
2011	39900-Other Tangible Property	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%			
2012	39900-Other Tangible Property	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%		
2013	39900-Other Tangible Property	2,785	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2014	39900-Other Tangible Property	8,178	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	39901-Oth Tang Prop - Servers - H/W	0	0	0	0	NA									
2006	39901-Oth Tang Prop - Servers - H/W	0	0	0	0	NA	NA								
2007	39901-Oth Tang Prop - Servers - H/W	0	0	0	0	NA	NA	NA							
2008	39901-Oth Tang Prop - Servers - H/W	0	0	0	0	NA	NA	NA	NA						
2009	39901-Oth Tang Prop - Servers - H/W	0	0	0	0	NA	NA	NA	NA	NA					
2010	39901-Oth Tang Prop - Servers - H/W	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	39901-Oth Tang Prop - Servers - H/W	1,169	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
2012	39901-Oth Tang Prop - Servers - H/W	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2013	39901-Oth Tang Prop - Servers - H/W	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2014	39901-Oth Tang Prop - Servers - H/W	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	39906-Oth Tang Prop - PC Hardware	0	0	0	0	NA									
2006	39906-Oth Tang Prop - PC Hardware	0	0	0	0	NA	NA								
2007	39906-Oth Tang Prop - PC Hardware	8,955	0	0	0	0.00%	0.00%	0.00%							
2008	39906-Oth Tang Prop - PC Hardware	0	0	0	0	NA	0.00%	0.00%	0.00%						
2009	39906-Oth Tang Prop - PC Hardware	0	0	0	0	NA	NA	0.00%	0.00%	0.00%					
2010	39906-Oth Tang Prop - PC Hardware	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%				
2011	39906-Oth Tang Prop - PC Hardware	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%			
2012	39906-Oth Tang Prop - PC Hardware	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%		
2013	39906-Oth Tang Prop - PC Hardware	735,552	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2014	39906-Oth Tang Prop - PC Hardware	69,334	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	39907-Oth Tang Prop - PC Software	0	0	0	0	NA									
2006	39907-Oth Tang Prop - PC Software	0	0	0	0	NA	NA								
2007	39907-Oth Tang Prop - PC Software	0	0	0	0	NA	NA	NA							
2008	39907-Oth Tang Prop - PC Software	0	0	0	0	NA	NA	NA	NA						
2009	39907-Oth Tang Prop - PC Software	0	0	0	0	NA	NA	NA	NA	NA					
2010	39907-Oth Tang Prop - PC Software	0	0	0	0	NA	NA	NA	NA	NA	NA				
2011	39907-Oth Tang Prop - PC Software	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2012	39907-Oth Tang Prop - PC Software	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2013	39907-Oth Tang Prop - PC Software	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2014	39907-Oth Tang Prop - PC Software	256,541	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%