BEFORE THE TENNESSEE PUBLIC UTILITY COMMISSION
NASHVILLE, TENNESSEE

February 15, 2018

IN RE:	**)**	
	)	
CHATTANOOGA GAS COMPANY	**)**	
PETITION FOR APPROVAL OF AN	**)**	
ADJUSTMENT IN RATES AND	**)**	**Docket No.**
TARIFF; THE TERMINATION OF	**)**	**18-** 00017
THE AUA MECHANISM AND THE	**)**	
RELATED TARIFF CHANGES AND	**)**	
REVENUE DEFICIENCY	**)**	
RECOVERY; AND AN ANNUAL	**)**	
RATE REVIEW MECHANISM	**)**	

DIRECT TESTIMONY OF

DANE A. WATSON

ON BEHALF OF

CHATTANOOGA GAS COMPANY

Q. Please state your name, business address and position.

A. My name is Dane A. Watson. My business address is 101 E. Park Blvd., Suite 220, Plano, Texas 75074. I am a Partner in Alliance Consulting Group ("Alliance"). Alliance provides consulting and expert services to the utility industry.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of Chattanooga Gas Company, ("CGC" or the "Company"), a division of Southern Gas Company.

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 examination and has certain required qualifications to become certified in this field. I have met all requirements and am a Certified Depreciation Professional.

Q. Please describe your involvement with any professional societies or committees?

A. I have twice been Chair of the Edison Electric Institute ("EEI") Property Accounting and Valuation Committee and have been Chairman of EEI's

Depreciation and Economic Issues Subcommittee. I was the Industry Project Manager for the EEI/AGA effort around the electric and gas industry adoption of FAS 143 and testified before the Federal Energy Regulatory Commission ("FERC") in the hearings leading up to the release of FERC Order 631. I am a Registered Professional Engineer ("PE") in the State of Texas and a Certified Depreciation Professional. I am a Senior Member of the Institute of Electrical and Electronics Engineers. I am also Past President of the Society of Depreciation Professionals.

Q. Please outline your experience in the field of depreciation.

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

My prior employment from 1985 to 2004 was with Texas Utilities ("TXU"). During my tenure with TXU, I was responsible for, among other

things, conducting valuation and depreciation studies for the domestic TXU companies. During that time, I also served as Manager of Property Accounting Services and Records Management in addition to my depreciation responsibilities.

Q. Have you previously testified before any regulatory agencies?

A. Yes. A listing of my testimony experience is attached as Exhibit DAW-1.

Q. Do you sponsor any exhibits?

A. Yes. I sponsor the 2016 CGC depreciation study and the resulting depreciation rates attached to my direct testimony as Exhibit DAW-2.

Q. Were the exhibits you are sponsoring prepared by you or under your direct supervision?

A. Yes, they were.

Q. Please describe the depreciation study on which CGC has based its requested depreciation rates in this case.

A. The proposed depreciation rates for CGC's assets are based on my depreciation study, which analyzes the life and net salvage percentages for Storage, Distribution, General Plant Depreciated and General Plant Amortized assets for the period ended December 31, 2016. CGC has three classes, or functional groups, of gas depreciable property: Storage, Distribution and General Plant property. The Storage functional group primarily consists of facilities that store liquefied natural gas ("LNG") for use as needed. The Distribution functional

group primarily consists of lines and associated facilities used to distribute gas within the cities served by CGC. Last, General Plant property is not location specific but is used to support the overall distribution of gas to its customers.

Q. What definition of "depreciation" have you used for the purposes of conducting a depreciation study and preparing testimony?

A. The term "depreciation," as used herein, 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. Depreciation is a process of allocation, not valuation. Depreciation 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. Thus, depreciation is considered an expense or cost, rather than a loss or decrease in value. The Company accrues depreciation based on the original cost of all property included in each depreciable plant account. On retirement, the full cost of depreciable property, less the net salvage amount, if any, is charged to the depreciation reserve.

Q. Please describe your depreciation study approach.

A. I conducted the depreciation study in four phases as shown in my Exhibit DAW-2. The four phases are: Data Collection, Analysis, Evaluation, and Calculation. During the initial phase of the study, I collected historical data to be used in the analysis. After the data was assembled, I performed analyses to determine the life and net salvage percentage for the different property accounts being studied. As

part of this process, I conferred with field personnel, engineers, and managers responsible for the installation, operation, and removal of the assets to gain their input into the operation, maintenance, and net salvage of the assets. The information obtained from field personnel, engineers, and managerial personnel, combined with the study results, was then evaluated to determine how the results of the historical asset activity analysis, in conjunction with the Company's expected future plans should be applied. Using all of these resources, I applied proposed life and net salvage parameters to calculate the depreciation rate for each account.

Q. What depreciation system did you use?

A. The straight-line (method), Average Life Group (procedure), remaining-life (technique) depreciation system was employed to calculate annual accrued depreciation expense in this study. This is the same depreciation system that was used to develop the approved depreciation rates.

Q. How are the depreciation rates determined using the average life group procedure?

A. In this system, the annual depreciation expense for each account was computed by dividing the original cost of the asset, less actual account book depreciation reserve; less estimated net salvage, by its respective average life group remaining life. The resulting annual accrual amounts of all depreciable property within an account were accumulated, and the total was divided by the original cost of all depreciable property within the account to determine the depreciation rate. The calculated remaining lives and annual depreciation accrual rates were based on

the attained ages of the plant in service, the estimated service life, and the net salvage characteristics of each depreciable group. The annual depreciation rates from these calculations are shown in Appendix A, page 66, of my Exhibit DAW-2.

Q. What time period did you use to develop the proposed depreciation rates?

A. The account level depreciation rates were developed based on the depreciable property recorded on the Company's books at December 31, 2016.

Q. Did you perform and prepare the depreciation study in accordance with the process that you have described in your study and testimony?

A. Yes, I did.

Q. Is this the study upon which CGC relies in this case to establish new depreciation rates for property?

A. Yes, it is.

Q. What are your findings and recommendations?

A. This study, consistent with the Company's last depreciation filing in Docket No. 09-00183, utilized the Average Life Group procedure with the remaining life technique. I found that changes are needed to the mortality characteristics for numerous accounts resulting in revised depreciation rates. A comparison of the existing depreciation rates and those recommended in the depreciation study for CGC, by account, can be found in Appendix A of Exhibit DAW-2. A summary comparison of the depreciation rates for CGC by functional category is as follows:

Table 1				
Chattanooga Gas Company				
Comparison of Functional Depreciation Rates				
	Function	Existing		Proposed
(a)	(b)	(c)		(d)
1	LNG Storage	2.34%		2.30%
2	Distribution	2.22%		2.34%
3	General	11.64%		4.85%
4	**Total Depreciable Plant**	**2.54%**		**2.41%**

Q. Have you quantified the impact on annual depreciation expense due to your recommended changes?

A. Yes, I have. The above summaries were taken from Appendix A, page 66, of Exhibit DAW-2. Using December 31, 2016 depreciable balances, the effect of the recommended depreciation rates on annual depreciation expense for CGC is a decrease of approximately $326 thousand.

Q. What are the primary forces affecting the depreciation expense recommended in this study?

A. Generally, depreciation expense is affected by three separate factors – changes in average service life, changes in net salvage, and the effect of reserve position. CGC's depreciation expense is no exception.

Q. Please describe the results reflected in the table above for LNG Storage Plant.

A**.** The functional depreciation rate for the LNG Storage Plant decreased from 2.34% to 2.30%. There has been a general increase in asset lives and an increase in net salvage (less cost of removal resulting in less negative net salvage rates). These changes resulted in remaining life and reserve requirement differences. The total

effect upon depreciation expense for this function is a decrease of approximately $12 thousand.

Q. Please describe the results reflected in the table above for Distribution Plant.

A. The functional depreciation rate for Distribution Plant increased from 2.22% to 2.34%. An increase in cost of removal (resulting in a more negative net salvage rate), a decrease in life for Account 381.0 - Meters and 381.10 - ERTs, offset by an increase in asset life for Account 380 - Services are the primary drivers for the change in this function. Among the accounts in this function there is a mix of increases, decreases, and no change in average service lives and net salvage rates. The total effect upon annual depreciation expense is an increase of approximately $265 thousand.

Q. Please describe the results reflected in the table above for General Plant.

A. The functional depreciation rate for General Plant has decreased from 11.64% to 4.85%. The primary change impacting the depreciation rates in this function is the change (increase) in reserve position. The effect upon annual depreciation expense is a decrease of approximately $579 thousand.

Q. When you use the term "reserve position", what do you mean?

A. The term "reserve position" refers to the difference between a theoretical reserve and the existing book reserve. If the theoretical reserve is greater than the book reserve, past depreciation has been inadequate compared to the proposed depreciation parameters developed in the depreciation study, and an upward adjustment to the depreciation rate is required. If the opposite is true, a downward adjustment to the depreciation rate is required.

Q. Have you prepared a summary schedule comparing the approved and recommended rates and accrual for each account?

A. Yes. Exhibit DAW-2 Appendix A, page 66, provides an account comparison showing the rates, accrual expense, and resulting change between the currently approved and the study proposed.

Q. What factors influence the depreciation rates for an account?

A. There are three primary factors that influence the depreciation rate for an account.

1. The remaining investment to be recovered in the account;
2. The depreciable life of the account; and
3. The net salvage for the account.

As mentioned earlier, all three of these factors have influenced the changes in the recommended depreciation rates and annual depreciation expense accrual for CGC.

Q. What method did you use to analyze historical data to determine life characteristics?

A. Accounts were analyzed using the simulated plant record balances method or the actuarial method to estimate the life of property. In much the same manner as human mortality is analyzed by actuaries, depreciation analysts use models of property mortality characteristics that have been validated in research and empirical applications. Further detail is found in the life analysis section of Exhibit DAW-2.

Q. How did you determine the average service lives for each asset group?

A. The establishment of appropriate average service lives for each account in the Distribution function was determined by using the simulated plant record balances analysis method and the actuarial method where there was enough historical data to perform a meaningful analysis. For accounts where the simulated plant record analysis was used graphs showing the simulated balances for the proposed curve and life compared to the actual balances are provided in Exhibit DAW-2. For actuarial accounts, where possible, a graph of the observed life table with the study proposed life parameter is provided in the life analysis section of Exhibit DAW-2. The establishment of appropriate average service lives for each account in the LNG Storage and General Plant function was determined using the actuarial method. The recommended Iowa-curve (dispersion pattern) with average service life is provided in Exhibit DAW-2. A comparison of the existing life and Iowa curve for the approved and current study are provided in Appendix C, page 74, of Exhibit DAW-2.

Q. Please describe some of the changes in the average service lives for the various accounts?

A. The detailed analysis of each account is described fully in Exhibit DAW-2, pages 17-54. Examples of some of the changes in average service lives are:

- The largest increases (all greater than 20 years) in life were in Storage Accounts 362.0, 362.1, 363.3, 364.23, and Distribution Account 382.0;
- The largest decreases in life are 10 years in Distribution Account 381.10 ERTs and 5 years in General Account 392.12; and

- Overall, six accounts experienced a decrease in life, 22 accounts an increase in life and 21 remained the same.

Q. What is net salvage?

A. While discussed more fully in the study itself, 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 amount of removal cost and the timing of the addition versus the retirement.

Q. Is the net salvage calculation and approach you describe above supported by recognized texts or publications on depreciation practices and theory?

A. Yes. The "Public Utility Depreciation Practices" published by the National Association of Regulatory Utility Commissioners ("NARUC") supports the use of estimated future salvage and removal cost as part of the depreciation calculation. NARUC's 1996 Edition of the "Public Utility Depreciation Practices" states:

> Under presently accepted concepts, the amount of depreciation to be accrued over the life of an asset is its original cost less net salvage. Net salvage is the difference between the gross salvage that will be realized when the asset is disposed of and the cost of retiring it. Positive net salvage occurs when gross salvage exceeds cost of retirement, and negative net salvage occurs when cost of retirement exceeds gross salvage. Retired. The Net salvage is expressed as a percentage of plant retired by dividing the dollars of net salvage by the dollars of original cost of plant goal of accounting for net salvage is to allocate the net cost of an asset to accounting periods, making due allowance for the net salvage, positive or negative. This concept carries with it the premise that

> property ownership includes the responsibility for the property's ultimate abandonment or removal. Hence, if current users benefit from its use, they should pay their pro rata share of the costs involved in the abandonment or removal of the property and also receive their pro rata share of the benefits of the proceeds realized.
>
> This treatment of net salvage is in harmony with generally accepted accounting principles and tends to remove from the income statement any fluctuations caused by erratic, although necessary, abandonment and removal operations. It also has the advantage that current customers pay or receive a fair share of cost associated with the property devoted to their service, even though the costs may be estimated.[1]

Two of the most widely regarded experts on depreciation, Frank Wolf and Chester Fitch, wrote and support the use of this calculation.[2] Other published texts such as the textbook "Accounting for Public Utilities" by Hahne/Aliff and industry published materials from the American Gas Association and the Edison Electric Institute also provides guidance and support for this approach.

Q. How did you determine the net salvage percentages for each asset group?

A. The establishment of appropriate net salvage percentages for each account was determined by using the method as discussed above. The net salvage as a percent of retirements for various bands (i.e. groupings of years such as the three-year average) for each account are shown in Appendix D, page 77, of my Exhibit DAW-2. Judgment was used to select a net salvage percentage that represents the future expectations for each account. The use of judgment consists of numerous considerations such as an understanding of the different types and sizes of assets that might be recorded in an account, the age at which the assets are retiring,

1 NARUC *Public Utility Depreciation Practices*, Page 18.

2 *See* Depreciation Systems, page 53:

prevailing market conditions, and company policy and practices. During the course of conducting a study, we interview operations and accounting personnel to gain a better understanding of the assets and the Company's policy and practices in conjunction with the historical net salvage analysis, any observed trends, and the current approved net salvage percentages. A summary comparing the existing net salvage to the proposed net salvage percentages is shown in Appendix C, page 74, of Exhibit DAW-2. A discussion of the account net salvage analysis is found in Exhibit DAW-2, pages 55-65.

Q. Please describe some of the changes in the net salvage percentages for the various accounts?

A. The detailed analysis of each account is described fully in Exhibit DAW-2. Examples of some of the changes in net salvage are:

- The increases (i.e. more positive or less negative) in net salvage was an increase in Distribution Account 386 and in General Account 396.0;
- The largest decreases (i.e. more negative) are in Distribution Accounts 380.10, 380.20, and General Account 392.10; and
- Overall, two accounts experienced some level of increased (less negative/more positive) net salvage percentage while 10 accounts experienced a decrease (more negative/less positive) in net salvage and 37 accounts had no change.

Q. Do you have any recommendations as a result of your depreciation study?

A. Yes, I do. I recommend that the TPUC approve, and CGC adopt, the depreciation rates shown on Appendix A, page 66, of Exhibit DAW-2.

Q. Upon what do you base this recommendation?

A. I base this recommendation on the fact that I have conducted a comprehensive depreciation study, giving appropriate recognition to historical experience, recent trends, and CGC specific experience, expectations, and plans. The depreciation study results in a fair and reasonable level of depreciation expense which, when incorporated into a revenue stream, will provide CGC with adequate capital recovery until such time as a new depreciation study indicates a need for change.

Q. Does this complete your direct testimony?

A. Yes, it does.

	A	B	C	D	E	F
1	**Asset Location**	**Commission**	**Docket (If Applicable**	**Company**	**Year**	**Description**
2	Michigan	Michigan Public Service Commission	U-18457	Upper Peninsula Power Company	2017	Electric Depreciation Study
3	Florida	Florida Public Service Commission	20170179-GU	Florida City Gas	2017	Gas Depreciation Study
4	Michigan	FERC	ER18-56-000	Consumers Energy	2017	Electric Depreciation Study
5	Missouri	Missouri Public Service Commission	GR-2018-0013	Liberty Utilites	2017	Gas Depreciation Study
6	Michigan	Michigan Public Service Commission	U-18452	SEMCO	2017	Gas Depreciation Study
7	Texas	Public Utility Commission of Texas	47527	SPS	2017	Electric Production Depreciation Study
8	MultiState	FERC	ER17-1664	American Transmission Company	2017	Electric Depreciation Study
9	Alaska	Regulatory Commission of Alaska	U-17-008	Municipal Power and Light City of Anchorage	2017	Generating Unit Depreciation Study
10	Mississippi	Mississippi Public Service Commission	2017-UN-041	Atmos Energy	2017	Gas Depreciation Study
11	Texas	Public Utility Commission of Texas	46957	Oncor Electric Delivery	2017	Electric Depreciation Study
12	Oklahoma	Oklahoma Corporation Commission	PUD 201700078	CenterPoint Oklahoma	2017	Gas Depreciation Study
13	New York	FERC	ER17-1010-000	New York Power Authority	2017	Electric Depreciation Study
14	Texas	Railroad Commission of Texas	GUD 10580	Atmos Pipeline Texas	2017	Gas Depreciation Study
15	Texas	Railroad Commission of Texas	GUD 10567	CenterPoint Texas	2016	Gas Depreciation Study
16	MultiState	FERC	ER17-191-000	American Transmission Company	2016	Electric Depreciation Study
17	New Jersey	New Jersey Public Utilities Board	GR16090826	Elizabethtown Natural Gas	2016	Gas Depreciation Study
18	North Carolina	North Carolina Utilities Commission	Docket G-9 Sub 77H	Piedmont Natural Gas	2016	Gas Depreciation Study
19	Michigan	Michigan Public Service Commission	U-18195	Consumers Energy/DTE Electric	2016	Ludington Pumped Storage Depreciation Study
20	Alabama	FERC	ER16-2313-000	SEGCO	2016	Electric Depreciation Study
21	Alabama	FERC	ER16-2312-000	Alabama Power Company	2016	Electric Depreciation Study

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22	Michigan	Michigan Public Service Commission	U-18127	Consumers Engergy	2016	Natural Gas Depreciation Study
23	Mississippi	Mississippi Public Service Commission	2016 UN 267	Willmut Natural Gas	2016	Natural Gas Depreciation Study
24	Iowa	Iowa Utilities Board	RPU-2016-0003	Liberty-Iowa	2016	Natural Gas Depreciation Study
25	Illinois	Illinois Commerce Commission	GRM #16-208	Liberty-Illinois	2016	Natural Gas Depreciation Study
26	Kentucky	FERC	RP16-097-000	KOT	2016	Natural Gas Depreciation Study
27	Alaska	Regulatory Commission of Alaska	U-16-067	Alaska Electric Light and Power	2016	Generating Unit Depreciation Study
28	Florida	Florida Public Service Commission	160170-EI	Gulf Power	2016	Electric Depreciation Study
29	Arizona	Arizona Corporation Commission	G-01551A-16-0107	Southwest Gas	2016	Gas Depreciation Study
30	Texas	Public Utility Commission of Texas	45414	Sharyland	2016	Electric Depreciation Study
31	Colorado	Colorado Public Utilities Commission	16A-0231E	Public Service of Colorado	2016	Electric Depreciation Study
32	Multi-State NE US	FERC	16-453-000	Northeast Transmission Development, LLC	2015	Electric Depreciaiton Study
33	Arkansas	Arkansas Public Service Commission	15-098-U	CenterPoint Arkansas	2015	Gas Depreciation Study and Cost of Removal Study
34	New Mexico	New Mexico Public Regulation Commission	15-00296-UT	SPS NM	2015	Electric Depreciation Study
35	Atmos Energy Corporation	Tennessee Regulatory Authority	14-00146	Atmos Tennessee	2015	Natural Gas Depreciation Study
36	New Mexico	New Mexico Public Regulation Commission	15-00261-UT	Public Service Company of New Mexico	2015	Electric Depreciation Study
37	Hawaii	NA	NA	Hawaii American Water	2015	Water/Wastewater Depreciation Study
38	Kansas	Kansas Corporation Commission	16-ATMG-079-RTS	Atmos Kansas	2015	Gas Depreciation Study
39	Texas	Public Utility Commission of Texas	44704	Entergy Texas	2015	Electric Depreciation Study
40	Alaska	Regulatory Commission of Alaska	U-15-089	Fairbanks Water and Wastewater	2015	Water and Waste Water Depreciation Study

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41	Arkansas	Arkansas Public Service Commission	15-031-U	Source Gas Arkansas	2015	Underground Storage Gas Depreciation Study
42	New Mexico	New Mexico Public Regulation Commission	15-00139-UT	SPS NM	2015	Electric Depreciation Study
43	Texas	Public Utility Commission of Texas	44746	Wind Energy Transmission Texas	2015	Electric Depreciation Study
44	Colorado	Colorado Public Utilities Commission	15-AL-0299G	Atmos Colorado	2015	Gas Depreciation Study
45	Arkansas	Arkansas Public Service Commission	15-011-U	Source Gas Arkansas	2015	Gas Depreciation Study
46	Texas	Railroad Commission of Texas	GUD 10432	CenterPoint- Texas Coast Division	2015	Gas Depreciation Study
47	Kansas	Kansas Corporation Commission	15-KCPE-116-RTS	Kansas City Power and Light	2015	Electric Depreciation Study
48	Alaska	Regulatory Commission of Alaska	U-14-120	Alaska Electric Light and Power	2014-2015	Electric Depreciation Study
49	Texas	Public Utility Commission of Texas	43950	Cross Texas Transmission	2014	Electric Depreciation Study
50	New Mexico	New Mexico Public Regulation Commission	14-00332-UT	Public Service of New Mexico	2014	Electric Depreciation Study
51	Texas	Public Utility Commission of Texas	43695	Xcel Energy	2014	Electric Depreciation Study
52	Multi State – SE US	FERC	RP15-101	Florida Gas Transmission	2014	Gas Transmission Depreciation Study
53	California	California Public Utilities Commission	A.14-07-006	Golden State Water	2014	Water and Waste Water Depreciation Study
54	Michigan	Michigan Public Service Commission	U-17653	Consumers Energy Company	2014	Electric and Common Depreciation Study
55	Colorado	Public Utilities Commission of Colorado	14AL-0660E	Public Service of Colorado	2014	Electric Depreciation Study
56	Wisconsin	Wisconsin	05-DU-102	WE Energies	2014	Electric, Gas, Steam and Common Depreciation Studies
57	Texas	Public Utility Commission of Texas	42469	Lone Star Transmission	2014	Electric Depreciation Study
58	Nebraska	Nebraska Public Service Commission	NG-0079	Source Gas Nebraska	2014	Gas Depreciation Study

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59	Alaska	Regulatory Commission of Alaska	U-14-055	TDX North Slope Generating	2014	Electric Depreciation Study
60	Alaska	Regulatory Commission of Alaska	U-14-054	Sand Point Generating LLC	2014	Electric Depreciation Study
61	Alaska	Regulatory Commission of Alaska	U-14-045	Matanuska Electric Coop	2014	Electric Generation Depreciation Study
62	Texas, New Mexico	Public Utility Commission of Texas	42004	Xcel Energy	2013-2014	Electric Production, Transmission, Distribution and General Plant Depreciation Study
63	New Jersey	Board of Public Utilities	GR13111137	South Jersey Gas	2013	Gas Depreciation Study
64	Various	FERC	RP14-247-000	Sea Robin	2013	Gas Depreciation Study
65	Arkansas	Arkansas Public Service Commission	13-078-U	Arkansas Oklahoma Gas	2013	Gas Depreciation Study
66	Arkansas	Arkansas Public Service Commission	13-079-U	Source Gas Arkansas	2013	Gas Depreciation Study
67	California	California Public Utilities Commission	Proceeding No.: A.13-11-003	Southern California Edison	2013	Electric Depreciation Study
68	North Carolina/South Carolina	FERC	ER13-1313	Progress Energy Carolina	2013	Electric Depreciation Study
69	Wisconsin	Public Service Commission of Wisconsin	4220-DU-108	Northern States Power-Wisconsin	2013	Electric, Gas and Common Transmission, Distribution and General
70	Texas	Public Utility Commission of Texas	41474	Sharyland	2013	Electric Depreciation Study
71	Kentucky	Kentucky Public Service Commission	2013-00148	Atmos Energy Corporation	2013	Gas Depreciation Study
72	Minnesota	Minnesota Public Utilities Commission	13-252	Allete Minnesota Power	2013	Electric Depreciation Study
73	New Hampshire	New Hampshire Public Service Commission	DE 13-063	Liberty Utilities	2013	Electric Distribution and General
74	Texas	Railroad Commission of Texas	10235	West Texas Gas	2013	Gas Depreciation Study
75	Alaska	Regulatory Commission of Alaska	U-12-154	Alaska Telephone Company	2012	Telecommunications Utility

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1	**Asset Location**	**Commission**	**Docket (If Applicable**	**Company**	**Year**	**Description**
76	New Mexico	New Mexico Public Regulation Commission	12-00350-UT	SPS	2012	Electric Depreciation Study
77	Colorado	Colorado Public Utilities Commission	12AL-1269ST	Public Service of Colorado	2012	Gas and Steam Depreciation Study
78	Colorado	Colorado Public Utilities Commission	12AL-1268G	Public Service of Colorado	2012	Gas and Steam Depreciation Study
79	Alaska	Regulatory Commission of Alaska	U-12-149	Municipal Power and Light City of Anchorage	2012	Electric Depreciation Study
80	Texas	Texas Public Utility Commission	40824	Xcel Energy	2012	Electric Depreciation Study
81	South Carolina	Public Service Commission of South Carolina	Docket 2012-384-E	Progress Energy Carolina	2012	Electric Depreciation Study
82	Alaska	Regulatory Commission of Alaska	U-12-141	Interior Telephone Company	2012	Telecommunications Utility
83	Michigan	Michigan Public Service Commission	U-17104	Michigan Gas Utilities Corporation	2012	Gas Depreciation Study
84	North Carolina	North Carolina Utilities Commission	E-2 Sub 1025	Progress Energy Carolina	2012	Electric Depreciation Study
85	Texas	Texas Public Utility Commission	40606	Wind Energy Transmission Texas	2012	Electric Depreciation Study
86	Texas	Texas Public Utility Commission	40604	Cross Texas Transmission	2012	Electric Depreciation Study
87	Minnesota	Minnesota Public Utilities Commission	12-858	Minnesota Northern States Power	2012	Electric, Gas and Common Transmission, Distribution and General
88	Texas	Railroad Commission of Texas	10170	Atmos Mid-Tex	2012	Gas Depreciation Study
89	Texas	Railroad Commission of Texas	10174	Atmos West Texas	2012	Gas Depreciation Study
90	Texas	Railroad Commission of Texas	10182	CenterPoint Beaumont/ East Texas	2012	Gas Depreciation Study
91	Kansas	Kansas Corporation Commission	12-KCPE-764-RTS	Kansas City Power and Light	2012	Electric Depreciation Study
92	Nevada	Public Utility Commission of Nevada	12-04005	Southwest Gas	2012	Gas Depreciation Study
93	Texas	Railroad Commission of Texas	10147, 10170	Atmos Mid-Tex	2012	Gas Depreciation Study

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94	Kansas	Kansas Corporation Commission	12-ATMG-564-RTS	Atmos Kansas	2012	Gas Depreciation Study
95	Texas	Texas Public Utility Commission	40020	Lone Star Transmission	2012	Electric Depreciation Study
96	Michigan	Michigan Public Service Commission	U-16938	Consumers Energy Company	2011	Gas Depreciation Study
97	Colorado	Public Utilities Commission of Colorado	11AL-947E	Public Service of Colorado	2011	Electric Depreciation Study
98	Texas	Texas Public Utility Commission	39896	Entergy Texas	2011	Electric Depreciation Study
99	MultiState	FERC	ER12-212	American Transmission Company	2011	Electric Depreciation Study
100	California	California Public Utilities Commission	A1011015	Southern California Edison	2011	Electric Depreciation Study
101	Mississippi	Mississippi Public Service Commission	2011-UN-184	Atmos Energy	2011	Gas Depreciation Study
102	Michigan	Michigan Public Service Commission	U-16536	Consumers Energy Company	2011	Wind Depreciation Rate Study
103	Texas	Public Utility Commission of Texas	38929	Oncor	2011	Electric Depreciation Study
104	Texas	Railroad Commission of Texas	10038	CenterPoint South TX	2010	Gas Depreciation Study
105	Alaska	Regulatory Commission of Alaska	U-10-070	Inside Passage Electric Cooperative	2010	Electric Depreciation Study
106	Texas	Public Utility Commission of Texas	36633	City Public Service of San Antonio	2010	Electric Depreciation Study
107	Texas	Texas Railroad Commission	10000	Atmos Pipeline Texas	2010	Gas Depreciation Study
108	Multi State – SE US	FERC	RP10-21-000	Florida Gas Transmission	2010	Gas Depreciation Study
109	Maine/ New Hampshire	FERC	10-896	Granite State Gas Transmission	2010	Gas Depreciation Study
110	Texas	Public Utility Commission of Texas	38480	Texas New Mexico Power	2010	Electric Depreciation Study
111	Texas	Public Utility Commission of Texas	38339	CenterPoint Electric	2010	Electric Depreciation Study
112	Texas	Texas Railroad Commission	10041	Atmos Amarillo	2010	Gas Depreciation Study
113	Georgia	Georgia Public Service Commission	31647	Atlanta Gas Light	2010	Gas Depreciation Study

	A	B	C	D	E	F
1	**Asset Location**	**Commission**	**Docket (If Applicable**	**Company**	**Year**	**Description**
114	Texas	Public Utility Commission of Texas	38147	Southwestern Public Service	2010	Electric Technical Update
115	Alaska	Regulatory Commission of Alaska	U-09-015	Alaska Electric Light and Power	2009-2010	Electric Depreciation Study
116	Alaska	Regulatory Commission of Alaska	U-10-043	Utility Services of Alaska	2009-2010	Water Depreciation Study
117	Michigan	Michigan Public Service Commission	U-16055	Consumers Energy/DTE Energy	2009-2010	Ludington Pumped Storage Depreciation Study
118	Michigan	Michigan Public Service Commission	U-16054	Consumers Energy	2009-2010	Electric Depreciation Study
119	Michigan	Michigan Public Service Commission	U-15963	Michigan Gas Utilities Corporation	2009	Gas Depreciation Study
120	Michigan	Michigan Public Service Commission	U-15989	Upper Peninsula Power Company	2009	Electric Depreciation Study
121	Texas	Railroad Commission of Texas	9869	Atmos Energy	2009	Shared Services Depreciation Study
122	Mississippi	Mississippi Public Service Commission	09-UN-334	CenterPoint Energy Mississippi	2009	Gas Depreciation Study
123	Texas	Railroad Commission of Texas	9902	CenterPoint Energy Houston	2009	Gas Depreciation Study
124	Colorado	Colorado Public Utilities Commission	09AL-299E	Public Service of Colorado	2009	Electric Depreciation Study
125	Louisiana	Louisiana Public Service Commission	U-30689	Cleco	2008	Electric Depreciation Study
126	Texas	Public Utility Commission of Texas	35763	SPS	2008	Electric Production, Transmission, Distribution and General Plant Depreciation Study
127	Wisconsin	Wisconsin	05-DU-101	WE Energies	2008	Electric, Gas, Steam and Common Depreciation Studies
128	North Dakota	North Dakota Public Service Commission	PU-07-776	Northern States Power	2008	Net Salvage
129	New Mexico	New Mexico Public Regulation Commission	07-00319-UT	SPS	2008	Testimony – Depreciation

	A	B	C	D	E	F
1	**Asset Location**	**Commission**	**Docket (If Applicable**	**Company**	**Year**	**Description**
130	Multiple States	Railroad Commission of Texas	9762	Atmos Energy	2007-2008	Shared Services Depreciation Study
131	Minnesota	Minnesota Public Utilities Commission	E015/D-08-422	Minnesota Power	2007-2008	Electric Depreciation Study
132	Texas	Public Utility Commission of Texas	35717	Oncor	2008	Electric Depreciation Study
133	Texas	Public Utility Commission of Texas	34040	Oncor	2007	Electric Depreciation Study
134	Michigan	Michigan Public Service Commission	U-15629	Consumers Energy	2006-2009	Gas Depreciation Study
135	Colorado	Colorado Public Utilities Commission	06-234-EG	Public Service of Colorado	2006	Electric Depreciation Study
136	Arkansas	Arkansas Public Service Commission	06-161-U	CenterPoint Energy – Arkla Gas	2006	Gas Distribution Depreciation Study and Removal Cost Study
137	Texas, New Mexico	Public Utility Commission of Texas	32766	Xcel Energy	2005-2006	Electric Production, Transmission, Distribution and General Plant Depreciation Study
138	Texas	Railroad Commission of Texas	9670/9676	Atmos Energy Corp	2005-2006	Gas Distribution Depreciation Study
139	Texas	Railroad Commission of Texas	9400	TXU Gas	2003-2004	Gas Distribution Depreciation Study
140	Texas	Railroad Commission of Texas	9313	TXU Gas	2002	Gas Distribution Depreciation Study
141	Texas	Railroad Commission of Texas	9225	TXU Gas	2002	Gas Distribution Depreciation Study
142	Texas	Public Utility Commission of Texas	24060	TXU	2001	Line Losses
143	Texas	Public Utility Commission of Texas	23640	TXU	2001	Line Losses
144	Texas	Railroad Commission of Texas	9145-9148	TXU Gas	2000-2001	Gas Distribution Depreciation Study
145	Texas	Public Utility Commission of Texas	22350	TXU	2000-2001	Electric Depreciation Study, Unbundling
146	Texas	Railroad Commission of Texas	8976	TXU Pipeline	1999	Pipeline Depreciation Study

	A	B	C	D	E	F
1	**Asset Location**	**Commission**	**Docket (If Applicable**	**Company**	**Year**	**Description**
147	Texas	Public Utility Commission of Texas	20285	TXU	1999	Fuel Company Depreciation Study
148	Texas	Public Utility Commission of Texas	18490	TXU	1998	Transition to Competition
149	Texas	Public Utility Commission of Texas	16650	TXU	1997	Customer Complaint
150	Texas	Public Utility Commission of Texas	15195	TXU	1996	Mining Company Depreciaiton Study
151	Texas	Public Utility Commission of Texas	12160	TXU	1993	Fuel Company Depreciation Study
152	Texas	Public Utility Commission of Texas	11735	TXU	1993	Electric Depreciation Study

CHATTANOOGA GAS COMPANY

DEPRECIATION RATE STUDY

AT DECEMBER 31, 2016

http://www.utilityalliance.com

CHATTANOOGA GAS COMPANY
DEPRECIATION RATE STUDY
EXECUTIVE SUMMARY

Southern Company Gas engaged Alliance Consulting Group to conduct a depreciation study of Chattanooga Gas Company ("CGC" or "the Company") gas operations depreciable assets as of December 31, 2016.

This study was conducted under the standard depreciation study approach. The current approved depreciation rates were based on the straight-line method, average life group ("ALG") procedure, and remaining-life technique. The change in annual depreciation accrual expense is a decrease of approximately $326 thousand.

The average service lives ("ASLs") for the accounts were generally increasing. Of the 49 accounts analyzed, 22 accounts have increasing lives, 6 accounts have decreasing lives, and 21 accounts have no change in life. The accounts with the most significant changes in life were in Storage Plant Accounts 362.0 and 362.10, which are natural gas and liquefied natural gas ("LNG") holders (tanks) each increased by 30 years; Account 364.23 LNG Structures and Improvements increased by 30 years; and Account 363.30 Compressor Equipment increased by 25 years.

For net salvage, there were 10 accounts decreasing their net salvage percentages (i.e. more negative), 37 accounts remained the same, and two accounts with increasing net salvage (i.e. less negative). The account impacted most by the decrease (more negative net salvage) are Accounts 380.10 and 380.20 Distribution Steel and Plastic Services where the net salvage moved from negative 60 percent to negative 75 percent. The account most impacted by the increase (less negative net salvage) is Account 386 Distribution Other Equipment where the net salvage moved from negative 60 percent to zero percent.

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. This study recommends a decrease of $326 thousand in annual depreciation expense for depreciable gas plant compared to the depreciation rates currently in effect. This decrease is comprised of $12 thousand for Storage and $579 thousand for General Plant and an increase of $265 thousand for Distribution Plant. Appendix A demonstrates the change in depreciation expense for the accounts. Appendix B presents the development of the annual depreciation rates and accruals.

CHATTANOOGA GAS COMPANY

NATURAL GAS OPERATIONS

DEPRECIATION RATE STUDY

AT DECEMBER 31, 2016

Table of Contents

PURPOSE

The purpose of this study is to develop depreciation rates for the depreciable property as recorded on the Company books at December 31, 2016. The account based depreciation rates were designed to recover the total remaining undepreciated investment, adjusted for net salvage, over the remaining life of CGC's property on a straight-line basis. Non-depreciable property (land) and intangible plant were excluded from this study.

CGC provides retail natural gas sales and transportation services to approximately 64,000 residential, commercial and industrial customers in Hamilton and Bradley counties in southeast Tennessee. Their service territory includes Chattanooga, Cleveland, Red Bank, East Ridge, Lookout Mountain and Signal Mountain. CGC owns and operates a liquefied natural gas ("LNG") storage facility, distribution mains and various other plant assets that comprise a complex system of storage and intermediate and low pressure distribution networks located across the service area. There are a number of city gates throughout the system where gas is delivered. Once gas is metered into individual cities, the pressure is reduced through regulators in order to meet system requirements as determined by pressure and volume needs. Then gas is delivered to customers for burner tip consumption.

CGC has made significant investments to expand and modernize the gas distribution system since the late 1980's and plans to continue making those infrastructure improvements and replacements. Assets for CGC at December 31, 2016 include: approximately 1,600 miles of distribution mains, 5 natural gas city gate stations, and a LNG storage facility that holds the equivalent of 6.1 billion cubic feet of natural gas. In addition, CGC owns and maintains other equipment such as services, meters, and general plant to serve its customers.

STUDY RESULTS

Depreciation rates for all CGC depreciable property are shown in Appendix A. Overall these rates translate into an annual depreciation accrual of $6.4 million based on CGC's depreciable investment at December 31, 2016. The annual depreciation expense calculated by using the approved rates was $6.7 million.

Consistent with Federal Energy Regulatory Commission Rule AR-15, this depreciation study develops depreciation expense for Vintage 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 five 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 CGC. Both the FERC and the Tennessee Public Utility Commission ("TPUC") have approved this approach.

The study gave recognition to increased lives in nearly 45% of the accounts and decreased (more negative) net salvage in 20% of the accounts. The increase in lives, somewhat offset by the decrease in net salvage, is the primary driver of the overall decrease in depreciation expense. Appendix A presents a comparison of approved rates versus proposed rates by account. Appendix B presents the development of the annual depreciation rates and accruals. Appendix C presents a comparison of approved and proposed mortality and net salvage estimates by account. Appendix D presents the net salvage analysis by account.

GENERAL DISCUSSION

Definition

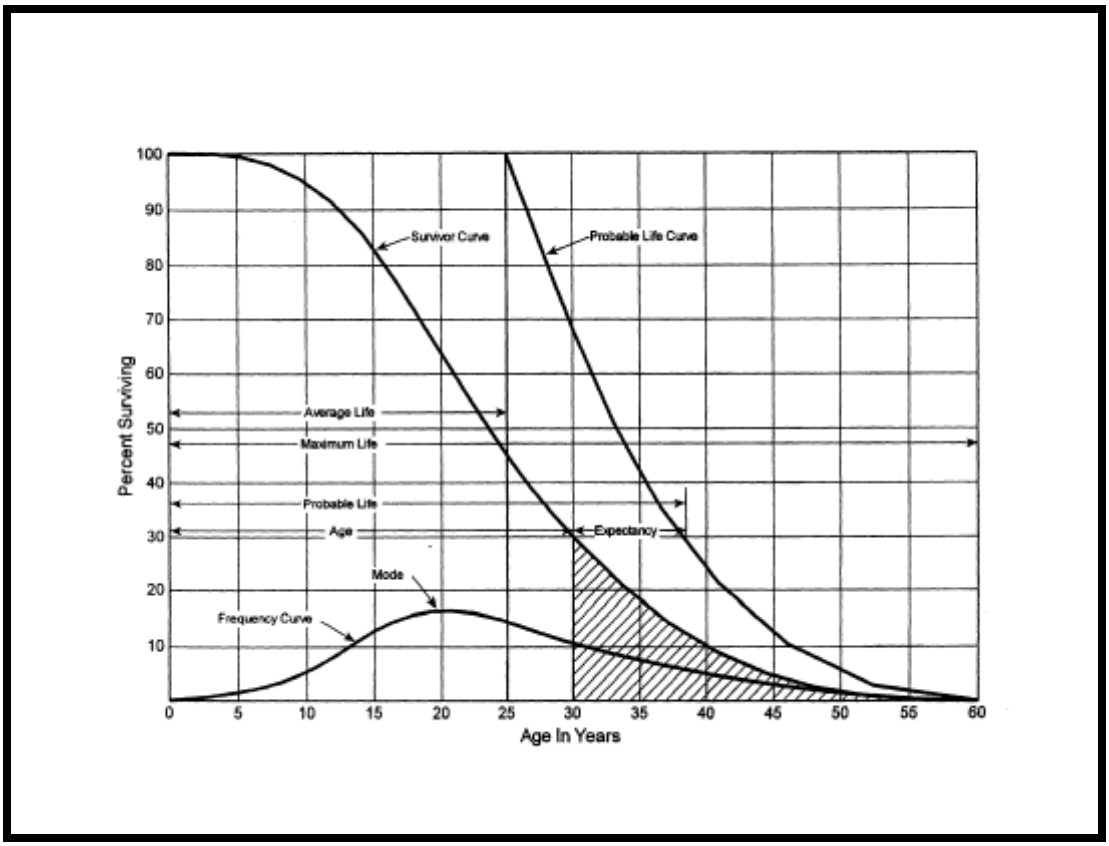
The term "depreciation" as used in this study is considered in the accounting sense, that is, a system of accounting that distributes the cost of assets, less net salvage (if any), over the estimated useful life of the assets in a systematic and rational manner. It is a process of allocation, not valuation. 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

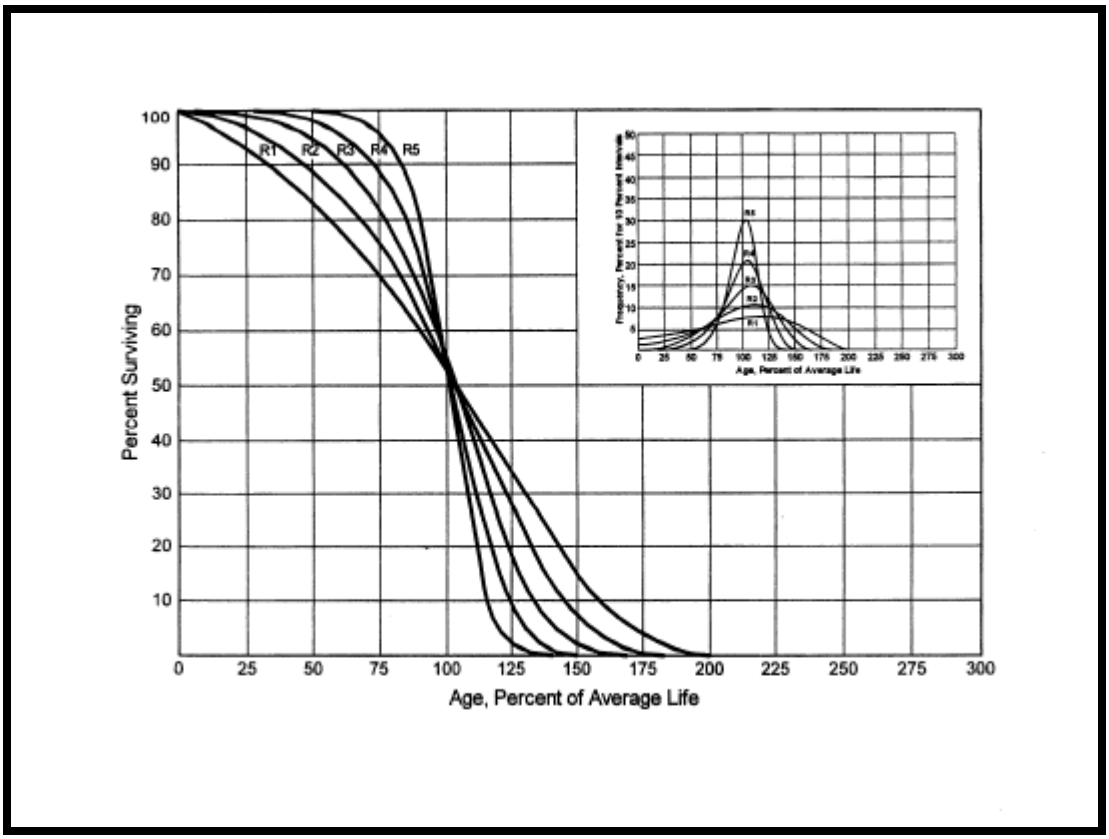
The straight-line, broad (average) life group, remaining-life depreciation system was employed to calculate annual and accrued depreciation in this study. In this system, the annual depreciation expense for each group is computed by dividing the original cost of the asset less allocated depreciation reserve less estimated net salvage by its respective average life group remaining life. The 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 account. The computations of the annual depreciation rates for each account and function are shown on Appendix A and B. Both Actuarial and Simulated Plant Record (“SPR”) analysis were used where sufficient data was available, and judgment was used to some degree on all accounts.

Survivor Curves

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



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



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

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

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

Actuarial Analysis

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

Simulated Plant Record Analysis

The SPR - Balances approach is one of the commonly accepted approaches to analyze mortality characteristics of utility property. SPR was applied to any accounts where vintaged transaction data was unavailable or available for a limited number of years. In this method, an Iowa Curve and average service life are selected as a starting point of the analysis and its survivor factors applied to the actual annual additions to give a sequence of annual balance totals. These simulated balances are compared with the actual balances by using both graphical and statistical analysis. Through multiple comparisons, the mortality characteristics (as defined by an average life and Iowa Curve) that are the best historical match to the property in the account can be found.

The Conformance Index ("CI") is one measure used to evaluate various SPR analyses. CIs are also used to evaluate the "goodness of fit" between the actual data and the Iowa Curve being referenced. The sum of squares difference ("SSD") is a summation of the difference between the calculated balances and the actual balances for the band or test year being analyzed. This difference is squared and then summed to arrive at the SSD.

$$SSD = \Sigma_1^n (Calculated\ Balance_i - Observed\ Balance_i)^2$$

Where n is the number of years in the test band. This calculation can then be used to develop other calculations, which the analyst feels might give a better indication for the "goodness of fit" for the representative curve under consideration. The residual measure ("RM") is the square root of the average squared differences as developed above. The residual measure is calculated as follows:

$$RM = \sqrt{(\frac{SSD}{n})}$$

The CI is developed from the residual measure and the average observed plant

balances for the band or test year being analyzed. The calculation of conformance index is shown below:

$$CI = \frac{\sum_1^n Balances_i / n}{RM}$$

The retirement experience index ("REI") gives an indication of the maturity of the account and is the percent of the property retired from the oldest vintage in the band at the end of the test year. Retirement indices range from 0 percent to 100 percent and an REI of 100 percent indicates that a complete curve was used. A retirement index less than 100 percent indicates that the survivor curve was truncated at that point. The originator of the SPR method, Alex Bauhan, suggests ranges of value for the CI and REI.

The relationship for CI proposed by Bauhan is shown below[1]:

CI	Value
Over 75	Excellent
50 to 75	Good
25 to 50	Fair
Under 25	Poor

The relationship for REI proposed by Bauhan[2] is shown below:

REI	Value
Over 75	Excellent
50 to 75	Good
33 to 50	Fair
17 to 33	Poor
Under 17	Valueless

Despite the fact there has not been empirical research to validate Bauhan's conclusions, depreciation analysts have used these measures in analyzing SPR results for nearly 60 years, since the SPR method was developed.

1 Public Utility Depreciation Practices, p. 96.
2 Public Utility Depreciation Practices, p. 97.

Each of these statistics provides the analyst with a different perspective of the comparison between a band of simulated or calculated balances and the observed or actual balances in the account being studied. Although one statistic is not necessarily superior over the others, the conformance index is the one many analysts use in depreciation studies. The depreciation analyst should carefully weigh the data from REIs to ensure that a mature curve is being used to estimate life.

Statistics are useful in analyzing mortality characteristics of accounts as well as determining a range of service lives to be analyzed using the detailed graphical method. However, these statistics boil all the information down to one, or at most, a few numbers for comparison. Visual matching through comparison between actual and calculated balances expands the analysis by permitting the analyst to view many points of data at a time. The goodness of fit should be visually compared to plots of other Iowa Curve dispersions and average lives for the selection of the appropriate curve and life. 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. Individually, no one factor in these cases may have a substantial impact on the analysis, but overall, may shed light on the utilization and characteristics of assets. Judgment may also be defined as deduction, inference, wisdom, common sense, or the ability to make sensible decisions. There is no single correct result from statistical analysis; hence, there is no answer absent judgment. At the very least for example, any analysis requires choosing which bands to place more emphasis.

The establishment of appropriate average service lives and retirement dispersions for the Storage, 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 and SPR balances 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 CGC and in compliance with Settlement Agreement in TRA Docket No. 06-00175., this study only calculated and proposed the ALG depreciation procedure to group the assets within each account. After an average service life and dispersion were selected for each account, those parameters were used to estimate what portion of the surviving investment of each vintage was expected to retire. The depreciation of the group continues until all investment in the vintage group is retired. ALG is defined by their respective account dispersion, life, and salvage estimates. A straight-line rate for each ALG is calculated by computing a composite remaining life for each group across all vintages within the group, dividing the remaining investment to be recovered by the remaining life to find the annual depreciation expense and

dividing the annual depreciation expense by the surviving investment. The resultant rate for each ALG is designed to recover all retirements less net salvage when the last unit retires. The ALG procedure recovers net book cost over the life of each account by averaging many components.

Theoretical Depreciation Reserve

The book depreciation reserve was derived from Company records where the provision for depreciation is maintained on an account level. As a point of comparison, a theoretical depreciation reserve model was computed 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 average life group method requires an estimate of dispersion and service life to establish how much of each vintage is expected to be retired in each year until all property within the group is retired. Estimated average service lives and dispersion determine the amount within each average life group. The straight-line remaining-life theoretical reserve ratio at any given age (RR) is calculated as:

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

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 deprecation rates and documenting the corresponding recommendations.

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

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

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

Finally, Phase 4 involved the calculation of accrual rates, making recommendations and documenting the conclusions in a final report. The calculation of accrual rates is found in the workpapers. Recommendations for the various accounts are contained within the Detailed Discussion of this report. The depreciation study flow diagram shown as Figure 1[3] 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 the statistical analysis, discussions with management, forecast assumptions, write logic supporting forecasts and estimation, and write final report.

[3] Introduction to Depreciation for Public Utilities & Other Industries, AGA EEI 2013

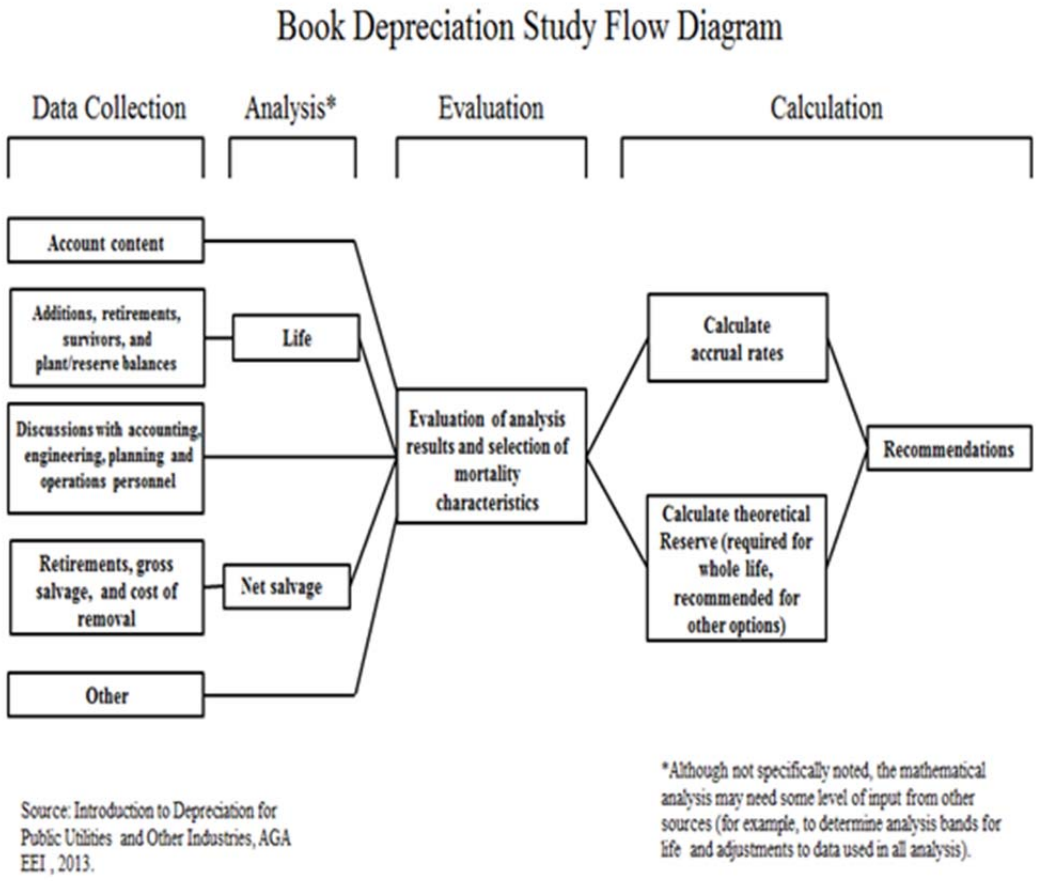


Figure 1
CGC DEPRECIATION STUDY PROCESS

Depreciation Rate Calculation

Annual depreciation expense amounts for the depreciable accounts of CGC were calculated by the straight line method, average life group procedure, and remaining-life technique. With this approach, remaining lives were calculated according to standard ALG 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.

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 actuarial (retirement rate) and SPR (balances) methods. After establishment of appropriate average service lives and retirement dispersion, remaining life was computed for each account. Theoretical depreciation reserve with zero net salvage was calculated using theoretical reserve ratios as defined in the theoretical reserve portion of the General Discussion section. The difference between plant balance and theoretical reserve was then spread over the ALG depreciation accruals. Remaining life computations for each account are provided in work papers.

Life Analysis

The retirement rate actuarial analysis method was applied to storage and general plant accounts for CGC. 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. The selected curve for each account is shown in the Life Analysis Section of this report. The observed life tables for all analyzed placement and experience bands are provided in workpapers.

For each account on the overall band (i.e. placement from earliest vintage year which varied for each account through 2016), 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: in increments of approximately ten years, for instance 1997-2016, 1977-2008, etc. Repeated matching usually pointed to a focus on one dispersion family and small range of service lives. The goal of visual matching was to minimize the differential between the observed life table and Iowa curve in top and mid-range of the plots. These results are used in conjunction with all other factors that may influence asset lives.

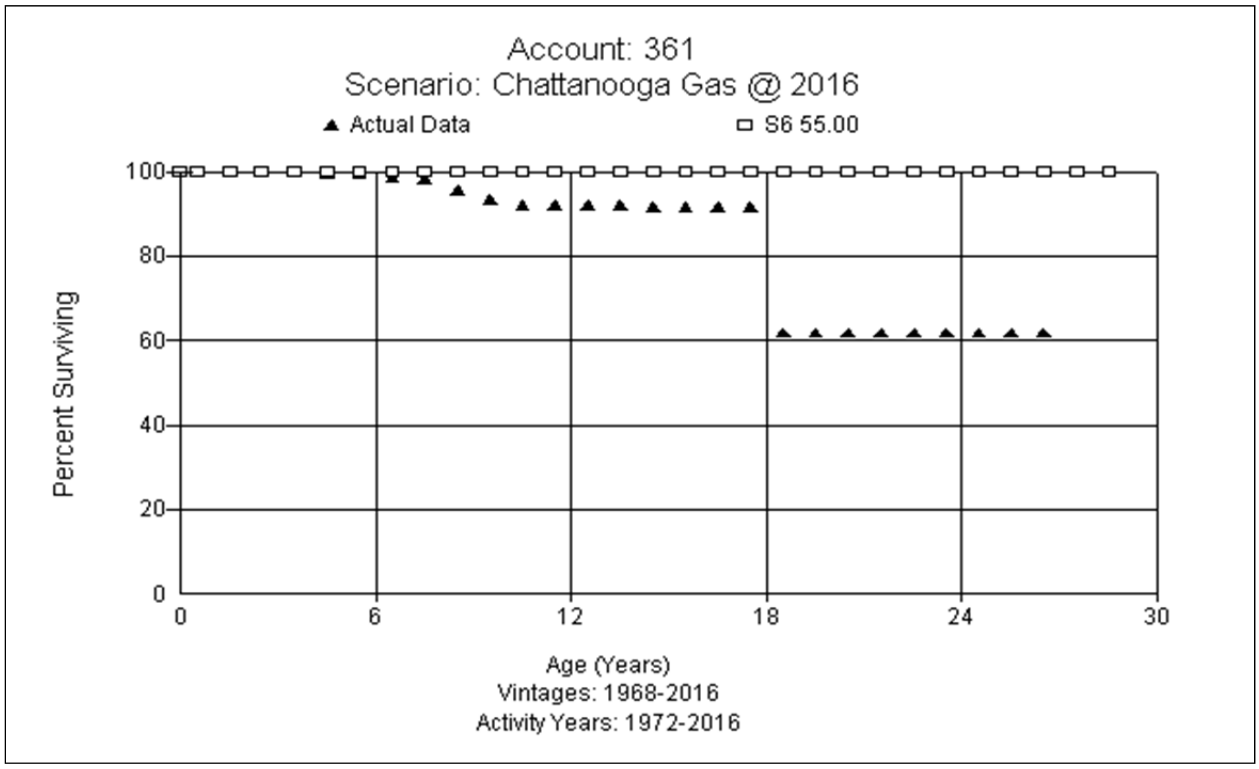
The SPR (semi-actuarial) balances method was applied to most distribution accounts for CGC. For each account, an analysis was performed at intervals of 10, 20, 30, 40, and full bands within the balance periods. In addition to reviewing the SPR analysis for each band and account, a graphical comparison between actual and simulated balances was performed.

ACCOUNT SPECIFIC LIFE ANALYSIS RESULTS

LNG Storage Plant

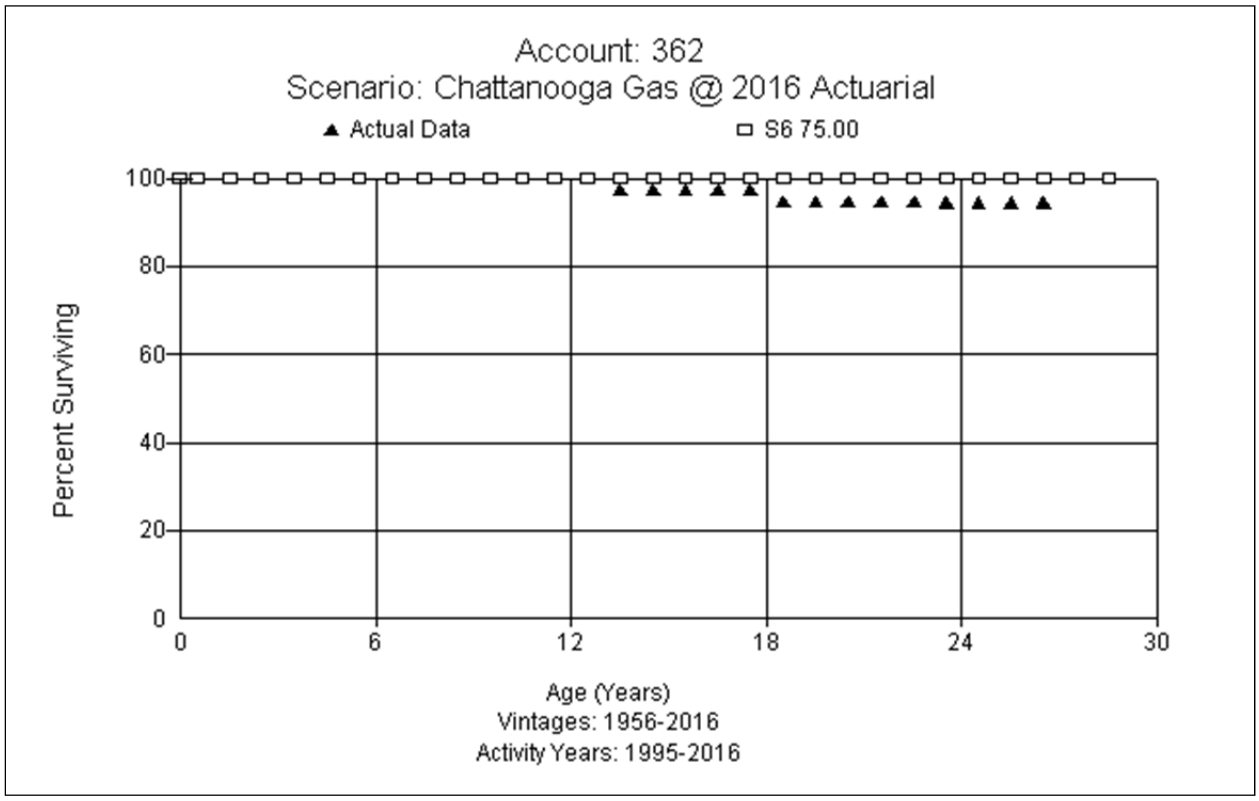
Account 361.0 Natural Gas Structures and Improvements (55 S6)

This account consists of structures, gates, fences, paving, security and fire water booster systems, plant control systems and boil-off compressor package. There is approximately $10.3 million. The approved life for this account is 45 years with the S6 dispersion. The few retirements that have been recorded are at ages younger than would be expected, which is indicated in the average age of retirements of 10.21 years. The analysis is inconclusive but expectations are that these assets will last longer than the currently approved 45 year life. Based on the type and mix of assets in the account, expectations, and judgment, we recommend moving out to 55 years but retaining the S6 dispersion. An observed life table with the study proposed parameter is shown in the graph below.



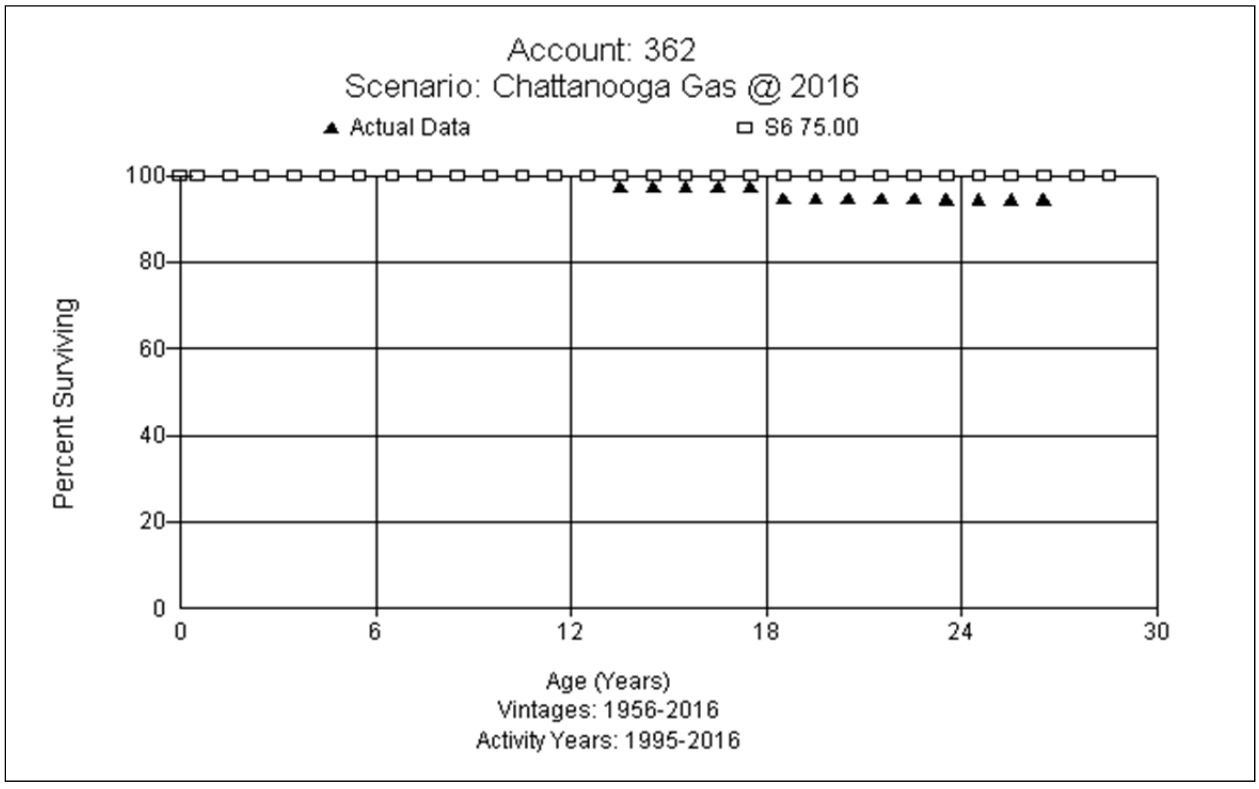
Account 362.0 Natural Gas Holders (75 S6)

This account consists of the natural gas holders (tanks) and related equipment. There is approximately $180 thousand in this account. The approved life for this account is 45 years with the S6 dispersion. Consistent with the last study, Accounts 362.00 and 362.10 were combined for analysis due to the similarity in form and function. Due to the small level of retirements, the analysis was inconclusive. Discussions with Company personnel indicated the tanks, which are now 45 years old, should last another 30 years with good maintenance and a good coating. Based on the type of asset, discussions with Company personnel and judgment, this study recommends increasing the life to 75 years while retaining the S6 dispersion. An observed life table for the combined 362.00 and 362.10 accounts with the study proposed parameter is shown in the graph below.



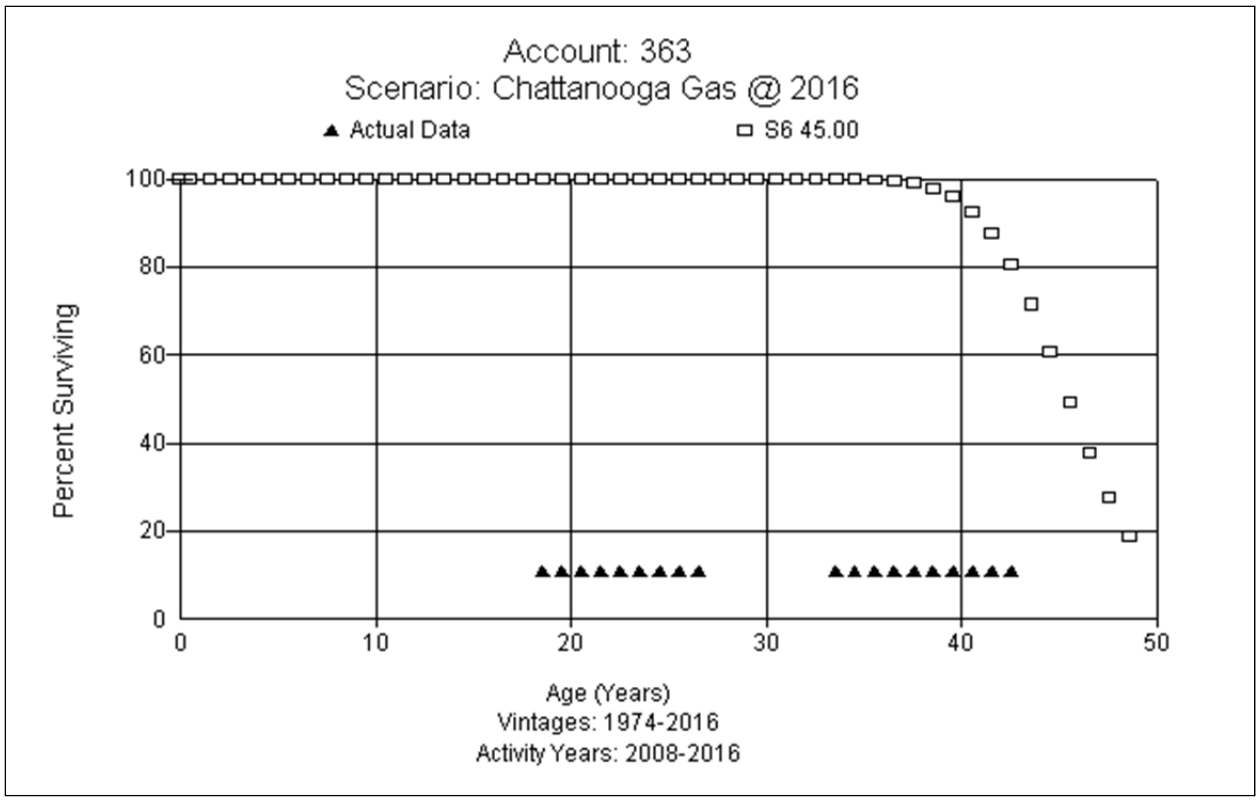
Account 362.10 LNG Storage Tanks (75 S6)

This account consists of the storage tanks located at the LNG storage plant site. There is approximately $7.7 million in this account. The approved life for this account is 45 years with the S6 dispersion. Consistent with the last study Accounts 362.00 and 362.10 were combined for analysis due to the similarity in form and function. Due to the small level of retirements, the analysis was inclusive. Discussions with Company personnel indicated the tanks, which are now 45 years old, should last another 30 years with good maintenance and a good coating. Based on the type of asset, discussions with Company personnel and judgment, this study recommends increasing the life to 75 years while retaining the S6 dispersion. An observed life table for the combined 362.00 and 362.10 accounts with the study proposed parameter is shown in the graph below.



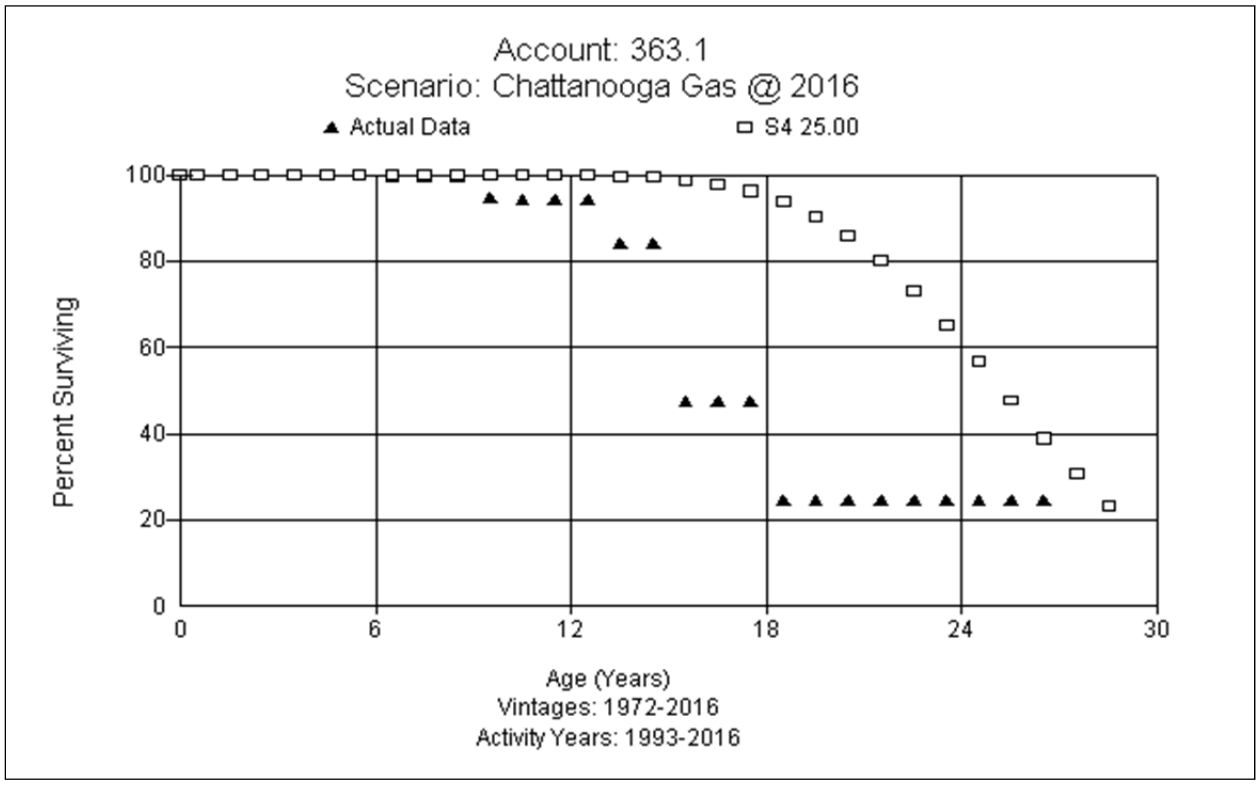
Account 363.0 Purification Equipment (45 S6)

This account consists of regeneration heaters, hydrocarbon removal equipment, various purification racks, vessels, and filters used in the LNG plant operations. There is approximately $528 thousand of investment in this account. The approved life for this account is 45 S6. The average age of surviving assets is 33.09 years. The average age of retirements is 18.50 years. The analysis is being driven by one retirement which would suggest a life less than 30 years and is not necessarily representative of the future. Discussions with Company personnel indicated many parts at the plant were replaced due to a fire. The discussions with Company personnel and age and characteristic of the assets in this account continue to indicate the existing life is reasonable. Based on the limited analysis, discussions with Company personnel and judgment, this study proposes to retain the 45 S6 at this time. An observed life table with the study proposed parameter is shown in the graph below.



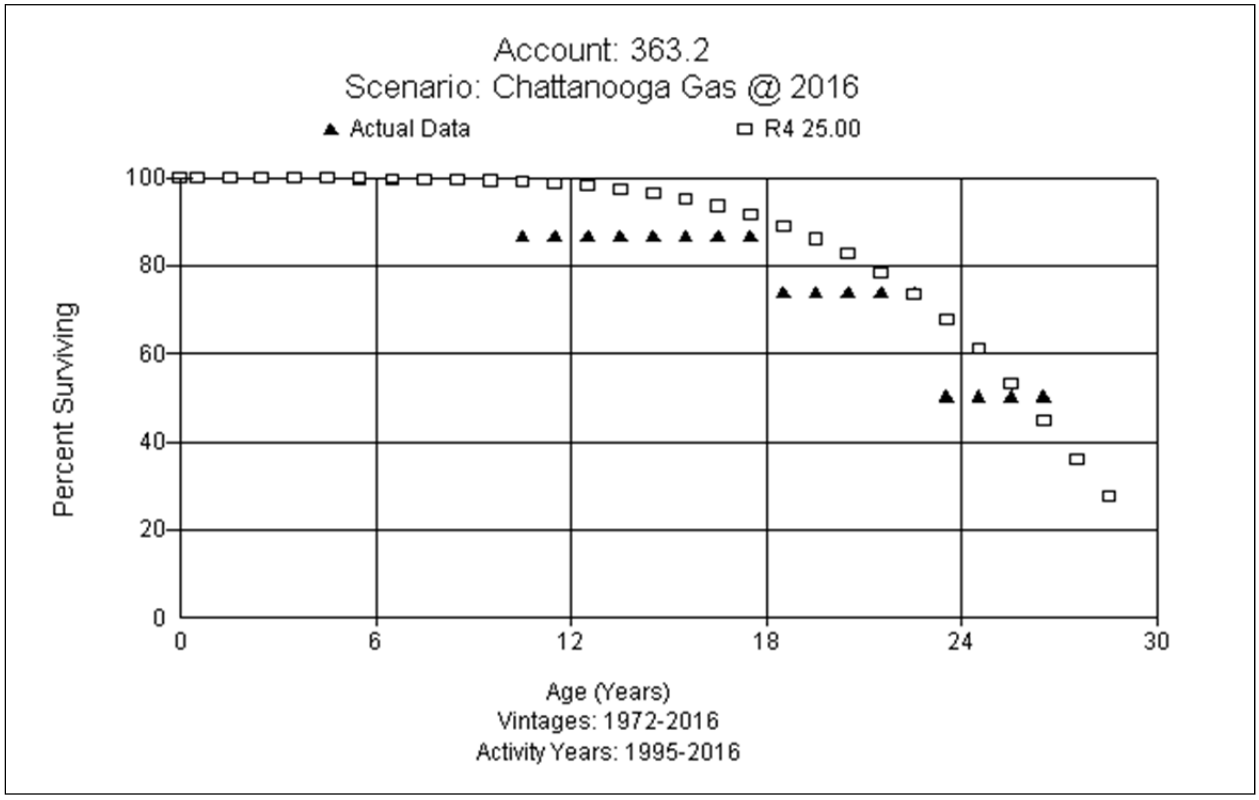
Account 363.1 Liquefaction Equipment (25 S4)

This account consists of inlet separators, absorber, regeneration, and odorizing and liquefaction equipment associated with the LNG plant. There is approximately $5.3 million, in this account. The approved life for this account is the 25 S4. The surviving assets average age is 7.49. The average age of retirements is 15.37 years. Discussions with Company personnel indicated many of the assets in this account have been replaced due to a fire with exception of the cold box (which is the main component). Limited curve fits with a life in the 15–25 year range are indicated. Based on analysis indications, Company input and expectations, and type of assets in this account, this study proposes retaining the 25 S4. An observed life table with the study proposed parameter is shown in the graph below.



Account 363.2 Vaporizing Equipment (25 R4)

This account consists of vaporizers, boiler, piping and pump equipment associated with the LNG plant. There is approximately $2 million in this account. The approved life for this account is the 25 R4. The average age of retirements is 16.23 years. Average age of the surviving investment is 19.51 years. Consistent with other accounts, retirements were recorded at an early age due to a fire. Discussions with Company personnel did not indicate the existing life was unreasonable. Based on the analysis, type of assets, discussions with Company personnel, and judgment, this study recommends retention of the 25 R4. An observed life table with the study proposed parameter is graphed for this account below.

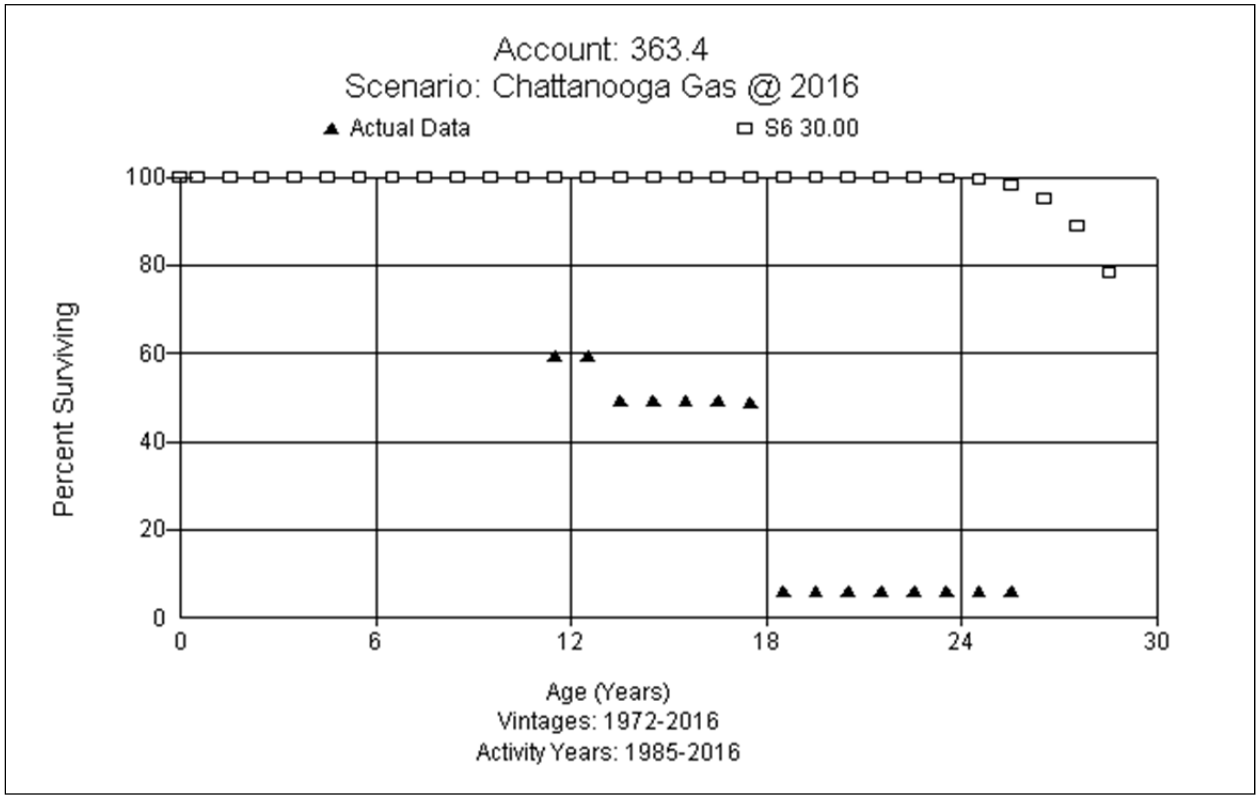


Account 363.3 Compressor Equipment (50 R4)

This account consists of compressors, valves, piping and other compressor station equipment used in the LNG storage operations. There is approximately $2.7 million of investment in this account. The current approved life is 25 R4. Discussions with Company personnel indicated these are boil-off compressors with reciprocating engines. There are two compressors, so having a second compressor allows a shorter run time each year for each compressor extending the overall life. The current average age of surviving assets is 13.88 years. Based on discussions with Company personnel regarding assets, expectations, and judgment, this study recommends moving to a 50 year ASL with the R4 dispersion pattern. There are no retirements recorded, so no graph of the observed life table with the proposed study parameter is provided.

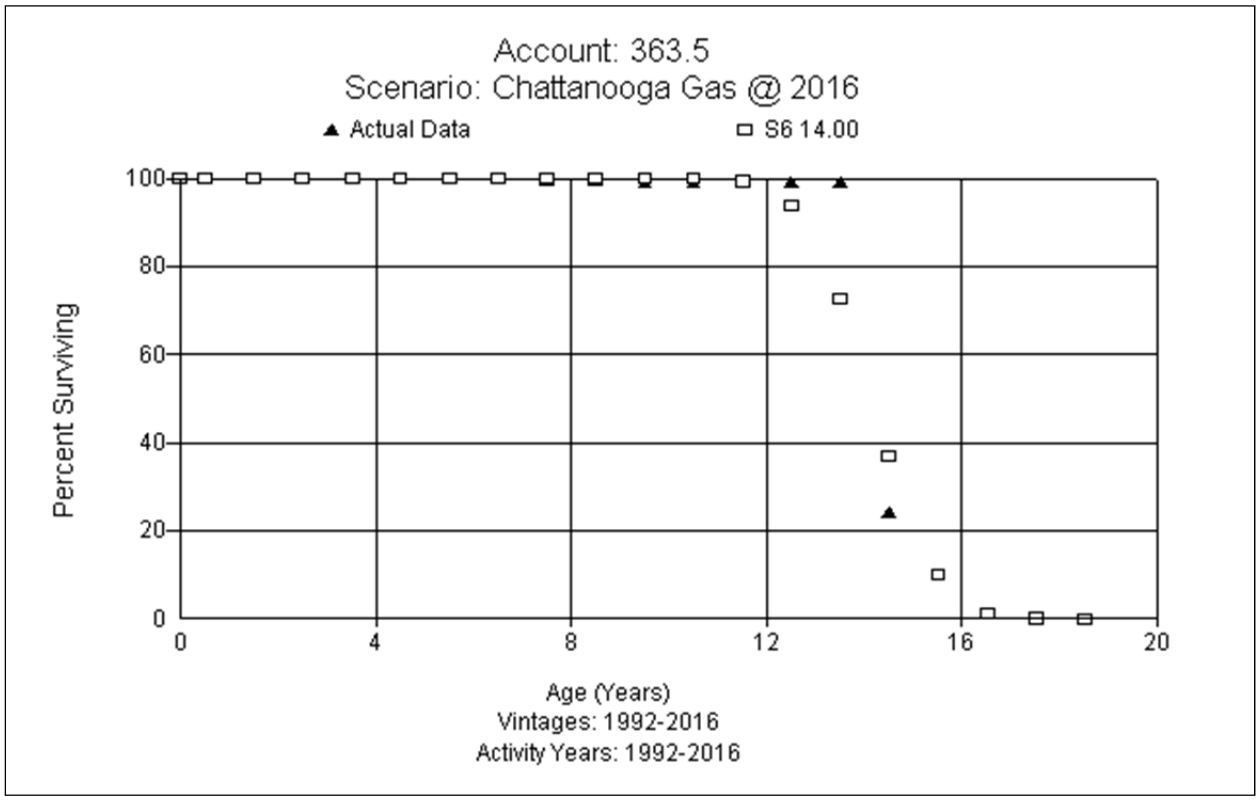
Account 363.4 Measuring & Regulating Equipment (30 S6)

This account consists of measuring and regulating station equipment used for LNG storage operations. There is approximately $283 thousand in this account. The approved life for this account is the 30 S6. The average age of surviving assets is 6.62 years. The limited retirements that have been recorded have occurred between age 12 and 18 years which impacts the curve fits with the majority of the fits between 18-24 years. However, a life of 30 years is a reasonable expectation for these types of assets. The average age of retirements is 16.33 years. Based on the analysis, type of equipment, and judgment this study recommends retention of the existing 30 S6 curve at this time. A graph of the observed life table with the study proposed parameter is provided.



Account 363.5 Other Equipment (14 S6)

This account consists of instrumentation and switch gear, analyzers and other miscellaneous equipment used in the LNG storage operations. There is approximately $2.1 million of investment in this account. The approved life for this account is 14 years with the S6 dispersion. The current average age of the surviving investment is 7.36 years. Average age of retirements is 14.31 years. The fuller band analysis indicates a life slightly less than the existing 14 years but with the same steep dispersion pattern. The more recent band fits is the 14 S6, which is consistent with the existing. Based on the analysis, type of assets, and judgment this study recommends retention of the existing 14 S6. A graph of the observed life table with the study proposed parameter is provided.



Account 364.2 Structures & Improvements LNG (55 S6)

This account consists of structures and improvements used in the LNG storage operations. There is approximately $521 thousand of investment in this account. The approved life for this account is the 45 S6. Current average age of surviving investment is 2.25 years. Discussion with Company personnel indicated a new control building was added when the fire happened, but the old building remains. Based on limited historical activity, type of assets, similarity to Account 361.0, and Company input, this study recommends increasing the life to 55 years while retaining the S6 curve. No observed life table is graphed for this account.

Account 364.5 M&R Equipment LNG (30 S6)

This account consists of measuring and regulating equipment used in the LNG storage operations. There is approximately $962 thousand of investment in this account. The approved life for this account is the 30 S6. Current average age of surviving investment is 2.50 years. Without more historical retirement activity or feedback that the life is not appropriate, there is no basis for changing the approved life. This study recommends retention of the 30 S6. No observed life table is graphed for this account.

Account 364.8 Other Equipment (14 S6)

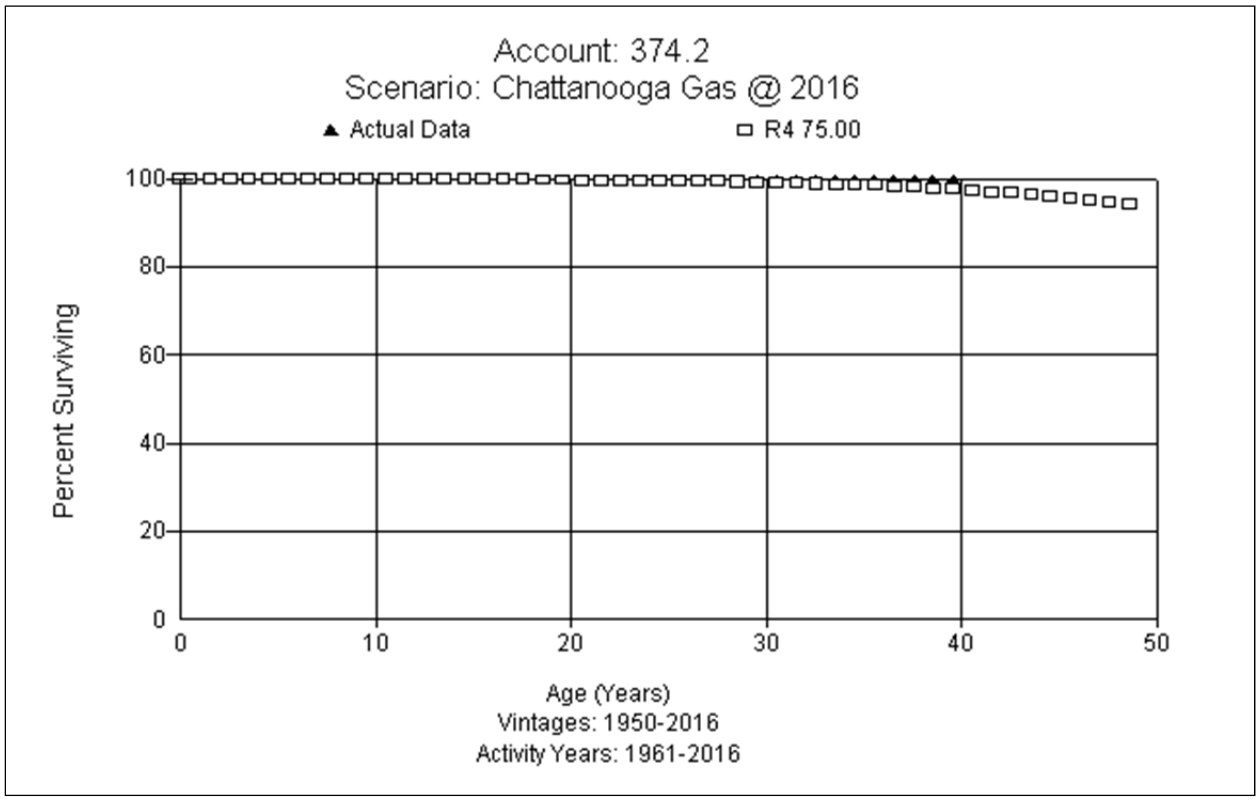
This account consists of other equipment used in the LNG storage operations. There is approximately $732 thousand of investment in this account. The approved life for this account is the 14 S6. Current average age of surviving investment is 4.73 years. Without more historical retirement activity and no feedback that the life based on the types of assets are inappropriate, there is no basis for changing the approved life. This study recommends retention of the 14 S6. No observed life table is graphed for this account.

Distribution Plant

The Distribution system of CGC has been and will continue to see infrastructure replacements. The Pipe Replacement Program ("PRP") which targeted cast iron first, finished a couple years ago. The Company is still working on bare steel with all pipe identified originally is expected to be removed by next year. The initial steel identification was pre-1957 vintages. Ineffectively coated pipe may be found in vintages up to even the early 1970s and was maybe 106 miles or more. There will still be an effort to retire vintage steel in the next few years. No vintage plastic program has been initiated. There will be a continued focus and effort in infrastructure which affects both Accounts 376 Mains and 380 Services the most.

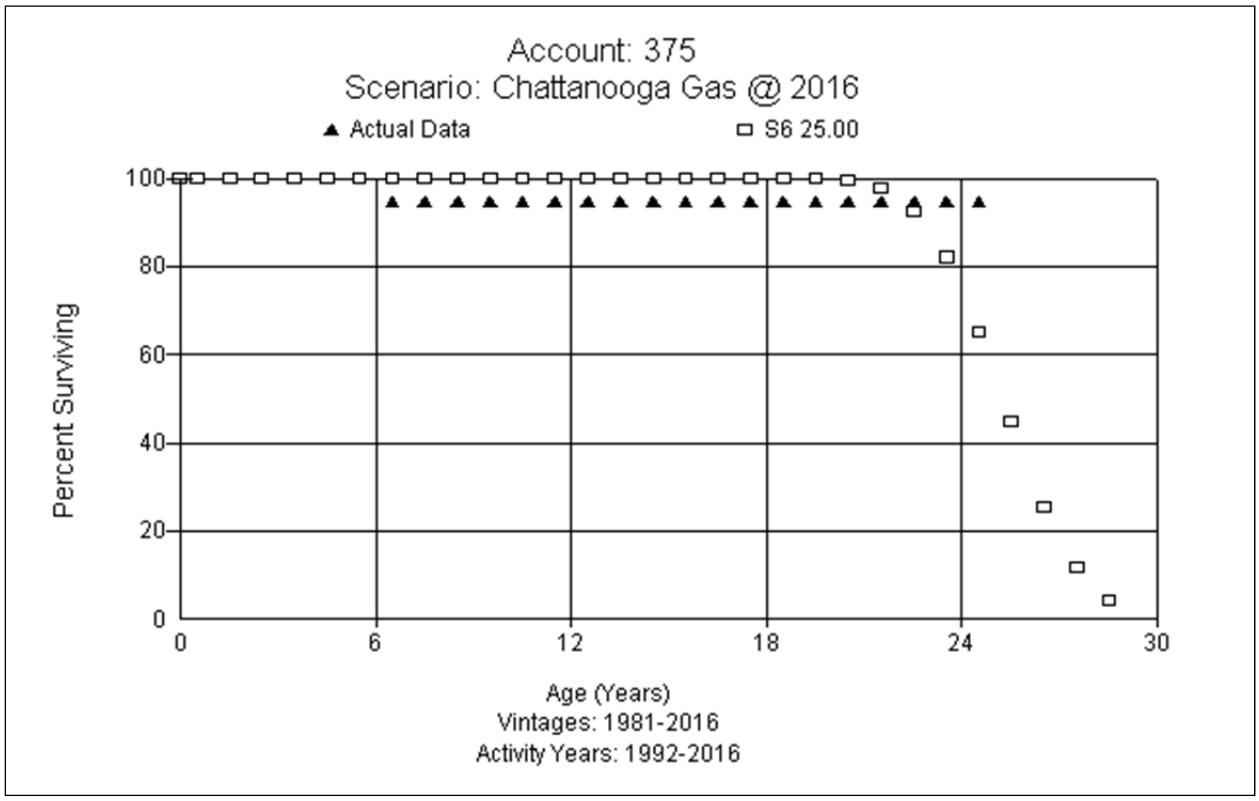
Account 374.2 Land Rights (75 R4)

This account includes the cost of land rights used in connection with distribution operations. There is approximately $697 thousand in this account. The approved life for this account is the 60 R4. There have been very few retirements recorded. Land Rights are tied with the installation of mains so a reasonable expectation is the life would equal or exceed the life of mains. This study recommends increasing the life to 75 years but retaining the R4 dispersion. A graph of the observed life table with the study proposed parameter is provided.



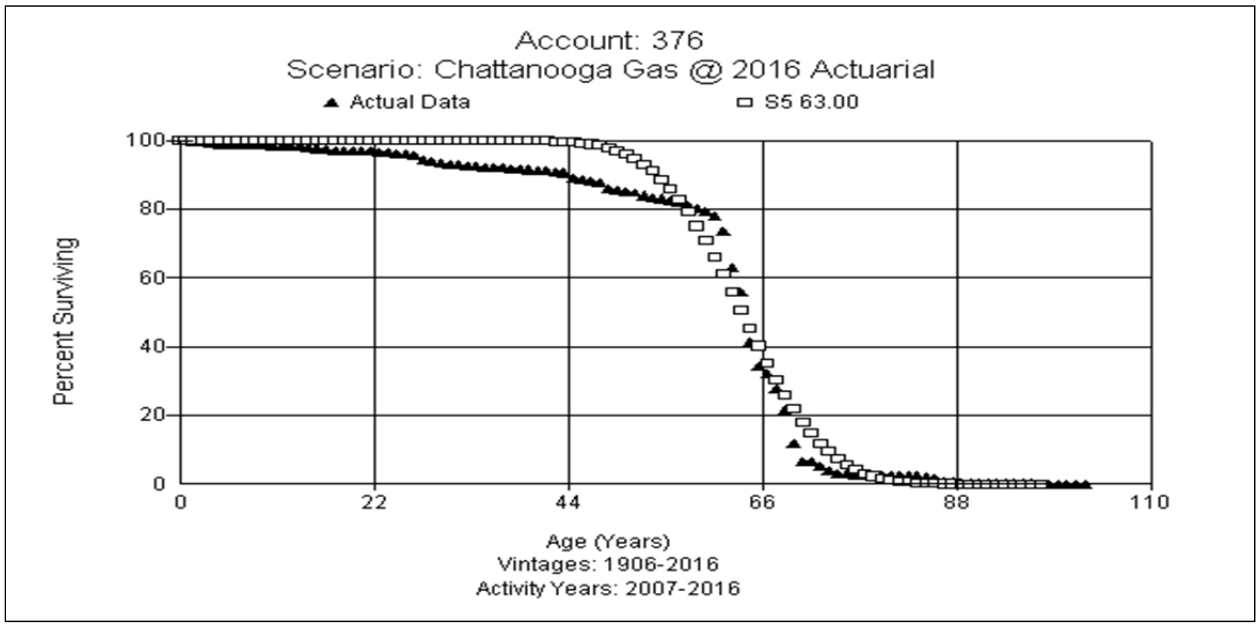
Account 375.0 Structures and Improvements (25 S6)

This account includes two portable steel buildings and other miscellaneous structures and improvements associated with the gas distribution system. There is approximately $72 thousand in this account. The approved life for this account is the 25 S6. There have only been two retirements recorded and those are at ages much younger than would be expected. The average age of retirements is 4.68 years and the average age of the surviving investment is 7.72 years. Discussion with Company personnel indicated bollards (barriers) are the additions to the account. These are generally used to protect residential and small commercial meters. A bollard is expected to have a life around 25 years. Considering the indications in the limited historical activity and analysis, type of assets, discussions with Company personnel and judgment, this study recommends retention of the 25 S6 at this time. A graph of the observed life table with the study proposed parameter is provided.



Account 376.0 Mains All (63 S5)

This account consists of all distribution mains, which is comprised of cast iron, steel and plastic. There is approximately $130.7 million in this account. The approved life is 57 R2.5. The current average age of the investment is 16.39 years. There is approximately 1,600 miles of mains. The cast iron program finished a couple years ago but the Company is still working on replacing bare steel. There is still an effort to retire vintage steel over the next few years. No vintage plastic program has been initiated. The initial steel identification was pre-1957 vintages but ineffectively coated pipe may be found in vintages up to 1970s (maybe 106 miles or more). Discussions with Company personnel indicated a life longer than 57 years would be reasonable and they would expect to see the newer pipe last longer due to better (effective) coating and consistent cathodic protection. Some earlier generations are having hydrocarbon penetration. Current mix is approximately 60% plastic (around 15% is pre-1974 vintage plastic) and 40% steel. The Company began recording aged retirements in 2000, so actuarial analysis was performed. The full band had a good fit with a 63 S5. The SPR analysis indicates the best CI and REIs have ASLs of 61 and 68 years with R2.5 and R2 dispersion patterns, respectively. Considering both actuarial and SPR analysis and discussions with Company personnel on plans and expectations, this study recommends increasing the life to 63 years with the S5 dispersion. A graph of the observed life table and the study proposed curve and life is shown below.

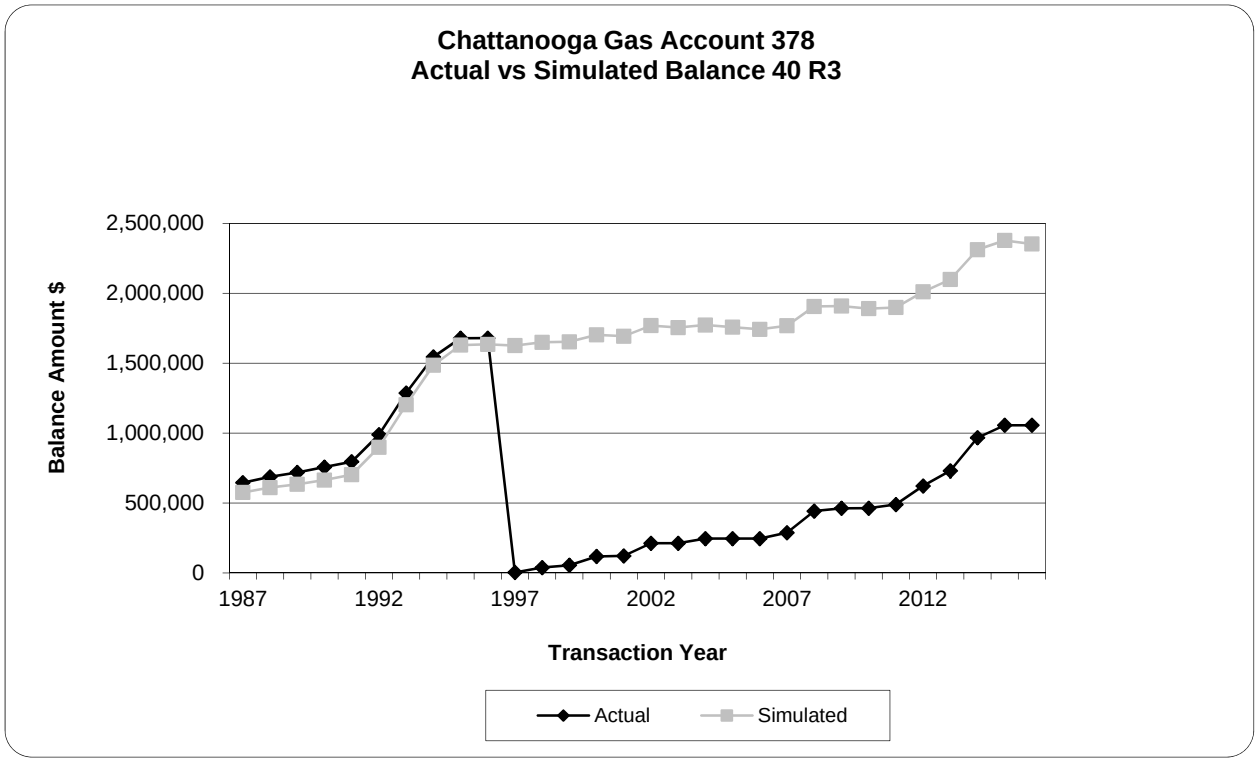


Account 377.0 Compressor Station Equipment

This account consists of regulator stations, receivers, recorders, transmitters and other miscellaneous compressor station equipment used in the distribution system. There is approximately $703 thousand of investment in this account. The currently approved life is 25 R3 for this account. Based on discussions with Company personnel these assets should be transferred to measuring and regulating accounts. It was determined that $597 thousand would be transferred to Account 378 and $106 thousand would be transferred to Account 379. This transfer is considered to be a proforma adjustment in the study and will occur in 2017. Therefore, no account recommendation or rate is provided in the study.

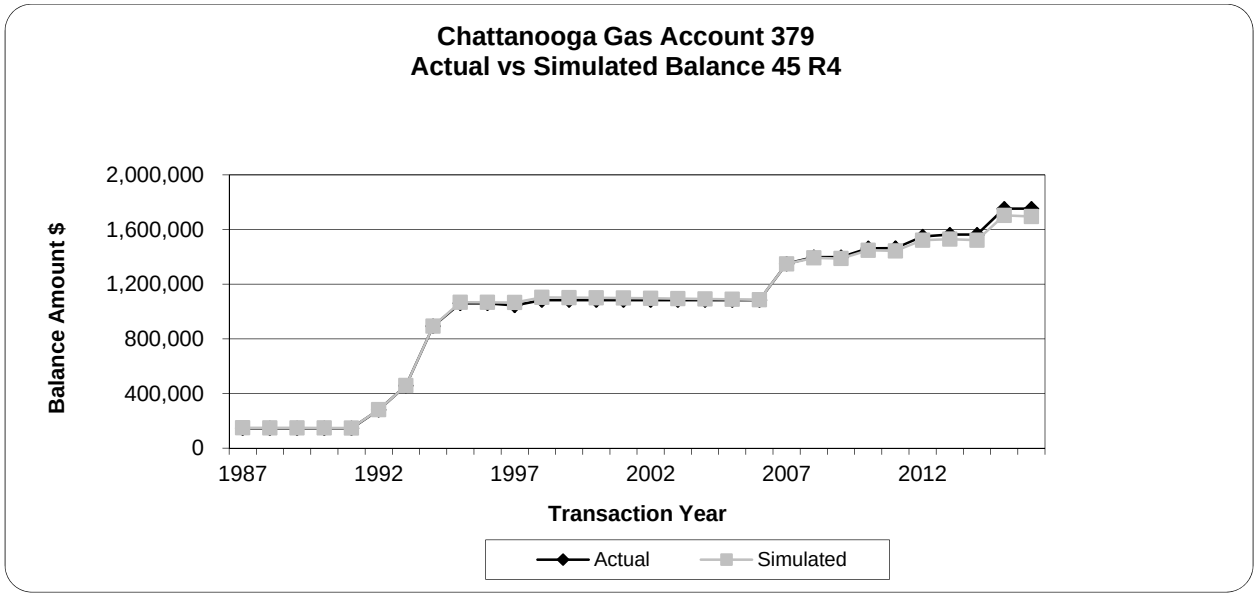
Account 378.0 Measuring & Regulating Equipment (40 R3)

This account consists primarily of valves, regulators and heaters. There is approximately $1 million of investment in this account and will be increased by the transfer of $597 thousand from Account 377 to a total of $1.7 million. The transfer is a proforma adjustment to the study and will occur in 2017. The approved curve for this account is the 40 R3. Retirements that have been recorded are prior to CGC maintaining vintage retirement data so the SPR life analysis was used. The results of the SPR had poor CI but excellent REI with life indications in the 5-7 year range, which is much lower than would be expected for this type of assets. Discussions with Company personnel indicated retirements have occurred and that there is now similarity in life expectations for Account 378 and 379. Based on Company input, type of assets, limited life analysis, and judgment, this study recommends retention of the existing 40 R3. A graph of the simulated balances for the proposed curve and life versus actual balances is shown below.



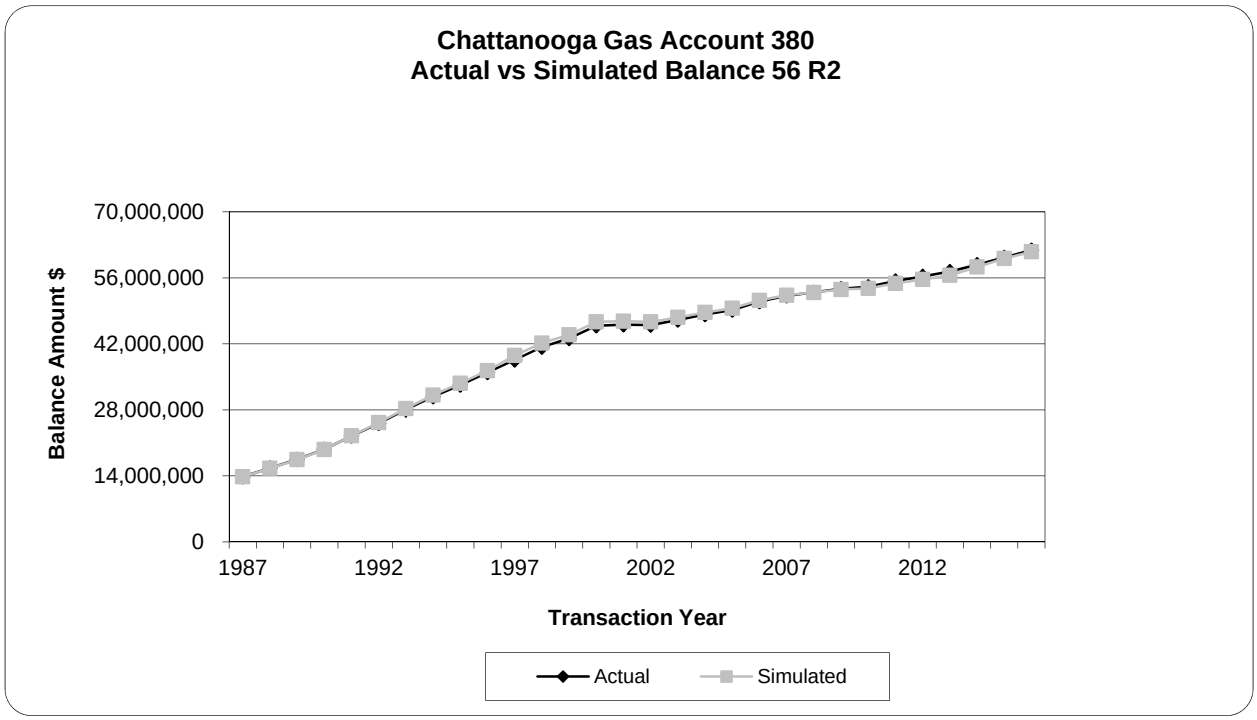
Account 379.0 City Gate Equipment (45 R4)

This account consists primarily of valves, regulators and heaters used at receipt points on the distribution system. There is approximately $1.8 million of investment in this account and will be increased by the transfer of nearly $106 thousand from Account 377 to a total of $1.9 million. The transfer is a proforma adjustment to the study and will occur in 2017. The approved curve for this account is the 42 R4. The highest ranking curves in the SPR analysis are not representative of these types of assets. Steeper dispersion patterns (which have fair CIs) have more reasonable life indications. Discussions with Company personnel indicated they have been much more aggressive at rebuilding city gates. Historically, the life would have been more different than DRS stations but not as much anymore. The Company will be doing one rebuild and one new station (with the retirement of the old one) in 2017. Over the past 5 years, the Company has done one rebuild and 2 stations where components were replaced (Davidson Road and East Gate Station – where there were some modifications in the last few years but it will replace in 2017-2018). The Company believes a slightly longer life – in the neighborhood of 45 would be appropriate. SPR results with a good CI and good REI were 48-49 years with steep dispersion pattern. Giving consideration to Company plans to aggressively rebuild and replace city gate stations, analysis indications, and judgment, this study recommends only moving to 45 years while retaining the R4 dispersion. A graph of the simulated balances for the proposed curve and life versus actual balances is shown below.



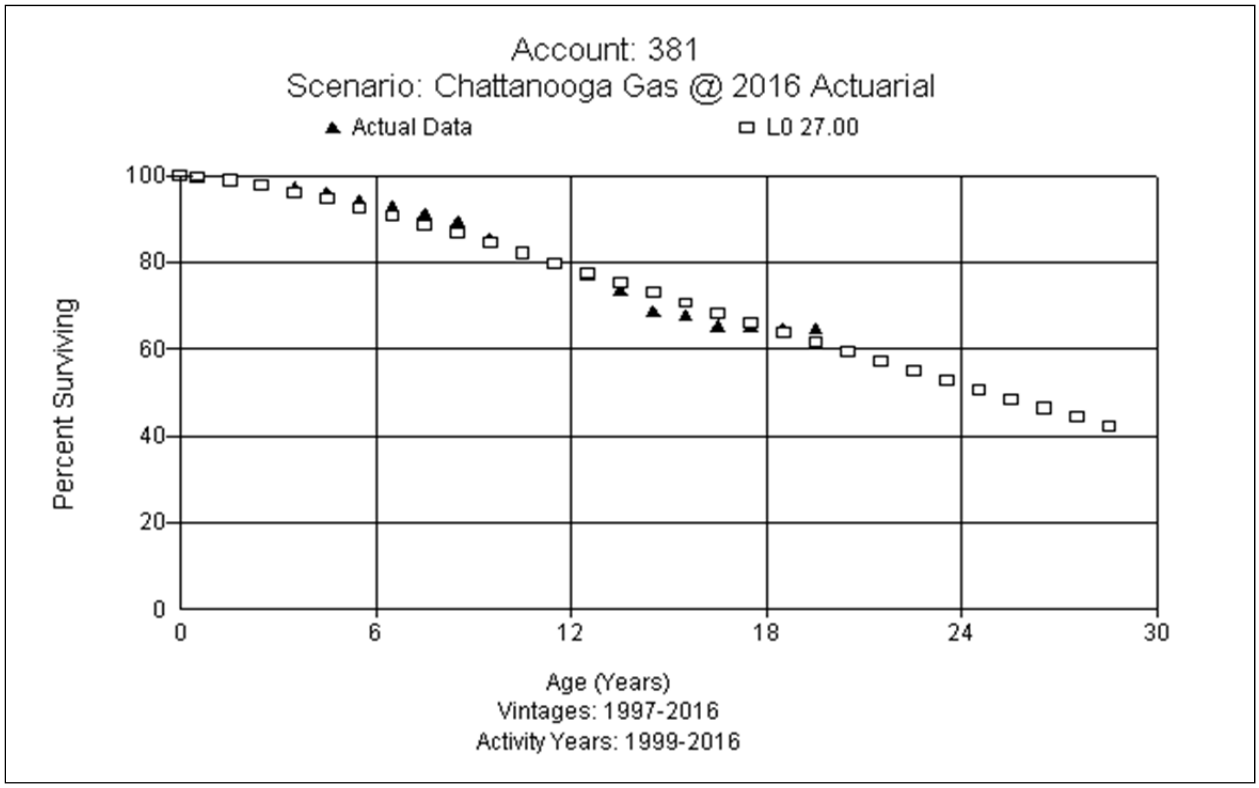
Account 380 Services - All (56 R2)

This account consists of all types (steel and plastic) of services. There is approximately $61.9 million of investment in this account. The approved curve for this account is the 51 R2. The average age of the surviving investment is 16.81 years. Consistent with the prior study, this study has combined all service accounts together for analysis and rate calculation. For life analysis, both actuarial and SPR were performed. However, the actuarial was limited and produced an inadequately short stub curve. The SPR analysis indicated the 56 R2 to be in the top five best fits with a good CI and excellent REI. Discussions with Company personnel indicated when mains are moving from steel to plastic, the steel services will be replaced with plastic. The same will hold true when it involves steel or vintage plastic, the services will be replaced. Excess Flow Valve requirements (from FEMSA) may require more service replacements. If a steel service is damaged, it will be replaced. However, if a plastic service is damaged it would probably be repaired (if not an early generation plastic). The Company expects Services to parallel the life of mains but a little shorter. Third party dig-ins and reroutes are forces of retirement for services. Considering all the information, this study recommends moving to a 56 year life and retaining the R2 dispersion. A graph of the simulated balances for the proposed curve and life versus actual balances is shown below.



Account 381.0 Meters (27 L0)

This account includes the cost of about 60,000 meters used in measuring gas to customers. The approved curve for this account is the 30 S5. The balance in this account is $13.5 million. The current average age of the surviving investment is 11.69 years. The average age of retirements is 19.34 years. Both SPR and actuarial analysis were performed. The SPR analysis resulted in poor CI with excellent REI but highest ranked curves had lives between 42 to 53 years, which is too long for the assets and expectations as well as compared to the existing. The actuarial analysis in the more recent placement band indicated a good fit with the 27 L0. Discussions with Company personnel indicated 25-30 years is the targeted meter life. All meters that are brought in to test are refurbished if tested reliable. Every meter that is pulled to test is retired (either to be thrown away or to be refurbished). There are about 60,000 residential meters, with around 1,000 meters tested per year and additional ones that fail for other reasons. Based on the indications in the analyses, discussions with Company personnel, type of assets and expectations, this study recommendation is to use the L0 27. A graph of the observed life table and the study proposed curve and life is shown below.

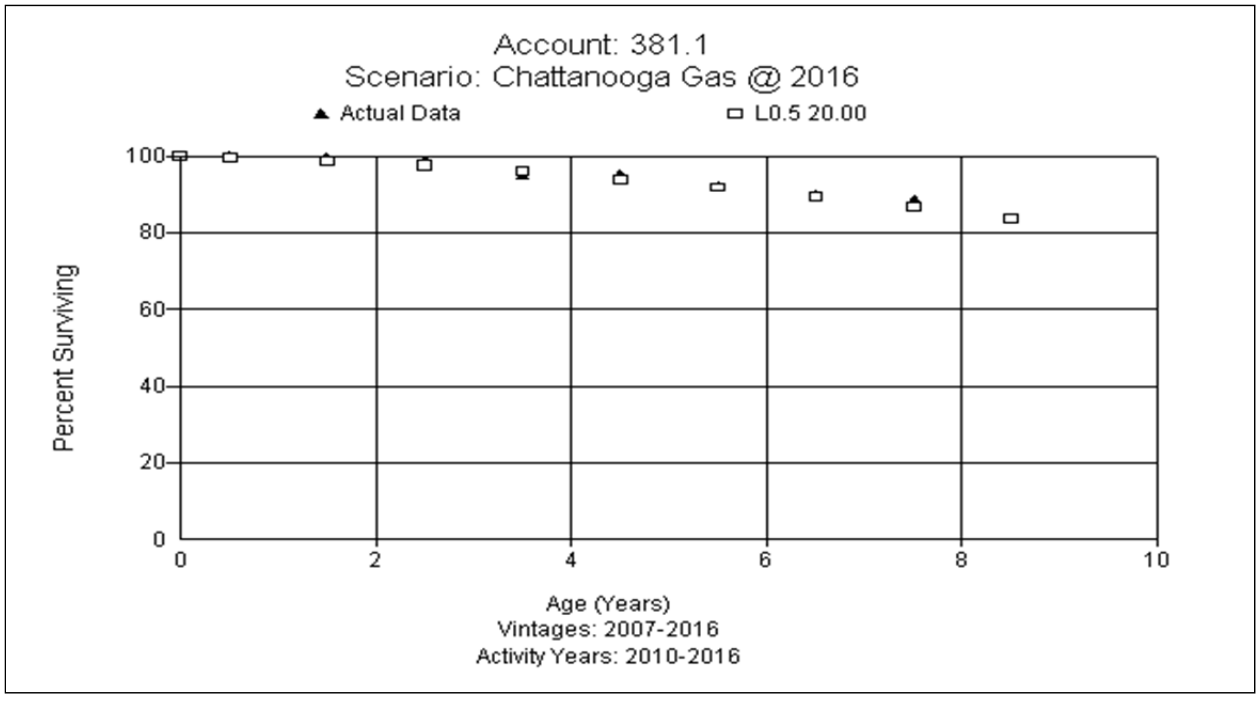


Account 381.1 Meters - ERTS (20 L0.5)

This account includes the cost of automated metering devices ("ERTs") used in measuring gas to residential customers. The approved curve for this account is the 30 S5. The balance in this account is $3.7 million. The current average age of the surviving investment is 7.38 years. The average age of retirements is 5.01 years. The prior study combined Accounts 381.0 and 381.1. However, we have segregated the accounts in this study. Discussions with Company personnel indicated they initially installed 40G ERTs on its system and are currently installing 100G ERTs. Over the past several years, as 40G ERTs failed, the replacement units have been 100G ERTs. The expected life of an ERT is about 20 years. The Company's current replacement practice is as follows:

- Any meter scheduled for change out will be replaced with a meter with a 100G ERT;
- Any stopped meter, a new meter with a 100G ERT will be installed;
- Meters with dead ERTs, a new 110G ERT will be installed on the meter if the meter is not scheduled for replacement; and
- A small number of dead ERTs, ERTs with busted batteries are held in the warehouse for disposal

Based on the Account 381.1 analysis, discussions with Company personnel, and assets, the study recommendation is the 20 L0.5. A graph of the observed life table and the study proposed curve and life is shown below.

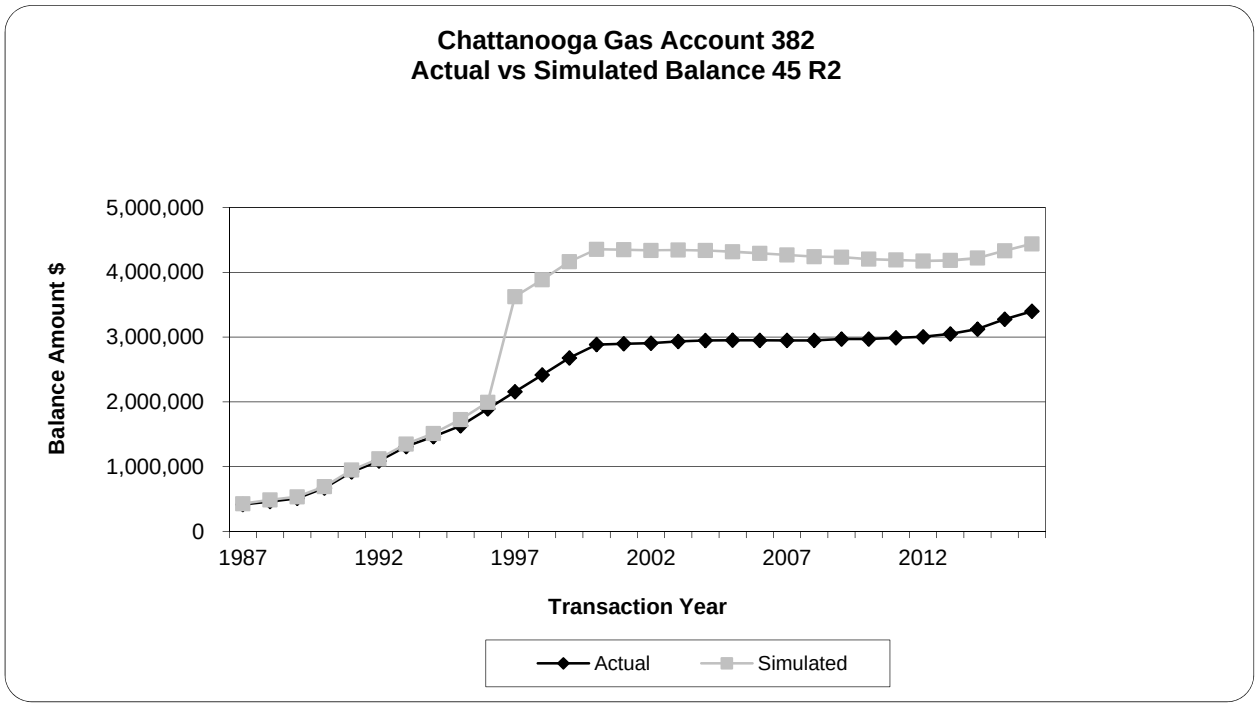


Account 381.3 Metreteks

This account includes the cost of assets to electronically monitor and record the gas consumption of commercial and industrial customers. The surviving assets have been combined with Account 381.0 Meters.

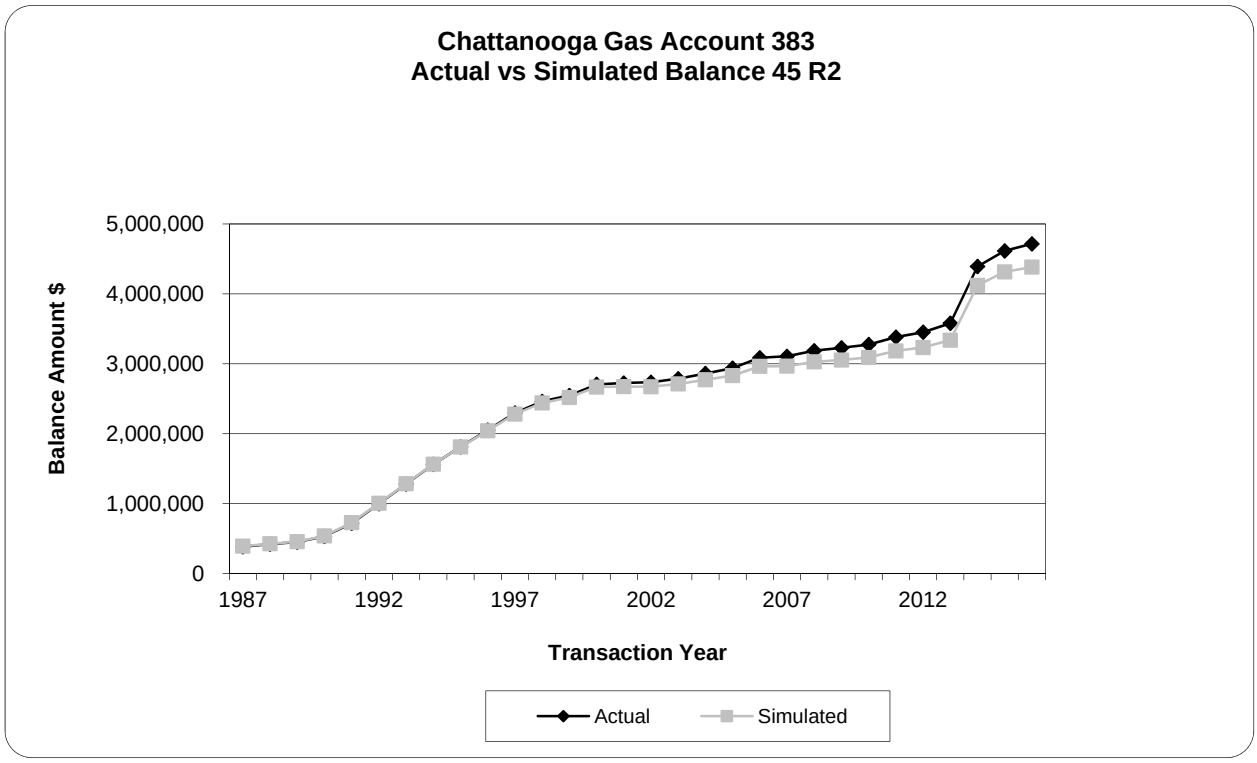
Account 382.0 Meter Installations (45 R2)

This account includes the cost of installation of meters. There is approximately $3.4 million of plant in this account. The approved life is the 30 S5. The current average age of the surviving investment is 16.96 years. The average age at retirement is 16.64 years. The SPR analysis yields low ASL (20-23 years) with poor CIs and excellent REIs. CGC began purchasing the manufactured meter loops in the last 5-6 or more years ago. When changing a meter it would not necessarily change out the meter bar/loop. If replacing a service, the Company would generally install a new meter loop. Based on all the information, this study recommends moving toward expectations for a longer life by moving to 45 years and the R2 dispersion pattern. A graph of the simulated balances for the proposed curve and life versus actual balances is shown below.



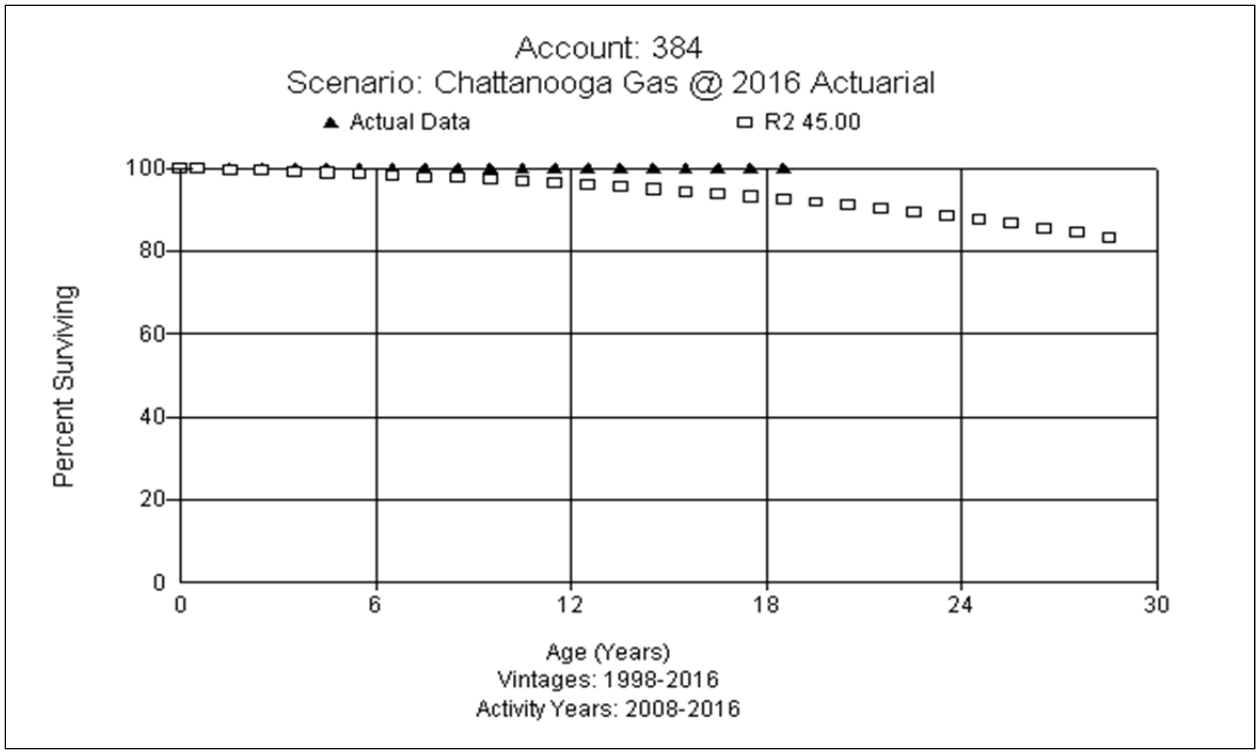
Account 383.0 House Regulators (45 R2)

This account includes the cost of house regulators. There is approximately $4.7 million of investment in this account. The approved life is the 37 S6. The current average age of investment is 15.64 years. Discussions with Company personnel indicated the house regulator is part of meter loop. When replacing the meter loop, the Company would automatically replace the regulator. There may be some instances where the regulator is replaced before the loop if the regulator fails. Company expects the same life for a regulator (and regulator installation) as the loop. Company expectation is that the meter loop and regulator lives would be closer to the life of services. There is a wide range of lives exhibited in the SPR analysis. The top three best ranked curves in the SPR analysis yield results that are unreasonable. The next three best ranked curves are in the low 40's with steep R and S dispersion patterns and have excellent CI and REIs. Consistent with the Meter Installation account, based on discussions with Company personnel, the SPR analysis, expectations, and judgment, this study recommends moving toward expectations for a longer life by moving to 45 years and the R2 dispersion pattern. A graph of the simulated balances for the proposed curve and life versus actual balances is shown below.



Account 384.0 House Regulator Installations (45 R2)

This account includes the cost of installing house regulating equipment. The current balance is $287 thousand. This account was not segregated in the prior study but the approved curve and life, 37 S6, of Account 383 – House Regulators would be an appropriate comparison. The actuarial data is limited, which has very limited retirements recorded. Discussions with Company personnel indicated it is reasonable to link the life of this account with Account 383 - House Regulators. The study recommendation is to use the 45 R2 as was proposed for that account. A graph of the observed life table and the study proposed curve and life is shown below.



Account 385.0 Industrial Meter & Regulating Equipment (35 R3)

This account includes the cost of measuring and regulating equipment used in industrial stations. The current balance is $139 thousand. The approved life is the 35 R3. Current average age of surviving investments is 20.67 years. The actuarial data is limited with one retirement recorded in 2011 at age 27.50 years. The assets in this account are similar to assets in Account 378 – Measuring & Regulating Equipment but with slightly heavier usage. The expectations are for a slightly shorter life than for domestic meter and regulator equipment. This study recommends retaining the existing 35 R3. Due to limited historical data and no retirement activity no graph is provided.

Account 386.0 Installations on Customer Premises (40 S1.5)

This account includes the cost of equipment owned and maintained by the company on customer premises, which is the equivalent to a service line (Account 380). The current balance of $17 thousand reflects one surviving vintage (1992) and has not changed in over 10 years. The existing is 40 S1.5. Current average age of surviving investments is 24.50 years. This study recommends retention of 40 S1.5. No graph is provided.

Account 387 Other Equipment (50 R4)

This account includes the cost of equipment used in conjunction with providing distribution service. The current balance of $386 thousand is due primarily to additions in 2008. The current average age of surviving investment is 11.44 years. No retirements have been recorded. There is no basis to change from the existing 50 R4 at this time. No graph is provided.

General Plant

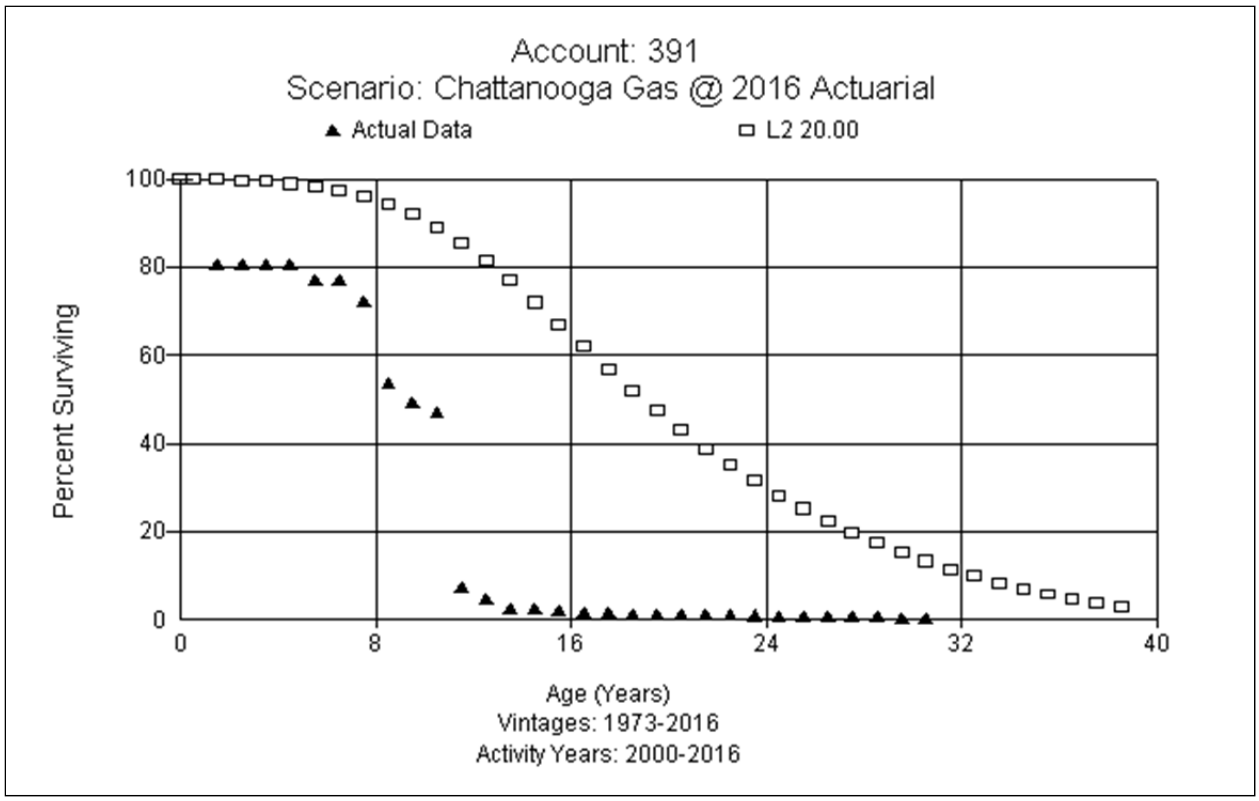
The activity in this function was impacted by CGC's sale of buildings, which has left no depreciable investment in Account 390 – Structures and Improvements at this time. This study has segregated this function into two categories: depreciated and amortized. We are recommending the implementation of Vintage Group Amortization (General Plant Amortization) as authorized by FERC's Accounting Release 15 (AR15) for accounts 391-398 (excludes 392 and 396).

Account 390.0 Structures & Improvements

There is currently no depreciable investment in this account and continues to evaluate a lease versus buy analysis. The existing 10 SQ is reflective of leasehold improvement type assets, not structures. No study recommendation is provided for this account at this time.

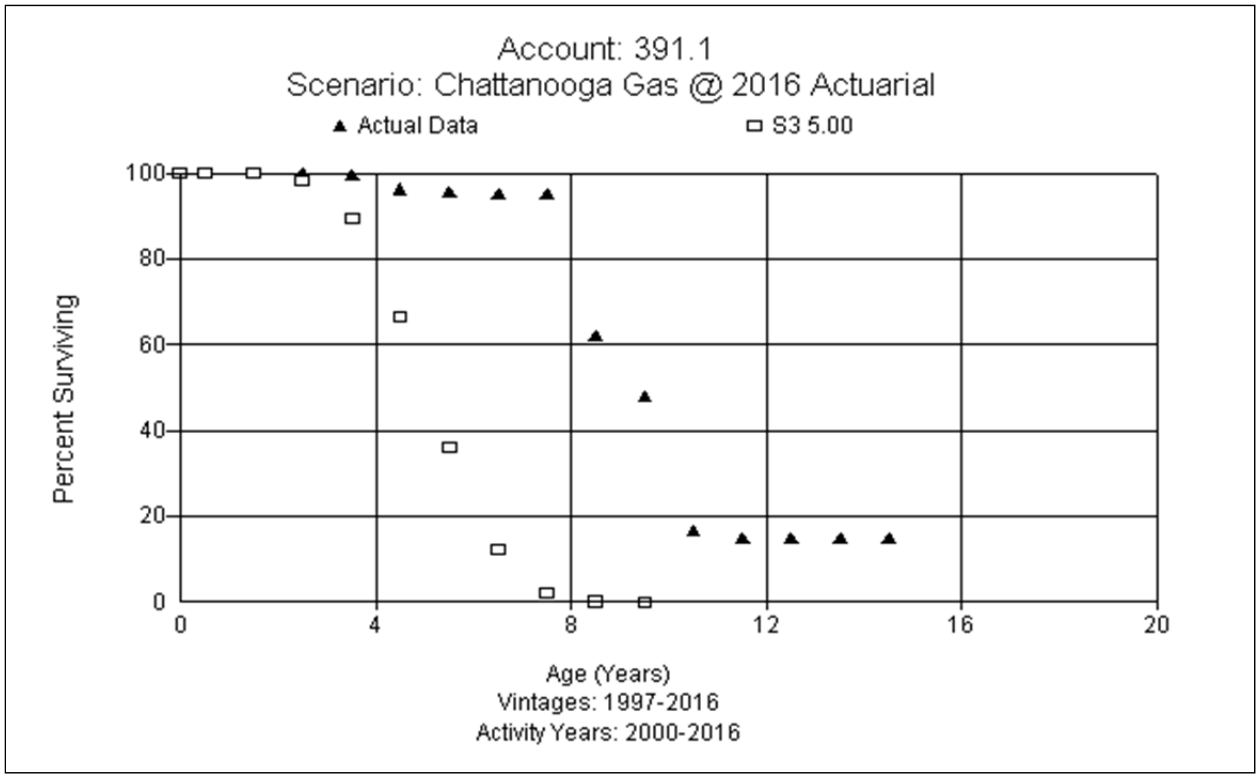
Account 391.0 Office Furniture & Equipment (20 SQ)

This account generally consists of miscellaneous office furniture such as desks, chairs, filing cabinets, and tables used for general utility service. There are only two surviving vintages. There is approximately $10 thousand in equipment in this account. The approved curve for this account is the 20 S6. Analysis indicates a shorter life of between 10 and 12 years. The analysis is not representative of account assets going forward. Therefore, this study proposes retention of the existing 20 year life with the L2 dispersion. However, vintage group amortization is being recommended so the SQ dispersion will be used for the rate calculations. A graph of the observed life table with the study proposed curve and life is shown below.


Account: 391
Scenario: Chattanooga Gas @ 2016 Actuarial
Actual Data
L2 20.00
Percent Surviving
100
80
60
40
20
0
0
8
16
24
32
40
Age (Years)
Vintages: 1973-2016
Activity Years: 2000-2016

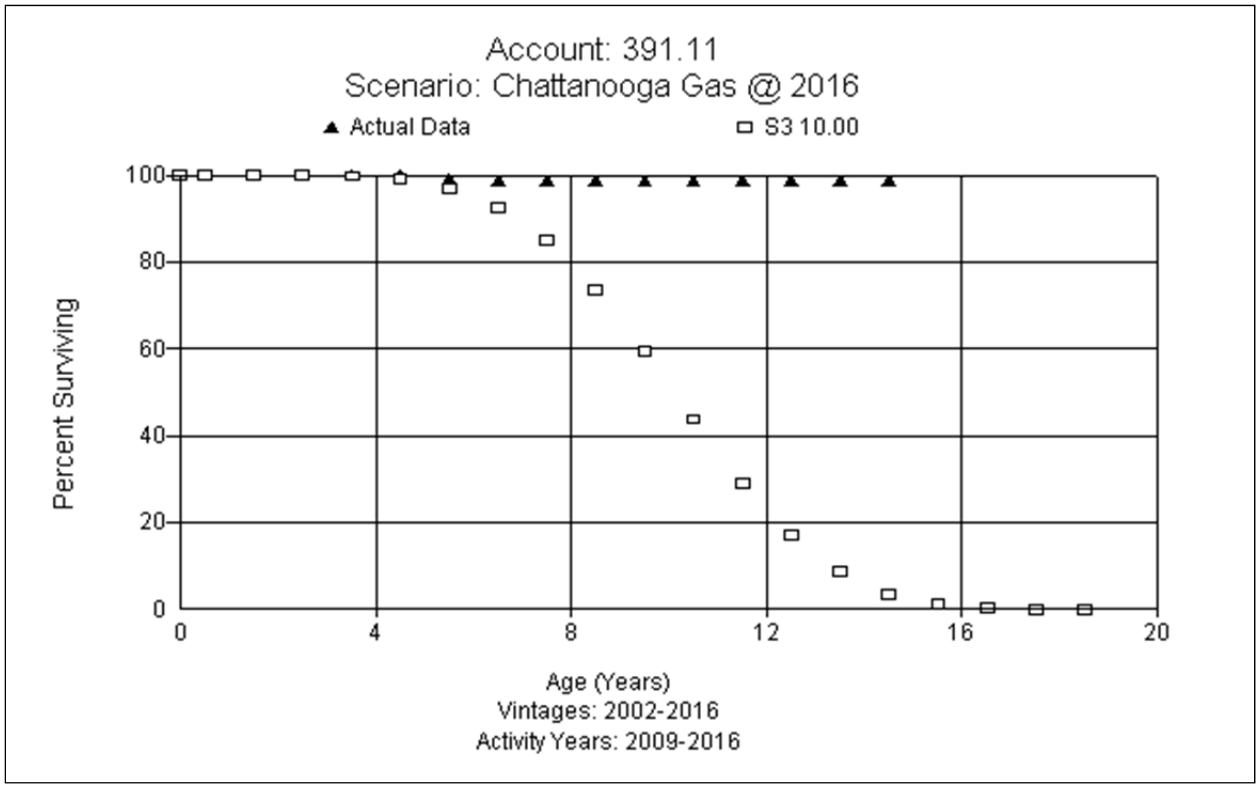
Account 391.10 Computer Equipment and Software (5 SQ)

This account consists of personal computer equipment, printers, peripherals and software used for general utility service. The approved curve for this account is the 5 S6. There is approximately $587 thousand in equipment in this account. The average age of the surviving investment is 8.16 years. The average age of retirement is 9.59 years. Discussions with Company personnel indicated the assets in this account generally have a refresh cycle of 4-5 years. Our analysis indicates a longer life and flatter dispersion pattern, but Company personnel indicated the merger has created a deferral on replacing some equipment until consistency of equipment and software is established. Company personnel indicated another 1-2 years before standardization is started. Based on the discussions with Company personnel, near term expectations, refresh policy, analysis, and judgement, this study recommends retention of the 5 year life based with the S3 dispersion. However, vintage group amortization is being recommended so the SQ dispersion will be used for the rate calculations. A graph of the observed life table with the study proposed curve and life is shown below.



Account 391.11 CFE - Computer Software (10 SQ)

This account consists of personal computer equipment, printers, peripherals and software used for general utility service. The approved curve for this account is the 10 R1.5. There is approximately $2.2 million in equipment in this account. The average age of the surviving investment is 6.73 years. Discussions with Company personnel indicated the software recorded here is non-enterprise software. The average age of retirements is 5.69. There was limited historical retirement activity for actuarial analysis so no meaningful indications were observed. Similar to Account 391.10 the Company is evaluating both hardware and software platforms to be used uniformly among its subsidiaries. This will take some time to implement and will push current refresh cycles longer. Based on type of surviving assets, discussion with the Company, and judgment this study recommends retention of the existing 10 year life but moving to the S3 dispersion pattern. However, vintage group amortization is being recommended so the SQ dispersion will be used for the rate calculations. A graph of the observed life table with the study proposed curve and life is shown below.

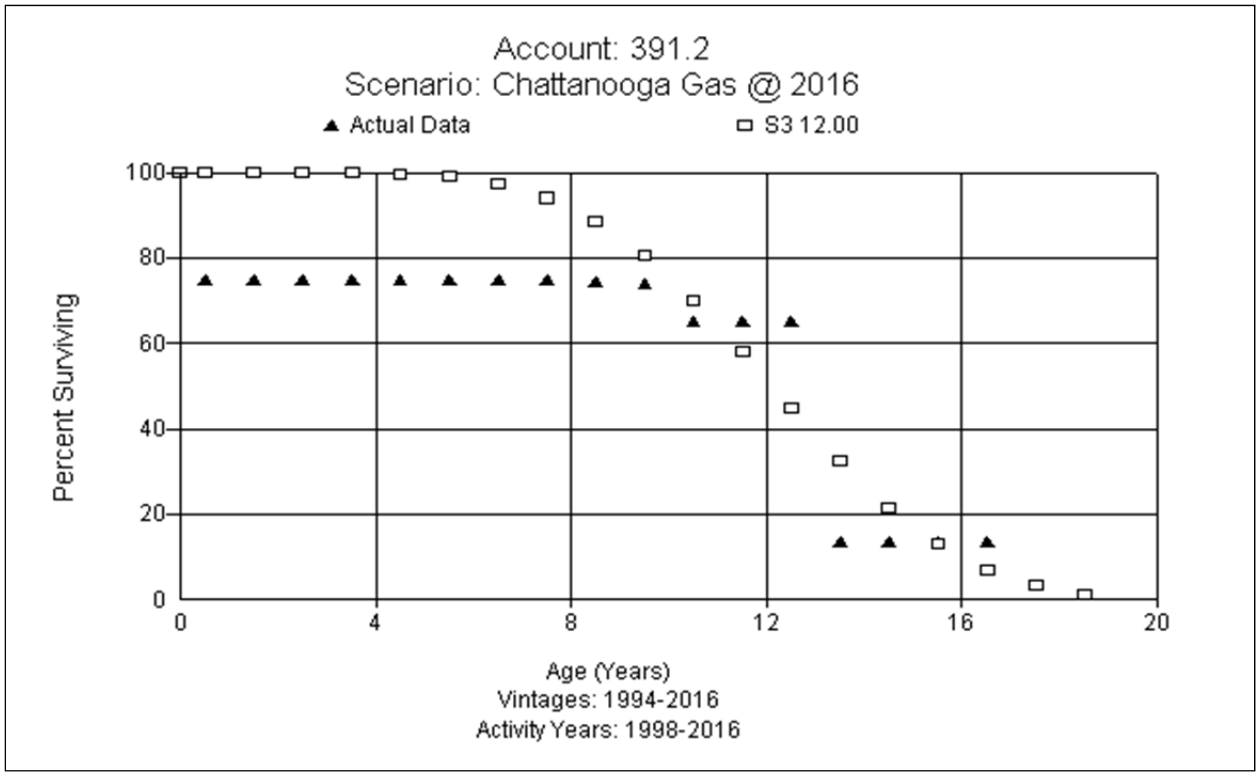


Account 391.12 CFE - Computer Hardware (5 R1.5)

This account consists of network and server type computer equipment used for general utility service. The approved curve for this account is the 10 R1.5. There is approximately $254 thousand in equipment in this account. The average age of the surviving investment is 3.04 years. Discussions with Company personnel indicated these assets have a refresh policy of 5 years, which is budgeted and followed pretty closely. Refreshing on a rotating cycle is important to system reliability. Nearly 82% of the assets in the account have vintages from 2014 to 2016. This study recommends moving to the 5 R1.5 curve based on type of surviving assets, discussion with the Company, refresh cycle policy, and judgment. However, vintage group amortization is being recommended so the SQ dispersion will be used for the rate calculations. No graph of the observed life table and the study proposed curve and life is shown below due to the lack of segregated historical account retirement activity.

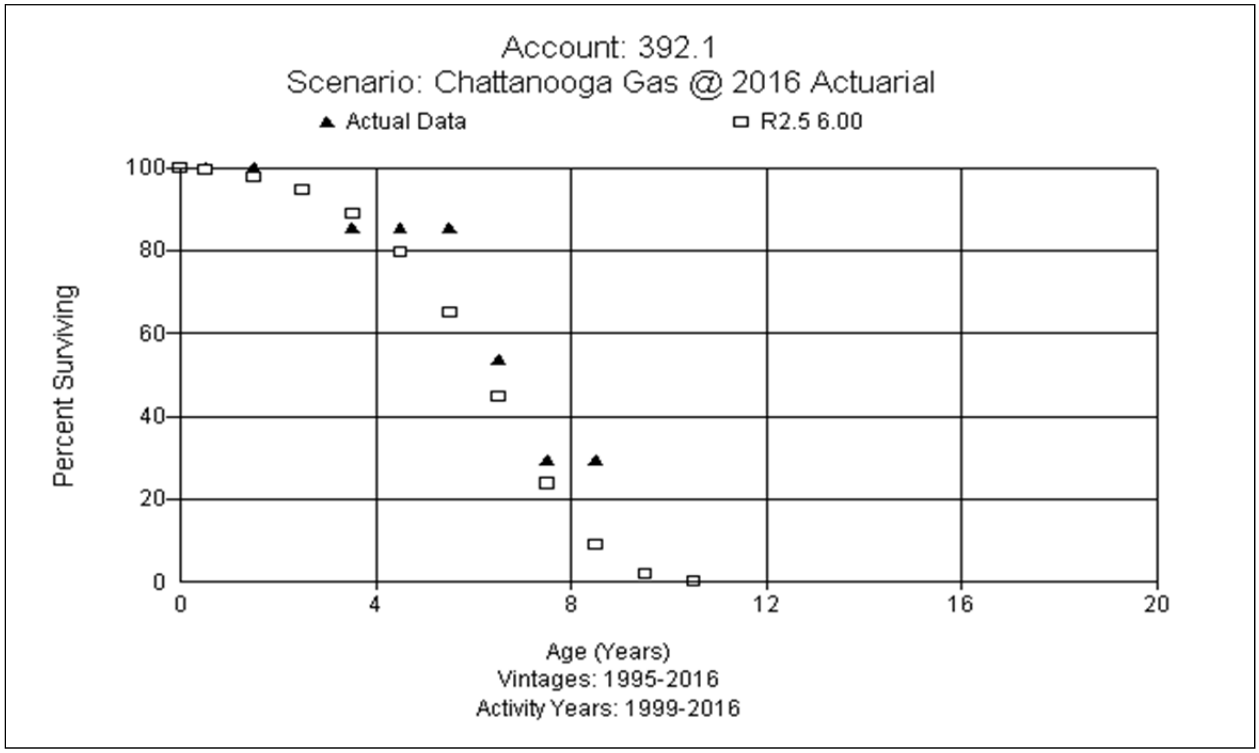
Account 391.2 Enterprises Systems (12 SQ)

This account consists of enterprise (large software applications) system software and hardware. The approved curve for this account is the 10 R1.5 which is reflective of the prior study's combined analysis of all electronic data processing equipment. There is approximately $2 million in assets in this account. The current average age of the surviving investment is 8.68 years. Discussions with Company personnel indicated these large system assets are allocated to the various business units. Currently there are merger system integrations and upgrades to be accomplished. Company indicated this could take another 1 ½ to 2 years. Based on type of surviving assets, discussions with Company on future plans and expectations, and judgment this study recommends increasing the life to 12 years and moving to the S3 dispersion pattern. However, vintage group amortization is being recommended so the SQ dispersion will be used for the rate calculations. A graph of the observed life table and the study proposed curve and life is shown below.



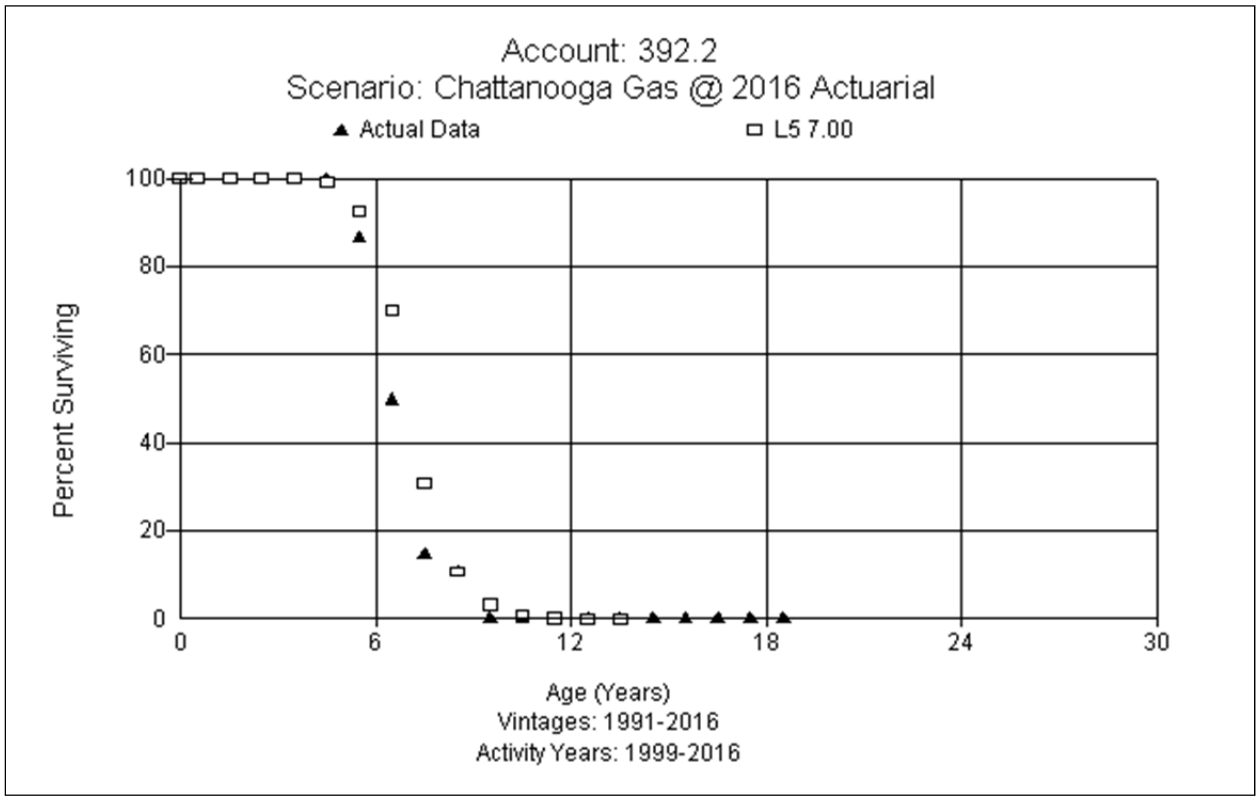
Account 392.1 Transportation Equipment – Autos and Light Trucks (6 R2.5)

This account consists of autos and light trucks used in performing various distribution and general company operations. The approved curve for this account is the 7 S6. There is approximately $158 thousand in equipment in this account. The average age of the surviving investment is 1.63 years. The Company utilizes a "new fleet" approach. Life analysis curve fits indicate a life between 6-8 years. The average age of retirements is 5.79 years, which is very close to Company ASL expectations. The Company continues evaluating lease versus buy options for these assets on a periodic basis and is expected to continue in the future. The study recommends a 6 year ASL and R2.5 curve to reflect some dispersion in retirements. A graph of the observed life table and the study proposed curve and life is shown below.



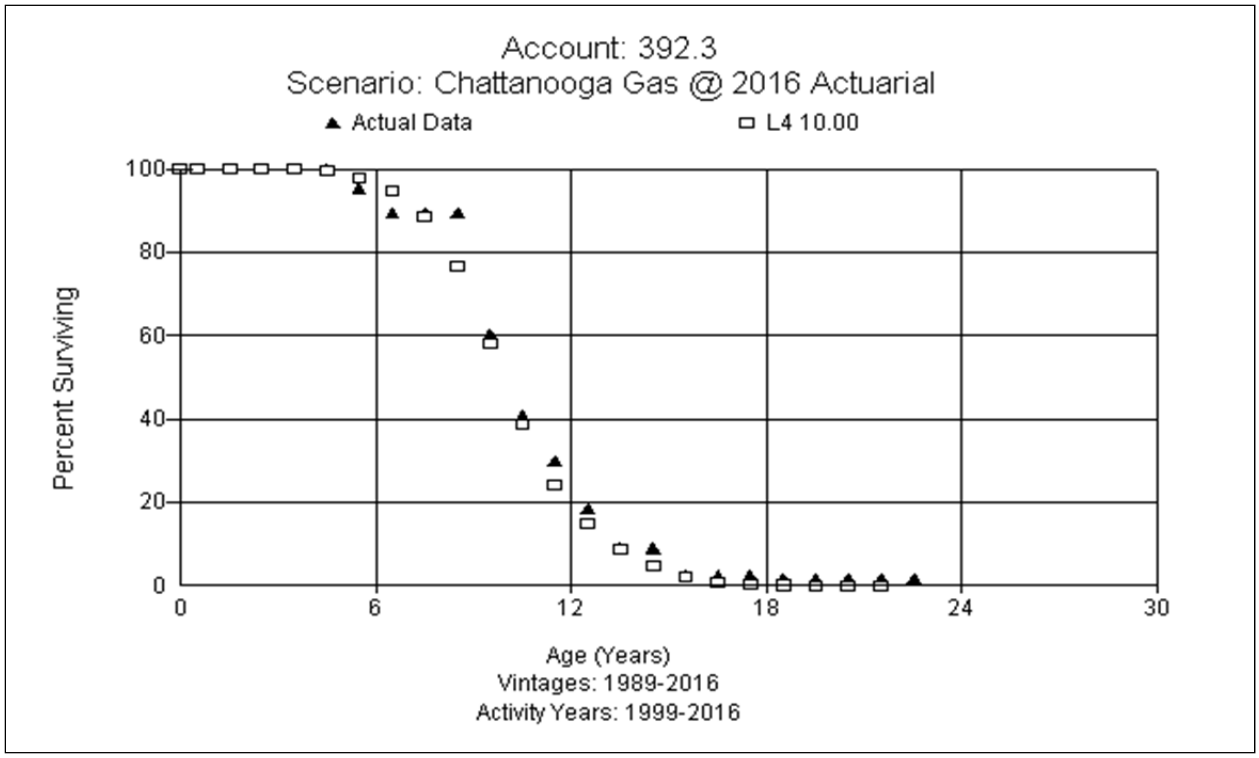
Account 392.2 Transportation Equipment – 7 Year Service Trucks (7 L5)

This account consists of service duty trucks and related equipment used by service crews performing operations and maintenance on the distribution system. The approved curve for this account is the 7 S6. There is approximately $630 thousand in equipment in this account. The current average age of the surviving investment is 2.33 years. The Company applies the "new fleet" approach to these assets as well. The Company performs lease versus buy evaluations and will continue this practice in the future. The study has very consistent life and dispersion indications. The life analysis in the full band indicates a 7 L5 to be a good fit. Based upon the type of vehicle, use, analysis indications, Company plans and expectations, the study recommendation is a 7 L5. A graph of the observed life table and the study proposed curve and life is shown below.



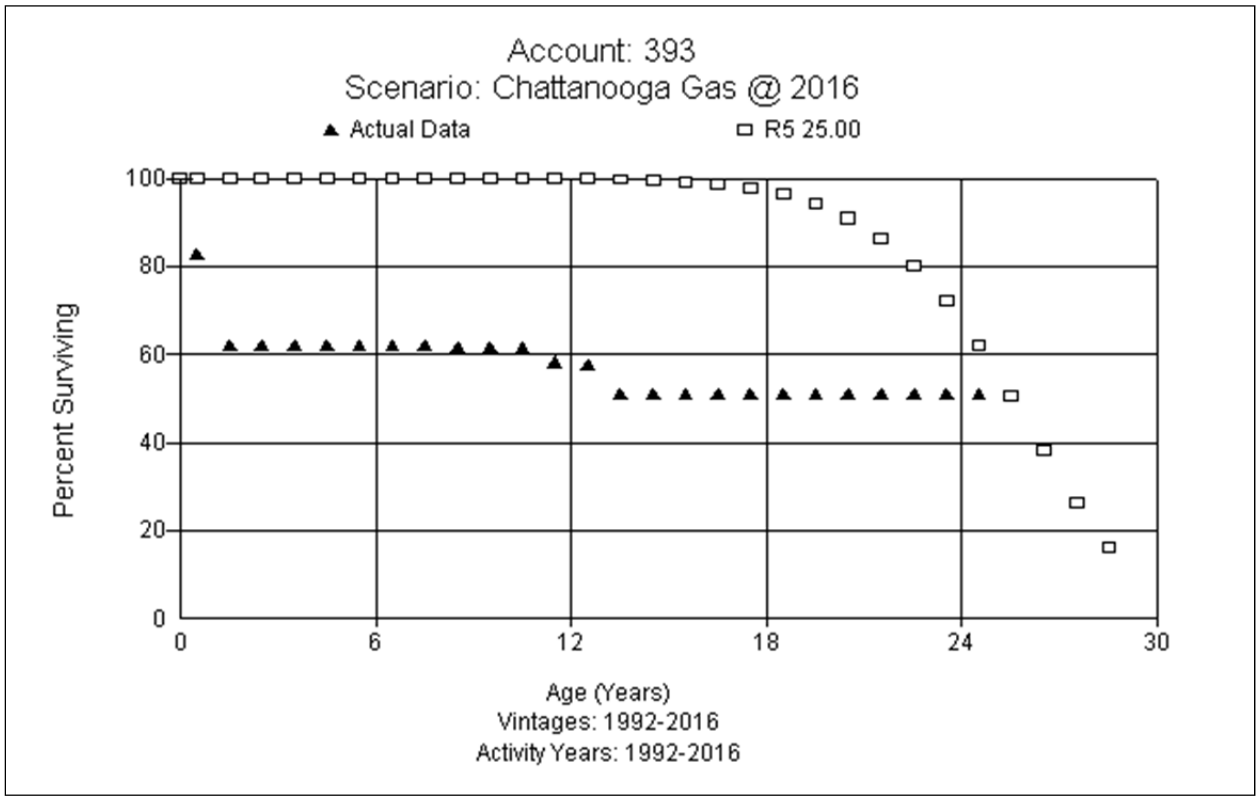
Account 392.3 Transportation Equipment – 10 Year Heavy Trucks (10 L4)

This account consists of heavy duty trucks and related equipment used by service center crews performing operations and maintenance on the distribution system. The approved curve for this account is the 10 S3. There is approximately $892 thousand in equipment in this account. The Company continues to apply a "new fleet" approach. The current average age of the surviving investment is 4.06 years. The study has very consistent life and dispersion indications, which supports the plans and expectations of Company personnel. Therefore, the study recommendation is a 10 L4. A graph of the observed life table and the study proposed curve and life is shown below.



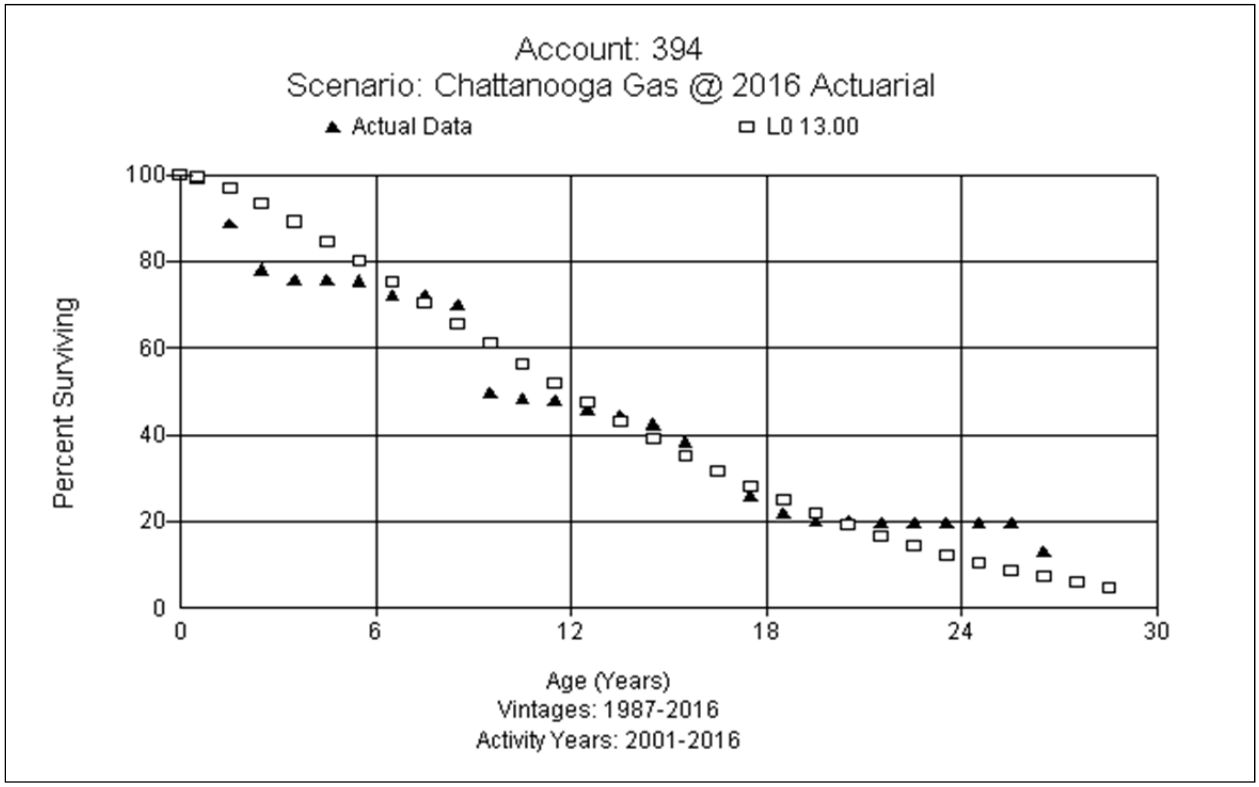
Account 393 Stores Equipment (25 SQ)

This account contains forklifts, shelves and bins used for general utility service. The approved curve for this account is the 25 R5. There is approximately $18 thousand in equipment in this account. The current average age of the surviving investment is 24.55 years. The average age of retirements is 12.97 years. The analysis indicates a flatter dispersion and shorter life due to retirements at younger ages. However, the types of assets usually recorded in the account have longer lives as evidenced by the current average age of investment. Based on type of assets, current age and expectations, the study proposes retention of the existing 25 R5. However, vintage group amortization is being recommended so the SQ dispersion will be used for the rate calculations. A graph of the observed life table with the study proposed curve and life is shown below.



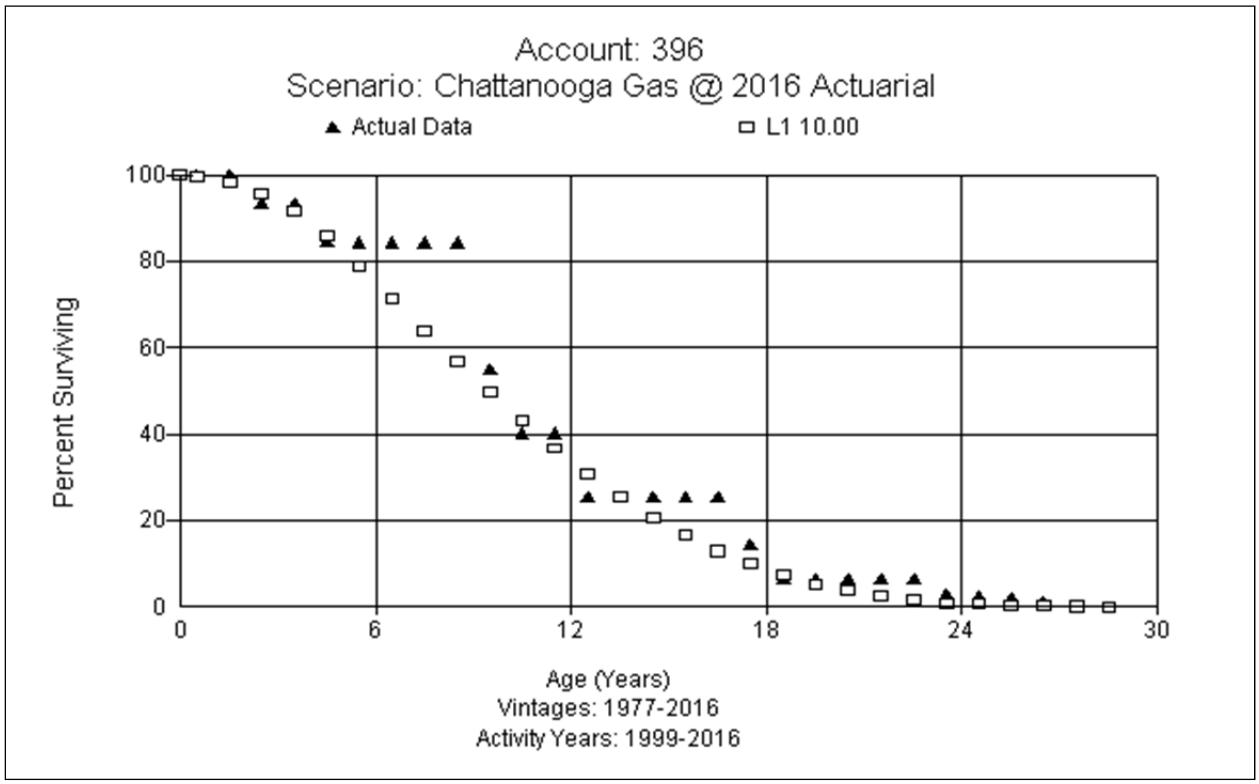
Account 394 Tools, Shop & Garage Equipment (13 SQ)

This account consists of vacuum excavation machine, tapping machines, electro fusion unit, pipe horn & pipe horn valve locators, mustang squeezer, roots transfer prover, air tools, saws, and other miscellaneous tools and equipment used in the shop and garages. There is approximately $367 thousand in this account. The approved curve for this account is the 15 R2. The current average age of the surviving investment is 10.69 years. The analysis suggests a life between 11 and 15 years with a good fit in the full band of the L0 13, which is being driven by some retirements occurring at ages below 10 years. Over 50% of the account balance has been added since the last two years. Discussions with Company personnel indicated there is a wide variety of tools and equipment with varying ages but would expect a life of 15 years or less. Based on the type, mix and discussions with Company personnel, and the analysis, this study proposes the 13 L0. However, vintage group amortization is being recommended so the SQ dispersion will be used for the rate calculations. A graph of the observed life table and the study proposed curve and life is shown below.



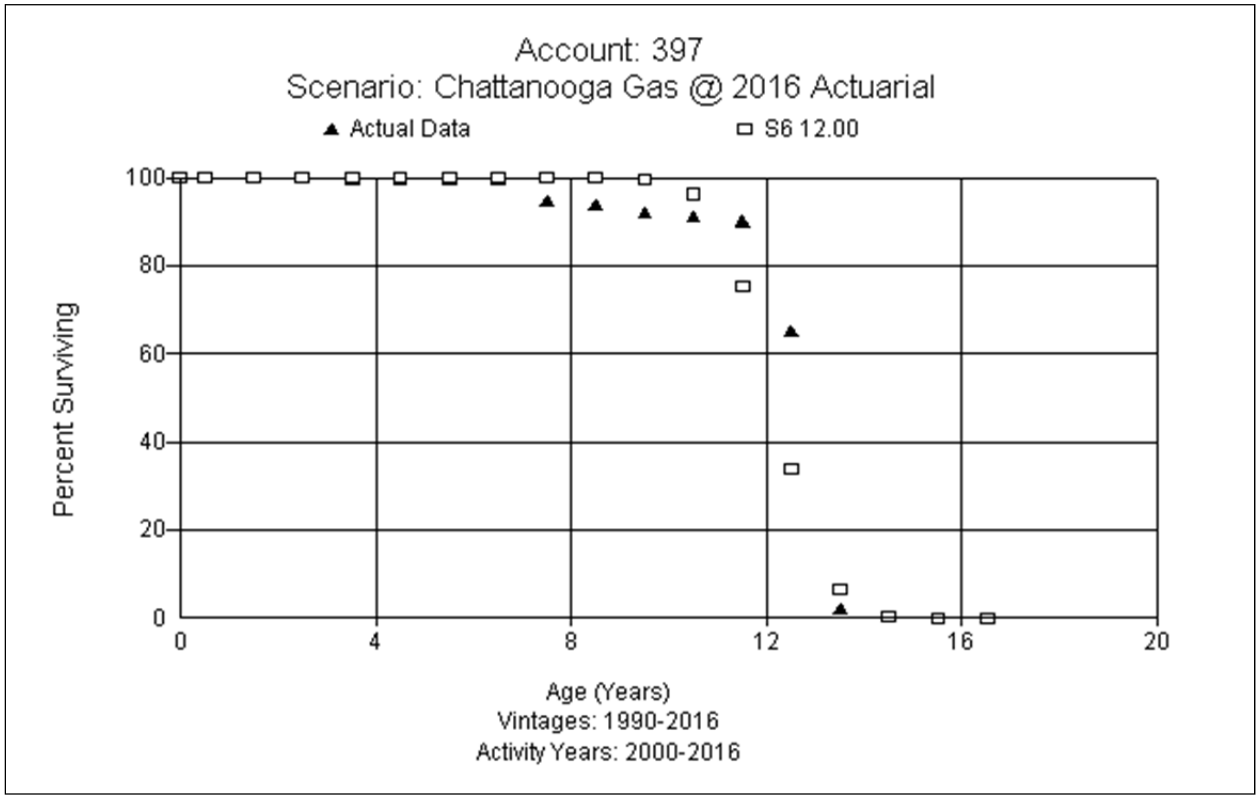
Account 396.0 Power Operated Equipment (10 L1)

This account consists of backhoe loader, 12 volt pump, rock drill, paving breakers and other power operated equipment that cannot be licensed on roadways. The approved curve for this account is the 10 S6. There is approximately $416 thousand in equipment in this account. The current average age of the surviving investment is 4.58 years. Discussions with Company personnel indicated a 10 year life is reasonable for the assets. Obsolescence is one of the drivers of retirements as well as the physical life. Similar to 392 accounts, the Company assesses reliability and would replace to maintain it. The life analysis indications in the full band have a good fit with the L1 10, which is reflective of the Company's plans and expectations for these assets. Based upon all the information, this study recommends retention of the 10 year life but changing the dispersion to L1. A graph of the observed life table and the study proposed curve and life is shown below.



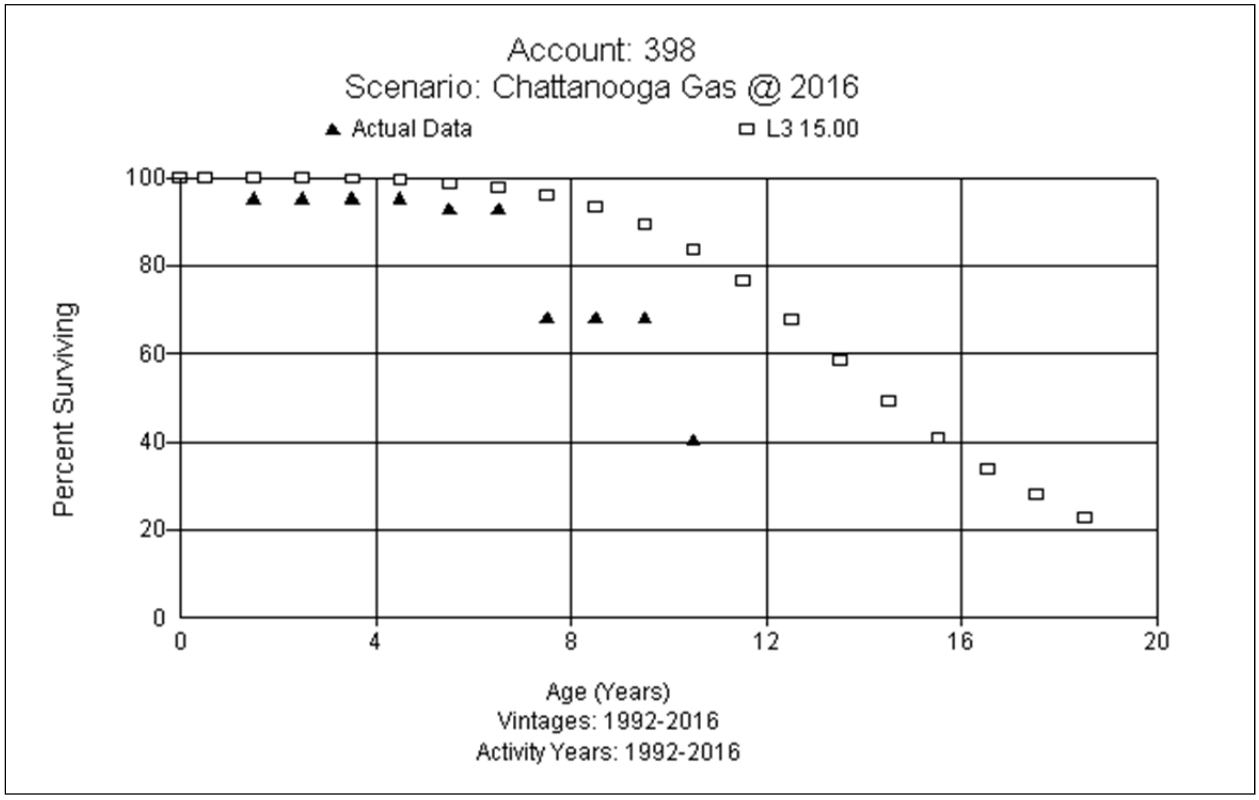
Account 397.0 Communication Equipment (12 SQ)

This account consists of miscellaneous communication equipment used in general utility service. There is $409 in this account. The existing mortality characteristic is a 10 L3. The current average age of the surviving investment is 5.23 years, with all of it being added between 2009 and 2016. The life analysis results indicate some very large retirements occurring in 2004 between ages 12-14 years. The best fit in the full band is the S6 12. Based on the type of assets and use and the analysis, this study proposes moving the life to 12 years and changing to the S6 dispersion pattern. However, vintage group amortization is being recommended so the SQ dispersion will be used for the rate calculations. A graph of the observed life table and the study proposed curve and life is shown below.



Account 398.0 Miscellaneous Equipment (15 SQ)

This account consists of miscellaneous equipment used in general utility service. There is approximately $207 thousand in this account. The existing is a 15 L3. The majority of surviving assets were added from 2009 to present. The average age of survivors is 5.52 years. The full band analysis indicates a life of 11 L2 to be a good fit, but this result is being driven by one large retirement at age 7.5 in 2001. Generally, the assets in this account are expected to have at least a 15 year life. Based on analysis indications, type of assets, and judgment, the study recommends retaining the 15 L3. However, vintage group amortization is being recommended so the SQ dispersion will be used for the rate calculations. An observed life table with the 15 L3 is graphed and shown below.



ACCOUNT SPECIFIC 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, Mains, with a current installed cost of $500 (2016) would have had an installed cost of $26.46[4] in 1953. A removal cost of $50 for the asset calculated (incorrectly) on current installed cost would only have a negative10 percent removal cost ($50/$500). However, a correct removal cost calculation would show a negative 189 percent removal cost for that asset ($50/$26.46). 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 CGC can expect in its operations. As a result, the analysis not only looks at the historical experience of CGC, but also takes into account recent and expected changes in operations that could reasonably lead to different future expectations than were experienced in the past. Recent experience is more heavily weighted in making net salvage recommendations than older experience.

Salvage Characteristics

For each account, data for retirements, gross salvage, and cost of removal is derived from 2000-2008. Moving averages, which remove timing differences between retirement and salvage and removal cost, were analyzed over periods varying from one to 10 years.

[4] Using the Handy-Whitman Bulletin No. 184, G-2, line 44, $26.46 = $500 x 38/718.

LNG Storage Plant

Account 361.0 Structures and Improvements (0% NS)

This account includes any salvage and removal cost related to structures used in connection with underground storage compressor operations. The authorized net salvage for this account is 0 percent. It is expected that cost of removal would exceed any salvage at time of retirement. However, retirements have occurred with no salvage or cost of removal recorded, so this study recommends retaining the existing approved 0 percent net salvage at this time.

Account 362.0 Storage Tanks (0% NS)

This account consists of the combined salvage and removal costs associated with the storage tanks for natural and liquefied natural gas. The authorized net salvage for this account is 0 percent. The expectation at terminal end of life for these tanks would be to see some salvage and some cost of removal. Without any historical experience in this account, this study recommends retention of the existing 0 percent net salvage at this time.

Account 363.0 Purification Equipment (0% NS)

This account consists of salvage and removal cost associated with retirement of purification equipment used in the LNG storage operations. The currently authorized net salvage for this account is 0 percent. It is expected that cost of removal would exceed any salvage at time of retirement. However, retirements have occurred with no salvage or cost of removal recorded, so this study recommends retaining the existing approved 0 percent net salvage at this time.

Account 363.1 Liquefaction Equipment (0% NS)

This account consists of any salvage and removal costs associated with liquefaction equipment used in the LNG storage operations. The currently authorized net salvage for this account is 0 percent. It is expected that cost of removal would exceed any salvage at time of retirement. However, retirements have occurred with no salvage or cost of removal recorded, so this study recommends retaining the existing approved 0 percent net salvage at this time.

Account 363.2 Vaporizing Equipment (0% NS)

This account includes any salvage and removal cost related to vaporizing equipment used in connection with LNG storage operations. The currently authorized net salvage for this account is 0 percent. It is expected that cost of removal would exceed any salvage at time of retirement. However, retirements have occurred with no salvage or cost of removal recorded, so this study recommends retaining the existing approved 0 percent net salvage at this time.

Account 363.3 Compressor Station Equipment (0% NS)

This account includes any salvage and removal cost related to compressor station equipment used in connection with LNG storage operations. The currently authorized net salvage for this account is 0 percent. It is expected that cost of removal would exceed any salvage at time of retirement. However, retirements have occurred with no salvage or cost of removal recorded, so this study recommends retaining the existing approved 0 percent net salvage at this time.

Account 363.4 Measuring & Regulating Equipment (0% NS)

This account includes any salvage and removal cost related to measuring and regulating equipment used in connection with LNG storage operations. The currently authorized net salvage for this account is 0 percent. It is expected that cost of removal would exceed any salvage at time of retirement. However, retirements have occurred with no salvage or cost of removal recorded, so this study recommends retaining the existing approved 0 percent net salvage at this time.

Account 363.5 Other Storage Equipment (0% NS)

This account includes any salvage and removal cost related to other storage equipment used in connection with LNG storage operations. The currently authorized net salvage for this account is 0 percent. It is expected that cost of removal would exceed any salvage at time of retirement. However, retirements have occurred with no salvage or cost of removal recorded, so this study recommends retaining the existing approved 0 percent net salvage at this time.

Distribution Plant

Account 374.1 Rights of Way (0% NS)

This account includes any salvage and removal cost related to land rights used in connection with distribution operations. Generally, there is no salvage or cost of removal cost is incurred. Therefore, this study recommends retaining the approved 0 percent net salvage for this account.

Account 375.0 Structures and Improvements (0% NS)

This account consists of any salvage and removal cost related to small structures and associated assets on the distribution system. The authorized net salvage is 0 percent. Typically we would expect little to no salvage and cost of removal to exceed any salvage. However, there is little historical retirement activity. This study recommends retaining the 0 percent net salvage rate for this account.

Account 376 Mains (-34% NS)

This account consists of any salvage and removal cost related to Mains of all material types. The authorized net salvage is negative 32 percent. The most recent moving average net salvage experienced ranges from negative 34 percent to negative 88 percent. The full experience analyzed, 1997-2016, indicates a negative 34 percent. The process to abandon (cut, cap and purge) in place at time of retirement generals little or no salvage, but cost of removal has increased due to labor costs, environmental and regulatory rules and procedures around the safe retirement of mains. The 3 and 5 year moving averages are more negative, negative 67% and negative 47%, respectively. However, the account has fluctuations in both retirements and cost of removal being recorded. Based on all the information and analysis, our recommendation relies on the most recent 10 year moving average which results in a slight increase from a negative 32 percent to a negative 34 percent.

Account 377 Compressor Station Equipment (0% NS)

This account consists of any salvage and removal cost related to compressor station equipment related to the gas distribution system. The authorized net salvage is 0 percent. Our salvage analysis is limited to the most recent 10 years with only two

retirements being recorded with no salvage or cost of removal. This account has been transferred to Accounts 378 and 379.

Account 378.0 Measuring & Regulating Station Equipment (0% NS)

This account includes any salvage and removal cost related to installed equipment used in regulating gas at entry points to the distribution system. The authorized net salvage is 0 percent. Generally there is little to no salvage and cost of removal will exceed it generating a negative net salvage factor. However, no retirements have been recorded with the cost of removal shown, which is due to the timing differences that are known to occur in a net salvage analysis. Without retirement detail, future studies will evaluate and set net salvage at that time. Based on the available information and analysis, this study proposes to retain the existing 0 percent net salvage.

Account 379.0 City Gate Equipment (0% NS)

This account includes any salvage and removal cost related to installed equipment used in regulating gas at city gate entry points to the distribution system. The approved net salvage is 0 percent. Generally there is little to no salvage and cost of removal will exceed it generating a negative net salvage factor. However, no retirements have been recorded with the cost of removal shown, which is due to the timing differences that are known to occur in a net salvage analysis. Without retirement detail, future studies will evaluate and set net salvage at that time. Based on the available information and analysis, this study proposes to retain the existing 0 percent net salvage.

Account 380 Services (-75% NS)

This account includes any salvage and removal cost related to service lines on the distribution system. Service lines are the pipes and accessories leading from the main to the customers' premises. The authorized net salvage rate for this account is negative 60 percent. Generally, pipe is abandoned in place. However, removal cost is still incurred even when abandoning the pipe in place. For pipe that is being replaced, activities such as isolating the old pipe, cutting the old pipe, purging or foaming the old

pipe and capping the old pipe are charged as removal costs. When the pipe is not being replaced, in addition to the above activities, dispatching a crew, uncovering the pipe, recovering the hole and repairing the surface are additional activities charged to removal cost.

The trend seen in the historical data over recent years has been toward increased removal cost. The 3 and 5 year moving averages are more negative, negative 142% and negative 116%, respectively. Discussions with Company personnel indicated there has been a change in the process of how cost of removal would be recorded. Until this year the cost was allocated as a percentage (10% of installed labor cost) of the cost of the job. Starting this year, contractors will separately estimate the removal cost in the project proposal. They believe that the contractor will estimate removal cost lower than 10% of project cost. Based on the information from Company personnel and the analysis, our recommendation relies on the most recent 10 year moving average but moderated to reflect the change going forward. This study recommends moving from a negative 60 percent to a negative 75 percent net salvage.

Account 381.0 Meters (0% NS)

This account includes any salvage and removal cost related to meters used in measuring gas to customers. The authorized net salvage rate is 0 percent. No salvage is being recorded presently and only one year, 2014, had cost of removal recorded. Based on the most recent 10 year moving average, this study recommends retention of the 0 percent net salvage.

Account 381.1 ERT's (0% NS)

This account includes any salvage and removal cost related to ERTs used with a meter to measuring gas to customers. The authorized net salvage rate is 0 percent. No salvage or cost of removal has been recorded in this account since retirements were first recorded in 2010. Based on this activity, this study recommends retention of the 0 percent net salvage.

Account 381.3 Metreteks

This account includes any salvage and removal cost related to automated meters

used in measuring gas to commercial and industrial customers. The authorized net salvage rate is 0 percent. This account has been combined with Account 381.0.

Account 382.0 Meter Installations (0% NS)

This account includes any salvage and removal cost related to meter installations used in measuring gas to customers. The authorized net salvage rate is 0 percent. No salvage or cost of removal has been recorded and none is expected in the future. This study recommends retention of the existing 0 percent net salvage.

Account 383.0 House Regulators (-5% NS)

This account includes any salvage and removal cost related to house regulators. The authorized net salvage percent is 0 percent. There has been some cost of removal activity recorded, but it has been inconsistent over the last 10 years. Recent activity is driving the overall result to be a negative 10 percent. Discussions with Company personnel indicated the Company is implementing a system in January of 2019 that uses a derivation functionality when a single work order is used for both new installation and retirement for tracking cost of removal. At the present time, this account is the only account recording a measureable cost of removal pertaining to retirement costs for meters and the meter loop. Therefore, this study recommends moving toward the indications with a negative 5 percent net salvage at this time. Further evaluation of the impacts of this system will occur in the next study.

Account 384.0 House Regulator Installations (0% NS)

This account includes any salvage and removal cost related to house regulator installations. The authorized net salvage percent is 0 percent. There is limited retirement experience and no salvage or cost of removal has been recorded. This study recommends retention of the existing 0 percent net salvage.

Account 385 Industrial Meter & Regulator Equipment (0% NS)

This account includes the salvage and removal costs related to measuring and regulating equipment used in industrial stations. The authorized net salvage percent is 0 percent and is retained.

Account 386 Installations on Customer Premises (0% NS)

This account includes the salvage and removal costs related to assets owned and maintained by CGC on customer premises, which is equivalent to that of services. The currently authorized net salvage percent is negative 60 percent based on Account 380 experience. The current study does not propose to maintain the link but instead move to a 0 percent net salvage at this time.

Account 387 Other Equipment (0% NS)

This account includes the salvage and removal costs related to miscellaneous distribution equipment used in distribution operations. The authorized net salvage percent is 0 percent and is retained in this study.

General Plant

The General Plant function has depreciated and amortized accounts. Typically, Account 390.0 Structures & Improvements would be depreciated property, but it currently has no depreciable investment recorded. For the remaining accounts, only Account 396.0 Power Operated Equipment is considered depreciable and has recorded salvage. The other accounts are all being recommended for amortization and generally do not have any salvage or cost of removal recorded. The following is a brief description of each account analysis and the study recommendations.

Account 391.0 Office Furniture and Equipment (0% NS)

This account includes any salvage and removal cost related to office furniture and equipment. The authorized net salvage rate for this account is 0 percent. The Company currently leases most of the assets that would be in this account and remaining assets are not expected to have any salvage or cost of removal at retirement. This study recommends retention of the existing 0 percent net salvage for this account.

Account 391.1 Computer Equipment and Software (0% NS)

This account includes any salvage and removal cost related to personal computers, printers, peripherals and related software. The authorized net salvage rate for this account is 0 percent. Based on the type of equipment and no past experience of

recording salvage or cost of removal in this account, this study recommends retaining the 0 percent net salvage.

Account 391.2 Enterprise Systems (0% NS)

This account includes any salvage and removal cost related to enterprise system software. The authorized net salvage rate for this account is 0 percent. Based on the type of equipment and no past experience of recording salvage or cost of removal in this account, this study recommends retaining the 0 percent net salvage for this account.

Account 392.1 Transportation Equipment – Autos and Light Trucks (16%)

This account consists of salvage and removal costs associated with autos and light trucks. Currently, a 28 percent net salvage is recognized. Company leased assets until 2013. The retirement and salvage in 2016 has been removed as it was due to an accident and insurance proceeds. That is not a typical end of life transaction and owned assets are still too young. After six years CGC would not expect to receive 28 percent net salvage. Prior study used a combined net salvage analysis, but accounts have been segregated and now being tracked separately but there may be some mismatch of prior year transactions across the account. Current analysis indicates 0% for most recent 10 year moving average. However, the 2014 moving 10 year average is 17.44 percent. Giving consideration to the historical experience across all the accounts, discussion with Company personnel, additional salvage information provided by CGC fleet indicating a 16.44 percent average, this study recommends moving from the approved 28 percent net salvage to 16 percent net salvage at this time.

Account 392.2 Transportation Equipment – 7 Year Service Trucks (26% NS)

This account consists of salvage and removal costs associated with service trucks and associated equipment. Currently, 28 percent net salvage is recognized. Prior study used a combined net salvage analysis, but accounts have been segregated and now being tracked separately but there may be some mismatch of prior year transactions across the account. Current analysis indicates 12.51% for most recent 10 year moving average. However, the 2015 moving 10 year average is 16.75 percent.

Giving consideration to the historical experience across all the accounts, discussion with Company personnel, additional salvage information provided by CGC fleet indicating a 26.19 percent average, this study recommends moving from the approved 28 percent net salvage to 26 percent net salvage at this time.

Account 392.3 Transportation Equipment – Heavy Trucks (23% NS)

This account consists of salvage and removal costs associated with heavy trucks and associated equipment. Currently, 28 percent net salvage is recognized. Prior study used a combined net salvage analysis, but accounts have been segregated and now being tracked separately but there may be some mismatch of prior year transactions across the account. Current analysis indicates 17.95% for most recent 10 year moving average. However, the 2015 moving 10 year average is 14.91 percent. Giving consideration to the historical experience across all the accounts, discussion with Company personnel, additional salvage information provided by CGC fleet indicating a 22.90 percent average, this study recommends moving from the approved 28 percent net salvage to 23 percent net salvage at this time.

Account 393.0 Stores Equipment (0% NS)

This account consists of salvage and removal costs associated with forklifts, shelves and bins. There was salvage recorded in 2014, which is indicating a positive 18.67 percent in the most recent 10 year moving average. However, this is not indicative of future expectations for these assets at the end of a 25 year life. Giving consideration to the analysis, type of assets, and proposed amortization life, this study recommends retaining the 0 percent net salvage.

Account 394.0 Tools, Shop & Garage Equipment (0% NS)

This account consists of salvage and removal costs associated with air compressors, grinders, mixers, hoists, and cranes. The authorized net salvage rate for this account is 0 percent. Based on the type of equipment, data analyzed, past experience and expectations that no salvage or cost of removal will be recorded at time of retirement, this study recommends retaining the 0 percent net salvage.

Account 396.0 Power Operated Equipment (25% NS)

This account includes any salvage and removal cost related to backhoes, forklifts, trenchers, and other power operated equipment that cannot be licensed on roadways. The authorized net salvage rate for this account is 17 percent. The current analysis indicates in the most recent 10 year moving average is 16.70 percent. The 5 year moving average is around 25 percent. Based on the net salvage analysis, type of assets and expectations, this study recommends moving to a 25 percent net salvage for this account.

Account 397.0 Communication Equipment (0% NS)

This account consists of miscellaneous communication equipment used in general utility service. The authorized net salvage rate for this account is 0 percent. No salvage or cost of removal has been recorded and none expected. This study retains 0 percent salvage.

Account 398.0 Miscellaneous Equipment (0% NS)

This account consists of miscellaneous equipment used in general utility service. The authorized net salvage rate for this account is 0 percent. The current analysis in the most recent 10 year moving average is 12.96 percent. This is being driven by one year (2015), which is not typical and unlikely to reoccur. Based on the overall analysis and expectations, this study recommends retaining the 0 percent net salvage for this account.

APPENDIX A - Depreciation Expense Comparison

CHATTANOOGA GAS COMPANY
Book Depreciation Study as of December 31, 2016
Comparison of Existing vs. Proposed Annual Depreciation Expense

Account	Description	Plant In Service Balance at 12/31/2016		Existing Accrual ALG-RL Rate	Existing Accrual Amount	Proposed Accrual ALG-RL Rate	Proposed Accrual Amount	Difference Increase / (Decrease)
STORAGE PLANT								
361.00	Natural Gas Structures & Improvements	$ 10,288,324		2.03%	$ 208,853	1.51%	$ 155,445	$ (53,408)
362.00	Natural Gas Holders	180,457		1.39%	2,508	0.96%	1,739	(769)
362.10	LNG Tanks	7,673,399		1.39%	106,660	0.96%	73,941	(32,719)
363.00	Purification Equipment	528,383		0.33%	1,744	0.21%	1,112	(632)
363.10	Liquefaction Equipment	5,251,707		2.23%	117,113	3.59%	188,692	71,579
363.20	Vaporizing Equipment	2,067,144		1.87%	38,656	1.35%	27,906	(10,750)
363.30	Compressor Equipment	2,731,450		3.81%	104,068	1.73%	47,205	(56,863)
363.40	M&R Equipment	283,077		0.24%	679	3.49%	9,866	9,187
363.50	Other Equipment	2,143,973		6.50%	139,358	7.54%	161,639	22,281
364.20	Structures & Improvements LNG	520,735		2.03%	10,571	1.84%	9,588	(983)
364.50	M&R Equipment LNG	961,554		0.24%	2,308	3.62%	34,789	32,481
364.80	Other Equipment	732,263		6.50%	47,597	7.62%	55,781	8,184
	Total Storage	33,362,466		2.34%	780,116	2.30%	767,703	(12,413)
DISTRIBUTION PLANT								
374.00	Land	0		0.00%	0	0.00%	0	0
374.20	Land Rights	750,752		1.47%	11,036	1.17%	8,798	(2,238)
375.00	Structures and Improvements	72,479		2.73%	1,979	3.80%	2,755	776
376 C	Mains - All	130,726,784		1.96%	2,562,245	1.95%	2,551,706	(10,539)
377.00	Compressor Station Equipment	0	(1)	1.76%	0			
378.00	M&R Equipment	1,653,248		2.36%	39,017	2.34%	38,665	(352)
379.00	City Gate Equipment	1,858,044		1.97%	36,603	1.80%	33,436	(3,168)
380 C	Services - All	61,858,135		2.79%	1,725,842	2.92%	1,808,240	82,398
381.00	Meters	13,529,058		2.19%	296,286	2.97%	401,967	105,681
381.10	Meters - ERTS	3,715,111		2.19%	81,361	6.25%	232,103	150,742
381.30	Metreteks	0	(2)	2.02%	0			
382.00	Meter Installations	3,399,433		2.43%	82,606	1.13%	38,261	(44,345)
383.00	House Regulators	4,715,029		1.98%	93,358	1.73%	81,476	(11,882)
384.00	House Regulator Installations	287,417		2.34%	6,726	1.80%	5,187	(1,539)
385.00	Industrial M&R Equipment	138,554		1.84%	2,549	2.22%	3,074	525
386.00	Other. Prop. on Customers' Premises	16,919		2.92%	494	0.00%	0	(494)
387.00	Other Equipment	386,205		1.87%	7,222	1.86%	7,198	(24)
	Total Distribution	223,107,167		2.22%	4,947,324	2.34%	5,212,866	265,542

CHATTANOOGA GAS COMPANY
Book Depreciation Study as of December 31, 2016
Comparison of Existing vs. Proposed Annual Depreciation Expense

Account	Description	Plant In Service Balance at 12/31/2016	Existing Accrual ALG-RL Rate	Existing Accrual Amount	Proposed Accrual ALG-RL Rate	Proposed Accrual Amount	Difference Increase / (Decrease)
GENERAL PLANT - DEPRECIATED							
392.10	Transportation - Autos & Light Trucks	158,841	12.22%	19,410	16.12%	25,608	6,198
392.20	Transportation - 7 Year Service Trucks	629,561	9.45%	59,494	8.71%	54,838	(4,656)
392.30	Transportation - 10 Year Heavy Trucks	891,527	9.45%	84,249	7.43%	66,200	(18,050)
396.00	Power Operated Equipment	416,398	15.19%	63,251	1.87%	7,766	(55,485)
	Total General - Depreciated	2,096,327	10.80%	226,404	7.37%	154,412	(71,992)
GENERAL PLANT - AMORTIZED							
391.00	Office Furniture and Equipment	9,711	6.16%	598	(3)	399	(199)
391.10	OFE - Computer Equipment and Software	587,348	23.28%	136,735	(3)	153	(136,581)
391.11	CFE - Computer Software	2,233,646	10.38%	231,852	(3)	64,863	(166,989)
391.12	OFE - Computer Hardware	253,669	23.28%	59,054	(3)	37,251	(21,803)
391.20	OFE - Enterprise 10 Year	2,336,491	10.38%	242,528	(3)	105,744	(136,784)
393.00	Stores Equipment	17,547	5.39%	946	(3)	608	(338)
394.00	Tools, Shop & Garage Equipment	367,393	7.91%	29,061	(3)	17,048	(12,013)
397.00	Communication Equipment	408,882	12.35%	50,497	(3)	17,663	(32,834)
398.00	Miscellaneous Equipment	206,995	6.87%	14,221	(3)	14,811	590
	Total General - Amortized	6,421,683	11.92%	765,491	4.03%	258,541	(506,950)
	Total General Plant	8,518,010	11.64%	991,895	4.85%	412,953	(578,942)
	Total Depreciable Plant	$ 264,987,643	2.54%	$ 6,719,335	2.41%	6,393,522	$ (325,813)

(1) Compressor Station Equipment assets will be transferred to Accounts 378 and 379 in 2017. This is a proforma adjustment in the study.
(2) Metretek have been combined with Meters Account 381.
(3) General Plant - Amortized proposed accrual includes ongoing amortization (1/Life) plus fixed (Deficit)/Surplus accrual for 5 years.

APPENDIX B - Depreciation Rate Calculation

CHATTANOOGA GAS COMPANY
Book Depreciation Study as of December 31, 2016
Calculation of Annual Depreciation Expense Accrual and Rate

Account	Description	Plant In Service Balance at 12/31/2016	Book Reserve	Net Salvage %	Net Salvage Amount	Unaccrued Balance	Remaining Life	Annual Accrual	Accrual Rate
STORAGE PLANT									
361.00	Natural Gas Structures & Improvements	$ 10,288,324	$ 3,604,296	0%	$ -	$ 6,684,028	43.00	$ 155,445	1.51%
362.00	Natural Gas Holders	7,853,856	3,165,668	0%	-	4,688,188	61.95	75,680	0.96%
363.00	Purification Equipment	528,383	514,318	0%	-	14,065	12.65	1,112	0.21%
363.10	Liquefaction Equipment	5,251,707	1,845,249	0%	-	3,406,458	18.05	188,692	3.59%
363.20	Vaporizing Equipment	2,067,144	1,865,435	0%	-	201,708	7.23	27,906	1.35%
363.30	Compressor Equipment	2,731,450	1,022,055	0%	-	1,709,394	36.21	47,205	1.73%
363.40	M&R Equipment	283,077	52,304	0%	-	230,773	23.39	9,866	3.49%
363.50	Other Equipment	2,143,973	1,069,927	0%	-	1,074,046	6.64	161,639	7.54%
364.20	Structures & Improvements LNG	520,735	14,931	0%	-	505,804	52.75	9,588	1.84%
364.50	M&R Equipment LNG	961,554	4,865	0%	-	956,690	27.50	34,789	3.62%
364.80	Other Equipment	732,263	215,356	0%	-	516,907	9.27	55,781	7.62%
	TOTAL STORAGE PLANT	33,362,466	13,374,405		-	19,988,061		767,703	2.30%
DISTRIBUTION PLANT									
374.20	Land Rights	750,752	223,092	0%	-	527,660	59.98	8,798	1.17%
375.00	Structures and Improvements	72,479	24,131	0%	-	48,348	17.55	2,755	3.80%
376 C	Mains - All	130,726,784	55,981,731	-34%	(44,447,107)	119,192,160	46.71	2,551,706	1.95%
377	Compressor Station Equipment	(1)							
378.00	M&R Equipment	1,653,248	570,104	0%	-	1,083,144	28.01	38,665	2.34%
379.00	City Gate Equipment	1,858,044	914,123	0%	-	943,921	28.23	33,436	1.80%
380 C	Services - All	61,858,135	32,988,689	-75%	(46,393,601)	75,263,047	41.62	1,808,240	2.92%
381.00	Meters	13,529,058	4,910,024	0%	-	8,619,034	21.44	401,967	2.97%
381.10	Meters - ERTS	3,715,111	215,829	0%	-	3,499,282	15.08	232,103	6.25%
381.30	Metreteks	(2)							
382.00	Meter Installations	3,399,433	2,224,548	0%	-	1,174,885	30.71	38,261	1.13%
383.00	House Regulators	4,715,029	2,344,175	-5%	(235,751)	2,606,606	31.99	81,476	1.73%
384.00	House Regulator Installations	287,417	103,972	0%	-	183,445	35.37	5,187	1.80%
385.00	Industrial M&R Equipment	138,554	88,340	0%	-	50,213	16.33	3,074	2.22%
386.00	Other. Prop. on Customers' Premises	16,919	18,827	0%	-	(1,908)	21.65	(88)	0.00%
387.00	Other Equipment	386,205	107,598	0%	-	278,607	38.71	7,198	1.86%
	TOTAL DISTRIBUTION PLANT	223,107,167	100,715,183		(91,076,459)	213,468,443		5,212,778	2.34%
GENERAL PLANT - DEPRECIATED									
392.10	Transportation - Autos & Light Trucks	158,841	16,091	16%	25,415	117,335	4.58	25,608	16.12%
392.20	Transportation - 7 Year Service Trucks	629,561	199,270	26%	163,686	266,605	4.86	54,838	8.71%
392.30	Transportation - 10 Year Heavy Trucks	891,527	277,273	23%	205,051	409,203	6.18	66,200	7.43%
396.00	Power Operated Equipment	416,398	256,520	25%	104,099	55,778	7.18	7,766	1.87%
	TOTAL GENERAL - DEPRECIATED	2,096,327	749,154		498,251	848,921		154,412	7.37%

CHATTANOOGA GAS COMPANY
Book Depreciation Study as of December 31, 2016
Calculation of Annual Depreciation Expense Accrual and Rate

Account	Description	Plant In Service Balance at 12/31/2016	Book Reserve	Net Salvage %	Net Salvage Amount	Unaccrued Balance	Remaining Life	Annual Accrual		Accrual Rate
GENERAL PLANT - AMORTIZED (after AR 15 Retirements)										
391.00	Office Furniture and Equipment	9,711	9,390	0%	-	321	(3)	399	*	5.00%
391.10	OFE - Comp Equip and So	1,804	1,939	0%	-	(135)	(3)	153	*	20.00%
391.11	CFE - Computer Software	1,473,943	1,112,673	0%	-	361,270	(3)	64,863	*	10.00%
391.12	OFE - Computer Hardware	213,493	112,744	0%	-	100,749	(3)	37,251	*	20.00%
391.20	OFE - Enterprise 10 Year	2,056,446	1,699,831	0%	-	356,615	(3)	105,744	*	8.33%
393.00	Stores Equipment	16,624	16,577	0%	-	48	(3)	608	*	4.00%
394.00	Tools, Shop and Garage Equipment	262,352	131,034	0%	-	131,319	(3)	17,048	*	7.69%
397.00	Communication Equipment	408,882	260,253	0%	-	148,630	(3)	17,663	*	8.33%
398.00	Miscellaneous Equipment	206,995	71,175	0%	-	135,820	(3)	14,811	*	6.67%
	TOTAL GENERAL - AMORTIZED	4,650,251	3,415,615		-	1,234,637		258,541		5.56%
	TOTAL GENERAL PLANT	6,746,578	4,164,769		498,251	2,083,558		412,953		6.12%
	TOTAL DEPRECIATED & AMORTIZED	$ 263,216,211	$ 118,254,356		$ (90,578,208)	235,540,063		$ 6,393,434		2.43%

(1) Compressor Station Equipment will be transferred to Accounts 378 and 379 in 2017. This is a proforma adjustment in the study.
(2) Metreteks have been combined with Meters Account 381.
(3) General Plant - Amortized proposed accrual amount is the total of the ongoing annual amortization (1-NS/ASL) plus the fixed 5 year reserve true up (deficit/surplus) accrual amount.
*Denotes a whole life rate (1-NS/ASL) for amortization.

CHATTANOOGA GAS COMPANY
Computation of Depreciation Accruals and Rate - General Plant Amortized Accounts
Book Depreciation Study as of December 31, 2016

GENERAL PLANT - AMORTIZED Account	Description	Plant in Service Balance at 12/31/2016	Book Reserve 12/31/2016	Theoretical Reserve 12/31/2016	Reserve Deficit/ Surplus	Reserve Recovery Period (Yrs)	Amortize Reserve Deficit/Surplus	Assets to Retire Greater Than ASL
391.00	Office Furniture & Equipment	$ 9,711	$ 9,390	$ 8,957	$ 433	5	$ (87)	$ -
391.10	OFE - Comp. Equip. & Software	587,348	587,483	586,446	1,037	5	(207)	585,544
391.11	CFE - Computer Software	2,233,646	1,872,376	1,459,721	412,655	5	(82,531)	759,703
391.12	OFE - Computer Hardware	253,669	152,920	125,684	27,236	5	(5,447)	40,176
391.20	OFE - Enterprise 10 Year	2,336,491	1,979,876	1,651,744	328,132	5	(65,626)	280,045
393.00	Stores Equipment	17,547	17,500	17,215	285	5	(57)	923
394.00	Tools, Shop, & Garage Equip.	367,393	236,074	220,408	15,666	5	(3,133)	105,040
397.00	Communication Equipment	408,882	260,253	178,201	82,052	5	(16,410)	-
398.00	Miscellaneous Equipment	206,995	71,175	76,230	(5,055)	5	1,011	-
	Total General Amortized	**6,421,683**	**5,187,046**	**4,324,606**	**862,440**		**(172,488)**	**1,771,431**

After Retirements of Assets With Age > Average Service Life

Account	Description	Plant Balance 12/31/2016	Book Reserve 12/31/2016	Proposed Life	Annual Amort.	Accrual For Reserve Deficit Surplus	(1) Total Amortization Amount ($)	(2) Annual Amortization Rate (%)
391.00	Office Furniture & Equipment	9,711	9,390	20	486			5.00%
391.00	Office Furniture & Equipment					(87)		
391.00	Total						399	
391.10	OFE - Comp. Equip. & Software	1,804	1,939	5	361			20.00%
391.10	OFE - Comp. Equip. & Software					(207)		
391.10	Total						153	
391.11	CFE - Computer Software	1,473,943	1,112,673	10	147,394			10.00%
391.11	CFE - Computer Software					(82,531)		
391.11	Total						64,863	
391.12	OFE - Computer Hardware	213,493	112,744	5	42,699			20.00%
391.12	OFE - Computer Hardware					(5,447)		
391.12	Total						37,251	
391.20	OFE - Enterprise 10 Year	2,056,446	1,699,831	12	171,370			8.33%
391.20	OFE - Enterprise 10 Year					(65,626)		

CHATTANOOGA GAS COMPANY
Computation of Depreciation Accruals and Rate - General Plant Amortized Accounts
Book Depreciation Study as of December 31, 2016

391.20		Total					105,744	
393.00	Stores Equipment		16,624	16,577	25	665		4.00%
393.00	Stores Equipment						(57)	
393.00		Total					608	
394.00	Tools, Shop, & Garage Equip.		262,352	131,034	13	20,181		7.69%
394.00	Tools, Shop, & Garage Equip.						(3,133)	
394.00		Total					17,048	
397.00	Communication Equipment		408,882	260,253	12	34,074		8.33%
397.00	Communication Equipment						(16,410)	
397.00		Total					17,663	
398.00	Miscellaneous Equipment		206,995	71,175	15	13,800		6.67%
398.00	Miscellaneous Equipment						1,011	
398.00		Total					14,811	
Total General Amortized After Retirements			**$ 4,650,251**	**$ 3,415,615**		**$ 431,029**	**$ (172,488)**	**$ 258,541**
	AR 15 Retirements		**1,771,431**	**1,771,431**				

Note 1= Total Amortization is the annual amortization amount plus the fixed 5 year amount for the reserve true-up (deficit/surplus).
Note 2=Annual Amortization % is the annual amortization rate to be applied (1/ASL).

APPENDIX C - Depreciation Parameter Comparison

CHATTANOOGA GAS COMPANY
Book Depreciation Study as of December 31, 2016
Comparison of Mortality Characteristics

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
		Existing					Study Recommendation				
Account Number	Description	ASL	Iowa Curve	Gross Salvage	Cost of Removal	Net Salvage	ASL	Iowa Curve	Gross Salvage	Cost of Removal	Net Salvage
		yrs.		%	%	%	yrs.		%	%	%
	STORAGE PLANT										
361.00	Natural Gas Structures & Improvements	45	S6	0	0	0	55	S6	0	0	0
362.00	Natural Gas Holders	45	S6	0	0	0	75	S6	0	0	0
362.10	LNG Tanks	45	S6	0	0	0	75	S6	0	0	0
363.00	Purification Equipment	45	S6	0	0	0	45	S6	0	0	0
363.10	Liquefaction Equipment	25	S4	0	0	0	25	S4	0	0	0
363.20	Vaporizing Equipment	25	R4	0	0	0	25	R4	0	0	0
363.30	Compressor Equipment	25	R4	0	0	0	50	R4	0	0	0
363.40	M&R Equipment	30	S6	0	0	0	30	S6	0	0	0
363.50	Other Equipment	14	S6	0	0	0	14	S6	0	0	0
364.20	Structures & Improvements LNG	45	S6	0	0	0	55	S6	0	0	0
364.23	M&R Structures LNG	45	S6	0	0	0	75	S6	0	0	0
364.50	M&R Equipment LNG	30	S6	0	0	0	30	S6	0	0	0
364.80	Other Equipment	14	S6	0	0	0	14	S6	0	0	0
	DISTRIBUTION PLANT										
374.10	Land Rights	60	R4	0	0	0	75	R4	0	0	0
375.00	Structures & Improvements	25	S6	0	0	0	25	S6	0	0	0
376 C	Mains - All	57	R2.5	0	32	(32)	63	S5	0	34	(34)
378.00	M&R Equipment	40	R3	0	0	0	40	R3	0	0	0
379.00	City Gate Equipment	42	R4	0	0	0	45	R4	0	0	0
380 C	Services - All	51	R2	0	60	(60)	56	R2	0	75	(75)
381.00	Meters	30	S5	0	0	0	27	L0	0	0	0
381.10	Meters - ERTS	30	S5	0	0	0	20	L0.5	0	0	0
382.00	Meter Installations	30	S5	0	0	0	45	R2	0	0	0
383.00	House Regulators	37	S6	0	0	0	45	R2	0	5	(5)
384.00	House Regulator Installations	37	S6	0	0	0	45	R2	0	0	0
385.00	Industrial M&R Equipment	35	R3	0	0	0	35	R3	0	0	0
386.00	Other. Prop. on Customers' Premises	40	S1.5	0	60	(60)	40	R1.5	0	0	0
387.00	Other Equipment	50	R4	0	0	N/A	50	R4	0	0	0

Appendix C

CHATTANOOGA GAS COMPANY
Book Depreciation Study as of December 31, 2016
Comparison of Mortality Characteristics

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
		Existing					Study Recommendation				
Account Number	Description	ASL	Iowa Curve	Gross Salvage	Cost of Removal	Net Salvage	ASL	Iowa Curve	Gross Salvage	Cost of Removal	Net Salvage
		yrs.		%	%	%	yrs.		%	%	%
	GENERAL PLANT										
390.00	Structures & Improvements	10	SQ	0	0	0			0	0	0
391.00	Office Furniture and Equipment	20	S6	0	0	0	20	L2	0	0	0
391.10	OFE - Comp Equip and So	5	S6	0	0	0	5	S3	0	0	0
391.11	CFE - Computer Software	10	R1.5	0	0	0	10	S3	0	0	0
391.12	OFE - Computer Hardware	10	R1.5	0	0	0	5	R1.5	0	0	0
391.20	OFE - Enterprise 10 Year	10	R1.5	0	0	0	12	S3	0	0	0
392.10	Transportation - Autos & Light Trucks	7	S6	28	0	28	6	R2.5	16	0	16
392.20	Transportation - 7 Year Service Trucks	7	S6	28	0	28	7	L5	26	0	26
392.30	Transportation - 10 Year Heavy Trucks	10	S3	28	0	28	10	L4	23	0	23
393.00	Stores Equipment	25	R5	0	0	0	25	R5	0	0	0
394.00	Tools, Shop and Garage Equipment	15	R2	0	0	0	13	L0	0	0	0
395.00	Laboratory Equipment	No Balance							0	0	0
396.00	Power Operated Equipment	10	S6	17	0	17	10	L1	25	0	25
397.00	Communication Equipment	10	L3	0	0	0	12	S6	0	0	0
398.00	Miscellaneous Equipment	15	L3	0	0	0	15	L3	0	0	0

*Used rate from 392.20

Proforma Adjustments							
381.30	Metreteks	40	R4	0	0	0	Assets were combined with Account 381.0 Meters
377.00	Compressor Station Equipment	25	R3	0	0	0	Assets transferred to 378 and 379 in 2017

APPENDIX D - Net Salvage Analysis

CHATTANOOGA GAS COMPANY
RETIREMENTS, GROSS SALVAGE, AND COST OF REMOVAL
NET SALVAGE ANALYSIS AS OF DECEMBER 31, 2016

	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. %
Account 361.00														
Structures and Improvements														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	128,838	0	0	0	0.00%	0.00%	0.00%	0.00%						
2001	20,910	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2002	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%				
2003	18,087	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
2004	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2005	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2006	104,296	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	202,219	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	476,263	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
Account 362.0 and 362.10														
Storage Tanks														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	26	0	0	0	0.00%	0.00%	0.00%	0.00%						
2001	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
2002	420,929	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
2003	105,382	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
2004	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2005	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2006	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	238,781	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2015	0	0	4,726	(4,726)	NA	NA	NA	NA	NA	NA	NA	-1.98%	-1.98%	-1.98%
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	-1.98%	-1.98%

CHATTANOOGA GAS COMPANY
RETIREMENTS, GROSS SALVAGE, AND COST OF REMOVAL
NET SALVAGE ANALYSIS AS OF DECEMBER 31, 2016

	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. %
Account 363.1														
Liquefication Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	220,752	0	0	0	0.00%	0.00%	0.00%							
2000	0	0	0	0	NA	0.00%	0.00%	0.00%						
2001	0	0	0	0	NA	NA	0.00%	0.00%	0.00%					
2002	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%				
2003	279,858	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
2004	25,200	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2005	1,034,236	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2006	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	672,269	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
Account 363.2														
Vaporizaing Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	339,644	0	0	0	0.00%	0.00%	0.00%	0.00%						
2001	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
2002	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%				
2003	4,949	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
2004	8,269	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2005	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2006	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	347,913	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%

CHATTANOOGA GAS COMPANY
RETIREMENTS, GROSS SALVAGE, AND COST OF REMOVAL
NET SALVAGE ANALYSIS AS OF DECEMBER 31, 2016

	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. %
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
Account 363.3														
Compressor Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 363.4														
Vaporizing Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	62,248	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2002	3,064	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
2003	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
2004	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2005	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2006	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2008	65,312	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%

CHATTANOOGA GAS COMPANY
RETIREMENTS, GROSS SALVAGE, AND COST OF REMOVAL
NET SALVAGE ANALYSIS AS OF DECEMBER 31, 2016

	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	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
Account 363.5														
Other Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	317,920	0	0	0	0.00%	0.00%	0.00%	0.00%						
2001	322,967	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2002	4,465	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
2003	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
2004	3,710	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2005	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2006	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	649,061	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
Account 364.2 and 364.23														
Strucutres and Improvements LNG														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

CHATTANOOGA GAS COMPANY
RETIREMENTS, GROSS SALVAGE, AND COST OF REMOVAL
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	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	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 364.5														
LNG Measuring Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 364.8														
LNG Other Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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RETIREMENTS, GROSS SALVAGE, AND COST OF REMOVAL
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	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. %
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 374.2														
Lnad Rights														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 375														
Structures and Improvements														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

CHATTANOOGA GAS COMPANY
RETIREMENTS, GROSS SALVAGE, AND COST OF REMOVAL
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	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. %
2011	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 376 - All Distribution Mains														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	280,468	0	0	0	0.00%	0.00%	0.00%	0.00%						
2001	162,195	0	18,322	(18,322)	-11.30%	-4.14%	-4.14%	-4.14%	-4.14%					
2002	153,969	0	101,925	(101,925)	-66.20%	-38.03%	-20.15%	-20.15%	-20.15%	-20.15%				
2003	24,923	0	328,159	(328,159)	-1316.71%	-240.42%	-131.46%	-72.14%	-72.14%	-72.14%	-72.14%			
2004	52,570	0	11,287	(11,287)	-21.47%	-438.04%	-190.69%	-116.77%	-68.19%	-68.19%	-68.19%	-68.19%		
2005	4,584	0	1,189	(1,189)	-25.94%	-21.83%	-415.02%	-187.49%	-115.73%	-67.91%	-67.91%	-67.91%	-67.91%	
2006	11,282	0	17,946	(17,946)	-159.06%	-120.60%	-44.45%	-384.09%	-186.19%	-116.92%	-69.40%	-69.40%	-69.40%	-69.40%
2007	57,495	0	9,583	(9,583)	-16.67%	-40.03%	-39.15%	-31.77%	-244.05%	-154.22%	-104.58%	-65.34%	-65.34%	-65.34%
2008	2,102,608	0	1,894	(1,894)	-0.09%	-0.53%	-1.36%	-1.41%	-1.88%	-16.42%	-19.61%	-19.08%	-17.20%	-17.20%
2009	(1,166,088)	0	0	0	0.00%	-0.20%	-1.15%	-2.93%	-3.03%	-3.94%	-34.03%	-38.02%	-34.93%	-29.12%
2010	45	0	0	0	0.00%	0.00%	-0.20%	-1.15%	-2.93%	-3.03%	-3.94%	-34.03%	-38.02%	-34.93%
2011	0	0	0	0	NA	0.00%	0.00%	-0.20%	-1.15%	-2.93%	-3.03%	-3.94%	-34.03%	-38.02%
2012	752,338	0	0	0	0.00%	0.00%	0.00%	0.00%	-0.11%	-0.66%	-1.67%	-1.74%	-2.31%	-20.11%
2013	167	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	-0.11%	-0.66%	-1.67%	-1.74%	-2.31%
2014	619,221	0	772,931	(772,931)	-124.82%	-124.79%	-56.35%	-56.35%	-56.35%	-375.79%	-33.57%	-33.16%	-33.75%	-33.74%
2015	910,815	0	343,979	(343,979)	-37.77%	-73.00%	-72.99%	-48.93%	-48.93%	-48.93%	-100.04%	-34.76%	-34.44%	-34.87%
2016	202,019	0	37,496	(37,496)	-18.56%	-34.28%	-66.65%	-66.64%	-46.46%	-46.46%	-46.46%	-87.55%	-33.80%	-33.52%
Account 377 Compressor Station Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	31,052	0	0	0	0.00%	0.00%	0.00%	0.00%						
2001	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%					
2002	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%				
2003	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%			
2004	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%		
2005	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
2009	897,105	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

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	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. %
2010	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
Account 378														
M & R Stattion Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	0	0	85,375	(85,375)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	0	0	6,400	(6,400)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 379														
City Gate Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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	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. %
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	0	0	5,216	(5,216)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 380 - All Services														
1997	68,727	0	0	0	0.00%									
1998	0	0	0	0	NA	0.00%								
1999	2,717	0	0	0	0.00%	0.00%	0.00%							
2000	200,478	0	0	0	0.00%	0.00%	0.00%	0.00%						
2001	114,107	0	12,170	(12,170)	-10.67%	-3.87%	-3.84%	-3.84%	-3.15%					
2002	105,700	0	121,524	(121,524)	-114.97%	-60.82%	-31.81%	-31.61%	-31.61%	-27.19%				
2003	78,439	0	69,619	(69,619)	-88.76%	-103.80%	-68.17%	-40.77%	-40.55%	-40.55%	-35.66%			
2004	76,593	0	48,897	(48,897)	-63.84%	-76.45%	-92.06%	-67.28%	-43.84%	-43.63%	-43.63%	-39.00%		
2005	176,561	0	109,550	(109,550)	-62.05%	-62.59%	-68.78%	-79.94%	-65.61%	-48.11%	-47.94%	-47.94%	-43.94%	
2006	97,612	0	86,550	(86,550)	-88.67%	-71.52%	-69.85%	-73.30%	-81.54%	-69.08%	-52.77%	-52.61%	-52.61%	-48.68%
2007	135,927	0	75,280	(75,280)	-55.38%	-69.29%	-66.17%	-65.81%	-68.99%	-76.24%	-66.70%	-53.13%	-52.99%	-52.99%
2008	90,761	0	52,917	(52,917)	-58.30%	-56.55%	-66.22%	-64.75%	-64.63%	-67.51%	-74.10%	-65.83%	-53.57%	-53.43%
2009	150,681	4,073	0	4,073	2.70%	-20.23%	-32.89%	-44.35%	-49.15%	-50.69%	-54.40%	-61.41%	-55.77%	-46.66%
2010	86,327	0	0	0	0.00%	1.72%	-14.90%	-26.77%	-37.53%	-43.40%	-45.32%	-49.14%	-56.10%	-51.45%
2011	155,931	0	0	0	0.00%	0.00%	1.04%	-10.10%	-20.03%	-29.37%	-35.83%	-38.04%	-41.83%	-48.53%
2012	172,636	0	0	0	0.00%	0.00%	0.00%	0.72%	-7.44%	-15.67%	-23.67%	-30.03%	-32.29%	-35.92%
2013	180,001	0	0	0	0.00%	0.00%	0.00%	0.00%	0.55%	-5.84%	-12.77%	-19.69%	-25.69%	-27.90%
2014	670,159	0	916,446	(916,446)	-136.75%	-107.80%	-89.60%	-77.75%	-72.44%	-64.45%	-64.08%	-63.36%	-64.78%	-64.52%
2015	628,496	0	1,106,150	(1,106,150)	-176.00%	-155.75%	-136.79%	-122.49%	-111.92%	-106.82%	-98.74%	-97.02%	-94.53%	-94.29%
2016	282,694	0	229,156	(229,156)	-81.06%	-146.55%	-142.39%	-127.84%	-116.43%	-107.74%	-103.47%	-96.59%	-95.16%	-93.04%
Account 381 Meters														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	3,372	0	0	0	0.00%	0.00%	0.00%							
2000	33,153	0	0	0	0.00%	0.00%	0.00%	0.00%						
2001	47,616	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2002	26,783	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
2003	58,269	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
2004	15,376	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2005	46,027	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2006	32,498	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	47,639	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

CHATTANOOGA GAS COMPANY
RETIREMENTS, GROSS SALVAGE, AND COST OF REMOVAL
NET SALVAGE ANALYSIS AS OF DECEMBER 31, 2016

	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. %
2008	135,694	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	199,864	1,069	0	1,069	0.53%	0.32%	0.28%	0.26%	0.23%	0.22%	0.20%	0.19%	0.18%	0.17%
2010	184,814	0	0	0	0.00%	0.28%	0.21%	0.19%	0.18%	0.17%	0.16%	0.15%	0.14%	0.13%
2011	279,623	0	0	0	0.00%	0.00%	0.16%	0.13%	0.13%	0.12%	0.12%	0.11%	0.11%	0.10%
2012	333,734	0	0	0	0.00%	0.00%	0.00%	0.11%	0.09%	0.09%	0.09%	0.08%	0.08%	0.08%
2013	85,354	0	0	0	0.00%	0.00%	0.00%	0.00%	0.10%	0.09%	0.08%	0.08%	0.08%	0.08%
2014	543,403	0	8,606	(8,606)	-1.58%	-1.37%	-0.89%	-0.69%	-0.60%	-0.46%	-0.43%	-0.42%	-0.41%	-0.40%
2015	167,726	0	8	(8)	0.00%	-1.21%	-1.08%	-0.76%	-0.61%	-0.54%	-0.42%	-0.39%	-0.38%	-0.38%
2016	158,661	0	0	0	0.00%	0.00%	-0.99%	-0.90%	-0.67%	-0.55%	-0.49%	-0.39%	-0.36%	-0.35%
Account 381.1														
Automated Meters (ERTS)														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	12,626	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	28,687	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	145,637	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	12,575	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	122,672	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2015	91,279	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2016	63,423	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Account 382														
Meter Installations														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	1,371	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2006	659	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

CHATTANOOGA GAS COMPANY
RETIREMENTS, GROSS SALVAGE, AND COST OF REMOVAL
NET SALVAGE ANALYSIS AS OF DECEMBER 31, 2016

	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	2,186	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	344	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	133	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	3,616	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	830	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	1,705	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2015	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2016	23,805	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Account 383														
House Regulators														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	1,324	0	0	0	0.00%	0.00%	0.00%	0.00%						
2001	0	0	43	(43)	NA	-3.22%	-3.22%	-3.22%	-3.22%					
2002	0	0	0	0	NA	NA	-3.22%	-3.22%	-3.22%	-3.22%				
2003	3,059	0	2,254	(2,254)	-73.68%	-73.68%	-75.07%	-52.39%	-52.39%	-52.39%	-52.39%			
2004	342	0	0	0	0.00%	-66.26%	-66.26%	-67.52%	-48.60%	-48.60%	-48.60%	-48.60%		
2005	0	0	0	0	NA	0.00%	-66.26%	-66.26%	-67.52%	-48.60%	-48.60%	-48.60%	-48.60%	
2006	102	0	0	0	0.00%	0.00%	0.00%	-64.33%	-64.33%	-65.54%	-47.57%	-47.57%	-47.57%	-47.57%
2007	0	0	0	0	NA	0.00%	0.00%	0.00%	-64.33%	-64.33%	-65.54%	-47.57%	-47.57%	-47.57%
2008	551	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	-55.59%	-55.59%	-56.64%	-42.70%	-42.70%
2009	5,784	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-22.91%	-22.91%	-23.34%	-20.57%
2010	11,035	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-10.80%	-10.80%	-11.00%
2011	11,064	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-7.06%	-7.06%
2012	3,514	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-6.36%
2013	1,990	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	896	0	3,879	(3,879)	-433.14%	-134.43%	-60.62%	-22.21%	-13.61%	-11.32%	-11.14%	-11.14%	-11.10%	-11.10%
2015	453	0	0	0	0.00%	-287.69%	-116.20%	-56.61%	-21.65%	-13.40%	-11.17%	-10.99%	-10.99%	-10.96%
2016	153	0	0	0	0.00%	0.00%	-258.32%	-111.09%	-55.37%	-21.47%	-13.33%	-11.12%	-10.95%	-10.95%
Account 384														
House Regulator Installations														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	

CHATTANOOGA GAS COMPANY
RETIREMENTS, GROSS SALVAGE, AND COST OF REMOVAL
NET SALVAGE ANALYSIS AS OF DECEMBER 31, 2016

	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. %
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	4	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	2	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	55	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	48	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	8	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2015	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2016	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Account 381-384														
Meters, Regulators, & Installs														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	3,372	0	0	0	0.00%	0.00%	0.00%							
2000	34,477	0	0	0	0.00%	0.00%	0.00%	0.00%						
2001	47,616	0	43	(43)	-0.09%	-0.05%	-0.05%	-0.05%	-0.05%					
2002	26,783	0	0	0	0.00%	-0.06%	-0.04%	-0.04%	-0.04%	-0.04%				
2003	61,327	0	2,254	(2,254)	-3.67%	-2.56%	-1.69%	-1.35%	-1.32%	-1.32%	-1.32%			
2004	15,718	0	0	0	0.00%	-2.93%	-2.17%	-1.52%	-1.24%	-1.21%	-1.21%	-1.21%		
2005	47,398	0	0	0	0.00%	0.00%	-1.81%	-1.49%	-1.15%	-0.98%	-0.97%	-0.97%	-0.97%	
2006	33,259	0	0	0	0.00%	0.00%	0.00%	-1.43%	-1.22%	-0.99%	-0.86%	-0.85%	-0.85%	-0.85%
2007	49,825	0	0	0	0.00%	0.00%	0.00%	0.00%	-1.09%	-0.96%	-0.81%	-0.73%	-0.72%	-0.72%
2008	136,592	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	-0.65%	-0.61%	-0.55%	-0.51%	-0.50%
2009	205,782	1,069	0	1,069	0.52%	0.31%	0.27%	0.25%	0.23%	0.22%	-0.22%	-0.21%	-0.20%	-0.19%
2010	212,145	0	0	0	0.00%	0.26%	0.19%	0.18%	0.17%	0.16%	0.15%	-0.16%	-0.15%	-0.15%
2011	320,252	0	0	0	0.00%	0.00%	0.14%	0.12%	0.12%	0.11%	0.11%	0.10%	-0.11%	-0.11%
2012	484,597	0	0	0	0.00%	0.00%	0.00%	0.09%	0.08%	0.08%	0.07%	0.07%	0.07%	-0.08%
2013	99,919	0	0	0	0.00%	0.00%	0.00%	0.00%	0.08%	0.07%	0.07%	0.07%	0.07%	0.07%
2014	666,970	0	12,485	(12,485)	-1.87%	-1.63%	-1.00%	-0.79%	-0.70%	-0.57%	-0.54%	-0.52%	-0.52%	-0.51%
2015	259,458	0	8	(8)	0.00%	-1.35%	-1.22%	-0.83%	-0.68%	-0.61%	-0.51%	-0.48%	-0.47%	-0.46%
2016	246,043	0	0	0	0.00%	0.00%	-1.07%	-0.98%	-0.71%	-0.60%	-0.55%	-0.46%	-0.43%	-0.43%
Account 385														
Industrial M & R Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		

CHATTANOOGA GAS COMPANY
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	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	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	82,224	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2015	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2016	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
Account 386														
Other Property on Customer Premises														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 387														
Other Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			

CHATTANOOGA GAS COMPANY
RETIREMENTS, GROSS SALVAGE, AND COST OF REMOVAL
NET SALVAGE ANALYSIS AS OF DECEMBER 31, 2016

	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. %
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 390														
Structures and Improvements														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	834,026	499,199	0	499,199	59.85%	59.85%	59.85%	59.85%						
2001	1,008,551	1,008,551	0	1,008,551	100.00%	81.83%	81.83%	81.83%	81.83%					
2002	0	0	0	0	NA	100.00%	81.83%	81.83%	81.83%	81.83%				
2003	0	0	0	0	NA	NA	100.00%	81.83%	81.83%	81.83%	81.83%			
2004	0	0	0	0	NA	NA	NA	100.00%	81.83%	81.83%	81.83%	81.83%		
2005	0	0	0	0	NA	NA	NA	NA	100.00%	81.83%	81.83%	81.83%	81.83%	
2006	0	0	0	0	NA	NA	NA	NA	NA	100.00%	81.83%	81.83%	81.83%	81.83%
2007	255,739	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	79.77%	71.86%	71.86%	71.86%
2008	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	79.77%	71.86%	71.86%
2009	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	79.77%	71.86%
2010	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	79.77%
2011	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
Account 391														
Office Furniture and Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	65,304	0	0	0	0.00%	0.00%	0.00%	0.00%						
2001	10,841	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2002	15,366	349	0	349	2.27%	1.33%	0.38%	0.38%	0.38%	0.38%				

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	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. %
2003	201,552	2,046	0	2,046	1.02%	1.10%	1.05%	0.82%	0.82%	0.82%	0.82%			
2004	24,558	0	0	0	0.00%	0.90%	0.99%	0.95%	0.75%	0.75%	0.75%	0.75%		
2005	1,465	0	0	0	0.00%	0.00%	0.90%	0.99%	0.94%	0.75%	0.75%	0.75%	0.75%	
2006	1,224	0	0	0	0.00%	0.00%	0.00%	0.89%	0.98%	0.94%	0.75%	0.75%	0.75%	0.75%
2007	3,469	0	0	0	0.00%	0.00%	0.00%	0.00%	0.88%	0.97%	0.93%	0.74%	0.74%	0.74%
2008	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.88%	0.97%	0.93%	0.74%	0.74%
2009	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.88%	0.97%	0.93%	0.74%
2010	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.88%	0.97%	0.93%
2011	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.88%	0.97%
2012	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.88%
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
Account 391.1														
Computer Equipment and Software														
1997	0	0	0											
1998	0	0	0	0	NA									
1999	0	0	0	0	NA	NA								
2000	1,325	0	0	0	0.00%	0.00%	0.00%							
2001	10,600	0	0	0	0.00%	0.00%	0.00%	0.00%						
2002	3,538	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2003	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%				
2004	157,801	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
2005	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2006	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2007	150,376	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	24,394	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	151,074	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2015	148,796	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2016	117,670	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Account 391.11														
Computer Hardware														
1997	0	0	0											
1998	0	0	0	0	NA									
1999	0	0	0	0	NA	NA								
2000		0	0	0	NA	NA	NA							
2001	0	0	0	0	NA	NA	NA	NA						

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	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. %
2002	0	0	0	0	NA	NA	NA	NA	NA					
2003	0	0	0	0	NA	NA	NA	NA	NA	NA				
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	98	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	691	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2015	465	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2016	6,326	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Account 391.12														
Computer Software														
1997	0	0	0											
1998	0	0	0	0	NA									
1999	0	0	0	0	NA	NA								
2000	0	0	0	0	NA	NA	NA							
2001	0	0	0	0	NA	NA	NA	NA						
2002	0	0	0	0	NA	NA	NA	NA	NA					
2003	0	0	0	0	NA	NA	NA	NA	NA	NA				
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2006	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 391.20														
Enterprise Systems														
1997	0	0	0	0	NA									
1998	224,334	0	0	0	0.00%	0.00%								
1999	0	0	0	0	NA	0.00%	0.00%							
2000	0	0	0	0	NA	NA	0.00%	0.00%						

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	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	0	0		0	0	NA	NA	NA	0.00%	0.00%					
2002	0	0		0	0	NA	NA	NA	NA	0.00%	0.00%				
2003	0	0		0	0	NA	NA	NA	NA	NA	0.00%	0.00%			
2004	0	0		0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%		
2005	0	0		0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	
2006	658,907	0		0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	1,081,169	0		0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	0	0		0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	0	0		0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	0	0		0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	0	0		0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0		0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0		0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2014	0	0		0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2015	20,918	0		0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2016	288,206	0		0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Account 392.1															
Auto and Light Trucks (5 Year)															
1997	0	0	#	0	0	NA									
1998	0	0	#	0	0	NA	NA								
1999	27,559	0	#	0	0	0.00%	0.00%	0.00%							
2000	0	0	#	0	0	NA	0.00%	0.00%	0.00%						
2001	48,554	3,605	#	0	3,605	7.42%	7.42%	4.74%	4.74%	4.74%					
2002	0	349	#	0	349	NA	8.14%	8.14%	5.19%	5.19%	5.19%				
2003	21,746	0	#	0	0	0.00%	1.60%	5.62%	5.62%	4.04%	4.04%	4.04%			
2004	0	0	#	0	0	NA	0.00%	1.60%	5.62%	5.62%	4.04%	4.04%	4.04%		
2005	15,938	2,780	#	0	2,780	17.44%	17.44%	7.38%	8.30%	7.81%	7.81%	5.92%	5.92%	5.92%	
2006	0	0	#	0	0	NA	17.44%	17.44%	7.38%	8.30%	7.81%	7.81%	5.92%	5.92%	5.92%
2007	0	0	#	0	0	NA	NA	17.44%	17.44%	7.38%	8.30%	7.81%	7.81%	5.92%	5.92%
2008	0	0	#	0	0	NA	NA	NA	17.44%	17.44%	7.38%	8.30%	7.81%	7.81%	5.92%
2009	0	0	#	0	0	NA	NA	NA	NA	17.44%	17.44%	7.38%	8.30%	7.81%	7.81%
2010	0	0	#	0	0	NA	NA	NA	NA	NA	17.44%	17.44%	7.38%	8.30%	7.81%
2011	0	0	#	0	0	NA	NA	NA	NA	NA	NA	17.44%	17.44%	7.38%	8.30%
2012	0	0	#	0	0	NA	NA	NA	NA	NA	NA	NA	17.44%	17.44%	7.38%
2013	0	0	#	0	0	NA	NA	NA	NA	NA	NA	NA	NA	17.44%	17.44%
2014	0	0	#	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	17.44%
2015	0	0	#	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	#	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 392.2															
Transportation Service Trucks 7 Year															
1997	0	0		0	0	NA									
1998	0	0		0	0	NA	NA								
1999	207,867	0		0	0	0.00%	0.00%	0.00%							

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	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. %
2000	0	65,500	0	65,500	NA	31.51%	31.51%	31.51%						
2001	66,807	10,395	0	10,395	15.56%	113.60%	27.63%	27.63%	27.63%					
2002	0	0	0	0	NA	15.56%	113.60%	27.63%	27.63%	27.63%				
2003	0	0	0	0	NA	NA	15.56%	113.60%	27.63%	27.63%	27.63%			
2004	0	0	0	0	NA	NA	NA	15.56%	113.60%	27.63%	27.63%	27.63%		
2005	0	0	0	0	NA	NA	NA	NA	15.56%	113.60%	27.63%	27.63%	27.63%	
2006	0	0	0	0	NA	NA	NA	NA	NA	15.56%	113.60%	27.63%	27.63%	27.63%
2007	0	0	0	0	NA	NA	NA	NA	NA	NA	15.56%	113.60%	27.63%	27.63%
2008	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	15.56%	113.60%	27.63%
2009	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	15.56%	113.60%
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.56%
2011	54,303	14,005	0	14,005	25.79%	25.79%	25.79%	25.79%	25.79%	25.79%	25.79%	25.79%	25.79%	25.79%
2012	0	0	0	0	NA	25.79%	25.79%	25.79%	25.79%	25.79%	25.79%	25.79%	25.79%	25.79%
2013	29,316	0	0	0	0.00%	0.00%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%
2014	0	0	0	0	NA	0.00%	0.00%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%
2015	0	0	0	0	NA	NA	0.00%	0.00%	16.75%	16.75%	16.75%	16.75%	16.75%	16.75%
2016	37,678	1,165	0	1,165	3.09%	3.09%	3.09%	1.74%	1.74%	12.51%	12.51%	12.51%	12.51%	12.51%
Account 392.3														
Transportation - Heavy Trucks 10 Year														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	51,348	0	0	0	0.00%	0.00%	0.00%							
2000	111,820	51,530	0	51,530	46.08%	31.58%	31.58%	31.58%						
2001	79,833	8,280	0	8,280	10.37%	31.21%	24.61%	24.61%	24.61%					
2002	0	0	0	0	NA	10.37%	31.21%	24.61%	24.61%	24.61%				
2003	285,297	66,185	0	66,185	23.20%	23.20%	20.39%	26.42%	23.85%	23.85%	23.85%			
2004	41,140	0	0	0	0.00%	20.27%	20.27%	18.33%	24.32%	22.13%	22.13%	22.13%		
2005	0	0	0	0	NA	0.00%	20.27%	20.27%	18.33%	24.32%	22.13%	22.13%	22.13%	
2006	0	0	0	0	NA	NA	0.00%	20.27%	20.27%	18.33%	24.32%	22.13%	22.13%	22.13%
2007	0	0	0	0	NA	NA	NA	0.00%	20.27%	20.27%	18.33%	24.32%	22.13%	22.13%
2008	42,951	42,951	0	42,951	100.00%	100.00%	100.00%	100.00%	51.08%	29.55%	29.55%	26.14%	30.11%	27.59%
2009	75,349	3,095	0	3,095	4.11%	38.92%	38.92%	38.92%	38.92%	28.88%	25.24%	25.24%	22.97%	27.03%
2010	0	0	0	0	NA	4.11%	38.92%	38.92%	38.92%	38.92%	28.88%	25.24%	25.24%	22.97%
2011	0	0	0	0	NA	NA	4.11%	38.92%	38.92%	38.92%	38.92%	28.88%	25.24%	25.24%
2012	119,859	12,500	0	12,500	10.43%	10.43%	10.43%	7.99%	24.58%	24.58%	24.58%	24.58%	20.96%	22.09%
2013	157,398	0	0	0	0.00%	4.51%	4.51%	4.51%	4.42%	14.80%	14.80%	14.80%	14.80%	13.41%
2014	9,682	1,895	0	1,895	19.57%	1.13%	5.02%	5.02%	5.02%	4.83%	14.91%	14.91%	14.91%	14.91%
2015	0	0	0	0	NA	19.57%	1.13%	5.02%	5.02%	5.02%	4.83%	14.91%	14.91%	14.91%
2016	0	12,316	0	12,316	NA	NA	146.78%	8.51%	9.31%	9.31%	9.31%	8.23%	17.95%	17.95%
Account 393														
Stores Equipment														
1997	0	0	0	0	NA									
1998	0	720	0	720	NA	NA								

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	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. %
1999	11,510	0	0	0	#REF!	#REF!	NA							
2000	294	0	0	0	#REF!	#REF!	6.10%	6.10%						
2001	0	0	0	0	NA	#REF!	0.00%	6.10%	6.10%					
2002	0	0	0	0	NA	NA	NA	0.00%	6.10%	6.10%				
2003	4,992	266	0	266	5.33%	5.33%	5.33%	5.33%	1.58%	5.87%	5.87%			
2004	411	0	0	0	0.00%	4.92%	4.92%	4.92%	4.92%	1.55%	5.73%	5.73%		
2005	5,305	0	0	0	0.00%	0.00%	2.48%	2.48%	2.48%	2.48%	1.18%	4.38%	4.38%	
2006	10,165	0	0	0	0.00%	0.00%	0.00%	1.27%	1.27%	1.27%	1.27%	0.81%	3.02%	3.02%
2007	0	0	0	0	NA	0.00%	0.00%	0.00%	1.27%	1.27%	1.27%	1.27%	0.81%	3.02%
2008	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	1.27%	1.27%	1.27%	1.27%	0.81%
2009	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	1.27%	1.27%	1.27%	1.27%
2010	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	1.27%	1.27%	1.27%
2011	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	1.27%	1.27%
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	1.27%
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2014	22,341	4,171	0	4,171	18.67%	18.67%	18.67%	18.67%	18.67%	18.67%	18.67%	18.67%	12.83%	11.03%
2015	0	0	0	0	NA	18.67%	18.67%	18.67%	18.67%	18.67%	18.67%	18.67%	18.67%	12.83%
2016	0	0	0	0	NA	NA	18.67%	18.67%	18.67%	18.67%	18.67%	18.67%	18.67%	18.67%
Account 394														
Tools Shop and Garage Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	54,176	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2002	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%				
2003	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%			
2004	36,025	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2005	2,106	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2006	5,669	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	159,473	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	41,419	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	20,342	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	3,203	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	6,990	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	5,261	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2015	8,351	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2016	16,333	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Account 395														
Laboratory Equipment														
1997	0	0	0	0	NA									

CHATTANOOGA GAS COMPANY
RETIREMENTS, GROSS SALVAGE, AND COST OF REMOVAL
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	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. %
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	0	0	0	0	NA	NA	NA	NA	NA					
2002	0	0	0	0	NA	NA	NA	NA	NA	NA				
2003	0	0	0	0	NA	NA	NA	NA	NA	NA	NA			
2004	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA		
2005	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2006	21,289	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	590	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
Account 396														
Power Operated Equipment														
1997	0	0	0	0	NA									
1998	0	2,700	0	2,700	NA	NA								
1999	41,788	0	0	0	0.00%	6.46%	6.46%							
2000	0	7,900	0	7,900	NA	18.90%	25.37%	25.37%						
2001	21,562	1,000	0	1,000	4.64%	41.28%	14.05%	18.31%	18.31%					
2002	0	0	0	0	NA	4.64%	41.28%	14.05%	18.31%	18.31%				
2003	25,315	13,915	0	13,915	54.97%	54.97%	31.82%	48.67%	25.73%	28.78%	28.78%			
2004	10,858	0	0	0	0.00%	38.47%	38.47%	25.83%	39.52%	22.92%	25.64%	25.64%		
2005	0	0	0	0	NA	0.00%	38.47%	38.47%	25.83%	39.52%	22.92%	25.64%	25.64%	
2006	25,315	0	0	0	0.00%	0.00%	0.00%	22.63%	22.63%	17.96%	27.47%	18.28%	20.44%	20.44%
2007	1,635	0	0	0	0.00%	0.00%	0.00%	0.00%	22.04%	22.04%	17.61%	26.94%	18.04%	20.17%
2008	24,354	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	15.91%	15.91%	13.68%	20.92%	15.13%
2009	7,786	3,095	0	3,095	39.75%	9.63%	9.16%	5.24%	5.24%	4.43%	17.86%	17.86%	15.42%	22.18%
2010	0	0	0	0	NA	39.75%	9.63%	9.16%	5.24%	5.24%	4.43%	17.86%	17.86%	15.42%
2011	1,622	0	0	0	0.00%	0.00%	32.90%	9.17%	8.74%	5.10%	5.10%	4.32%	17.56%	17.56%
2012	0	0	0	0	NA	0.00%	0.00%	32.90%	9.17%	8.74%	5.10%	5.10%	4.32%	17.56%
2013	34,887	0	0	0	0.00%	0.00%	0.00%	0.00%	6.99%	4.51%	4.40%	3.24%	3.24%	2.91%
2014	0	8,700	0	8,700	NA	24.94%	24.94%	23.83%	23.83%	26.63%	17.18%	16.78%	12.34%	12.34%
2015	339	0	0	0	0.00%	2566.37%	24.70%	24.70%	23.61%	23.61%	26.43%	17.10%	16.70%	12.29%
2016	0	0	0	0	NA	0.00%	2566.37%	24.70%	24.70%	23.61%	23.61%	26.43%	17.10%	16.70%
Account 397														
Communication Equipment														

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	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. %
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	1,909	0	0	0	0.00%	0.00%	0.00%	0.00%						
2001	21,958	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2002	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%				
2003	1,165	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
2004	592,965	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2005	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2006	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2010	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2011	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2012	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
2013	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Account 398														
Miscellaneous Equipment														
1997	0	0	0	0	NA									
1998	0	0	0	0	NA	NA								
1999	0	0	0	0	NA	NA	NA							
2000	0	0	0	0	NA	NA	NA	NA						
2001	18,039	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%					
2002	3,360	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
2003	3,096	104	0	104	3.34%	1.60%	0.42%	0.42%	0.42%	0.42%	0.42%			
2004	6,587	25	0	25	0.38%	1.33%	0.99%	0.41%	0.41%	0.41%	0.41%	0.41%		
2005	0	0	0	0	NA	0.38%	1.33%	0.99%	0.41%	0.41%	0.41%	0.41%	0.41%	
2006	0	0	0	0	NA	NA	0.38%	1.33%	0.99%	0.41%	0.41%	0.41%	0.41%	0.41%
2007	6,974	0	0	0	0.00%	0.00%	0.00%	0.18%	0.77%	0.64%	0.34%	0.34%	0.34%	0.34%
2008	2,355	0	0	0	0.00%	0.00%	0.00%	0.00%	0.16%	0.68%	0.57%	0.32%	0.32%	0.32%
2009	0	0	0	0	NA	0.00%	0.00%	0.00%	0.00%	0.16%	0.68%	0.57%	0.32%	0.32%
2010	0	0	0	0	NA	NA	0.00%	0.00%	0.00%	0.00%	0.16%	0.68%	0.57%	0.32%
2011	0	0	0	0	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.16%	0.68%	0.57%
2012	0	0	0	0	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.16%	0.68%
2013	0	0	0	0	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.16%
2014	0	0	0	0	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2015	10,479	2,850	0	2,850	27.20%	27.20%	27.20%	27.20%	27.20%	27.20%	27.20%	22.21%	14.39%	14.39%
2016	2,182	0	0	0	0.00%	22.51%	22.51%	22.51%	22.51%	22.51%	22.51%	22.51%	18.98%	12.96%