TESTIMONY EXPERIENCE

DONALD S. ROFF

CASE NO.	DATE	COMPANY	JURISDICTION	SUBJECT
Docket No. 93-3005	July 1993	Southwest Gas Corporation	Nevada	Gas Depreciation Rates
Docket No. 93-3025	July 1993	Southwest Gas Corporation	Nevada	Gas Depreciation Rates
Docket No. 12820	June 1994	Central Power and Light Company	Texas	Electric Depreciation Rates
Case No. U-10380	Dec 1994	Consumers Power Company	Michigan	Gas Depreciation Rates and Accounting
Cause No. 38938	April 1995	Indianapolis Power & Light Company	Indiana	Electric Depreciation Rates
Case No. U-10754	July 1995	Consumers Power Company	Michigan	Electric Depreciation Rates and Accounting
Docket No. 13369	Aug 1995	West Texas Utilities Company	Texas	Electric Depreciation Rates
Docket No. 95-02116	Sept 1995	Chattanooga Gas Company	Tennessee	Gas Depreciation Rates
Docket No. 95-715-G	Oct 1995	Piedmont Natural Gas Company	South Carolina	Gas Depreciation Rates
Docket No. 14965	Dec 1995	Central Power and Light Company	Texas	Electric Depreciation Rates
Cause No. 40395 (I)	Feb 1996	Wabash Valley Power Association, Inc.	Indiana	Electric Depreciation Rates
GUD NO. 8664	Oct 1996	Lone Star Pipeline Company	Texas	Gas Depreciation Rates
Docket No. 96-360-U	Nov 1996	Entergy Arkansas Inc.	Arkansas	Electric Depreciation Rates
Docket No. 16705	Nov 1996	Entergy Gulf States Inc.	Texas	Electric Depreciation Rates/Competitive Issue
Docket No. ER-97-394	Mar 1997	Missouri Public Service	Missouri	Electric Depreciation Rates/Competitive Issue
Docket No. U-22092	Mar 1997	Entergy Gulf States Inc.	Louisiana	Electric Depreciation Rates/Competitive Issue
Docket No. 97-00982	May 1997	Chattanooga Gas Company	Tennessee	Gas Depreciation Rates
Cause No. 40395 (II)	June 1997	Wabash Valley Power Association, Inc.	Indiana	Electric Depreciation Rates
Case No. U-11509	Sept 1997	Consumers Energy Company	Michigan	Gas Depreciation Rates and Accounting
Docket No. ER98-11	Sept 1997	Long Island Lighting Company	FERC	Electric Depreciation Rates
Docket No. 8390-U	Dec 1997	Atlanta Gas Light Company	Georgia	Gas Depreciation Rates and Accounting
Cause No. 41118	Mar 1998	Wabash Valley Power Association, Inc.	Indiana	Electric Depreciation Rates
Case No. U-11722	Oct 1998	Detroit Edison Company	Michigan	Electric Depreciation Rates
Docket No. 98-2035-03	Nov 1998	PacifiCorp	Utah	Electric Depreciation Rates
Docket No. 99-4006	April 1999	Nevada Power Company	Nevada	Electric Depreciation Rates
GUD Docket No. 9030	March 2000	Atmos Energy Corporation	Texas	Gas Depreciation Rates and Accounting
GUD Docket No. 9145	April 2000	TXU Gas Distribution	Texas	Gas Depreciation Rates
City of Tyler	Dec 2000	Reliant Energy Entex	Texas	Gas Depreciation Rates and Accounting
Docket No. U-24993	March 2001	Entergy Gulf States Inc.	Louisiana	Electric Depreciation Rates and Accounting
Docket Nos. GR01050328/GR0105029	May 2001	Public Service Electric & Gas	New Jersey	Gas Depreciation Rates and Accounting
Case No. U-12999	July 2001	Consumers Energy Company	Michigan	Gas Depreciation Rates and Accounting
Docket No. 01-10002	Oct 2001	Nevada Power Company	Nevada	Electric Depreciation Rates
Docket No. 14618-U	Nov 2001	Savannah Electric and Power Company	Georgia	Electric Depreciation Rates
Docket No. 01-11031	Dec 2001	Sierra Pacific Power Company	Nevada	Electric Depreciation Rates
Docket No. 010949-EL	Jan 2002	Gulf Power Company	Florida	Electric Depreciation Rates
Docket No. 14311-U	Jan 2002	Atlanta Gas Light Company	Georgia	Gas Depreciation Rates and Accounting
Docket No. UD-00-2	March 2002	Entergy New Orleans, Inc.	New Orleans	Electric Depreciation Accounting
Cause No. PUD200200166	May 2002	Reliant Energy Entex	Oklahoma	Gas Depreciation Rates and Accounting
Docket No. 01-243-U	June 2002	Reliant Energy Entex	Arkansas	Gas Depreciation Rates and Accounting
Docket No. 02-035-12	Oct 2002	PacifiCorp	Utah	Electric Depreciation Rates
Docket No. 20000-ER-2-192	Oct 2002	PacifiCorp	Wyoming	Electric Depreciation Rates
Docket No. UE-021271	Oct 2002	PacifiCorp	Washington	Electric Depreciation Rates
Docket No. UM-1064	Oct 2002	PacifiCorp	Oregon	Electric Depreciation Rates
Docket No. PAC-E-02-5	Oct 2002	PacifiCorp	Idaho	Electric Depreciation Rates
Docket No. 02-0391	Oct 2002	Hawaiian Electric Company, Inc.	Hawaii	Electric Depreciation Rates and Accounting
Docket No. 03-ATMG-1036-RTS	June 2003	Atmos Energy Corporation	Kansas	Gas Depreciation Rates and Accounting
Docket No. 02-0391	Aug 2003	Hawaiian Electric Company, Inc.	Hawaii	Electric Depreciation Rates and Accounting
Cause No. 42458	Sept 2003	Wabash Valley Power Association, Inc.	Indiana	Electric Depreciation Rates and Accounting
Docket No. 03-ATMG-1036-RTS	Nov 2003	Atmos Energy Corporation	Kansas	Gas Depreciation Rates and Accounting
Case No. 12999	Dec 2003	Consumers Energy Company	Michigan	Gas Depreciation Rates and Accounting
Case No. 12999	Feb 2004	Consumers Energy Company	Michigan	Gas Depreciation Rates and Accounting
Docket No. ER-2004-0570	Apr 2004	The Empire District Electric Company	Missouri	Electric Depreciation Rates and Accounting
Docket No. 04-100-U	Apr 2004	The Empire District Electric Company	Arkansas	Electric Depreciation Rates and Accounting
Docket No. PUE 2003-00597	Aug 2004	Atmos Energy Corporation	Virginia	Gas Depreciation Rates and Accounting
Docket No. 18638-U	Oct 2004	Atlanta Gas Light Company	Georgia	Gas Depreciation Rates and Accounting
Docket No. ER-2004-0570	Nov 2004	The Empire District Electric Company	Missouri	Electric Depreciation Rates and Accounting
Docket No. ER-2004-0570	Nov 2004	The Empire District Electric Company	Missouri	Electric Depreciation Rates and Accounting
Cause No. 200400610	Jan 2005	Oklahoma Natural Gas Company	Oklahoma	Gas Depreciation Rates and Accounting

Exhibit DSR-3

Atmos Energy Corporation

Depreciation Study of
Georgia Properties as of
September 30, 2004

Deloitte

Deloitte & Touche LLP
JPMorgan Chase Tower
2200 Ross Avenue, Suite 1600
Dallas, TX 75201-6778
USA

Tel: +1 214 840 7000
www.deloitte.com

March 2005

Atmos Energy Corporation
Three Lincoln Center
5430 LBJ Freeway
Dallas, Texas 75240

Attention: Mr. Tom Petersen

In accordance with your request and with the cooperation and participation of your staff, a book depreciation study of Atmos Energy Corporation Georgia properties (Atmos or the Company) has been conducted. The study covered all depreciable property and recognized addition and retirement experience through September 30, 2004. The purpose of the study was to determine if the existing depreciation rates remain appropriate for the property and, if not, to recommend changes. Changes are recommended. The recommended changes in aggregate cause a decrease in depreciation rates used to calculate the annual depreciation expense.

A comparison of the effect of the existing rates and the recommended rates is shown below, based on depreciable plant balances as of September 30, 2004:

Function	Composite Depreciation Rate	
	Existing %	Recommended %
Storage Plant	3.18%	2.11%
Transmission Plant	2.56	1.41
Distribution Plant	2.90	2.90
General Plant	5.31	5.13
Total Gas Plant	2.96%	2.87%

The summary above is taken from Schedule 1, which shows the annual depreciation provisions calculated from the existing rates and recommended account rates and differences. Based on the September 30, 2004 depreciable balances, the recommended depreciation rates will result in an annual decrease in depreciation provisions of $88,089, or approximately 3%. The study results are being driven by decreases in the Storage Plant and Transmission Plant functions. In the Distribution Plant function, several individual accounts change significantly, but the overall functional depreciation rate remains the same.

Schedule 2 shows the mortality characteristics used to calculate the existing and recommended depreciation rates. The recommended rates are calculated using the equal life group (ELG) procedure and the remaining life technique.

The following sections of this report describe the methods of analysis used and the bases for the conclusions reached. The remainder of the report will present the results and recommendations for both immediate and future action by the Company.

We appreciate this opportunity to serve Atmos Energy Corporation and would be pleased to meet with you to discuss further the matters presented in this report, if you desire.

Yours truly,

Deloitte & Touche LLP

PURPOSE OF DEPRECIATION

Book depreciation accounting is the process of recognizing in financial statements the consumption of physical assets in the process of providing a service or a product. Generally accepted accounting principles require the recording of depreciation provisions to be systematic and rational. To be systematic and rational, depreciation should, to the extent possible, match either the consumption of the facilities or the revenues generated by the facilities. Accounting theory requires the matching of expenses with either consumption or revenues to ensure that financial statements reflect the results of operations and changes in financial position as accurately as possible. The matching principle is often referred to as the "cause and effect" principle; thus, both the cause and the effect are required to be recognized for financial accounting purposes. This study was conducted in a manner consistent with the matching principle of accounting.

Because utility revenues are determined through regulation and this study assumes that such regulation will continue, asset consumption is not automatically reflected in revenues. Therefore, the consumption of utility assets must be measured directly by conducting a book depreciation study to accurately determine their mortality characteristics.

Matching is also an essential element of basic regulatory philosophy, and it has become known as "intergenerational customer equity." Intergenerational customer equity means the costs are borne by the generation of customers that caused them to be incurred, not by some earlier or later generation. This matching is required to ensure that charges to customers reflect the actual costs of providing service.

DEPRECIATION DEFINITIONS

The Uniform System of Accounts prescribed for gas utilities by the Federal Energy Regulatory Commission (FERC) followed by Atmos states that:

> "Depreciation," as applied to depreciable gas plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of gas plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities, and in the case of natural gas companies, the exhaustion of natural resources.
>
> "Service value" means the difference between original cost and net salvage value of gas plant.
>
> "Net salvage value" means the salvage value of property retired less the cost of removal.
>
> "Salvage value" means the amount received for the property retired less any expenses incurred in connection with the sale or in preparing the property for sale or, if retained, the amount at which the material is chargeable to materials and supplies, or other appropriate account.
>
> "Cost of removal" means the cost of demolishing, dismantling, tearing down or otherwise removing gas plant, including the cost of transportation and handling incidental thereto.

As is clear from the wording of the salvage value and cost of removal definitions, it is the salvage that will actually be received and the cost of removal that will actually be incurred, both measured at the price level at the time of receipt or incurrence, that is required to be recognized in the depreciation rates of Atmos.

These definitions are consistent with the purpose of depreciation, and the study reported here was conducted in a manner consistent with both.

ACCOMPLISHMENT OF ACCOUNTING AND REGULATORY PRINCIPLES

Utility depreciation accounting is a group concept. Inherent in this concept is the assumption that all property is fully depreciated at the time of retirement, regardless of age, and there is no attempt to record the depreciation applicable to individual components of the groups. The depreciation rates are based on the recognition that each depreciable property group has an average service life. However, very little of the property is "average." The group concept carries with it recognition that most property will be retired at an age either less than or greater than the average service life. The study recognized the existence of this variation through the identification of Iowa-type retirement dispersion patterns for all property groups.

The depreciation study required to determine the applicable mortality characteristics is independent from the calculation of the depreciation rates. The resulting mortality characteristics can be used to calculate either average life group (ALG) or ELG rates, both with either the whole life technique or the remaining life technique. Any set of mortality characteristics that is suitable for calculating ALG rates is just as suitable for calculating ELG rates. Conversely, any set that is not suitable for ELG is not suitable for ALG. ALG and ELG are straight-line procedures that reflect life measured by time, with ALG utilizing average life and ELG utilizing actual life. For ALG, all property in the group is assumed to have a life equal to the average of the group. ELG recognizes that, in reality, only a small portion of the group retires at an age equal to the average service life. For the average to exist, about half of the investment in an asset group will be retired at ages less than average life, a small amount at average life and the rest at ages greater than average life. It is the use of this dispersion in the rate calculation that causes ELG rates to better match cost recovery with the use of and benefit from property. Thus, the ELG procedure best accomplishes the purpose of book depreciation accounting by ensuring that the recording of depreciation

provisions match the actual consumption of the physical assets. Since ELG matches the recording of consumption with the actual consumption, customers will pay the actual costs incurred to serve them. For this reason, ELG rates are recommended and are consistent with the approved methodology for Atmos properties in Texas, Kentucky, Kansas and Louisiana.

A detailed discussion of the ELG procedure is included in the Appendix to this report.

THE BOOK DEPRECIATION STUDY

Implementation of a policy toward book depreciation that recognizes the purpose of depreciation accounting requires the determination of the mortality characteristics that are applicable to surviving property. The purpose of the depreciation study reported here was to accurately measure those mortality characteristics and to use the characteristics to determine appropriate rates for accrual of depreciation expenses.

The major effort of the study was the determination of the appropriate mortality characteristics. The remainder of this report describes how those characteristics were determined, describes how the mortality characteristics were used to calculate the recommended depreciation rates and presents the results of the rate calculations.

The study consisted of the following steps:

Step One was a Life Analysis consisting of determination of historical retirement experience and an evaluation of the applicability of that experience to surviving property.

Step Two was a Salvage and Cost of Removal Analysis consisting of a study of salvage value and cost of removal experience and an evaluation of the applicability of that experience to surviving property.

Step Three consisted of the determination of average service lives, retirement dispersion patterns identified by Iowa-type curves and the net salvage factors applicable to surviving property.

Step Four was the determination of the depreciation rate applicable to each depreciable property group, recognizing the results of the work in Steps One through Three, and a comparison with the existing rates.

LIFE ANALYSIS

The Life Analysis for the property concerns the determination of average service lives (ASL) and Iowa-type retirement dispersion patterns. An analysis of historical retirement activity, suitably tempered by informed judgment as to the future applicability of such activity to surviving property, formed the basis for determination of average service lives and retirement dispersion patterns. Retirement experience through September 30, 2004 was analyzed using either the Actuarial or Simulation Plant Record (SPR) method of Life Analysis.

In order to recognize trends in life characteristics and to ensure that the valuable information in the curves is available to the analyst, actual survivor curves were calculated and plotted by computer using several different periods of retirement experience. The period (year bands) of retirement experience analyzed by the Actuarial method was the full extent of available history for those asset categories with aged data. The average service lives and retirement dispersion patterns indicated by these actual survivor curves were identified by visually fitting Iowa-type standard curves to each of the actual curves and plotting the results. This visual approach ensures that the data contained in the actual survivor curves, input data and the trends are available to the analyst, and that the analyst does not allow computer calculations to be the sole determinant of study results.

The Simulated Balances procedure consists of applying survivor ratios for Iowa-type dispersion patterns to gross additions in order to calculate annual balances, and then comparing the calculated balances with the actual annual balances for several periods of retirement experience, followed by statistical comparisons of the calculated balances over the period with the actual balances for the same period. Through an iterative procedure, a computer program calculates the best-fitting ASL for each of the 26 Iowa-type left, symmetrical and right modal dispersion patterns, using the most recent year as a starting point, and then backs up one year and repeats the process. Thus, trends are shown, both by using different periods of retirement experience and by making calculations as if the study was done at the end of each of the last 10 years.

The Simulated Retirements procedure is similar, except that the retirement frequency rates of the Iowa-type patterns are utilized to calculate annual retirements, and the comparisons are to actual retirements rather than to balances. The Simulated Retirements procedure is more sensitive in recognizing change more quickly than does the Simulated Balances procedure. The periods of retirement experience analyzed for the Simulation method were the past 5, 10 and 20 years.

For property groups having little retirement experience or having experience that is not a reasonable indication of the expected mortality characteristics of the surviving property, evaluation was made of the significance history played in selecting the mortality characteristics. The importance of this aspect of the study and its influence on the study are discussed later.

SALVAGE AND COST OF REMOVAL ANALYSIS

Salvage and cost of removal experience from 2000 through 2004 at the account level was the basis for determining the net salvage factors used. The analysis was done in a manner that allows selection of separate salvage and cost of removal factors for most depreciable property groups. The analysis consisted

of calculating the experienced salvage and cost of removal factors for each property group by dividing salvage and cost of removal amounts by the original cost of the retired property. Factors are expressed as percentages and were calculated for annual, rolling and shrinking bands of retirement experience.

EVALUATION OF ACTUAL EXPERIENCE

Life Analysis and Salvage and Cost of Removal Analysis involve the measurement of what has occurred in the past. History is often a misleading indicator of the future. There are many kinds of events that can cause history to be misleading, among them significant changes contemplated in the underlying accounting procedures and/or changes in other management practices such as maintenance procedures. It is the evaluation phase of a depreciation study that identifies if history is a good indicator of the future. Blind acceptance of history often results in selecting mortality characteristics to use for calculating depreciation rates that will provide recovery over a time period longer than productive life.

For each property group, the analysis processes involved only historical retirement experience. Since the depreciation rates will be applied to surviving property, the historical mortality experience indicated by the Life and the Salvage and Cost of Removal Analyses was evaluated to ensure that the mortality characteristics used to calculate the rates are applicable to surviving property. The evaluation is required to ensure the validity of the recommended depreciation rates.

The evaluation process requires knowledge of the type of property surviving; the type of property retired; the reasons for changing life, dispersion, salvage and cost of removal; and the effect of present and future Atmos plans on the property mortality characteristics. The evaluation included discussions with the Company accounting, engineering and operating personnel; determination of the type of property recorded in a number of accounts; and special analyses of retirements to identify the type of property retired and reasons for retirement.

The Life Analysis procedure determines the average service life applicable to original installations. The Salvage and Cost of Removal Analysis procedure determines the net salvage applicable to original installations only if the age of retirements is about the same as the average service life. If the age of retirements is less than average service life, salvage factors will normally be overstated and cost of removal factors understated. If the age of retirements is greater than average service life, salvage factors will normally be understated and cost of removal factors overstated. When analyses of study data shows that this situation exists, some compensation is appropriate, but no analysis and adjustment were made.

CALCULATION OF DEPRECIATION RATES

A straight-line remaining life rate for each depreciable property group was calculated using the following formula:

$$\text{Rate} = \frac{\text{Plant Balance - Future Net Salvage - Book Reserve}}{\text{Average Remaining Life}}$$

Formula numerator elements in percent of depreciable balance and the denominator in years produce a rate in percent. This formula illustrates that a remaining life rate recognizes the book reserve position. The depreciable balances and book reserves were taken from accounting records, and the net salvage factors were determined by the study.

The theoretical reserve is a product of the expected future. The mortality characteristics determined to be applicable to the property are used for the theoretical reserve calculation. The book reserve is a product of history and is the result of recording retirements, depreciation expenses, salvage and cost of removal. The theoretical reserve is the difference between the total to be recovered and the amount that will be recovered in the future. If the calculated theoretical reserve is higher than the book reserve, that

difference results in the depreciation rate increasing. Conversely, if the theoretical reserve is lower than the book reserve, the difference will cause the depreciation rate to decrease.

The remaining lives for each property group are a function of the age distribution of surviving plant and the selected average service life and Iowa dispersion pattern.

RESULTS

A comparison of the existing depreciation rates to the proposed study depreciation rates can be found on Schedule 1 in this report. A comparison listing, by account, of the existing and proposed mortality characteristics for this study can be found on Schedule 2 in this report.

Storage Plant

The depreciation rate for this functional category is a decrease from 3.18% to 2.11%. The results for this function are driven primarily by increasing average service lives (ASL).

Transmission Plant

The depreciation rate for this functional category decreases from 2.56% to 1.41%. This decrease is attributable to Account 367, Mains, which is a result of increasing the ASL.

Distribution Plant

The depreciation rate for this functional category is no change from the existing 2.90%. However, there are some individual account changes that were significant, and the following provides a brief explanation:

- Account 376, Mains, is an increase from 2.04% to 2.41%, which is attributable to more negative net salvage, the reserve position and a very slight decrease in ASL.

- Account 380, Services, is a decrease from 4.03% to 2.79%, which is a result of less negative net salvage and the reserve position.

- Account 382, Meter Installations, is an increase from 3.65% to 6.74%, which is due to a decrease in ASL, more negative net salvage and the reserve position.

General Plant

The depreciation rate for this functional category is a small decrease from 5.31% to 5.13%. There is no one account or reason for this decrease. However, Account 394, Tools, Shop and Garage Equipment, and Account 397, Communication Equipment, both had debit reserve balances due to large retirements in the last several years, and the resulting depreciation rate is significantly higher than what is typical for these asset categories. We recommend that this rate only be applied to the existing assets and that any new assets be depreciated at the rates shown below.

General Plant Amortization

For the General Plant function, we are proposing General Plant Amortization for certain accounts. This approach has been implemented by numerous electric and gas utilities all over the country, by many commissions, including the Georgia Public Services Commission, and with blanket approval of the Federal Energy Regulatory Commission (FERC) through its Accounting Release 15 (AR 15). This approach solves the universal problem of unreported retirements, is intended to simplify the accounting effort and provides a better matching of the accounting effort with the magnitude of the asset base.

For existing General Plant assets in this study, the depreciation rates are shown on Schedule 1 in this report. Assets added to these accounts after the study date should be amortized using the following rates:

Account 391, Office Furniture and Equipment	4.00%
Account 393, Store Equipment	4.00%
Account 394, Tools, Shop and Garage Equipment	6.67%

Account 397, Communication Equipment	6.67%
Account 398, Miscellaneous Equipment	6.67%

For Account 399, Other Tangible Property, we recommend that any new additions be amortized at a rate of 14.29%, which is based on an ASL of seven years and zero net salvage. Currently the accumulated reserve for this account exceeds the original investment balance by $68,532. Our recommendation is that future accrual amounts for new assets be applied against this balance.

RESERVE COMPARISON

Because remaining life rates are recommended, a comparison of the accumulated provision for depreciation and the calculated theoretical reserve as of September 30, 2004 is not meaningful, and no comparison is presented. This is because the only way a reserve difference can exist is through the use of whole life rates.

RECOMMENDATIONS

Our recommendations for your future actions in regard to book depreciation are as follows:

1. The depreciation rates shown in Column 6 of Schedule 1 are applicable to existing property and are recommended for implementation at such time as their effect can be incorporated into service rates.
2. Because of variation of life and net salvage experience with time, a depreciation study should be made during 2009 based on retirement experience through September 30, 2008.
3. Existing assets in General Plant should be depreciated at the rate shown on Schedule 1. For any new assets added to the accounts, where General Plant Amortization is being implemented, use the rates recommended in this report under the General Plant Amortization Section found on page 12.

ATMOS ENERGY CORPORATION - GEORGIA (DIV. 95) **SCHEDULE 1**
Book Depreciation Study as of September 30, 2004
Comparison of Depreciation Rates and Annual Amounts

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Account	Description	9/30/2004 Balance $	Existing Rate %	Annual Amount $	Study Rate %	Annual Amount $	Increase or (Decrease) $
	STORAGE PLANT						
361.00	Structures and Improvements	488,483	3.96	19,344	1.75	8,548	(10,795)
362.00	Gas Holders	1,651,166	3.36	55,479	1.84	30,381	(25,098)
363.10	Liquefaction Equipment	2,028,879	2.89	58,635	2.28	46,258	(12,376)
363.50	Other Equipment	351,258	2.89	10,151	2.89	10,151	0
	Total Storage Plant	4,519,786	3.18	143,609	2.11	95,340	(48,269)
	TRANSMISSION PLANT						
365.20	Rights of Way	294,938	0.00	0	1.54	4,542	4,542
367.00	Mains	3,030,928	2.87	86,988	1.21	36,674	(50,313)
370.00	Communication Equipment	78,188	0.30	235	8.54	6,677	6,443
	Total Transmission Plant	3,404,054	2.56	87,222	1.41	47,894	(39,329)
	DISTRIBUTION PLANT						
375.00	Structures and Improvements	51,300	3.00	1,539	3.04	1,560	21
376.00	Mains	48,758,983	2.04	994,683	2.41	1,175,091	180,408
378.00	M&R Station Equipment	1,555,108	3.32	51,630	4.69	72,935	21,305
379.00	City Gate Equipment	291,045	3.00	8,731	3.80	11,060	2,328
380.00	Services	29,244,686	4.03	1,178,561	2.79	815,927	(362,634)
381.00	Meters	4,615,644	3.15	145,393	2.02	93,236	(52,157)
382.00	Meter Installations	7,885,021	3.65	287,803	6.74	531,450	243,647
383.00	Regulators	1,225,228	3.65	44,721	1.28	15,683	(29,038)
385.00	Industrial M&R Station Equipment	23,771	3.48	827	4.63	1,101	273
	Total Distribution Plant	93,650,786	2.90	2,713,888	2.90	2,718,042	4,154
	GENERAL PLANT						
390.00	Structures and Improvements	582,026	2.50	14,551	1.46	8,498	(6,053)
390.10	Leasehold Improvements	269,914	10.00	26,991	3.23	8,718	(18,273)
391.00	Office Furniture and Equipment	490,450	4.04	19,814	2.06	10,103	(9,711)
392.00	Transportation Equipment	86,939	6.44	5,599	6.14	5,338	(261)
393.00	Stores Equipment	4,183	3.98	166	0.58	24	(142)
394.00	Tools, Shop and Garage Equipment	157,696	4.11	6,481	21.80	34,378	27,896
396.00	Power Operated Equipment	441,211	6.21	27,399	3.56	15,707	(11,692)
397.00	Communication Equipment	105,811	6.31	6,677	18.15	19,205	12,528
398.00	Miscellaneous Equipment	393,884	6.82	26,863	7.09	27,926	1,063
	Total General Plant	2,532,114	5.31	134,542	5.13	129,897	(4,644)
	Total Depreciable Plant	104,106,740	2.96	3,079,261	2.87	2,991,172	(88,089)
	Intangible Plant	20,716					
	Land and Land Rights	357,169					
	Fully Depreciated	2,434,587					
	Amortized Retirements	51,620					
	Total Gas Plant	106,970,832					

Note: Account 399.0 has been overdepreciated. Deferred treatment of the excess reserve, to be set aside for future assets, will be handled separately.

ATMOS ENERGY CORPORATION - GEORGIA (DIV. 95) **SCHEDULE 2**
Book Depreciation Study as of September 30, 2004
Comparison of Mortality Characteristics

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
		EXISTING			STUDY				
Account	Description	ASL yrs.	Iowa Curve	Net Salvage %	ASL yrs.	Iowa Curve	Gross Salvage %	Cost of Removal %	Net Salvage %
	STORAGE PLANT								
361.00	Structures and Improvements	29.6	-	(10.8)	40.0	R4	0	0	0
362.00	Gas Holders	34.5	-	(8.4)	45.0	R4	3	30	(27)
363.10	Liquefaction Equipment	34.2	-	0.6	35.0	R4	0	0	0
363.50	Other Equipment	34.2	-	0.6	35.0	R4	0	0	0
	TRANSMISSION PLANT								
365.20	Rights of Way	-	-	-	70.0	R4	0	0	0
367.00	Mains	44.0	-	(16.1)	60.0	R4	0	20	(20)
370.00	Communication Equipment	15.0	-	0.0	30.0	SQ	0	0	0
	DISTRIBUTION PLANT								
375.00	Structures and Improvements	32.1	-	2.5	35.0	R4	0	0	0
376.00	Mains	61.7	-	(16.1)	60.0	R2	0	20	(20)
378.00	M&R Station Equipment	32.1	-	(4.0)	35.0	R1	0	5	(5)
379.00	City Gate Equipment	32.1	-	0.0	35.0	R1	0	5	(5)
380.00	Services	40.2	-	(39.5)	40.0	R4	0	20	(20)
381.00	Meters	28.5	-	4.1	40.0	L2	0	10	(10)
382.00	Meter Installations	33.8	-	(13.6)	25.0	S6	0	40	(40)
383.00	Regulators	33.8	-	(13.6)	40.0	R5	0	0	0
385.00	Industrial M&R Station Equipment	32.1	-	(11.0)	35.0	R1	0	5	(5)
	GENERAL PLANT								
390.00	Structures and Improvements	40.0	-	0.0	35.0	R3	0	0	0
390.10	Leasehold Improvements	10.0	-	0.0	13.6	SQ	0	0	0
391.00	Office Furniture and Equipment	24.8	-	(0.2)	25.0	SQ	0	0	0
392.00	Transportation Equipment	15.0	-	2.2	15.0	L3	0	0	0
393.00	Stores Equipment	25.0	-	0.0	25.0	SQ	0	0	0
394.00	Tools, Shop and Garage Equipment	22.8	-	3.3	15.0	SQ	0	0	0
396.00	Power Operated Equipment	15.4	-	5.4	11.0	R4	5	0	5
397.00	Communication Equipment	15.0	-	2.1	15.0	SQ	0	0	0
398.00	Miscellaneous Equipment	15.0	-	(1.9)	15.0	SQ	0	0	0

APPENDIX

CALCULATION OF EQUAL LIFE GROUP DEPRECIATION RATES

It is the group concept of depreciation that leads to the existence of the ELG procedure of calculating depreciation rates. This concept has been an integral part of utility depreciation accounting practices for many years. Under the group concept, there is no attempt to keep track of the depreciation applicable to individual items of property. This is not surprising, in view of the millions of items making up a utility system. Any item retired is assumed to be fully depreciated, no matter when retirements occur. The group of property would have some average life. "Average" is the result of an arithmetic calculation, and there is no assurance that any of the property in the group is "average."

The term "average service life" used in the context of book depreciation is well known, and its use in the measurement of the mortality characteristics of property carries with it the concept of retirement dispersion. If every item was average, thereby having exactly the same life, there would be no dispersion. The concept of retirement dispersion recognizes that some items in a group live to an age less than the average service life and other items live longer than the average. Retirement dispersion is often identified by standard patterns.

The Iowa-type dispersion patterns that are widely used by electric and gas utilities were devised empirically about 60 years ago to provide a set of standard definitions of retirement dispersion patterns. Figure 1 shows the dispersion patterns for three of these curves. The L series indicates the mode is to the Left of average service life, the R series to the Right and the S series at average service life, and therefore, Symmetrical. There is also an O series that has the mode at the Origin, thereby identifying a retirement pattern that has the maximum percentage of original installations retired during the year of placement.

The subscripts on Figure 1 indicate the range of dispersion, with the high number (4) indicating a narrow dispersion pattern, and the low number (1) indicating a wide dispersion pattern. For example, the R1 curve shown on the Figure indicates retirements start immediately and some of the property will last twice as long as the average service life. The dispersion patterns translate to survivor curves, which are the most widely recognized form of the Iowa curves. Other families of patterns exist, but are not as widely used as the Iowa-type.

The methods of calculating depreciation rates are categorized as straight- line and non-straight-line.

Non-straight-line methods can be accelerated or deferred. There are three basic procedures for calculating straight-line book depreciation rates:

Units-of-Production

Average Life Group (ALG)

Equal Life Group (ELG)

Each of these procedures can be calculated using either the whole life or the remaining life technique.

Productive life may be identified by (a) a life span or (b) a pattern of production or usage. If production or usage is the suitable criteria, depreciation should be straight-line over life measured by time. Units-of-Production is straight-line over production or usage, while the others are straight-line over life measured by time. ALG is straight-line over the average life of the group, while ELG is straight-line over the actual life of the group.

The formulas for the whole life and remaining life techniques are shown on Table 1. For the ELG calculation procedure, Formulas 1 and 3 are applied to the individual equal life components of the property group. For the ALG calculation, the formulas are applied to the property group itself. Formula 2 is applied to the property group for either ELG or ALG. Use of the units (percent and years) in the

formulas result in rates as a percent of the depreciable plant balance. The depreciable plant balance is the surviving balance at the time the rate is calculated, and is expressed as a percentage (always 100) of itself. Salvage and reserves are expressed as a percent of the depreciable plant balance. For example, a property group having a 35-year average service life and negative 5% salvage would have an ALG whole life rate of (100 + 5/35), or 3.00%.

The first term of Formula 2 is identical to Formula 1 for the whole life rate. The second term of Formula 2 illustrates that the difference between a remaining life rate and whole life rate is the allocation of the difference between the book and calculated theoretical reserves over the remaining life by a remaining life rate.

The widely used ALG procedure of depreciation rate calculation does not recognize the existence of retirement dispersion in the calculation. The difference between the ALG and ELG procedures is the recognition of the existence of retirement dispersion in the ELG rate calculation. ELG is a rate calculation procedure; nothing more. The data required to make the ELG calculation are average service life, retirement dispersion, net salvage and the age distribution of the property. The depreciation study required to determine the applicable mortality characteristics is independent from the calculation of the depreciation rates. The resulting mortality characteristics can be used to calculate either ALG or ELG rates, both with either the whole life technique or the remaining life technique. Any set of mortality characteristics that is suitable for calculating ALG rates is just as suitable for calculating ELG rates. Conversely, any set that is not suitable for ELG is not suitable for ALG either.

The ELG procedure calculates the depreciation rates based on the expected life of each equal life component of the property rather than the average life of all components. As discussed earlier, "average" is the result of a calculation and there may not be any "average" property. When curves are used to define

retirement dispersion. The average service life and the retirement dispersion pattern define the equal life groups and the expected life applicable to each group.

When retirement dispersion does not exist, the ELG rate is identical to the ALG rate. When dispersion exists, the ELG rate for recently installed property is higher than the ALG rate and for old property is lower.

A Simple Illustration ELG

This illustration provides a framework for visualizing the ELG methodology. Table 2 assumes 20% of the $5,000 investment is retired at the end of each year following placement. The retirement frequencies are shown on Line 7. As shown in Columns 2 through 6, this means $1,000 of investment is retired each year, with the retirement at Age 1 being recovered in its entirety during Year One, at Age 2 in Years One and Two, etc. The depreciation rate applicable to each equal life group is shown on Line 8. The annual provision in dollars for Year One shown in Column 7 is made up of the Age 1 annual amounts shown on Line 1, Columns 2 through 6. As shown on the Table, the annual provision for Age 2 is equal to the annual provision for Age 1 less the amount collected during Year One applicable to the group retired during Year One. Thus. the annual provisions can be thought of as a matrix, with the provision for any given year being produced by a portion of the matrix.

The depreciation rates in Column 9 are determined by dividing the annual provisions in Column 7 by the survivors in Column 8. The rate formula shown on Table 2 can also be used to calculate the rates and is used on the Table to illustrate the working of the matrix by calculating the depreciation rates for Year One and Year Three. For Year One, the numerator and denominator both consist of five terms. Each year, the left-hand term of both numerator and denominator drop off. It should be noted that the reverse summation of retirement ratios (starting with Column 6 and moving left on Line 7) is equal to the survivor ratio at the beginning of the period shown in Column 10.

The formula can illustrate how the matrix can be thought of in terms of a depreciation rates. If the multiplier of 100 is incorporated in each element of the numerator of the formula, such as (100 x 0.2)/2, it can be seen that 100/2 is a rate and the retirement frequency (0.2) is a weighting factor. This particular rate (50%) is the one shown for Age 2 property on Line 8, Column 3.

It can be seen that the only data required for the ELG rate calculation are the retirement frequencies for each year. These frequencies are defined by the average service life and the shape of the dispersion pattern.

A Real Illustration of ELG

The depreciation analyst deals with much larger groups of property than appearing on Table 2. Table 3 contains an ELG rate calculation for an actual depreciable property group. The retirement frequencies shown in Column 4 are defined by the 38-year average service life and the L5 Iowa-type dispersion pattern. The ALG rate without salvage for this property is 2.632% (100%/38 years), while the ELG rate varies from 2.704% at age 0.5 years to 1.471% at the age just prior to the last retirement, 67.5 years.

The rate listed in Column 5 at each age is the weighted summation of individual rates applicable to that portion of the surviving property the retirement frequencies in Column 4 indicate will be retired in each following year. This combination of average service life and dispersion pattern means that the first retirement will be from the age 18.5 year property during the following year at an age of 19 years; therefore, it will require a rate of 5.263% (100%/19 years). (This example does not have any surviving balance at age 18.5.) The last retirement will be from age 67.5-year property; consequently, it will require a rate of 1.471% (100%/68 years). The vintage composite rate shown in Column 5 at age 0.5 years is the weighted summation of rates varying from 5.263% to 1.471%.

Since this example is for a narrow dispersion pattern, the first retirement occurs at age 19 years and the vintage composite rate remains at 2.704% at age 19.5 years, because the first retirement drops the 5.263% rate from the summation.

A wider dispersion pattern would result in a wider range of vintage composite rates than defined by the L5 curve (2.704% to 1.471%).

All that's necessary for calculating the depreciation rates applicable to each age of property are the retirement frequencies. These frequencies are defined by the average service life and the retirement dispersion pattern. The determination of average service life requires the determination of the dispersion pattern, as without dispersion there would be no "average."

Depending on the dispersion pattern, the number of retirement frequencies making up the complete Iowa curve can be up to about 4.4 times the number of years of average service life. Thus, for an account whose number of retirement frequencies is three times average service life and whose average service life is 30 years, the rate applicable to the Age 1 property will be made up of the weighted summation of 89 components, etc. Thus, the rate calculation process is complex, but certainly not complicated. It is this complexity that makes the rate calculations much more practical using a computer.

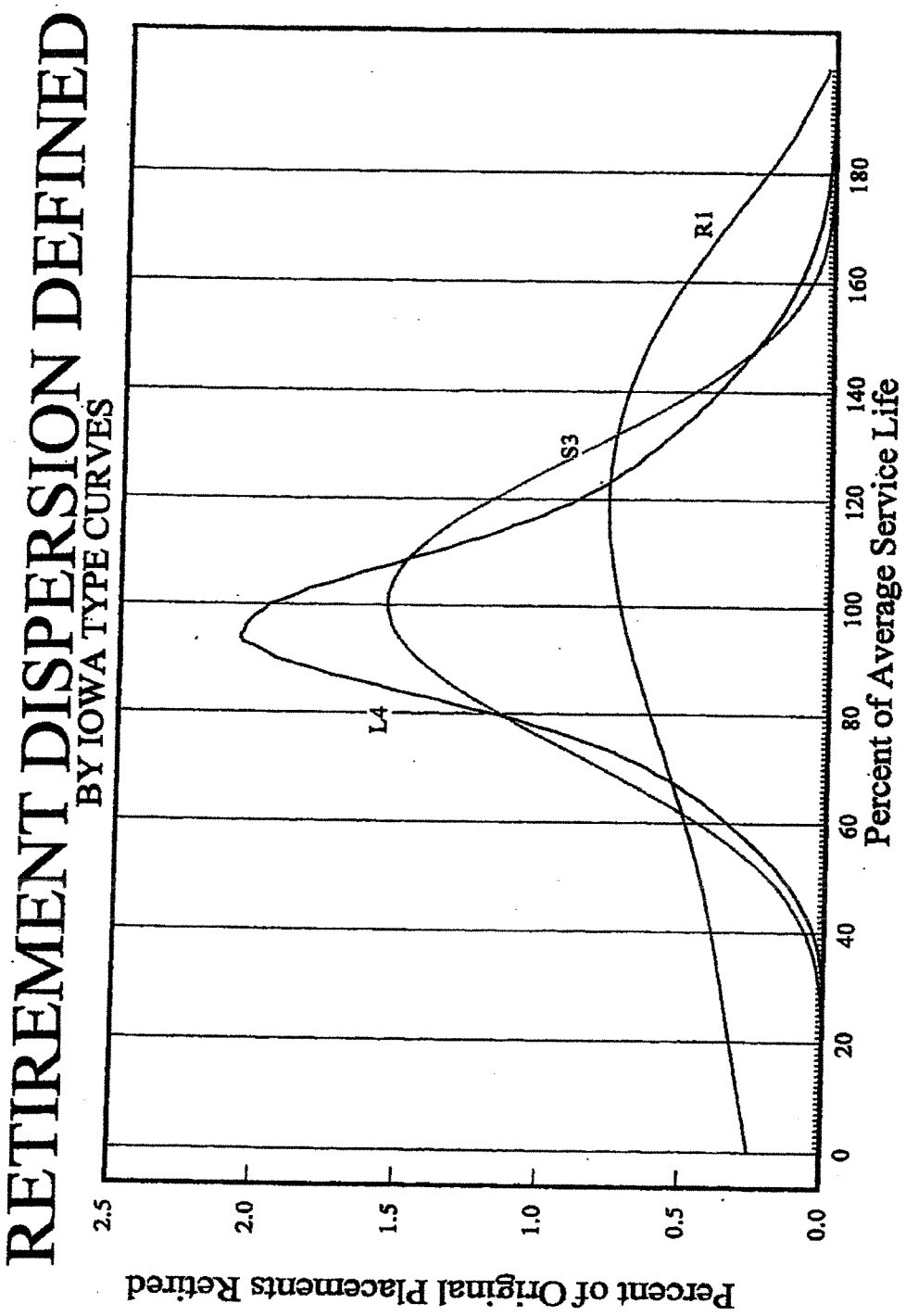
RETIREMENT DISPERSION DEFINED
BY IOWA TYPE CURVES
Percent of Original Placements Retired
2.5
2.0
1.5
1.0
0.5
0.0
0
20
40
60
80
100
120
140
160
180
Percent of Average Service Life
L4
S3
R1

TABLE 1

DEPRECIATION RATE CALCULATION PROCEDURES

Whole Life

$$\text{Rate (\%)} = \frac{PB - S}{ASL} \qquad \text{Formula 1}$$

Remaining Life

$$\text{Rate (\%)} = \frac{PB - S}{ASL} \;\_\_\; \frac{BR - CT}{ARL} \qquad \text{Formula 2}$$

$$\text{Rate (\%)} = \frac{PB - FS - BR}{ASL} \qquad \text{Formula 3}$$

Where

PB	is Depreciable Balance, %
AS	is Average Net Salvage, %
FS	is Future Net Salvage, %
ASL	is Average Service Life, years
BR	is Depreciation Reserve, %
CTR	is Calculated Theoretical Reserve, %
ARL	is Average Remaining Life, year

TABLE 2

DEVELOPMENT OF EQUAL LIFE GROUP CAPITAL RECOVERY RATE

Line	(1) Age Years	(2) Group 1 $	(3) Group 2 $	(4) Group 3 $	(5) Group 4 $	(6) Group 5 $	(7) Annual Provision $	(8) Beginning Survivors $	(9) Rate %	(10) Survivor Factor
1	1	1,000.00	500.00	333.33	250.00	200.00	2,283.33	5,000.00	45.67	1.00
2	2		500.00	333.33	250.00	200.00	1,283.33	4,000.00	32.08	0.80
3	3			333.33	250.00	200.00	783.33	3,000.00	26.11	0.60
4	4				250.00	200.00	450.00	2,000.00	22.50	0.40
5	5					200.00	200.00	1,000.00	20.00	0.20
6	Retirements	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00				
7	Frequency	0.20	0.20	0.20	0.20	0.20				
8	Rate	100%	50%	33.33%	25%	20%				

$$\text{Rate, \%} = \frac{\text{Retirements Frequencies}}{\text{Age at Retirement}} \times 100$$

Reverse of Retirement Frequencies

$$\text{Year One Rate} = \frac{\frac{0.2}{1} + \frac{0.2}{2} + \frac{0.2}{3} + \frac{0.2}{4} + \frac{0.2}{5}}{0.2 + 0.2 + 0.2 + 0.2 + 0.2} \times 100 = 45.67\%$$

$$\text{Year Three Rate} = \frac{\frac{0.2}{3} + \frac{0.2}{4} + \frac{0.2}{5}}{0.2 + 0.2 + 0.2} \times 100 = 26.11\%$$

TABLE 3

DETERMINATION OF DEPRECIATION RATES BY ELG PROCEDURES

[1] Age Years	[2] Year	[3] Vintage Balance $	[4] Retirement Frequency ASL 38 Curve L5	[5] Rate	[6] Amount $
0.5	1993	4,244,285	0.0000	0.02704	114,758.36
1.5	1992	800,784	0.0000	0.02704	21,651.86
2.5	1991	60,016	0.0000	0.02704	1,622.73
3.5	1990	43,455,063	0.0000	0.02704	1,174,952.00
4.5	1989	81,456	0.0000	0.02704	2,202.43
5.5	1988	172,463	0.0000	0.02704	4,663.11
6.5	1987	2,098,991	0.0000	0.02704	56,753.20
7.5	1986	2,685,949	0.0000	0.02704	72,623.55
9.5	1984	1,642,443	0.0000	0.02704	44,408.90
10.5	1983	222,602	0.0000	0.02704	6,018.78
11.5	1982	85,661	0.0000	0.02704	2,316.13
12.5	1981	4,985	0.0000	0.02704	134.79
13.5	1980	72,942	0.0000	0.02704	1,972.23
14.5	1979	219,163	0.0000	0.02704	5,925.80
15.5	1978	120,665	0.0000	0.02704	3,262.58
16.5	1977	37,042	0.0000	0.02704	1,001.55
17.5	1976	339,236	0.0000	0.02704	9,172.21
19.5	1974	336,723	0.0001	0.02703	9,101.41
20.5	1973	10,375,359	0.0004	0.02702	280,292.86
21.5	1972	4,481,906	0.0009	0.02699	120,963.25
22.5	1971	5,923,340	0.0018	0.02695	159,618.98
23.5	1970	78,848	0.0030	0.02689	2,119.97
24.5	1969	305,178	0.0047	0.02681	8,180.42
25.5	1968	10,312,586	0.0069	0.02670	275,375.94
26.5	1967	2,754,067	0.0094	0.02658	73,203.24
27.5	1966	9,558,786	0.0123	0.02644	252,715.77
29.5	1964	5,556,083	0.0194	0.02610	144,995.54
30.5	1963	23,383	0.0242	0.02589	605.42
31.5	1962	3,313,564	0.0305	0.02566	85,012.50
32.5	1961	32,271	0.0386	0.02538	819.15
33.5	1960	151,658	0.0482	0.02507	3,802.24
34.5	1959	171,483	0.0583	0.02472	4,238.70
35.5	1958	167,116	0.0674	0.02433	4,065.35
36.5	1957	70,420	0.0740	0.02390	1,683.22
37.5	1956	1,792,312	0.0768	0.02345	42,036.33
39.5	1954	2,270,555	0.0701	0.02252	51,131.79
40.5	1953	187	0.0622	0.02206	4.13
41.5	1952	20,185	0.0531	0.02161	436.14
42.5	1951	12,860	0.0442	0.02118	272.40
43.5	1950	706	0.0362	0.02078	14.67
44.5	1949	2,652	0.0296	0.02041	54.13
45.5	1948	6,422	0.0245	0.02006	128.81
46.5	1947	19,573	0.0205	0.01972	386.07
47.5	1946	323,058	0.0173	0.01940	6,268.69
49.5	1944	2,285,041	0.0123	0.01879	42,943.47
50.5	1943	15,614	0.0103	0.01850	288.86
51.5	1942	620,752	0.0085	0.01821	11,306.36
53.5	1940	684,610	0.0055	0.01766	12,090.28
54.5	1939	47,173	0.0043	0.01740	820.76
55.5	1938	22,725	0.0033	0.01714	389.52
56.5	1937	560	0.0025	0.01689	9.46
57.5	1936	722	0.0019	0.01664	12.02
59.5	1934	3,065	0.0005	0.01573	48.21
61.5	1932	944,400	0.0005	0.01573	14,853.98
67.5	1926	2	0.0000	0.01471	0.03
Totals		119,029,691			3,133,730.27
				SALVAGE (%) =	-5.0
				AFTER SALVAGE =	3,290,417
				ANNUAL DEPRECIATION RATE =	2.76

ATMOS ENERGY CORPORATION - GEORGIA (DIV. 95)
CHANGE IN ANNUAL DEPRECIATION BY CAUSE

Exhibit DSR-4

[1] Function	[2] 9/30/2004 Balance $	[3] Existing Rate %	[4] Annual Amount $	[5] Study Rate %	[6] Annual Amount $	[7] Increase or (Decrease) $	[8] Change in ASL $	[9] Change in Net Salv. $	[10] Reserve Position $	[11] Change in Procedure $	[12] Inter-Relations $
STORAGE	4,519,786	3.18	143,609	2.11	95,340	(48,269)	(17,048)	5,914	(34,017)	2,594	(5,712)
TRANSMISSION	3,404,054	2.56	87,222	1.41	47,894	(39,328)	(20,976)	1,970	(17,473)	(2,189)	(660)
DISTRIBUTION	93,650,786	2.90	2,713,888	2.90	2,718,042	4,154	51,006	(14,648)	(1,957)	210,956	(241,203)
GENERAL	2,532,114	5.31	134,542	5.13	129,897	(4,645)	9,832	245	(14,465)	392	(649)
TOTAL GAS PLANT	104,106,740	2.96	3,079,261	2.87	2,991,173	(88,088)	22,814	(6,519)	(67,912)	211,753	(248,224)

FILED
3/31/05

BEFORE THE
GEORGIA PUBLIC SERVICE COMMISSION

PREFILED REBUTTAL TESTIMONY OF
DONALD S. ROFF

ON BEHALF OF
ATLANTA GAS LIGHT COMPANY

DOCKET NO. 18638-U

Q. Please state your name, title, affiliation and business address?

A. My name is Donald S. Roff and I am a Director with the public accounting firm of Deloitte & Touche LLP. My business address is JPMorgan Chase Tower, 2200 Ross Avenue, Suite 1600, Dallas, Texas 75201-6778.

Q. Are you the same Donald S. Roff that presented direct testimony in this proceeding?

A. Yes, I am.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to respond to the positions and recommendations of Adversary Staff witness Mr. Charles W. King with respect to the topics of depreciation and depreciation accounting. I will demonstrate that the recommendations and approach provided by Mr. King:

- Do not comply with the regulatory accounting rules of this Commission;
- Do not comply with accounting principles;
- Do not comport with depreciation theory;
- Are not widely accepted;
- Would unfairly shift costs to future customers, and

- Contain fundamental calculation errors.

In particular, I will address Mr. King's recommendations regarding the net salvage allowance for Distribution Mains, Account 376 and Distribution Services, Account 380. I will also address certain of Mr. King's other recommendations in this proceeding, as well as the depreciation rates for AGL Services Company ("AGLSCo").

Q. Have you prepared any exhibits?

A. Yes. AGLC Exhibit No. ___(DSR-4) has been prepared to compare and summarize the depreciation proposals in this proceeding. I have also included some of my depreciation analysis workpapers as AGLC Exhibit ____ (DSR-5). AGLC Exhibit No. ____ (DSR-6) has been prepared to illustrate some of my concerns with Mr. King's net salvage approach.

Q. Were these exhibits prepared by you or under your direction and supervision?

A. Yes.

Q. Please describe AGLC Exhibit No. ____ (DSR-4).

A. AGLC Exhibit No. ____ (DSR-4) provides a columnar summary of the depreciation rate and annual depreciation expense recommendations that I have made contrasted with those of Mr. King. The Exhibit also shows the level of depreciation expense developed by application of the existing depreciation rates. I have segregated my recommended depreciation rates into a life rate and a net salvage rate, similar to Mr. King's presentation, although I do not agree that the two must be segregated. Row 68 of Column [5] shows the total depreciation expense developed by application of the existing depreciation rates - $60,399,955. Row 69 of Column [9] shows the total depreciation expense developed by application of my recommended depreciation rates - $71,830,325

or an increase of $11,430,370 (Row 70). Row 69 of Column [13] shows the total depreciation expense developed by application of Mr. King's recommended depreciation rates - $62,842,017 or an increase of $2,442,062 (Row 70) over existing rates. One can see that the primary difference between my recommendations and those of Mr. King is the net salvage accruals, shown in Row 68 of Columns [9] and [13], $18,762,138 and $3,269,644, respectively.

Q. Is this difference the main issue with respect to depreciation in this proceeding?

A. Yes. The fundamental depreciation issue in this proceeding is the estimate of a net salvage allowance for Distribution Mains and Distribution Services, although there are other issues related to the depreciation rates and annual expenses pertaining to AGLSC, as well as consistency with and the interpretation of accounting and regulatory principles.

Q. Mr. King testified that he used the same depreciation approach that this Commission has adopted many times. Do you have any comment?

A. Yes. I am not aware of a single time that this Commission has adopted Mr. King's approach based on the merits. Mr. King cites the Commission's final order (October 1, 1991) adopting a stipulation in Georgia Power Company Docket No. 4007-U as precedent for why the Commission should adopt his methodology in this current proceeding. However, the Commission stated therein that the factual findings and legal conclusions in that stipulation order "shall not be taken as precedent in any future proceeding." Tr. 1237. Each Georgia Power rate case following Docket No. 4007-U also has been resolved through stipulation, as was the last AGLC rate case that Mr. King also cited as precedent. Typically, depreciation is not the driving issue in a rate case settlement and sometimes parties adopt a depreciation position in one case but another

position in another case. For example, in the Savannah Electric & Power Company Docket No. 14618-U in 2002, the settling parties did not adopt the depreciation position that Mr. King proposed in that case and in this current case as well. Not surprisingly, Mr. King at the hearing denied that the Commission should treat as precedent for this case a number of the provisions in these orders adopting stipulations that are contrary to Adversary Staff's positions in this current rate case. Tr. 1237-39. The Commission should take a fresh look in this case at the depreciation methodology and Mr. King's approach.

Q. What approach have you utilized to develop net salvage allowances in your depreciation study?

A. I have used the same approach for every asset category, which approach I have also used for every depreciation study that I have conducted for Atlanta Gas Light Company ("AGLC"), and for other utilities as well. That approach consists of an analysis of history using the cause and effect relationships of retirements (***cause***) and net salvage (***effect***) coupled with an evaluation of that history and its applicability to future surviving plant in service.

Q. Why have you conducted your analysis in this manner?

A. I conducted my analysis in this manner because it complies with regulatory accounting instructions and rules, comports with depreciation analysis theory as well as recognizes the cause and effect relationship described above. On the other hand, Mr. King used a methodology that ignores the causal link between actual retirements and the costs those retirements cause.

Q. To what depreciation analysis theory are you referring?

A. Numerous depreciation texts provide a description of the net salvage analysis. For example, the NARUC text referenced by Mr. King provides the following discussion:

> 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 retired.[1]

Another reference can be found in *Accounting for Public Utilities*, a recognized text in the regulated utility arena:

> Salvage and cost of removal analysis involves the determination of salvage and cost of removal as a percentage of the cost of the retired property.[2]

At the hearing, Mr. King admitted that the FERC accounting rules that AGLC must follow, including Gas Plant Instruction 10 (B, D & F) - AGLC Exhibit No. 54, require the inclusion of actual "book cost of gas plant retired" less the net salvage of the plant retired. Thus salvage and cost of removal allowances reflect the same relationship between salvage received or cost of removal incurred (i.e., negative net salvage) and the book cost of the plant retired expressed as a percentage of retired amounts.

Q. Did your depreciation study utilize an analysis process that was consistent with these passages?

A. Yes. My salvage and cost of removal analysis for Account 376, Mains and Account 380, Services was based upon the historical relationship between salvage and cost of removal to the cost amounts of the plant retired. This is evident from a review of my analysis workpapers for Account 376 and Account 380, attached as AGLC Exhibit No. ____ (DSR-5). In both accounts, salvage has been very limited and net salvage is comprised almost entirely of cost of removal. Net salvage percentages for Account 376, Mains range from negative 13% to negative 386%, with a weighted average for the period 1989

[1] *Public Utilities Depreciation Practices*, National Association of Regulatory Utility Commissioners, 1996 Edition, page 18.
[2] *Accounting for Public Utilities*, Hahne and Aliff, 19th Edition, page 6-24.

– 2003 of negative 59%. In total, some $26.6 million of cost of removal has been incurred relative to over $45.2 million in book cost of retirements within the Mains Account. Net salvage percentages for Account 380, Mains range from negative 27% to negative 174%, with a weighted average for the period 1989 – 2003 of negative 53%. In total, some $23.4 million of cost of removal has been incurred relative to over $43.8 million in book cost of retirements within the Services Account. It is clear that my analysis has been conducted consistent with the concepts described above.

Q. During the hearing, Mr. King tried to suggest that the NARUC text endorses various methods for the determination of net salvage. Tr. 1233. Do you have any comments?

A. Yes. I am familiar with the passage referenced by Mr. King at the hearing. In fact, I provide the entire passage below:

> Some commissions have abandoned the above procedure and moved to current-period accounting for gross salvage and /or cost of removal. In some jurisdictions gross salvage and cost of removal are accounted for as income and expense, respectively, when they are realized. Other jurisdictions consider only gross salvage in depreciation rates, with the cost of removal being expensed in the year incurred.[3]

I have worked in the area of utility depreciation accounting for over 32 years in over 30 states. With the exception of Pennsylvania and perhaps certain General Plant accounts where cost of removal and salvage are minimal, I am **unaware** of **ANY** commission that requires (or allows) salvage or cost of removal for an electric or gas utility to be treated as a current period item. The claim advanced by Mr. King is just not true!

[3] *Public Utilities Depreciation Practices*, NARUC, 1996 Edition, page 157.

Q. Please respond to Mr. King's testimony (p.17) that you have over-accrued net removal cost by comparing the cost of removal in recent years with the original book cost of the plant retired.

A. Mr. King, who admits that he is not a Certified Public Accountant (Tr. 1243), apparently does not agree with traditional concepts of accounting. Depreciation accounting does not involve valuation of assets but instead simply recognizes retired plant costs that have been recorded on the books and actual removal costs caused by such retirements. Mr. King agreed (Tr. 1223) that depreciation allows investors to recover the principal amount of their investment over a future period and to do so, the actual amount of removal costs must be recovered as well. Mr. King also admitted (Tr. 1231), that for an investment in gas pipe made today, the investors should recover over time the actual future removal cost that will be incurred, i.e., perhaps 40 or 80 years in the future. When those future removal costs are incurred, AGLC is required by the FERC system of accounts and generally accepted accounting principles to account for those actual removal costs (at that future point in time) and the book cost of the plant being retired (i.e., today's cost to purchase and install the pipe). Thus, future removal costs necessarily will be compared with present cost of plant. Similarly, to allow adequate recovery of these future removal costs, I have compared present or recent actual removal costs with the original book cost of the retired assets. Mr. King complains that this is a "mismatch" of past dollars with present dollars. Tr. 1224. However, Mr. King is really complaining about basic accounting rules, relationships and principles, which require a comparison of actual removal cost with prior investment cost.

Q. Did Mr. King compare net removal costs to the cost of the plant retired in his methodology?

A. No. Apparently in order to obtain lower negative removal ratios, Mr. King abandoned the governing accounting rules and did not include in his calculations the cost of the plant being retired, which retirement causes AGLC to incur the cost of removal. Instead, he created a number of mathematical averages of retirement costs, with very little logical support, and divided total removal costs in a period, not by the book cost of the plant retired but the entire book cost of all of AGLC's plant that remains on the books. In other words, Mr. King's denominator (book cost of all non-retired AGLC plant) consists of pipes and related facilities that will not be retired for some time but whose cost is compared nonetheless by Mr. King to current or recent removal costs. Thus, Mr. King completely ignores the causal relationship between the retirement and the removal cost it causes.

Q. Can you provide an example of this calculation?

A. Yes. Consider a simple scenario where pipes that originally cost $10 million to construct are retired this past year with a removal cost of $3 million. Under my method, I would divide the $3 million actual annual removal cost by the $10 million book cost of the pipe retired and obtain a 30 percent negative net salvage ratio. On the other hand, assuming that these are the only retirement costs incurred in a given year for this account, Mr. King would divide the $3 million in retirement cost not by the book cost of the actual plant retired but instead by the total book value of all of the pipes in that account that are still being used! Thus, if that total book value of non-retired pipes is $300 million, Mr. King would obtain a net removal ratio of a mere 1 percent ($3 million/$300 million). The

result fits with an attempt to reduce depreciation rates but does not fit with generally accepted accounting principles or accounting rules to which AGLC is subject. Of course future removal costs are likely to be significantly higher than today's removal costs. Therefore, to allow investors to recover the principal of their investment, they must also recover the future, and hence much higher, removal costs. Otherwise, costs will shift to future ratepayers who will subsidize present service.

Q. Are there any other flaws in Mr. King's analysis?

A. Yes, although Mr. King starts with the very data contained in my analysis, he significantly departs from my analysis first by re-stating actual cost of removal to current price levels. This effort violates a number of fundamental depreciation tenets. There is nothing in the Uniform System of Accounts describing or requiring cost of removal to be re-stated to current price levels. In fact, the following instruction, for Account 403, depreciation expense, reinforces the process that I have utilized:

> The utility shall keep such records of property and property retirements as will reflect the service life of property which has been retired and aid in estimating probable service life by mortality, turnover, or other appropriate methods; and also such records as will reflect the percentage of salvage and cost of removal for property retired from each account, or subdivision thereof, for gas depreciable plant.[4]

Not only is Mr. King's re-statement of removal cost inconsistent with fundamental depreciation tenets, such a restatement has the appearance of valuation. This is in clear defiance of Mr. King's own definition of depreciation accounting (p. 6) that depreciation accounting "is a process of allocation, not valuation" (emphasis added). The objective of depreciation accounting is to allocate an asset's total cost over its useful life; it is not to

[4] Code of Federal Regulations, 18 CFR, Part 201, 403 – Depreciation Expense.

value or re-value that asset, as Mr. King has done. Thus Mr. King's approach violates at least two accounting principles.

Q. What does Mr. King do next?

A. Instead of simply comparing actual removal costs to the book cost of the retired plant that caused the removal costs, Mr. King develops a series of averages. He develops a 10-year average of re-stated net removal amounts; a 5-year average of re-stated net removal amounts; and a 3-year average of re-stated net removal amounts. The apparent intent is to identify trends. My analysis includes similar averages, but not on a re-stated net removal basis. He then develops another "statistic," that being the simple average of the three re-stated amounts described above. This amount becomes the annual net removal figure used to estimate Mr. King's Lifetime Net Removal Cost. It is unclear what the statistical basis for this "new average" is. Mr. King claims in his direct testimony (p. 19) that this procedure "captures a number of years' activity and gives greatest weight to the most recent experience." It certainly captures a number of years' activity but can only be thought of giving the greatest weight to the most recent experience because the most recent experience is in every average! If this were not confusing enough, Mr. King's next step is even more disturbing.

Q. What is the next step?

A. After having developed an estimate of the annual net removal cost, Mr. King attempts to estimate a lifetime total net removal cost. To do this, he multiplies the annual net (re-stated) removal cost by the average service life. Apparently, Mr. King believes that the number of future periods for which annual net removal cost will be incurred is equal to

the number of years of average service life. I fail to see how this is meaningful in any way, which is why I provided a different approach in my direct testimony.

Q. Why do you believe that a different approach is more meaningful?

I believe that Mr. King's approach is totally flawed and again divorces retirements from actual removal costs. Even if his estimate of annual net removal cost were correct, the estimate of future periods cannot be correct. If one were attempting to determine the number of future periods that an asset category might live then one should look at how quickly the asset category is being consumed (or "dying"). The correct way to estimate the number of future periods, if one is trying to develop a meaningful lifetime removal cost estimate using Mr. King's methodology, is to look at the level of annual retirements. If the retirement levels continue as they have occurred in the past, one can estimate when the current balance of $956,399,064 will be exhausted. Using Mr. King's average of the three, five and ten year average retirement amount, I compute an average annual retirement of $3,009,925, resulting in 318 equivalent future periods ($956,399,064/$3,009,925). Using this estimate of future periods produces the correct lifetime removal cost of $262,806,659 ($734,311 x 318 + $37,373,182) or an equivalent net salvage allowance of negative 27.5%. This percentage is very close to my recommended net salvage allowance of negative 30%, and very different from the 7% figure developed by Mr. King.

Q. What does all this mean?

A. Fundamentally, it means that different estimates can be derived by different methods. More significantly, the process created by Mr. King is not correct and leads to incorrect results.

Q. Please summarize the problems with Mr. King's approach.

A. First, Mr. King clings to the notion that ***prior approvals of stipulated depreciation rates*** by this Commission in certain cases constitute endorsement of his methodology ***for determining a net salvage allowance***. I believe that no such precedent exists, in particular when I believe the methodology is merely an exercise in math. Second, Mr. King ignores regulatory rules as well as basic logic by NOT relating net salvage amounts to retirements. Such a process violates depreciation accounting principles. Third, Mr. King never fully explains why cost of removal amounts must be restated to current price levels. Fourth, even if this approach were valid from the standpoint of depreciation accounting theory, Mr. King has understated the number of future periods, making his net removal ratio equally understated. In reality, it would appear that Mr. King's objective is to develop a lower level of depreciation expense than what I have recommended. Fifth, it does not make sense to think that the lifetime net removal cost is a function of the average service life of a group of assets. A longer life may mean more cost of removal, but also means a longer period over which to allocate costs. Finally, with respect to Mains and Services, Mr. King's methodology produces a dramatic deferral of net removal cost expense.

Q. Why do you make this last point?

A. I make this last assertion because it is clear from Mr. King's schedules that the accrual for net removal cost for Mains of $971,841[5] is decidedly lower than the actual cost of removal being incurred during the period of the Pipe Replacement Program ("PRP").

[5] King Schedule 2, Column G.

The actual average cost of removal incurred over the period 1997 through 2003 was $3,189,683.[6]

Q. Is it your suggestion that the appropriate level of annual net removal cost for the Mains account should be $3,189,683?

A. No. This approach would emulate cash accounting and AGLC is required to practice accrual accounting by the Uniform System of Accounts.[7] But, I do want to emphasize that for the Mains account the amount proposed by Mr. King for annual net removal cost is inadequate and results in a considerable deferral.

Q. Can you provide an example that demonstrates the errors contained in Mr. King's methodology?

A. Yes. Unfortunately, this cannot be demonstrated in simple terms. AGLG Exhibit No. ____ (DSR-6) has been prepared to illustrate the shortfall contained in Mr. King's methodology. The basic assumptions are:

- retirements occur uniformly over the average remaining life of 43.51years (87 future periods)
- net removal cost ratio is 30% (based upon composite history)
- investment accrual rate is 1.557% (King Schedule 1, Column G)
- net removal cost accrual rate is 0.102% (King Schedule 2, Column H)
- starting book reserve is $308,289,209 (King Schedule 1, Column C)
- starting net removal cost reserve is $24,663,137 (King Schedule 2, Column D)

I have split the Exhibit into two parts. The first page stops after 48 future periods. This replicates Mr. King's use of the average service life as the number of periods. With an average service life of 55 years, and the fact that the Pipe Replacement Program ("PRP")

[6] King Schedule 5, average of Column C for the period 1997-2003.
[7] 18 CFR Part 201, General Instruction 11.

has been in place for seven years, I arrive at 48 future periods. It can be seen that a shortfall occurs as shown by the ($99,690,042) credit balance at the end of year 2052 in Column [9].

The second page continues the calculations from the first page, but properly extends them until the end of life of the existing asset base (through the year 2092). The investment is essentially fully accrued as demonstrated by the Ending Book Reserve balance of $23,137. The reason this amount is not zero is that the depreciation rate is NOT precisely 1.557%. But also notice that the shortfall in Column [9] continues to grow to over $219,000,000. This is because Mr. King has under-stated the total lifetime net removal cost. This Exhibit demonstrates the error of Mr. King's methodology and highlights the inadequacy of the accumulated cost of removal that results.

Q. Finally, please address Mr. King's claim (Tr. 1225) that FERC Order No. 631 requires AGLC to separate removal cost accounting from depreciation accounting.

A. Mr. King's claim is not true. In order to fully understand why I say this is not true, we must begin with SFAS No. 143 – *Accounting for Asset Retirement Obligations*. SFAS No. 143 defined the *financial accounting* for Asset Retirement Obligations, that is, those obligations that develop as the result of a law, statute or contract. The pertinent paragraphs of SFAS No. 143 are enumerated as follows:

> Many rate-regulated entities currently provide for the costs related to the retirement of certain long-lived assets in their financial statements and recover those amounts in rates charged to customers. Some of those costs result from asset retirement obligations within the scope of this Statement; others result from costs that are not within the scope of this Statement. The amounts charged to customers for the costs related to the retirement of long-lived assets may differ from the period costs recognized in accordance with this Statement and, therefore may result in a difference in the timing of recognition of period costs for financial reporting and rate-making purposes. An additional recognition timing difference may exist when the costs related to the retirement of long-lived assets are

included in amounts charged to customers but liabilities are not recognized in the financial statements. If the requirements of Statement 71 are met, a regulated entity also shall recognize a regulatory asset or liability for differences in the timing of the recognition of the period costs associated with asset retirement obligations for financial reporting pursuant to this Statement and rate-making purposes.[8]

The Board considered how existing rate-making practices for entities subject to FASB Statement No. 71, *Accounting for the Effects of Certain Types of Regulation*, would affect the accounting by those entities for costs related to asset retirement obligations. The way in which those costs are treated for financial reporting purposes and the way in which they are treated for rate-making purposes often differ. The most common differences arise from different estimates by the entity and its regulator of the future cost of asset retirement activities. Those differences may relate to the estimates of the cost of performing asset retirement activities or the assumptions necessary to develop the estimated future cash flows required to satisfy those obligations. In addition, an entity may make revisions to its estimate of the obligation before a regulator considers those revisions in setting the entity's rates.[9]

Many rate-regulated entities currently provide for the costs related to asset retirement obligations in their financial statements and recover those amounts in rates charged to customers. Some of those costs relate to asset retirement obligations within the scope of this Statement; others are not within the scope of this Statement and, therefore, cannot be recognized as liabilities under its provisions. The objective of including those amounts in rates currently charged to customers is to allocate costs to customers over the lives of those assets. The amount charged to customers is adjusted periodically to reflect the excess or deficiency of the amounts charged over the amounts incurred for the retirement of long-lived assets. The Board concluded that if asset retirement costs are charged to customers of rate-regulated entities but no liability is recognized, a regulatory liability should be recognized if the requirements of Statement 71 are met.[10]

Nothing in these paragraphs describe the accounting that Mr. King claims is required by the Securities and Exchange Commission.

More to the point, FERC Order No. 631 contains some very distinct language about NOT changing the regulatory accounting framework:

---

[8] Statement of Financial Accounting Standards No. 143 – *Accounting for Asset Retirement Obligations*, Financial Accounting Standards Board, June, 2001, Paragraph 20.
[9] Ibid, Paragraph B67.
[10] Ibid, Paragraph B73.

> The Commission did not propose any changes to its existing accounting requirements for cost of removal for non-legal retirement obligations.[11]
>
> The accounting for removal costs that do not qualify as legal retirement obligations falls outside the scope of this rule. The Commission is aware that there is an ongoing discussion in the accounting community as to whether the cost of removal should be considered as a component of depreciation. However, this issue is beyond the scope of this rule and we are not convinced that there is a need to fundamentally change accounting concepts at this time[12] (Emphasis added)

What Order No. 631 did require is the creation of some new accounts within the Uniform System of Accounts for asset retirement obligations, asset retirement costs and accretion expense. Order No. 631 did NOT require the creation of new accounts for non-legal retirement obligations. Order No. 631 DID require a reporting entity to maintain separate subsidiary records:

> Instead we will require jurisdictional entities to maintain separate subsidiary records for cost of removal for non-legal retirement obligations that are included as specific identifiable allowances recorded in accumulated depreciation in order to separately identify such information to facilitate external reporting and for regulatory analysis, and rate setting purposes. Therefore, the Commission is amending the instructions of account 108 and 110 in Parts 101, 201 and account 31, Accrued depreciation – Carrier property, in Part 352 to require jurisdictional entities to maintain separate subsidiary records for the purpose of identifying the amount of specific allowances collected on rates for non-legal retirement obligations included in the depreciation accruals.[13]
>
> Jurisdictional entities must identify and quantify in separate subsidiary records the amounts, if any, of previous and current accrued accumulated removal costs for other than legal retirement obligations recorded as part of the depreciation accrual in accounts 108 and 110 for public utilities and licensees, account 108 for natural gas companies, and account 31 for oil pipeline companies. If jurisdictional entities do not have the required records to separately identify such prior accruals for specific identifiable allowances collected in rates for non-legal asset retirement obligations recorded in accumulated depreciation, the Commission will require that the jurisdictional entities separately identify and quantify prospectively the amount of current accruals for specific allowances collected in rates for non-legal retirement obligations.[14]

---

[11] Order No. 631, Paragraph 36.
[12] Ibid, Paragraph 37.
[13] Ibid, Paragraph 38.
[14] Ibid, Paragraph 39.

Thus separate accounting is NOT required. There is a distinct difference between a requirement to maintain separate subsidiary records and the alleged requirement for separate accounting. For example, AGLC maintains time reports for its employees to support the accounting for payroll expense, but does not account for each employee's payroll expense on its general ledger. Mr. King has introduced an interpretation that does not apply.

Q. **Mr. King implies that AGLC has not met its burden of proof relative to the reasonableness of the depreciation rates proposed for AGLSCo. Do you have any comments?**

A. Yes. Responses were provided by the Company to the Adversary Staff to Data Requests made regarding the depreciation rates for AGLSCo. In particular, Data Requests STF-4-2, STF-8-5 and STF-8-6 provide workpapers and supporting detail associated with the Company's depreciation request for AGLSCo. Mr. King's claim is without merit and the depreciation request by ALGC for the AGLSCo. Properties should be approved by this Commission.

Q. **Does this complete your rebuttal testimony?**

A. Yes, it does. However, to the extent that I have not addressed a particular topic, issue or concept raised by Mr. King, does not constitute my agreement with such topic, issue or concept.

ATLANTA GAS LIGHT COMPANY
Comparison of Depreciation Recommendations

AGLC EXHIBIT NO. ____ (DSR-4)

[1] Account Number	[2] Description	[3] 12/31/2003 Balance $	[4] Existing Rate %	[5] Annual Amount $	[6] Study Life Rate %	[7] Annual Amount $	[8] Study Net Salv Rate %	[9] Annual Amount $	[10] Staff Life Rate %	[11] Annual Amount $	[12] Staff Net Salv Rate %	[13] Annual Amount $
	PRODUCTION PLANT											
304.1	Land Rights	16,575	0.690	114	1.484	246	-	-	2.015	334	-	-
305.0	Structures & Improvements	32,901	0.690	227	0.161	53	-	-	(1.854)	(610)	-	-
311.0	LPG Equipment	287,544	0.690	1,984	0.963	2,769	-	-	0.930	2,673	-	-
320.0	Other Equipment	57,108	0.690	394	2.859	1,633	-	-	3.931	2,245	-	-
	Total Production Plant	394,128	0.690	2,719	1.193	4,701	-	-	1.178	4,642	-	-
	STORAGE PLANT											
361.0	Structures & Improvements	22,829	2.570	587	3.395	775	-	-	3.443	786	-	-
361.1	LNG Structures & Improvs.	22,358,912	2.570	574,624	2.236	499,934	-	-	1.998	446,818	-	-
362.1	LNG Storage Tanks	26,011,485	2.570	668,495	2.326	605,152	0.385	100,235	2.045	531,926	0.385	100,235
363.0	Purification Equipment	6,587,513	2.570	169,299	2.447	161,198	0.211	13,874	2.269	149,470	0.211	13,874
363.1	Liquefaction Equipment	13,573,958	2.570	348,851	3.811	517,368	0.505	68,486	5.548	753,086	0.505	68,486
363.2	Vaporizing Equipment	17,400,571	2.570	447,195	3.231	562,178	0.331	57,656	3.778	657,450	0.331	57,656
363.3	Compressor Equipment	5,388,369	2.570	138,481	2.171	116,984	0.194	10,467	1.722	92,795	0.194	10,467
363.4	M & R Equipment	2,289,902	2.570	58,850	2.096	47,991	-	-	1.493	34,194	-	-
363.5	Other Equipment	23,436,866	2.570	602,327	3.208	751,949	0.367	86,102	3.559	834,182	0.367	86,102
	Total Storage Plant	117,070,405	2.570	3,008,709	2.788	3,263,529	0.288	336,820	2.990	3,500,707	0.288	336,820
	TRANSMISSION PLANT											
365.1	Land Rights	1,583,460	1.210	19,160	1.163	18,417	-	-	1.087	17,216	-	-
365.2	Rights of Way	6,540,804	1.210	79,144	1.079	70,581	-	-	0.951	62,205	-	-
366.0	M & R Structures	607,554	1.210	7,351	2.429	14,758	-	-	2.518	15,296	-	-
367.0	Mains	117,916,072	1.210	1,426,784	1.206	1,422,606	0.035	40,776	1.215	1,432,549	0.035	40,776
369.0	M & R Equipment	2,930,768	1.210	35,462	1.666	48,818	-	-	1.719	50,390	-	-
	Total Transmission Plant	129,578,658	1.210	1,567,902	1.216	1,575,180	0.031	40,776	1.218	1,577,656	0.031	40,776
	DISTRIBUTION PLANT											
374.1	Land Rights	9,848,725	2.230	219,627	1.523	149,987	-	-	1.337	131,695	-	-
375.0	Structures & Improvements	812,872	2.230	18,127	2.568	20,877	-	-	1.117	9,078	(0.436)	(3,547)
376.0	Mains	956,399,064	2.230	21,327,699	1.702	16,277,797	0.630	6,027,501	1.557	14,895,653	0.102	971,841
378.0	M & R Equipment	21,221,584	2.230	473,241	2.054	435,831	-	-	1.592	337,946	-	-
379.0	City Gate Equipment	7,978,344	2.230	177,917	2.059	164,304	-	-	1.711	136,506	-	-
380.0	Services	682,076,117	2.230	15,210,297	1.933	13,187,154	1.812	12,357,041	2.274	15,512,670	0.282	1,923,754
381.1	Meters	106,389,530	2.230	2,372,487	2.444	2,599,905	-	-	2.349	2,499,571	-	-
381.2	Automated Meters (ERTs)	39,770,575	2.230	886,884	7.717	3,068,906	-	-	18.730	7,448,954	-	-
381.3	Metreteks	3,015,217	2.230	67,239	3.223	97,190	-	-	3.838	115,716	-	-
382.0	Meter Installations	100,910,276	2.230	2,250,299	1.646	1,661,352	-	-	1.307	1,319,276	-	-
383.0	House Regulators	39,136,052	2.230	872,734	1.965	768,850	-	-	1.693	662,751	-	-
384.0	House Regulator Installations	36,402,747	2.230	811,781	1.410	513,292	-	-	0.997	363,013	-	-
385.0	Industrial M & R Equipment	1,343,479	2.230	29,960	2.060	27,682	-	-	1.728	23,210	-	-
386.0	Other Property on Customers' Premises	4,142,614	2.230	92,380	6.410	265,535	-	-	9.787	405,417	-	-
387.0	Other Equipment	4,537,505	2.230	101,186	3.280	148,808	-	-	3.554	161,278	-	-
	Total Distribution Plant	2,013,984,701	2.230	44,911,859	1.956	39,387,470	0.913	18,384,542	2.186	44,022,734	0.144	2,892,048
	GENERAL PLANT											
390.0	Structures & Improvements	17,214,355	10.630	1,829,886	2.234	384,624	-	-	0.535	92,157	-	-
391.1	Amortized Office Furniture & Equipment	1,738,717	10.630	184,826	1.170	20,336	-	-	3.975	69,116	-	-
391.2	Amortized Hardware	2,990,354	10.630	317,875	0.875	26,176	-	-	11.111	332,261	-	-
391.2	Deprec, Data Processing	61,759,906	10.630	6,565,078	12.664	7,821,329	-	-	15.432	9,530,834	-	-
393.0	Amortized Stores Equipment	416,730	10.630	44,298	2.898	12,076	-	-	2.237	9,323	-	-
394.0	Amortized Tools	6,852,093	10.630	728,377	0.949	65,048	-	-	1.571	107,645	-	-
394.0	Deprec. Tools	1,825,135	10.630	194,012	5.689	103,828	-	-	2.873	52,430	-	-
395.0	Amortized Laboratory Equipment	36,087	10.630	3,836	4.062	1,466	-	-	3.553	1,282	-	-
396.0	Power Operated Equipment	1,742,802	10.630	185,260	5.209	90,786	-	-	5.907	102,943	-	-
397.0	Communication Equipment	5,902,747	10.630	627,462	4.040	238,467	-	-	1.551	91,523	-	-
398.0	Amortized Misc. Equipment	1,494,882	10.630	158,906	1.783	26,650	-	-	3.311	49,489	-	-
398.0	Deprec. Miscellaneous Equipment	648,634	10.630	68,950	7.172	46,521	-	-	4.260	27,631	-	-
	Total General Plant	102,622,442	10.630	10,908,766	8.611	8,837,307	-	-	10.199	10,466,634	-	-
	Total Gas Plant	2,363,650,334	2.555	60,399,955	2.245	53,068,187	0.794	18,762,138	2.520	59,572,373	0.138	3,269,644
	Total Depreciation Expense							71,830,325				62,842,017
	Increase over Existing Rates							11,430,370				2,442,062

ATLANTA GAS LIGHT COMPANY
ACCOUNT NO.: 37600000
Distribution Mains

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS AMOUNT	REIMBURSEMENTS RATIO	SALVAGE AMOUNT	SALVAGE RATIO	COST OF REMOVAL AMOUNT	COST OF REMOVAL RATIO	NET SALVAGE W/REIMB.	NET SALVAGE W/O REIMB.
1989	0.	1785914.	0.	0.%	-417.	0.%	354707.	20.%	-20.%	-20.%
1990	0.	2142998.	0.	0.%	200.	0.%	273884.	13.%	-13.%	-13.%
1991	0.	2723791.	0.	0.%	22020.	1.%	580636.	21.%	-21.%	-21.%
1992	0.	2721992.	0.	0.%	24220.	1.%	788560.	29.%	-28.%	-28.%
1993	0.	2377264.	0.	0.%	21424.	1.%	843753.	35.%	-35.%	-35.%
1994	0.	2979009.	0.	0.%	20834.	1.%	642624.	22.%	-21.%	-21.%
1995	0.	2547273.	0.	0.%	0.	0.%	432964.	17.%	-17.%	-17.%
1996	0.	1951800.	0.	0.%	0.	0.%	378298.	19.%	-19.%	-19.%
1997	0.	2767315.	0.	0.%	0.	0.%	2889746.	104.%	-104.%	-104.%
1998	0.	2807421.	0.	0.%	0.	0.%	2680929.	95.%	-95.%	-95.%
1999	0.	2989921.	0.	0.%	0.	0.%	2321969.	78.%	-78.%	-78.%
2000	0.	12657418.	0.	0.%	0.	0.%	3477519.	27.%	-27.%	-27.%
2001	0.	2064209.	0.	0.%	0.	0.%	4502705.	218.%	-218.%	-218.%
2002	0.	2008698.	0.	0.%	0.	0.%	3541246.	176.%	-176.%	-176.%
2003	0.	754396.	0.	0.%	0.	0.%	2913662.	386.%	-386.%	-386.%
	0.	45279419.	0.	0.%	88281.	0.%	26623202.	59.%	-59.%	-59.%
3YR-BANDS										
1989-1991	0.	6652703.	0.	0.%	21803.	0.%	1209227.	18.%	-18.%	-18.%
1990-1992	0.	7588781.	0.	0.%	46440.	1.%	1643080.	22.%	-21.%	-21.%
1991-1993	0.	7823047.	0.	0.%	67664.	1.%	2212949.	28.%	-27.%	-27.%
1992-1994	0.	8078265.	0.	0.%	66478.	1.%	2274937.	28.%	-27.%	-27.%
1993-1995	0.	7903546.	0.	0.%	42258.	1.%	1919341.	24.%	-24.%	-24.%
1994-1996	0.	7478082.	0.	0.%	20834.	0.%	1453887.	19.%	-19.%	-19.%
1995-1997	0.	7266388.	0.	0.%	0.	0.%	3701009.	51.%	-51.%	-51.%
1996-1998	0.	7526536.	0.	0.%	0.	0.%	5948974.	79.%	-79.%	-79.%
1997-1999	0.	8564657.	0.	0.%	0.	0.%	7892644.	92.%	-92.%	-92.%
1998-2000	0.	18454760.	0.	0.%	0.	0.%	8480416.	46.%	-46.%	-46.%
1999-2001	0.	17711548.	0.	0.%	0.	0.%	10302192.	58.%	-58.%	-58.%
2000-2002	0.	16730325.	0.	0.%	0.	0.%	11521470.	69.%	-69.%	-69.%
2001-2003	0.	4827303.	0.	0.%	0.	0.%	10957613.	227.%	-227.%	-227.%
SHRINKING BAND										
1994-2003	0.	33527460.	0.	0.%	20834.	0.%	23781662.	71.%	-71.%	-71.%
1995-2003	0.	30548451.	0.	0.%	0.	0.%	23139038.	76.%	-76.%	-76.%
1996-2003	0.	28001178.	0.	0.%	0.	0.%	22706074.	81.%	-81.%	-81.%

ATLANTA GAS LIGHT COMPANY

ACCOUNT NO.: 37600000

Distribution Mains

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REIMB.	W/O REIMB.
1997-2003	0.	26049378.	0.	0.%	0.	0.%	22327776.	86.%	-86.%	-86.%
1998-2003	0.	23282063.	0.	0.%	0.	0.%	19438029.	83.%	-83.%	-83.%
1999-2003	0.	20474642.	0.	0.%	0.	0.%	16757100.	82.%	-82.%	-82.%
2000-2003	0.	17484721.	0.	0.%	0.	0.%	14435132.	83.%	-83.%	-83.%
2001-2003	0.	4827303.	0.	0.%	0.	0.%	10957613.	227.%	-227.%	-227.%
2002-2003	0.	2763094.	0.	0.%	0.	0.%	6454908.	234.%	-234.%	-234.%
2003	0.	754396.	0.	0.%	0.	0.%	2913662.	386.%	-386.%	-386.%

USE										
2000										
2003										

ATLANTA GAS LIGHT COMPANY

ACCOUNT NO.: 38000000

Services

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS AMOUNT	REIMBURSEMENTS RATIO	SALVAGE AMOUNT	SALVAGE RATIO	COST OF REMOVAL AMOUNT	COST OF REMOVAL RATIO	NET SALVAGE W/REIMB.	NET SALVAGE W/O REIMB.
1989	0.	2113231.	0.	0.%	1587.	0.%	739289.	35.%	-35.%	-35.%
1990	0.	2570444.	0.	0.%	35.	0.%	896690.	35.%	-35.%	-35.%
1991	0.	3188433.	0.	0.%	81.	0.%	1163113.	36.%	-36.%	-36.%
1992	0.	3559094.	0.	0.%	117.	0.%	1387266.	39.%	-39.%	-39.%
1993	0.	3801163.	0.	0.%	-447.	0.%	1576739.	41.%	-41.%	-41.%
1994	0.	3232602.	0.	0.%	0.	0.%	1626826.	50.%	-50.%	-50.%
1995	0.	2335222.	0.	0.%	3207.	0.%	1490878.	64.%	-64.%	-64.%
1996	0.	3139072.	0.	0.%	0.	0.%	2609230.	83.%	-83.%	-83.%
1997	0.	3037935.	0.	0.%	0.	0.%	1547791.	51.%	-51.%	-51.%
1998	0.	3444485.	0.	0.%	0.	0.%	1435945.	42.%	-42.%	-42.%
1999	0.	2440561.	0.	0.%	0.	0.%	1243680.	51.%	-51.%	-51.%
2000	0.	1853076.	0.	0.%	0.	0.%	1862610.	101.%	-101.%	-101.%
2001	0.	1426267.	0.	0.%	0.	0.%	2476033.	174.%	-174.%	-174.%
2002	0.	4283704.	0.	0.%	0.	0.%	1157474.	27.%	-27.%	-27.%
2003	0.	3357986.	0.	0.%	0.	0.%	2199886.	66.%	-66.%	-66.%
	0.	43783275.	0.	0.%	4580.	0.%	23413450.	53.%	-53.%	-53.%
3YR-BANDS										
1989-1991	0.	7872108.	0.	0.%	1703.	0.%	2799092.	36.%	-36.%	-36.%
1990-1992	0.	9317971.	0.	0.%	233.	0.%	3447069.	37.%	-37.%	-37.%
1991-1993	0.	10548690.	0.	0.%	-249.	0.%	4127119.	39.%	-39.%	-39.%
1992-1994	0.	10592859.	0.	0.%	-330.	0.%	4590832.	43.%	-43.%	-43.%
1993-1995	0.	9368987.	0.	0.%	2761.	0.%	4694443.	50.%	-50.%	-50.%
1994-1996	0.	8706896.	0.	0.%	3207.	0.%	5726934.	66.%	-66.%	-66.%
1995-1997	0.	8512229.	0.	0.%	3207.	0.%	5647898.	66.%	-66.%	-66.%
1996-1998	0.	9621492.	0.	0.%	0.	0.%	5592965.	58.%	-58.%	-58.%
1997-1999	0.	8922981.	0.	0.%	0.	0.%	4227416.	47.%	-47.%	-47.%
1998-2000	0.	7738122.	0.	0.%	0.	0.%	4542235.	59.%	-59.%	-59.%
1999-2001	0.	5719904.	0.	0.%	0.	0.%	5582323.	98.%	-98.%	-98.%
2000-2002	0.	7563047.	0.	0.%	0.	0.%	5496117.	73.%	-73.%	-73.%
2001-2003	0.	9067957.	0.	0.%	0.	0.%	5833393.	64.%	-64.%	-64.%
SHRINKING BAND										
1994-2003	0.	28550910.	0.	0.%	3207.	0.%	17650353.	62.%	-62.%	-62.%
1995-2003	0.	25318308.	0.	0.%	3207.	0.%	16023527.	63.%	-63.%	-63.%
1996-2003	0.	22983086.	0.	0.%	0.	0.%	14532649.	63.%	-63.%	-63.%

ATLANTA GAS LIGHT COMPANY

ACCOUNT NO.: 38000000

Services

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS AMOUNT	REIMBURSEMENTS RATIO	SALVAGE AMOUNT	SALVAGE RATIO	COST OF REMOVAL AMOUNT	COST OF REMOVAL RATIO	NET SALVAGE W/REIMB.	NET SALVAGE W/O REIMB.
1997-2003	0.	19844014.	0.	0.%	0.	0.%	11923419.	60.%	-60.%	-60.%
1998-2003	0.	16806079.	0.	0.%	0.	0.%	10375628.	62.%	-62.%	-62.%
1999-2003	0.	13361594.	0.	0.%	0.	0.%	8939683.	67.%	-67.%	-67.%
2000-2003	0.	10921033.	0.	0.%	0.	0.%	7696003.	70.%	-70.%	-70.%
2001-2003	0.	9067957.	0.	0.%	0.	0.%	5833393.	64.%	-64.%	-64.%
2002-2003	0.	7641690.	0.	0.%	0.	0.%	3357360.	44.%	-44.%	-44.%
2003	0.	3357986.	0.	0.%	0.	0.%	2199886.	66.%	-66.%	-66.%

USE										
2000										
2003										

ATLANTA GAS LIGHT COMPANY
DEVELOPMENT OF FUTURE DEPRECIATION ACCRUALS
INADEQUACY OF KING METHODOLOGY

AGLC EXHIBIT NO. ____ (DSR-6)

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Year	Ending Balance	ARL = 43.51 Retmts.	Average Balance	@ 1.557% Accrual	@ 30% COR	Ending Bk Rsv	@ 0.102% COR Accrual	COR Rsv
	$	$	$	$	$	$	$	$
2004	956,399,064					308,289,209		24,663,167
2005	945,408,498	10,990,566	950,903,781	14,805,572	3,297,170	312,104,215	969,922	22,335,919
2006	934,417,932	10,990,566	939,913,215	14,634,449	3,297,170	315,748,097	958,711	19,997,461
2007	923,427,366	10,990,566	928,922,649	14,463,326	3,297,170	319,220,857	947,501	17,647,792
2008	912,436,800	10,990,566	917,932,083	14,292,203	3,297,170	322,522,493	936,291	15,286,913
2009	901,446,233	10,990,566	906,941,516	14,121,079	3,297,170	325,653,007	925,080	12,914,823
2010	890,455,667	10,990,566	895,950,950	13,949,956	3,297,170	328,612,397	913,870	10,531,523
2011	879,465,101	10,990,566	884,960,384	13,778,833	3,297,170	331,400,664	902,660	8,137,013
2012	868,474,535	10,990,566	873,969,818	13,607,710	3,297,170	334,017,808	891,449	5,731,293
2013	857,483,969	10,990,566	862,979,252	13,436,587	3,297,170	336,463,829	880,239	3,314,362
2014	846,493,403	10,990,566	851,988,686	13,265,464	3,297,170	338,738,726	869,028	886,220
2015	835,502,837	10,990,566	840,998,120	13,094,341	3,297,170	340,842,501	857,818	(1,553,132)
2016	824,512,271	10,990,566	830,007,554	12,923,218	3,297,170	342,775,152	846,608	(4,003,694)
2017	813,521,704	10,990,566	819,016,987	12,752,094	3,297,170	344,536,681	835,397	(6,465,466)
2018	802,531,138	10,990,566	808,026,421	12,580,971	3,297,170	346,127,086	824,187	(8,938,449)
2019	791,540,572	10,990,566	797,035,855	12,409,848	3,297,170	347,546,368	812,977	(11,422,642)
2020	780,550,006	10,990,566	786,045,289	12,238,725	3,297,170	348,794,527	801,766	(13,918,046)
2021	769,559,440	10,990,566	775,054,723	12,067,602	3,297,170	349,871,563	790,556	(16,424,660)
2022	758,568,874	10,990,566	764,064,157	11,896,479	3,297,170	350,777,476	779,345	(18,942,484)
2023	747,578,308	10,990,566	753,073,591	11,725,356	3,297,170	351,512,266	768,135	(21,471,519)
2024	736,587,742	10,990,566	742,083,025	11,554,233	3,297,170	352,075,932	756,925	(24,011,764)
2025	725,597,175	10,990,566	731,092,458	11,383,110	3,297,170	352,468,476	745,714	(26,563,220)
2026	714,606,609	10,990,566	720,101,892	11,211,986	3,297,170	352,689,896	734,504	(29,125,886)
2027	703,616,043	10,990,566	709,111,326	11,040,863	3,297,170	352,740,193	723,294	(31,699,762)
2028	692,625,477	10,990,566	698,120,760	10,869,740	3,297,170	352,619,367	712,083	(34,284,849)
2029	681,634,911	10,990,566	687,130,194	10,698,617	3,297,170	352,327,418	700,873	(36,881,146)
2030	670,644,345	10,990,566	676,139,628	10,527,494	3,297,170	351,864,346	689,662	(39,488,653)
2031	659,653,779	10,990,566	665,149,062	10,356,371	3,297,170	351,230,151	678,452	(42,107,371)
2032	648,663,213	10,990,566	654,158,496	10,185,248	3,297,170	350,424,833	667,242	(44,737,299)
2033	637,672,646	10,990,566	643,167,930	10,014,125	3,297,170	349,448,391	656,031	(47,378,438)
2034	626,682,080	10,990,566	632,177,363	9,843,002	3,297,170	348,300,827	644,821	(50,030,787)
2035	615,691,514	10,990,566	621,186,797	9,671,878	3,297,170	346,982,139	633,611	(52,694,346)
2036	604,700,948	10,990,566	610,196,231	9,500,755	3,297,170	345,492,328	622,400	(55,369,116)
2037	593,710,382	10,990,566	599,205,665	9,329,632	3,297,170	343,831,394	611,190	(58,055,096)
2038	582,719,816	10,990,566	588,215,099	9,158,509	3,297,170	341,999,337	599,979	(60,752,286)
2039	571,729,250	10,990,566	577,224,533	8,987,386	3,297,170	339,996,157	588,769	(63,460,687)
2040	560,738,684	10,990,566	566,233,967	8,816,263	3,297,170	337,821,854	577,559	(66,180,298)
2041	549,748,117	10,990,566	555,243,401	8,645,140	3,297,170	335,476,427	566,348	(68,911,120)
2042	538,757,551	10,990,566	544,252,834	8,474,017	3,297,170	332,959,878	555,138	(71,653,152)
2043	527,766,985	10,990,566	533,262,268	8,302,894	3,297,170	330,272,205	543,928	(74,406,394)
2044	516,776,419	10,990,566	522,271,702	8,131,770	3,297,170	327,413,410	532,717	(77,170,847)
2045	505,785,853	10,990,566	511,281,136	7,960,647	3,297,170	324,383,491	521,507	(79,946,510)
2046	494,795,287	10,990,566	500,290,570	7,789,524	3,297,170	321,182,449	510,296	(82,733,383)
2047	483,804,721	10,990,566	489,300,004	7,618,401	3,297,170	317,810,284	499,086	(85,531,467)
2048	472,814,155	10,990,566	478,309,438	7,447,278	3,297,170	314,266,995	487,876	(88,340,761)
2049	461,823,588	10,990,566	467,318,872	7,276,155	3,297,170	310,552,584	476,665	(91,161,266)
2050	450,833,022	10,990,566	456,328,305	7,105,032	3,297,170	306,667,050	465,455	(93,992,981)
2051	439,842,456	10,990,566	445,337,739	6,933,909	3,297,170	302,610,392	454,244	(96,835,906)
2052	428,851,890	10,990,566	434,347,173	6,762,785	3,297,170	298,382,612	443,034	(99,690,042)
Subtotals		527,547,174		517,640,577	158,264,152		33,910,943	

ATLANTA GAS LIGHT COMPANY
DEVELOPMENT OF FUTURE DEPRECIATION ACCRUALS
INADEQUACY OF KING METHODOLOGY

AGLC EXHIBIT NO. ____ (DSR-6)

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Year	Ending Balance	ARL = 43.51 Retmts.	Average Balance	@ 1.557% Accrual	@ 30% COR	Ending Bk Rsv	@ 0.102% COR Accrual	COR Rsv
	$	$	$	$	$	$	$	$
2053	417,861,324	10,990,566	423,356,607	6,591,662	3,297,170	293,983,708	431,824	(102,555,388)
2054	406,870,758	10,990,566	412,366,041	6,420,539	3,297,170	289,413,681	420,613	(105,431,944)
2055	395,880,192	10,990,566	401,375,475	6,249,416	3,297,170	284,672,531	409,403	(108,319,711)
2056	384,889,626	10,990,566	390,384,909	6,078,293	3,297,170	279,760,258	398,193	(111,218,688)
2057	373,899,059	10,990,566	379,394,343	5,907,170	3,297,170	274,676,862	386,982	(114,128,876)
2058	362,908,493	10,990,566	368,403,776	5,736,047	3,297,170	269,422,342	375,772	(117,050,274)
2059	351,917,927	10,990,566	357,413,210	5,564,924	3,297,170	263,996,700	364,561	(119,982,882)
2060	340,927,361	10,990,566	346,422,644	5,393,801	3,297,170	258,399,934	353,351	(122,926,701)
2061	329,936,795	10,990,566	335,432,078	5,222,677	3,297,170	252,632,046	342,141	(125,881,730)
2062	318,946,229	10,990,566	324,441,512	5,051,554	3,297,170	246,693,034	330,930	(128,847,970)
2063	307,955,663	10,990,566	313,450,946	4,880,431	3,297,170	240,582,899	319,720	(131,825,420)
2064	296,965,097	10,990,566	302,460,380	4,709,308	3,297,170	234,301,641	308,510	(134,814,080)
2065	285,974,531	10,990,566	291,469,814	4,538,185	3,297,170	227,849,260	297,299	(137,813,951)
2066	274,983,964	10,990,566	280,479,247	4,367,062	3,297,170	221,225,756	286,089	(140,825,032)
2067	263,993,398	10,990,566	269,488,681	4,195,939	3,297,170	214,431,128	274,878	(143,847,323)
2068	253,002,832	10,990,566	258,498,115	4,024,816	3,297,170	207,465,378	263,668	(146,880,825)
2069	242,012,266	10,990,566	247,507,549	3,853,693	3,297,170	200,328,504	252,458	(149,925,537)
2070	231,021,700	10,990,566	236,516,983	3,682,569	3,297,170	193,020,508	241,247	(152,981,459)
2071	220,031,134	10,990,566	225,526,417	3,511,446	3,297,170	185,541,388	230,037	(156,048,592)
2072	209,040,568	10,990,566	214,535,851	3,340,323	3,297,170	177,891,145	218,827	(159,126,935)
2073	198,050,002	10,990,566	203,545,285	3,169,200	3,297,170	170,069,779	207,616	(162,216,489)
2074	187,059,435	10,990,566	192,554,718	2,998,077	3,297,170	162,077,290	196,406	(165,317,253)
2075	176,068,869	10,990,566	181,564,152	2,826,954	3,297,170	153,913,677	185,195	(168,429,228)
2076	165,078,303	10,990,566	170,573,586	2,655,831	3,297,170	145,578,942	173,985	(171,552,412)
2077	154,087,737	10,990,566	159,583,020	2,484,708	3,297,170	137,073,084	162,775	(174,686,807)
2078	143,097,171	10,990,566	148,592,454	2,313,585	3,297,170	128,396,102	151,564	(177,832,413)
2079	132,106,605	10,990,566	137,601,888	2,142,461	3,297,170	119,547,997	140,354	(180,989,229)
2080	121,116,039	10,990,566	126,611,322	1,971,338	3,297,170	110,528,769	129,144	(184,157,255)
2081	110,125,473	10,990,566	115,620,756	1,800,215	3,297,170	101,338,418	117,933	(187,336,492)
2082	99,134,906	10,990,566	104,630,189	1,629,092	3,297,170	91,976,944	106,723	(190,526,939)
2083	88,144,340	10,990,566	93,639,623	1,457,969	3,297,170	82,444,347	95,512	(193,728,596)
2084	77,153,774	10,990,566	82,649,057	1,286,846	3,297,170	72,740,627	84,302	(196,941,464)
2085	66,163,208	10,990,566	71,658,491	1,115,723	3,297,170	62,865,783	73,092	(200,165,542)
2086	55,172,642	10,990,566	60,667,925	944,600	3,297,170	52,819,817	61,881	(203,400,831)
2087	44,182,076	10,990,566	49,677,359	773,476	3,297,170	42,602,727	50,671	(206,647,330)
2088	33,191,510	10,990,566	38,686,793	602,353	3,297,170	32,214,514	39,461	(209,905,039)
2089	22,200,944	10,990,566	27,696,227	431,230	3,297,170	21,655,179	28,250	(213,173,959)
2090	11,210,377	10,990,566	16,705,661	260,107	3,297,170	10,924,720	17,040	(216,454,089)
2091	219,811	10,990,566	5,715,094	88,984	3,297,170	23,137	5,829	(219,745,429)
Subtotals		428,632,079		130,272,605	128,589,624		8,534,236	
Totals		956,179,253		647,913,181	286,853,776		42,445,179	

BEFORE THE CORPORATION COMMISSION OF THE STATE OF OKLAHOMA

IN THE MATTER OF THE APPLICATION OF OKLAHOMA NATURAL GAS COMPANY, A DIVISION OF ONEOK, INC., FOR A REVIEW AND CHANGE OR MODIFICATION IN ITS RATES, CHARGES, TARIFFS, AND TERMS AND CONDITIONS OF SERVICE	)))))))	CAUSE NO. PUD 200400610

DIRECT TESTIMONY

OF

DONALD S. ROFF

ON BEHALF OF

OKLAHOMA NATURAL GAS COMPANY

DELOITTE & TOUCHE LLP
JPMorgan Chase Tower
2200 Ross Ave., Suite 1600
Dallas, TX 75201-6778

JANUARY 28, 2005

EXECUTIVE SUMMARY

Due to the technical nature of the subject of depreciation, this Executive Summary has been provided to highlight Oklahoma Natural Gas Company's ("Oklahoma Natural" or "the Company") depreciation request in this proceeding in simple and direct terms. Based upon a depreciation study that I conducted as of December 31, 2002, new mortality characteristics were selected to be used in the calculation of depreciation expense provisions. Mortality characteristics encompass average service life, retirement dispersion (the scattering of retirements by age around the average service life), and net salvage (net salvage is the difference between gross salvage and cost of removal; when cost of removal exceeds gross salvage, negative net salvage occurs). In general, average service lives have declined (increasing annual depreciation expense) and net salvage has become slightly more negative (also increasing annual depreciation expense).

I am also recommending that Oklahoma Natural adopt the Equal Life Group ("ELG") procedure. In depreciation parlance, the depreciation procedure refers to the grouping of assets for depreciation rate calculation purposes. The ELG procedure groups together asset categories of equal lives and depreciates them over their respective lives. The ELG procedure recognizes that assets within a depreciable group have different lives, and uses the average service life and retirement dispersions to develop these equal life group elements. The benefit to Oklahoma Natural and its customers is that the recording of depreciation expense matches the consumption of assets. This is a desirable outcome from both an accounting principles standpoint, as well as from the standpoint of customer equity, a ratemaking principle.

As part of my depreciation study, I calculated a theoretical reserve amount for each asset category. A theoretical reserve is a measure of what would have been accumulated in the book reserve had the study parameters been in effect for all time. In effect, the theoretical reserve is the difference between the total amount to be accumulated through depreciation charges (plant balance adjusted for net salvage) and the sum of future accruals. In my study, the theoretical reserve exceeds the book reserve by over $23 million. Compared to the test year depreciation expense request of $40 million, this difference is not cause for concern. In fact, the remaining life depreciation rates that I recommended allocate this difference to future periods over the remaining lives of the respective asset categories.

In total, based upon July 31, 2004 test-year balances, my recommended depreciation rates produce an increase in annual depreciation expense of approximately $9.7 million compared to the level of annual depreciation expense developed by application of the existing depreciation rates (see Exhibit DSR-5). Approximately one-quarter of this difference is due equally to changes in average service lives, changes in net salvage allowances, a change in depreciation procedure, and the reserve position. My study was based upon sound analysis and evaluation and produces a fair and reasonable level of annual depreciation expense.

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

A. My name is Donald S. Roff and I am a Director with the accounting firm of Deloitte & Touche LLP. My business address is JPMorgan Chase Tower, 2200 Ross Avenue, Suite 1600, Dallas, Texas 75201-6778.

Q. PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE.

A. My business experience is described on Exhibit DSR-1.

Q. HAVE YOU EVER TESTIFIED BEFORE THIS OR ANY OTHER REGULATORY BODY?

A. Yes. A list of my regulatory appearances is summarized on Exhibit DSR-2.

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

A. Yes. In addition to the above-described Exhibits, I am sponsoring Exhibit DSR-3, which presents the depreciation study report prepared for Oklahoma Natural Gas Company ("the Company" or "Oklahoma Natural"), which includes a discussion of depreciation accounting principles, describes the depreciation study methodology, summarizes the study results and itemizes recommendations related to depreciation rate and depreciation accounting. I am also sponsoring Exhibit DSR-4, which presents a summary comparison of changes in annual depreciation by cause.

Q. WERE THESE EXHIBITS PREPARED BY YOU OR UNDER YOUR DIRECTION AND SUPERVISION?

A. Yes, they were.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I have conducted a depreciation study of Oklahoma Natural's depreciable gas properties as of December 31, 2002, and have made recommendations for revised depreciation rates, as necessary, for inclusion in the Company's revenue requirement. Exhibit DSR-3 is the report of my findings and recommendations. The purpose of my testimony is to present the study results, describe the depreciation study process and recommend appropriate depreciation rates for use by Oklahoma Natural reflecting depreciation accounting principles and regulatory rules. I will show that my study produces a fair and reasonable level of depreciation expense utilizing sound accounting practices and principles. I will demonstrate that the Equal Life Group ("ELG") procedure better comports with the matching principle of accounting and reduces total lifetime customer revenue requirements.

Q. WHAT WERE YOUR FINDINGS AND RECOMMENDATIONS?

A. I found that changes were needed to the mortality characteristics for nearly every asset category resulting in revised depreciation rates. A summary comparison of the existing and recommended depreciation rates by functional category follows:

Function	Existing	Recommended
	%	%
Transmission	1.86	1.21
Distribution	2.53	3.55
General	7.94	8.73
Total Gas Plant	2.87	3.74

Q. HAVE YOU QUANTIFIED THE IMPACT ON ANNUAL DEPRECIATION DUE TO YOUR RECOMMENDED CHANGES?

A. Yes. The above summary was taken from Schedule 1 of Exhibit DSR-3. Using December 31, 2002 depreciable balances, the effect of the recommended depreciation rates on annual depreciation expense is an increase of about $8.9 million. However, this does not represent the pro forma depreciation expense increase captured in Oklahoma Natural's pending general rate change filing because the Company's pro forma depreciation expense is a function of plant balances as of January 31, 2005 inclusive of corporate support services plant investments allocated to Oklahoma Natural from ONEOK Corporate. The pro forma adjustment developed to support the Company's total pro forma depreciation expense is E-15.

Q. WHAT ARE THE PRIMARY FORCES THAT ARE DRIVING THIS CHANGE IN ANNUAL DEPRECIATION EXPENSE?

A. The change in annual depreciation expense is affected almost equally by four separate factors: changes in average service life; changes in net salvage; the effect of reserve position and a change in depreciation procedure. The interaction of these four factors also makes up a portion of the difference. Exhibit DSR-4 (will be updated to reflect 1/31/2005 balances as they are provided) has been prepared to summarize the change in annual depreciation by cause. Decreases in average service lives, primarily in the Distribution function, produce an increase in annual depreciation expense of about $1.8 million. More negative net salvage, also in the Distribution function, produces an increase in annual depreciation expense of about $1.3 million. Prior depreciation was too little relative to what it would have been had the current study parameters been in use, resulting in an increase in annual depreciation expense of about $1.9 million. Use of the Equal Life Group ("ELG") procedure increases annual

depreciation expense by about $1.4 million. The effect of depreciation procedure will be discussed later in my testimony.

Q. CAN YOU EXPLAIN THE COLUMN ENTITLED "INTER-RELATIONS"?

A. Yes. The total change in annual depreciation expense from the level of annual depreciation expense developed by application of the existing, approved rates as shown on Exhibit DSR-4 is $8.9 million. This increase is a function of changes in average service life parameters, changes in net salvage allowances, changes in the theoretical level of accumulated depreciation, changes in the depreciation procedure and the interaction of each of these forces. Assume that we have an asset category with a balance of $1,000. Assume that my recommendation is an average service life of 25 years and the existing average service life is 20 years. Further assume that I recommend a positive 10% net salvage factor and the existing net salvage factor is positive 20%. The difference in annual depreciation due to the ***increase*** in average service life is ($1,000/25 = $40) minus ($1,000/20 = ($50), for a ***decrease*** of $10. The difference due to the change in net salvage would be calculated as ((100%-10%)/25 = 3.6%) minus ((100%-20%)/25 = 3.2%), times the $1,000 balance, or an ***increase*** of $4. The existing depreciation rate would be ((100%-20%)/20), or 4.00%. My recommended depreciation rate would be ((100%-10%)/25), or 3.60%. The total change in depreciation expense is a ***decrease*** of $4. Therefore, the components of the depreciation change are: a ***decrease*** of $10, for an ***increase*** average service life; an ***increase*** of $4 for less positive net salvage; a total ***decrease*** of $4; and an inter-relationship effect of positive $2, representing the combination of change in life and change in net salvage. The inter-relationships magnify as the number of changing elements increases.

Q. WHAT DOES THE COLUMN ENTITLED "CHANGE IN PROCEDURE" REFER TO?

A. The depreciation procedure refers to the grouping of assets for depreciation rate calculation purposes. The nature of the group varies with the form of the depreciable base. The most basic depreciable group is a single item. Because utilities have thousands of items, group procedures are utilized. In the past a broad group procedure or Average Life Group ("ALG") procedure has been used. Other types of groups include vintage group and Equal Life Group ("ELG"). The ELG procedure will be discussed in detail later in my testimony.

Q. WHAT IS DEPRECIATION?

A. The most widely recognized accounting definition of depreciation is that of the American Institute of Certified Public Accountants, which states:

> Depreciation accounting is a system of accounting which aims to distribute the cost or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner. It is a process of allocation, not of valuation.[1]

Q. WHAT IS THE SIGNIFICANCE OF THIS DEFINITION?

A. This definition of depreciation accounting forms the accounting framework under which my depreciation study was conducted. Several aspects of this definition are particularly significant. Salvage (net salvage) is to be recognized. The allocation of costs is over the useful life of the assets. Grouping of assets is permissible. Depreciation accounting is a process of cost allocation; it is not a valuation process. And the cost allocation must be both systematic and rational.

[1] Accounting Research Bulletin No. 43, Chapter 9, Paragraph 5 (June 1953).

Q. PLEASE EXPLAIN THE IMPORTANCE OF THE TERMS "SYSTEMATIC AND RATIONAL".

A. Systematic implies the use of a formula, and the formula used for calculating the recommended depreciation rates is shown on Page 7 of Exhibit DSR-3. Rational means that the pattern of depreciation, in this case, the depreciation rate itself, must match either the pattern of revenues produced by the asset, or match the consumption of the asset. Since revenues are determined through regulation and are expected to continue to be so determined, asset consumption must be directly measured and reflected in depreciation rates. This measurement of asset consumption is accomplished by conducting a depreciation study.

Q. ARE THERE OTHER DEFINITIONS OF DEPRECIATION?

A. Yes. The Federal Energy Regulatory Commission (FERC) Uniform System of Accounts (USOA), followed by the Company, provides a series of definitions related to depreciation as shown on Pages 3 and 4 of Exhibit DSR-3. These definitions of depreciation make reference to asset consumption, and therefore relate very well to the accounting framework for depreciation. These definitions form the regulatory framework under which my depreciation study was conducted. I recommend remaining life rates, which depreciation rates provide for full recovery of net investment adjusted for net salvage over the future useful life of each asset category, and are consistent with past practice.

Q. WHAT ARE MORTALITY CHARACTERISTICS?

A. Mortality characteristics are the parameters necessary to calculate depreciation rates. They include average service life, retirement dispersion defined by Iowa-type curves and net salvage factors.

Q. WHAT ARE IOWA-TYPE CURVES?

A. The Iowa-type curves were devised empirically over 60 years ago by the Engineering Research Institute at what is now Iowa State University to provide a set of standard definitions of retirement dispersion. Retirement dispersion merely recognizes that groups of assets are comprised of individual assets having different lives, i.e., each asset retires at a differing age. Retirement dispersion is the scattering of retirements by age for the individual assets around the average service life for the entire group of assets. Standard dispersion patterns are useful and necessary because they make calculations of the remaining life of existing property possible and allow life characteristics to be compared.

The Engineering Research Institute collected retirement information on many types of industrial and utility property and devised empirical curves that matched the range of patterns found. A total of 18 curves were defined. There were six left-skewed, seven symmetrical and five right-skewed curves, varying from wide to narrow dispersion patterns. The Iowa-curve naming convention allows the analyst to relate easily to the patterns. The left-skewed curves are known as the "L series", the symmetrical as the "S series" and the right-skewed as the "R series." A number identifies the range of dispersion. A low number represents a wide pattern and a high number a narrow pattern. The combination of one letter and one number defines a unique dispersion

pattern. There is also an "SQ" pattern that has no dispersion and is the equivalent of an amortization period, that is, all assets survive for their entire average life. This pattern has been used for certain General Plant accounts.

Q. PLEASE DISCUSS THE DEPRECIATION STUDY PROCESS.

A. A depreciation study consists of four distinct yet inter-related phases: *data collection, analysis, evaluation and calculation.* Data collection refers to the gathering of historical investment activity and this information was provided by the Company. Analysis refers to the statistical processing of the data gathered in phase one. In my study there were two separate analyses performed – one for the determination of life and one for the determination of net salvage. The analyses were conducted by me or under my supervision. Evaluation refers to the development of an understanding of asset history and its applicability to the surviving asset base into the future. This phase also gives consideration to changing asset base and Company plans and expectations. The evaluation phase was conducted by me with the assistance of my staff and the input from Company personnel. The calculation phase utilizes the information and results determined in the first three phases, in the computation of recommended depreciation rates, and were conducted by Deloitte personnel.

Q. PLEASE DISCUSS THE LIFE ANALYSIS PROCEDURE FOR TRANSMISSION, DISTRIBUTION AND GENERAL PLANT.

A. For all asset categories, the age of both surviving and retired property is known, and actuarial analysis was utilized for these property groups. Actuarial analysis is described on Pages 9 and 10 of Exhibit DSR-3

Q. HOW WERE THE IOWA CURVE SHAPES AND AVERAGE SERVICE LIFE SELECTIONS MADE?

A. Summaries of the individual asset category life analysis indications were prepared and discussed with Oklahoma Natural personnel. Anomalies and trends were identified and engineering and operations input was requested where necessary. The types of assets surviving and retiring were discussed. A single average service life and Iowa curve was selected for each asset category reflecting the combination of the historical results and the additional information obtained from the engineering, accounting and operations personnel. This process is a part of the Evaluation phase of the depreciation study.

Q. PLEASE EXPLAIN THE SALVAGE AND COST OF REMOVAL ANALYSIS.

A. Annual salvage amounts, cost of removal and retirements were provided by functional group for the period 1983 though 2002. Annual salvage, cost of removal, and net salvage percentages were calculated by dividing by the retirement amounts. Rolling and shrinking bands were also developed to illustrate trends. A rolling band uses a constant number of experience years and moves forward through time, e.g., 1983-1985, 1984-1986, etc. A shrinking band successively eliminates one experience year as one moves through time, e.g., 1993-2002, 1994-2002, etc. The purpose of both processes is to identify trends.

Q. WHAT ARE THE RESULTS OF YOUR DEPRECIATION STUDY FOR TRANSMISSION PLANT?

A. For the Transmission Plant function, the depreciation rate decreases from 1.86% to 1.21%. A portion of the decrease in depreciation rate is attributable to the reserve position, whereby the accumulated depreciation to date is higher than it would have been, presuming that assets retiring in the future follow the selected patterns. The net dollar impact of the change in depreciation rate is a decrease in annual depreciation expense of approximately $480,000.

Q. WHAT ARE THE RESULTS OF YOUR DEPRECIATION STUDY FOR DISTRIBUTION PLANT?

A. For the Distribution Plant function, the depreciation rate increases from 2.53% to 3.55%. Based upon a review of the prior depreciation study, both average service lives and net salvage factors have changed. The increase in annual depreciation expense is attributable almost equally to decreases in average service lives, decreases in net salvage (more negative), reserve position and the change in depreciation procedure. The impact of the change in rate is an increase in annual depreciation expense of approximately $8.8 million.

Q. WHAT ARE YOUR DEPRECIATION STUDY RESULTS FOR GENERAL PLANT?

A. The composite depreciation rate increases from 7.94% to 8.73%. In general, average service lives have been shortened and the accumulated depreciation balance is less than the theoretical reserve. The impact of the change in rate is an increase in annual depreciation expense of approximately $560,000.

Q. WHAT DEPRECIATION PROCEDURE ARE YOU RECOMMENDING IN THIS PROCEEDING?

A. I am recommending the Equal Life Group ("ELG") procedure.

Q. WHY ARE YOU RECOMMENDING THE ELG PROCEDURE?

A. The ELG procedure provides the best matching of the recording of depreciation expense with the consumption of the depreciable assets. Such a matching is desirable from both an accounting and a regulatory perspective. The actual decision regarding the use of the ELG procedure was made by Oklahoma Natural management, after a careful review of the concepts, advantages and shortcomings of various depreciation methodologies.

Q. PLEASE BRIEFLY EXPLAIN THE ELG PROCEDURE.

A. Certainly. The ELG procedure merely recognizes that assets within a group have different service lives. This fact has been given recognition by adoption of retirement dispersion in concert with an average service life selection for each depreciable asset category.

Q. CAN YOU PROVIDE A SIMPLE EXAMPLE OF THE DIFFERENCE BETWEEN THE ALG PROCEDURE AND THE ELG PROCEDURE?

A. Yes, I can. Assume that we have a two unit asset group. Each unit costs $10. Asset "A" has a life of 2 years, and Asset "B" has a life of 8 years. The average service life of this group is 5 years. For purposes of this example, we shall ignore net salvage. The following Table illustrates the difference between the ELG procedure and the Average Life Group ("ALG") procedure:

			ALG						ELG			
			Accrual			EOY Reserve			Accrual			EOY Reserve
	Asset "A"	Asset "B"	Totals	Asset "A"	Asset "B"	Totals	Asset "A"	Asset "B"	Totals	Asset "A"	Asset "B"	Totals
1	2.00	2.00	4.00	2.00	2.00	4.00	5.00	1.25	6.25	5.00	1.25	6.25
2	2.00	2.00	4.00	(6.00)	4.00	(2.00)	5.00	1.25	6.25	0.00	2.50	2.50
3		2.00	2.00	(6.00)	6.00	0.00		1.25	1.25		3.75	3.75
4		2.00	2.00	(6.00)	8.00	2.00		1.25	1.25		5.00	5.00
5		2.00	2.00	(6.00)	10.00	4.00		1.25	1.25		6.25	6.25
6		2.00	2.00	(6.00)	12.00	6.00		1.25	1.25		7.50	7.50
7		2.00	2.00	(6.00)	14.00	8.00		1.25	1.25		8.75	8.75
8		2.00	2.00	(6.00)	6.00	0.00		1.25	1.25		0.00	0.00

Q. WHAT DOES THIS EXAMPLE ILLUSTRATE?

A. First and foremost, this example illustrates that the ELG procedure produces a better matching of the pattern of depreciation relative to how the assets are consumed. This improved matching is desirable from both a regulatory and an accounting perspective. This example also illustrates a number of facts. There is retirement dispersion, which is recognized in the determination of average service life. Neither asset has a life equal to the average service life. There is a deferral of depreciation under the ALG procedure. The longer lived asset (Asset "B") must accumulate more depreciation to make up for the depreciation shortfall for the shorter lived asset (Asset "A"). This is evident by the reserve position at the end of Period 2

for the ALG procedure. It is negative! The depreciation under the ELG procedure reflects the life of each asset appropriately. Fifth, the ELG depreciation rate changes over time as the asset mix changes.

Q. IF THE DEPRECIATION RATE CHANGES OVER TIME, HOW WOULD THIS CHANGE BE RECOGNIZED IN FUTURE YEARS?

A. For this simple example, the depreciation rate does change over time to reflect the remaining mix of assets and associated equal life at every point in time. In fact, the depreciation rate only changes once, at the beginning of the third year. For Oklahoma Natural, we are dealing with large, continuous asset groups, with many hundreds of assets and a constantly changing asset mix. As additions are made and retirements are recorded, the composite depreciation changes very little, if at all. For example, for Account 376, Distribution – Mains, the depreciation rate for the youngest vintage (2002) is 2.34%, as seen on the attached Exhibit DSR-6; the depreciation rate for the oldest vintage (1923) is 1.24%. Thus the depreciation rate declines 110 basis points over roughly 80 years. Moreover, as assets are added and replaced, and existing assets are retired, the composite depreciation rate changes very little, if at all. Even so, periodic prospective adjustments can be made in future rate filings. I have recommended to Oklahoma Natural management that periodic depreciation studies be conducted.

Q. DOES THE USE OF THE ELG PROCEDURE VERSUS THE ALG PROCEDURE HAVE ANY IMPACT ON REVENUE REQUIREMENTS?

A. Yes. The above example is expanded below to include the impact on revenue requirements due strictly to depreciation expense and return:

	ALG			ELG		
Period	Rate Base	Return @ 12%	Rev. Reqs.	Rate Base	Return @ 12%	Rev. Reqs.
1	20.00	2.40	6.40	20.00	2.40	8.65
2	16.00	1.92	5.92	13.75	1.65	7.90
3	12.00	1.44	3.44	7.50	0.90	2.15
4	10.00	1.20	3.20	6.25	0.75	2.00
5	8.00	0.96	2.96	5.00	0.60	1.85
6	6.00	0.72	2.72	3.75	0.45	1.70
7	4.00	0.48	2.48	2.50	0.30	1.55
8	2.00	0.24	2.24	1.25	0.15	1.40
Totals			29.36			27.20

Thus, the ELG procedure produces a lower, total-life revenue requirement of approximately 7.5% in this example.

Q. THIS IS A RATHER LIMITED LIFE EXAMPLE. DOES THE SAME RELATIONSHIP HOLD TRUE FOR THE LONG-LIVED ASSETS OF OKLAHOMA NATURAL?

A. Yes. As a matter of fact, the difference is more pronounced the longer the average service life is. This is because the return component has a longer time to build, making the absolute contribution to return greater under ALG than under ELG.

Q. WHAT ARE THE BENEFITS OF THE ELG PROCEDURE?

A. First and foremost, the individual asset categories are depreciated over their respective lives. This is consistent with item depreciation, and this allocation of cost provides the most appropriate matching between the recording of depreciation and asset consumption. Second, the ELG procedure gives appropriate recognition to the fact that assets within a group retire at different ages. Third, the ELG procedure produces a lower total life revenue requirement to the benefit of customers. Fourth, the ELG procedure produces a systematic and rational allocation of cost in a straight-line method over the life of each asset, consistent with generally accepted accounting principles ("GAAP").

Q. ARE THERE CRITICISMS OF THE ELG PROCEDURE?

A. Yes, there are, but in my view these criticisms are either misplaced or asserted due to a lack of understanding of the ELG procedure.

Q. WHAT ARE THESE CRITICISMS AND WHY ARE THEY MISPLACED OR ASSERTED DUE TO MISUNDERSTANDING?

A. One common criticism is that the ELG procedure is not widely accepted. This may be true for certain segments of the utility environment, but should certainly **not** be used as a basis for denying its use. The beneficial features of the ELG procedure as described above should be the basis for its acceptance and approval. A second common criticism is that the ELG procedure results in accelerated depreciation. This is patently incorrect and is demonstrated in the above example. While the ELG depreciation rate in early years may be higher than the ALG depreciation rate, this does not equate to accelerated depreciation. In fact, the ELG rate in later years is less than the ALG rate. Using the same logic, this would say that the ALG procedure produces accelerated depreciation. I believe that the ELG procedure produces the correct depreciation expense.

Q. ARE THERE OTHER FEATURES OF THE ELG PROCEDURE THAT ARE DESIRABLE?

A. Yes. Robley Winfrey, the "father" of the Iowa curves, in a letter dated February 1, 1975 to Dr. W. Chester Fitch, Center for Depreciation Studies, Western Michigan University, wrote:

> In the 43 years, 1932 to 1975, that have passed since I developed the concepts and procedures that led to the publication in 1942 of *Depreciation of Group Properties*, I have continued to have faith that the unit summation procedure of applying the concept of the so-called average life method of computing annual depreciation cost for accounting purposes would someday prevail. Now, the discussion and publications of the past ten years are giving evidence that my 1932 expectations are being upheld.

The beginning of my study of group property depreciation was undertaken in the belief that the commonly applied method of applying the straight line method to group properties, as contrasted to single units of property in which terms the method is usually defined and explained, results in inappropriate answers. But the analysts and accountants were not aware of the true character of their results and their effects on the depreciation reserve balance. But the publication in 1942 created no awareness and made no impression on the legal and business actions involving depreciation within the subjects of accounting, property valuation, utility rate making, income tax, and depreciation reserves.

What kept me on course 1928 to 1932 was the firm conviction that any depreciation procedure using a zero discount rate and the concept of average life as applied to single units of property, should produce for a fully stabilized property, a depreciation reserve credit balance of 50 percent of the cost new (depreciation base) of the surviving property. The unit summation procedure **(ELG)** (emphasis by Mr. Roff) gives that 50 percent result for all properties regardless of the character of the distribution of the retirement over total life of a vintage group.

I think of no reasons why the unit summation method should not be used by public utilities, private industries, for income tax returns, and other uses. On the other hand, I can think of good reasons for using the unit summation procedure in cost accounting applications to the preference of other methods and procedures. Now that we are in the computer age, the details of the calculation can no longer be supported as an administrative objection to using the unit summation procedure.

The Portland (Oregon) General Electric Court Case and the recent proposal by the American Telephone and Telegraph Company of their equal life group (a different name for unit summation) procedure are evidence that the unit summation procedure is now an accepted and legally approved method of cost accounting for depreciation expense. We can look ahead for wider adoption of the procedure in public utility regulation and in private business.[2]

Q. HAVE YOU EVER TESTIFIED IN A LITIGATED PROCEEDING WHERE THE ELG PROCEDURE WAS AN ISSUE AND WAS APPROVED BY A REGULATORY BODY?

A. Yes. I testified in a case on behalf of Lone Star Gas Pipeline Company before the Railroad Commission of Texas (GUD Docket No. 8664). After extensive cross-examination and discovery, the Commission found that the ELG procedure provided a better matching between

[2] *The Estimation of Depreciation*, Fitch, Wolf and Bissinger, Center for Depreciation Studies, Western Michigan University, 1975, pages 45 and 46.

the recording of depreciation and asset consumption than the alternative Average Life Group (ALG) procedure. This procedure has repeatedly been approved in Texas.

Q. ARE YOU PROPOSING ANY CHANGES IN DEPRECIATION METHODOLOGY FOR ANY OF THE PLANT ACCOUNTS?

A. Yes. I recommend that Oklahoma Natural change from a depreciation accounting methodology to a vintage amortization accounting methodology for certain plant accounts.

Q. TO WHICH ACCOUNTS DOES THIS RECOMMENDED CHANGE APPLY?

A. The vintage amortization accounting methodology would be applied to the following accounts:

Account	Description
	GENERAL PLANT
391.1	Office Furniture and Equipment
391.2	Data Processing Equipment
391.3	Office Machines and Equipment
391.5	Artwork
391.6	Purchased Software
391.8	Micro-Computer Equipment
393.0	Stores Equipment
394.0	Tools, Shop and Garage Equipment
394.1	Tools
394.3	Garage Equipment
395.0	Laboratory Equipment
397.0	Communication Equipment
397.1	Radio
397.2	Telephone Equipment Equipment
397.3	Stationary Radio Equipment

Q. WHY IS THIS CHANGE BEING PROPOSED FOR THESE ACCOUNTS?

A. This change is being proposed for three reasons. First, these accounts generally represent items of small dollar unit prices, with similar mortality characteristics. Second, the

percentage of total plant represented by these accounts is minimal, only about two and one-half percent of total depreciable plant balances. Third, the proposed method of accounting will eliminate the individual recording and tracking by Property Accounting of thousands of items.

Q. PLEASE EXPLAIN THE PROPOSED ACCOUNTING METHODOLOGY?

A. The Company would use a vintage (year of addition) accounting methodology to record assets in these accounts. Under the proposed method of accounting, amounts recorded as additions to utility plant would be recorded in the Continuing Property Records (CPR) of the Company at a vintage account level only (i.e., total by year), as opposed to tracking assets individually. These vintage amounts would then be amortized over their average service life, as determined in this depreciation study (See Schedule 3 of Exhibit DSR-3). When each vintage amount reaches its average service life (i.e. the amount is fully amortized), the original cost in that vintage amount will be retired from utility plant in service.

Q. HAS THE VINTAGE ACCOUNTING METHODOLOGY BEEN APPROVED IN OTHER JURISDICTIONS OF WHICH YOU ARE AWARE?

A. Yes, virtually all of my clients utilize this methodology for the selected plant accounts. I am not aware of any state jurisdiction that has not authorized this accounting methodology. In addition, the Federal Energy Regulatory Commission granted a blanket approval for this methodology in Accounting Release AR-15, provided that certain conditions are met. Public Service Company of Oklahoma has been using a form of vintage accounting for certain accounts for many years.

Q. WHAT ARE THOSE CONDITIONS?

A. These conditions are that the individual classes of assets contain high volume, low value items; that there is no change in existing retirement unit definitions; that the cost of each vintage group is amortized to depreciation expense over its useful life; that there is no change in depreciation rates resulting from the adoption of vintage amortization accounting; that interim retirements are not recognized; that salvage and cost of removal is included in the accumulated provision for depreciation and assigned to the oldest vintage first; and that retirements are recorded for those assets whose age exceeds average service life at the time of adoption. The Company's proposal will meet all of these conditions upon approval of the depreciation rates recommended in this proceeding for these General Plant asset categories.

Q. PLEASE SUMMARIZE AGAIN WHY THE COMPANY IS SEEKING THE APPROVAL OF THE USE OF THE ELG PROCEDURE

A. First, Oklahoma Natural believes that the ELG procedure provides the best matching between the recording of depreciation with asset consumption. This was the finding before the Railroad Commission of Texas in the Lone Star Pipeline Case (Docket No. GUD 8664). Second, Oklahoma Natural desires consistency in depreciation methodology for each of its jurisdictions. Third, Oklahoma Natural and I believe that the ELG procedure more correctly allocates cost over the life of the assets.

Q. WHAT ARE THE RESULTS OF YOUR STUDY FOR THE TOTAL COMPANY?

A. At the total Company depreciable level, the composite depreciation rate increases from 2.87% to 3.74%, or approximately $8.9 million more depreciation expense on an annual basis.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. I recommend that Oklahoma Natural adopt the depreciation rates shown on Schedule 1 of Exhibit DSR-3 and that this Commission approves their use. I base this recommendation on the fact that I have conducted a comprehensive depreciation study, giving appropriate recognition to historical experience, recent trends and Company expectations. My study results in a fair and reasonable level of depreciation expense which, when incorporated into a revenue stream, will provide the Company 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.

Academic Background

Donald S. Roff graduated from Rensselaer Polytechnic Institute with a Bachelor of Science degree in Management Engineering in 1972.

Mr. Roff has also received specialized training in the area of depreciation from Western Michigan University's Institute of Technological Studies. This training involved three forty-hour seminars on depreciation entitled "Fundamentals of Depreciation", "Fundamentals of Service Life Forecasting" and "Making a Depreciation Study" and included such topics as accounting for depreciation, estimating service life, and estimating salvage and cost of removal.

Employment and Professional Experience

Following graduation, Mr. Roff was employed for eleven and one-half years by Gilbert Associates, Inc., as an engineer in the Management Consulting Division. In this capacity, he held positions of increasing responsibility related to the conduct and preparation of various capital recovery and valuation assignments.

In 1984, Mr. Roff was employed by Ernst & Whinney and was involved in several depreciation rate studies and utility consulting assignments.

In 1985, Mr. Roff joined Deloitte Haskins & Sells (DH&S), which, in 1989, merged with Touche Ross & Co. to form Deloitte & Touche. In 1995, Mr. Roff was appointed as a Director with Deloitte & Touche.

During his tenure with Gilbert Associates, Inc., Ernst & Whinney, DH&S and Deloitte & Touche, Mr. Roff has participated in or directed depreciation studies for electric, gas, water and steam heat utilities, pipelines, railroad and telecommunication companies in over 30 states, several Canadian provinces and Puerto Rico. This work requires an in-depth knowledge of depreciation accounting and regulatory principles, mortality analysis techniques and financial practices. At these firms, Mr. Roff has had varying degrees of responsibility for valuation studies, development of depreciation accrual rates, consultation on the unitization of property records, and other studies concerned with the inspection and appraisals of utility property, preparation of rate case testimony and support exhibits, data responses and rebuttal testimony, in addition to appearing as an expert witness.

Industry and Technical Affiliations

Mr. Roff is a registered Professional Engineer in Pennsylvania (by examination).

Mr. Roff is a member of the Society of Depreciation Professionals and a Certified Depreciation Professional, and a Technical Associate of the American Gas Association (A.G.A.) Depreciation Committee. He currently serves as the lead instructor for the A.G.A.'s Principles of Depreciation Course.

TESTIMONY EXPERIENCE

DONALD S. ROFF

CASE NO.	DATE	COMPANY	JURISDICTION	SUBJECT
Docket No. 93-3005	July 1993	Southwest Gas Corporation	Nevada	Gas Depreciation Rates
Docket No. 93-3025	July 1993	Southwest Gas Corporation	Nevada	Gas Depreciation Rates
Docket No. 12820	June 1994	Central Power and Light Company	Texas	Electric Depreciation Rates
Case No. U-10380	Dec 1994	Consumers Power Company	Michigan	Gas Depreciation Rates and Accounting
Cause No. 39938	April 1995	Indianapolis Power & Light Company	Indiana	Electric Depreciation Rates
Case No. U-10754	July 1995	Consumers Power Company	Michigan	Electric Depreciation Rates and Accounting
Docket No. 13369	Aug 1995	West Texas Utilities Company	Texas	Electric Depreciation Rates
Docket No. 95-02116	Sept 1995	Chattanooga Gas Company	Tennessee	Gas Depreciation Rates
Docket No. 95-715-G	Oct 1995	Piedmont Natural Gas Company	South Carolina	Gas Depreciation Rates
Docket No. 14965	Dec 1995	Central Power and Light Company	Texas	Electric Depreciation Rates
Cause No. 40395 (I)	Feb 1996	Wabash Valley Power Association, Inc.	Indiana	Electric Depreciation Rates
GUD NO. 8664	Oct 1996	Lone Star Pipeline Company	Texas	Gas Depreciation Rates
Docket No. 96-360-U	Nov 1996	Entergy Arkansas Inc.	Arkansas	Electric Depreciation Rates
Docket No. 16705	Nov 1996	Entergy Gulf States Inc.	Texas	Electric Depreciation Rates/Competitive Issues
Docket No. ER-97-394	Mar 1997	Missouri Public Service	Missouri	Electric Depreciation Rates/Competitive Issues
Docket No. U-22092	Mar 1997	Entergy Gulf States Inc.	Louisiana	Electric Depreciation Rates/Competitive Issues
Docket No. 97-00982	May 1997	Chattanooga Gas Company	Tennessee	Gas Depreciation Rates
Cause No. 40395 (II)	June 1997	Wabash Valley Power Association, Inc.	Indiana	Electric Depreciation Rates
Case No. U-11509	Sept 1997	Consumers Energy Company	Michigan	Gas Depreciation Rates and Accounting
Docket No. ER98-11	Sept 1997	Long Island Lighting Company	FERC	Electric Depreciation Rates
Docket No. 8390-U	Dec 1997	Atlanta Gas Light Company	Georgia	Gas Depreciation Rates and Accounting
Cause No. 41118	Mar 1998	Wabash Valley Power Association, Inc.	Indiana	Electric Depreciation Rates
Case No. U-11722	Oct 1998	Detroit Edison Company	Michigan	Electric Depreciation Rates
Docket No. 98-2035-03	Nov 1998	PacifiCorp	Utah	Electric Depreciation Rates
Docket No. 99-4006	April 1999	Nevada Power Company	Nevada	Electric Depreciation Rates
GUD Docket No. 9030	March 2000	Atmos Energy Corporation	Texas	Gas Depreciation Rates and Accounting
GUD Docket No. 9145	April 2000	TXU Gas Distribution	Texas	Gas Depreciation Rates
City of Tyler	Dec 2000	Reliant Energy Entex	Texas	Gas Depreciation Rates and Accounting
Docket No. U-24993	March 2001	Entergy Gulf States Inc.	Louisiana	Electric Depreciation Rates and Accounting
Docket Nos. GR01050328/GR01050297	May 2001	Public Service Electric & Gas	New Jersey	Gas Depreciation Rates and Accounting
Case No. U-12999	July 2001	Consumers Energy Company	Michigan	Gas Depreciation Rates and Accounting
Docket No. 01-10002	Oct 2001	Nevada Power Company	Nevada	Electric Depreciation Rates
Docket No. 14618-U	Nov 2001	Savannah Electric and Power Company	Georgia	Electric Depreciation Rates
Docket No. 01-11031	Dec 2001	Sierra Pacific Power Company	Nevada	Electric Depreciation Rates
Docket No. 010949-EL	Jan 2002	Gulf Power Company	Florida	Electric Depreciation Rates
Docket No. 14311-U	Jan 2002	Atlanta Gas Light Company	Georgia	Gas Depreciation Rates and Accounting
Docket No. UD-00-2	March 2002	Entergy New Orleans, Inc.	New Orleans	Electric Depreciation Accounting
Cause No. PUD200200166	May 2002	Reliant Energy Entex	Oklahoma	Gas Depreciation Rates and Accounting
Docket No. 01-243-U	June 2002	Reliant Energy Entex	Arkansas	Gas Depreciation Rates and Accounting
Docket No. 02-035-12	Oct 2002	PacifiCorp	Utah	Electric Depreciation Rates
Docket No. 20000-ER-2-192	Oct 2002	PacifiCorp	Wyoming	Electric Depreciation Rates
Docket No. UE-021271	Oct 2002	PacifiCorp	Washington	Electric Depreciation Rates
Docket No. UM-1064	Oct 2002	PacifiCorp	Oregon	Electric Depreciation Rates
Docket No. PAC-E-02-5	Oct 2002	PacifiCorp	Idaho	Electric Depreciation Rates
Docket No. 02-0391	Oct 2002	Hawaiian Electric Company, Inc.	Hawaii	Electric Depreciation Rates and Accounting
Docket No. 03-ATMG-1036-RTS	June 2003	Atmos Energy Corporation	Kansas	Gas Depreciation Rates and Accounting
Docket No. 02-0391	Aug 2003	Hawaiian Electric Company, Inc.	Hawaii	Electric Depreciation Rates and Accounting
Cause No. 42458	Sept 2003	Wabash Valley Power Association, Inc.	Indiana	Electric Depreciation Rates and Accounting
Docket No. 03-ATMG-1036-RTS	Nov 2003	Atmos Energy Corporation	Kansas	Gas Depreciation Rates and Accounting
Case No. 12999	Dec 2003	Consumers Energy Company	Michigan	Gas Depreciation Rates and Accounting
Case No. 12999	Feb 2004	Consumers Energy Company	Michigan	Gas Depreciation Rates and Accounting
Cause No. ER-2004-0570	April 2004	The Empire District Electric Company	Missouri	Electric Depreciation Rates
Docket No. 04-100-U	July 2004	The Empire District Electric Company	Arkansas	Electric Depreciation Rates
Docket No. PUE 2003-00507	Aug 2004	Atmos Energy Corporation - Virginia	Virginia	Gas Depreciation Rates and Accounting
Docket No. 18638-U	Oct 2004	Atlanta Gas Light Company	Georgia	Gas Depreciation Rates and Accounting

Oklahoma Natural Gas

Depreciation Study
December 31, 2002

Deloitte.

Deloitte & Touche LLP
JPMorgan Chase Tower
2200 Ross Avenue, Suite 1600
Dallas, TX 75201-6778
USA

Tel: +1 214 840 7000
www.deloitte.com

September 2004

Mr. James R. Armstrong
Manager, Rates and Regulatory
Oklahoma Natural Gas
401 North Harvey Avenue
Oklahoma City, Oklahoma 73102

Dear Mr. Armstrong:

In accordance with your request and with the cooperation and participation of your staff, a book depreciation study of Oklahoma Natural Gas (ONG or the Company) properties has been conducted. The study covered all depreciable property, and recognized addition and retirement experience through December 31, 2002. The purpose of the study was to determine whether the existing depreciation rates remain appropriate for the property and, if not, to recommend changes. Changes are recommended. The recommended changes in aggregate cause an increase in depreciation rates.

A comparison of the effect of the existing rates and the recommended rates is shown below, based on depreciable plant balances as of December 31, 2002:

Function	Composite Depreciation Rate	
	Existing	Recommended
	%	%
Transmission	1.86	1.21
Distribution	2.53	3.55
General	7.94	8.73
Total Company	2.87	3.74

The summary above is taken from Schedule 1, which shows the annual depreciation provisions calculated from the existing rates and recommended account rates and differences. Based on the December 31, 2002 depreciable balances, the recommended depreciation rates will result in an annual increase in depreciation

provisions of $8,856,069. The study results are being driven primarily by an increase in depreciation rates for Distribution Plant due to increased negative net salvage factors.

Schedule 2 shows the mortality characteristics used to calculate the recommended rates. The recommended rates are calculated using the equal life group (ELG) procedure and the remaining life technique consistent with the 1997 study.

Schedule 3 shows the amortization lives being recommended. A more detailed explanation can be found under the section of this report entitled "Vintage Amortization Accounting (General Plant Amortization)."

We have excluded Account 392.1—Automobiles from our study. The Company conducted a "lease versus buy" study, which determined that leasing was the more economical approach to procuring vehicles under the current set of facts. The Company's decision, as a result of that study, was to move to leasing vehicles in 2002. Under the new lease arrangement, all costs are embedded within the applicable lease expense.

The same fundamental concepts and principles were followed for each function, and the following sections of this report describe the methods of analysis used and the bases for the conclusions reached. The remainder of the report will present the results and recommendations for both immediate and future action by the Company.

The following sections of this report describe the methods of analysis used and the bases for the conclusions reached. To assist the reader, we have also included, in Appendix C, a glossary of terms frequently used in depreciation accounting.

We appreciate this opportunity to serve Oklahoma Natural Gas and would be pleased to meet with you to discuss further the matters presented in this report, if you desire.

Yours truly,

Deloitte & Touche LLP

PURPOSE OF DEPRECIATION

Book depreciation accounting is the process of recognizing in financial statements the consumption of physical assets in the process of providing a service or a product. Accounting principles generally accepted in the United States of America require the recording of depreciation provisions to be systematic and rational. To be systematic and rational, depreciation should, to the extent possible, match either the consumption of the facilities or the revenues generated by the facilities. Accounting theory requires the matching of expenses with either consumption or revenues to ensure that financial statements reflect the results of operations and changes in financial position as accurately as possible. The matching principle is often referred to as the "cause and effect" principle; thus, both the cause and the effect are required to be recognized for financial accounting purposes. This study was conducted in a manner consistent with the matching principle of accounting.

Because utility revenues are determined through regulation and this study assumes that such regulation will continue, asset consumption is not automatically reflected in revenues. Therefore, the consumption of utility assets must be measured directly by conducting a book depreciation study to accurately determine their mortality characteristics.

Matching is also an essential element of basic regulatory philosophy, and it has become known as "intergenerational customer equity." Intergenerational customer equity means the costs are borne by the generation of customers that caused them to be incurred, not by some earlier or later generation. This matching is required to ensure that charges to customers reflect the actual costs of providing service.

DEPRECIATION DEFINITIONS

The gas utility Uniform System of Accounts of the Federal Energy Regulatory Commission (FERC) followed by the Company states that:

> "Depreciation," as applied to depreciable gas plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of gas plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities.
>
> "Service value" means the difference between original cost and net salvage value of gas plant.
>
> "Net salvage value" means the salvage value of property retired less the cost of removal.
>
> "Salvage value" means the amount received for the property retired less any expenses incurred in connection with the sale or in preparing the property for sale or, if retained, the amount at which the material recoverable is chargeable to materials and supplies, or other appropriate account.
>
> "Cost of removal" means the cost of demolishing, dismantling, tearing down or otherwise removing gas plant, including the cost of transportation and handling incidental thereto.

As is clear from the wording of the salvage value and cost of removal definitions, it is the salvage that will actually be received and the cost of removal that will actually be incurred, both measured at the price level at the time of receipt or incurrence, that is required to be recognized in the depreciation rates of ONG.

These definitions are consistent with the purpose of depreciation, and the study reported here was conducted in a manner consistent with both.

ACCOMPLISHMENT OF ACCOUNTING AND REGULATORY PRINCIPLES

Utility depreciation accounting is a group concept. Inherent in this concept is the assumption that all property is fully depreciated at the time of retirement, regardless of age, and there is no attempt to record the depreciation applicable to individual components of the groups. The depreciation rates are based on the

recognition that each depreciable property group has an average service life. However, very little of the property is "average." The group concept carries with it recognition that most property will be retired at an age either less than or greater than the average service life. The study recognized the existence of this variation through the identification of Iowa-type retirement dispersion patterns for all property groups.

The depreciation study required to determine the applicable mortality characteristics is independent from the calculation of the depreciation rates. The resulting mortality characteristics can be used to calculate either average life group (ALG) or ELG rates, both with either the whole life technique or the remaining life technique. Any set of mortality characteristics that is suitable for calculating ALG rates is just as suitable for calculating ELG rates. Conversely, any set that is not suitable for ELG is not suitable for ALG. ALG and ELG are straight-line procedures that reflect life measured by time, with ALG utilizing average life and ELG utilizing actual life. For ALG, all property in the group is assumed to have a life equal to the average of the group. ELG recognizes that, in reality, only a small portion of the group retires at an age equal to the average service life. For the average to exist, about half of the investment in an asset group will be retired at ages less than average life, a small amount at average life and the rest at ages greater than average life. It is the use of this dispersion in the rate calculation that causes ELG rates to better match cost recovery with the use of and benefit from property. Thus, the ELG procedure best accomplishes the purpose of book depreciation accounting by ensuring that the recording of depreciation provisions match the actual consumption of the physical assets. Since ELG matches the recording of consumption with the actual consumption, customers will pay the actual costs incurred to serve them. For this reason, ELG rates are recommended.

A detailed discussion of the ELG procedure is included in Appendix B to this report.

THE BOOK DEPRECIATION STUDY

Implementation of a policy toward book depreciation that recognizes the purpose of depreciation accounting requires the determination of the mortality characteristics that are applicable to surviving property. The

purpose of the depreciation study reported here was to accurately measure those mortality characteristics and to use the characteristics to determine appropriate rates for accrual of depreciation expenses.

The major effort of the study was the determination of the appropriate mortality characteristics. The remainder of this report describes how those characteristics were determined, describes how the mortality characteristics were used to calculate the recommended depreciation rates and presents the results of the rate calculations.

The study consisted of the following steps:

Step One was a Life Analysis consisting of determination of historical retirement experience and an evaluation of the applicability of that experience to surviving property.

Step Two was a Salvage and Cost of Removal Analysis consisting of a study of salvage value and cost of removal experience, and an evaluation of the applicability of that experience to surviving property.

Step Three consisted of the determination of average service lives (ASLs), retirement dispersion patterns identified by Iowa-type curves and the net salvage factors applicable to surviving property.

Step Four was the determination of the depreciation rate applicable to each depreciable property group, recognizing the results of the work in Steps One through Three, and a comparison with the existing rates.

LIFE ANALYSIS

The Life Analysis for the property concerns the determination of ASLs and Iowa-type retirement dispersion patterns. An analysis of historical retirement activity, suitably tempered by informed judgment as to the

future applicability of such activity to surviving property, formed the basis for determination of ASLs and retirement dispersion patterns. Retirement experience through December 31, 2002 was analyzed using the actuarial method of Life Analysis.

In order to recognize trends in life characteristics and to ensure that the valuable information in the curves is available to the analyst, actual survivor curves were calculated and plotted by computer using several different periods of retirement experience.

SALVAGE AND COST OF REMOVAL ANALYSIS

Salvage and cost of removal experience from 1983 through 2002 at the account level was the basis for determining the net salvage factors used. The analysis was done in a manner that allows selection of separate salvage and cost of removal factors for most depreciable property groups. The analysis consisted of calculating the experienced salvage and cost of removal factors for each property group by dividing salvage and cost of removal amounts by the original cost of the retired property. Factors are expressed as percentages and were calculated for annual, rolling, and shrinking bands of retirement experience.

EVALUATION OF ACTUAL EXPERIENCE

Life Analysis and Salvage and Cost of Removal Analysis involve the measurement of what has occurred in the past. History is often a misleading indicator of the future. There are many kinds of events that can cause history to be misleading, among them significant changes contemplated in the underlying accounting procedures and/or changes in other management practices such as maintenance procedures. It is the evaluation phase of a depreciation study that identifies if history is a good indicator of the future. Blind acceptance of history often results in selecting mortality characteristics to use for calculating depreciation rates that will provide recovery over a time period longer than productive life.

For each property group, the analysis processes involved only historical retirement experience. Since the depreciation rates will be applied to surviving property, the historical mortality experience indicated by the Life and the Salvage and Cost of Removal Analyses was evaluated to ensure that the mortality characteristics used to calculate the rates are applicable to surviving property. The evaluation is required to ensure the validity of the recommended depreciation rates.

The evaluation process requires knowledge of the type of property surviving; the type of property retired; the reasons for changing life, dispersion, salvage, and cost of removal; and the effect of present and future ONG plans on the property mortality characteristics. The evaluation included discussions with the Company accounting, engineering, and operating personnel; determination of the type of property recorded in a number of accounts; and special analyses of retirements to identify the type of property retired and reasons for retirement.

The Life Analysis procedure determines the average service life applicable to original installations. The Salvage and Cost of Removal Analysis procedure determines the net salvage applicable to original installations only if the age of retirements is about the same as the average service life. If the age of retirements is less than average service life, salvage factors will normally be overstated and cost of removal factors understated. If the age of retirements is greater than average service life, salvage factors will normally be understated and cost of removal factors overstated. When analyses of study data show that this situation exists, some compensation is appropriate. However, no evaluation was made, so no adjustment is reflected. The evaluation of the Salvage and Cost of Removal Analysis gave greater weight to the most recent experience than was given for the Life Analysis.

CALCULATION OF DEPRECIATION RATES

A straight-line remaining life rate for each depreciable property group was calculated using the following formula:

$$\text{Rate} = \frac{\text{Plant Balance - Net Salvage - Book Reserve}}{\text{Average Remaining Life}}$$

$$\text{Rate} = \text{Whole Life Rate} - \frac{\text{Book Reserve - Theoretical Reserve}}{\text{Average Remaining Life}}$$

For example, with a net salvage figure of negative 20%, a book reserve ratio of 40% and a remaining life of 20 years, a depreciation rate of 4.00% is calculated (100% - (20%) - 40%)/20 = 4.00%, where the plant balance is 100%.

The whole life rate used in the second formula was calculated using the following formula:

$$\text{Rate} = \frac{\text{Plant Balance - Net Salvage}}{\text{Average Service Life}}$$

Formula numerator elements in percent of depreciable plant balance (100%) and the denominator element in years produce a rate in percent with the same negative 20% net salvage, an average service life of 30 years and a calculated rate of 4.00% (100% - (20%))/30 = 4.00%. The second remaining life rate formula clearly illustrates that a remaining life rate is merely an adjustment to a whole life rate in order to amortize the calculated reserve difference over the remaining life.

The depreciable balances and book reserves were taken from accounting records, and the net salvage factors were determined by the study. The remaining lives for each property group are a function of the age distribution of surviving plant and the selected average service life and Iowa dispersion pattern.

Vintage Amortization Accounting (General Plant Amortization)

We are recommending the adoption and implementation of Vintage Amortization Accounting. Since FERC issued Accounting Release 15 (AR15), which provides blanket approvals for vintage amortization accounting when certain conditions are met, a large majority of utility companies have received regulatory approval and adopted this process. This approach is intended to simplify the accounting effort and to accommodate the universal difficulty of dealing with unreported retirements. It is a process of systematic and rational recording of expense and the retirement of small-dollar items in certain of the accounts. For vintages with an age in excess of the estimated service lives, those amounts will be retired and have been reflected as such in our study.

Vintage amortization accounting is being recommended for three reasons. First, these accounts generally represent items of small-dollar unit prices, with similar mortality characteristics. Second, the percentage of total plant represented by these accounts is minimal—only about 3-1/2% of total depreciable balances. Third, the proposed method of accounting will eliminate the individual recording and tracking by Property Accounting of thousands of small-dollar items. This allows for a more efficient use of the available time of Property Accounting personnel and provides for a better matching of the level of accounting effort with the level of investment associated with ONG's general plant.

For embedded assets, we have developed a remaining life depreciation rate, which is shown in Schedule 1 of this report. Any new assets added would have a depreciation (amortization) rate that is developed by 1/ASL. Schedule 3 provides the amortization lives (periods) for those accounts.

RESERVE COMPARISON

Because remaining life rates are recommended, a comparison of the accumulated provision for depreciation and the calculated theoretical reserve as of December 31, 2002 is not meaningful, and no comparison is presented. This is because the only way a reserve difference can exist is through the use of whole life rates.

RESULTS

As shown in Schedule 1, overall, the rates for Transmission Plant decreased, while Distribution and General Plant functional groups increased. The following discussions summarize the more detailed explanation of study results in Appendix A.

Transmission Plant

The composite rate decreased from 1.86% to 1.21%. ASLs are generally increasing, and net salvage is primarily decreasing. The most significant change is in Account 367.0—Line Equipment, which is a decrease due to longer ASL and less negative net salvage.

Distribution Plant

The composite depreciation rate increased from 2.53% to 3.55%. ASLs are generally increasing, but they are offset by more negative net salvage. The most significant changes are in Accounts 376.0—Mains Line Equipment, which increased due to a shorter ASL, and Account 380.0—Service Line Equipment, which increased due to a decrease in ASL and more negative net salvage.

General Plant

The composite depreciation rate increased from 7.94% to 8.79%. Some of the accounts in this function will now be amortized. A listing of those accounts and respective lives (periods) are shown in Schedule 3. The most significant change was in Account 391.8—Micro Computer Equipment, which is impacted by changes in technology and has an ASL of 5.5 years.

RECOMMENDATIONS

Our recommendations for your future actions in regard to book depreciation are as follows:

1. The depreciation rates shown in Column 6 of Schedule 1 are applicable to existing property and are recommended for implementation at such time as their effect can be incorporated into service rates.

2. Because of variation of life and net salvage experience with time, a depreciation study should be made during 2007 based on retirement experience through December 31, 2006. Exact timing of the study should be coordinated with a retail rate case to ensure timely implementation of revised depreciation rates.

3. We suggest the Company implement a vintage amortization process for certain categories of Plant Equipment, as outlined in this report.

OKLAHOMA NATURAL GAS COMPANY
Book Depreciation Study as of December 31, 2002
Comparison of Depreciation Rates and Annual Amounts
General Plant Allocated & Amortized

SCHEDULE 1

[1] Account Number	[2] Description	[3] 12/31/02 Balance $	[4] Existing Rates %	[5] Annual Amount $	[6] Study Rates %	[7] Annual Amount $	[8] Increase or (Decrease) $
	TRANSMISSION PLANT						
365.2	Rights of Way	2,932,009	1.30	38,116	0.91	26,681	(11,435)
366.2	M&R Station Structures	53,222	0.82	436	2.54	1,352	915
366.3	Other Structures	26,444	2.57	680	1.75	463	(217)
367.0	Line Equipment	67,473,160	1.86	1,255,001	1.09	735,457	(519,543)
368.0	Compressor Station Equipment	61,176	3.23	1,976	2.75	1,682	(294)
369.1	Measuring Station Equipment	2,528,955	2.62	66,259	4.54	114,815	48,556
371.0	Transmission Systems Equipment	11,212	1.24	139	3.34	374	235
	Total Transmission Plant	73,086,178	1.86	1,362,607	1.21	880,825	(481,782)
	DISTRIBUTION PLANT						
375.1	District Regulator Structures	208,768	5.29	11,044	1.81	3,779	(7,265)
375.2	Other District Structures	40,432,864	1.45	586,277	3.25	1,314,068	727,792
376.0	Mains Line Equipment	454,463,753	1.74	7,907,669	2.48	11,270,701	3,363,032
377.0	Compressor Station Equipment	53,098	3.14	1,667	10.56	5,607	3,940
378.0	Measuring Station Equipment	25,337,128	3.83	970,412	4.90	1,241,519	271,107
378.1	District Regulators	8,886,897	3.83	340,368	7.77	690,512	350,144
378.2	District Regulators - Odorizers	1,694,262	3.83	64,890	7.00	118,598	53,708
378.3	District Regulator Equipment	811,906	3.83	31,096	9.41	76,400	45,304
379.0	City Gate Equipment	370,099	3.83	14,175	6.97	25,796	11,621
380.0	Service Line Equipment	237,369,736	3.36	7,975,623	5.21	12,366,963	4,391,340
380.1	Industrial Service Line	6,922,984	3.36	232,612	3.60	249,227	16,615
380.2	Commercial Service Line Equipment	8,817,962	3.36	296,284	5.60	493,806	197,522
380.3	CNG Fill Stations CUS	3,389,422	17.17	581,964	9.36	317,250	(264,714)
381.0	Metering Equipment	64,503,313	3.80	2,451,126	3.40	2,193,113	(258,013)
383.0	House Regulators	10,446,120	3.62	378,150	2.36	246,528	(131,621)
386.0	Other Property on Cust. Premises	150,229	5.26	7,902	4.11	6,174	(1,728)
387.0	Other Miscellaneous Equipment	273,320	4.99	13,639	7.00	19,132	5,494
	Total Distribution Plant	884,131,841	2.53	21,864,896	3.55	30,639,174	8,774,278
	GENERAL PLANT						
390.0	Structures and Improvements	405,101	11.45	46,384	3.15	12,761	(33,623)
391.1	Office Furniture and Equipment	4,857,315	4.32	209,836	6.18	300,182	90,348
391.2	Data Processing and Equipment	269,226	10.83	29,157	10.57	28,457	(700)
391.3	Office Machines and Equipment	881,407	5.99	52,796	5.97	52,620	(176)
391.5	Artwork	214,295	2.90	6,215	5.02	10,758	4,543
391.6	Purchased Software	11,786,202	8.54	1,006,542	11.00	1,296,482	289,941
391.8	Micro Computer Equipment	6,513,952	10.61	691,130	20.49	1,334,709	643,578
391.9	Information Technology	211,774	10.61	22,469	11.86	25,116	2,647
392.0	Transportation Equipment	681,183	7.89	53,745	6.82	46,457	(7,289)
392.3	Trucks and Vans	20,158,847	10.05	2,025,964	8.62	1,737,693	(288,272)
392.5	Trailers	1,337,660	1.99	26,619	2.28	30,499	3,879
393.0	Stores Equipment	183,912	2.41	4,432	4.49	8,258	3,825
394.0	Tools, Shop and Garage Equipment	489,662	5.97	29,233	5.23	25,609	(3,623)
394.1	Tools	6,833,417	5.97	407,955	5.35	365,588	(42,367)
394.3	Garage Equipment	278,995	5.97	16,656	5.57	15,540	(1,116)
394.4	CNG Company Stations	3,935,554	5.97	234,953	5.18	203,862	(31,091)
395.0	Laboratory Equipment	1,632	4.56	74	5.43	89	14
396.0	Power Operated Equipment	9,749,388	5.03	490,394	5.72	557,665	67,271
396.1	Power Operated Equipment (Rubber Tire)	44,425	5.03	2,235	6.69	2,972	737
397.0	Communication Equipment	200,972	11.68	23,474	7.34	14,751	(8,722)
397.1	Radio Equipment	659,861	11.68	77,072	7.39	48,764	(28,308)
397.2	Telephone Equipment	1,886,526	11.68	220,346	7.08	133,566	(86,780)
397.3	Stationary Radio Equipment	203,685	11.68	23,790	6.21	12,649	(11,142)
	Total General Plant	71,784,993	7.94	5,701,472	8.73	6,265,045	563,573
	Total Depreciable Plant	1,009,003,012	2.87	28,928,975	3.74	37,785,044	8,856,069
	Intangible Plant	4,196,781					
	Land	2,546,014					
	Fully Depreciated Plant	4,273,507					
	Amortization Retirements	17,591,474					
390.0	Leasehold Improv. (Amort over Lease)	705,178					
390.1	Leasehold Improv. (Fully Amort.)	126,372					
392.1	Automobiles	79,663					
	Total Gas Plant	1,038,522,001					

OKLAHOMA NATURAL GAS COMPANY
Book Depreciation Study as of December 31, 2002
Comparison of Mortality Characteristics

SCHEDULE 2

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
		Existing			Study				
Account	Description	ASL yrs.	Iowa Curve	Net Salvage %	ASL yrs.	Iowa Curve	Gross Salvage %	Cost of Removal %	Net Salvage %
	TRANSMISSION PLANT								
365.2	Rights of Way	43.0	R2	0	55.0	R1.5	0	0	0
366.2	M&R Station Structures	30.0	R0.5	(15)	30.0	R4	0	5	(5)
366.3	Other Structures	40.0	R1	(15)	30.0	R4	0	0	0
367.0	Line Equipment	50.0	R2.5	(10)	55.0	R1.5	0	5	(5)
368.0	Compressor Station Equipment	28.0	R1	(5)	35.0	R2	0	10	(10)
369.1	Measuring Station Equipment	30.0	R0.5	(5)	20.0	R2	0	15	(15)
371.0	Transmission Systems Equipment	26.0	L0	0	20.0	SQ	0	0	0
	DISTRIBUTION PLANT								
375.1	District Regulator Structures	40.0	R1	(35)	40.0	S1	0	40	(40)
375.2	Other District Structures	51.0	L1	15	45.0	R1.5	10	10	0
376.0	Mains Line Equipment	57.0	R2	(15)	50.0	R3	5	20	(15)
377.0	Compressor Station Equipment	35.0	R2	(10)	35.0	R2	0	10	(10)
378.0	Measuring Station Equipment	30.0	L2	(20)	35.0	S0.5	0	40	(40)
378.1	District Regulators	30.0	L2	(20)	25.0	L2	0	40	(40)
378.2	District Regulators - Odorizers	30.0	L2	(20)	25.0	L2	0	40	(40)
378.3	District Regulator Equipment	30.0	L2	(20)	25.0	L2	0	40	(40)
379.0	City Gate Equipment	N/A	N/A	N/A	25.0	L2	0	20	(20)
380.0	Service Line Equipment	38.0	R2	(35)	33.0	R4	0	50	(50)
380.1	Industrial Service Line	38.0	R2	(35)	45.0	S1.5	0	50	(50)
380.2	Commercial Service Line Equipment	38.0	R2	(35)	33.0	R2.5	0	50	(50)
380.3	CNG Fill Stations CUS	8.0	R2	0	10.0	R2.5	0	0	0
381.0	Metering Equipment	28.0	R5	0	30.0	R5	3	3	0
383.0	House Regulators	30.0	L3	0	40.0	S2	0	0	0
386.0	Other Property on Cust. Premises	N/A	N/A	N/A	20.0	SQ	0	0	0
387.0	Other Miscellaneous Equipment	20.0	R1	0	20.0	R1	0	0	0
	GENERAL PLANT								
390.0	Structures and Improvements	35.0	R3	0	35.0	R3	0	0	0
391.1	Office Furniture and Equipment	20.0	L1.5	5	17.0	SQ	0	0	0
391.2	Data Processing and Equipment	8.0	L3	0	10.0	SQ	0	0	0
391.3	Office Machines and Equipment	18.0	R1	2	20.0	SQ	0	0	0
391.5	Artwork	25.0	L0	0	25.0	SQ	0	0	0
391.6	Purchased Software	11.0	R3	0	10.0	SQ	0	0	0
391.8	Micro Computer Equipment	N/A	N/A	N/A	5.5	SQ	0	0	0
391.9	Information Technology	N/A	N/A	N/A	10.0	SQ	0	0	0
392.0	Transportation Equipment	N/A	N/A	N/A	15.0	R2.5	10	0	10
392.3	Trucks and Vans	10.0	L2	10	10.0	L2	20	0	20
392.5	Trailers	30.0	L1	20	25.0	L1.5	50	0	50
393.0	Stores Equipment	30.0	L2	5	25.0	SQ	0	0	0
394.0	Tools, Shop and Garage Equipment	N/A	N/A	N/A	20.0	SQ	0	0	0
394.1	Tools	16.0	L1	5	20.0	SQ	0	0	0
394.3	Garage Equipment	16.0	L1	5	20.0	SQ	0	0	0
394.4	CNG Company Stations	16.0	L1	5	20.0	SQ	0	0	0
395.0	Laboratory Equipment	N/A	N/A	N/A	20.0	SQ	0	0	0
396.0	Power Operated Equipment	18.0	L2	15	16.0	S2	15	0	15
396.1	Power Operated Equipment (Rubber Tire)	18.0	L2	15	15.0	SQ	0	0	0
397.0	Communication Equipment	N/A	N/A	N/A	15.0	SQ	0	0	0
397.1	Radio Equipment	15.0	R2	0	15.0	SQ	0	0	0
397.2	Telephone Equipment	15.0	R2	0	15.0	SQ	0	0	0
397.3	Stationary Radio Equipment	15.0	R2	0	20.0	SQ	0	0	0