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Issue: Depreciation
Witness: Gregory E. Macias
Sponsoring Party: MOPSC Staff
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Case No.: GR-2006-0422
Date Testimony Prepared: October 13, 2006

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

GREGORY E. MACIAS

MISSOURI GAS ENERGY

CASE NO. GR-2006-0422

Jefferson City, Missouri
October 2006

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy's Tariff Sheets Designed to Increase Rates for Gas Service in the Company's Missouri Service Area	)))	Case No. GR-2006-0422

AFFIDAVIT OF GREGORY E. MACIAS

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Gregory E. Macias, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, consisting of 9 pages to be presented in the above case; that the answers in the foregoing Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

Gregory E. Macias

Subscribed and sworn to before me this 11th day of October 2006

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

ASHLEY M. HARRISON
My Commission Expires
August 31, 2010
Cole County
Commission #06898978

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Q. Please state your name and business address.

A. Gregory E. Macias, P.O. Box 360, Jefferson City, MO 65102.

Q. By whom are you employed and in what capacity?

A. I am employed by the Missouri Public Service Commission (PSC or Commission) as a Utility Engineering Specialist II in the Engineering and Management Services Department.

Q. Please describe your educational background.

A. I received a Bachelor of Science degree in Civil Engineering from the University of Missouri-Columbia.

Q. Please describe your work background.

A. I began working for the Commission in September 1997 as an Engineering Specialist in the Gas Safety Department. In December 2001, I joined the Engineering and Management Services Department in my current position.

Q. Please describe your duties while employed by the Commission.

A. While working in the Gas Safety Department, I conducted safety inspections and incident investigations of natural gas local distribution companies and intrastate pipeline companies. I am currently responsible for depreciation calculations and studies of companies regulated by the Commission.

Q. Have you previously filed testimony before this Commission?

A. Yes. See Schedule 1, attached to my testimony, for a list of cases in which I have previously filed testimony.

Q. What matters will you address in your testimony?

A. I will address the Commission Staff's (Staff's) recommendation regarding depreciation rates.

Q. What knowledge, skill, experience, training and education do you have in these matters?

A. In addition to my Bachelor of Science degree in Civil Engineering from the University of Missouri-Columbia, I have made on-site visits to several Missouri-regulated electric, natural gas, telecommunications, water and sewer companies. I have gained work related experience and training from the Engineering and Management Services Department's engineering staff regarding concepts of depreciation. I have completed the National Association of Regulatory Commissioners (NARUC) Utility Rate School administered by the University of Florida and the NARUC Water Committee. I have also completed the New Mexico State University Basic NARUC Course. I have reviewed prior Commission decisions and portions of the testimony regarding depreciation issues in previous cases.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to recommend depreciation rates for Missouri Gas Energy (MGE or Company). Staff's proposal in this case is:

1. The depreciation rates, as well as the associated average service life and net salvage percentage, presented in Schedule 2 be effective for MGE on the date of the Commission's order in this case; and

2. The Company be ordered to record the amount of annual depreciation accrual segregated by the amounts for return of investment (life portion) and collection for net salvage/cost of removal.

EXECUTIVE SUMMARY

Q. Please summarize your direct testimony in this proceeding.

A. The Staff conducted a depreciation study of MGE's capital assets and has recommended depreciation rates which, when applied to the plant in service as of June 30, 2006, generated the depreciation expense used in the Staff's EMS (revenue requirement) run to determine the Staff's revenue requirement recommendation. The depreciation rates determined in this study would decrease the currently ordered annual depreciation accrual by approximately $100,000.

Staff is recommending the use of straight line, whole life depreciation rates to determine MGE's depreciation expense. The depreciation rates are based on Staff's estimate of average service life and future net salvage for each capital plant account, and are calculated by the following equation:

$$\textit{Depreciation Rate} = (\textit{100\%} - \textit{Net Salvage}) \div \textit{Average Service Life}$$

Staff is recommending that MGE keep separate accounting of its amounts accrued for recovery of its initial investment in plant from the amounts accrued for net salvage.

Staff is not recommending an adjustment to MGE's accumulated reserve for depreciation at this time.

DEPRECIATION ISSUES

Q. When were depreciation rates for the Company last adopted by a Commission Order?

A. Depreciation rates were last ordered for MGE in Case No. GR-2004-0209, effective October 2, 2004. The Ordered depreciation rates were the result of a stipulation and agreement between the parties.

Q. Has there been a change in the Staff's approach to determining depreciation rates since MGE's last rate increase proceeding?

A. Yes. The Staff's recommendation in this case is in conformance with the guidelines set forth in the Commission's Third Report and Order in Case No. GR-99-315, Laclede Gas Company (Laclede Gas), and the Report And Order in Case No. ER-2004-0570, The Empire District Electric Company (Empire), concerning the treatment of salvage costs and cost of removal in depreciation expense.

Q. Did you conduct a depreciation study of MGE's capital plant accounts?

A. Yes. The recommended depreciation rates, associated average service lives, and net salvage percentages are presented in Schedule 2. The recommended depreciation rates would decrease the currently ordered depreciation accrual by approximately $100,000. In addition, the Staff recommends that the Company be required to record the depreciation accrual separated into its components, i.e. a life accrual and a net salvage accrual, consistent with the Commission's decisions concerning depreciation expense in its January 11, 2005, Third Report And Order in Case No. GR-99-315.

Q. Are the Company's depreciation data inadequacies that were at issue in Case Nos. GR-2004-0209, GR-2001-292, and GR-98-140 still at issue in this case?

A. Yes. MGE's limited depreciation database contains actuarial data dating back only to 1994. As a result, Staff relied on surrogate average service lives to determine depreciation rates for the Company.

DEPRECIATION STUDY

Q. What is the definition of "depreciation?"

A. Depreciation is the loss, not restored by current maintenance, which is due to all factors causing ultimate retirement of the property. These factors include wear and tear, decay, inadequacy, obsolescence, changes in the art, and requirements of public authorities.

The purpose of depreciation in a regulatory setting is to recover the cost(s) of capital assets allocated rationally over the assets' useful lives (return of equity). Annual depreciation expense, when distributed over the life of each asset, yields the recovery of all costs determined to be associated with the utility's assets.

Q. Briefly explain the condition of MGE's depreciation database.

A. The condition of MGE's depreciation database has been an issue raised in Staff testimony since Case No. GR-98-140. In that case, Staff witness Woodie C. Smith stated the following:

> MGE asserts that when the (C)ompany was purchased by Southern Union from Western Resources that the plant retirement records were not available. These problems were recognized in the 1995 Black and Veatch depreciation study. [Woodie C. Smith, Dir. Test., Case No. GR-98-140, p. 12, l. 19 thru p. 13, l. 1]

MGE's depreciation database contains historical retirement data for the years 1995 through 2004. Plant vintages prior to 1994 are rolled up into a 1994 end of year balance. The database is accurate regarding the plant balance, but contains only ten years of retirement history for statistical analysis. In time, MGE will build a database sufficient for actuarial analysis. However, at present, the absence of historical retirement data prevents a reliable study of Company specific average service lives.

Q. In the absence of sufficient retirement data, how did the Staff determine average service lives for MGE's various plant accounts?

A. In general, when a lack of data prevents a reliable study of Company specific average service lives, Staff uses the life characteristics of a similar utility as a surrogate. Staff, in this case, believes this is the best approach. For this case, Staff used the average service lives determined in recent depreciation studies of similar Missouri jurisdictional natural gas local distribution (LDC) companies, Aquila Inc, Ameren UE, and Laclede Gas, to develop the surrogate average service lives for MGE. (Aquila Inc.'s Missouri LDC properties were sold to The Empire District Electric Company effective June 1, 2006.) A summary of the development of the surrogate average service lives proposed by Staff in this proceeding is presented in Schedule 3.

Q. Why is use of surrogate average service lives the Staff's preferred approach to determine MGE's average service lives in this case?

A. Staff believes that this approach results in reasonable average service lives for three reasons:

1. The comparison LDCs operate under the jurisdiction of the PSC;

2. The various accounts' average service lives are based on depreciation studies conducted by Staff using depreciation databases with adequate placement and retirement histories;

3. Using an average of the individual LDCs' average service lives mitigates the differences between MGE's plant, operations and management and that of the comparison LDCs.

Q. Are there any other elements factored into the depreciation rate calculation?

A. Yes. Consideration was given to the future net salvage that an account may experience.

Q. What is net salvage?

A. Net salvage is gross salvage, or recovered marketable value of retired plant, less cost of removal, or the cost associated with the retirement from service and disposition of plant. Negative net salvage occurs when the cost of removal exceeds gross salvage; this is sometimes referred to as net salvage expense or net cost of removal.

Q. Does MGE have adequate salvage data to determine Company specific net salvage ratios?

A. Yes. MGE provided over 25 years of complete salvage data.

Q. How is it possible to have over 25 years of salvage data while having a depreciation database of only ten years?

A. For a salvage database, all that is required is the amount of plant retired (in dollars), gross salvage collected, and cost of removal. For a depreciation database, the retired plant's vintage (year of installation) must also be known. These retirements by vintage are what MGE's depreciation database is missing prior to 1995.

Q. How was net salvage calculated in your depreciation study?

A. To implement Commission policy, net salvage rates were developed by dividing the experienced net salvage by the original cost of plant retired to calculate the net salvage rate realized by the Company. This realized net salvage rate was used as an estimator for future net salvage requirements for most accounts. A summary of the net salvage rates is provided in Schedule 3.

Q. How did you calculate depreciation rates for MGE's various plant accounts?

A. Using the straight line method and whole life technique, the annual depreciation accrual rate for an account is calculated as follows:

$$\textit{Depreciation Rate} = (\textit{100\%} - \textit{Net Salvage}) \div \textit{Average Service Life}$$

where, generally:

Net Salvage % = (*Gross Salvage – Cost of Removal*) ÷ *Original Cost of Plant Retired*

This depreciation rate is designed to recover the original cost of an account's assets, less any estimated scrap value, plus an estimate of any cost of removal, over the useful average service life of the assets.

Q. What are the results of Staff's depreciation study?

A. The depreciation rates determined in this study would decrease the currently ordered annual depreciation accrual by approximately $100,000 based on June 30, 2006, plant in service balances. June 30, 2006, is the end of the Staff's test year update period in this case.

Q. Please summarize Staff's recommendation for depreciation rates for the Company's plant accounts.

A Staff's recommended average service lives, net salvage percentages, and depreciation rates are summarized in Schedule 2. A comparison of Staff's recommendation, to the existing ordered depreciation rates, including annual depreciation accruals, is provided in Schedule 4.

DEPRECIATION RESERVE ANALYSIS

Q. Why is the accumulated reserve for depreciation analyzed?

A. When estimates of average service life and future net salvage change, the revised forecasts would have generated different annual accruals had they been applied from the beginning. Therefore, there will be an imbalance between the amount of the actual accumulated reserve for depreciation accrued using past depreciation rates, and what would have been accrued using current depreciation rate recommendations, or the theoretical

reserve. Depending on the magnitude of this imbalance, and other factors such as the causes for the difference and the year-to-year volatility, an adjustment may be appropriate.

Q. Is Staff recommending an adjustment to the depreciation reserve at this time?

A. No. Because a plant specific actuarial analysis could not be performed, a true theoretical reserve cannot be calculated. This is because the theoretical reserve calculation requires not only an average service life, but an associated Iowa type curve as well. The Iowa type curve smoothes the pattern of the retirements experienced by an account and models the future retirement expectation. Determining the Iowa type curve for an account is an essential element of the theoretical reserve calculation. Furthermore, the Staff believes that MGE's reserve ratio (depreciation reserve ÷ plant balance) of approximately 33% is reasonable for a natural gas distribution company and, therefore, no adjustment is necessary at this time.

RECOMMENDATION

Q. Please summarize Staff's proposal regarding depreciation in this case.

A. The Staff recommends that the Commission order the depreciation rates proposed in Schedule 2 for MGE. Additionally, the Staff recommends that MGE track the amounts accrued for the life portion and the net salvage portion of the booked annual depreciation accrual separately, consistent with the Commission's Third Report And Order in Case No. GR-99-315.

Q. Does this conclude your direct testimony?

A. Yes, it does.

GR-2006-0422
Missouri Gas Energy

Schedule 1. Case Proceeding Participation
Staff Witness Gregory E. Macias

Company Name	Case Number	Testimony Filed	Issue(s)
Missouri American Water Company	WR-2003-0500	Direct, Rebuttal, Surrebuttal	Depreciation
Osage Water Company	ST-2003-0562 WT-2003-0563	Direct	Depreciation
Fidelity Telephone Company	IR-2004-272	Direct	Depreciation
The Empire District Electric Company	ER-2004-0570	Direct, Rebuttal, Surrebuttal	Depreciation
Aquila Networks, Inc.	ER-2005-0436 HR-2005-0450	Direct	Depreciation

GR-2006-0422
Missouri Gas Energy
Schedule 2. Depreciation Rate Recommendation

Account Number	Description	Depreciation Rate	ASL (Years)	Net Salvage	Life Only Rate	Net Salvage Rate
	DISTRIBUTION					
375.00	Structures and Improvements	2.00%	45	10%	2.22%	-0.22%
376.00	Mains	2.11%	45	5%	2.22%	-0.11%
378.00	Measuring and Regulating Equip.	2.44%	41	0%	2.44%	0.00%
379.00	Meas & Reg Equip - City Gate	2.44%	41	0%	2.44%	0.00%
380.00	Services	3.05%	42	-28%	2.38%	0.67%
381.00	Meters	2.46%	41	-1%	2.44%	0.02%
382.00	Meter Installations	2.44%	41	0%	2.44%	0.00%
383.00	House Regulators	2.22%	45	0%	2.22%	0.00%
385.00	Industrial Meas and Reg Equipment	2.33%	43	0%	2.33%	0.00%
	GENERAL					
390.00	Structures and Improvements	2.44%	41	0%	2.44%	0.00%
391.00	Office Furniture and Equipment	9.09%	11	0%	9.09%	0.00%
392.00	Transportation Equipment	7.50%	12	10%	8.33%	-0.83%
393.00	Stores Equipment	3.13%	32	0%	3.13%	0.00%
394.00	Tool, Shop, and Garage Equipment	3.70%	27	0%	3.70%	0.00%
396.00	Power Operated Equipment	4.41%	17	25%	5.88%	-1.47%
397.10	Electronic Reading - ERT	5.00%	20	0%	5.00%	0.00%
397.20	Communication Equipment	4.76%	21	0%	4.76%	0.00%
398.00	Miscellaneous Equipment	3.85%	26	0%	3.85%	0.00%

**MGE is required to keep separate accounting of its amounts accrued for recovery of its initial investment in plant from the amounts accrued for the cost of removal/ net salvage.

SUMMARY OF DEPRECIATION DETERMINATIONS

Case No. GR-2006-0422, Missouri Gas Energy

To develop surrogate average service lives for Missouri Gas Energy's (MGE's) capital plant accounts, Staff considered the life characteristics of Missouri's other large natural gas local distribution (LDC) companies. Staff compiled the average service lives developed from depreciation studies conducted by Staff in conjunction with recent rate case filings. The comparison depreciation studies were associated with Case Nos. GR-2003-0517 (Ameren UE.), GR-2004-0072 (Aquila Inc.), and GR-2005-0284 (Laclede Gas Company). Each of the companies studied provided actuarial data of placements and retirements for the various plant accounts. The average service lives determined in these depreciation studies are presented in Table 3.1.

For the majority of accounts, Staff used the average of the three large LDC's average service lives. Staff believes that by averaging the three large LDC's unique average service lives, the variations in each LDC's plant, management and operations are mitigated. In certain accounts, where the LDCs' experiences vary greatly, Staff used the median of the average service lives.

To develop net salvage rates, Staff analyzed MGE's salvage data dating back to 1978. Staff calculated average net salvage percentages for the most recent five year (2000 – 2004) and ten year (1995 – 2004) periods, and also for the entire salvage history. The net salvage averages are presented in Table 3.2. Staff also conducted five year rolling band analyses to help identify trends. For the majority of accounts, Staff relied on the ten year average as an indicator of future net salvage/ cost of removal expectations.

An account by account summary of Staff's depreciation rates follows below.

Distribution Plant Accounts

Account 375 – Structures and Improvements, Depreciation Rate (DR) = 2.00%

- Average Service Life (ASL) = 45 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- Net Salvage/ Cost of Removal (NS) = 10%. Staff recommends 10% net salvage based on the average of experienced net salvage percentage. Staff finds that there is volatility in the salvage pattern of this account and believes that 10% is an appropriate expectation.

Account 376 – Mains, DR = 2.11%

- ASL = 45 years. Staff recommends the median of the three large LDCs as a basis for the ASL for this account. Staff finds that the experience of one LDC varies significantly from the other two. Staff chose the median to mitigate the variance.
- NS = 5%. Staff recommends 5% net salvage. Staff finds the trend for the net salvage of this account to be declining rapidly.

Account 378 – Measuring and Regulating Equipment, DR = 2.44%

- ASL = 41 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- NS = 0%. Staff recommends the ten year average (1995 – 2004) of experienced net salvage percentage.

Account 379 – Measuring and Regulating Equipment – City Gate, DR = 2.44%

- ASL = 41 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- NS = 0%. Staff recommends the ten year average (1995 – 2004) of experienced net salvage percentage.

Account 380 – Services, DR = 3.05%

- ASL = 42 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- NS = – 28%. Staff recommends the ten year average (1995 – 2004) of experienced net cost of removal percentage.

Account 381 – Meters, DR = 2.46%

- ASL = 41 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- NS = – 1%. Staff recommends the five year average (2000 – 2004) of experienced net cost of removal percentage.

Account 382 – Meter Installations, DR = 2.44%

- ASL = 41 years. Staff recommends the same ASL for this account as for Account 381.
- NS = 0%. Staff recommends five year average (2000 – 2004) of experienced net salvage percentage. Staff finds that the cost of removal is trending toward zero.

Account 383 – House Regulators, DR = 2.22%

- ASL = 45 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- NS = 0%. Staff recommends the ten year average (1995 – 2004) of experienced net salvage percentage.

Account 385 – Industrial Measuring and Regulating Equipment, DR = 2.33%

- ASL = 43 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- NS = 0%. Staff recommends the ten year average (1995 – 2004) of experienced net salvage percentage similar to Account 378, there is no salvage data for this account.

General Plant Accounts

Account 390 – Structures and Improvements, DR = 2.44%

- ASL = 41 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- NS = 0%. Staff recommends the five year average of experienced net salvage percentage. Staff finds that minimal retirements have occurred over the past ten years and a single retirement event in 1996 grossly inflates the ten year average.

Account 391 – Office Furniture and Equipment, DR = 9.09%

- ASL = 11 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account. The 11 year ASL for this account is calculated from a weighted average of the average ASL for office furniture (20 years) and the average ASL for computers (8 years).
- NS = 0%. Staff recommends the ten year average (1995 – 2004) of experienced net salvage percentage.

Account 392 – Transportation Equipment, DR = 7.50%

- ASL = 12 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- NS = 10%. Staff recommends 10% net salvage based on the average of experienced net salvage percentages. Staff finds that there is volatility in the salvage pattern of this account and believes that 10% is an appropriate expectation.

Account 393 – Stores Equipment, DR = 3.13%

- ASL = 32 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- NS = 0%. Staff recommends zero net salvage for this account. Staff finds minimal salvage experienced in six of the last twenty-seven years. No cost of removal has been experienced for this account.

Account 394 – Tools, Shop and Garage Equipment, DR = 3.70%

- ASL = 27 years. Staff recommends the median of the three large LDCs as a basis for the ASL for this account. Staff finds that the experience of one LDC varies significantly from the other two. Staff chose the median to mitigate the variance.
- NS = 0%. Staff recommends zero net salvage for this account. The ten year average of experienced net salvage is less than 1%.

Account 396 – Power Operated Equipment, DR = 4.41%

- ASL = 17 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- NS = 25%. Staff recommends 25% net salvage based on the average of experienced net salvage percentage. Staff finds that there is volatility in the salvage pattern of this account and believes that 25% is a conservative expectation.

Account 397 – Communication Equipment, DR = 4.76%

- ASL = 21 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- NS = 0%. Staff recommends the ten year average (1995 – 2004) of experienced net salvage percentage.

Account 397.1 – Electronic Reading - ERT, DR = 5.00%

- ASL = 20 years. Staff recommends no change of the ASL of this account.
- NS = 0%. Staff does not anticipate significant net salvage for this account.

Account 398 – Miscellaneous Equipment, DR = 3.85%

- ASL = 26 years. Staff recommends the average of the three large LDCs as a basis for the ASL for this account.
- NS = 0%. Staff recommends the ten year average (1995 – 2004) of experienced net salvage percentage.

Table 3.1
Average Service Life Summary

Account Number	Description	Staff Depreciation Studies Average Service Life (years)			ASL Range		Average ASL	Median ASL
		Ameren UE	Aquila	Laclede	Low	High		
	Distribution							
375	Structures and Improvements	44	45	45	44	45	45	45
376	Mains	43	45	75	43	75	54	45
378	Measuring and Regulating Equip.	44	44	35	35	44	41	44
379	Meas & Reg Equip - City Gate	44	44	35	35	44	41	44
380	Services	36	45	44	36	45	42	44
381	Meters	45	40	38	38	45	41	40
382	Meter Installations				0	0		
383	House Regulators	45	40	50	40	50	45	45
385	Industrial Meas and Reg Equipment	44	44	40	40	44	43	44
	General							
390	Structures and Improvements	44	45	35	35	45	41	44
391	Office Furniture and Equipment	9	22	30	9	30	20	22
391.1	Computers	8	7	10	7	10	8	8
392	Transportation Equipment	13	12	11	11	13	12	12
393	Stores Equipment	25	27	45	25	45	32	27
394	Tool, Shop, and Garage Equipment	22	27	38	22	38	29	27
396	Power Operated Equipment	22	16	13	13	22	17	16
397	Communication Equipment	14	29	20	14	29	21	20
398	Miscellaneous Equipment		23	29	23	29	26	26

Table 3.2

Average Net Salvage Percentages

Account Number	Description	Average Net Salvage	10 Year Avg. 1995-2004	5 Year Avg. 2000-2004
	Distribution			
375	Structures and Improvements	11.80%	17.88%	28.74%
376	Mains	27.77%	19.52%	6.22%
378	Measuring and Regulating Equip	0.44%	-0.01%	5.34%
379	Meas & Reg Equip - City Gate	4.36%	-0.52%	0.00%
380	Services	-36.47%	-27.86%	-70.63%
381	Meters	2.15%	-0.31%	-1.02%
382	Meter Installations	-4.16%	-3.58%	0.31%
383	House Regulators	1.01%	-0.01%	-0.29%
	General			
390	Structures and Improvements	37.24%	59.66%	0.00%
391	Office Furn and Equipment	1.75%	0.30%	0.33%
392	Transportation Equipment	11.21%	15.50%	6.95%
393	Stores Equipment	4.49%	2.80%	4.27%
394	Tool, Shop, and Garage Equipment	1.00%	0.82%	0.16%
396	Power Operated Equipment	25.62%	29.96%	35.40%
397	Communication Equipment	0.01%	-0.07%	0.09%
398	Miscellaneous Equipment	1.96%	0.00%	0.00%

GR-2006-0422
Missouri Gas Energy
SCHEDULE 4. Depreciation Rate Determination and Corresponding Annual Accrual

Account Number	Description	Original Cost 6/30/2006	Existing Ordered				Staff Proposal			
			ASL (Years)	Net Salvage	Depreciation Rate	Annual Accrual	ASL (Years)	Net Salvage	Depreciation Rate	Annual Accrual
	DISTRIBUTION									
375.00	Structures and Improvements	5,584,958	61	0%	1.65%	92,152	45	10%	2.00%	111,699
376.00	Mains	339,884,706	44	0%	2.27%	7,715,383	45	5%	2.11%	7,171,567
378.00	Measuring and Regulating Equip.	11,634,249	35	0%	2.86%	332,740	41	0%	2.44%	283,876
379.00	Meas & Reg Equip - City Gate	3,058,251	47	0%	2.13%	65,141	41	0%	2.44%	74,621
380.00	Services	294,362,067	37	0%	2.70%	7,947,776	42	-28%	3.05%	8,978,043
381.00	Meters	31,036,775	35	0%	2.86%	887,652	41	-1%	2.46%	763,505
382.00	Meter Installations	68,835,673	35	0%	2.86%	1,968,700	41	0%	2.44%	1,679,590
383.00	House Regulators	11,558,045	41	0%	2.44%	282,016	45	0%	2.22%	256,589
385.00	Industrial Meas and Reg Equipment	372,505	30	0%	3.33%	12,404	43	0%	2.33%	8,679
	TOTAL DISTRIBUTION	766,327,228				19,303,964				19,328,170
	GENERAL									
390.00	Structures and Improvements	661,193	50	0%	2.00%	13,224	41	0%	2.44%	16,133
391.00	Office Furniture and Equipment	6,970,421	12	0%	8.06%	561,816	11	0%	9.09%	633,611
392.00	Transportation Equipment	5,043,979	11	0%	8.70%	438,826	12	10%	7.50%	378,298
393.00	Stores Equipment	538,350	37	0%	2.70%	14,535	32	0%	3.13%	16,850
394.00	Tool, Shop, and Garage Equipment	5,154,470	19	0%	5.30%	273,187	27	0%	3.70%	190,715
396.00	Power Operated Equipment	243,807	12	0%	8.33%	20,309	17	25%	4.41%	10,752
397.10	Electronic Reading - ERT	36,324,861	20	0%	5.00%	1,816,243	20	0%	5.00%	1,816,243
397.20	Communication Equipment	3,289,347	16	0%	6.25%	205,584	21	0%	4.76%	156,573
398.00	Miscellaneous Equipment	431,485	26	0%	3.85%	16,612	26	0%	3.85%	16,612
	TOTAL GENERAL	58,657,913				3,360,336				3,235,789
	GRAND TOTAL	**824,985,141**				**22,664,300**				**22,563,958**