Exhibit No.:
Issue: *Depreciation*
Witness: *Paul W. Adam*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Direct Testimony*
Case No.: *GR-2001-292*
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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

PAUL W. ADAM

MISSOURI GAS ENERGY,
A DIVISION OF SOUTHERN UNION COMPANY

CASE NO. GR-2001-292

Jefferson City, Missouri
April 2001

Exhibit No. 14
Date 6-25-01 Case No. GR-2001-292
Reporter Stewart

DIRECT TESTIMONY

OF

PAUL W. ADAM

MISSOURI GAS ENERGY,

A DIVISION OF SOUTHERN UNION COMPANY

CASE NO. GR-2001-292

Q. Please state your name and business address.

A. Paul W. Adam, 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 an Engineer II in the Engineering and Management Services Department.

Q. What are your duties as an engineer in the Engineering and Management Services Department?

A. I am responsible for depreciation determinations and studies of companies regulated by the Commission.

Q. Would you please state briefly your qualifications, educational background and experience?

A. I am a Registered Professional Engineer in Missouri and Colorado. In 1967, I earned a Bachelor of Science degree in Chemical Engineering from the University of Missouri–Columbia. I served in the U.S. Army after graduating and subsequently was employed in the oil industry from 1969 until 1991 as an engineer in various capacities, with the exception of a brief period from 1971 to 1974 when I completed a Masters Degree in Business Administration at the University of Missouri and also built single family homes.

From 1991 to 1993 I managed a concrete products plant in Northwest Missouri. In 1994, I accepted my current position.

Q. Have you ever testified before the Commission?

A. Yes.

Q. Please state the purpose of your testimony in this case.

A. The purpose of my testimony is to: 1) repeat what was learned in Missouri Gas Energy's (MGE's or Company's) Case No. GR-98-140 that affects everyone's ability to determine depreciation rates from the study of historical retirement events; 2) present Staff's proposed depreciation rates that were determined by Staff from similar plant data obtained principally from Laclede Gas Company, St. Louis, Missouri; and 3) to explain the validity of Staff's depreciation rate proposal for accounts 3760, Mains, and 3800, Services.

Q. Have you conducted a depreciation study of the Company's capital plant?

A. Yes. This Company has not retained the data to study plant life using mortality records but engineering judgment and analogy to similar Missouri plant was used to complete a depreciation study.

Q. What was learned in Case No. GR-98-140 that affects everyone's ability to determine depreciation rates from the study of historical retirement events?

A. The direct testimony of Staff witness Woodie C. Smith in Case No. GR-98-140 states on pages 12 and 13, lines 19-21 and 1 and 2, respectively:

> 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. The consultant tried several methods of data analysis, and stated that those results were inconclusive.

The absence of Company-specific historical retirement data files prevents a study of Company-specific average service lives (ASLs) account by account. MGE has initiated a compilation of retirement histories beginning in 1994. Ultimately, these MGE-specific files will allow calculations to be made to determine Company-specific ASLs for MGE plant in each account.

Until there is sufficient historical retirement data to allow Company-specific ASLs to be determined, Staff recommend that ASLs of comparable plant owned and operated by other Missouri Public Service Commission-regulated gas utility companies be used, along with engineering judgment, to determine the account-by-account ASLs and depreciation rates for this Company.

Q. As a result of this situation, which was learned in Case No. GR-98-140, what actions have you taken to determine reasonable ASLs and depreciation rates for the Company?

A. I have reviewed the Company's historical data from 1998 to the present time to confirm that MGE is maintaining a historical retirements file account by account. They are. Also, I have made plant tours of MGE's facilities to meet with operating personnel and engineers to learn about the maintenance and operation of physical plant. From these visits and conversations, I developed an understanding about the type of plant in each account and its use.

Q. What conclusions have you arrived at as a result of your plant visits and conversations?

A. I have concluded that MGE's plant is similar to the plant of Laclede Gas Company in St. Louis.

Q. What do you know about Laclede's plant that brought you to this conclusion?

A. Over the past six years, I have worked with Laclede's data several times to determine ASLs and depreciation rates account by account. I have made several plant tours and discussed Laclede's plant with their operations personnel and engineers. It is my opinion that Laclede's data is current and valid.

Q. Are there other Missouri Public Service Commission-regulated gas companies whose plant histories could be used to help establish ASL's and depreciation rates for MGE's plant?

A. This may be the case with AmerenUE's gas plant but I have less exposure to it. UtiliCorp's currently ordered depreciation rates for gas plant are from Case No. GR-88-194. These rates do not have associated ASLs and would need to be brought current to be used as a "go by" for the MGE plant. I have little first-hand knowledge of UtiliCorp's gas plant.

Q. Are these the reasons that you have relied heavily on ASLs and depreciation rates determined for Laclede Gas Company's plant because of the depth of knowledge about the historical data and the similarity of plant?

A. Yes. On critical accounts, I will give my proposed ASL and the ordered ASLs for Laclede and AmerenUE.

Q. What ASLs and depreciation rates have you determined for MGE?

A. I have determined the ASLs and depreciation rates presented in my Schedule 1.

Q. What methodology was used to determine Staff's proposed ASLs and depreciation rates?

A. The methodology used on MGE's plant was to determine if it was analogous to gas plant that had lives evaluated using mortality data. An analogy was Laclede Gas Company. In the Laclede cases, Staff conducted in-depth and detailed studies of plant. Multiple placement and experience bands (i.e., groups of vintage data) were calculated and studied to determine each account's ASL. Knowing the ASL of each account, the original cost of plant is spread equally over all years. Using this methodology, depreciation is used to recover the capital cost of the plant in service from utility customers thru service rates. Net salvage cost, that includes cost of removal of plant when it is retired, is considered an annual expense rather than an annual accrual and is determined by Staff auditors and included with other annual expenses. If a large life span type property has a retirement and an associated net salvage cost as a result of a demolition and location rehabilitation project, Staff depreciation engineers will study this project and its associated cost. An appropriate net cost or net salvage cost of this type of project will be proposed for recovery by the Company through an amortization after the work is done or at least when the work is committed to by the regulated company.

Q. Is there a change in the annual accrual for depreciation from the currently ordered depreciation rates to Staff's proposed depreciation rates?

A. Yes. Excluding the Corporate plant that is partially allocated to MGE, the currently ordered depreciation rates would result in an annual depreciation accrual of $23,034,284 based on June 30, 2000 plant balances. Based on the same plant balances, the Staff's proposed depreciation rates will result in an annual depreciation accrual of $14,604,649. Added to the Staff's annual depreciation accrual would be the annual net salvage cost of $713,624 determined by the auditors. (The Corporate plant allocated to MGE will be added in at the end of this testimony and shown in the attached Schedule 1).

The sum of these two values, $15,318,273, is comparable to the ordered annual depreciation accrual ($23,034,284) that has net salvage cost included in it.

Q. This is approximately an $8 million difference. Can you explain what accounts cause this difference?

A. Nearly all of the difference is attributable to account 3800, Services. A smaller amount is attributable to account 3760, Mains. The decrease in annual accrual due to Mains is about equal to the net increase in annual accrual of all other accounts.

Q. For the Services account, 3800, why is there a change of nearly $8 million?

A. Apparently, when the depreciation rates were previously determined for Services, the ASL was too short resulting in a depreciation rate and a depreciation accrual that are too large. The currently ordered ASLs for the Services account for both Laclede Gas and AmerenUE is 44 years. Using this ASL to calculate annual accrual based on a June 30, 2000 plant balance, the annual accrual for Services is $5,481,288. The currently ordered depreciation rate does not have an ASL ordered with it. But, utilizing Black and

Veatch's (B & V's) $720,000[1] annual net salvage cost, an ASL of about 18 years can be back calculated. The difference between a reasonable ASL of 44 years, as experienced and ordered for Laclede Gas and AmerenUE Gas, versus an ASL of about 18 years is the basis for nearly $8 million difference between the annual accrual determined using the ordered depreciation rate ($13,280,654) and the annual accrual determined from Staff's proposed depreciation rate ($5,481,288).

Q. For the account 3760, Mains, what is the basis for the difference between the annual depreciation accrual determined with ordered depreciation rates and the annual depreciation accrual determined with Staff's proposed depreciation rates?

A. The basis of the difference appears to be the ASL again. The difference is about $1.2 million based on the June 30, 2000 plant balance. The ordered depreciation rate calculates an annual accrual of $4,988,376 and Staff's proposed depreciation rate calculates an annual accrual of $3,741,282.

There are differences between ASLs determined for other Missouri PSC-regulated gas service companies in the Mains account. For example, AmerenUE has an ordered ASL of 44 years. The MGE-ordered depreciation rate suggests an ASL of about 55 years. Laclede's ASL for Mains is ordered at 71 years. Staff have used the life determined for Laclede's Mains in their proposal for MGE. Staff are familiar with the quality of the data submitted by Laclede and through engineering judgment chose to use the Laclede ASLs in this MGE case. There are two basic reasons for this decision. First, Staff believes that Mains will experience ASL considerably longer than Services due to pipe size, type and wall thickness. Second, large mains in other service industries placed

[1] Black & Veatch Corporation depreciation study submitted June 8, 2000, to Mr. Robert J. Hack of Missouri Gas Energy (full study attached).

in similar soils experience lives of 70 to 100 years before pitting from electromotive forces requires replacement. Therefore, the 71 year ASL calculated from the actual historical data of Laclede gas seems reasonable for MGE's gas service mains.

Q. Do you accept the MGE's consultant's determination of net salvage cost?

A. Yes. As Mr. Sullivan of B & V states on page 11 of his study, he has determined net salvage cost on a current basis. Mr. Sullivan has left the current determination of net salvage in the depreciation rates he calculates when Staff have separated net salvage cost from recovery of original capital cost. Staff auditors will determine a normalized annual net salvage cost on a current basis and include this expense with other expenses. The level of collection for net salvage cost is essentially equal using either method of determining the value.

Q. Is there any corporate plant that is booked to the parent company, Southern Union Company, that is partially allocated to MGE?

A. Yes. There are four accounts, 2901 Structures, 3911 Computer Equipment, 3970 Communication Equipment and 3980 Miscellaneous Equipment.

Q. What did you determine about these four accounts?

A. Staff auditors determined appropriate allocations as given on Schedule 1 under the title "Southern Union Corporate" in the column titled "Plant Balance 12-13-00." From these plant balances and the proposed depreciation rates, that are consistent with the proposed depreciation rates for the same MGE only accounts, Staff determined annual accruals as given on Schedule 1. The total annual accrual for Corporate allocated plant based on 12-31-00 plant balance is $1,038,728. This small amount must be added to the previously discussed $14,604,649 for MGE only accounts.

The addition of these two annual accruals is $15,642,728. The fact that there is a different plant balance date for the two groups of plant does not affect validity of the comparisons made earlier in this testimony to ordered rates.

Q. What plant balances are used with the proposed rates in Staff's Revenue Requirement Model to determine the Company's revenue requirement for this case?

A. Normal operation is for depreciation rates to be supplied to Staff auditors that run the Revenue Requirement model. Staff auditors normally run the model with a plant balance that is nearer current than the plant balance used for comparison calculations by depreciation engineers. In this case, the Model was run with 12-31-00 plant balances. This allows the results of the Revenue Requirement Model to be as current as possible with the available data.

Q. What are Staff's proposals for this MGE case?

A. Staff propose: 1) That MGE be ordered to continue maintaining mortality records on all capital plant accounts. 2) That the lives and depreciation rates presented in Schedule 1 be ordered.

Q. Does this conclude your testimony?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In The Matter of Missouri Gas Energy's Tariff Filing For General Rate Increase	))	Case No. GR-2001-292

AFFIDAVIT OF PAUL W. ADAM

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

Paul W. Adam, 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.

Paul W. Adam

Paul W. Adam

Subscribed and sworn to before me this 18th day of April 2001.

Toni M. Charlton

TONI M. CHARLTON
NOTARY PUBLIC STATE OF MISSOURI
COUNTY OF COLE
My Commission Expires December 28, 2004

Missouri Gas Energy GR-2001-292

Account #	Account	(Year) Life	(%) Depr. Rate	($) Plant Bal. 6-30-2000	($) Proposed Annual Accrual
3751	Structures	60.5	1.65	5,987,064	98,787
3760	Mains	71.0	1.41	265,339,168	3,741,282
3780	Measuring & Regulating Sta.	35.0	2.86	10,260,757	293,458
3790	City Gate Stations	47.0	2.13	2,775,072	59,109
3800	Services	44.0	2.27	241,466,436	5,481,288
3810	Meters	35.0	2.86	27,608,278	789,597
3820	Installations: Meters & Reg.	35.0	2.86	47,892,829	1,369,735
3830	Regulations	41.0	2.44	9,254,498	225,810
3850	EGM Equipment	30.0	3.33	250,335	8,336
3870	Other Equipment	n/a	0.00	-	-
3901	Structures & Improvements	50.0	2.00	419,125	8,383
3910	Furniture & Equipment	*12.4	8.06	3,012,525	242,809
3920	Transportation Equipment	11.5	8.70	4,470,517	388,935
3930	Store Equipment	37.0	2.70	499,757	13,493
3940	Tools	42.0	2.38	4,441,648	105,711
3960	Power Op. Equipment	12.0	8.33	586,189	48,830
3970	Communication Equipment	16.0	6.25	1,478,273	92,392
3971	Electronic ERT Equipment	20.0	5.00	32,607,557	1,630,378
3980	Miscellaneous Equipment	26.0	3.85	164,059	6,316
					$14,604,649

**Special Account: has 3 plant types with distinguishable lives. 12.4 years is a weighted average.*

Southern Union Corporate

(MGE Allocated)

Account #	Account	(Year) Life	(%) Depr. Rate	($) Plant Bal. 12-31-00	($) Annual Accrual
3901	Structures	50.0	2.00	295,765	5,915
3910	Furniture and Equipment	31.0	3.22	439,187	28,309
3911	Computer Equipment	10.0	10.00	10,034,929	1,003,493
3970	Communication Equipment	16.0	6.25	4,220	264
3980	Miscellaneous Equipment	26.0	3.85	2,547	98
			Total Corporate Allocated		1,038,079
			MGE Total Including Corporate Allocated Plant		15,642,728