Missouri Gas Energy
Table of Contents
to the Financial Supporting Schedules
of Frank J. Hanley

Southwest Gas Corporation
Brief Summary of Common Equity Cost Rate
With General Revenues Adjustment Provision (GRA) Included

No.	Principal Methods	Southwest Gas Corporation	Proxy Group of Eight Value Line Natural Gas Distribution Companies
1.	Discounted Cash Flow Model (DCF) (1)	9.24 %	9.61 %
2.	Risk Premium Model (RPM) (2)	12.09	11.53
3.	Capital Asset Pricing Model (CAPM) (3)	12.08	11.25
4.	Comparable Earnings Model (CEM) (4)	NMF	NMF
5.	Indicated Common Equity Cost Rate before Adjustments for Business and Financial Risk (Mid-	10.67 %	10.57 %
6.	Business Risk Adjustment	0.01 (5)	0.00
7.	Financial Risk Adjustment	0.00	0.40 (6)
8.	Recommended Common Equity Cost Rate after Business Risk	10.68 %	10.97 %
9.	Decoupling Adjustment	-0.09 (7)	0.12 (8)
10.	Indicated Common Equity Cost Rate	10.59 %	11.09 %
11.	Recommendation for the Cost of Common Equity for Southwest Gas Corporation	**10.80** %	

Notes:
(1) From Sheet 21 of this Exhibit.
(2) From Sheet 33 of this Exhibit.
(3) From Sheet 48 of this Exhibit.
(4) The CEM results are on Sheets 1 and 2 of Exhibit __ (FJH-15). Mr. Hanley considers these results aberrant relative to the other cost of equity models and are not meaningful (NMF) in this particular study as explained in his direct testimony.
(5) Business risk adjustment to reflect Southwest Gas Corporation's (Southwest) greater business risk due to its small size relative to the proxy group of eight Value Line natural gas distribution companies as detailed in Mr. Hanley's accompanying direct testimony.
(6) Financial risk adjustment to reflect Southwest's greater financial risk due to its bond rating of Baa3 relative to the A3 bond rating of the proxy group of eight Value Line natural gas distribution companies. Mr. Hanley will apply 2/3 of the 0.60% normalized spread between A2 and Baa2 or 0.40% to reflect the greater financial risk of Southwest relative to the proxy group as discussed in Mr. Hanley's accompanying direct testimony.
(7) If a decoupling mechanism is approved in this docket, the Nevada operations of Southwest would be enjoying decoupled revenues. According to the 2007 annual report, Southwest's Nevada operations contribute 35% of total operating margin to the whole of Southwest. Assuming 25 basis points is the full value of decoupling, you multiply by 35% to find the total risk reduction for Southwest if the decoupling mechanism is approved (8.75 bp = 35% * 25 bp).
(8) As shown on Exhibit __ (FJH-3), the average of the proxy group of eight Value Line natural gas distribution companies whose revenues are fully or partially decoupled is 93.8% of the total revenues of the proxy group. The upward adjustment of 12 basis points reflects the increased risk of having only approximately 45% of total revenues that are partially or fully decoupled, which would be the approximate percentage of revenues under decoupling that Southwest would have if the decoupling mechanism is approved (93.8% - 45.0% = 48.8%). Assuming 25 basis points is the full value of decoupling, you multiply that value by 48.6% to find the increased risk of the proxy group if it only had 45% decoupled revenues (48.8% * 25 bp = 12 bp).

Missouri Gas Energy
Summary of Cost of Capital and Fair Rate of Return
Based on a Hypothetical Capital Structure

Type of Capital	Ratios (1)	Cost Rate	Weighted Cost Rate
Long-Term Debt	41.06%	6.080% (2)	2.496%
Short-Term Debt	10.94%	5.492% (3)	0.601%
Total Debt	52.00%		
Common Equity	48.00%	10.500% (4)	5.040%
Total	100.00%		8.137%

(1) The 52.00% total debt ratio has been allocated between the long-term and short-term debt based upon the average long-term and short-term debt ratios of the proxy group of nine Value Line natural gas distribution companies for the five quarters ended December 31, 2008 as shown on Page 4 of Schedule FJH-5. The allocation is derived as follows:

	Average for the Five Quarters ended December 31, 2008	Proxy Group of Nine Value Line Natural Gas Distribution Companies	Percent of Total Debt
	Long-Term Debt	40.84 %	78.96 %
	Short-Term Debt	10.88 %	21.04 %
	Total Debt	51.73 %	100.00 %

Therefore, the hypothetical long-term debt ratio of 41.06% is derived as 78.96% * 52.00%, and the short-term debt ratio of 10.94% is derived as 21.04% * 52.00%.

(2) Derived on Schedule FJH-9.

(3) Based on Integys Energy's 364 day revolving credit facility agreement on May 27, 2009 which is shown on pages 2 and 3 of Schedule FJH-27. Assuming that the Company had a split rating of A3/A, which is equal to Mr. Hanley's proxy group shown on page 2 of this Schedule. Mr. Hanley utilized the median spread of 262.5 basis points [(275.0+250.0)/2] over the projected three-month LIBOR rate over six quarters ended Q4 2010 of 0.867% from Blue Chip Financial Forecasts shown on page 40 of Schedule FJH-21. This sum was added to a 200 basis point upfront fee which was inadvertantly excluded in Schedule FJH-21, page 1. Thus, the corrected short-term debt cost rate is 5.492% calculated as shown below.

0.867%	Projected Three-Month LIBOR Rate
2.625%	Spread over LIBOR Rate
2.000%	Upfront Fee
5.492%	Indicated Short-term Debt Cost Rate for MGE

The above rate is conservative as it does not include an allowance for a commitment fee on undrawn funds. Such fees range between 25 and 37.5 basis points as shown on page 2 of Schedule FJH-27.

(4) Based upon informed judgment from the entire study, the principal results of which are summarized on Page 2 of Schedule FJH-21.

Schedule FJH-32

Missouri Gas Energy
Market-to-Book Ratios, Earnings / Book Ratios and
Inflation for Standard & Poor's Industrial Index and
the Standard & Poor's 500 Composite Index
from 1947 through 2008

Year	Market-to-Book Ratio (1)		Earnings-to-Book Ratio (2)			Earnings / Book Ratio - Net of Inflation	
	S&P Industrial Index (3)	S&P 500 Composite Index (3)	S&P Industrial Index (3)	S&P 500 Composite Index (3)	Inflation (4)		
1947	1.23 %	NA	13.0 %	NA	9.0 %	4.0 %	NA
1948	1.13	NA	17.3	NA	2.7	14.6	NA
1949	1.00	NA	16.3	NA	(1.8)	18.1	NA
1950	1.16	NA	18.3	NA	5.8	12.5	NA
1951	1.27	NA	14.4	NA	5.9	8.5	NA
1952	1.29	NA	12.7	NA	0.9	11.8	NA
1953	1.21	NA	12.7	NA	0.6	12.1	NA
1954	1.45	NA	13.5	NA	(0.5)	14.0	NA
1955	1.81	NA	16.0	NA	0.4	15.6	NA
1956	1.92	NA	13.7	NA	2.9	10.8	NA
1957	1.71	NA	12.5	NA	3.0	9.5	NA
1958	1.70	NA	9.8	NA	1.8	8.0	NA
1959	1.94	NA	11.2	NA	1.5	9.7	NA
1960	1.82	NA	10.3	NA	1.5	8.8	NA
1961	2.01	NA	9.8	NA	0.7	9.1	NA
1962	1.83	NA	10.9	NA	1.2	9.7	NA
1963	1.94	NA	11.4	NA	1.7	9.7	NA
1964	2.18	NA	12.3	NA	1.2	11.1	NA
1965	2.21	NA	13.2	NA	1.9	11.3	NA
1966	2.00	NA	13.2	NA	3.4	9.8	NA
1967	2.05	NA	12.1	NA	3.0	9.1	NA
1968	2.17	NA	12.6	NA	4.7	7.9	NA
1969	2.10	NA	12.1	NA	6.1	6.0	NA
1970	1.71	NA	10.4	NA	5.5	4.9	NA
1971	1.99	NA	11.2	NA	3.4	7.8	NA
1972	2.16	NA	12.0	NA	3.4	8.6	NA
1973	1.96	NA	14.6	NA	8.8	5.8	NA
1974	1.39	NA	14.8	NA	12.2	2.6	NA
1975	1.34	NA	12.3	NA	7.0	5.3	NA
1976	1.51	NA	14.5	NA	4.8	9.7	NA
1977	1.38	NA	14.6	NA	6.8	7.8	NA
1978	1.25	NA	15.3	NA	9.0	6.3	NA
1979	1.23	NA	17.2	NA	13.3	3.9	NA
1980	1.31	NA	15.6	NA	12.4	3.2	NA
1981	1.24	NA	14.9	NA	8.9	6.0	NA
1982	1.17	NA	11.3	NA	3.9	7.4	NA
1983	1.45	NA	12.2	NA	3.8	8.4	NA
1984	1.46	NA	14.6	NA	4.0	10.6	NA
1985	1.67	NA	12.2	NA	3.8	8.4	NA
1986	2.02	NA	11.5	NA	1.1	10.4	NA
1987	2.50	NA	15.7	NA	4.4	11.3	NA
1988	2.13	NA	19.0	NA	4.4	14.6	NA
1989	2.56	NA	18.5	NA	4.7	13.8	NA
1990	2.63	NA	16.3	NA	6.1	10.2	NA
1991	2.77	NA	10.8	NA	3.1	7.7	NA
1992	3.29	NA	13.0	NA	2.9	10.1	NA
1993	3.72	NA	15.7	NA	2.8	12.9	NA
1994	3.73	NA	23.0	NA	2.7	20.3	NA
1995	4.06	2.64 %	22.9	16.0 %	2.5	20.4	13.5 %
1996	4.79	3.00	24.8	16.8	3.3	21.5	13.5
1997	5.88	3.53	24.6	16.3	1.7	22.9	14.6
1998	7.13	4.16	21.3	14.5	1.6	19.7	12.9
1999	8.27	4.76	25.2	17.1	2.7	22.5	14.4
2000	7.51	4.51	23.9	16.2	3.4	20.5	12.8
2001	NA	3.50	NA	7.4	1.6	NA	5.8
2002	NA	2.93	NA	8.3	2.4	NA	5.9
2003	NA	2.78	NA	14.1	1.9	NA	12.2
2004	NA	2.91	NA	15.3	3.3	NA	12.0
2005	NA	2.78	NA	16.4	3.4	NA	13.0
2006	NA	2.75 (5)	NA	17.2	2.5	NA	14.7
2007	NA	2.77 (5)	NA	12.8	4.1	NA	8.7
2008	NA	2.02 (5)	NA	2.7	0.1	NA	2.6
Average	2.34 %	3.22 %	14.9 %	13.7 %	3.8 %	10.9 %	11.2 %

Notes: (1) Market-to-Book Ratio equals average of the high and low market price for the year divided by the average book value.

(2) Earnings/Book equals earnings per share for the year divided by the average book value.

(3) On January 2, 2001 Standard & Poor's released Global Industry Classification Standard (GICS) price indexes for all Standard & Poor's U.S. indexes. As a result, all S&P Indexes have been calculated with a common base of 100 at a start date of December 31, 1994. Also, the GICS industrial sector is not comparable to the former S&P Industrial Index and data for the former S&P Industrial Index has been discontinued.

(4) As measured by the Consumer Price Index (CPI).

(5) Ratios for 2006 / 2007 are based upon estimated book values using the actual average price and the estimated book value calculated by adding the 2006 earnings per share to the 2005 / 2006 book value per share and then subtracting the 2006 / 2007 dividends per share as provided by Standard & Poor's Statistical Record - Current Statistics, March 2008, p. 29.

Source of Information: Standard & Poor's Security Price Index Record, 2000 Edition, p. 40
Standard & Poor's Statistical Service, Current Statistics, August 2001, p. 29
Standard & Poor's Statistical Service, Current Statistics, January 2001, p. 36
Standard & Poor's Current Statistics, June 2006, p. 29.
Standard & Poor's Current Statistics, August 2007, p. 29.
Standard & Poor's Compustat Services, Inc. PC Plus Research Insight Database
Ibbotson Associates, Stocks, Bonds, Bills and Inflation - Valuation Edition 2009 Yearbook, 2009

Comparison of Bond Ratings, Business Risk and Financial Risk Profiles for the
Proxy Group of Nine Value Line Natural Gas Distribution Companies
and Southern Union Company

		Moody's Bond Rating August 2009		Standard & Poor's Bond Rating August 2009				Standard & Poor's			
	Proxy Group of Nine Value Line Natural Gas Distribution Companies	Bond Rating	Numerical Weighting (1)	Bond Rating	Numerical Weighting (1)	Credit Rating	Numerical Weighting (1)	Business Risk Profile (2)	Numerical Weighting (1)	Financial Risk Profile (2)	Numerical Weighting (1)
ATG	AGL Resources Inc. (3)	A3	7.0	A-	7.0	A-	7.0	Excellent	1.0	Significant	4.0
ATO	Atmos Energy Corp.	Baa2	9.0	BBB+	8.0	BBB+	8.0	Excellent	1.0	Significant	4.0
LG	The Laclede Group, Inc. (4)	A3	7.0	A	6.0	A	6.0	Excellent	1.0	Intermediate	3.0
NJR	New Jersey Resources Corp. (5)	Aa3	4.0	NR	- -	A	6.0	Excellent	1.0	Intermediate	3.0
NWN	Northwest Natural Gas Co.	A2	6.0	AA-	4.0	AA-	4.0	Excellent	1.0	Intermediate	3.0
PNY	Piedmont Natural Gas Co., Inc.	A3	7.0	A	6.0	A	6.0	Excellent	1.0	Intermediate	3.0
SJI	South Jersey Industries, Inc. (6)	A3	7.0	A	6.0	BBB+	8.0	Excellent	1.0	Significant	4.0
SWX	Southwest Gas Corporation	Baa3	10.0	BBB	9.0	BBB	9.0	Excellent	1.0	Aggressive	5.0
WGL	WGL Holdings, Inc. (7)	A2	6.0	AA-	4.0	AA-	4.0	Excellent	1.0	Intermediate	3.0
	AVERAGE	A3	7.0	A	6.3	A	6.0	Excellent	1.0	Significant	3.6
	Southern Union Company	Baa3	10.0	BBB-	10.0	BBB-	10.0	Strong	2.0	Significant	4.0

Notes: (1) From Page 36 of Schedule FJH-21.
(2) From Standard & Poor's Issuer Ranking: U.S. Natural Gas Distribution and Integrated Gas Companies, Strongest to Weakest and U.S. Midstream Energy Companies, Strongest to Weakest September 2, 2009.
(3) Ratings, business risk and financial risk profiles are those of Atlanta Gas Light Company.
(4) Ratings, business risk and financial risk are those of Laclede Gas Company.
(5) Ratings, business risk and financial risk profiles are those of New Jersey Natural Gas Company.
(6) Ratings, business risk and financial risk profiles are those of South Jersey Gas.
(7) Ratings, business risk and financial risk profiles are those of Washington Gas Light Company.

Source Information: Moody's Investors Service
Standard & Poor's Global Utilities Rating Service

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2008 Valuation Yearbook

Market Results for

Stocks, Bonds, Bills, and Inflation

1926–2007

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Schedule FJH-35

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Table 7-14
Size Effect within Industries
Summary Statistics and Excess Returns

(Through Year-end 2007)

SIC Code	Description	Years	Large Company Group Geometric Mean	Arithmetic Mean	Standard Deviation
10	Metal Mining	82	8 57%	12.18%	29.09%
13	Oil and Gas Extraction	45	11 90%	14.78%	25.84%
15	Building Construction-General Contractors & Op Builders	36	9.26%	16 60%	40.95%
16	Hvy Construction Other than Bldg. Construction-Contractors	37	9.17%	13 15%	32.18%
20	Food and Kindred Spirits	82	11.05%	12.65%	18.77%
22	Textile Mill Products	82	6.74%	11 50%	32.34%
23	Apparel & other Finished Products Made from Fabrics & Similar	48	7.54%	12.10%	32 52%
24	Lumber and Wood Products, Except Furniture	45	8.72%	11.34%	25.24%
25	Furniture and Fixtures	38	10.26%	12 49%	21.76%
26	Paper & Allied Products	77	11.53%	14.41%	26.75%
27	Printing, Publishing and Allied Products	47	9.62%	11.70%	20.98%
28	Chemicals and Allied Products	82	11.75%	13 83%	22.17%
29	Petroleum Refining & Related Industries	82	11.80%	13.88%	21.21%
30	Rubber & Miscellaneous Plastics Products	61	11.06%	13.69%	24.93%
31	Leather & Leather Products	45	11.86%	16.29%	33.11%
32	Stone, Clay, Glass & Concrete Products	78	9 08%	12.77%	31.09%
33	Primary Metal Industries	82	8 83%	12.79%	30.46%
34	Fabricated Metal Products, Except Machinery & Trans. Equip.	82	9.86%	12 34%	22 87%
35	Industrial & Commercial Machinery & Computer Equipment	82	10.85%	14.20%	27.38%
36	Electrical Equipment & Components, Except Computer	82	9.86%	13.49%	28.19%
37	Transportation Equipment	82	11.13%	15.28%	31 66%
38	Measuring, Analyzing & Controlling Instruments	71	12 12%	14 16%	21.64%
39	Miscellaneous Manufacturing Industries	46	8.15%	11.94%	28.35%
40	Railroad Transportation	82	9.76%	12.71%	24.55%
42	Motor Freight Transportation & Warehousing	44	9.20%	12.53%	27.81%
45	Transport by Air	62	6.76%	11.11%	32.15%
48	Communications	45	9.48%	11.76%	21.92%
49	Electric, Gas & Sanitary Services	82	9.03%	11.10%	21.25%
50	Wholesale Trade-Durable Goods	62	10 07%	12.35%	22 98%
51	Wholesale Trade-Nondurable Goods	40	9.80%	12.60%	24.31%
53	General Merchandise Stores	82	9.66%	12.81%	26.32%
54	Food Stores	51	11.12%	13.54%	22 99%
56	Apparel & Accessory Stores	61	13.56%	17 59%	31.88%
57	Home Furniture, Furnishings, and Equipment Stores	35	11 95%	22 64%	58.73%
58	Eating and Drinking Places	39	10.99%	15.29%	32.29%
59	Miscellaneous Retail	45	12.53%	15.65%	26 36%
60	Depository Institutions	39	10.89%	13 04%	21 41%
61	Nondepository Credit Institutions	58	11.94%	14.84%	26.63%
62	Security and Commod. Brokers, Dealers, Exchanges	35	17.50%	23.99%	42 13%
63	Insurance Carriers	39	10.70%	12.48%	19.78%
65	Real Estate	45	7.07%	11.46%	30.33%
67	Holding & Other Investment Offices	78	10 00%	13 11%	24 98%
70	Hotels, Rooming Houses, Camps, & Other Lodging	38	10 95%	16 53%	34.89%
72	Personal Services	38	8.26%	12.73%	30.17%
73	Business Services	45	10.31%	14.91%	31.82%
78	Motion Pictures	57	11 65%	16 18%	32.97%
79	Amusement and Recreation Services	35	12.72%	16.29%	26.95%
80	Health Services	36	12.73%	18.18%	34 89%

Table 7-14 (continued)
Size Effect within Industries
Summary Statistics and Excess Returns

(Through Year-end 2007)

		Small Company Group			
SIC Code	Description	Geometric Mean	Arithmetic Mean	Standard Deviation	Excess Return
10	Metal Mining	8.74%	16.57%	45.51%	4.38%
13	Oil and Gas Extraction	12.37%	20.28%	45.67%	5.50%
15	Building Construction-General Contractors & Op. Builders	3.58%	13.35%	44.06%	−3.25%
16	Hvy. Construction Other than Bldg. Construction-Contractors	18 60%	23.37%	36.44%	10.22%
20	Food and Kindred Spirits	12.57%	16.09%	29.80%	3.44%
22	Textile Mill Products	9.25%	14 76%	34.44%	3.26%
23	Apparel & other Finished Products Made from Fabrics & Similar	5.69%	11.38%	37.52%	−0.72%
24	Lumber and Wood Products, Except Furniture	10.80%	20 58%	52.46%	9 24%
25	Furniture and Fixtures	7.83%	11.94%	29.50%	−0 55%
26	Paper & Allied Products	15.10%	20.45%	41.47%	6.04%
27	Printing, Publishing and Allied Products	14 94%	17.85%	25.20%	6 15%
28	Chemicals and Allied Products	12.85%	18.29%	39.37%	4.45%
29	Petroleum Refining & Related Industries	13.53%	17.93%	31.63%	4 05%
30	Rubber & Miscellaneous Plastics Products	12.28%	16.74%	32 90%	3.06%
31	Leather & Leather Products	10.50%	15.46%	34.02%	−0.83%
32	Stone, Clay, Glass & Concrete Products	10.01%	14.75%	32.84%	1.98%
33	Primary Metal Industries	13 63%	19.32%	38.17%	6 52%
34	Fabricated Metal Products, Except Machinery & Trans. Equip.	11 88%	17.40%	36.99%	5.06%
35	Industrial & Commercial Machinery & Computer Equipment	12.20%	17.47%	35.22%	3.26%
36	Electrical Equipment & Components, Except Computer	11.83%	19.64%	45.39%	6.15%
37	Transportation Equipment	12.04%	18.20%	37.94%	2.92%
38	Measuring, Analyzing & Controlling Instruments	12.90%	17.73%	34.61%	3.57%
39	Miscellaneous Manufacturing Industries	7 59%	11.92%	31.37%	−0.02%
40	Railroad Transportation	8.80%	15.02%	35 94%	2.31%
42	Motor Freight Transportation & Warehousing	6.48%	12.32%	38.44%	−0.21%
45	Transport by Air	8.67%	16.87%	47.63%	5.76%
48	Communications	17.00%	24.85%	45.23%	13.10%
49	Electric, Gas & Sanitary Services	10.56%	14.11%	29.34%	3 02%
50	Wholesale Trade-Durable Goods	10 97%	16.01%	35.70%	3.66%
51	Wholesale Trade-Nondurable Goods	8.34%	11.86%	28.05%	−0.74%
53	General Merchandise Stores	8.92%	16.26%	42.81%	3.45%
54	Food Stores	10.42%	14.11%	28.99%	0.58%
56	Apparel & Accessory Stores	11.13%	17.31%	38 88%	−0 27%
57	Home Furniture, Furnishings, and Equipment Stores	14 63%	24.80%	50.41%	2.16%
58	Eating and Drinking Places	1.72%	7.50%	36.30%	−7.79%
59	Miscellaneous Retail	11.59%	16.97%	35.97%	1.32%
60	Depository Institutions	14.21%	16 90%	25 13%	3.86%
61	Nondepository Credit Institutions	12.74%	16.67%	29.94%	1 83%
62	Security and Commod Brokers, Dealers, Exchanges	14.85%	21.70%	41 62%	−2.29%
63	Insurance Carriers	12.77%	15.56%	23.78%	3.08%
65	Real Estate	6.42%	11.22%	34.37%	−0.24%
67	Holding & Other Investment Offices	11.07%	15.24%	30.91%	2 13%
70	Hotels, Rooming Houses, Camps, & Other Lodging	6.16%	12 03%	36 49%	−4.50%
72	Personal Services	17 90%	22.10%	31.96%	9.36%
73	Business Services	13.84%	23.17%	58.64%	8.26%
78	Motion Pictures	5.38%	13.10%	45.16%	−3.08%
79	Amusement and Recreation Services	10.03%	13 85%	31.27%	−2 44%
80	Health Services	14.76%	20 93%	39.89%	2.75%

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Missouri Gas Energy
Beta and R-Squared Data for
Staff Witness Murray's Group of Seven Gas Distribution Companies

Staff Witness Murray's Group of Seven Gas Distribution Companies	Adjusted Beta	Unadjusted Beta	R Factor	R-Squared
AGL Resources Inc.	0.75	0.56	0.5739	0.3294
Atmos Energy Corporation	0.65	0.45	0.5024	0.2524
New Jersey Resources Corp.	0.65	0.43	0.4714	0.2222
Northwest Natural Gas Co.	0.60	0.33	0.3562	0.1269
Piedmont Natural Gas Co., Inc.	0.65	0.43	0.4516	0.2039
South Jersey Industries, Inc.	0.65	0.40	0.4102	0.1683
WGL Holdings, Inc.	0.65	0.43	0.4465	0.1994
Average	0.66	0.43	0.4589	0.2146
Median	0.65	0.43	0.4516	0.2039

Source of Information: Value Line Proprietary Database, September 15, 2009.

Missouri Gas Eastern
Details of Capital Structure of Southern Union Company
Including and Excluding Long-Term Debt Associated with the Panhandle Eastern Acquisition

	Consolidated Capital Structure of SUG at 12/31/2008				Elimination of Long-Term Debt and Cost Rate Associated with Panhandle Eastern Acquisition		Capital Structure of SUG at 12/31/08 Excluding Long-Term Debt Associated with Panhandle Eastern Acquisition			
Description	Amount (1)	Ann Int Ratio	Cost Rate %	Composite rate %			Amount	Ann Int Ratio	Cost Rate %	Composite rate %
LT Debt	3,279,809,919	56.16%	6.258% (1)	3.514%	(1,117,428,000) (1)	6.361% (1)	2,162,091,794	45.78%	6.173% (1)	2.826%
ST Debt	190,506,007	3.26%	6.117% (2)	0.199%			190,506,007	4.03%	6.117% (2)	0.247%
Preferred Securities	111,914,580	1.92%	7.758% (1)	0.149%			111,914,580	2.37%	7.758% (1)	0.184%
Common Equity	2,258,156,420	38.66%	13.900% (2)	5.374%			2,258,156,420	47.82%	12.480% (3)	5.968%
Total	5,840,386,926	100.00%		9.236%			4,722,668,801	100.00%		9.225%
ST Debt										

Notes:

(1) From Page 2 of this Schedule.
(2) From Page 2 of this Schedule.
(3) The adjustment to the indicated common equity cost rate of SUG is calculated by the Hamada equation, which un-levers and then re-levers betas based on changes in capital structure. The equation, obtained from Intermediate Financial Management, 9th Edition by Brigham and Daves, page 533, is used to un-lever the beta of SUG of 1.05 with an equity ratio of 40.58% to 0.54 when applied to a 100% equity ratio and then re-levered the beta to 0.89 using SUG's equity ratio of 50.19%, which excludes the long-term debt associated with the acquisition of Panhandle Eastern. The re-levered beta, applied to a 8.87% market risk premium and a 4.67% risk-free rate translates to a 12.56% common equity cost rate. The difference between the 12.56% re-levered beta common equity cost rate and the result of the traditional CAPM for SUG with a beta of 1.05, 13.98% is 1.42% or 142 basis points. Mr. Hanley will take the 142 basis points and subtract it from the indicated common equity cost rate of SUG of 13.90%, resulting in an adjusted common equity cost rate of 12.48% to reflect the decreased risk of SUG attributable to its higher ratemaking equity ratio of 50.19% excluding the long-term debt associated with the Panhandle Eastern acquisition compared to its consolidated equity ratio of 40.58%. The Hamada Equation is as follows:

$$b_l = b_u[1 + (1 - T)(D/S)]$$

Where:
b_l = Levered beta
b_u = Un-levered beta
T = Tax Rate
(D/S) = Debt to Equity Ratio

To un-lever the beta from a 40.58% equity ratio Mr. Hanley used this equation:

$$1.05 = b_u[1 + (1 - 0.35)(59.42\% / 40.58\%)]$$

The result for the un-levered beta is 0.54, which means the beta for SUG would be 0.54 if its capital structure was carried at 100% equity.

To re-lever the beta relative to a 50.19% equity ratio, Mr. Hanley used this equation:

$$b_l = 0.54[1 + (1 - 0.35)(49.81\% / 50.19\%)$$

The result for the levered beta is 0.89, which means the beta for SUG would be 0.89 if they carried a capital structure excluding the long-term debt associated with the Panhandle Eastern acquisition of 50.19% equity.

Missouri Gas Eastern
Details of Long-Term Debt and Preferred Equity of Southern Union Company
at 12/31/2008 (1)

Description	Outstanding LTD December 31, 2008	Annual Interest Rate	Annual Interest	181 Unamortized Issuance Cost	189 Unamortized Issuance Cost	257	Amortization of Issuance Cost	Embeded rate
7.6% Senior Notes	359,765,000	7.60%	27,342,140	(2,078,001)			137,768	7.683%
8.25% Senior Notes	300,000,000	8.25%	24,750,000	(4,617,349)			221,190	8.454%
Fall River 9.44%	6,500,000	9.44%	613,600	(131,079)			11,782	9.819%
Fall River 7.99%	7,000,000	7.99%	559,300	(92,546)			5,226	8.173%
Fall River 7.24%	6,000,000	7.24%	434,400	(76,802)			4,051	7.402%
6.089% Senior Notes	100,000,000	6.089%	6,089,000	(301,238)			323,829	6.432%
7.20% Subordinated Notes	600,000,000	7.200%	43,200,000	(13,220,577)			228,598	7.401%
PEPL 6.50%	60,623,000	6.500%	3,940,495	0			(1,329,581)	4.307%
PEPL 8.25%	40,500,000	8.250%	3,341,250	575,629			(1,580,984)	4.285%
PEPL 7.00%	66,305,000	7.000%	4,641,350	4,123,176			(283,703)	6.187%
PEPL 7.00%	400,000,000	7.000%	28,000,000	(1,095,409)			163,295	7.060%
PEPL 6.05%	250,000,000	6.050%	15,125,000	(1,017,082)			219,910	6.163%
PEPL 6.20%	300,000,000	6.200%	18,600,000	(2,296,190)			259,946	6.335%
TLNG Bank Loan	455,000,000	5.600%	25,480,000	(342,473)			104,853	5.627%
TLNG Bank Loan	360,391,233	1.021%	3,680,495	(964,327)			284,708	1.103%
Acct 189 unamortized issue costs/discounts					(12,319,150)		799,668	
Acct 257 unamortorized premiums						1,579,103	(104,692)	
Total LTD	3,312,084,233		205,797,030	(21,534,267)	(12,319,150)	1,579,103	(534,135)	6.258%
PEPL Debt	1,117,428,000		73,648,095	290,125	0	0	(2,551,118)	6.361%
Excluding PEPL Debt	2,194,656,233		132,148,935	(21,824,391)	(12,319,150)	1,579,103	1,322,007	6.173%
Preferred Securities	115,000,325	7.55%	8,682,525	(3,085,745)	0	0	0	7.758%

Notes:
(1) Company Provided