### Rate of Return (December 31, 2013 and December 31, 2014)

<u>Line</u>	Line Description		<u>Amount</u> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	Weighted <u>Cost</u> (4)
1	Long-Term Debt*	\$	505,460,413	43.89%	5.79%	2.54%
2	Short-Term Debt	\$	99,623,527	8.65%	1.63%	0.14%
3	Preferred Stock	\$	15,258,600	1.32%	4.58%	0.06%
4	Common Equity**	\$	531,387,131	<u>46.14%</u>	9.30%	<u>4.29%</u>
5	Total	\$	1,151,729,671	100.00%		7.03%

Source:

Rule 20:10:13:72, Statement G, Page 1.

\* Public Service Commission of Montana, Docket No. D2015.6.51, Rebuttal testimony of Garret Senger at 2.

\*\* Page 2.

## **Adjusted Capital Structure**

Line	Description	Amount
1	Common Equity - 12/31/2013	\$2,808,164,204
2	Investment in Subsidiaries	2,454,243,612
3	Utility Common Equity - 12/31/2013	\$353,920,592
4	Common Equity - 12/31/2014	\$3,119,040,893
5	Investment in Subsidiaries	2,667,331,431
6	Utility Common Equity - 12/31/2014	\$451,709,462
7	Average @ 12/31/2014	\$402,815,027
8	Common Equity - 12/31/2015	\$3,275,802,000
9	Investment in Subsidiaries	2,664,737,201
10	Utility Common Equity - 12/31/2015	\$611,064,799
11	Average @ 12/31/2015	\$531,387,131

Source:

Rule 20:10:13:75, Statement G, Page 1.

### Nonconsolidated Balance Sheet (December 31, 2013 and December 31, 2014)

<u>Line</u>	Description	2013	2014
	Assets and Other Debits		
1	Utility Plant	\$1,618,679,070	\$1,807,075,033
2	Construction Work in Progress	151,552,008	161,794,898
3	Less Acc. Provision for Depreciation and Amort.	760,970,889	781,150,735
4	Net Utility Plant	1,009,260,189	1,187,719,196
5	Gas Stored Underground - Noncurrent	1,558,796	2,539,826
-	Other Property and Investments		
6	Nonutility Property	15,629,869	16,086,364
7	(Less) Accum. Prov. for Depr. And Amort.	2,901,889	3,483,659
8	Investment in Subsidiary Companies	2,380,828,521	2,590,283,230
9	Other investments	60,687,111	64,445,496
10	Net Other Property and Investments	2,454,243,612	2,667,331,431
11	Current and Accrued Assets	(73,415,091)	(77,048,201)
12	Cash	4,718,520	5,873,534
13	Special Deposits	260,505	14,870
13	Working Fund	332,668	246,893
14	Temporary Cash Investments	332,008 0	240,893
16	Customer Accounts Receivable	29,796,719	29,467,184
17	Other Accounts Receivable	4,403,590	8,855,452
18	(Less) Accum.Prov. For Uncollectible Acct Cr.	443,629	485,245
19	Notes Receivable from Assoc. Companies	443,029	405,245
20	Accounts Receivable from Assoc. Companies	31,371,687	-
20 21	Fuel Stock		32,690,791
21		4,751,688	4,417,908
22	Plant Materials and Operating Supplies Merchandise	19,097,488	19,800,235
23 24		75,479 0	16,232 0
24 25	Stores Expense Undistributed	-	-
	Gas Stored Underground - Current	5,386,681	9,350,117
26 27	Prepayments	5,074,231	6,105,991 47,389,618
28	Accured Utility Revenues Miscellaneous Current and Accrued Assets	49,648,010	_
20 29	Total Current and Accrued Assets	00	0
		,,	
	Deferred Debits		0.040.040
30	Unamortized Debt Expenses	1,219,120	2,019,812
31	Unrecovered Plant and Regulatory Study Costs	3,698,596	3,350,503
32	Other Regulatory Assets	83,915,120	121,494,214
33	Prelim. Survey and Investigation Charges (EI)	336,423	500,300
34	Prelim. Survey and Investigation Charges (Gas)	61,412	93,539
35	Clearing Accounts	(6,513)	55,122
36	Miscellaneous Deferred Debits	26,225,949	29,214,803
37	Unamortized Loss on Reaquired Debt	7,407,081	6,687,570
38	Accumulated Deferred Income Taxes	49,133,806	63,779,943
39	Unrecovered Purchased Gas Costs	8,019,627	10,651,144
40	Total Deferred Debits	180,010,621	237,846,950
41	Total Assets and Other Debits	\$3,799,546,855	\$4,259,180,983

### **Nonconsolidated Balance Sheet** (December 31, 2013 and December 31, 2014)

<u>Line</u>	Description	2013	2014
	Liabilities and Other Credits		
	Proprietary Capital		
42	Common Stock Issued	\$189,868,780	\$194,754,812
43	Preferred Stock Issued	15,000,000	15,000,000
44	Premium on Capital Stock	1,061,253,848	1,213,676,764
45	(Less) Capital Stock Expense	4,257,578	6,488,675
46	Retained Earnings	540,130,502	555,934,822
47	Unappropriated Undistributed Sub Earnings	1,062,999,041	1,206,892,280
48	(Less) Reacquired Capital Stock	3,625,813	3,625,813
49	Accumulated Other Comprehensive Income	(38,204,576)	(42,103,297)
50	Total Proprietary Capital	2,823,164,204	3,134,040,893
	Long-Term Debt		
51	Bonds	280,000,000	0
52	Other Long-Term Debt	154,705,972	508,273,506
53	(Less) Unamortized Discount on Long-Term Debt-Dε		0
54	Total Long-Term Debt	434,705,972	508,273,506
	Other Noncurrent Liabilities		
55	Accumulated Provision for Injuries and Damages	1,355,445	3,736,056
56	Accumulated Provision for Pensions and Benefits	51,449,261	54,640,098
57	Accumulated Provision for Rate Refunds	191,185	450,000
58	Asset Retirement Obligations	7,142,915	6,509,617
59	Total Other Noncurrent Liabilities	60,138,806	65,335,771
	Current and Accrued Liabilities		
60	Notes Payable	0	0
61	Accounts Payable	44,138,862	46,830,236
62	Accounts Payable to Associated Companies	4,839,083	30,863,009
63	Customer Deposits	1,428,796	1,510,515
64	Taxes Accrued	12,336,506	(41,641,535)
65	Interest Accrued	4,973,368	7,431,466
66	Dividends Declared	33,737,408	35,606,942
67	Tax Collections Payable	1,143,473	1,257,661
68	Miscellaneous Current and Accrued Liabilities	29,444,730	24,909,601
69	Total Current and Accrued Assets	132,042,226	106,767,895
	Deferred Credits		
70	Customer Advances for Construction	18,726,550	22,623,499
71	Accumulated Deferred Investment Tax Credit	767,331	2,411,735
72	Other Deferred Credits	62,138,894	96,422,495
73	Other Regulatory Liabilities	16,286,380	9,005,624
74	Accumulated Deferred Income Taxes	251,576,492	314,299,565
75	Total Deferred Credits	349,495,647	444,762,918
76	Total Liabilities and Equity	\$3,799,546,855	\$4,259,180,983

Source: Rule 20:10:13:51, Statement A, Pages 1-2 of 4.

### Proxy Group

		Credit I	Ratings <sup>1</sup>	Common Equity Ratios		
<u>Line</u>	<u>Company</u>	<u>S&amp;P</u> (1)	<u>Moody's</u> (2)	<u>SNL<sup>1</sup></u> (3)	<u>Value Line<sup>2</sup></u> (4)	
1	Atmos Energy Corporation	A-	A2	53.8%	55.7%	
2	Laclede Group, Inc. (The)	A-	Baa2	41.4%	44.9%	
3	New Jersey Resources Corporation	N/A	N/A	50.9%	61.8%	
4	Northwest Natural Gas Company	A+	A3	46.1%	55.2%	
5	South Jersey Industries, Inc.	BBB+	N/A	42.6%	52.0%	
6	Southwest Gas Corporation	BBB+	A3	47.1%	47.6%	
7	WGL Holdings, Inc.	A+	A3	51.4%	63.8%	
8	Average	A-	A3	47.6%	54.4%	
9	Montana-Dakota Utilities Co.	BBB+ <sup>3</sup>		<b>46.1%</b> <sup>4</sup>		

#### Sources:

<sup>1</sup> SNL Financial, Downloaded on February 29, 2016.

<sup>2</sup> The Value Line Investment Survey, December 4, 2015.

<sup>3</sup> Rating for MDU Resources.

<sup>4</sup> Exhibit No.\_\_\_(MPG-2), Schedule 1.

### **Consensus Analysts' Growth Rates**

		Zad	cks	SI	NL	Reu	Average of	
<u>Line</u>	<u>Company</u>	Estimated <u>Growth %<sup>1</sup></u> (1)	Number of <u>Estimates</u> (2)	Estimated Growth % <sup>2</sup> (3)	Number of <u>Estimates</u> (4)	Estimated Growth % <sup>3</sup> (5)	Number of <u>Estimates</u> (6)	Growth <u>Rates</u> (7)
1	Atmos Energy Corporation	6.60%	N/A	7.00%	1	6.40%	2	6.67%
2	Laclede Group, Inc. (The)	4.80%	N/A	4.70%	3	4.78%	3	4.76%
3	New Jersey Resources Corporation	6.50%	N/A	6.50%	2	6.50%	2	6.50%
4	Northwest Natural Gas Company	4.00%	N/A	4.00%	1	NA	NA	4.00%
5	South Jersey Industries, Inc.	NA	N/A	N/A	N/A	NA	NA	N/A
6	Southwest Gas Corporation	5.00%	N/A	4.00%	1	NA	NA	4.50%
7	WGL Holdings, Inc.	7.30%	N/A	8.00%	2	8.00%	2	7.77%
8	Average	5.70%	N/A	5.70%	2	6.42%	2	5.70%

#### Sources:

<sup>1</sup> Zacks Elite, http://www.zackselite.com/, downloaded on February 26, 2016.

<sup>2</sup> SNL Interactive, http://www.snl.com/, downloaded on February 26, 2016.

<sup>3</sup> Reuters, http://www.reuters.com/, downloaded on February 26, 2016.

#### **Constant Growth DCF Model** (Consensus Analysts' Growth Rates)

<u>Line</u>	Company	13-Week AVG <u>Stock Price<sup>1</sup></u> (1)	Analysts' <u>Growth<sup>2</sup></u> (2)	Annualized <u>Dividend<sup>3</sup></u> (3)	Adjusted <u>Yield</u> (4)	Constant <u>Growth DCF</u> (5)
1	Atmos Energy Corporation	\$65.10	6.67%	\$1.68	2.75%	9.42%
2	Laclede Group, Inc. (The)	\$60.51	4.76%	\$1.96	3.39%	8.15%
3	New Jersey Resources Corporation	\$32.85	6.50%	\$0.96	3.11%	9.61%
4	Northwest Natural Gas Company	\$50.66	4.00%	\$1.87	3.84%	7.84%
5	South Jersey Industries, Inc.	\$24.01	N/A	\$1.00	N/A	N/A
6	Southwest Gas Corporation	\$56.24	4.50%	\$1.62	3.01%	7.51%
7	WGL Holdings, Inc.	\$63.73	7.77%	\$1.85	3.13%	10.90%
1	Average	\$50.44	5.70%	\$1.56	3.21%	8.91%
2	Median					8.79%

Sources:

<sup>1</sup> SNL Financial, Downloaded on February 29, 2016.

<sup>2</sup> Exhibit No.\_\_\_(MPG-2) Schedule 3.
<sup>3</sup> The Value Line Investment Survey, December 4, 2015.

### Payout Ratios

		Dividend	s Per Share	Earnings	s Per Share	Payout Ratio		
Line	<u>Company</u>	2014	Projected	<u>2014</u>	Projected	2014	Projected	
		(1)	(2)	(3)	(4)	(5)	(6)	
1	Atmos Energy Corporation	\$1.48	\$1.95	\$2.96	\$3.80	50.00%	51.32%	
2	Laclede Group, Inc. (The)	\$1.76	\$2.20	\$2.35	\$4.20	74.89%	52.38%	
3	New Jersey Resources Corporation	\$0.86	\$1.00	\$2.10	\$1.95	40.95%	51.28%	
4	Northwest Natural Gas Company	\$1.85	\$2.10	\$2.16	\$3.30	85.65%	63.64%	
5	South Jersey Industries, Inc.	\$0.96	\$1.35	\$1.57	\$2.30	61.15%	58.70%	
6	Southwest Gas Corporation	\$1.46	\$2.10	\$3.01	\$4.50	48.50%	46.67%	
7	WGL Holdings, Inc.	\$1.72	\$1.99	\$2.68	\$3.55	64.18%	56.06%	
1	Average	\$1.44	\$1.81	\$2.40	\$3.37	60.76%	54.29%	

Source:

The Value Line Investment Survey, December 4, 2015.

#### Sustainable Growth Rate

		3 to 5 Year Projections Su								Sustainable		
		Dividends	Earnings	Book Value	Book Value		Adjustment	Adjusted	Payout	Retention	Internal	Growth
Line	<u>Company</u>	Per Share	Per Share	Per Share	<u>Growth</u>	ROE	Factor	ROE	Ratio	Rate	Growth Rate	Rate
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Atmos Energy Corporation	\$1.95	\$3.80	\$36.65	3.58%	10.37%	1.02	10.55%	51.32%	48.68%	5.14%	9.20%
2	Laclede Group, Inc. (The)	\$2.20	\$4.20	\$48.10	6.61%	8.73%	1.03	9.01%	52.38%	47.62%	4.29%	4.90%
3	New Jersey Resources Corporation	\$1.00	\$1.95	\$16.35	7.35%	11.93%	1.04	12.35%	51.28%	48.72%	6.02%	6.37%
4	Northwest Natural Gas Company	\$2.10	\$3.30	\$33.85	3.78%	9.75%	1.02	9.93%	63.64%	36.36%	3.61%	4.03%
5	South Jersey Industries, Inc.	\$1.35	\$2.30	\$18.40	6.15%	12.50%	1.03	12.87%	58.70%	41.30%	5.32%	6.95%
6	Southwest Gas Corporation	\$2.10	\$4.50	\$39.40	4.28%	11.42%	1.02	11.66%	46.67%	53.33%	6.22%	7.93%
7	WGL Holdings, Inc.	\$1.99	\$3.55	\$30.55	4.87%	11.62%	1.02	11.90%	56.06%	43.94%	5.23%	5.23%
8	Average	\$1.81	\$3.37	\$31.90	5.23%	10.90%	1.03	11.18%	54.29%	45.71%	5.12%	6.37%

Sources and Notes:

Cols. (1), (2) and (3): The Value Line Investment Survey, December 4, 2015. Col. (4): [Col. (3) / Page 2 Col. (2) ] ^ (1/5) - 1. Col. (5): Col. (2) / Col. (3). Col. (6): [ 2 \* (1 + Col. (4)) ] / (2 + Col. (4)). Col. (7): Col. (6) \* Col. (5). Col. (8): Col. (1) / Col. (2). Col. (9): 1 - Col. (8). Col. (10): Col. (9) \* Col. (7). Col. (11): Col. (10) + Page 2 Col. (9).

#### Sustainable Growth Rate

		13-Week Average	<u>2014</u> Book Value	Market to Book	Common Shares Outstanding (in Millions) <sup>2</sup>					
<u>Line</u>	Company	<u>Stock Price<sup>1</sup></u> (1)	Per Share <sup>2</sup> (2)	Ratio (3)	<u>2014</u> (4)	<u>3-5 Years</u> (5)	<u>Growth</u> (6)	<u>S Factor<sup>3</sup></u> (7)	V Factor <sup>4</sup> (8)	<u>S * V</u> (9)
1	Atmos Energy Corporation	\$65.10	\$30.74	2.12	100.39	120.00	3.63%	7.69%	52.78%	4.06%
2	Laclede Group, Inc. (The)	\$60.51	\$34.93	1.73	43.18	45.00	0.83%	1.44%	42.28%	0.61%
3	New Jersey Resources Corporation	\$32.85	\$11.47	2.86	84.20	85.00	0.19%	0.54%	65.09%	0.35%
4	Northwest Natural Gas Company	\$50.66	\$28.12	1.80	27.28	28.00	0.52%	0.94%	44.49%	0.42%
5	South Jersey Industries, Inc.	\$24.01	\$13.65	1.76	68.33	76.00	2.15%	3.78%	43.16%	1.63%
6	Southwest Gas Corporation	\$56.24	\$31.95	1.76	46.52	52.00	2.25%	3.96%	43.19%	1.71%
7	WGL Holdings, Inc.	\$63.73	\$24.08	2.65	51.76	50.00	- 0.69%	- 1.82%	62.22%	- 1.14%
8	Average	\$50.44	\$24.99	2.10	60.24	65.14	1.60%	3.06%	50.46%	1.46%

Sources and Notes:

<sup>1</sup> SNL Financial, Downloaded on February 29, 2016.

<sup>2</sup> The Value Line Investment Survey, December 4, 2015.

<sup>3</sup> Expected Growth in the Number of Shares, Column (3) \* Column (6).

<sup>4</sup> Expected Profit of Stock Investment, [1 - 1 / Column (3)].

### **Constant Growth DCF Model** (Sustainable Growth Rate)

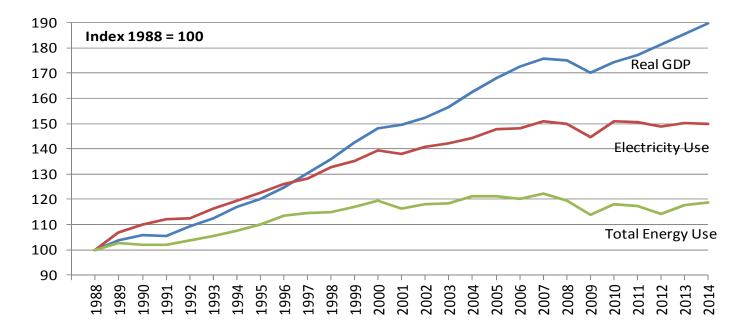
<u>Line</u>	<u>Company</u>	13-Week AVG <u>Stock Price<sup>1</sup></u> (1)	Sustainable <u>Growth<sup>2</sup></u> (2)	Annualized <u>Dividend<sup>3</sup></u> (3)	Adjusted <u>Yield</u> (4)	Constant <u>Growth DCF</u> (5)
1	Atmos Energy Corporation	\$65.10	9.20%	\$1.68	2.82%	12.02%
2	Laclede Group, Inc. (The)	\$60.51	4.90%	\$1.96	3.40%	8.30%
3	New Jersey Resources Corporation	\$32.85	6.37%	\$0.96	3.11%	9.48%
4	Northwest Natural Gas Company	\$50.66	4.03%	\$1.87	3.84%	7.87%
5	South Jersey Industries, Inc.	\$24.01	6.95%	\$1.00	4.47%	11.42%
6	Southwest Gas Corporation	\$56.24	7.93%	\$1.62	3.11%	11.04%
7	WGL Holdings, Inc.	\$63.73	5.23%	\$1.85	3.06%	8.29%
8	Average	\$50.44	6.37%	\$1.56	3.40%	9.77%
9	Median					9.48%

Sources:

<sup>1</sup> SNL Financial, Downloaded on February 29, 2016.

<sup>2</sup> Exhibit No. (MPG-2), Schedule 6.
 <sup>3</sup> The Value Line Investment Survey, December 4, 2015.

Electricity Sales Are Linked to U.S. Economic Growth



Note:

1988 represents the base year. Graph depicts increases or decreases from the base year.

Sources:

U.S. Department of Energy, Energy Information Administration.

Edison Electric Institute, http://www.eei.org. Downloaded 4/16/2015.

#### Multi-Stage Growth DCF Model

		13-Week AVG	Annualized	First Stage		Sec	Third Stage	Multi-Stage			
Line	<u>Company</u>	Stock Price <sup>1</sup>	Dividend <sup>2</sup>	Growth <sup>3</sup>	Year 6	Year 7	Year 8	Year 9	Year 10	Growth <sup>4</sup>	Growth DCF
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Atmos Energy Corporation	\$65.10	\$1.68	6.67%	6.29%	5.91%	5.53%	5.16%	4.78%	4.40%	7.51%
2	Laclede Group, Inc. (The)	\$60.51	\$1.96	4.76%	4.70%	4.64%	4.58%	4.52%	4.46%	4.40%	7.86%
3	New Jersey Resources Corporation	\$32.85	\$0.96	6.50%	6.15%	5.80%	5.45%	5.10%	4.75%	4.40%	7.89%
4	Northwest Natural Gas Company	\$50.66	\$1.87	4.00%	4.07%	4.13%	4.20%	4.27%	4.33%	4.40%	8.15%
5	South Jersey Industries, Inc.	\$24.01	\$1.00	N/A	N/A	N/A	N/A	N/A	N/A	4.40%	N/A
6	Southwest Gas Corporation	\$56.24	\$1.62	4.50%	4.48%	4.47%	4.45%	4.43%	4.42%	4.40%	7.42%
7	WGL Holdings, Inc.	\$63.73	\$1.85	7.77%	7.21%	6.64%	6.08%	5.52%	4.96%	4.40%	8.15%
8	Average	\$50.44	\$1.56	5.70%	5.48%	5.27%	5.05%	4.83%	4.62%	4.40%	7.83%
9	Median										7.87%

Sources:

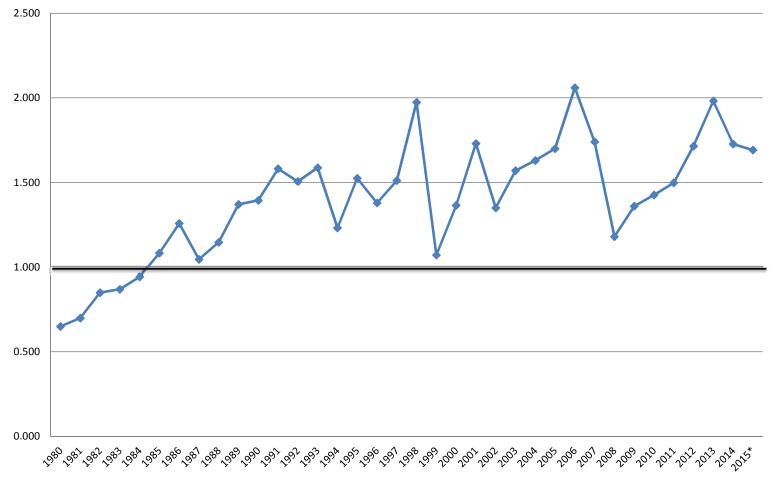
<sup>1</sup> SNL Financial, Downloaded on February 29, 2016.

<sup>2</sup> *The Value Line Investment Survey*, December 4, 2015.

<sup>3</sup> Exhibit No.\_\_\_(MPG-2), Schedule 4.

<sup>4</sup> Blue Chip Financial Forecasts, December 1, 2015 at 14.





\* through September 2015

Source:

1980 - 2000: Mergent Public Utility Manual.

2001 - 2015: AUS Utility Reports, various dates.

### Equity Risk Premium - Treasury Bond

<u>Line</u>	<u>Year</u>	Authorized Gas <u>Returns<sup>1</sup></u> (1)	30 yr. Treasury <u>Bond Yield<sup>2</sup></u> (2)	Indicated Risk <u>Premium</u> (3)	Rolling 5 - Year <u>Average</u> (4)	Rolling 10 - Year <u>Average</u> (5)
1	1986	13.46%	7.80%	5.66%		
2	1987	12.74%	8.58%	4.16%		
3	1988	12.85%	8.96%	3.89%		
4	1989	12.88%	8.45%	4.43%		
5	1990	12.67%	8.61%	4.06%	4.44%	
6	1991	12.46%	8.14%	4.32%	4.17%	
7	1992	12.01%	7.67%	4.34%	4.21%	
8	1993	11.35%	6.60%	4.75%	4.38%	
9	1994	11.35%	7.37%	3.98%	4.29%	
10	1995	11.43%	6.88%	4.55%	4.39%	4.42%
11	1996	11.19%	6.70%	4.49%	4.42%	4.30%
12	1997	11.29%	6.61%	4.68%	4.49%	4.35%
13	1998	11.51%	5.58%	5.93%	4.73%	4.55%
14	1999	10.66%	5.87%	4.79%	4.89%	4.59%
15	2000	11.39%	5.94%	5.45%	5.07%	4.73%
16	2001	10.95%	5.49%	5.46%	5.26%	4.84%
17	2002	11.03%	5.43%	5.60%	5.45%	4.97%
18	2003	10.99%	4.96%	6.03%	5.47%	5.10%
19	2004	10.59%	5.05%	5.54%	5.62%	5.25%
20	2005	10.46%	4.65%	5.81%	5.69%	5.38%
21	2006	10.43%	4.99%	5.44%	5.69%	5.47%
22	2007	10.24%	4.83%	5.41%	5.65%	5.55%
23	2008	10.37%	4.28%	6.09%	5.66%	5.56%
24	2009	10.19%	4.07%	6.12%	5.77%	5.69%
25	2010	10.15%	4.25%	5.90%	5.79%	5.74%
26	2011	9.92%	3.91%	6.01%	5.91%	5.80%
27	2012	9.94%	2.92%	7.02%	6.23%	5.94%
28	2013	9.68%	3.45%	6.23%	6.26%	5.96%
29	2014	9.78%	3.34%	6.44%	6.32%	6.05%
30	2015	9.60%	2.84%	6.76%	6.49%	6.14%
31	Average	11.12%	5.81%	5.31%	5.26%	5.26%
32	Minimum				4.17%	4.30%
	Maximum				6.49%	6.14%

Sources:

<sup>2</sup> St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/. The yields from 2002 to 2005 represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.

<sup>&</sup>lt;sup>1</sup> Regulatory Research Associates, Inc., Regulatory Focus, Major Rate Case Decisions, Calendar 2015.

### Equity Risk Premium - Utility Bond

<u>Line</u>	<u>Year</u>	Authorized Gas <u>Returns<sup>1</sup></u> (1)	Average "A" Rated Utility <u>Bond Yield<sup>2</sup></u> (2)	Indicated Risk <u>Premium</u> (3)	Rolling 5 - Year <u>Average</u> (4)	Rolling 10 - Year <u>Average</u> (5)
1	1986	13.46%	9.58%	3.88%		
2	1987	12.74%	10.10%	2.64%		
3	1988	12.85%	10.49%	2.36%		
4	1989	12.88%	9.77%	3.11%		
5	1990	12.67%	9.86%	2.81%	2.96%	
6	1991	12.46%	9.36%	3.10%	2.80%	
7	1992	12.01%	8.69%	3.32%	2.94%	
8	1993	11.35%	7.59%	3.76%	3.22%	
9	1994	11.35%	8.31%	3.04%	3.21%	
10	1995	11.43%	7.89%	3.54%	3.35%	3.16%
11	1996	11.19%	7.75%	3.44%	3.42%	3.11%
12	1997	11.29%	7.60%	3.69%	3.49%	3.22%
13	1998	11.51%	7.04%	4.47%	3.64%	3.43%
14	1999	10.66%	7.62%	3.04%	3.64%	3.42%
15	2000	11.39%	8.24%	3.15%	3.56%	3.45%
16	2001	10.95%	7.76%	3.19%	3.51%	3.46%
17	2002	11.03%	7.37%	3.66%	3.50%	3.50%
18	2003	10.99%	6.58%	4.41%	3.49%	3.56%
19	2004	10.59%	6.16%	4.43%	3.77%	3.70%
20	2005	10.46%	5.65%	4.81%	4.10%	3.83%
21	2006	10.43%	6.07%	4.36%	4.33%	3.92%
22	2007	10.24%	6.07%	4.17%	4.44%	3.97%
23	2008	10.37%	6.53%	3.84%	4.32%	3.91%
24	2009	10.19%	6.04%	4.15%	4.27%	4.02%
25	2010	10.15%	5.46%	4.69%	4.24%	4.17%
26	2011	9.92%	5.04%	4.88%	4.35%	4.34%
27	2012	9.94%	4.13%	5.81%	4.67%	4.56%
28	2013	9.68%	4.48%	5.20%	4.95%	4.63%
29	2014	9.78%	4.28%	5.50%	5.22%	4.74%
30	2015	9.60%	4.12%	5.48%	5.38%	4.81%
31	Average	11.12%	7.19%	3.93%	3.87%	3.85%
32	Minimum				2.80%	3.11%
33	Maximum				5.38%	4.81%

#### Sources:

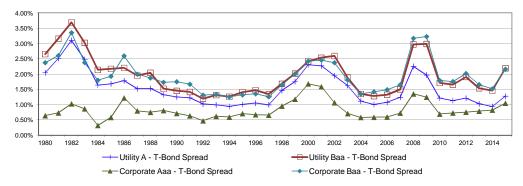
<sup>1</sup> *Regulatory Research Associates, Inc.*, Regulatory Focus, Major Rate Case Decisions, Calendar 2015.

<sup>2</sup> Mergent Public Utility Manual, Mergent Weekly News Reports, 2003. The utility yields for the period 2001-2009 were obtained from the Mergent Bond Record. The utility yields from 2010-2015 were obtained from http://credittrends.moodys.com/.

#### **Bond Yield Spreads**

				Publi	ic Utility Bond			Co	orporate Bond		Utility to	Corporate
Line	Year	T-Bond Yield <sup>1</sup>	<u>A<sup>2</sup></u>	Baa <sup>2</sup>	A-T-Bond Spread	Baa-T-Bond Spread	Aaa <sup>1</sup>	Baa <sup>1</sup>	Aaa-T-Bond Spread	Baa-T-Bond Spread	Baa Spread	A-Aaa Spread
Lille	<u>rear</u>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	1980	11.30%	13.34%	13.95%	2.04%	2.65%	11.94%	13.67%	0.64%	2.37%	0.28%	1.40%
2	1981	13.44%	15.95%	16.60%	2.51%	3.16%	14.17%	16.04%	0.73%	2.60%	0.56%	1.78%
3	1982	12.76%	15.86%	16.45%	3.10%	3.69%	13.79%	16.11%	1.03%	3.35%	0.34%	2.07%
4	1983	11.18%	13.66%	14.20%	2.48%	3.02%	12.04%	13.55%	0.86%	2.38%	0.65%	1.62%
5	1984	12.39%	14.03%	14.53%	1.64%	2.14%	12.71%	14.19%	0.32%	1.80%	0.34%	1.32%
6	1985	10.79%	12.47%	12.96%	1.68%	2.17%	11.37%	12.72%	0.58%	1.93%	0.24%	1.10%
7	1986	7.80%	9.58%	10.00%	1.78%	2.20%	9.02%	10.39%	1.22%	2.59%	-0.39%	0.56%
8	1987	8.58%	10.10%	10.53%	1.52%	1.95%	9.38%	10.58%	0.80%	2.00%	-0.05%	0.72%
9	1988	8.96%	10.49%	11.00%	1.53%	2.04%	9.71%	10.83%	0.75%	1.87%	0.17%	0.78%
10	1989	8.45%	9.77%	9.97%	1.32%	1.52%	9.26%	10.18%	0.81%	1.73%	-0.21%	0.51%
11	1990	8.61%	9.86%	10.06%	1.25%	1.45%	9.32%	10.36%	0.71%	1.75%	-0.29%	0.54%
12	1991	8.14%	9.36%	9.55%	1.22%	1.41%	8.77%	9.80%	0.63%	1.67%	-0.25%	0.59%
13	1992	7.67%	8.69%	8.86%	1.02%	1.19%	8.14%	8.98%	0.47%	1.31%	-0.12%	0.55%
14	1993	6.60%	7.59%	7.91%	0.99%	1.31%	7.22%	7.93%	0.62%	1.33%	-0.02%	0.37%
15	1994	7.37%	8.31%	8.63%	0.94%	1.26%	7.96%	8.62%	0.59%	1.25%	0.01%	0.35%
16	1995	6.88%	7.89%	8.29%	1.01%	1.41%	7.59%	8.20%	0.71%	1.32%	0.09%	0.30%
17	1996	6.70%	7.75%	8.17%	1.05%	1.47%	7.37%	8.05%	0.67%	1.35%	0.12%	0.38%
18	1997	6.61%	7.60%	7.95%	0.99%	1.34%	7.26%	7.86%	0.66%	1.26%	0.09%	0.34%
19	1998	5.58%	7.04%	7.26%	1.46%	1.68%	6.53%	7.22%	0.95%	1.64%	0.04%	0.51%
20	1999	5.87%	7.62%	7.88%	1.75%	2.01%	7.04%	7.87%	1.18%	2.01%	0.01%	0.58%
21	2000	5.94%	8.24%	8.36%	2.30%	2.42%	7.62%	8.36%	1.68%	2.42%	-0.01%	0.62%
22	2001	5.49%	7.76%	8.03%	2.27%	2.54%	7.08%	7.95%	1.59%	2.45%	0.08%	0.68%
23	2002	5.43%	7.37%	8.02%	1.94%	2.59%	6.49%	7.80%	1.06%	2.37%	0.22%	0.88%
24	2003	4.96%	6.58%	6.84%	1.62%	1.89%	5.67%	6.77%	0.71%	1.81%	0.08%	0.91%
25	2004	5.05%	6.16%	6.40%	1.11%	1.35%	5.63%	6.39%	0.58%	1.35%	0.00%	0.53%
26	2005	4.65%	5.65%	5.93%	1.00%	1.28%	5.24%	6.06%	0.59%	1.42%	-0.14%	0.41%
27	2006	4.99%	6.07%	6.32%	1.08%	1.32%	5.59%	6.48%	0.60%	1.49%	-0.16%	0.48%
28	2007	4.83%	6.07%	6.33%	1.24%	1.50%	5.56%	6.48%	0.72%	1.65%	-0.15%	0.52%
29	2008	4.28%	6.53%	7.25%	2.25%	2.97%	5.63%	7.45%	1.35%	3.17%	-0.20%	0.90%
30	2009	4.07%	6.04%	7.06%	1.97%	2.99%	5.31%	7.30%	1.24%	3.23%	-0.24%	0.72%
31	2010	4.25%	5.46%	5.96%	1.21%	1.71%	4.94%	6.04%	0.69%	1.79%	-0.08%	0.52%
32	2011	3.91%	5.04%	5.56%	1.13%	1.65%	4.64%	5.66%	0.73%	1.75%	-0.10%	0.40%
33	2012	2.92%	4.13%	4.83%	1.21%	1.91%	3.67%	4.94%	0.75%	2.01%	-0.11%	0.46%
34	2013	3.45%	4.48%	4.98%	1.03%	1.53%	4.24%	5.10%	0.79%	1.65%	-0.12%	0.24%
35	2014	3.34%	4.28%	4.80%	0.94%	1.46%	4.16%	4.85%	0.82%	1.51%	-0.06%	0.11%
36	2015	2.84%	4.12%	5.03%	1.27%	2.19%	3.89%	5.00%	1.05%	2.16%	0.03%	0.23%
37	Average	6.84%	8.36%	8.79%	1.52%	1.95%	7.67%	8.77%	0.83%	1.94%	0.02%	0.69%

Yield Spreads Treasury Vs. Corporate & Treasury Vs. Utility



Sources:

 <sup>1</sup> St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.
 <sup>2</sup> Mergent Public Utility Manual, Mergent Weekly News Reports, 2003. The utility yields for the period 2001-2009 were obtained from the Mergent Bond Record. The utility yields from 2010-2015 were obtained from http://credittrends.moodys.com/.

#### Exhibit No.\_\_\_(MPG-2) Schedule 14 Page 1 of 3

# Montana-Dakota Utilities Co.

# **Treasury and Utility Bond Yields**

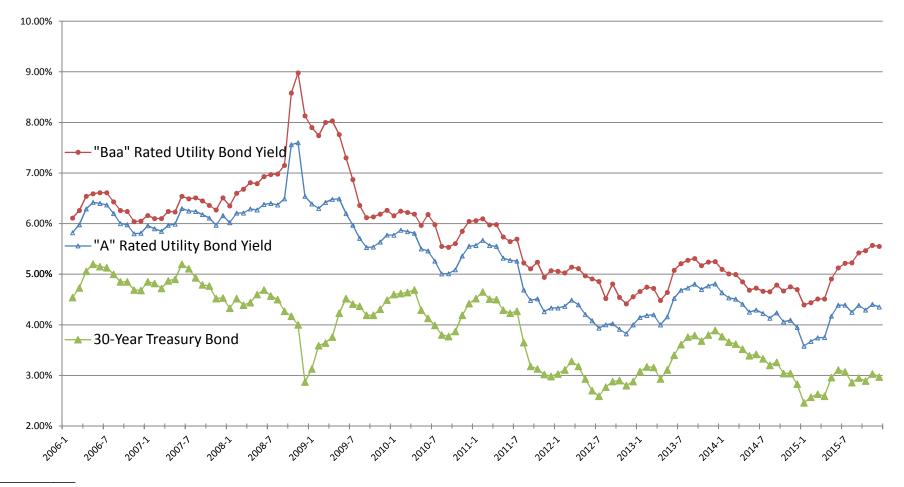
<u>Line</u>	<u>Date</u>	Treasury <u>Bond Yield<sup>1</sup></u> (1)	"A" Rated Utility <u>Bond Yield<sup>2</sup></u> (2)	"Baa" Rated Utility <u>Bond Yield<sup>2</sup></u> (3)
1	02/26/16	2.58%	4.15%	5.25%
2	02/19/16	2.61%	4.10%	5.26%
3	02/12/16	2.60%	4.09%	5.26%
4	02/05/16	2.68%	4.15%	5.34%
5	01/29/16	2.75%	4.19%	5.40%
6	01/22/16	2.83%	4.25%	5.51%
7	01/15/16	2.81%	4.23%	5.45%
8	01/08/16	2.91%	4.32%	5.52%
9	12/31/15	3.01%	4.41%	5.58%
10	12/24/15	2.96%	4.35%	5.56%
11	12/18/15	2.90%	4.30%	5.53%
12	12/11/15	2.87%	4.26%	5.45%
13	12/04/15	3.01%	4.38%	5.55%
14	Average	2.81%	4.24%	5.44%
15	Spread To Treasury		1.43%	2.63%

Sources:

<sup>1</sup> St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.

<sup>2</sup> http://credittrends.moodys.com/.





Sources:

Mergent Bond Record.

www.moodys.com, Bond Yields and Key Indicators.

St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

### 6.00% 5.00% 4.00% 3.00% 2.00% 1.00% 0.00% 2006-1 2006-1 2010-1 2012-7 2009:1 2012:1 2010-1 2012 2013 2013 2014 2014 2015 2015 2001 2008 2008 2009 2012-1 2001 - A Spread ----- Baa Spread

# Yield Spread Between Utility Bonds and 30-Year Treasury Bonds

Sources:

Mergent Bond Record.

www.moodys.com, Bond Yields and Key Indicators.

St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

#### Exhibit No.\_\_\_(MPG-2) Schedule 15 Page 1 of 1

# Montana-Dakota Utilities Co.

# Value Line Beta

<u>Line</u>	<u>Company</u>	<u>Beta</u>
1	Atmos Energy Corporation	0.80
2	Laclede Group, Inc. (The)	0.70
3	New Jersey Resources Corporation	0.80
4	Northwest Natural Gas Company	0.65
5	South Jersey Industries, Inc.	0.80
6	Southwest Gas Corporation	0.80
7	WGL Holdings, Inc.	0.75
8	Average	0.76

Source:

The Value Line Investment Survey, December 4, 2015.

#### Exhibit No.\_\_\_(MPG-2) Schedule 16 Page 1 of 1

# Montana-Dakota Utilities Co.

### **CAPM Return**

<u>Line</u>	<b>Description</b>	High Market Risk <u>Premium</u> (1)	Low Market Risk <u>Premium</u> (2)
1	Risk-Free Rate <sup>1</sup>	3.70%	3.70%
2	Risk Premium <sup>2</sup>	7.90%	6.00%
3	Beta <sup>3</sup>	0.76	0.76
4	САРМ	9.68%	8.24%

Sources:

<sup>2</sup> Morningstar, Inc. Ibbotson SBBI 2015 Classic Yearbook at 91 and 152.

3 Exhibit No.\_\_\_(MPG-2), Schedule 15.

<sup>&</sup>lt;sup>1</sup> Blue Chip Financial Forecasts; February 1, 2016, at 2.

#### Standard & Poor's Credit Metrics

Line	Description	Retail Cost of Service _ Amount (\$000)		S&P Benc Modest	hmark (Medial ) Intermediate	/olatility) <sup>1/2</sup> Significant	Reference
	<u></u>	<u></u>	(1)	(2)	(3)	(4)	(5)
1	Rate Base	\$	39,892,967				Rule 20:10:13:96, Page 7 of 7.
2	Weighted Common Return		4.29%				Page 2, Line 4, Col. 4.
3	Pre-Tax Rate of Return		9.35%				Page 2, Line 5, Col. 5.
4	Income to Common	\$	1,711,748				Line 1 x Line 2.
5	EBIT	\$	3,730,987				Line 1 x Line 3.
6	Depreciation & Amortization	\$	3,668,425				Rule 20:10:13:96, Page 7 of 7.
7	Imputed Amortization	\$	-				N/A
8	Deferred Income Taxes & ITC	\$	2,819,206				Rule 20:10:13:96, Page 7 of 7.
9	Funds from Operations (FFO)	\$	8,199,379				Sum of Line 4 and Lines 6 through 8.
10	Imputed Interest Expense	\$	-				N/A
11	EBITDA	\$	7,399,412				Sum of Lines 5 through 7 and Line 10.
12	Total Debt Ratio		54%				Page 3, Line 4, Col. 2.
13	Debt to EBITDA		2.9x	1.75x - 2.5x	2.5x - 3.5x	3.5x - 4.5x	(Line 1 x Line 12) / Line 11.
14	FFO to Total Debt		38%	35% - 50%	23% - 35%	13% - 23%	Line 9 / (Line 1 x Line 12).

Sources:

<sup>1</sup> Standard & Poor's RatingsDirect: "Criteria: Corporate Methodology," November 19, 2013.

 <sup>2</sup> Standard & Poor's RatingsDirect: "MDU Resources Group Inc. and Subsidiary 'BBB+' Corporate Credit Ratings Affirmed, Outlook Revised To Negative.," November 30, 2015.

Note:

Based on the November 2015 S&P report, MDU has a "Satisfactory" business risk profile and a "Significant" financial risk profile, and falls under the "Medial Volatility" matrix.

### Standard & Poor's Credit Metrics (Pre-Tax Rate of Return)

<u>Line</u>	<b>Description</b>		Amount <sup>1</sup> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	Weighted <u>Cost</u> (4)	Pre-Tax Weighted <u>Cost</u> (5)
1	Long-Term Debt	\$	505,460,413	43.89%	5.79%	2.54%	2.54%
2	Short-Term Debt	\$	99,623,527	8.65%	1.63%	0.14%	0.14%
3	Preferred Stock	\$	15,258,600	1.32%	4.58%	0.06%	0.06%
4	Common Equity	\$	531,387,131	<u>46.14%</u>	9.30%	<u>4.29%</u>	<u>6.61%</u>
5	Total	\$ <sup>-</sup>	1,151,729,671	100.00%		7.03%	9.35%

6 Tax Conversion Factor\*

1.5406

### Sources:

<sup>1</sup> Exhibit No.\_\_\_(MPG-2), Schedule 1.

\* Rule 20:10:13:96, Page 7 of 7.

## Standard & Poor's Credit Metrics (Financial Capital Structure)

<u>Line</u>	Description		<u>Amount</u> (1)	<u>Weight</u> (2)
1	Long-Term Debt	\$	505,460,413	43.89%
2	Short-Term Debt	\$	99,623,527	8.65%
3	Preferred Stock	\$	15,258,600	<u>1.32</u> %
4	Total Debt	\$	620,342,540	53.86%
5	Common Equity		531,387,131	<u>46.14</u> %
6	Total	\$ <sup>^</sup>	1,151,729,671	100.00%

Sources: Page 2.

#### MONTANA-DAKOTA UTILITIES CO. COMPANY PROPOSAL TOTAL NORMALIZED REVENUES UNDER CURRENT AND PROPOSED RATES GAS UTILITY - SOUTH DAKOTA

				Current	Proposed	Proposed	Dereent	
Line	Rate Class	<b>Billing Units</b>	Dk	Rates Revenue	Rates Revenue	Revenue Increase	Percent Increase	Index
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Residential	50,016	3,607,260	\$28,587,683	\$29,908,561	\$1,320,878	4.62%	1.50
	Firm General Service							
2	Small Firm General	5,124	669,013	\$ 4,712,824				
3	Large Firm General	1,823	2,281,656	14,552,498				
4	Total Firm General	6,947	2,950,669	\$19,265,322	\$19,421,931	\$ 156,609	0.81%	0.26
	Small Interruptible							
5	Sales - Rate 71	5	21,860	\$ 120,906				
6	Transport - Rate 81	20	314,711	149,437				
7	Total Small Interruptible	25	336,571	\$ 270,343	\$ 272,629	\$ 2,286	0.85%	0.27
	Large Interruptible							
8	Sales - Rate 85	2	378,296	\$ 1,405,216				
9	Transport - Rate 82	8	895,914	199,471				
10	Total Large Interruptible	10	1,274,210	\$ 1,604,687	\$ 1,657,233	\$ 52,546	3.27%	1.06
11	Total South Dakota	56,998	8,168,710	\$49,728,035	\$51,260,354	\$1,532,319	3.08%	1.00

Source: Exhibit TAA-1, page 1 of 1

#### MONTANA-DAKOTA UTILITIES CO. COMPANY PROPOSAL DISTRIBUTION NORMALIZED REVENUES UNDER CURRENT AND PROPOSED RATES GAS UTILITY - SOUTH DAKOTA

				Current Rates	Proposed Rates	Proposed Revenue	Percent	
Line	Rate Class	<b>Billing Units</b>	Dk	Revenue	Revenue	Increase	Increase	Index
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Residential	50,016	3,607,260	\$11,402,696	\$12,723,574	\$1,320,878	11.58%	1.29
	Firm General Service							
2	Small Firm General	5,124	669,013	\$ 1,525,646				
3	Large Firm General	1,823	2,281,656	3,682,689				
4	Total Firm General	6,947	2,950,669	\$ 5,208,335	\$ 5,364,944	\$ 156,609	3.01%	0.33
	Small Interruptible							
5	Sales - Rate 71	5	21,860	\$ 16,765				
6	Transport - Rate 81	20	314,711	149,437				
7	Total Small Interruptible	25	336,571	\$ 166,202	\$ 168,488	\$ 2,286	1.38%	0.15
	Large Interruptible							
8	Sales - Rate 85	2	378,296	\$ 80,423				
9	Transport - Rate 82	8	895,914	199,471				
10	Total Large Interruptible	10	1,274,210	\$ 279,894	\$ 332,440	\$ 52,546	18.77%	2.09
11	Total South Dakota	56,998	8,168,710	\$17,057,127	\$18,589,446	\$1,532,319	8.98%	1.00

Source: Statement I, pp. 6-7

Exhibit TAA-1, page 1 of 1

#### MONTANA-DAKOTA UTILITIES CO. FEA PROPOSAL DISTRIBUTION REVENUES UNDER CURRENT AND PROPOSED RATES GAS UTILITY - SOUTH DAKOTA

Line	Data Class	Dilling Unite		Current Rates	Proposed Rates	Proposed Revenue	Percent	Index
Line	Rate Class	Billing Units	Dk	Revenue	Revenue	Increase	Increase	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Residential	50,016	3,607,260	\$11,402,696	\$12,935,015	\$ 1,532,319	13.44%	1.50
	Firm General Service							
2	Small Firm General	5,124	669,013	\$ 1,525,646				
3	Large Firm General	1,823	2,281,656	3,682,689				
4	Total Firm General	6,947	2,950,669	\$ 5,208,335	\$ 5,208,335	\$-	0.00%	-
	Small Interruptible							
5	Sales - Rate 71	5	21,860	\$ 16,765				
6	Transport - Rate 81	20	314,711	149,437				
7	Total Small Interruptible	25	336,571	\$ 166,202	\$ 166,202	\$-	0.00%	-
	Large Interruptible							
8	Sales - Rate 85	2	378,296	\$ 80,423				
9	Transport - Rate 82	8	895,914	199,471				
10	Total Large Interruptible	10	1,274,210	\$ 279,894	\$ 279,894	\$-	0.00%	-
11	Total South Dakota	56,998	8,168,710	\$17,057,127	\$18,589,446	\$ 1,532,319	8.98%	1.00

#### MONTANA-DAKOTA UTILITIES CO. COMPANY PROPOSAL COST OF SERVICE GAS UTILITY - SOUTH DAKOTA

				Current	Proposed	Proposed	Deveent	
Line	Rate Class	<b>Billing Units</b>	Dk	Rates Revenue	Rates Revenue	Revenue Increase	Percent Increase	Index
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Residential	50,016	3,607,260	\$11,404,008	\$13,380,996	\$ 1,976,988	17.34%	1.93
	Firm General Service							
2	Small Firm General	5,124	669,013	\$ 1,525,888				
3	Large Firm General	1,823	2,281,656	3,683,519				
4	Total Firm General	6,947	2,950,669	\$ 5,209,407	\$ 4,773,672	\$ (435,735)	-8.36%	(0.93)
	Small Interruptible							
5	Sales - Rate 71	5	21,860					
6	Transport - Rate 81	20	314,711					
7	Total Small Interruptible	25	336,571	\$ 193,788	\$ 133,103	\$ (60,685)	-31.32%	(3.49)
	Large Interruptible							
8	Sales - Rate 85	2	378,296					
9	Transport - Rate 82	8	895,914					
10	Total Large Interruptible	10	1,274,210	\$ 279,887	\$ 332,317	\$ 52,430	18.73%	2.09
11	Total South Dakota	56,998	8,168,710	\$17,087,090	\$18,620,088	\$ 1,532,998	8.97%	1.00

Source: Statement N, Cost of Service Study

Provided in response to data request FEA 1-8

#### MONTANA-DAKOTA UTILITIES CO. FEA PROPOSAL COST OF SERVICE GAS UTILITY - SOUTH DAKOTA

				Current Rates	Proposed Rates		Proposed Revenue	Percent	
Line	Rate Class	<b>Billing Units</b>	Dk	Revenue	Revenue	_	ncrease	Increase	Index
		(1)	(2)	(3)	(4)		(5)	(6)	(7)
1	Residential	50,016	3,607,260	\$11,404,008	\$13,482,527	\$	2,078,519	18.23%	2.03
	Firm General Service								
2	Small Firm General	5,124	669,013	\$ 1,525,888					
3	Large Firm General	1,823	2,281,656	3,683,519					
4	Total Firm General	6,947	2,950,669	\$ 5,209,407	\$ 4,848,515	\$	(360,892)	-6.93%	(0.77)
	Small Interruptible								
5	Sales - Rate 71	5	21,860						
6	Transport - Rate 81	20	314,711						
7	Total Small Interruptible	25	336,571	\$ 193,788	\$ 96,255	\$	(97,533)	-50.33%	(5.61)
	Large Interruptible								
8	Sales - Rate 85	2	378,296						
9	Transport - Rate 82	8	895,914						
10	Total Large Interruptbile	10	1,274,210	\$ 279,887	\$ 192,793	\$	(87,094)	-31.12%	(3.47)
11	Total South Dakota	56,998	8,168,710	\$17,087,090	\$18,620,090	\$	1,533,000	8.97%	1.00