

Missouri Gas Energy  
Cost of Service Study  
12 Months Ending December 31, 2016

	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of Gross Plant	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3		Factor	Company	RS	SGS	LGS	LVS	Factor
4								
286	395 - Laboratory Equipment		-					
287	- Demand		-					
288	- Customer		-					
289	- Commodity		-					
290	Total		-					
291								
292	396 - Power operated equip		3,063,341					DISPLT
293	- Demand	Plant Dist_D	1,045,515	649,688	115,091	102,471	178,265	34%
294	- Customer	Plant Dist_C	2,017,826	1,775,930	160,727	58,760	22,409	66%
295	- Commodity		-	-	-	-	-	0%
296	Total		3,063,341	2,425,618	275,818	161,231	200,674	
297								
298	397.1 - Communications equip - AMR		40,845,110					CUS
299	- Demand		-					0%
300	- Customer	C8_Nonlvqus	40,845,110	38,164,799	2,414,474	265,837	-	100%
301	- Commodity		-	-	-	-	-	0%
302	Total		40,845,110	38,164,799	2,414,474	265,837	-	
303								
304	397.0 - Communications equip		6,622,779					DISPLT
305	- Demand	Plant Dist_D	2,260,347	1,404,590	248,820	221,536	385,400	34%
306	- Customer	Plant Dist_C	4,362,432	3,839,465	347,484	127,036	48,448	66%
307	- Commodity		-	-	-	-	-	0%
308	Total		6,622,779	5,244,055	596,304	348,572	433,847	
309								
310	398 - Misc General Equipment		800,700					DISPLT
311	- Demand	Plant Dist_D	273,278	169,816	30,083	26,784	46,595	34%
312	- Customer	Plant Dist_C	527,422	464,195	42,011	15,359	5,857	66%
313	- Commodity		-	-	-	-	-	0%
314	Total		800,700	634,011	72,094	42,143	52,453	
315								

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2	Allocation of Gross Plant	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3		Factor	Company	RS	SGS	LGS	LVS	Factor
4								
316	Corporate		-					
317	- Demand		-					
318	- Customer		-					
319	- Commodity		-					
320	Total		-	-	-	-	-	
321								
322	Total General Plant							
323	- Demand		40,609,236	25,234,777	4,470,292	3,980,101	6,924,066	
324	- Customer		119,220,279	107,144,373	8,657,348	2,548,153	870,406	
325	- Commodity		-	-	-	-	-	
326	Total		159,829,515	132,379,150	13,127,640	6,528,254	7,794,472	
327								
328	Total Utility Plant							
329	- Demand		431,893,890	268,380,968	47,543,170	42,329,808	73,639,944	
330	- Customer		874,418,467	771,837,375	68,801,006	24,528,084	9,252,002	
331	- Commodity		-	-	-	-	-	
332	Total		1,306,312,356	1,040,218,343	116,344,176	66,857,891	82,891,946	

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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>							
2	Allocation of Accumulated Depreciation	Allocation	Total	Residential	Small	Large	Large	Classification
3		Factor	Company	RS	General Srv	General Srv	Volume Srv	Factor
4					SGS	LGS	LVS	
5	<b>Intangible Plant</b>							
6	<b>301 - Organization Costs</b>							
7	- Demand	Plant Nonint_D	-	-	-	-	-	NINTPLT
8	- Customer	Plant Nonint_C	-	-	-	-	-	33%
9	- Commodity	-	-	-	-	-	-	67%
10	Total		-	-	-	-	-	0%
11								
12	<b>302 - Franchise and Consents</b>							
13	- Demand	Plant Nonint_D	-	-	-	-	-	NINTPLT
14	- Customer	Plant Nonint_C	-	-	-	-	-	33%
15	- Commodity	-	-	-	-	-	-	67%
16	Total		-	-	-	-	-	0%
17								
18	<b>303 - Misc. Intangible Plant</b>							
19	- Demand	D2_Demand	(506,426)	(104,045)	(18,431)	(16,410)	(28,548)	NINTPLT
20	- Customer	C1_customers	(338,991)	(316,497)	(20,023)	(2,205)	(267)	33%
21	- Commodity	-	-	-	-	-	-	67%
22	Total		(506,426)	(420,541)	(38,454)	(18,615)	(28,816)	0%
23								
24	<b>Total Intangible Plant</b>							
25	- Demand		(167,435)	(104,045)	(18,431)	(16,410)	(28,548)	
26	- Customer		(338,991)	(316,497)	(20,023)	(2,205)	(267)	
27	- Commodity		-	-	-	-	-	
28	Total		(506,426)	(420,541)	(38,454)	(18,615)	(28,816)	
29								
30	<b>Production Plant</b>							
31	<b>304 - Land &amp; land rights</b>							
32	- Demand		-	-	-	-	-	
33	- Customer		-	-	-	-	-	
34	- Commodity		-	-	-	-	-	
35	Total		-	-	-	-	-	
36								

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1	<b>Missouri Gas Energy</b>							
2	Allocation of Accumulated Depreciation	Allocation	Total	Residential	Small	Large	Large	Classification
3		Factor	Company	RS	General Srv	General Srv	Volume Srv	Factor
4					SGS	LGS	LVS	
37	305 - Structures & improvements		-					
38	- Demand		-					
39	- Customer		-					
40	- Commodity		-					
41	Total		-					
42	311 - LPG equipment		-					
44	- Demand		-					
45	- Customer		-					
46	- Commodity		-					
47	Total		-					
48	325.4 - Rights of way		-					
50	- Demand		-					
51	- Customer		-					
52	- Commodity		-					
53	Total		-					
54	Total Production Plant		-					
56	- Demand		-					
57	- Customer		-					
58	- Commodity		-					
59	Total		-					
60	Transmission Plant		-					
62	365.0 - T&D: Land and Land Rights		-					
63	- Demand		-					
64	- Customer		-					
65	- Commodity		-					
66	Total		-					
67								

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1	<b>Missouri Gas Energy</b>							
2	<b>Allocation of Accumulated Depreciation</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>Small</b>	<b>Large</b>	<b>Large</b>	<b>Classification</b>
3		<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Factor</b>
4					<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	
68	365.1 - Land and Land Rights		-					
69	- Demand		-					
70	- Customer		-					
71	- Commodity		-					
72	Total		-	-	-	-	-	
73								
74	365.2 - Rights-of-Way		-					
75	- Demand		-					
76	- Customer		-					
77	- Commodity		-					
78	Total		-	-	-	-	-	
79								
80	366.1 - Compressor station structures		-					
81	- Demand		-					
82	- Customer		-					
83	- Commodity		-					
84	Total		-	-	-	-	-	
85								
86	367.1 - Mains		-					
87	- Demand		-					
88	- Customer		-					
89	- Commodity		-					
90	Total		-	-	-	-	-	
91								
92	368 - Compressor Station Equipment		-					
93	- Demand		-					
94	- Customer		-					
95	- Commodity		-					
96	Total		-	-	-	-	-	
97								
98	369 - Measuring and Reg. Sta. Equipment		-					
99	- Demand		-					
100	- Customer		-					
101	- Commodity		-					
102	Total		-	-	-	-	-	
103								

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2	Allocation of Accumulated Depreciation	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3		Factor	Company	RS	SGS	LGS	LVS	Factor
4								
104	370 - Communication Equipment		-					
105	- Demand		-					
106	- Customer		-					
107	- Commodity		-					
108	Total		-					
109								
110	371 - Other equipment		-					
111	- Demand		-					
112	- Customer		-					
113	- Commodity		-					
114	Total		-					
115								
116	Total Transmission Plant							
117	- Demand		-					
118	- Customer		-					
119	- Commodity		-					
120	Total		-					
121								
122	Distribution Plant							
123	374.1 - Land		-					DIS376-379
124	- Demand	Plant_376-379_D	-					66%
125	- Customer	Plant_376-379_C	-					34%
126	- Commodity	-	-					0%
127	Total		-					
128								
129	374.2 - Land Rights		(904,179)					DIS376-379
130	- Demand	Plant_376-379_D	(595,131)	(369,817)	(65,512)	(58,329)	(101,473)	66%
131	- Customer	Plant_376-379_C	(309,048)	(288,541)	(18,254)	(2,010)	(244)	34%
132	- Commodity	-	-					0%
133	Total		(904,179)	(658,358)	(83,767)	(60,338)	(101,716)	
134								
135	375 - Structures and improvements		(1,734,701)					DIS376-379
136	- Demand	Plant_376-379_D	(1,141,780)	(709,508)	(125,688)	(111,906)	(194,679)	66%
137	- Customer	Plant_376-379_C	(592,920)	(553,576)	(35,022)	(3,856)	(467)	34%
138	- Commodity	-	-					0%
139	Total		(1,734,701)	(1,263,083)	(160,710)	(115,762)	(195,146)	
140								

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2	<b>Allocation of Accumulated Depreciation</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>Small</b>	<b>Large</b>	<b>Large</b>	<b>Classification</b>
3		<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Factor</b>
4					<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	
141	376 - Mains		(186,816,317)					DISMAIN
142	- Demand	D2_Demand	(120,654,579)	(74,975,343)	(13,281,737)	(11,825,324)	(20,572,174)	65%
143	- Customer	C1_customers	(66,161,738)	(61,771,393)	(3,907,932)	(430,269)	(52,144)	35%
144	- Commodity	-	-	-	-	-	-	0%
145	Total		(186,816,317)	(136,746,736)	(17,189,669)	(12,255,593)	(20,624,318)	
146								
147	376.1 - Mains steel		-					
148	- Demand		-					
149	- Customer		-					
150	- Commodity		-					
151	Total		-	-	-	-	-	
152								
153	376.2 - Mains plastic		-					
154	- Demand		-					
155	- Customer		-					
156	- Commodity		-					
157	Total		-	-	-	-	-	
158								
159	377 - Compressor station equipment		-					
160	- Demand		-					
161	- Customer		-					
162	- Commodity		-					
163	Total		-	-	-	-	-	
164								
165	378 - Measurement & equip: Gen		(6,181,907)					DEM
166	- Demand	D2_Demand	(6,181,907)	(3,841,467)	(680,508)	(605,887)	(1,054,044)	100%
167	- Customer	-	-	-	-	-	-	0%
168	- Commodity	-	-	-	-	-	-	0%
169	Total		(6,181,907)	(3,841,467)	(680,508)	(605,887)	(1,054,044)	
170								
171	379 - Measurement & equip: CG		(1,786,056)					DEM
172	- Demand	D2_Demand	(1,786,056)	(1,109,864)	(196,610)	(175,051)	(304,531)	100%
173	- Customer	-	-	-	-	-	-	0%
174	- Commodity	-	-	-	-	-	-	0%
175	Total		(1,786,056)	(1,109,864)	(196,610)	(175,051)	(304,531)	
176								

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2	Allocation of Accumulated Depreciation		Allocation	Total	Residential	Small	Large	Large
3		Factor	Company	RS	General Srv	General Srv	Volume Srv	Classification
4					SGS	LGS	LVS	Factor
177	380 - Services		(217,100,229)					CUS
178	- Demand	-	-	-	-	-	-	0%
179	- Customer	C6_services	(217,100,229)	(198,951,886)	(14,125,992)	(3,463,242)	(559,109)	100%
180	- Commodity	-	-	-	-	-	-	0%
181	Total		(217,100,229)	(198,951,886)	(14,125,992)	(3,463,242)	(559,109)	
182				(397,903,772)	(28,251,984)	(6,926,485)	(1,118,217)	
183	381 - Meters		(5,606,851)					CUS
184	- Demand	-	-	-	-	-	-	0%
185	- Customer	C3_meters	(5,606,851)	(3,814,932)	(1,032,504)	(483,001)	(276,414)	100%
186	- Commodity	-	-	-	-	-	-	0%
187	Total		(5,606,851)	(3,814,932)	(1,032,504)	(483,001)	(276,414)	
188								
189	382 - Meter installation		(37,046,542)					CUS
190	- Demand	-	-	-	-	-	-	0%
191	- Customer	C4_Metincus	(37,046,542)	(27,292,166)	(5,199,996)	(3,518,212)	(1,036,169)	100%
192	- Commodity	-	-	-	-	-	-	0%
193	Total		(37,046,542)	(27,292,166)	(5,199,996)	(3,518,212)	(1,036,169)	
194								
195	383 - House regulators		(5,439,223)					CUS
196	- Demand	-	-	-	-	-	-	0%
197	- Customer	C5_Regcus	(5,439,223)	(3,815,530)	(476,690)	(617,567)	(529,436)	100%
198	- Commodity	-	-	-	-	-	-	0%
199	Total		(5,439,223)	(3,815,530)	(476,690)	(617,567)	(529,436)	
200								
201	384 - House regulators Installations		-					
202	- Demand	-	-	-	-	-	-	
203	- Customer	-	-	-	-	-	-	
204	- Commodity	-	-	-	-	-	-	
205	Total		-	-	-	-	-	
206								
207	385 - Industrial Meas & Reg stations		(252,432)					CUS
208	- Demand	-	-	-	-	-	-	0%
209	- Customer	C10_Lvcus	(252,432)	-	-	-	(252,432)	100%
210	- Commodity	-	-	-	-	-	-	0%
211	Total		(252,432)	-	-	-	(252,432)	
212								



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3		<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Factor</b>
4					<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	
213	386 - Other property on customer premises		-					
214	- Demand		-					
215	- Customer		-					
216	- Commodity		-					
217	Total		-					
218								
219	387 - Other distribution equip.		-					
220	- Demand		-					
221	- Customer		-					
222	- Commodity		-					
223	Total		-					
224								
225	Total Distribution Plant							
226	- Demand		(130,359,452)	(81,005,999)	(14,350,056)	(12,776,496)	(22,226,901)	
227	- Customer		(332,508,984)	(296,488,023)	(24,796,390)	(8,518,158)	(2,706,414)	
228	- Commodity		-	-	-	-	-	
229	Total		(462,868,437)	(377,494,022)	(39,146,446)	(21,294,654)	(24,933,315)	
230								
231	<b>General Plant</b>							
232	389 - Land & land rights		-					DISPLT
233	- Demand	Plant Dist_D	-	-	-	-	-	34%
234	- Customer	Plant Dist_C	-	-	-	-	-	66%
235	- Commodity	-	-	-	-	-	-	0%
236	Total		-	-	-	-	-	
237								
238	390.1 - Structures & improvements		(252,354)					DISPLT
239	- Demand	Plant Dist_D	(86,128)	(53,520)	(9,481)	(8,441)	(14,685)	34%
240	- Customer	Plant Dist_C	(166,226)	(146,298)	(13,240)	(4,841)	(1,846)	66%
241	- Commodity	-	-	-	-	-	-	0%
242	Total		(252,354)	(199,819)	(22,722)	(13,282)	(16,531)	
243								
244	390.2 - General improvements		-					
245	- Demand		-					
246	- Customer		-					
247	- Commodity		-					
248	Total		-	-	-	-	-	
249								

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3		Factor	Company	RS	General Srv	General Srv	Volume Srv	Factor
4					SGS	LGS	LVS	
250	391 - Office Furniture and Equipment		(3,680,482)					DISPLT
251	- Demand	Plant Dist_D	(1,256,144)	(780,574)	(138,277)	(123,114)	(214,178)	34%
252	- Customer	Plant Dist_C	(2,424,338)	(2,133,709)	(193,108)	(70,598)	(26,924)	66%
253	- Commodity	-	-	-	-	-	-	0%
254	Total		(3,680,482)	(2,914,283)	(331,385)	(193,712)	(241,102)	
255								
256	391.5 - Enterprise Software-EIMS		(12,274,769)					DISPLT
257	- Demand	Plant Dist_D	(4,189,364)	(2,603,291)	(461,168)	(410,598)	(714,306)	34%
258	- Customer	Plant Dist_C	(8,085,405)	(7,116,129)	(644,033)	(235,450)	(89,794)	66%
259	- Commodity	-	-	-	-	-	-	0%
260	Total		(12,274,769)	(9,719,420)	(1,105,201)	(646,049)	(804,100)	
261								
262	392.1 - Transp. Equip. Cars & Small Trucks		(4,390,634)					DISPLT
263	- Demand	Plant Dist_D	(1,498,518)	(931,186)	(164,958)	(146,869)	(255,504)	34%
264	- Customer	Plant Dist_C	(2,892,116)	(2,545,410)	(230,368)	(84,220)	(32,119)	66%
265	- Commodity	-	-	-	-	-	-	0%
266	Total		(4,390,634)	(3,476,596)	(395,326)	(231,089)	(287,623)	
267								
268	392.2 - Transp. Equip. Heavy Trucks		(4,829,016)					DISPLT
269	- Demand	Plant Dist_D	(1,648,138)	(1,024,161)	(181,428)	(161,534)	(281,015)	34%
270	- Customer	Plant Dist_C	(3,180,879)	(2,799,556)	(253,369)	(92,628)	(35,326)	66%
271	- Commodity	-	-	-	-	-	-	0%
272	Total		(4,829,016)	(3,823,717)	(434,797)	(254,162)	(316,341)	
273								
274	393 - Stores Equipment		(205,568)					DISPLT
275	- Demand	Plant Dist_D	(70,160)	(43,598)	(7,723)	(6,876)	(11,963)	34%
276	- Customer	Plant Dist_C	(135,408)	(119,175)	(10,786)	(3,943)	(1,504)	66%
277	- Commodity	-	-	-	-	-	-	0%
278	Total		(205,568)	(162,773)	(18,509)	(10,820)	(13,466)	
279								
280	394 - Tools		(2,911,155)					DISPLT
281	- Demand	Plant Dist_D	(993,574)	(617,412)	(109,373)	(97,380)	(169,409)	34%
282	- Customer	Plant Dist_C	(1,917,581)	(1,687,702)	(152,742)	(55,841)	(21,296)	66%
283	- Commodity	-	-	-	-	-	-	0%
284	Total		(2,911,155)	(2,305,114)	(262,116)	(153,221)	(190,705)	
285								

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1	<b>Missouri Gas Energy</b>							
2	Allocation of Accumulated Depreciation	Allocation	Total	Residential	Small	Large	Large	
3		Factor	Company	RS	General Srv	General Srv	Volume Srv	Classification
4					SGS	LGS	LVS	Factor
286	395 - Laboratory Equipment		-					
287	- Demand		-					
288	- Customer		-					
289	- Commodity		-					
290	Total		-					
291								
292	396 - Power operated equip		(548,141)					DISPLT
293	- Demand	Plant Dist_D	(187,080)	(116,252)	(20,594)	(18,336)	(31,898)	34%
294	- Customer	Plant Dist_C	(361,061)	(317,777)	(28,760)	(10,514)	(4,010)	66%
295	- Commodity	-	-	-	-	-	-	0%
296	Total		(548,141)	(434,030)	(49,354)	(28,850)	(35,908)	
297								
298	397.1 - Communications equip - AMR		(12,411,319)					CUS
299	- Demand	-	-	-	-	-	-	0%
300	- Customer	CS_Nonlvcus	(12,411,319)	(11,596,872)	(733,669)	(80,778)	-	100%
301	- Commodity	-	-	-	-	-	-	0%
302	Total		(12,411,319)	(11,596,872)	(733,669)	(80,778)	-	
303								
304	397.0 - Communications equip		14,771					DISPLT
305	- Demand	Plant Dist_D	5,041	3,133	555	494	860	34%
306	- Customer	Plant Dist_C	9,730	8,564	775	283	108	66%
307	- Commodity	-	-	-	-	-	-	0%
308	Total		14,771	11,696	1,330	777	968	
309								
310	398 - Misc General Equipment		(517,389)					DISPLT
311	- Demand	Plant Dist_D	(176,584)	(109,730)	(19,439)	(17,307)	(30,108)	34%
312	- Customer	Plant Dist_C	(340,805)	(299,949)	(27,146)	(9,924)	(3,785)	66%
313	- Commodity	-	-	-	-	-	-	0%
314	Total		(517,389)	(409,680)	(46,585)	(27,231)	(33,893)	
315								
316	Corporate		-					
317	- Demand		-					
318	- Customer		-					
319	- Commodity		-					
320	Total		-					
321								
322	Total General Plant							
323	- Demand		(10,100,649)	(6,276,592)	(1,111,886)	(989,962)	(1,722,208)	
324	- Customer		(31,905,408)	(28,754,014)	(2,286,446)	(648,454)	(216,494)	
325	- Commodity		-	-	-	-	-	
326	Total		(42,006,057)	(35,030,606)	(3,398,332)	(1,638,416)	(1,938,702)	
327								
328	Total Utility Plant							
329	- Demand		(140,627,536)	(87,386,636)	(15,480,374)	(13,782,868)	(23,977,658)	
330	- Customer		(364,753,384)	(325,558,534)	(27,102,859)	(9,168,816)	(2,923,175)	
331	- Commodity		-	-	-	-	-	
332	Total		(505,380,920)	(412,945,170)	(42,583,233)	(22,951,684)	(26,900,833)	

Missouri Gas Energy  
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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of Rate Base	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3		Factor	Company	RS	SGS	LGS	LVS	Factor
4								
5	Net Plant in Service							
6	Total Gas Utility Plant							
7	- Demand		431,893,890	268,380,968	47,543,170	42,329,808	73,639,944	
8	- Customer		874,418,467	771,837,375	68,801,006	24,528,084	9,252,002	
9	- Commodity		-	-	-	-	-	
10	Total		1,306,312,356	1,040,218,343	116,344,176	66,857,891	82,891,946	
11								
12	Total Accumulated Depreciation							
13	- Demand		(140,627,536)	(87,386,636)	(15,480,374)	(13,782,868)	(23,977,658)	
14	- Customer		(364,753,384)	(325,558,534)	(27,102,859)	(9,168,816)	(2,923,175)	
15	- Commodity		-	-	-	-	-	
16	Total		(505,380,920)	(412,945,170)	(42,583,233)	(22,951,684)	(26,900,833)	
17								
18	Net Plant in Service							
19	- Demand		291,266,354	180,994,332	32,062,796	28,546,940	49,662,286	
20	- Customer		509,665,083	446,278,842	41,698,147	15,359,268	6,328,827	
21	- Commodity		-	-	-	-	-	
22	Total		800,931,437	627,273,173	73,760,943	43,906,207	55,991,113	
23								
24	Construction Work in Progress							
25	Construction Work in Progress		35,186,016					NINTPLT
26	- Demand	Plant Dist_D	11,633,225	7,228,943	1,280,593	1,140,169	1,983,520	33%
27	- Customer	Plant Dist_C	23,552,791	20,729,289	1,876,067	685,867	261,569	67%
28	- Commodity		-	-	-	-	-	0%
29	Total		35,186,016	27,958,231	3,156,661	1,826,036	2,245,088	
30								
31	Net Plant in Service							
32	- Demand		302,899,578	188,223,274	33,343,389	29,687,109	51,645,806	
33	- Customer		533,217,874	467,008,131	43,574,214	16,045,134	6,590,396	
34	- Commodity		-	-	-	-	-	
35	Total		836,117,453	655,231,405	76,917,603	45,732,243	58,236,201	
36								

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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of Rate Base	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3		Factor	Company	RS	SGS	LGS	LVS	Factor
4								
37	Additions to Utility Plant							
38	Materials and Supplies		5,004,239					TOTPLT
39	- Demand	Plant_TT_D	1,654,505	1,028,117	182,129	162,158	282,101	33%
40	- Customer	Plant_TT_C	3,349,734	2,956,765	263,564	93,963	35,443	67%
41	- Commodity		-	-	-	-	-	0%
42	Total		5,004,239	3,984,883	445,693	256,120	317,544	
43								
44	Net Cost of Removal		-					
45	- Demand		-					
46	- Customer		-					
47	- Commodity		-					
48	Total		-	-	-	-	-	
49								
50	Gas Storage		29,273,371					DEM
51	- Demand	Plant GasInvDem	29,273,371	20,307,691	3,226,263	3,178,514	2,560,903	100%
52	- Customer		-	-	-	-	-	0%
53	- Commodity		-	-	-	-	-	0%
54	Total		29,273,371	20,307,691	3,226,263	3,178,514	2,560,903	
55								
56	Prepaid Expenses		3,169,251					NONTOTOPEXP
57	- Demand	OPEXPDEM	897,962	576,562	96,016	82,845	142,539	28%
58	- Customer	OPEXPCUS	2,264,781	1,993,319	189,414	51,663	30,384	71%
59	- Commodity	OPEXPCOM	6,508	3,121	479	634	2,274	0%
60	Total		3,169,251	2,573,002	285,909	135,142	175,197	
61								
62	Cash Working Capital		7,135,564					NONTOTOPEXP
63	- Demand	OPEXPDEM	2,021,760	1,298,129	216,179	186,526	320,926	28%
64	- Customer	OPEXPCUS	5,099,151	4,487,954	426,466	116,320	68,410	71%
65	- Commodity	OPEXPCOM	14,653	7,027	1,079	1,427	5,119	0%
66	Total		7,135,564	5,793,111	643,724	304,273	394,456	
67								

Missouri Gas Energy  
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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of Rate Base	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3		Factor	Company	RS	SGS	LGS	LVS	Factor
4								
68	<b>Other Regulatory Assets</b>							
69								
70	Prepaid Pension Assets		2,812,626					NONAGOPEXP
71	- Demand	EXP_Non-A&G_D	813,209	517,484	87,664	76,322	131,738	29%
72	- Customer	EXP_Non-A&G_C	1,993,447	1,760,388	165,345	45,765	21,949	71%
73	- Commodity	EXP_Non-A&G_E	5,971	2,863	440	582	2,086	0%
74	Total		2,812,626	2,280,735	253,449	122,669	155,773	
75								
76	Red Tag Program		39,995					TOTPLT
77	- Demand	Plant_TT_D	13,223	8,217	1,456	1,296	2,255	33%
78	- Customer	Plant_TT_C	26,772	23,631	2,106	751	283	67%
79	- Commodity		-	-	-	-	-	0%
80	Total		39,995	31,848	3,562	2,047	2,538	
81								
82	Low Income Energy Affordability		336,181					TOTPLT
83	- Demand	Plant_TT_D	111,149	69,068	12,235	10,894	18,951	33%
84	- Customer	Plant_TT_C	225,033	198,634	17,706	6,312	2,381	67%
85	- Commodity		-	-	-	-	-	0%
86	Total		336,181	267,702	29,941	17,206	21,332	
87								
88	MGE Software		2,239,152					NONAGOPEXP
89	- Demand	EXP_Non-A&G_D	647,401	411,973	69,790	60,761	104,878	29%
90	- Customer	EXP_Non-A&G_C	1,586,997	1,401,457	131,632	36,434	17,473	71%
91	- Commodity	EXP_Non-A&G_E	4,753	2,280	350	463	1,661	0%
92	Total		2,239,152	1,815,710	201,772	97,658	124,012	
93								
94	One-Time Non-Capital Transition Costs		8,620,933					NONAGOPEXP
95	- Demand	EXP_Non-A&G_D	2,492,552	1,586,131	268,698	233,934	403,789	29%
96	- Customer	EXP_Non-A&G_C	6,110,080	5,395,736	506,795	140,275	67,274	71%
97	- Commodity	EXP_Non-A&G_E	18,301	8,777	1,348	1,782	6,394	0%
98	Total		8,620,933	6,990,643	776,842	375,991	477,457	
99								

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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>							
2	<b>Allocation of Rate Base</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>Small</b>	<b>Large</b>	<b>Large</b>	<b>Classification</b>
3		<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Factor</b>
4					<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	
100	Energy Efficiency Program		13,969,796					TOTPLT
101	- Demand	Plant_TT_D	4,618,703	2,870,085	508,430	452,678	787,511	33%
102	- Customer	Plant_TT_C	9,351,092	8,254,083	735,763	262,305	98,942	67%
103	- Commodity		-	-	-	-	-	0%
104	Total		13,969,796	11,124,168	1,244,193	714,983	886,452	
105								
106	Other Regulatory Assets		28,018,682					
107	- Demand		8,696,237	5,462,958	948,274	835,884	1,449,122	
108	- Customer		19,293,420	17,033,928	1,559,348	491,842	208,302	
109	- Commodity		29,025	13,920	2,138	2,827	10,140	
110	Total		28,018,682	22,510,806	2,509,759	1,330,553	1,667,564	
111								
112	Total Additions to Utility Plant							
113	- Demand		42,543,834	28,673,457	4,668,860	4,445,926	4,755,591	
114	- Customer		30,007,087	26,471,967	2,438,792	753,789	342,539	
115	- Commodity		50,187	24,068	3,697	4,888	17,534	
116	Total		72,601,107	55,169,493	7,111,349	5,204,603	5,115,664	
117								
118								
119	<b>Reductions: Other Reg. Liabilities</b>							
120								
121	Rate Base Offset from GM-2013-0254		(118,326,358)					TOTPLT
122	- Demand	Plant_TT_D	(39,121,142)	(24,310,068)	(4,306,482)	(3,834,253)	(6,670,339)	33%
123	- Customer	Plant_TT_C	(79,205,216)	(69,913,375)	(6,232,026)	(2,221,765)	(838,050)	67%
124	- Commodity		-	-	-	-	-	0%
125	Total		(118,326,358)	(94,223,443)	(10,538,508)	(6,056,018)	(7,508,390)	
126								
127	Amortization of Rate Base Offset		39,442,119					TOTPLT
128	- Demand	Plant_TT_D	13,040,381	8,103,356	1,435,494	1,278,084	2,223,446	33%
129	- Customer	Plant_TT_C	26,401,739	23,304,458	2,077,342	740,588	279,350	67%
130	- Commodity		-	-	-	-	-	0%
131	Total		39,442,119	31,407,814	3,512,836	2,018,673	2,502,797	
132								
133	Other Regulatory Liabilities		(78,884,239)					TOTPLT
134	- Demand		(26,080,761)	(16,206,712)	(2,870,988)	(2,556,169)	(4,446,893)	33%
135	- Customer		(52,803,477)	(46,608,917)	(4,154,684)	(1,481,177)	(558,700)	67%
136	- Commodity		-	-	-	-	-	0%
137	Total		(78,884,239)	(62,815,629)	(7,025,672)	(4,037,345)	(5,005,593)	
138								

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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of Rate Base	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3		Factor	Company	RS	SGS	LGS	LVS	Factor
4								
139	Reductions: Others							
140	Accumulated Deferred Income Taxes		(28,506,945)					TOTPLT
141	- Demand	Plant_TT_D	(9,424,986)	(5,856,732)	(1,037,509)	(923,740)	(1,607,004)	33%
142	- Customer	Plant_TT_C	(19,081,959)	(16,843,388)	(1,501,407)	(535,263)	(201,901)	67%
143	- Commodity		-	-	-	-	-	0%
144	Total		(28,506,945)	(22,700,120)	(2,538,916)	(1,459,003)	(1,808,906)	
145								
146	Customer Deposits		(4,762,253)					CUS
147	- Demand		-	-	-	-	-	0%
148	- Customer	C2_depcus	(4,762,253)	(3,189,944)	(1,399,543)	(154,092)	(18,674)	100%
149	- Commodity		-	-	-	-	-	0%
150	Total		(4,762,253)	(3,189,944)	(1,399,543)	(154,092)	(18,674)	
151								
152	Customer Advances		(4,045,439)					MAINSVC
153	- Demand	Plant_MainsSrv_D	(1,522,439)	(1,182,202)	(131,557)	(83,526)	(125,154)	38%
154	- Customer	Plant_MainsSrv_C	(2,523,000)	(2,355,580)	(149,024)	(16,408)	(1,988)	62%
155	- Commodity		-	-	-	-	-	0%
156	Total		(4,045,439)	(3,537,782)	(280,581)	(99,934)	(127,142)	
157								
158	Total Deductions							
159	- Demand		(37,028,186)	(23,245,647)	(4,040,053)	(3,563,435)	(6,179,051)	
160	- Customer		(79,170,690)	(68,997,828)	(7,204,659)	(2,186,939)	(781,264)	
161	- Commodity		-	-	-	-	-	
162	Total		(116,198,876)	(92,243,474)	(11,244,712)	(5,750,374)	(6,960,315)	
163								
164	Total Rate Base							
165	- Demand		308,415,227	193,651,085	33,972,196	30,569,600	50,222,346	
166	- Customer		484,054,271	424,482,270	38,808,347	14,611,984	6,151,670	
167	- Commodity		50,187	24,068	3,697	4,888	17,534	
168	Total		792,519,685	618,157,423	72,784,240	45,186,472	56,391,550	



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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of O&M Expenses	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3		Factor	Company	RS	SGS	LGS	LVS	Factor
4								
5	Production Expense							
6	717 - LPG Expense Maintenance		-					
7	- Demand		-					
8	- Customer		-					
9	- Commodity		-					
10	Total		-	-	-	-	-	
11								
12	742 - Maintenance of production equip		-					
13	- Demand		-					
14	- Customer		-					
15	- Commodity		-					
16	Total		-	-	-	-	-	
17								
18	Total Production Expenses		-	-	-	-	-	
19	- Demand		-	-	-	-	-	
20	- Customer		-	-	-	-	-	
21	- Commodity		-	-	-	-	-	
22	Total		-	-	-	-	-	
23								
24	Transmission Expenses							
25	Operations Expenses							
26								
27	850 - Supervision & Engineering		-					
28	- Demand		-					
29	- Customer		-					
30	- Commodity		-					
31	Total		-	-	-	-	-	
32								
33	851 - Load Dispatching		-					
34	- Demand		-					
35	- Customer		-					
36	- Commodity		-					
37	Total		-	-	-	-	-	
38								

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	A	B	C	D	E	F	G	H
1	<u>Missouri Gas Energy</u>							
2	Allocation of O&M Expenses	Allocation	Total	Residential	Small	Large	Large	Classification
3		Factor	Company	RS	General Srv	General Srv	Volume Srv	
4					SGS	LGS	LVS	Factor
39	852 - Communication System Expenses		-					
40	- Demand		-					
41	- Customer		-					
42	- Commodity		-					
43	Total		-	-	-	-	-	
44								
45	856 - Mains Expenses		-					
46	- Demand		-					
47	- Customer		-					
48	- Commodity		-					
49	Total		-	-	-	-	-	
50								
51	857 - Measuring and Regulating Expenses		-					
52	- Demand		-					
53	- Customer		-					
54	- Commodity		-					
55	Total		-	-	-	-	-	
56								
57	858 - Transmission & Compression by other		-					
58	- Demand		-					
59	- Customer		-					
60	- Commodity		-					
61	Total		-	-	-	-	-	
62								
63	859 - Other expenses		-					
64	- Demand		-					
65	- Customer		-					
66	- Commodity		-					
67	Total		-	-	-	-	-	
68								
69	860 - Rents		-					
70	- Demand		-					
71	- Customer		-					
72	- Commodity		-					
73	Total		-	-	-	-	-	
74								
75	Total Operations Expense		-					
76	- Demand		-	-	-	-	-	
77	- Customer		-	-	-	-	-	
78	- Commodity		-	-	-	-	-	
79	Total		-	-	-	-	-	
80								

Missouri Gas Energy  
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	A	B	C	D	E	F	G	H
1	<u>Missouri Gas Energy</u>				Small	Large	Large	
2	<u>Allocation of O&amp;M Expenses</u>	<u>Allocation</u>	<u>Total</u>	<u>Residential</u>	<u>General Srv</u>	<u>General Srv</u>	<u>Volume Srv</u>	<u>Classification</u>
3		<u>Factor</u>	<u>Company</u>	<u>RS</u>	<u>SGS</u>	<u>LGS</u>	<u>LVS</u>	<u>Factor</u>
4								
81	<u>Maintenance Expense</u>							
82	<u>861 - Supervision</u>		-					
83	- Demand		-					
84	- Customer		-					
85	- Commodity		-					
86	Total		-	-	-	-	-	
87								
88	<u>862 - Maintenance Structure &amp; Improve</u>		-					
89	- Demand		-					
90	- Customer		-					
91	- Commodity		-					
92	Total		-	-	-	-	-	
93								
94	<u>863 - Maintenance of Mains</u>		-					
95	- Demand		-					
96	- Customer		-					
97	- Commodity		-					
98	Total		-	-	-	-	-	
99								
100	<u>864 - Maintenance of Compressor Station</u>		-					
101	- Demand		-					
102	- Customer		-					
103	- Commodity		-					
104	Total		-	-	-	-	-	
105								
106	<u>865 - Maintenance of M&amp;R station</u>		-					
107	- Demand		-					
108	- Customer		-					
109	- Commodity		-					
110	Total		-	-	-	-	-	
111								
112	<u>866 - Maintenance of Communication Equipment</u>		-					
113	- Demand		-					
114	- Customer		-					
115	- Commodity		-					
116	Total		-	-	-	-	-	
117								

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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>							
2	Allocation of O&M Expenses	Allocation	Total	Residential	Small	Large	Large	Classification
3		Factor	Company	RS	General Srv	General Srv	Volume Srv	
4					SGS	LGS	LVS	Factor
118	867 - Maintenance of Other Equipment		-					
119	- Demand		-					
120	- Customer		-					
121	- Commodity		-					
122	Total		-	-	-	-	-	
123								
124	Total Maintenance Expense							
125	- Demand		-	-	-	-	-	
126	- Customer		-	-	-	-	-	
127	- Commodity		-	-	-	-	-	
128	Total		-	-	-	-	-	
129								
130	Total Transmission Expenses							
131	- Demand		-	-	-	-	-	
132	- Customer		-	-	-	-	-	
133	- Commodity		-	-	-	-	-	
134	Total		-	-	-	-	-	
135								
136	<b>Distribution Expenses</b>							
137	<b>Operations Expenses</b>							
138								
139	805 - Purchased Gas Cost Adjustment		(68,901)					COM
140	- Demand		-	-	-	-	-	0%
141	- Customer		-	-	-	-	-	0%
142	- Commodity	D1_sales	(68,901)	(33,043)	(5,075)	(6,710)	(24,072)	100%
143	Total		(68,901)	(33,043)	(5,075)	(6,710)	(24,072)	
144								
145	870 - Supervision & Engineering		142,549					EXP871-880
146	- Demand	EXP_871-880_D	39,743	29,230	3,683	2,634	4,196	28%
147	- Customer	EXP_871-880_C	100,497	81,700	11,010	5,151	2,636	71%
148	- Commodity	EXP_871-880_E	2,309	1,108	170	225	807	2%
149	Total		142,549	112,037	14,864	8,010	7,639	
150								
151	871 - Distribution Load Dispatching + Odorization		136,772					COM
152	- Demand		-	-	-	-	-	0%
153	- Customer		-	-	-	-	-	0%
154	- Commodity	D1_sales	136,772	65,592	10,075	13,321	47,784	100%
155	Total		136,772	65,592	10,075	13,321	47,784	
156								

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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy							
2	Allocation of O&M Expenses	Allocation	Total	Residential	Small	Large	Large	
3		Factor	Company	RS	General Srv	General Srv	Volume Srv	Classification
4					SGS	LGS	LVS	Factor
157	872 - Compressor Station Labor and Expenses		-					
158	- Demand		-					
159	- Customer		-					
160	- Commodity		-					
161	Total		-					
162								
163	874 - Mains & services expense		4,599,636					MAINSVC
164	- Demand	Plant_MainsSrv_D	1,731,002	1,344,156	149,579	94,968	142,299	38%
165	- Customer	Plant_MainsSrv_C	2,868,634	2,678,278	169,440	18,656	2,261	62%
166	- Commodity		-	-	-	-	-	0%
167	Total		4,599,636	4,022,434	319,019	113,624	144,560	
168								
169	875 - Measurement & Reg - General		622,739					DEM
170	- Demand	D2_Demand	622,739	386,973	68,551	61,034	106,180	100%
171	- Customer		-	-	-	-	-	0%
172	- Commodity		-	-	-	-	-	0%
173	Total		622,739	386,973	68,551	61,034	106,180	
174								
175	876 - Measurement & Reg - Industrial		-					
176	- Demand		-					
177	- Customer		-					
178	- Commodity		-					
179	Total		-					
180								
181	877 - Measurement & Reg - City Gate		-					
182	- Demand		-					
183	- Customer		-					
184	- Commodity		-					
185	Total		-					
186								
187	878 - Meter and House Regulator		2,143,852					CUS
188	- Demand		-	-	-	-	-	0%
189	- Customer	C7_Metregcus	2,143,852	1,468,300	350,788	197,172	127,593	100%
190	- Commodity		-	-	-	-	-	0%
191	Total		2,143,852	1,468,300	350,788	197,172	127,593	
192								
193	879 - Customer installation		939,433					CUS
194	- Demand		-	-	-	-	-	0%
195	- Customer	C4_Metincus	939,433	692,080	131,862	89,215	26,275	100%
196	- Commodity		-	-	-	-	-	0%
197	Total		939,433	692,080	131,862	89,215	26,275	
198								

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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>							
2	<b>Allocation of O&amp;M Expenses</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>Small</b>	<b>Large</b>	<b>Large</b>	<b>Classification</b>
3		<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Factor</b>
4					<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	
199	880 - Other expenses		4,384,246					EXP871-879
200	- Demand	EXP_871-879_D	1,222,323	898,994	113,278	81,014	129,038	28%
201	- Customer	EXP_871-879_C	3,090,896	2,512,767	338,637	158,412	81,079	71%
202	- Commodity	EXP_871-879_E	71,027	34,063	5,232	6,917	24,815	2%
203	Total		4,384,246	3,445,823	457,147	246,344	234,932	
204								
205	881 - Rents		50,464					EXP871-879
206	- Demand	EXP_871-879_D	14,069	10,348	1,304	932	1,485	28%
207	- Customer	EXP_871-879_C	35,577	28,923	3,898	1,823	933	71%
208	- Commodity	EXP_871-879_E	818	392	60	80	286	2%
209	Total		50,464	39,663	5,262	2,835	2,704	
210								
211	Total Operations Expenses							
212	- Demand		3,629,876	2,669,700	336,395	240,583	383,197	
213	- Customer		9,178,890	7,462,047	1,005,636	470,430	240,778	
214	- Commodity		142,025	68,112	10,462	13,832	49,619	
215	Total		12,950,790	10,199,858	1,352,493	724,845	673,594	
216								
217	Maintenance Expense							
218	885 - Supervision		192,790					DIS887-893
219	- Demand	EXP_887-893_D	112,414	69,855	12,375	11,018	19,167	58%
220	- Customer	EXP_887-893_C	79,822	71,294	5,368	1,184	1,977	41%
221	- Commodity	EXP_887-893_E	554	265	41	54	193	0%
222	Total		192,790	141,414	17,783	12,255	21,338	
223								
224	886 - Maintenance Structure & Improve		244,367					DIS887-893
225	- Demand	EXP_887-893_D	142,488	88,543	15,685	13,965	24,295	58%
226	- Customer	EXP_887-893_C	101,177	90,367	6,804	1,500	2,506	41%
227	- Commodity	EXP_887-893_E	702	336	52	68	245	0%
228	Total		244,367	179,246	22,540	15,534	27,047	
229								
230	887 - Maintenance of Mains		17,533,690					PLT376MAINS
231	- Demand	D2_Demand	11,324,064	7,036,829	1,246,561	1,109,869	1,930,806	65%
232	- Customer	C1_customers	6,209,626	5,797,569	366,780	40,383	4,894	35%
233	- Commodity		-	-	-	-	-	0%
234	Total		17,533,690	12,834,398	1,613,341	1,150,252	1,935,700	
235								
236	889 - Maintenance of M&R station - General		743,037					DEM
237	- Demand	D2_Demand	743,037	461,727	81,794	72,825	126,691	100%
238	- Customer		-	-	-	-	-	0%
239	- Commodity		-	-	-	-	-	0%
240	Total		743,037	461,727	81,794	72,825	126,691	
241								

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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>							
2	<b>Allocation of O&amp;M Expenses</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>Small</b>	<b>Large</b>	<b>Large</b>	<b>Classification</b>
3		<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Factor</b>
4					<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	
242	Odorant Expense (Acct. 891 reduced by Odorant Expense for Tes		60,051					COM
243	- Demand		-	-	-	-	-	0%
244	- Customer		-	-	-	-	-	0%
245	- Commodity	D1_sales	60,051	28,799	4,423	5,849	20,980	100%
246	Total		60,051	28,799	4,423	5,849	20,980	
247								
248	890 - Maintenance of M&R station - Industrial		165,113					CUS
249	- Demand		-	-	-	-	-	0%
250	- Customer	C10_Lvcus	165,113	-	-	-	165,113	100%
251	- Commodity		-	-	-	-	-	0%
252	Total		165,113	-	-	-	165,113	
253								
254	891 - Maintenance of M&R station - City Gate		127,914					DEM
255	- Demand	D2_Demand	127,914	79,486	14,081	12,537	21,810	100%
256	- Customer		-	-	-	-	-	0%
257	- Commodity		-	-	-	-	-	0%
258	Total		127,914	79,486	14,081	12,537	21,810	
259								
260	892 - Maintenance of Services		1,606,224					CUS
261	- Demand		-	-	-	-	-	0%
262	- Customer	C6_services	1,606,224	1,471,953	104,512	25,623	4,137	100%
263	- Commodity		-	-	-	-	-	0%
264	Total		1,606,224	1,471,953	104,512	25,623	4,137	
265								
266	893 - Maintenance of Meter and House Reg		678,364					CUS
267	- Demand		-	-	-	-	-	0%
268	- Customer	C7_Metregcus	678,364	464,604	110,997	62,390	40,373	100%
269	- Commodity		-	-	-	-	-	0%
270	Total		678,364	464,604	110,997	62,390	40,373	
271								

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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>							
2	<b>Allocation of O&amp;M Expenses</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>Small</b>	<b>Large</b>	<b>Large</b>	<b>Classification</b>
3		<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Factor</b>
4					<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	
272	894 - Maintenance of Other Equipment		41,914					
273	- Demand	EXP_887-893_D	24,440	15,187	2,690	2,395	4,167	DIS887-893
274	- Customer	EXP_887-893_C	17,354	15,500	1,167	257	430	58%
275	- Commodity	EXP_887-893_E	120	58	9	12	42	41%
276	Total		41,914	30,744	3,866	2,664	4,639	0%
277								
278	Total Maintenance Expense							
279	- Demand		12,474,358	7,751,627	1,373,186	1,222,609	2,126,937	
280	- Customer		8,857,680	7,911,285	595,627	131,337	219,430	
281	- Commodity		61,426	29,459	4,525	5,982	21,461	
282	Total		21,393,464	15,692,371	1,973,337	1,359,928	2,367,828	
283								
284	Total Distribution O&M Expenses							
285	- Demand		16,104,234	10,421,327	1,709,581	1,463,192	2,510,134	
286	- Customer		18,036,569	15,373,332	1,601,262	601,766	460,208	
287	- Commodity		203,451	97,570	14,986	19,815	71,080	
288	Total		34,344,254	25,892,230	3,325,830	2,084,773	3,041,422	
289								
290	<b>Customer Account Expense</b>							
291	901 - Supervision		-	-	-	-	-	
292	- Demand		-	-	-	-	-	
293	- Customer		-	-	-	-	-	
294	- Commodity		-	-	-	-	-	
295	Total		-	-	-	-	-	
296								
297	902 - Meter reading expense		1,976,539					CUS
298	- Demand		-	-	-	-	-	0%
299	- Customer	C1_customers	1,976,539	1,845,381	116,747	12,854	1,558	100%
300	- Commodity		-	-	-	-	-	0%
301	Total		1,976,539	1,845,381	116,747	12,854	1,558	
302								
303	903 - Customer records & collections		12,561,118					CUS
304	- Demand		-	-	-	-	-	0%
305	- Customer	C11_903cus	12,561,118	11,585,112	869,265	98,428	8,314	100%
306	- Commodity		-	-	-	-	-	0%
307	Total		12,561,118	11,585,112	869,265	98,428	8,314	
308								



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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy							
2	Allocation of O&M Expenses	Allocation	Total	Residential	Small	Large	Large	Classification
3		Factor	Company	RS	General Srv	General Srv	Volume Srv	
4					SGS	LGS	LVS	Factor
309	904 - Uncollectible expense		4,896,608					CUS
310	- Demand		-	-	-	-	-	0%
311	- Customer	C12_904cus	4,896,608	4,224,972	599,059	72,577	-	100%
312	- Commodity		-	-	-	-	-	0%
313	Total		4,896,608	4,224,972	599,059	72,577	-	
314								
315	905 - Miscellaneous Customer Service		78,951					CUS
316	- Demand		-	-	-	-	-	0%
317	- Customer	EXP_902-904_C	78,951	71,724	6,439	747	40	100%
318	- Commodity		-	-	-	-	-	0%
319	Total		78,951	71,724	6,439	747	40	
320								
321	Total Customer Account Expenses							
322	- Demand		-	-	-	-	-	
323	- Customer		19,513,217	17,727,189	1,591,511	184,605	9,912	
324	- Commodity		-	-	-	-	-	
325	Total		19,513,217	17,727,189	1,591,511	184,605	9,912	
326								
327	Customer Service & Informational Expense							
328	908 - Customer Assistance		4,205,079					CUS
329	- Demand		-	-	-	-	-	0%
330	- Customer	C9_Residcus	4,205,079	4,205,079	-	-	-	100%
331	- Commodity		-	-	-	-	-	0%
332	Total		4,205,079	4,205,079	-	-	-	
333								
334	909 - Info & Inst Advertising		38,699					CUS
335	- Demand		-	-	-	-	-	0%
336	- Customer	C1_customers	38,699	36,131	2,286	252	30	100%
337	- Commodity		-	-	-	-	-	0%
338	Total		38,699	36,131	2,286	252	30	
339								
340	Total Customer Service Expenses							
341	- Demand		-	-	-	-	-	
342	- Customer		4,243,778	4,241,210	2,286	252	30	
343	- Commodity		-	-	-	-	-	
344	Total		4,243,778	4,241,210	2,286	252	30	
345								

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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of O&M Expenses	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3		Factor	Company	RS	SGS	LGS	LVS	Factor
4								
346	<b>Sales &amp; Advertising Expense</b>							
347	911 - Supervision		162,698					CUS
348	- Demand		-	-	-	-	-	0%
349	- Customer	EXP_912-913_C	162,698	88,977	66,368	7,307	46	100%
350	- Commodity		-	-	-	-	-	0%
351	Total		162,698	88,977	66,368	7,307	46	
352								
353	912 - Demonstration and selling		916,181					CUS
354	- Demand		-	-	-	-	-	0%
355	- Customer	C13_912cus	916,181	501,046	373,727	41,148	259	100%
356	- Commodity		-	-	-	-	-	0%
357	Total		916,181	501,046	373,727	41,148	259	
358								
359	913 - Advertising		-					
360	- Demand		-	-	-	-	-	
361	- Customer		-	-	-	-	-	
362	- Commodity		-	-	-	-	-	
363	Total		-	-	-	-	-	
364								
365	916 - Misc Sales Expense		5,500					CUS
366	- Demand		-	-	-	-	-	0%
367	- Customer	EXP_912-913_C	5,500	3,008	2,244	247	2	100%
368	- Commodity		-	-	-	-	-	0%
369	Total		5,500	3,008	2,244	247	2	
370								
371	Total Sales Expense							
372	- Demand		-	-	-	-	-	
373	- Customer		1,084,379	593,031	442,338	48,702	307	
374	- Commodity		-	-	-	-	-	
375	Total		1,084,379	593,031	442,338	48,702	307	
376								
377	<b>Administrative &amp; General Expense</b>							
378	<b>Operations</b>							
379	920 - A&G Salaries		10,702,321					NONAGOPEXP
380	- Demand	EXP_Non-A&G_D	3,094,339	1,969,078	333,571	290,413	501,277	29%
381	- Customer	EXP_Non-A&G_C	7,585,262	6,698,451	629,153	174,142	83,516	71%
382	- Commodity	EXP_Non-A&G_E	22,719	10,896	1,674	2,213	7,937	0%
383	Total		10,702,321	8,678,424	964,398	466,768	592,731	
384								

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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>							
2	<b>Allocation of O&amp;M Expenses</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>Small</b>	<b>Large</b>	<b>Large</b>	<b>Classification</b>
3		<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Factor</b>
4					<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	
385	921 - Office supplies		9,786,383					NONAGOPEXP
386	- Demand	EXP_Non-A&G_D	2,829,516	1,800,558	305,023	265,559	458,377	29%
387	- Customer	EXP_Non-A&G_C	6,936,092	6,125,177	575,308	159,238	76,369	71%
388	- Commodity	EXP_Non-A&G_E	20,775	9,963	1,530	2,023	7,258	0%
389	Total		9,786,383	7,935,698	881,862	426,820	542,003	
390								
391	922 - Administrative Expense Transfer		(7,449,468)					NONAGOPEXP
392	- Demand	EXP_Non-A&G_D	(2,153,849)	(1,370,598)	(232,186)	(202,145)	(348,920)	29%
393	- Customer	EXP_Non-A&G_C	(5,279,805)	(4,662,530)	(437,929)	(121,213)	(58,132)	71%
394	- Commodity	EXP_Non-A&G_E	(15,814)	(7,584)	(1,165)	(1,540)	(5,525)	0%
395	Total		(7,449,468)	(6,040,712)	(671,280)	(324,899)	(412,577)	
396								
397	923 - Outside services employed		5,439,918					NONAGOPEXP
398	- Demand	EXP_Non-A&G_D	1,572,832	1,000,869	169,552	147,615	254,796	29%
399	- Customer	EXP_Non-A&G_C	3,855,538	3,404,778	319,794	88,515	42,451	71%
400	- Commodity	EXP_Non-A&G_E	11,548	5,538	851	1,125	4,035	0%
401	Total		5,439,918	4,411,185	490,197	237,255	301,281	
402								
403	924 - Property insurance		407,076					TOTPLT
404	- Demand	Plant_Total_D	134,588	83,634	14,816	13,191	22,948	33%
405	- Customer	Plant_Total_C	272,489	240,522	21,440	7,644	2,883	67%
406	- Commodity		-	-	-	-	-	0%
407	Total		407,076	324,156	36,255	20,834	25,831	
408								
409	925 - Injuries and damages		2,862,064					NONAGOPEXP
410	- Demand	EXP_Non-A&G_D	827,503	526,580	89,205	77,664	134,054	29%
411	- Customer	EXP_Non-A&G_C	2,028,486	1,791,331	168,251	46,570	22,334	71%
412	- Commodity	EXP_Non-A&G_E	6,076	2,914	448	592	2,123	0%
413	Total		2,862,064	2,320,824	257,904	124,825	158,511	
414								

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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>							
2	<b>Allocation of O&amp;M Expenses</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>Small</b>	<b>Large</b>	<b>Large</b>	<b>Classification</b>
3		<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Factor</b>
4					<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	
415	926 - Employed pensions & benefits		17,350,288					NONAGOPEXP
416	- Demand	EXP_Non-A&G_D	5,016,452	3,192,211	540,776	470,810	812,656	29%
417	- Customer	EXP_Non-A&G_C	12,297,004	10,859,332	1,019,965	282,313	135,394	71%
418	- Commodity	EXP_Non-A&G_E	36,832	17,664	2,713	3,587	12,868	0%
419	Total		17,350,288	14,069,206	1,563,454	756,710	960,918	
420								
421	928 - Regulatory commission expense		3,062,891					CUS
422	- Demand		-	-	-	-	-	0%
423	- Customer	D3_totalrevenues	3,062,891	2,406,523	231,525	203,177	221,666	100%
424	- Commodity		-	-	-	-	-	0%
425	Total		3,062,891	2,406,523	231,525	203,177	221,666	
426								
427	930 - Misc. General Expenses		1,055,293					NONAGOPEXP
428	- Demand	EXP_Non-A&G_D	305,115	194,159	32,891	28,636	49,428	29%
429	- Customer	EXP_Non-A&G_C	747,938	660,495	62,037	17,171	8,235	71%
430	- Commodity	EXP_Non-A&G_E	2,240	1,074	165	218	783	0%
431	Total		1,055,293	855,728	95,094	46,025	58,446	
432								
433	931 - Rents		944,538					DISPLT
434	- Demand	Plant Dist_D	322,370	200,322	35,487	31,595	54,966	34%
435	- Customer	Plant Dist_C	622,168	547,583	49,558	18,118	6,910	66%
436	- Commodity		-	-	-	-	-	0%
437	Total		944,538	747,905	85,045	49,713	61,875	
438								
439	Total Operations Expenses							
440	- Demand		11,948,866	7,596,811	1,289,135	1,123,337	1,939,582	
441	- Customer		32,128,063	28,071,661	2,639,103	875,675	541,625	
442	- Commodity		84,376	40,465	6,215	8,218	29,478	
443	Total		44,161,305	35,708,937	3,934,453	2,007,229	2,510,685	
444								
445	Maintenance							
446	932 - Maintenance of general plant		250,654					GENPLT
447	- Demand	Plant_Gen_D	63,686	39,575	7,011	6,242	10,859	25%
448	- Customer	Plant_Gen_C	186,968	168,030	13,577	3,996	1,365	75%
449	- Commodity		-	-	-	-	-	0%
450	Total		250,654	207,605	20,588	10,238	12,224	
451								

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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of O&M Expenses	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3		Factor	Company	RS	SGS	LGS	LVS	Factor
4								
452	Payroll Adjustment							
453	Payroll Adjustment		2,730,213					NONAGOPEXP
454	- Demand	EXP_Non-A&G_D	789,381	502,321	85,096	74,086	127,878	29%
455	- Customer	EXP_Non-A&G_C	1,935,036	1,708,807	160,500	44,424	21,305	71%
456	- Commodity	EXP_Non-A&G_E	5,796	2,780	427	564	2,025	0%
457	Total		2,730,213	2,213,907	246,023	119,075	151,209	
458								
459	Total A&G Expense							
460	- Demand		12,801,932	8,138,707	1,381,242	1,203,665	2,078,319	
461	- Customer		34,250,068	29,948,498	2,813,180	924,095	564,296	
462	- Commodity		90,172	43,244	6,642	8,782	31,503	
463	Total		47,142,172	38,130,449	4,201,064	2,136,542	2,674,118	
464								
465	Total O&M Expense							
466	- Demand		28,906,167	18,560,034	3,090,823	2,666,857	4,588,453	
467	- Customer		77,128,011	67,883,261	6,450,577	1,759,420	1,034,753	
468	- Commodity		293,623	140,814	21,629	28,597	102,583	
469	Total		106,327,800	86,584,109	9,563,029	4,454,874	5,725,789	

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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>							
2	<b>Allocation of Taxes Other Than Income</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>Small</b>	<b>Large</b>	<b>Large</b>	<b>Classification</b>
3		<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Factor</b>
4					<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	
5	<b>Taxes Other Than Income</b>							
6								
7	Ad Valorem		19,418,142					TOTPLT
8	- Demand	Plant_Total_D	6,420,040	3,989,444	706,722	629,226	1,094,647	33%
9	- Customer	Plant_Total_C	12,998,103	11,473,250	1,022,717	364,606	137,530	67%
10	- Commodity		-	-	-	-	-	0%
11	Total		19,418,142	15,462,694	1,729,439	993,833	1,232,177	
12								
13	Payroll		3,894,460					NONOTOIPEXP
14	- Demand	EXP_TTotal_D	1,103,439	701,960	118,984	103,620	178,876	28%
15	- Customer	EXP_TTotal_C	2,783,023	2,449,555	230,082	67,645	35,741	71%
16	- Commodity	EXP_TTotal_E	7,998	3,835	589	779	2,794	0%
17	Total		3,894,460	3,155,350	349,655	172,044	217,411	
18								
19	Gross Receipts		0					
20	- Demand		-					
21	- Customer		-					
22	- Commodity		-					
23	Total		-	-	-	-	-	
24								
25	Other		-					
26	- Demand		-					
27	- Customer		-					
28	- Commodity		-					
29	Total		-	-	-	-	-	
30								
31			-					
32	- Demand		-					
33	- Customer		-					
34	- Commodity		-					
35	Total		-	-	-	-	-	
36								
37	Total Taxes Other Than Income							
38	- Demand		7,523,479	4,691,404	825,706	732,847	1,273,523	
39	- Customer		15,781,126	13,922,805	1,252,799	432,252	173,270	
40	- Commodity		7,998	3,835	589	779	2,794	
41	Total		23,312,602	18,618,044	2,079,094	1,165,877	1,449,587	

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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>				Small	Large	Large	
2	Allocation of Depreciation and	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3	Amortization Expenses	Factor	Company	RS	SGS	LGS	LVS	Factor
4								
5	<b>Intangible Plant</b>							
6	301 - Organization Costs		-					
7	- Demand		-					
8	- Customer		-					
9	- Commodity		-					
10	Total		-	-	-	-	-	
11								
12	302 - Franchise and Consents		-					
13	- Demand		-					
14	- Customer		-					
15	- Commodity		-					
16	Total		-	-	-	-	-	
17								
18	303 - Misc. Intangible Plant		-					
19	- Demand		-					
20	- Customer		-					
21	- Commodity		-					
22	Total		-	-	-	-	-	
23								
24	Total Intangible Plant		-	-	-	-	-	
25	- Demand		-	-	-	-	-	
26	- Customer		-	-	-	-	-	
27	- Commodity		-	-	-	-	-	
28	Total		-	-	-	-	-	
29								
30	<b>Production Plant Expense</b>							
31	304 - Land & land rights		-					
32	- Demand		-					
33	- Customer		-					
34	- Commodity		-					
35	Total		-	-	-	-	-	
36								

Missouri Gas Energy  
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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>							
2	<b>Allocation of Depreciation and</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>Small</b>	<b>Large</b>	<b>Large</b>	<b>Classification</b>
3	<b>Amortization Expenses</b>	<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Factor</b>
4								
37	305 - Structures & improvements		-					
38	- Demand		-					
39	- Customer		-					
40	- Commodity		-					
41	Total		-	-	-	-	-	
42								
43	311 - LPG equipment		-					
44	- Demand		-					
45	- Customer		-					
46	- Commodity		-					
47	Total		-	-	-	-	-	
48								
49	325.4 - Rights of way		-					
50	- Demand		-					
51	- Customer		-					
52	- Commodity		-					
53	Total		-	-	-	-	-	
54								
55	Total Production Plant		-	-	-	-	-	
56	- Demand		-	-	-	-	-	
57	- Customer		-	-	-	-	-	
58	- Commodity		-	-	-	-	-	
59	Total		-	-	-	-	-	
60								
61	<b>Transmission Plant</b>							
62	365.0 - T&D: Land and Land Rights		-					
63	- Demand		-					
64	- Customer		-					
65	- Commodity		-					
66	Total		-	-	-	-	-	
67								



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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>							
2	<b>Allocation of Depreciation and</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>Small</b>	<b>Large</b>	<b>Large</b>	
3	<b>Amortization Expenses</b>	<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Classification</b>
4					<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	<b>Factor</b>
68	<u>365.1 - Land and Land Rights</u>		-					
69	- Demand		-					
70	- Customer		-					
71	- Commodity		-					
72	Total		-					
73								
74	<u>365.2 - Rights-of-Way</u>		-					
75	- Demand		-					
76	- Customer		-					
77	- Commodity		-					
78	Total		-					
79								
80	<u>366.1 - Compressor station structures</u>		-					
81	- Demand		-					
82	- Customer		-					
83	- Commodity		-					
84	Total		-					
85								
86	<u>367.1 - Mains</u>		-					
87	- Demand		-					
88	- Customer		-					
89	- Commodity		-					
90	Total		-					
91								
92	<u>368 - Compressor Station Equipment</u>		-					
93	- Demand		-					
94	- Customer		-					
95	- Commodity		-					
96	Total		-					
97								
98	<u>369 - Measuring and Reg. Sta. Equipment</u>		-					
99	- Demand		-					
100	- Customer		-					
101	- Commodity		-					
102	Total		-					
103								

Missouri Gas Energy  
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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of Depreciation and	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3	Amortization Expenses	Factor	Company	RS	SGS	LGS	LVS	Factor
4								
104	370 - Communication Equipment		-					
105	- Demand		-					
106	- Customer		-					
107	- Commodity		-					
108	Total		-	-	-	-	-	
109								
110	371 - Other equipment		-					
111	- Demand		-					
112	- Customer		-					
113	- Commodity		-					
114	Total		-	-	-	-	-	
115								
116	Total Transmission Plant		-					
117	- Demand		-	-	-	-	-	
118	- Customer		-	-	-	-	-	
119	- Commodity		-	-	-	-	-	
120	Total		-	-	-	-	-	
121								
122	Distribution Expense							
123	374.1 - Land		-					
124	- Demand		-					
125	- Customer		-					
126	- Commodity		-					
127	Total		-	-	-	-	-	
128								
129	374.2 - Land Rights		58,975					DIS376-379
130	- Demand	Plant_376-379_D	38,817	24,121	4,273	3,804	6,619	66%
131	- Customer	Plant_376-379_C	20,158	18,820	1,191	131	16	34%
132	- Commodity	-	-	-	-	-	-	0%
133	Total		58,975	42,941	5,464	3,936	6,634	
134								
135	375 - Structures and improvements		268,298					DIS376-379
136	- Demand	Plant_376-379_D	176,594	109,736	19,440	17,308	30,110	66%
137	- Customer	Plant_376-379_C	91,704	85,619	5,417	596	72	34%
138	- Commodity	-	-	-	-	-	-	0%
139	Total		268,298	195,355	24,856	17,904	30,182	
140								

Missouri Gas Energy  
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12 Months Ending December 31, 2016

	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of Depreciation and	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3	Amortization Expenses	Factor	Company	RS	SGS	LGS	LVS	Factor
4								
141	376 - Mains		9,932,183					DISMAIN
142	- Demand	D2_Demand	6,414,661	3,986,102	706,130	628,699	1,093,730	65%
143	- Customer	C1_customers	3,517,522	3,284,107	207,767	22,875	2,772	35%
144	- Commodity	-	-	-	-	-	-	0%
145	Total		9,932,183	7,270,209	913,897	651,575	1,096,502	
146								
147	376.1 - Mains steel		-					
148	- Demand		-					
149	- Customer		-					
150	- Commodity		-					
151	Total		-	-	-	-	-	
152								
153	376.2 - Mains plastic		-					
154	- Demand		-					
155	- Customer		-					
156	- Commodity		-					
157	Total		-	-	-	-	-	
158								
159	377 - Compressor station equipment		-					
160	- Demand		-					
161	- Customer		-					
162	- Commodity		-					
163	Total		-	-	-	-	-	
164								
165	378 - Measurement & equip: Gen		407,533					DEM
166	- Demand	D2_Demand	407,533	253,243	44,862	39,942	69,486	100%
167	- Customer	-	-	-	-	-	-	0%
168	- Commodity	-	-	-	-	-	-	0%
169	Total		407,533	253,243	44,862	39,942	69,486	
170								
171	379 - Measurement & equip: CG		155,661					DEM
172	- Demand	D2_Demand	155,661	96,729	17,135	15,256	26,541	100%
173	- Customer	-	-	-	-	-	-	0%
174	- Commodity	-	-	-	-	-	-	0%
175	Total		155,661	96,729	17,135	15,256	26,541	
176								

Missouri Gas Energy  
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12 Months Ending December 31, 2016

	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of Depreciation and	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3	Amortization Expenses	Factor	Company	RS	SGS	LGS	LVS	Factor
4								
177	380 - Services		10,709,335					CUS
178	- Demand	-	-	-	-	-	-	0%
179	- Customer	C6_services	10,709,335	9,814,096	696,821	170,838	27,580	100%
180	- Commodity	-	-	-	-	-	-	0%
181	Total		10,709,335	9,814,096	696,821	170,838	27,580	
182								
183	381 - Meters		1,151,141					CUS
184	- Demand	-	-	-	-	-	-	0%
185	- Customer	C3_meters	1,151,141	783,243	211,983	99,165	56,750	100%
186	- Commodity	-	-	-	-	-	-	0%
187	Total		1,151,141	783,243	211,983	99,165	56,750	
188								
189	382 - Meter installation		2,711,666					CUS
190	- Demand	-	-	-	-	-	-	0%
191	- Customer	C4_Metincus	2,711,666	1,997,683	380,620	257,520	75,844	100%
192	- Commodity	-	-	-	-	-	-	0%
193	Total		2,711,666	1,997,683	380,620	257,520	75,844	
194								
195	383 - House regulators		388,853					CUS
196	- Demand	-	-	-	-	-	-	0%
197	- Customer	C5_Regcus	388,853	272,774	34,079	44,150	37,850	100%
198	- Commodity	-	-	-	-	-	-	0%
199	Total		388,853	272,774	34,079	44,150	37,850	
200								
201	384 - House regulators Installations		-					
202	- Demand		-					
203	- Customer		-					
204	- Commodity		-					
205	Total		-					
206								
207	385 - Industrial Meas & Reg stations		33,449					CUS
208	- Demand	-	-	-	-	-	-	0%
209	- Customer	C10_Lvcus	33,449	-	-	-	33,449	100%
210	- Commodity	-	-	-	-	-	-	0%
211	Total		33,449	-	-	-	33,449	
212								

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	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>				Small	Large	Large	
2	<b>Allocation of Depreciation and</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Classification</b>
3	<b>Amortization Expenses</b>	<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	<b>Factor</b>
4								
213	386 - Other property on customer premises		-					
214	- Demand		-					
215	- Customer		-					
216	- Commodity		-					
217	Total		-	-	-	-	-	
218								
219	387 - Other distribution equip.		-					
220	- Demand		-					
221	- Customer		-					
222	- Commodity		-					
223	Total		-	-	-	-	-	
224								
225	Total Distribution Plant							
226	- Demand		7,193,266	4,469,931	791,840	705,010	1,226,486	
227	- Customer		18,623,828	16,256,341	1,537,877	595,276	234,333	
228	- Commodity		-	-	-	-	-	
229	Total		25,817,094	20,726,272	2,329,717	1,300,286	1,460,819	
230								
231	<b>General Plant Expense</b>							
232	389 - Land & land rights		-					DISPLT
233	- Demand	Plant Dist_D	-					34%
234	- Customer	Plant Dist_C	-					66%
235	- Commodity	-	-					0%
236	Total		-	-	-	-	-	
237								
238	390.1 - Structures & improvements		18,709					DISPLT
239	- Demand	Plant Dist_D	6,385	3,968	703	626	1,089	34%
240	- Customer	Plant Dist_C	12,324	10,846	982	359	137	66%
241	- Commodity	-	-	-	-	-	-	0%
242	Total		18,709	14,814	1,685	985	1,226	
243								
244	390.2 - General Improvements		-					
245	- Demand		-					
246	- Customer		-					
247	- Commodity		-					
248	Total		-	-	-	-	-	
249								

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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of Depreciation and	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3	Amortization Expenses	Factor	Company	RS	SGS	LGS	LVS	Factor
4								
250	391 - Office Furniture and Equipment		450,550					DISPLT
251	- Demand	Plant Dist_D	153,772	95,555	16,927	15,071	26,219	34%
252	- Customer	Plant Dist_C	296,778	261,200	23,639	8,642	3,296	66%
253	- Commodity	-	-	-	-	-	-	0%
254	Total		450,550	356,755	40,567	23,713	29,515	
255								
256	391.3 - Data Processing Software		296,509					DISPLT
257	- Demand	Plant Dist_D	101,198	62,885	11,140	9,918	17,255	34%
258	- Customer	Plant Dist_C	195,311	171,897	15,557	5,688	2,169	66%
259	- Commodity	-	-	-	-	-	-	0%
260	Total		296,509	234,782	26,697	15,606	19,424	
261								
262	392.1 - Transp. Equip. Cars & Small Trucks		750,324					DISPLT
263	- Demand	Plant Dist_D	256,085	159,132	28,190	25,099	43,664	34%
264	- Customer	Plant Dist_C	494,239	434,990	39,368	14,392	5,489	66%
265	- Commodity	-	-	-	-	-	-	0%
266	Total		750,324	594,122	67,558	39,491	49,152	
267								
268	392.2 - Transp. Equip. Heavy Trucks		1,232,714					DISPLT
269	- Demand	Plant Dist_D	420,724	261,440	46,314	41,235	71,735	34%
270	- Customer	Plant Dist_C	811,990	714,649	64,678	23,645	9,018	66%
271	- Commodity	-	-	-	-	-	-	0%
272	Total		1,232,714	976,089	110,992	64,881	80,753	
273								
274	393 - Stores Equipment		23,722					DISPLT
275	- Demand	Plant Dist_D	8,096	5,031	891	794	1,380	34%
276	- Customer	Plant Dist_C	15,626	13,753	1,245	455	174	66%
277	- Commodity	-	-	-	-	-	-	0%
278	Total		23,722	18,784	2,136	1,249	1,554	
279								
280	394 - Tools		470,572					DISPLT
281	- Demand	Plant Dist_D	160,606	99,801	17,680	15,741	27,384	34%
282	- Customer	Plant Dist_C	309,966	272,808	24,690	9,026	3,442	66%
283	- Commodity	-	-	-	-	-	-	0%
284	Total		470,572	372,609	42,370	24,767	30,826	
285								

Missouri Gas Energy  
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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of Depreciation and	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3	Amortization Expenses	Factor	Company	RS	SGS	LGS	LVS	Factor
4								
286	395 - Laboratory Equipment		-					
287	- Demand		-					
288	- Customer		-					
289	- Commodity		-					
290	Total		-	-	-	-	-	
291								
292	396 - Power operated equip		306,334					DISPLT
293	- Demand	Plant Dist_D	104,551	64,969	11,509	10,247	17,827	34%
294	- Customer	Plant Dist_C	201,783	177,593	16,073	5,876	2,241	66%
295	- Commodity	-	-	-	-	-	-	0%
296	Total		306,334	242,562	27,582	16,123	20,067	
297								
298	397.1 - Communications equip - AMR		2,148,453					CUS
299	- Demand	-	-	-	-	-	-	0%
300	- Customer	C8_Nonlvcs	2,148,453	2,007,469	127,001	13,983	-	100%
301	- Commodity	-	-	-	-	-	-	0%
302	Total		2,148,453	2,007,469	127,001	13,983	-	
303								
304	397.0 - Communications equip		413,924					DISPLT
305	- Demand	Plant Dist_D	141,272	87,787	15,551	13,846	24,088	34%
306	- Customer	Plant Dist_C	272,652	239,967	21,718	7,940	3,028	66%
307	- Commodity	-	-	-	-	-	-	0%
308	Total		413,924	327,754	37,269	21,786	27,115	
309								
310	398 - Misc General Equipment		34,830					DISPLT
311	- Demand	Plant Dist_D	11,887	7,387	1,309	1,165	2,027	34%
312	- Customer	Plant Dist_C	22,943	20,192	1,827	668	255	66%
313	- Commodity	-	-	-	-	-	-	0%
314	Total		34,830	27,579	3,136	1,833	2,282	
315								

Missouri Gas Energy  
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	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of Depreciation and	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3	Amortization Expenses	Factor	Company	RS	SGS	LGS	LVS	Factor
4								
316	Corporate		-					
317	- Demand		-					
318	- Customer		-					
319	- Commodity		-					
320	Total		-	-	-	-	-	
321								
322	Total General Plant							
323	- Demand		1,364,577	847,955	150,214	133,742	232,667	
324	- Customer		4,782,064	4,325,363	336,778	90,675	29,248	
325	- Commodity		-	-	-	-	-	
326	Total		6,146,641	5,173,318	486,992	224,417	261,915	
327								
328	Amortization							
329	303 - Misc. Intangible Plant		77,393					NINTPLT
330	- Demand	D2_Demand	25,588	15,900	2,817	2,508	4,363	33%
331	- Customer	C1_customers	51,805	48,368	3,060	337	41	67%
332	- Commodity	-	-	-	-	-	-	0%
333	Total		77,393	64,268	5,877	2,845	4,404	
334								
335	375 - Structures and improvements		4,168					DIS376-379
336	- Demand	Plant_376-379_D	2,743	1,705	302	269	468	66%
337	- Customer	Plant_376-379_C	1,425	1,330	84	9	1	34%
338	- Commodity	-	-	-	-	-	-	0%
339	Total		4,168	3,035	386	278	469	
340								
341	391.5 - Enterprise Software-EIMS		4,745,141					DISPLT
342	- Demand	Plant Dist_D	3,064,631	1,904,376	337,357	300,364	522,534	65%
343	- Customer	Plant Dist_C	1,680,510	1,479,051	133,859	48,937	18,663	35%
344	- Commodity	-	-	-	-	-	-	0%
345	Total		4,745,141	3,383,428	471,215	349,301	541,197	
346								
347	Autonomy eTalk-Contact Ctr		16,457					NINTPLT
348	- Demand	D2_Demand	5,441	3,381	599	533	928	33%
349	- Customer	C1_customers	11,016	10,285	651	72	9	67%
350	- Commodity	-	-	-	-	-	-	0%
351	Total		16,457	13,666	1,250	605	936	
352								



Missouri Gas Energy  
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12 Months Ending December 31, 2016

	A	B	C	D	E	F	G	H
1	<b>Missouri Gas Energy</b>							
2	<b>Allocation of Depreciation and</b>	<b>Allocation</b>	<b>Total</b>	<b>Residential</b>	<b>Small</b>	<b>Large</b>	<b>Large</b>	<b>Classification</b>
3	<b>Amortization Expenses</b>	<b>Factor</b>	<b>Company</b>	<b>RS</b>	<b>General Srv</b>	<b>General Srv</b>	<b>Volume Srv</b>	<b>Factor</b>
4					<b>SGS</b>	<b>LGS</b>	<b>LVS</b>	
353	Mainframe Software Dev		264,438					NINTPLT
354	- Demand	D2_Demand	87,429	54,329	9,624	8,569	14,907	33%
355	- Customer	C1_customers	177,009	165,263	10,455	1,151	140	67%
356	- Commodity		-	-	-	-	-	0%
357	Total		264,438	219,592	20,079	9,720	15,046	
358								
359	TOA Work Force Automation		167,562					NINTPLT
360	- Demand	D2_Demand	55,400	34,426	6,098	5,430	9,446	33%
361	- Customer	C1_customers	112,163	104,720	6,625	729	88	67%
362	- Commodity		-	-	-	-	-	0%
363	Total		167,562	139,145	12,723	6,159	9,534	
364								
365	TOPO GIS Mapping		144,033					NINTPLT
366	- Demand	D2_Demand	47,620	29,591	5,242	4,667	8,119	33%
367	- Customer	C1_customers	96,413	90,015	5,695	627	76	67%
368	- Commodity		-	-	-	-	-	0%
369	Total		144,033	119,606	10,937	5,294	8,195	
370								
371	Red Tag Program		-					TOTPLT
372	- Demand	Plant_TT_D	-	-	-	-	-	33%
373	- Customer	Plant_TT_C	-	-	-	-	-	67%
374	- Commodity		-	-	-	-	-	0%
375	Total		-	-	-	-	-	
376								
377	Low Income Energy Affordability		-					TOTPLT
378	- Demand	Plant_TT_D	-	-	-	-	-	33%
379	- Customer	Plant_TT_C	-	-	-	-	-	67%
380	- Commodity		-	-	-	-	-	0%
381	Total		-	-	-	-	-	
382								
383	Energy Efficiency Program		-					TOTPLT
384	- Demand	Plant_TT_D	-	-	-	-	-	33%
385	- Customer	Plant_TT_C	-	-	-	-	-	67%
386	- Commodity		-	-	-	-	-	0%
387	Total		-	-	-	-	-	
388								

Missouri Gas Energy  
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12 Months Ending December 31, 2016

	A	B	C	D	E	F	G	H
1	Missouri Gas Energy				Small	Large	Large	
2	Allocation of Depreciation and	Allocation	Total	Residential	General Srv	General Srv	Volume Srv	Classification
3	Amortization Expenses	Factor	Company	RS	SGS	LGS	LVS	Factor
4								
389	Less: Test Year Amortization		-					TOTPLT
390	- Demand	Plant_TT_D	-	-	-	-	-	33%
391	- Customer	Plant_TT_C	-	-	-	-	-	67%
392	- Commodity	-	-	-	-	-	-	0%
393	Total		-	-	-	-	-	
394								
395	Total Amortization		5,419,192					
396	- Demand		3,288,851	2,043,708	362,039	322,339	560,765	
397	- Customer		2,130,341	1,899,032	160,429	51,863	19,018	
398	- Commodity		-	-	-	-	-	
399	Total		5,419,192	3,942,740	522,468	374,202	579,782	
400								
401	Less Depreciation Charged to Clearing		(729,421)					NINTPLT
402	- Demand	Plant Nonint_D	(241,162)	(149,859)	(26,547)	(23,636)	(41,119)	33%
403	- Customer	Plant Nonint_C	(488,259)	(430,965)	(38,423)	(13,702)	(5,169)	67%
404	- Commodity		-	-	-	-	-	0%
405	Total		(729,421)	(580,824)	(64,970)	(37,338)	(46,288)	
406								
407	Total Depreciation and Amortization							
408	- Demand		11,605,532	7,211,734	1,277,545	1,137,455	1,978,798	
409	- Customer		25,047,974	22,049,771	1,996,661	724,111	277,430	
410	- Commodity		-	-	-	-	-	
411	Total		36,653,506	29,261,506	3,274,206	1,861,566	2,256,228	

Missouri Gas Energy  
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	A	B	C	D	E	F	G
1	Missouri Gas Energy						
2	Allocation of Income Taxes	Allocation	Total	Residential	Small	Large	Large
3		Factor	Company	RS	General Srv	General Srv	Volume Srv
4					SGS	LGS	LVS
5	Income Tax Calculation						
6	Operating Revenues		199,714,711	156,916,485	15,096,494	13,248,104	14,453,629
7							
8	<b>Operating Expenses</b>						
9	O&M Expenses		106,327,800	86,584,109	9,563,029	4,454,874	5,725,789
10	Depreciation & Amortization		36,653,506	29,261,506	3,274,206	1,861,566	2,256,228
11	Taxes Other than Income		23,312,602	18,618,044	2,079,094	1,165,877	1,449,587
12	Interest on Customer Deposits	C14_Intcus	226,207	172,506	47,801	5,263	638
13	Total Expenses excl. Income Taxes		166,520,116	134,636,164	14,964,129	7,487,580	9,432,242
14							
15	Net Income before Taxes & Interest		33,194,596	22,280,320	132,364	5,760,523	5,021,387
16							
17	Less:						
18	Flow-Through Adjustments	Rate Base_Total	10,883,774	8,489,235	999,555	620,552	774,432
19	Interest Expense	Rate Base_Total	14,106,850	11,003,202	1,295,559	804,319	1,003,770
20							
21	Net Income before Taxes		8,203,971	2,787,884	(2,162,750)	4,335,653	3,243,185
22							
23	State Taxable Income		8,203,971	2,787,884	(2,162,750)	4,335,653	3,243,185
24	Kansas City Income Tax	0.16%	13,512	4,592	(3,562)	7,141	5,342
25							
26	State Taxable Income		8,203,971	2,787,884	(2,162,750)	4,335,653	3,243,185
27	Missouri State Income Tax	5.19%	425,868	144,719	(112,268)	225,064	168,354
28							
29	Federal Taxable Income		8,203,971	2,787,884	(2,162,750)	4,335,653	3,243,185
30	Federal Income Tax	33.03%	2,710,018	920,922	(714,421)	1,432,196	1,071,321
31							
32	Total Income Tax		3,149,398	1,070,232	(830,252)	1,664,401	1,245,017
33							
34	Kansas City Income Tax		13,512	4,592	(3,562)	7,141	5,342
35	Missouri State Income Tax		425,868	144,719	(112,268)	225,064	168,354
36	Federal Income Tax		2,710,018	920,922	(714,421)	1,432,196	1,071,321
37	Total Income Tax		3,149,398	1,070,232	(830,252)	1,664,401	1,245,017
38							
39	Actual Income Taxes		3,149,398	1,070,232	(830,252)	1,664,401	1,245,017

Missouri Gas Energy  
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	A	B	C	D	E	F	G
1	<b>Missouri Gas Energy</b>				Small	Large	Large
2	<b>Summary of Allocators</b>		Total	Residential	General Srv	General Srv	Volume Srv
3		Description	Company	RS	SGS	LGS	LVS
4							
5	<b>External Allocators</b>						
6							
7	C1_customers		100.00%	93.36%	5.91%	0.65%	0.08%
8	C2_depcus		100.00%	66.98%	29.39%	3.24%	0.39%
9	C3_meters		100.00%	68.04%	18.42%	8.61%	4.93%
10	C4_Metincus		100.00%	73.67%	14.04%	9.50%	2.80%
11	C5_Regcus		100.00%	70.15%	8.76%	11.35%	9.73%
12	C6_services		100.00%	91.64%	6.51%	1.60%	0.26%
13	C7_Metregcus		100.00%	68.49%	16.36%	9.20%	5.95%
14	C8_Nonlvcus		100.00%	93.44%	5.91%	0.65%	0.00%
15	C9_Residcus		100.00%	100.00%	0.00%	0.00%	0.00%
16	C10_lv cus		100.00%	0.00%	0.00%	0.00%	100.00%
17	C11_903cus		100.00%	92.23%	6.92%	0.78%	0.07%
18	C12_904cus		100.00%	86.28%	12.23%	1.48%	0.00%
19	C13_912cus		100.00%	54.69%	40.79%	4.49%	0.03%
20	C14_intcus		100.00%	76.26%	21.13%	2.33%	0.28%
21	D1_sales		100.00%	47.96%	7.37%	9.74%	34.94%
22	D2_Demand		100.00%	62.14%	11.01%	9.80%	17.05%
23	D3_totalrevenues		100.00%	78.57%	7.56%	6.63%	7.24%
24	Plant GasInvDem		100.00%	69.37%	11.02%	10.86%	8.75%
25							
26	<b>Internal Allocators</b>						
27							
28	Plant_Total_D		100.00%	62.14%	11.01%	9.80%	17.05%
29	Plant_Total_C		100.00%	88.27%	7.87%	2.81%	1.06%
30							
31	Plant_376-379_D		100.00%	62.14%	11.01%	9.80%	17.05%
32	Plant_376-379_C		100.00%	93.36%	5.91%	0.65%	0.08%
33							
34	Plant_Gen_D		100.00%	62.14%	11.01%	9.80%	17.05%
35	Plant_Gen_C		100.00%	89.87%	7.26%	2.14%	0.73%
36							
37	Plant_TT_D		100.00%	62.14%	11.01%	9.80%	17.05%
38	Plant_TT_C		100.00%	88.27%	7.87%	2.81%	1.06%
39							
40	Plant Dist_D		100.00%	62.14%	11.01%	9.80%	17.05%
41	Plant Dist_C		100.00%	88.01%	7.97%	2.91%	1.11%
42							
43	Plant Nonint_D		100.00%	62.14%	11.01%	9.80%	17.05%
44	Plant Nonint_C		100.00%	88.27%	7.87%	2.81%	1.06%
45							

Missouri Gas Energy  
Cost of Service Study  
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	A	B	C	D	E	F	G
1	Missouri Gas Energy				Small	Large	Large
2	Summary of Allocators		Total	Residential	General Srv	General Srv	Volume Srv
3		Description	Company	RS	SGS	LGS	LVS
4							
46	Plant_MainsSrv_D		100.00%	77.65%	8.64%	5.49%	8.22%
47	Plant_MainsSrv_C		100.00%	93.36%	5.91%	0.65%	0.08%
48							
49	Rate Base_Total		100.00%	78.00%	9.18%	5.70%	7.12%
50							
51	OPEXPDEM		100.00%	64.21%	10.69%	9.23%	15.87%
52	OPEXPCUS		100.00%	88.01%	8.36%	2.28%	1.34%
53	OPEXPCOM		100.00%	47.96%	7.37%	9.74%	34.94%
54							
55	EXP_871-880_D		100.00%	73.55%	9.27%	6.63%	10.56%
56	EXP_871-880_C		100.00%	81.30%	10.96%	5.13%	2.62%
57	EXP_871-880_E		100.00%	47.96%	7.37%	9.74%	34.94%
58							
59	EXP_871-879_D		100.00%	73.55%	9.27%	6.63%	10.56%
60	EXP_871-879_C		100.00%	81.30%	10.96%	5.13%	2.62%
61	EXP_871-879_E		100.00%	47.96%	7.37%	9.74%	34.94%
62							
63	EXP_887-893_D		100.00%	62.14%	11.01%	9.80%	17.05%
64	EXP_887-893_C		100.00%	89.32%	6.72%	1.48%	2.48%
65	EXP_887-893_E		100.00%	47.96%	7.37%	9.74%	34.94%
66							
67	EXP_902-904_C		100.00%	90.85%	8.16%	0.95%	0.05%
68							
69	EXP_912-913_C		100.00%	54.69%	40.79%	4.49%	0.03%
70							
71	EXP_Non-A&G_D		100.00%	63.63%	10.78%	9.39%	16.20%
72	EXP_Non-A&G_C		100.00%	88.31%	8.29%	2.30%	1.10%
73	EXP_Non-A&G_E		100.00%	47.96%	7.37%	9.74%	34.94%
74							
75	EXP_ITTotal_D		100.00%	63.62%	10.78%	9.39%	16.21%
76	EXP_ITTotal_C		100.00%	88.02%	8.27%	2.43%	1.28%
77	EXP_ITTotal_E		100.00%	47.96%	7.37%	9.74%	34.94%
78							

Missouri Gas Energy  
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	A	B	C	D	E	F	G
1	Missouri Gas Energy				Small	Large	Large
2	Summary of Allocators		Total	Residential	General Srv	General Srv	Volume Srv
3		Description	Company	RS	SGS	LGS	LVS
4							
79	Derivation External Allocators						
80	C1_customers_INPUT		501,755	468,460	29,637	3,263	395
81			100.00%	93.36%	5.91%	0.65%	0.08%
82							
83	C2_depcus_INPUT		\$ (7,109,547)	\$ (4,762,253)	\$ (2,089,372)	\$ (230,043)	\$ (27,879)
84			100.00%	66.98%	29.39%	3.24%	0.39%
85							
86	C3_meters_INPUT		\$ 45,515,182	\$ 30,968,779	\$ 8,381,641	\$ 3,920,898	\$ 2,243,864
87			100.00%	68.04%	18.42%	8.61%	4.93%
88							
89	C4_Metincus_INPUT		\$ 122,008,849	\$ 89,883,847	\$ 17,125,633	\$ 11,586,857	\$ 3,412,511
90			100.00%	73.67%	14.04%	9.50%	2.80%
91							
92	C5_Regcus_INPUT		\$ 12,294,722	\$ 8,624,556	\$ 1,077,502	\$ 1,395,937	\$ 1,196,727
93			100.00%	70.15%	8.76%	11.35%	9.73%
94							
95	C6_services_INPUT		\$ 959,436,664	\$ 879,233,221	\$ 62,427,363	\$ 15,305,197	\$ 2,470,883
96			100.00%	91.64%	6.51%	1.60%	0.26%
97							
98	C7_Metregcus_INPUT		\$ 57,809,905	\$ 39,593,335	\$ 9,459,144	\$ 5,316,834	\$ 3,440,592
99			100.00%	68.49%	16.36%	9.20%	5.95%
100							
101	C8_Nonlvcus_INPUT		501,360	468,460	29,637	3,263	
102			100.00%	93.44%	5.91%	0.65%	0.00%
103							
104	C9_Residcus_INPUT		468,460	468,460			
105			100.00%	100.00%	0.00%	0.00%	0.00%
106							
107	C10_Lvcus_INPUT		395				395
108			100.00%	0.00%	0.00%	0.00%	100.00%
109							
110	C11_903cus_INPUT		12,561,118	11,585,112	869,265	98,428	8,314
111			100.00%	92.23%	6.92%	0.78%	0.07%
112							

Missouri Gas Energy  
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	A	B	C	D	E	F	G
1	Missouri Gas Energy				Small	Large	Large
2	Summary of Allocators		Total	Residential	General Srv	General Srv	Volume Srv
3		Description	Company	RS	SGS	LGS	LVS
4							
113	C12_904cus_INPUT		\$ 2,714,084	\$ 2,341,810	\$ 332,046	\$ 40,228	\$ -
114			100.00%	86.28%	12.23%	1.48%	0.00%
115							
116	C13_912cus_INPUT		\$ 1,025,445	\$ 560,801	\$ 418,298	\$ 46,055	\$ 290
117			100.00%	54.69%	40.79%	4.49%	0.03%
118							
119	C14_Intcus_INPUT		\$ 296,626	\$ 226,207	\$ 62,681	\$ 6,901	\$ 836
120			100.00%	76.26%	21.13%	2.33%	0.28%
121							
122	D1_sales_INPUT		763,483,865	366,148,361	56,239,220	74,357,619	266,738,665
123			100.00%	47.96%	7.37%	9.74%	34.94%
124							
125	D2_demand_INPUT		100.00%	62.14%	11.01%	9.80%	17.05%
126			100.00%	62.14%	11.01%	9.80%	17.05%
127							
128	D3_totalrevenues_INPUT		198,143,308	155,681,828	14,977,711	13,143,865	14,339,904
129			100.00%	78.57%	7.56%	6.63%	7.24%
130							
131	Plant GasInvDem		322,340,362	223,615,810	35,525,626	34,999,839	28,199,087
132			100.00%	69.37%	11.02%	10.86%	8.75%

Missouri Gas Energy  
Cost of Service Study  
12 Months Ending December 31, 2016

	A	B	C	D	E	F
1	<b>Missouri Gas Energy</b>					
2	<b>Summary of Classifiers</b>					
3	<b>Classifier Description</b>	<b>Classifier Code</b>	<b>Total</b>	<b>- Demand</b>	<b>- Customer</b>	<b>- Commodity</b>
4						
5	<b>Classifiers</b>					
6						
7	Customer Factor	CUS	100.00%	0.00%	100.00%	0.00%
8	Demand Factor	DEM	100.00%	100.00%	0.00%	0.00%
9	Commodity Factor	COM	100.00%	0.00%	0.00%	100.00%
10	Non-Intangible Plant Factor	NINTPLT	100.00%	33.06%	66.94%	0.00%
11	Accounts 376-379 Factor	DIS376-379	100.00%	65.82%	34.18%	0.00%
12	Distribution Mains Factor	DISMAIN	100.00%	64.58%	35.42%	0.00%
13	Distribution Plant Factor	DISPLT	100.00%	34.13%	65.87%	0.00%
14	General Plant Factor	GENPLT	100.00%	25.41%	74.59%	0.00%
15	Mains and Services Factor	MAINSVC	100.00%	37.63%	62.37%	0.00%
16	Total Plant in Service Factor	TOTPLT	100.00%	33.06%	66.94%	0.00%
17	Operating Expense (without TOTI) Factor	NONTOTOIPEXP	100.00%	28.33%	71.46%	0.21%
18	Accounts 871-879 Factor	EXP871-879	100.00%	27.88%	70.50%	1.62%
19	Accounts 887-893 Factor	DIS887-893	100.00%	58.31%	41.40%	0.29%
20	Non-A&G Op. Exp. (without TOTI) Factor	NONAGOPEXP	100.00%	28.91%	70.87%	0.21%
21	Mains Factor	PLT376MAINS	100.00%	64.58%	35.42%	0.00%
22	Accounts 871-880 Factor	EXP871-880	100.00%	27.88%	70.50%	1.62%
23						
24						
25	<b>Derivations</b>					
26						
27	Customer Factor	CUS		0.00%	100.00%	0.00%
28						
29	Demand Factor	DEM		100.00%	0.00%	0.00%
30						
31	Commodity Factor	COM		0.00%	0.00%	100.00%
32						
33	376 Distribution Mains		\$ 557,987,758	\$ 360,374,185	\$ 197,613,574	\$ -
34	Distribution Mains Factor	DISMAIN	100.00%	64.58%	35.42%	0.00%



**LACLEDE GAS COMPANY**  
**Mains Classifier**

Zero-Intercept Analyses	Customer -Related Portion of Distribution Mains	R <sup>2</sup>
Composition Variables Included in Single Regression	37.94%	0.90
Separate Regressions For Each Composition	41.84%	0.78 to 0.94
<b>Minimum System Study</b>		
Minimum-System with Original Cost	48.81% to 56.83%	
Minimum-System with Adjusted Handy-Whitman Cost	52.72% to 54.33%	
<b>Note: The following provides Account 376, Mains detail and data included in the study:</b>		
Pipe Installed	674,435,602	
Encapsulation (Leak Clamps), Cathodic Protection, Valves, Rectifiers, Crossings, Misc to be allocated	8,968,646	
Completed Construction Not Classified - CCNC	23,144,901	
	706,549,149	

Workpapers

Mains Footage and Handy Whitman Adj. Cost (2017 Study) - Single Regression for all Composition Variables

Size	Type	Qty.(Footage)	Handy-Whitman Adj. Cost	HW Adj. Cost per Foot	Ln(HW Adj. Cost (Foot))	Size	Steel Dummy	Plastic Dummy	Size Squared
3	Cast Iron	23,936	1,993,546	83.29	4.42	3	0	0	9
4	Cast Iron	1,025,526	111,759,550	109.00	4.69	4	0	0	16
6	Cast Iron	1,356,045	165,566,528	122.10	4.80	6	0	0	36
8	Cast Iron	41,735	7,969,694	190.96	5.25	8	0	0	64
10	Cast Iron	101,727	24,990,458	245.66	5.50	10	0	0	100
12	Cast Iron	508,887	123,508,746	242.70	5.49	12	0	0	144
16	Cast Iron	105,850	251,257,839	2,184.77	7.69	16	0	0	256
20	Cast Iron	38,550	20,300,750	526.61	6.27	20	0	0	400
24	Cast Iron	118,023	104,670,588	886.87	6.79	24	0	0	576
30	Cast Iron	31,636	63,957,427	2,021.67	7.61	30	0	0	900
2	Plastic	15,493,379	332,086,806	21.43	3.06	2	0	1	4
3	Plastic	746,815	28,820,069	39	3.65	3	0	1	9
4	Plastic	3,517,519	129,314,951	39	3.66	4	0	1	16
6	Plastic	917,266	59,679,871	65	4.18	6	0	1	36
8	Plastic	338,275	44,002,966	130	4.87	8	0	1	64
12	Plastic	63,706	11,818,501	186	5.22	12	0	1	144
1	Steel	51,110	2,253,266	44	3.79	1	1	0	1
2	Steel	13,144,015	498,976,103	38	3.64	2	1	0	4
3	Steel	48,743	3,007,625	62	4.12	3	1	0	9
4	Steel	2,684,573	169,179,664	63	4.14	4	1	0	16
5	Steel	16,549	1,593,191	96	4.57	5	1	0	25
6	Steel	2,443,277	241,263,979	99	4.59	6	1	0	36
8	Steel	2,339,240	270,172,943	115	4.75	8	1	0	64
10	Steel	120,526	25,956,860	215	5.37	10	1	0	100
12	Steel	553,647	121,176,256	219	5.39	12	1	0	144
13	Steel	669	280,929	420	6.04	13	1	0	169
14	Steel	119	28,405	239	5.48	14	1	0	196
16	Steel	385,456	104,108,592	270	5.60	16	1	0	256
18	Steel	5,088	1,205,690	237	5.47	18	1	0	324
20	Steel	309,724	102,690,885	332	5.80	20	1	0	400
22	Steel	23,199	22,219,569	958	6.86	22	1	0	484
24	Steel	97,926	71,712,272	732	6.60	24	1	0	576
26	Steel	26,742	19,257,788	720	6.58	26	1	0	676
30	Steel	77,137	32,561,120	422	6.05	30	1	0	900
<b>Grand Total</b>		<b>46,556,415</b>	<b>3,149,343,406</b>						

Note: Steel mains also include Copper

**REGRESSION ANALYSES**

**Composition Variables Zero-Intercept (2)**

**SUMMARY OUTPUT**

<i>Regression Statistics</i>	
Multiple R	0.948
R Square	0.898
Adjusted R Squa	0.884
Standard Error	0.392
Observations	34

**Dependant Variable = ln (Handy Whitman Adj. Cost/Foot)**  
**Independent Variables = Size, Steel Dummy, Plastic Dummy, Size-Sq**

**RESULTS:**  
 All Variables and Intercept Significant with R-sq at 0.90

**ANOVA**

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	39.316	9.829	63.903	0.000
Residual	29	4.461	0.154		
Total	33	43.776			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	3.864	0.220	17.544	0.000	3.414	4.314	3.414	4.314
Size	0.220	0.031	7.096	0.000	0.157	0.284	0.157	0.284
Steel Dummy	(0.543)	0.155	(3.511)	0.001	(0.860)	(0.227)	(0.860)	(0.227)
Plastic Dummy	(0.869)	0.213	(4.087)	0.000	(1.305)	(0.434)	(1.305)	(0.434)
Size Squared	(0.004)	0.001	(3.701)	0.001	(0.006)	(0.002)	(0.006)	(0.002)

**Zero-Intercept Analysis Results Based on Adj. HW Cost - Separate Regressions For Each Composition**

Zero-Inch System	Cost		
	Per Foot	Footage	Total Cost
Steel	27.68	22,327.740	618,052.488
Cast Iron	47.65	3,351.715	159,721.015
Plastic	19.98	20,876.960	417,019.221
<b>Total</b>			<b>1,194,792.724</b>
<b>As-Configured System</b>			<b>3,149,343,406</b>

Resulting Customer Percentage (or Zero-Inch System Cost/As-Configured System Cost) **37.94%**

**MISSOURI GAS ENERGY**  
**Mains Classifier**

Zero-Intercept Analyses	Customer -Related Portion of Distribution Mains		R <sup>2</sup>
Composition Variables Included in Single Regression	35.42%		0.93
Separate Regressions For Each Composition	30.49%		0.86 to 0.96
<b>Minimum System Study</b>			
Minimum-System with Original Cost	37.60%	to 46.45%	
Minimum-System with Adjusted Handy-Whitman Cost	41.81%	to 48.82%	
<b>Note: The following provides Account 376, Mains detail and data included in the study:</b>			
Pipe Installed	475,313,244		
Structural, pits, vaults, ground beds, recitifiers, encapsulation, anodes and cathodic protection, clamps, valves, supports & hydrotesting	51,464,522		
Completed Construction Not Classified - CCNC	31,209,992		
<b>TOTAL MGE Account 376 Mains @ 12-31-16</b>	<b>557,987,758</b>		

Workpapers

Mains Footage and Handy Whitman Adj. Cost (2017 Study)

Size	Type	Qty (Footage)	Handy-Whitman		HW Adj. Cost per Foot	Ln(HW Adj. Cost /Foot)	Size	Steel Dummy	Plastic Dummy	Size Squared
			Adj. Cost							
2	Cast Iron	(92)	(1,886)		20.50	3.02	2	0	0	4
3	Cast Iron	1,858	20,783		11.19	2.41	3	0	0	9
4	Cast Iron	489,861	8,717,935		17.80	2.88	4	0	0	16
6	Cast Iron	662,708	26,503,037		39.99	3.69	6	0	0	36
8	Cast Iron	158,246	9,412,951		59.48	4.09	8	0	0	64
10	Cast Iron	49,803	4,328,287		86.91	4.46	10	0	0	100
12	Cast Iron	156,836	15,491,439		98.77	4.59	12	0	0	144
16	Cast Iron	55,586	6,787,525		122.55	4.81	16	0	0	256
20	Cast Iron	6,044	979,842		162.12	5.09	20	0	0	400
24	Cast Iron	9,955	1,256,768		126.24	4.84	24	0	0	576
30	Cast Iron	215	121,974		567.32	6.34	30	0	0	900
1	Plastic	393,165	5,569,378		14.17	2.65	1	0	1	1
2	Plastic	11,967,507	146,505,591		12.24	2.50	2	0	1	4
3	Plastic	557,321	10,088,299		18.10	2.90	3	0	1	9
4	Plastic	6,020,442	161,634,579		26.85	3.29	4	0	1	16
6	Plastic	940,732	51,864,761		55.13	4.01	6	0	1	36
8	Plastic	88,354	7,670,142		86.81	4.46	8	0	1	64
10	Plastic	26,371	2,205,183		83.62	4.43	10	0	1	100
12	Plastic	15,745	3,089,781		196.24	5.28	12	0	1	144
16	Plastic	5,232	854,767		163.37	5.10	16	0	1	256
20	Plastic	17,243	3,112,586		180.51	5.20	20	0	1	400
1	Steel	420,115	5,873,063		13.98	2.64	1	1	0	1
2	Steel	9,352,469	183,007,459		19.57	2.97	2	1	0	4
3	Steel	2,452,886	64,420,623		26.26	3.27	3	1	0	9
4	Steel	5,664,707	198,596,640		35.06	3.56	4	1	0	16
5	Steel	38,637	758,771		19.64	2.98	5	1	0	25
6	Steel	2,721,059	148,703,728		54.65	4.00	6	1	0	36
7	Steel	1,228	75,151		61.18	4.11	7	1	0	49
8	Steel	1,505,206	112,789,227		74.95	4.32	8	1	0	64
10	Steel	362,621	30,702,887		84.67	4.44	10	1	0	100
12	Steel	934,669	108,543,198		116.13	4.75	12	1	0	144
16	Steel	326,294	53,870,256		165.10	5.11	16	1	0	256
18	Steel	9,933	2,642,293		266.01	5.58	18	1	0	324
20	Steel	220,088	61,918,228		281.33	5.64	20	1	0	400
24	Steel	131,608	62,947,044		478.29	6.17	24	1	0	576
26	Steel	28,433	7,487,126		263.33	5.57	26	1	0	676
30	Steel	48,368	22,604,734		467.35	6.15	30	1	0	900
<b>Grand Total</b>		<b>45,841,273</b>	<b>1,531,154,106</b>							

Note: Steel type mains also include Copper

**REGRESSION ANALYSES**

**Composition Variables Zero-Intercept (2)**

**SUMMARY OUTPUT**

<i>Regression Statistics</i>	
Multiple R	0.962
R Square	0.926
Adjusted R Squa	0.916
Standard Error	0.324
Observations	37

**Dependant Variable = In (Handy Whitman Adj. Cost/Foot)**  
**Independent Variables = Size, Steel Dummy, Plastic Dummy, Size-Sq**

**RESULTS:**

**ANOVA**

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	41.942	10.485	99.665	0.000
Residual	32	3.367	0.105		
Total	36	45.308			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	2.203	0.159	13.879	0.000	1.880	2.527	1.880	2.527
Size	0.237	0.024	10.055	0.000	0.189	0.286	0.189	0.286
Steel Dummy	0.300	0.127	2.364	0.024	0.042	0.559	0.042	0.559
Plastic Dummy	0.245	0.144	1.697	0.099	(0.049)	0.539	(0.049)	0.539
Size-Squared	(0.004)	0.001	(5.017)	0.000	(0.006)	(0.002)	(0.006)	(0.002)

**Zero-Intercept Analysis Results Based on Adj. HW Cost -  
Separate Regressions For Each Composition**

Zero-Inch System	Cost		
	Per Foot	Footage	Total Cost
Steel	12.23	24,218,321	296,130,508
Cast Iron	9.05	1,590,820	14,403,261
Plastic	11.57	20,032,132	231,730,520
<b>Total</b>			<b>542,264,289</b>

As-Configured System 1,531,154.106

Resulting Customer Percentage (or Zero-Inch System Cost/As-Configured System Cost) 35.42%

**LACLEDE GAS COMPANY**

**Demand Allocator**

Design Day Methodology

Laclede Gas Company		Total	Residential	Small	Large	Large	Interruptible	Vehicular	
Development of Demand Allocator		Company	RS	General Srv	General Srv	Volume	IN	Fuel	Transportation
				SGS	LGS	LV		VF	Transp.
R-Square			99.8%	98.2%	98.2%	87.8%		15.3%	86.6%
Heat use per DD (coefficient)			0.149	0.372	5.098	11.794			60.277
Heat use at Design Day DD	73		10.885	27.190	372.153	860.942			4,400.204
Base use at Design Day			0.458	1.471	36.566	278.679			2,885.103
Total use at Design Day			11.343	28.661	408.719	1,139.620		981.315	7,285.307
Design Day Customers		650,381	609,082	37,368	3,711	71		8	141
Design Day Use		10,612,385	6,908,621	1,071,016	1,516,756	80,913		7,851	1,027,228
Design Day Use (%)		100.00%	65.10%	10.09%	14.29%	0.76%		0.07%	9.68%

Workpapers

Laclede Gas Company 12/31/2016												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Actual Sales (therms)</b>												
RS	86,623,712	84,351,055	59,445,895	35,821,240	16,268,127	12,190,845	8,689,239	7,885,261	9,386,751	10,054,876	21,802,148	69,503,892
SGS	13,305,043	14,444,718	10,560,282	5,530,397	2,832,746	2,100,625	1,663,458	1,572,883	1,852,006	1,791,279	3,094,825	9,697,313
LGS	19,325,734	21,020,131	16,835,504	10,336,262	6,413,948	5,162,939	4,148,669	3,961,920	4,378,318	4,993,517	6,582,369	15,397,318
LV	975,003	1,224,984	1,139,141	872,402	726,307	650,389	589,421	554,472	645,128	615,595	685,803	1,380,926
IN	559,905	565,005	526,554	584,277	501,259	515,232	718,967	698,136	628,932	603,880	671,351	534,294
VF	243,366	239,610	232,822	260,361	258,073	260,765	285,567	257,758	296,873	297,118	275,598	285,287
Transp.	17,895,789	21,406,538	19,580,964	16,596,511	14,677,779	13,543,144	12,360,949	12,372,461	12,998,449	12,504,024	13,821,138	15,544,305
<b>Total</b>	<b>138,928,552</b>	<b>143,252,041</b>	<b>108,321,162</b>	<b>70,001,450</b>	<b>41,678,239</b>	<b>34,423,939</b>	<b>28,456,270</b>	<b>27,302,891</b>	<b>30,186,457</b>	<b>30,860,289</b>	<b>46,933,232</b>	<b>112,343,335</b>
<b>Actual Customers</b>												
RS	609,082	612,486	612,447	608,445	605,486	601,825	596,641	594,726	609,874	597,381	614,133	605,094
SGS	37,368	37,744	37,817	36,882	36,876	36,544	36,298	36,087	37,587	36,209	38,133	36,959
LGS	3,711	3,720	3,705	4,280	3,670	3,664	3,653	3,643	3,657	3,631	3,623	3,687
LV	71	67	71	67	68	68	68	67	70	67	68	66
IN	20	20	20	20	20	20	23	22	21	21	21	21
VF	8	8	8	8	8	8	8	8	8	8	8	7
Transp.	141	142	143	142	141	142	141	141	141	143	141	142
<b>Total</b>	<b>650,401</b>	<b>654,187</b>	<b>654,211</b>	<b>649,844</b>	<b>646,269</b>	<b>642,271</b>	<b>636,832</b>	<b>634,674</b>	<b>651,358</b>	<b>637,460</b>	<b>656,127</b>	<b>645,976</b>
<b>Use per customer</b>												
RS	142	138	97	59	27	20	15	13	15	17	36	115
SGS	356	383	279	150	77	57	46	44	49	49	81	262
LGS	5,208	5,651	4,544	2,415	1,748	1,409	1,136	1,088	1,197	1,375	1,817	4,176
LV	13,732	18,283	16,044	13,021	10,681	9,565	8,668	8,276	9,216	9,188	10,085	20,923
IN	27,995	28,250	26,328	29,214	25,063	25,762	31,259	31,733	29,949	28,756	31,969	25,443
VF	30,421	29,951	29,103	32,545	32,259	32,596	35,696	32,220	37,109	37,140	34,450	40,755
Transp.	126,920	150,750	136,930	116,877	104,098	95,374	87,666	87,748	92,188	87,441	98,022	109,467
<b>Base Use per customer</b>												
RS	14											
SGS	45											
LGS	1,112											
LV	8,472											
IN	30,841											
VF	33,958											
Transp.	87,707											
<b>Heat Use per customer</b>												
RS	128	124	83	45	13	6	1	0	1	3	22	101
SGS	311	338	235	105	32	13	1	0	5	5	36	218
LGS	4,096	4,539	3,432	1,303	636	297	24	0	86	264	705	3,064
LV	5,261	9,812	7,572	4,549	2,209	1,093	196	0	744	716	1,614	12,451
IN	0	0	0	0	0	0	418	892	0	0	1,128	0
VF	0	0	0	0	0	0	1,738	0	3,151	3,182	492	6,797
Transp.	39,213	63,043	49,223	29,170	16,391	7,667	0	41	4,480	0	10,315	21,760
<b>Actual Billing Degree Days</b>	<b>856</b>	<b>788</b>	<b>564</b>	<b>323</b>	<b>107</b>	<b>37</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>31</b>	<b>179</b>	<b>703</b>



SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.998957038								
R Square	0.997915164								
Adjusted R Square	-1.090909091								
Standard Error	3.127398559								
Observations	1								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	12	51496.87648	4291.406373	5265.194568	#NUM!				
Residual	11	107.5868992	9.780621744						
Total	23	51604.46332							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	
Intercept							2.4596E+174	2.4596E+174	
X Variable 1							0	0	
X Variable 2							4.673E-307	4.673E-307	
X Variable 3							5.7856E-307	5.7856E-307	
X Variable 4							0	0	
X Variable 5							-1.8611E-306	1.8611E-306	
X Variable 6							-8.9971E-110	8.9971E-110	
X Variable 7							-1.5524E-107	2.0565E-107	
X Variable 8							1.3587E-232	1.3587E-232	
X Variable 9							0	0	
X Variable 10							0	0	
X Variable 11	0	#N/A	0	1	-1.8366E-307	1.8366E-307	-1.8366E-307	1.8366E-307	
X Variable 12	0.149110629	0.002054951	72.56166046	4.23317E-16	0.144587713	0.153633545	0.144587713	0.153633545	

SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.991011247								
R Square	0.982103291								
Adjusted R Square	-1.090909091								
Standard Error	23.07196264								
Observations	1								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	12	321325.9201	26777.16001	603.6381512	#NUM!				
Residual	11	5855.470059	532.3154599						
Total	23	327181.3901							
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	
Intercept							0	0	
X Variable 1							0	-2.3375E-308	
X Variable 2							0	0	
X Variable 3							-0.819800452	0.819800452	
X Variable 4							0	0	
X Variable 5							0	0	
X Variable 6							-2817.261005	2817.261005	
X Variable 7							-2817.261005	2817.261005	
X Variable 8							-856.8610424	2116.861042	
X Variable 9							-1.0285E-306	1.0285E-306	
X Variable 10							0	-2.3305E-308	
X Variable 11	0	#N/A	0	1	0	0	0	0	
X Variable 12	0.372469777	0.015160122	24.56904864	5.82041E-11	0.339102573	0.405836981	0.339102573	0.405836981	

EGS								
SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.990792428							
R Square	0.981669636							
Adjusted R Square	-1.090909091							
Standard Error	319.658726							
Observations	1							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	12	60194954.4	5016246.2	589.0972038	#NUM!			
Residual	11	1123998.712	102181.7011					
Total	23	61318953.11						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept							-5.3453E-308	1.4246E-307
X Variable 1							5.1853E-270	-1.3827E-269
X Variable 2							-1.5707E-306	1.7598E-306
X Variable 3							-5.345E-308	1.4246E-307
X Variable 4							-2.8859E+214	2.8859E+214
X Variable 5							-5.8467E+276	5.8467E+276
X Variable 6							1.3796E-306	1.3796E-306
X Variable 7							9.3461E-307	9.3461E-307
X Variable 8							2.50401E-81	2.50401E-81
X Variable 9							7.7397E+228	7.7397E+228
X Variable 10							9.1808E-270	-1.3815E-269
X Variable 11	0	#N/A	0	1	0	0	0	0
X Variable 12	5.097980899	0.210041512	24.27132472	6.64084E-11	4.635685088	5.560278711	4.635685088	5.560278711
LV								
SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.937177848							
R Square	0.878302319							
Adjusted R Square	-1.090909091							
Standard Error	2014.44544							
Observations	1							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	12	322155410.4	26846284.2	79.3879177	#NUM!			
Residual	11	44637894.74	4057990.431					
Total	23	366793305.1						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept							7.4906E-101	7.4906E-101
X Variable 1							-4.3172E-270	-4.3172E-270
X Variable 2							-1.9591E-306	1.9591E-306
X Variable 3							-2.4488E-306	2.4488E-306
X Variable 4							0	0
X Variable 5							-1.0155E-306	2.7067E-306
X Variable 6							9.4566E-308	9.4566E-308
X Variable 7							1.3351E-306	1.3351E-306
X Variable 8							1.8835E-69	1.8835E-69
X Variable 9							1.2906E-306	1.2906E-306
X Variable 10							-7.957E-251	-7.957E-251
X Variable 11	0	#N/A	0	1	-3.9182E-306	3.9182E-306	-3.9182E-306	3.9182E-306
X Variable 12	11.79372166	1.323651537	8.9098977	2.31254E-06	8.880384265	14.70705905	8.880384265	14.70705905

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.391289385							
R Square	0.153107382							
Adjusted R Square	-1.090909091							
Standard Error	2313.583693							
Observations	1							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	12	10644638.05	887053.171	1.988659686	#NUM!			
Residual	11	58879364.53	5352669.503					
Total	23	69524002.58						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept							0	0
X Variable 1							0	0
X Variable 2	TRUE	TRUE	71402128614	5.1077E-115	1.7802E-306	1.7802E-306	1.7802E-306	1.7802E-306
X Variable 3							1.8692E-306	1.8692E-306
X Variable 4							-2.057E-306	2.057E-306
X Variable 5							-8.1966E-307	2.5108E-306
X Variable 6							0	0
X Variable 7							0	0
X Variable 8							6.379E-203	6.379E-203
X Variable 9							0	0
X Variable 10							-4.2414E-270	-4.2414E-270
X Variable 11	0	#N/A	0	1	0	0	0	0
X Variable 12	2.143796751	1.52020926	1.410198456	0.186126121	-1.20216127	5.489754772	-1.20216127	5.489754772
SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.930784171							
R Square	0.866359174							
Adjusted R Square	-1.090909091							
Standard Error	10863.15705							
Observations	1							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	12	8415184230	701265352.5	71.51017658	#NUM!			
Residual	11	1298089992	118008181.1					
Total	23	9713274222						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept							65535	65535
X Variable 1							5.0847E-270	-1.3606E-269
X Variable 2							65535	65535
X Variable 3							-1.8165E-99	4.8173E-99
X Variable 4							1.5004E-99	1.5004E-99
X Variable 5							1.5004E-99	1.5004E-99
X Variable 6							-1.8631E-45	1.8631E-45
X Variable 7							2.2121E-62	2.2121E-62
X Variable 8							2.21223E-62	2.21223E-62
X Variable 9							65535	65535
X Variable 10							5.0802E-270	-1.3595E-269
X Variable 11	0	#N/A	0	1	-1.8366E-307	1.8366E-307	-1.8366E-307	1.8366E-307
X Variable 12	60.27677015	7.137961764	8.444535309	3.892E-06	44.56622223	75.98731806	44.56622223	75.98731806

## MISSOURI GAS ENERGY

### Demand Allocator

#### Design Day Methodology

Missouri Gas Energy Development of Demand Allocator	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume Srv LVS
R-Square		99.1%	97.7%	96.1%	82.1%
Heat use per DD (coefficient)		0.128	0.304	2.783	24.223
Heat use at Design Day DD	78	9.985	23.733	217.082	1,889.412
Base use at Design Day		0.420	0.346	22.777	1,580.717
Total use at Design Day		10.404	24.079	239.859	3,470.129
Design Day Customers	513,973	474,054	36,286	3,243	390
Design Day Use	7,937,318	4,932,288	873,745	777,935	1,353,350
Design Day Use (%)	100.00%	62.14%	11.01%	9.80%	17.05%

Workpapers

From MGE Test Period Data												
Actual Use	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rate Class												
<b>Actual Sales (therms) After Class Changes</b>												
RS	71,604,238	63,841,452	39,393,730	25,294,385	12,205,127	8,606,340	6,110,091	5,570,736	6,676,076	7,346,461	14,287,731	50,336,262
SGS	11,831,904	11,020,856	6,578,928	3,742,658	1,867,413	1,396,002	1,112,749	1,034,069	(96,659)	977,231	(2,484,644)	6,991,056
LGS	10,814,179	13,375,427	7,317,089	5,437,259	3,400,958	2,761,575	2,215,650	2,214,447	2,395,088	2,646,026	3,555,595	8,482,014
LVS	26,420,382	32,640,790	25,759,790	23,169,838	21,065,419	18,922,980	18,438,813	19,069,347	20,423,106	18,058,584	20,190,672	22,578,943
<b>Total</b>	<b>120,670,703</b>	<b>120,878,526</b>	<b>79,049,537</b>	<b>57,644,139</b>	<b>38,538,917</b>	<b>31,686,898</b>	<b>27,877,302</b>	<b>27,888,598</b>	<b>29,397,611</b>	<b>29,028,303</b>	<b>35,549,354</b>	<b>88,388,275</b>
<b>Actual Customers After Class Changes</b>												
RS	474,054	473,363	473,111	470,648	466,676	463,555	459,418	455,535	474,466	461,938	475,622	473,129
SGS	36,286	36,449	36,846	35,872	35,200	34,281	33,364	33,346	9,706	27,172	9,797	27,323
LGS	3,243	3,407	3,358	3,334	3,298	3,245	3,201	3,197	2,931	3,050	3,602	3,290
LVS	390	389	405	390	399	396	398	383	399	401	396	400
<b>Total</b>	<b>513,973</b>	<b>513,607</b>	<b>513,720</b>	<b>510,245</b>	<b>505,572</b>	<b>501,477</b>	<b>496,380</b>	<b>492,462</b>	<b>487,503</b>	<b>492,561</b>	<b>489,417</b>	<b>504,143</b>
<b>Use per customer</b>												
RS	151	135	83	54	26	19	13	12	14	16	30	106
SGS	326	302	179	104	53	41	33	31	-10	36	-254	256
LGS	3,334	3,926	2,179	1,631	1,031	851	692	693	817	867	987	1,578
LVS	67,745	83,909	63,604	59,410	52,845	47,813	46,375	49,732	51,151	45,034	51,042	56,433
<b>Basic Use per customer</b>												
RS	13											
SGS	11											
LGS	692											
LVS	48,054											
<b>Heat Use per customer</b>												
RS	138	122	71	41	13	6	1	0	1	3	17	94
SGS	316	292	168	94	43	30	23	20	0	25	0	245
LGS	2,642	3,234	1,486	938	339	159	0	0	125	175	295	1,885
LVS	19,691	35,856	15,551	11,356	4,791	0	0	1,678	3,097	0	2,988	8,379
<b>Actual Billing Degree Days</b>	<b>1,048</b>	<b>871</b>	<b>584</b>	<b>380</b>	<b>176</b>	<b>49</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>85</b>	<b>203</b>	<b>773</b>

MS								
SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.995429461							
R Square	0.990879813							
Adjusted R Square	-1.090909091							
Standard Error	6.436652699							
Observations	1							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	12	49514.23383	4126.186152	1195.115585	#NUM!			
Residual	11	455.7354777	41.43049797					
Total	23	49969.9693						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept							2.3365E-307	2.3365E-307
X Variable 1							-3.8006E-270	-3.8006E-270
X Variable 2							-2.2529E-306	2.2529E-306
X Variable 3							-8.8158E-307	8.8158E-307
X Variable 4							-1.0022E-307	2.6711E-307
X Variable 5							-2.4052E-307	6.4106E-307
X Variable 6							-7.2194E-307	3.3922E-306
X Variable 7							-2.2716E-307	6.0545E-307
X Variable 8							-1765.190098	1765.190098
X Variable 9							3.01666E-73	3.01666E-73
X Variable 10							8.367E-270	-8.367E-270
X Variable 11	0	#N/A	0	1	-4.8978E-307	4.8978E-307	-4.8978E-307	4.8978E-307
X Variable 12	0.128007709	0.003702808	34.57044381	1.42262E-12	0.119857884	0.136157534	0.119857884	0.136157534

MS								
SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.988556949							
R Square	0.977244842							
Adjusted R Square	-1.090909091							
Standard Error	24.33511033							
Observations	1							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	12	279758.2142	23313.18452	472.4068737	#NUM!			
Residual	11	6514.17554	592.1975946					
Total	23	286272.3878						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept							1.01772E-85	1.01772E-85
X Variable 1							-3.1539E-241	-3.1539E-241
X Variable 2							24.33511033	24.33511033
X Variable 3							0.977244842	0.977244842
X Variable 4							-1.0022E-307	2.6711E-307
X Variable 5							-2.4052E-307	6.4106E-307
X Variable 6							0	0
X Variable 7							0	0
X Variable 8							6.65974E-71	6.65974E-71
X Variable 9							4.88269E-72	4.88269E-72
X Variable 10							4.7825E-270	-1.237E-269
X Variable 11	0	#N/A	0	1	-2.2529E-306	2.2529E-306	-2.2529E-306	2.2529E-306
X Variable 12	0.30427237	0.013999239	21.7349229	2.18549E-10	0.273460254	0.335084486	0.273460254	0.335084486

LVS								
SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.980304497							
R Square	0.960996907							
Adjusted R Square	-1.090909091							
Standard Error	293.866074							
Observations	1							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	12	23405316.89	1950443.074	271.0289132	#NUM!			
Residual	11	949929.9642	86357.26948					
Total	23	24355246.85						
	Coefficients	Standard Error	tStat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept							0	0
X Variable 1							4.9249E-270	-1.3105E-269
X Variable 2							5.9883E-101	5.9883E-101
X Variable 3							5.272E-72	5.272E-72
X Variable 4							0	0
X Variable 5							0	0
X Variable 6							-6.64589E-73	6.64589E-73
X Variable 7							0	0
X Variable 8							0	0
X Variable 9							-5.1425E-307	5.1425E-307
X Variable 10							-4.0863E-270	-4.0863E-270
X Variable 11	0	#N/A	0	1	-1.7632E-306	1.7632E-306	-1.7632E-306	1.7632E-306
X Variable 12	2.783097087	0.16905209	16.46295578	4.26308E-09	2.411015945	3.155178228	2.411015945	3.155178228

LVS								
SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.906296115							
R Square	0.821372649							
Adjusted R Square	-1.090909091							
Standard Error	5920.638187							
Observations	1							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	12	1773054185	147754515.4	50.58071499	#NUM!			
Residual	11	385593522	35053956.55					
Total	23	2158647707						
	Coefficients	Standard Error	tStat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept							0	0
X Variable 1							0	0
X Variable 2							1.0236E-306	1.0236E-306
X Variable 3							4.0054E-307	4.0054E-307
X Variable 4							-1.0021E-307	2.6711E-307
X Variable 5							-2.4052E-307	6.4106E-307
X Variable 6							1.6912E-306	1.6912E-306
X Variable 7							9.1187E-308	2.871E-307
X Variable 8							-7.1492E-101	1.9033E-100
X Variable 9							2.3365E-307	2.3365E-307
X Variable 10							-3.8791E-270	-3.8791E-270
X Variable 11	0	#N/A	0	1	4.4652E-131	-4.4652E-131	4.4652E-131	-4.4652E-131
X Variable 12	24.22323252	3.40596057	7.112012021	1.96248E-05	16.72676385	31.71970119	16.72676385	31.71970119

## LACLEDE GAS COMPANY

### Derivation of Meters, Regulators, Meter Installation and Services Allocator

Laclede Gas Company Development of Meter, Meter Installation and Service Allocator	Cost per Meter	Cost per Meter Installation	Cost per Regulator	Cost per Service	Total Company	Residential RS	Small General Sv SOS	Large General Sv LGS	Large Volume LV	Interruptible IN	Fuel VT	Transportation Transp.
Number of meters (Year end)												
00EMCO-R	\$ 64	\$ 189	\$ 19	\$ 4,748	2	2	-	-	-	-	-	-
0-R	64	189	19	4,748	2	2	-	-	-	-	-	-
1.5M-A	989	1,295	19	4,487	38	1	33	4	-	-	-	-
1.5M-D	989	1,295	19	4,487	8	-	7	1	-	-	-	-
10000-R	1,967	12,531	2,691	22,138	6	-	2	4	-	-	-	-
1000-A	977	616	19	4,487	2,238	337	1,648	252	-	-	-	1
1000-R	977	616	19	4,487	177	14	116	47	-	-	-	-
10100-A	1,967	12,531	2,691	22,138	73	-	15	56	2	-	-	-
102M-D	24,323	70,538	3,510	10,790	22	-	-	-	-	1	-	21
10-R	64	189	19	4,748	3	3	-	-	-	-	-	-
10X30-V	24,323	70,538	3,510	10,790	1	-	-	-	-	-	-	1
11000-O	1,967	12,531	2,691	22,138	10	-	2	7	1	-	-	-
11C-A	977	616	19	4,487	70	6	56	8	-	-	-	-
11C-D	977	616	19	4,487	55	4	48	3	-	-	-	-
11M-A	1,967	12,531	2,691	22,138	4	-	1	3	-	-	-	-
11M-D	1,967	12,531	2,691	22,138	349	9	86	231	7	4	1	11
1200-A	977	616	19	4,487	225	17	167	41	-	-	-	-
1400-A	989	1,295	19	4,487	54	1	41	12	-	-	-	-
1500-O	989	1,295	19	4,487	1	-	1	-	-	-	-	-
16000-O	2,710	13,849	2,925	22,138	4	-	1	2	-	-	-	1
1600-R	989	1,295	19	4,487	115	6	90	19	-	-	-	-
16M-A	2,710	13,849	2,925	22,138	4	-	1	3	-	-	-	-
16M-D	2,710	13,849	2,925	22,138	189	-	12	131	20	-	1	25
175-A	64	189	19	4,748	32,191	31,242	948	1	-	-	-	-
175-N	64	189	19	4,748	21,610	21,239	371	-	-	-	-	-
175-R	64	189	19	4,748	9,971	9,624	347	-	-	-	-	-
175-S	64	189	19	4,748	19,972	19,491	480	1	-	-	-	-
176-R	64	189	19	4,748	1	1	-	-	-	-	-	-
2.5IC-R	1,025	1,334	19	15,681	24	-	21	3	-	-	-	-
2000-O	995	1,295	19	15,681	50	4	41	5	-	-	-	-
200-R	64	189	19	4,748	13,152	12,651	499	2	-	-	-	-
20-R	64	189	19	4,748	1	-	1	-	-	-	-	-
225-A	64	189	19	4,748	63	58	5	-	-	-	-	-
225-R	64	189	19	4,748	76	74	2	-	-	-	-	-
23000-O	6,608	35,613	3,276	22,138	1	-	-	1	-	-	-	-
2300-A	995	1,295	19	15,681	19	-	10	9	-	-	-	-
23M-D	6,608	35,613	3,276	22,138	107	-	4	57	13	6	1	26
240-S	64	189	19	4,748	30	28	2	-	-	-	-	-
250-A	64	189	19	4,748	273,249	264,538	8,707	4	-	-	-	-
250IC-A	64	189	19	4,748	213	-	82	130	1	-	-	-
250-N	64	189	19	4,748	1	-	1	-	-	-	-	-
250-R	64	189	19	4,748	3,670	3,560	110	-	-	-	-	-
250-S	64	189	19	4,748	77,050	73,900	3,147	3	-	-	-	-
250T-A	64	189	19	4,748	1	1	-	-	-	-	-	-



Laclede Gas Company Development of Meter, Meter Installation and Service Allocator	Cost per Meter	Cost per Meter Installation	Cost per Regulator	Cost per Service	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume LV	Interruptible IN	Fuel VF	Transportation Transp.
<b>Number of meters (Year end)</b>												
275-R	64	189	19	4,748	169,818	163,102	6,709	7	-	-	-	-
2M-A	995	1,295	19	15,681	224	11	160	53	-	-	-	-
2M-D	995	1,295	19	15,681	280	18	200	62	-	-	-	-
3.51C-R	1,025	1,334	19	15,681	1	-	-	1	-	-	-	-
3.5M-A	1,025	1,334	19	15,681	1	-	1	-	-	-	-	-
3000-O	1,025	1,334	19	15,681	49	3	30	16	-	-	-	-
3000-R	1,025	1,334	19	15,681	718	22	466	230	-	-	-	-
3100-A	1,025	1,334	19	15,681	184	2	129	53	-	-	-	-
340-U	147	269	19	4,748	1	1	-	-	-	-	-	-
35B1C-A	977	370	19	4,487	2	-	2	-	-	-	-	-
38000-O	7,046	37,898	3,276	22,138	2	-	-	-	-	-	-	2
38M-D	7,046	37,898	3,276	22,138	64	-	1	19	2	8	1	33
31C-A	1,025	1,334	19	15,681	1	-	-	1	-	-	-	-
31C-R	1,025	1,334	19	15,681	310	2	238	70	-	-	-	-
3M-A	1,025	1,334	19	15,681	376	8	192	176	-	-	-	-
3M-D	1,025	1,334	19	15,681	417	10	195	211	-	-	1	-
4.51C-R	1,234	6,695	317	15,681	5	-	3	2	-	-	-	-
400-S	147	269	50	4,748	1,576	1,023	531	22	-	-	-	-
400T-S	147	269	50	4,748	1	-	1	-	-	-	-	-
415-R	147	269	50	4,748	528	371	154	3	-	-	-	-
425-A	147	269	50	4,748	23,385	16,367	6,894	124	-	-	-	-
4GTS-A	6,608	35,613	3,276	22,138	1	-	-	-	-	1	-	-
41C-R	1,234	6,695	317	15,681	316	1	148	166	1	-	-	-
4X12-V	7,046	37,898	3,276	22,138	10	-	-	8	2	-	-	-
5.5M-A	1,234	6,695	317	15,681	7	-	2	5	-	-	-	-
5000-O	1,234	6,695	317	15,681	16	-	6	10	-	-	-	-
5000-R	1,234	6,695	317	15,681	692	9	348	332	3	-	-	-
5001C-A	1,234	6,695	317	15,681	153	-	23	122	5	1	-	2
56000-O	10,537	59,329	3,510	10,790	2	-	-	1	-	1	-	-
56M-D	10,537	59,329	3,510	10,790	29	-	1	1	-	1	1	25
5A-S	977	616	19	4,487	358	17	302	39	-	-	-	-
5B-A	64	189	19	4,748	47	37	7	3	-	-	-	-
5EMCO-R	1,967	12,531	2,691	22,138	70	-	13	54	3	-	-	-
5M-A	1,234	6,695	317	15,681	7	-	5	2	-	-	-	-
5M-D	1,234	6,695	317	15,681	588	2	158	424	2	-	2	-
5X15-V	6,608	35,613	2,925	22,138	10	-	1	9	-	-	-	-
60B1C-A	995	1,295	19	15,681	1	-	1	-	-	-	-	-
6100-A	1,644	10,834	317	15,681	125	-	43	82	-	-	-	-
630-A	497	370	19	4,487	225	34	182	9	-	-	-	-
6X18-V	7,046	37,898	3,276	22,138	5	-	-	2	1	-	-	2
7000-O	1,644	10,834	317	15,681	22	-	8	13	1	-	-	-
750-R	977	370	19	4,487	1,690	256	1,256	177	-	-	1	-
7M-A	1,644	10,834	317	15,681	2	-	-	2	-	-	-	-
7M-D	1,644	10,834	317	15,681	315	-	56	253	5	-	-	1
800-A	977	370	19	4,487	2,373	529	1,640	204	-	-	-	-
800-D	977	370	19	4,487	13	2	9	2	-	-	-	-
80B1C-A	977	370	19	4,487	141	2	109	30	-	-	-	-
8805X-R	977	370	19	4,487	1	-	1	-	-	-	-	-
8C-D	977	370	19	4,487	843	296	535	12	-	-	-	-
8X24-V	10,537	59,329	3,510	10,790	7	-	-	2	1	-	-	4
T140-R	24,428	70,538	3,510	10,790	2	-	-	-	-	-	-	2
T60-R	10,537	59,329	3,510	10,790	2	-	-	-	-	-	-	2

Laclede Gas Company	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume LV	Interruptible IN	Fuel VF	Transportation Transp.
<b>Meters</b>								
Total Meters	661,118	618,938	37,865	4,054	70	23	9	159
Cost of Meters	\$ 61,589,638	\$ 42,732,889	\$ 11,571,515	\$ 5,419,540	\$ 234,939	\$ 157,122	\$ 33,338	\$ 1,440,295
Allocation of Meters Costs	100.00%	69.38%	18.79%	8.80%	0.38%	0.26%	0.05%	2.34%
<b>Meter Installations</b>								
Total Meter Installations	661,118	618,938	37,865	4,054	70	23	9	159
Cost of Meter Installations	\$ 169,706,034	\$ 119,267,441	\$ 19,130,593	\$ 22,661,656	\$ 1,290,509	\$ 798,490	\$ 174,314	\$ 6,383,030
Allocation of Meter Installation Costs	100.00%	70.28%	11.27%	13.35%	0.76%	0.47%	0.10%	3.76%
<b>Regulators</b>								
Total Regulators	661,118	618,938	37,865	4,054	70	23	9	159
Cost of Regulators	\$ 16,575,580	\$ 12,086,074	\$ 1,565,141	\$ 2,169,827	\$ 161,376	\$ 70,751	\$ 16,350	\$ 506,060
Allocation of Regulator Costs	100.00%	72.91%	9.44%	13.09%	0.97%	0.43%	0.10%	3.05%
<b>Services</b>								
Number of Meters per Service		1.19	1.39	1.39	1.09	1.38	1.10	1.23
Total Services	549,091	518,624	27,323	2,925	64	17	8	129
Cost of Services	\$ 2,656,341,330	\$ 2,463,070,132	\$ 149,899,429	\$ 39,279,647	\$ 1,289,202	\$ 340,853	\$ 137,156	\$ 2,324,911
Allocation of Services Costs	100.00%	92.72%	5.64%	1.48%	0.05%	0.01%	0.01%	0.09%
<b>Meter, Meter Installation and Regulator</b>								
Meter, Meter Installations, and Regulator Cost	\$ 247,871,252	\$ 174,086,405	\$ 32,267,249	\$ 30,251,024	\$ 1,686,825	\$ 1,026,363	\$ 224,002	\$ 8,329,385
Allocation of Meter and Regulator Costs	100.00%	70.23%	13.02%	12.20%	0.68%	0.41%	0.09%	3.36%
<b>Account 385 Meter Installation Costs</b>								
Account 385 Meters	3,201	-	940	2,004	69	23	7	158
Account 385 Meter Installations Costs	\$ 37,366,157	\$ -	\$ 7,759,240	\$ 20,963,083	\$ 1,290,320	\$ 798,490	\$ 172,610	\$ 6,382,414
Allocation of Account 385	100.00%	0.00%	20.77%	56.10%	3.45%	2.14%	0.46%	17.08%
<b>Meter and Meter Installation (Less Acct. 385)</b>								
Meter and Meter Installation Cost	\$ 193,929,516	\$ 162,000,330	\$ 22,942,868	\$ 7,118,114	\$ 235,129	\$ 157,122	\$ 35,042	\$ 1,440,911
Allocation of Meter and Installation Costs	100.00%	83.54%	11.83%	3.67%	0.12%	0.08%	0.02%	0.74%

**MISSOURI GAS ENERGY**

**Derivation of Meters, Regulators, Meter Installation and Services Allocator**

Missouri Gas Energy Development of Meter, Meter Installation and Service Allocator	Cost per Meter	Cost per Meter Installation	Cost per Regulator	Cost per Service	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume Srv LVS
Number of meters (Year end)									
1.5M-D	\$ 951	\$ 4,151	\$ 18	\$ 1,933	451	40	317	94	-
1000-A	939	626	18	1,933	645	103	419	122	1
1000A-S	939	626	18	1,933	95	17	59	19	-
1000-R	1,891	4,537	2,588	1,933	6	-	3	3	-
102M-D	23,388	20,858	3,375	5,257	1	-	-	-	1
11000-O	1,891	4,537	2,588	6,923	9	1	-	4	4
11M-D	1,891	4,537	2,588	6,923	469	1	53	280	135
1400-A	951	4,151	18	1,933	145	11	92	41	1
15C-D	951	4,151	18	1,933	171	10	129	31	1
16000-O	2,606	6,500	2,813	6,923	9	-	1	6	2
1600-R	951	4,151	18	1,933	12	1	7	3	1
16M-D	2,606	6,500	2,813	6,923	200	-	12	73	115
175-A	62	185	18	2,090	14,530	13,966	559	5	-
175-N	62	185	18	2,090	53,868	51,784	2,064	20	-
175-R	62	185	18	2,090	45,575	44,141	1,413	21	-
175-S	62	185	18	2,090	17,704	17,093	601	10	-
1A-S	986	4,151	18	7,348	1	1	-	-	-
2000-O	956	4,151	18	7,348	22	-	16	6	-
200-R	62	185	18	2,090	13,145	12,488	651	6	-
225-A	62	185	18	2,090	7,240	7,019	219	2	-
2300-A	956	4,151	18	7,348	70	3	35	30	2
23M-D	6,354	7,223	3,150	6,923	64	1	2	15	46
240-S	62	185	18	2,090	36	33	3	-	-
250-A	62	185	18	2,090	168,543	160,413	8,013	117	-
250-N	62	185	18	2,090	6,285	6,011	273	1	-
250-R	62	185	18	2,090	405	377	28	-	-
250-S	62	185	18	2,090	37,412	35,215	2,153	44	-
275-R	62	185	18	2,090	130,302	124,121	6,099	82	-
2M-A	956	4,151	18	7,348	1	-	-	1	-
2M-D	956	4,151	18	7,348	426	33	250	142	1
3.5M-A	986	4,151	18	7,348	1	-	1	-	-
3000-O	986	4,151	18	7,348	77	4	39	33	1
3000-R	986	4,151	18	7,348	64	3	42	18	1
310-R	141	272	18	2,090	281	261	20	-	-

Missouri Gas Energy Development of Meter, Meter Installation and Service Allocator	Cost per Meter	Cost per Meter Installation	Cost per Regulator	Cost per Service	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume Srv LVS
<b>Number of meters (Year end)</b>									
315-R	141	272	18	2,090	382	340	42	-	-
38M-D	6,775	9,656	3,150	6,923	24	-	-	3	21
3M-A	986	4,151	18	7,348	2	-	1	1	-
3M-D	986	4,151	18	7,348	1,662	92	883	683	4
400-S	141	272	48	2,090	1,733	591	1,104	38	-
415-R	141	272	48	2,090	1,607	542	1,040	25	-
425-A	141	272	48	2,090	4,435	1,609	2,773	53	-
4A-S	141	272	48	2,090	2	1	1	-	-
4GTS-A	6,354	7,223	3,150	6,923	1	-	-	-	1
5000-A	1,187	4,495	305	7,348	24	1	3	16	4
5000-O	1,187	4,495	305	7,348	36	-	18	17	1
5000-R	1,187	4,495	305	7,348	35	2	14	18	1
56M-D	10,132	10,429	3,375	5,257	6	-	-	-	6
5A-S	939	626	18	1,933	146	25	95	25	1
5M-D	1,187	4,495	305	7,348	1,004	23	322	628	31
5X15-V	6,354	7,223	2,813	6,923	3	-	-	-	3
630-A	478	377	18	1,933	534	162	342	30	-
675-S	516	377	48	1,933	36	8	26	2	-
6GTS-A	6,775	9,656	3,150	6,923	2	-	-	-	2
7000-O	1,581	4,495	305	7,348	12	-	4	8	-
750-R	939	377	18	1,933	1,214	180	947	87	-
7M-D	1,581	4,495	305	7,348	497	2	91	365	39
800-A	939	377	18	1,933	2,982	637	2,135	209	1
800A-S	939	377	18	1,933	269	65	176	28	-
AAT-60-R	10,132	10,429	3,375	5,257	1	-	-	-	1
AAT-90-R	23,388	20,858	3,375	5,257	2	-	-	-	2
ATT-18-R	6,354	7,223	3,150	6,923	1	-	-	-	1
ORF-100X100-A	23,388	20,858	3,375	5,257	3	-	-	-	3
ORF-100X50-P	23,489	20,858	3,375	5,257	2	-	-	-	2
T140-R	23,489	20,858	3,375	5,257	7	-	-	-	7
T18-R	23,489	20,858	3,375	5,257	12	-	2	4	6
T230-R	46,978	20,858	3,375	5,257	2	-	-	-	2
T30-R	6,752	9,656	3,150	6,923	21	-	1	-	20
T60-R	10,132	10,429	3,150	5,257	28	-	-	-	28

<b>Missouri Gas Energy</b>					
Development of Meter, Meter Installation and Service Allocator	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume Srv LVS
<b>Meters</b>					
Total Meters	514,992	477,431	33,593	3,469	499
Cost per Meter (Current Customer Class)		64.87	249.51	1,130.27	4,496.72
Cost of Meters	\$ 45,515,182	\$ 30,968,779	\$ 8,381,641	\$ 3,920,898	\$ 2,243,864
Allocation of Meter Costs	100.00%	68.04%	18.42%	8.61%	4.93%
<b>Meter Installations</b>					
Total Meter Installations	514,992	477,431	33,593	3,469	499
Cost per Meter Inst. (Current Customer Class)		188.27	509.80	3,340.11	6,838.70
Cost of Meter Installations	\$ 122,008,849	\$ 89,883,847	\$ 17,125,633	\$ 11,586,857	\$ 3,412,511
Allocation of Meter Installation Costs	100.00%	73.67%	14.04%	9.50%	2.80%
<b>Regulators</b>					
Total Regulators	514,992	477,431	33,593	3,469	499
Cost per Regulator (Current Customer Class)		18.06	32.08	402.40	2,398.25
Cost of Regulators	\$ 12,294,722	\$ 8,624,556	\$ 1,077,502	\$ 1,395,937	\$ 1,196,727
Allocation of Regulator Costs	100.00%	70.15%	8.76%	11.35%	9.73%
<b>Services</b>					
Number of Meters per Service		1.14	1.26	1.26	1.36
Total Services					
Cost per Services (Current Customer Class)					
Cost of Services	\$ 959,436,664	\$ 879,233,221	\$ 62,427,363	\$ 15,305,197	\$ 2,470,883
Allocation of Services Costs	100.00%	91.64%	6.51%	1.60%	0.26%
<b>Meter and Regulator</b>					
Meter and Regulator	514,992	477,431	33,593	3,469	499
Cost of Meter and Regulator	\$ 57,809,905	\$ 39,593,335	\$ 9,459,144	\$ 5,316,834	\$ 3,440,592
Allocation of Meter and Regulator Costs	100.00%	68.49%	16.36%	9.20%	5.95%

## LACLEDE GAS COMPANY

### Revenue Targets

#### Proposed Revenue Targets

Laclede Gas Company Target Revenues	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume LV	Interruptible IN	Vehicular Fuel VF	Transportation Transp.
<b>Target Revenues</b>								
Class Revenues at EROR	382,129,998	316,496,941	32,784,844	21,900,417	1,071,676	230,629	112,984	9,532,506
Current Class Revenues	324,072,654	257,599,794	25,696,089	24,484,344	1,772,234	929,531	172,904	13,417,758
Difference (\$)	58,057,344	58,897,147	7,088,755	(2,583,927)	(700,558)	(698,902)	(59,920)	(3,885,252)
Difference (%)	17.9%	22.9%	27.6%	-10.6%	-39.5%	-75.2%	-34.7%	-29.0%
Target Revenues	382,129,998	308,836,261	31,291,377	24,899,092	1,903,212	964,914	173,288	14,061,854
Current Revenues	324,072,654	257,599,794	25,696,089	24,484,344	1,772,234	929,531	172,904	13,417,758
\$ Difference	58,057,344	51,236,467	5,595,288	414,748	130,978	35,383	384	644,096
% Difference	17.9%	19.9%	21.8%	1.7%	7.4%	3.8%	0.2%	4.8%
Customers	646,634	605,635	37,040	3,720	68	21	8	142
Usage (therms)	901,742,754	488,185,483	77,590,502	132,304,153	10,059,571	7,107,794	3,193,198	183,302,053
Target Increase (\$/ Customer/ Mo.)		\$ 7.05	\$ 12.59	\$ 9.29	\$ 160.12	\$ 142.10	\$ 4.04	\$ 378.88
Target Increase (\$ per therm)		\$ 0.10	\$ 0.07	\$ 0.00	\$ 0.01	\$ 0.00	\$ 0.00	\$ 0.00

**MISSOURI GAS ENERGY**

**Revenue Targets**

Proposed Revenue Targets

Missouri Gas Energy Target Revenues	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume Srv LVS
<b>Target Revenues</b>					
Class Revenues at EROR	248,544,377	198,607,571	22,522,534	12,148,685	15,265,587
Current Class Revenues	198,143,308	155,681,828	14,977,711	13,143,865	14,339,904
Difference (\$)	50,401,070	42,925,743	7,544,823	(995,179)	925,683
Difference (%)	25.4%	27.6%	50.4%	-7.6%	6.5%
<b>Target Revenues</b>	248,544,377	198,607,571	20,655,038	14,003,741	15,278,027
Current Revenues	198,143,308	155,681,828	14,977,711	13,143,865	14,339,904
\$ Difference	50,401,070	42,925,743	5,677,327	859,877	938,122
% Difference	25.4%	27.6%	37.9%	6.5%	6.5%
Customers	501,755	468,460	29,637	3,263	395
Usage (therms)	763,483,865	366,148,361	56,239,220	74,357,619	266,738,665
Target Increase (\$/ Customer/ Mo.)		\$ 7.64	\$ 15.96	\$ 21.96	\$ 197.69
Target Increase (\$ per therm)		\$ 0.12	\$ 0.10	\$ 0.01	\$ 0.00

## LACLEDE GAS COMPANY

### Summary of Proposed Delivery Rates

Laclede Gas Company Summary of Rates	Pre-Oct 2018 Residential RS	Post-Oct 2018 Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume LV	Interruptible IN	Fuel VF	Transportation Transp.
<b>Proposed Rates</b>								
Customer Charge (\$ per month)	\$ 23.50	\$ 17.00	\$ 35.00	\$ 125.00	\$ 1,000.00	\$ 935.00	\$ 50.00	\$ 2,500.00
Block Break								36,000
Single Volumetric Charge (\$ per therm)	\$ 0.28286	\$ 0.37962	\$ 0.20318	\$ 0.14625	\$ 0.02641	\$ 0.10422	\$ 0.05295	
Volume Charge/Nov-Apr (\$ per therm)								\$ 0.02533
Volume Charge/May-Oct (\$ per therm)								\$ 0.01060
Demand Charge (\$ per therm)					\$ 1.00635			\$ 0.60575
<b>Current Rates</b>								
Current Rates	Residential RS	C&I Class 1 C1	C&I Class 2 C2	C&I Class 3 C3	Large Volume LV	Interruptible IN	Fuel VF	Transportation Transp.
Customer Charge (\$ per month)	\$ 19.50	\$ 25.50	\$ 44.29	\$ 88.57	\$ 874.78	\$ 776.36	\$ 22.09	\$ 2,069.94
Current ISRS Charges (\$ per month)	\$ 3.57	\$ 4.67	\$ 8.11	\$ 16.21	\$ 160.12	\$ 142.10	\$ 4.04	\$ 378.88
Block Break	30	50	500	3,000	36,000	100,000	-	36,000
Peak Rate/ 1st Step (\$ per therm)	\$ 0.91686	\$ 0.87711	\$ 0.61244	\$ 0.85663	\$ 0.02502	\$ 0.10440	\$ 0.05332	\$ 0.02509
Peak Rate/ 2nd Step (\$ per therm)	\$ -	\$ -	\$ -	\$ -	\$ 0.00701	\$ 0.08083	\$ 0.05332	\$ 0.01050
Off-Peak Rate/ 1st Step (\$ per therm)	\$ 0.31290	\$ 0.33832	\$ 0.15306	\$ 0.15444	\$ 0.02502	\$ 0.10440	\$ 0.05332	\$ 0.02509
Off-Peak Rate/ 2nd Step (\$ per therm)	\$ 0.15297	\$ 0.11492	\$ 0.12421	\$ 0.12457	\$ 0.00701	\$ 0.08083	\$ 0.05332	\$ 0.01050
Demand Charge (\$ per therm)			\$ -	\$ -	\$ 0.95000	\$ -	\$ -	\$ 0.60000



**Residential Rate Design (Pre-October 2018): Proposed Rate Increase**

Laclede Gas Company Residential Rate Design			
Revenues	w/o ISRS	w/ ISRS	
Target Revenues	308,836,261	308,836,261	
Current Revenues (w/o and w/ ISRS)	257,599,794	283,545,198	
\$ Difference	51,236,467	25,291,063	
% Difference	19.9%	8.9%	
	Total Use	Peak Use	Off-Peak Use
Annual Usage (therms)	488,185,483	418,102,112	70,083,371
Number of Bills	7,267,620		
Average Annual Use (Therms)	806		
Residential Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 308,876,255
<b>Proposed Rates</b>			
Customer Charge	\$ 23.50	7,267,620	\$ 170,789,070
Consumption Charge	\$ 0.28286	488,185,483	138,087,185
Revenue at Proposed Rates			\$ 308,876,255
<b>Current Rates (w/o ISRS)</b>			
Customer Charge	\$ 19.50	7,267,620	\$ 141,718,590
Nov-Apr (First 30 therms)	\$ 0.91686	104,191,903	95,529,388
Nov-Apr (Over 30 therms)	-	313,910,209	-
May-Oct (First 30 therms)	0.31290	60,012,560	18,777,930
May-Oct (Over 30 therms)	0.15297	10,070,811	1,540,532
Revenue at Current Rates			\$ 257,566,440
		BF Adjustment	0.999871

**Residential Bill Impact Analysis (Pre-October 2018)**

Bill Impact Analysis - RS Rate			Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)
226	5.1%	1.1%	\$ 346	\$ 430	\$ (84)	-19.6%	\$ 454	\$ 509	\$ (54)	-10.7%
376	14.8%	5.7%	\$ 388	\$ 457	\$ (68)	-14.9%	\$ 568	\$ 606	\$ (38)	-6.3%
476	27.0%	13.5%	\$ 417	\$ 463	\$ (47)	-10.1%	\$ 644	\$ 664	\$ (20)	-3.0%
525	34.5%	19.1%	\$ 431	\$ 465	\$ (35)	-7.5%	\$ 681	\$ 691	\$ (10)	-1.4%
725	64.1%	46.1%	\$ 487	\$ 474	\$ 13	2.6%	\$ 833	\$ 804	\$ 29	3.7%
824	75.0%	58.4%	\$ 515	\$ 478	\$ 37	7.7%	\$ 909	\$ 858	\$ 50	5.9%
974	85.7%	72.3%	\$ 558	\$ 485	\$ 73	15.1%	\$ 1,023	\$ 942	\$ 81	8.6%
1,247	94.7%	86.5%	\$ 635	\$ 494	\$ 140	28.4%	\$ 1,230	\$ 1,093	\$ 138	12.6%
1,448	96.9%	90.9%	\$ 691	\$ 501	\$ 191	38.1%	\$ 1,383	\$ 1,203	\$ 180	15.0%
1,848	98.7%	95.2%	\$ 805	\$ 511	\$ 293	57.4%	\$ 1,687	\$ 1,418	\$ 269	19.0%

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

**Residential Rate Design (Post-October 2018): Proposed Rate Increase**

Laclede Gas Company Residential Rate Design			
Revenues	w/o ISRS	w/ ISRS	
Target Revenues	308,836,261	308,836,261	
Current Revenues (w/o and w/ ISRS)	257,599,794	283,545,198	
\$ Difference	51,236,467	25,291,063	
% Difference	19.9%	8.9%	
	Total Use	Peak Use	Off-Peak Use
Annual Usage (therms)	488,185,483	418,102,112	70,083,371
Number of Bills	7,267,620		
Average Annual Use (Therms)	806		
Residential Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 308,876,255
<b>Proposed Rates</b>			
Customer Charge	\$ 17.00	7,267,620	\$ 123,549,540
Consumption Charge	\$ 0.37962	488,185,483	185,326,715
Revenue at Proposed Rates			\$ 308,876,255
<b>Current Rates (w/o ISRS)</b>			
Customer Charge	\$ 19.50	7,267,620	\$ 141,718,590
Nov-Apr (First 30 therms)	\$ 0.91686	104,191,903	95,529,388
Nov-Apr (Over 30 therms)	-	313,910,209	-
May-Oct (First 30 therms)	0.31290	60,012,560	18,777,930
May-Oct (Over 30 therms)	0.15297	10,070,811	1,540,532
Revenue at Current Rates			\$ 257,566,440
		BF Adjustment	0.999871

**Residential Bill Impact Analysis (Post-October 2018)**

Bill Impact Analysis - RS Rate			Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)
226	5.1%	1.1%	\$ 290	\$ 430	\$ (141)	-32.6%	\$ 398	\$ 509	\$ (110)	-21.7%
376	14.8%	5.7%	\$ 347	\$ 457	\$ (110)	-24.0%	\$ 526	\$ 606	\$ (80)	-13.1%
476	27.0%	13.5%	\$ 385	\$ 463	\$ (79)	-17.0%	\$ 612	\$ 664	\$ (52)	-7.8%
525	34.5%	19.1%	\$ 403	\$ 465	\$ (62)	-13.3%	\$ 654	\$ 691	\$ (37)	-5.3%
725	64.1%	46.1%	\$ 479	\$ 474	\$ 5	1.0%	\$ 825	\$ 804	\$ 22	2.7%
824	75.0%	58.4%	\$ 517	\$ 478	\$ 39	8.1%	\$ 911	\$ 858	\$ 52	6.1%
974	85.7%	72.3%	\$ 574	\$ 485	\$ 89	18.4%	\$ 1,039	\$ 942	\$ 97	10.3%
1,247	94.7%	86.5%	\$ 677	\$ 494	\$ 183	37.1%	\$ 1,273	\$ 1,093	\$ 180	16.5%
1,448	96.9%	90.9%	\$ 754	\$ 501	\$ 253	50.5%	\$ 1,445	\$ 1,203	\$ 242	20.2%
1,848	98.7%	95.2%	\$ 905	\$ 511	\$ 394	77.1%	\$ 1,788	\$ 1,418	\$ 370	26.1%

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

### SGS Rate Design: Proposed Rate Increase

Laclede Gas Company			
Small General Service Rate Design			
Revenues	w/o ISRS	w/ ISRS	
Target Revenues	31,291,377	31,291,377	
Current Revenues (w/o and w/ ISRS)	25,696,089	27,986,097	
\$ Difference	5,595,288	3,305,279	
% Difference	21.8%	11.8%	
	Total Use	Peak Use	Off-Peak Use
Usage (therms)	77,590,502	66,013,877	11,576,625
Number of Bills	444,484		
Average Annual Use (Therms)	2,095		
Small General Service Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 31,321,905
<b>Proposed Rates</b>			
Customer Charge	\$ 35.00	444,484	\$ 15,556,940
Consumption Charge	\$ 0.20318	77,590,502	15,764,965
Revenue at Proposed Rates	\$ 0.20318		\$ 31,321,905
<b>Current C-1 Rates (w/o ISRS)</b>			
Customer Charge	\$ 25.50	382,197	\$ 9,746,018
Nov-Apr (First 50 therms)	\$ 0.87711	7,785,289	6,828,555
Nov-Apr (Over 50 therms)	-	31,144,053	-
May-Oct (First 50 therms)	0.33832	2,547,700	861,938
May-Oct (Over 50 therms)	0.11492	2,180,094	250,536
Revenue at Current Rates			\$ 17,687,047
<b>Current C-2 Rates (w/o ISRS)</b>			
Customer Charge	\$ 44.29	62,287	\$ 2,758,701
Nov-Apr (First 500 therms)	\$ 0.61244	6,952,412	4,257,935
Nov-Apr (Over 500 therms)	\$ -	20,132,123	-
May-Oct (First 500 therms)	\$ 0.15306	4,043,930	618,964
May-Oct (Over 500 therms)	\$ 0.12421	2,804,901	348,397
Revenue at Current Rates			\$ 7,983,997
Total Revenues at Current Rates			25,671,044
		BF Adjustment	0.999025

### SGS Rate Design: Bill Impact Analysis

Bill Impact Analysis - Current C1 Rate				Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	
50	6%	0%	\$ 430	\$ 403	\$ 27	6.7%	\$ 454	\$ 417	\$ 37	8.9%	
200	16%	1%	\$ 461	\$ 525	\$ (65)	-12.3%	\$ 556	\$ 579	\$ (23)	-3.9%	
500	34%	5%	\$ 522	\$ 619	\$ (97)	-15.7%	\$ 760	\$ 802	\$ (42)	-5.2%	
1,000	54%	13%	\$ 623	\$ 661	\$ (38)	-5.8%	\$ 1,101	\$ 1,096	\$ 4	0.4%	
1,750	68%	23%	\$ 776	\$ 688	\$ 88	12.8%	\$ 1,611	\$ 1,514	\$ 98	6.4%	
2,500	76%	32%	\$ 928	\$ 709	\$ 219	30.8%	\$ 2,122	\$ 1,924	\$ 198	10.3%	
3,500	83%	42%	\$ 1,131	\$ 734	\$ 397	54.1%	\$ 2,803	\$ 2,469	\$ 334	13.5%	
4,500	87%	51%	\$ 1,334	\$ 747	\$ 587	78.6%	\$ 3,484	\$ 3,002	\$ 482	16.0%	

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

Bill Impact Analysis - Current C2 Rate				Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	
5,000	89%	56%	\$ 1,436	\$ 2,481	\$ (1,045)	-42.1%	\$ 3,824	\$ 4,604	\$ (780)	-16.9%	
5,500	90%	60%	\$ 1,537	\$ 2,541	\$ (1,004)	-39.5%	\$ 4,165	\$ 4,916	\$ (751)	-15.3%	
6,000	92%	65%	\$ 1,639	\$ 2,575	\$ (936)	-36.4%	\$ 4,505	\$ 5,207	\$ (702)	-13.5%	
6,500	93%	69%	\$ 1,741	\$ 2,610	\$ (869)	-33.3%	\$ 4,846	\$ 5,500	\$ (654)	-11.9%	
7,000	94%	73%	\$ 1,842	\$ 2,644	\$ (802)	-30.3%	\$ 5,186	\$ 5,792	\$ (606)	-10.5%	
7,500	95%	77%	\$ 1,944	\$ 2,679	\$ (735)	-27.4%	\$ 5,526	\$ 6,084	\$ (557)	-9.2%	
8,000	96%	80%	\$ 2,045	\$ 2,714	\$ (668)	-24.6%	\$ 5,867	\$ 6,378	\$ (511)	-8.0%	
9,000	98%	88%	\$ 2,249	\$ 2,745	\$ (496)	-18.1%	\$ 6,548	\$ 6,936	\$ (388)	-5.6%	

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

### LGS Rate Design: Proposed Rate Increase

Laclede Gas Company			
Large General Service Rate Design			
Revenues	w/o ISRS	w/ ISRS	
Target Revenues	24,899,092	24,899,092	
Current Revenues (w/o and w/ ISRS)	24,484,344	24,899,092	
\$ Difference	414,748	-	
% Difference	1.7%	0.0%	
	<b>Total Use</b>	<b>Peak Use</b>	<b>Off-Peak Use</b>
Usage (therms)	132,304,153	102,707,932	29,596,221
Number of Bills	44,644		
Average Annual Use (Therms)	35,562		
Large General Service Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 24,929,726
<b>Proposed Rates</b>			
Customer Charge	\$ 125.00	44,644	\$ 5,580,500
Consumption Charge	\$ 0.14625	132,304,153	19,349,226
Revenue at Proposed Rates	\$ 0.14625		\$ 24,929,726
<b>Current C-2 Rates (w/o ISRS)</b>			
Customer Charge	\$ 44.29	38,140	\$ 1,689,203
Nov-Apr (First 500 therms)	\$ 0.61244	16,159,255	9,896,574
Nov-Apr (Over 500 therms)	-	46,792,409	-
May-Oct (First 500 therms)	0.15306	9,399,170	1,438,637
May-Oct (Over 500 therms)	0.12421	6,519,336	809,767
Revenue at Current Rates			\$ 13,834,180
<b>Current C-3 Rates (w/o ISRS)</b>			
Customer Charge	\$ 88.57	6,504	\$ 576,095
Nov-Apr (First 3000 therms)	\$ 0.85663	9,501,419	8,139,200
Nov-Apr (Over 3000 therms)	\$ -	30,254,849	-
May-Oct (First 3000 therms)	\$ 0.15444	6,727,454	1,038,988
May-Oct (Over 3000 therms)	\$ 0.12457	6,950,261	865,794
Revenue at Current Rates			\$ 10,620,077
Total Revenues at Current Rates			24,454,257
		BF Adjustment	0.998771

### LGS Rate Design: Bill Impact Analysis

Bill Impact Analysis - Current C2 Rate												
Annual Use	Cumulative Bills	Cumulative Use	Annual Bill (w/o PGA)				Annual Bill (w/ PGA)					
			Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)		
10,000	1%	0%	\$ 2,962	\$ 2,776	\$ 187	6.7%	\$ 7,739	\$ 7,495	\$ 244	3.3%		
12,500	23%	9%	\$ 3,328	\$ 2,851	\$ 477	16.7%	\$ 9,299	\$ 8,889	\$ 410	4.6%		
15,000	38%	16%	\$ 3,694	\$ 2,924	\$ 770	26.3%	\$ 10,859	\$ 10,280	\$ 579	5.6%		
17,500	48%	21%	\$ 4,059	\$ 2,992	\$ 1,067	35.7%	\$ 12,419	\$ 11,668	\$ 750	6.4%		
20,000	56%	26%	\$ 4,425	\$ 3,055	\$ 1,369	44.8%	\$ 13,978	\$ 13,050	\$ 929	7.1%		
25,000	67%	35%	\$ 5,156	\$ 3,181	\$ 1,975	62.1%	\$ 17,098	\$ 15,813	\$ 1,285	8.1%		
30,000	74%	42%	\$ 5,887	\$ 3,307	\$ 2,581	78.0%	\$ 20,218	\$ 18,577	\$ 1,641	8.8%		
35,000	79%	47%	\$ 6,619	\$ 3,432	\$ 3,186	92.8%	\$ 23,337	\$ 21,340	\$ 1,997	9.4%		
45,000	85%	55%	\$ 8,081	\$ 3,684	\$ 4,397	119.4%	\$ 29,576	\$ 26,866	\$ 2,710	10.1%		

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

Bill Impact Analysis - Current C3 Rate												
Annual Use	Cumulative Bills	Cumulative Use	Annual Bill (w/o PGA)				Annual Bill (w/ PGA)					
			Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)		
50,000	87%	58%	\$ 8,812	\$ 18,634	\$ (9,822)	-52.7%	\$ 32,696	\$ 40,820	\$ (8,124)	-19.9%		
55,000	89%	61%	\$ 9,544	\$ 18,830	\$ (9,286)	-49.3%	\$ 35,815	\$ 43,747	\$ (7,932)	-18.1%		
60,000	90%	64%	\$ 10,275	\$ 19,020	\$ (8,745)	-46.0%	\$ 38,935	\$ 46,669	\$ (7,734)	-16.6%		
70,000	92%	69%	\$ 11,737	\$ 19,384	\$ (7,646)	-39.4%	\$ 45,174	\$ 52,495	\$ (7,321)	-13.9%		
85,000	94%	74%	\$ 13,931	\$ 19,896	\$ (5,965)	-30.0%	\$ 54,533	\$ 61,203	\$ (6,670)	-10.9%		
100,000	96%	78%	\$ 16,125	\$ 20,372	\$ (4,247)	-20.8%	\$ 63,892	\$ 69,873	\$ (5,981)	-8.6%		
150,000	98%	87%	\$ 23,437	\$ 21,951	\$ 1,486	6.8%	\$ 95,088	\$ 98,765	\$ (3,677)	-3.7%		
200,000	99%	93%	\$ 30,750	\$ 23,530	\$ 7,220	30.7%	\$ 126,284	\$ 127,661	\$ (1,377)	-1.1%		

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)



### LV Rate Design: Proposed Rate Increase

Laclede Gas Company			
Large Volume Rate Design			
Revenues	w/o ISRS	w/ ISRS	Demand
Target Revenues	1,903,212	1,903,212	
Current Revenues (w/o and w/ ISRS)	1,772,234	1,903,212	
\$ Difference	130,978	-	
% Difference	7.4%	0.0%	
	Total Use	Peak Use	Off-Peak Use
Annual Usage (therms)	10,059,571		
First 36000 therms	10,012,562	6,231,250	3,781,312
Over 36000 therms	47,009	47,009	-
Number of Bills	818		
Average Annual Use (Therms)	147,573		
Large Volume Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 1,920,469
<b>Proposed Rates</b>			
Customer Charge	\$ 1,000.00	818	\$ 818,000
Consumption Charge	\$ 0.02641	10,059,571	265,723
Demand Charge	\$ 1.00635	831,468	836,747
Revenue at Proposed Rates			\$ 1,920,469
<b>Current Rates (w/o ISRS)</b>			
Customer Charge	\$ 874.78	818	\$ 715,570
First 36000 therms	\$ 0.02502	10,012,562	250,514
Over 36000 therms	\$ 0.00701	47,009	330
Demand Charge	0.95000	831,468	789,895
Revenue at Current Rates			\$ 1,756,308
		BF Adjustment	0.991014

### LV Rate Design: Bill Impact Analysis

Bill Impact Analysis - Current LV Customers											
Annual Use	Cumulative Bills	Cumulative Use	Annual Bill (w/o PGA)				Annual Bill (w/ PGA)				
			Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	
55,000	6%	1%	\$ 18,028	\$ 18,114	\$ (86)	-0.5%	\$ 44,300	\$ 44,385	\$ (86)	-0.2%	
80,000	15%	5%	\$ 20,768	\$ 20,702	\$ 65	0.3%	\$ 58,981	\$ 58,916	\$ 65	0.1%	
100,000	32%	15%	\$ 22,959	\$ 22,773	\$ 187	0.8%	\$ 70,726	\$ 70,540	\$ 187	0.3%	
125,000	41%	22%	\$ 25,699	\$ 25,361	\$ 338	1.3%	\$ 85,408	\$ 85,070	\$ 338	0.4%	
150,000	57%	36%	\$ 28,439	\$ 27,950	\$ 489	1.7%	\$ 100,090	\$ 99,601	\$ 489	0.5%	
175,000	71%	51%	\$ 31,179	\$ 30,539	\$ 640	2.1%	\$ 114,771	\$ 114,131	\$ 640	0.6%	
200,000	75%	56%	\$ 33,919	\$ 33,127	\$ 792	2.4%	\$ 129,453	\$ 128,661	\$ 792	0.6%	
250,000	88%	75%	\$ 39,399	\$ 38,304	\$ 1,094	2.9%	\$ 158,816	\$ 157,722	\$ 1,094	0.7%	
300,000	94%	86%	\$ 44,878	\$ 43,378	\$ 1,500	3.5%	\$ 188,179	\$ 186,679	\$ 1,500	0.8%	
350,000	99%	96%	\$ 50,358	\$ 48,257	\$ 2,101	4.4%	\$ 217,542	\$ 215,441	\$ 2,101	1.0%	

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

**IN Rate Design: Proposed Rate Increase**

Laclede Gas Company			
Interruptible Rate Design			
Revenues	w/o ISRS	w/ ISRS	
Target Revenues	964,914	964,914	
Current Revenues (w/o and w/ ISRS)	929,531	964,914	
\$ Difference	35,383	-	
% Difference	3.8%	0.0%	
	<b>Total Use</b>	<b>Peak Use</b>	<b>Off-Peak Use</b>
Annual Usage (therms)	7,107,794		
First 100000 therms	6,507,794	3,085,014	1,622,566
Over 100000 therms	600,000	303,603	149,978
Number of Bills	249		
Average Annual Use (Therms)	342,544		
Interruptible Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 973,613
<b>Proposed Rates</b>			
Customer Charge	\$ 935.00	249	\$ 232,815
Consumption Charge	\$ 0.10422	7,107,794	740,798
Revenue at Proposed Rates			\$ 973,613
<b>Current Rates (w/o ISRS)</b>			
Customer Charge	\$ 776.36	249	\$ 193,314
First 100000 therms	\$ 0.10440	6,507,794	679,414
Over 100000 therms	\$ 0.08083	600,000	48,498
Revenue at Current Rates			\$ 921,225
		BF Adjustment	0.991065

### IN Rate Design: Bill Impact Analysis

Bill Impact - Current IN Customers											
Annual Use	Cumulative Bills	Annual Bill (w/o PGA)				Annual Bill (w/ PGA)				Difference (\$)	Difference (%)
		Cumulative Use	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)		
50,000			\$ 16,431	\$ 16,242	\$ 190	1.2%	\$ 31,687	\$ 31,497	\$ 190	0.6%	
100,000			\$ 21,642	\$ 21,461	\$ 181	0.8%	\$ 52,153	\$ 51,972	\$ 181	0.3%	
150,000			\$ 26,854	\$ 26,682	\$ 172	0.6%	\$ 72,620	\$ 72,448	\$ 172	0.2%	
200,000			\$ 32,065	\$ 31,901	\$ 163	0.5%	\$ 93,087	\$ 92,923	\$ 163	0.2%	
250,000			\$ 37,276	\$ 37,122	\$ 154	0.4%	\$ 113,553	\$ 113,399	\$ 154	0.1%	
275,000			\$ 39,881	\$ 39,732	\$ 150	0.4%	\$ 123,787	\$ 123,637	\$ 150	0.1%	
300,000			\$ 42,487	\$ 42,341	\$ 146	0.3%	\$ 134,020	\$ 133,874	\$ 146	0.1%	
350,000			\$ 47,698	\$ 47,562	\$ 137	0.3%	\$ 154,487	\$ 154,350	\$ 137	0.1%	
400,000			\$ 52,909	\$ 52,781	\$ 128	0.2%	\$ 174,953	\$ 174,825	\$ 128	0.1%	
450,000			\$ 58,121	\$ 58,002	\$ 119	0.2%	\$ 195,420	\$ 195,301	\$ 119	0.1%	

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

### VF Rate Design: Proposed Rate Increase

Laclede Gas Company			
Vehicular Fuel Rate Design			
Revenues	w/o ISRS	w/ ISRS	
Target Revenues	173,288	173,288	
Current Revenues (w/o and w/ ISRS)	172,904	173,288	
\$ Difference	384	-	
% Difference	0.2%	0.0%	
	Total Use	Peak Use	Off-Peak Use
Annual Usage (therms)	3,193,198	1,537,044	1,656,154
Number of Bills	95		
Average Annual Use (Therms)	403,351		
Vehicular Fuel Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 173,836
<b>Proposed Rates</b>			
Customer Charge	\$ 50.00	95	\$ 4,750
Consumption Charge	\$ 0.05295	3,193,198	169,086
Revenue at Proposed Rates			\$ 173,836
<b>Current Rates (w/o ISRS)</b>			
Customer Charge	\$ 22.09	95	\$ 2,099
Consumption Charge	\$ 0.05332	3,193,198	170,261
Revenue at Current Rates			172,360
		BF Adjustment	0.996851

### VF Rate Design: Bill Impact Analysis

Bill Impact Analysis - VF Customers											
Annual Use	Cumulative Bills	Cumulative Use	Annual Bill (w/o PGA)				Annual Bill (w/ PGA)				
			Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	
25,000	25%	1%	\$ 1,924	\$ 1,647	\$ 277	16.8%	\$ 12,390	\$ 12,113	\$ 277	2.3%	
100,000	38%	3%	\$ 5,895	\$ 5,646	\$ 250	4.4%	\$ 47,761	\$ 47,511	\$ 250	0.5%	
200,000	50%	7%	\$ 11,190	\$ 10,978	\$ 213	1.9%	\$ 94,922	\$ 94,709	\$ 213	0.2%	
500,000	63%	15%	\$ 27,076	\$ 26,974	\$ 102	0.4%	\$ 236,404	\$ 236,301	\$ 102	0.0%	
1,000,000	88%	54%	\$ 53,552	\$ 53,634	\$ (82)	-0.2%	\$ 472,208	\$ 472,289	\$ (82)	0.0%	
2,000,000	100%	100%	\$ 106,504	\$ 106,954	\$ (450)	-0.4%	\$ 943,815	\$ 944,265	\$ (450)	0.0%	

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

### TR Rate Design: Proposed Rate Increase

Laclede Gas Company Transportation Rate Design			
Revenues	w/o ISRS	w/ ISRS	
Target Revenues	14,061,854	14,061,854	
Current Revenues (w/o and w/ ISRS)	13,417,758	14,061,854	
\$ Difference	644,096	-	
% Difference	4.8%	0.0%	
	Total Use	Peak Use	Off-Peak Use
Annual Usage (therms)	183,302,053		
First 36000 therms	51,712,161	27,695,823	24,016,338
Over 36000 therms	131,589,892	77,149,423	54,440,469
Number of Bills	1,700		
Average Annual Use (Therms)	928,870		
Transportation Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 14,154,748
<b>Proposed Rates</b>			
Customer Charge	\$ 2,500.00	1,700	\$ 4,250,000
First 36000 therms	\$ 0.02533	51,712,161	1,309,882
Over 36000 therms	\$ 0.01060	131,589,892	1,394,925
Reservation Charge	\$ 0.60575	11,886,084	7,199,941
Revenue at Proposed Rates	\$ 0.01476		\$ 14,154,748
<b>Current Rates (w/o ISRS)</b>			
Customer Charge	\$ 2,069.94	1,700	\$ 3,518,898
First 36000 therms	\$ 0.02509	51,712,161	1,297,458
Over 36000 therms	0.01050	131,589,892	1,381,694
Reservation Charge	0.60000	11,886,084	7,131,650
Revenue at Current Rates			13,329,700
		BF Adjustment	0.993437

### TR Rate Design: Bill Impact Analysis

Bill Impact Analysis - TR Customers											
Annual Use	Cumulative Bills	Cumulative Use	Annual Bill (w/o PGA)				Annual Bill (w/ PGA)				
			Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	
250,000	5%	1%	\$ 46,152	\$ 45,385	\$ 767	1.7%	\$ 68,197	\$ 67,430	\$ 767	1.1%	
500,000	44%	11%	\$ 61,200	\$ 60,290	\$ 910	1.5%	105,290	104,380	\$ 910	0.9%	
750,000	58%	18%	\$ 73,773	\$ 72,744	\$ 1,029	1.4%	139,908	138,879	\$ 1,029	0.7%	
1,000,000	69%	25%	\$ 86,243	\$ 85,095	\$ 1,148	1.3%	174,423	173,275	\$ 1,148	0.7%	
1,500,000	82%	38%	\$ 111,183	\$ 109,799	\$ 1,384	1.3%	243,453	242,069	\$ 1,384	0.6%	
2,000,000	86%	44%	\$ 136,123	\$ 134,502	\$ 1,621	1.2%	312,483	310,862	\$ 1,621	0.5%	
2,500,000	89%	47%	\$ 161,062	\$ 159,205	\$ 1,857	1.2%	381,512	379,655	\$ 1,857	0.5%	
3,000,000	91%	52%	\$ 186,002	\$ 183,908	\$ 2,094	1.1%	450,542	448,448	\$ 2,094	0.5%	
5,000,000	95%	63%	\$ 285,761	\$ 282,721	\$ 3,040	1.1%	726,661	723,621	\$ 3,040	0.4%	
15,000,000	99%	81%	\$ 784,558	\$ 776,787	\$ 7,771	1.0%	2,107,258	2,099,487	\$ 7,771	0.4%	

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)



## Workpapers

### Basic Customer Costs

Basic Customer Costs	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume LV	Interruptible IN	Vehicular Fuel VF	Transportation Transp.
<b>Basic Customer Costs</b>								
<b>Plant</b>								
376.1 - Mains - Steel	87,536,489	81,986,329	5,014,243	503,631	9,228	2,809	1,072	19,178
376.2 - Mains - Cast Iron	8,177,699	7,659,201	468,433	47,049	862	262	100	1,792
376.3 - Mains - Plastic	171,442,578	160,572,439	9,820,530	986,375	18,073	5,501	2,099	37,560
380.1 - Services - Steel	38,730,897	35,912,898	2,185,615	572,719	18,797	4,970	2,000	33,898
380.2 - Services - Plastic	645,762,615	598,777,948	36,440,892	9,548,972	313,408	82,862	33,343	565,191
381 - Meters	129,541,012	108,212,959	15,325,374	4,754,757	157,061	104,954	23,407	962,499
383 - House Regulators	25,568,099	18,642,965	2,414,255	3,346,994	248,925	109,135	25,220	780,606
385 - Commercial & Ind Meas & Reg Eq	14,480,417	-	3,006,920	8,123,773	500,035	309,437	66,891	2,473,362
<b>Total</b>	<b>1,121,239,806</b>	<b>1,011,764,739</b>	<b>74,676,261</b>	<b>27,884,268</b>	<b>1,266,389</b>	<b>619,931</b>	<b>154,132</b>	<b>4,874,086</b>
<b>Accumulated Depreciation</b>								
376.1 - Mains - Steel	(52,422,907)	(49,099,087)	(3,002,876)	(301,609)	(5,526)	(1,682)	(642)	(11,485)
376.2 - Mains - Cast Iron	(745,873)	(698,582)	(42,725)	(4,291)	(79)	(24)	(9)	(163)
376.3 - Mains - Plastic	(29,657,825)	(27,777,401)	(1,698,852)	(170,633)	(3,126)	(952)	(363)	(6,498)
380.1 - Services - Steel	(36,075,778)	(33,450,962)	(2,035,785)	(533,457)	(17,509)	(4,629)	(1,863)	(31,575)
380.2 - Services - Plastic	(245,081,235)	(227,249,512)	(13,830,127)	(3,624,046)	(118,945)	(31,448)	(12,654)	(214,503)
381 - Meters	(30,286,296)	(25,299,862)	(3,583,026)	(1,111,648)	(36,720)	(24,538)	(5,473)	(225,029)
383 - House Regulators	(11,032,284)	(8,044,183)	(1,041,718)	(1,444,182)	(107,408)	(47,090)	(10,882)	(336,821)
385 - Commercial & Ind Meas & Reg Eq	(5,778,276)	-	(1,199,883)	(3,241,716)	(199,534)	(123,478)	(26,692)	(986,972)
<b>Total</b>	<b>(411,080,474)</b>	<b>(371,619,589)</b>	<b>(26,434,991)</b>	<b>(10,431,582)</b>	<b>(488,848)</b>	<b>(233,841)</b>	<b>(58,578)</b>	<b>(1,813,045)</b>
<b>Net Income before taxes &amp; Interest</b>								
Net Plant	710,159,332	640,145,150	48,241,270	17,452,686	777,541	386,090	95,554	3,061,041
Net Income after taxes	54,682,269	\$ 49,291,177	\$ 3,714,578	\$ 1,343,857	\$ 59,871	\$ 29,729	\$ 7,358	\$ 235,700
Add: Income Taxes	20,089,070	18,108,501	1,364,655	493,704	21,995	10,922	2,703	86,591
Net Income before taxes & Interest	\$ 74,771,338	\$ 67,399,677	\$ 5,079,232	\$ 1,837,560	\$ 81,866	\$ 40,651	\$ 10,061	\$ 322,291

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Basic Customer Costs	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume LV	Interruptible IN	Vehicular Fuel VF	Transportation Transp.
<b>Basic Customer Costs</b>								
<b>O&amp;M Expenses</b>								
874 - Mains and Service Expenses	6,658,916	6,191,911	377,359	81,579	2,522	675	270	4,602
876 - Measuring and Reg Station Exp-Ind	155,837	-	32,360	87,427	5,381	3,330	720	26,618
878 - Meter and House Regulator Exp.	14,896,146	10,446,990	2,503,486	1,446,325	75,527	43,426	9,469	370,922
879 - Customer Installation Expenses	2,371,255	1,666,490	267,306	316,645	18,032	11,157	2,436	89,188
880 - Other Expenses	1,676,190	1,274,110	221,373	134,471	7,062	4,078	898	34,198
902 - Meter reading expense	8,680,331	8,129,963	497,224	49,941	915	279	106	1,902
903 - Customer records & collections	19,065,392	17,831,316	1,150,236	78,789	1,444	439	168	3,000
909 - Info & Inst Advertising	98,614	92,361	5,649	567	10	3	1	22
913 - Advertising	138,699	129,905	7,945	798	15	4	2	30
916 - Misc Sales Expense	-	-	-	-	-	-	-	-
<b>Total</b>	<b>53,741,378</b>	<b>45,763,047</b>	<b>5,062,938</b>	<b>2,196,543</b>	<b>110,907</b>	<b>63,392</b>	<b>14,069</b>	<b>530,481</b>
<b>Depreciation Expense</b>								
380.1 - Services - Steel	2,025,626	1,878,245	114,308	29,953	983	260	105	1,773
380.2 - Services - Plastic	24,216,098	22,454,173	1,366,533	358,086	11,753	3,107	1,250	21,195
381 - Meters	3,070,122	2,564,647	363,211	112,688	3,722	2,487	555	22,811
383 - House Regulators	511,362	372,859	48,285	66,940	4,978	2,183	504	15,612
385 - Commercial & Ind Meas & Reg Eq	470,614	-	97,725	264,023	16,251	10,057	2,174	80,384
<b>Total</b>	<b>30,293,821</b>	<b>27,269,924</b>	<b>1,990,062</b>	<b>831,690</b>	<b>37,688</b>	<b>18,094</b>	<b>4,588</b>	<b>141,775</b>
Basic customer-related costs	158,806,538	\$ 140,432,648	\$ 12,132,233	\$ 4,865,794	\$ 230,461	\$ 122,136	\$ 28,718	\$ 994,548
Number of customers	646,634	605,635	37,040	3,720	68	21	8	142
Monthly basic cost per customer	\$ 20.47	\$ 19.32	\$ 27.30	\$ 108.99	\$ 281.74	\$ 490.51	\$ 302.30	\$ 585.03

## Workpapers

### Fully Allocated Customer Costs

	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume LV	Interruptible IN	Vehicular Fuel VF	Transportation Transp.
<b>Fully Allocated Customer Costs</b>								
Rate Base	\$ 822,793,916	\$ 797,578,014	\$ 58,124,472	\$ 21,472,600	\$ 976,770	\$ 499,962	\$ 120,973	\$ 4,021,125
Net income after taxes	63,355,132	56,793,507	4,475,584	1,653,390	75,211	38,497	9,315	309,627
Add: Income Taxes	23,275,290	20,864,693	1,644,232	607,419	27,631	14,143	3,422	113,750
Net income before taxes & interest	\$ 86,630,422	\$ 77,658,200	\$ 6,119,816	\$ 2,260,810	\$ 102,842	\$ 52,640	\$ 12,737	\$ 423,377
Add: O&M	149,861,435	129,256,272	13,678,297	5,260,167	258,258	143,825	32,212	1,232,403
Add: Depreciation	42,843,652	38,746,206	2,784,578	1,059,037	47,322	22,724	5,758	178,027
Add: Taxes other than income	15,835,187	14,151,541	1,140,186	428,803	19,906	10,146	2,441	82,164
Add: Interest on deposits	114,944	80,593	31,164	3,130	57	-	-	-
Required Customer Revenues	\$ 295,285,639	\$ 259,892,812	\$ 23,754,041	\$ 9,011,947	\$ 428,385	\$ 229,335	\$ 53,148	\$ 1,915,971
Number of Customers	646,634	605,635	37,040	3,720	68	21	8	142
Monthly cost per customer	\$ 38.05	\$ 35.76	\$ 53.44	\$ 201.86	\$ 523.70	\$ 921.02	\$ 559.45	\$ 1,127.04

**MISSOURI GAS ENERGY**  
**Summary of Proposed Delivery Rates**

Missouri Gas Energy Summary of Rates	Pre-Oct 2018 Residential RS	Post-Oct 2018 Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume Srv LVS
<b>Proposed Rates</b>					
Customer Charge (\$ per month)	\$ 25.50	\$ 20.00	\$ 40.00	\$ 125.00	\$ 1,275.00
Volume Charge/All Year (\$ per therm)	0.15055	0.23500	0.11169		
Volume Charge/Nov-Mar (\$ per therm)				0.14819	
Volume Charge/Apr-Oct (\$ per therm)				0.08541	
1st 30,000 therm Volume Charge/Nov-Mar (\$ per therm)					0.04485
Over 30,000 therm Volume Charge/Nov-Mar (\$ per therm)					0.03520
1st 30,000 therm Volume Charge/Apr-Oct (\$ per therm)					0.02837
Over 30,000 therm Volume Charge/Apr-Oct (\$ per therm)					0.01872
<b>Current Rates</b>					
Customer Charge (\$ per month)	\$ 23.00		\$ 34.00	\$ 115.40	\$ 904.56
Current ISRS Charges (\$ per month)	\$ 1.97		\$ 2.92	\$ 9.90	\$ 77.60
Volume Charge/All Year (\$ per therm)	0.07380		0.05430		
Volume Charge/Nov-Mar (\$ per therm)				0.13268	
Volume Charge/Apr-Oct (\$ per therm)				0.07647	
1st 30,000 therm Volume Charge/Nov-Mar (\$ per therm)					0.05636
Over 30,000 therm Volume Charge/Nov-Mar (\$ per therm)					0.04424
1st 30,000 therm Volume Charge/Apr-Oct (\$ per therm)					0.03565
Over 30,000 therm Volume Charge/Apr-Oct (\$ per therm)					0.02352

**Residential Rate Design (Pre-October 2018): Proposed Rate Increase**

Missouri Gas Energy Residential Rate Design			
Revenues	w/o ISRS	w/ ISRS	
Target Revenues	198,607,571	198,607,571	
Current Revenues (w/o and w/ ISRS)	155,681,828	166,756,215	
\$ Difference	42,925,743	31,851,356	
% Difference	27.6%	19.1%	
	<u>Total Use</u>	<u>Peak Use</u>	<u>Off-Peak Use</u>
Usage (Therms)	366,148,361	283,004,373	83,143,988
Number of Bills	5,621,516	2,839,927	2,781,589
Average Annual Use (Therms)	782		
Residential Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 198,473,765
<b>Proposed Rates</b>			
Customer Charge	\$ 25.50	5,621,516	\$ 143,348,664
Volume Charge	0.15055	366,148,361	55,125,101
Revenue at Proposed Rates			\$ 198,473,765
<b>Current Rates (w/o ISRS)</b>			
Customer Charge	\$ 23.00	5,621,516	\$ 129,294,874
Volume Charge (Per Therm)	0.07235	366,148,361	26,491,911
Revenue at Current Rates			\$ 155,786,785
		BF Adjustment	1.000674

### Residential Rate Design (Pre-October 2018): Bill Impact Analysis

Residential Rate Design			Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)
227	6%	1%	\$ 340	\$ 316	\$ 24	8%	\$ 452	\$ 428	\$ 24	6%
327	13%	5%	355	323	32	10%	517	485	32	7%
426	25%	12%	370	330	40	12%	581	541	40	7%
575	49%	31%	393	341	51	15%	677	626	51	8%
675	64%	46%	408	348	59	17%	742	683	59	9%
775	76%	59%	423	356	67	19%	806	739	67	9%
825	80%	64%	430	359	71	20%	838	767	71	9%
924	87%	73%	445	367	79	21%	903	824	79	10%
974	89%	77%	453	370	83	22%	935	852	83	10%
1,147	95%	86%	479	383	96	25%	1,046	950	96	10%

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

Landlord Customers Transferred from SGS			Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)
227			\$ 340	\$ 455	\$ (115)	-25%	\$ 452	\$ 567	\$ (115)	-20%
327			355	460	(105)	-23%	517	622	(105)	-17%
426			370	466	(96)	-21%	581	677	(96)	-14%
476			378	468	(91)	-19%	613	704	(91)	-13%
575			393	474	(81)	-17%	677	758	(81)	-11%
625			400	476	(76)	-16%	710	786	(76)	-10%
675			408	479	(71)	-15%	742	813	(71)	-9%
775			423	484	(62)	-13%	806	868	(62)	-7%
924			445	492	(47)	-10%	903	950	(47)	-5%
1,147			479	504	(25)	-5%	1,046	1,072	(25)	-2%

**Residential Rate Design (Post-October 2018): Proposed Rate Increase**

Missouri Gas Energy Residential Rate Design			
Revenues	w/o ISRS	w/ ISRS	
Target Revenues	198,607,571	198,607,571	
Current Revenues (w/o and w/ ISRS)	155,681,828	166,756,215	
\$ Difference	42,925,743	31,851,356	
% Difference	27.6%	19.1%	
	<u>Total Use</u>	<u>Peak Use</u>	<u>Off-Peak Use</u>
Usage (Therms)	366,148,361	283,004,373	83,143,988
Number of Bills	5,621,516	2,839,927	2,781,589
Average Annual Use (Therms)	782		
Residential Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 198,473,765
<b>Proposed Rates</b>			
Customer Charge	\$ 20.00	5,621,516	\$ 112,430,325
Volume Charge	0.23500	366,148,361	86,043,440
Revenue at Proposed Rates			\$ 198,473,765
<b>Current Rates (w/o ISRS)</b>			
Customer Charge	\$ 23.00	5,621,516	\$ 129,294,874
Volume Charge (Per Therm)	0.07235	366,148,361	26,491,911
Revenue at Current Rates			\$ 155,786,785
		BF Adjustment	1.000674

### Residential Bill Impact Analysis (Post-October 2018)

Residential Rate Design			Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)
227	6%	1%	\$ 293	\$ 316	\$ (23)	-7%	\$ 406	\$ 428	\$ (23)	-5%
327	13%	5%	317	323	(7)	-2%	478	485	(7)	-1%
426	25%	12%	340	330	10	3%	551	541	10	2%
575	49%	31%	375	341	34	10%	660	626	34	5%
675	64%	46%	399	348	50	14%	733	683	50	7%
775	76%	59%	422	356	66	19%	806	739	66	9%
825	80%	64%	434	359	74	21%	842	767	74	10%
924	87%	73%	457	367	91	25%	915	824	91	11%
974	89%	77%	469	370	99	27%	951	852	99	12%
1,147	95%	86%	510	383	127	33%	1,077	950	127	13%

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

Landlord Customers Transferred from SGS			Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)
227			\$ 293	\$ 455	\$ (162)	-36%	\$ 406	\$ 567	\$ (162)	-29%
327			317	460	(144)	-31%	478	622	(144)	-23%
426			340	466	(126)	-27%	551	677	(126)	-19%
476			352	468	(117)	-25%	587	704	(117)	-17%
575			375	474	(98)	-21%	660	758	(98)	-13%
625			387	476	(89)	-19%	696	786	(89)	-11%
675			399	479	(80)	-17%	733	813	(80)	-10%
775			422	484	(62)	-13%	806	868	(62)	-7%
924			457	492	(35)	-7%	915	950	(35)	-4%
1,147			510	504	5	1%	1,077	1,072	5	1%



### SGS Rate Design: Proposed Rate Increase

Missouri Gas Energy Small General Service Rate Design			
Revenues	w/o ISRS	w/ ISRS	
Target Revenues	20,655,038	20,655,038	
Current Revenues (w/o and w/ ISRS)	14,977,711	16,016,186	
\$ Difference	5,677,327	4,638,853	
% Difference	37.9%	29.0%	
	<b>Total Use</b>	<b>Peak Use</b>	<b>Off-Peak Use</b>
Usage (therms)	56,239,220	43,644,991	12,594,229
Number of Bills	355,642	182,573	173,069
Average Annual Use (Therms)	1,898		
Small General Service Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 20,507,128
<b>Proposed Rates</b>			
Customer Charge	\$ 40.00	355,642	\$ 14,225,680
Volume Charge	\$ 0.11169	56,239,220	6,281,447
Revenue at Proposed Rates			\$ 20,507,128
<b>Current Rates (w/o ISRS)</b>			
Customer Charge	\$ 34.00	355,642	\$ 12,091,828
Volume Charge (Per Therm)	\$ 0.05324	56,239,220	2,993,911
Revenue at Current Rates			\$ 15,085,740
		BF Adjustment	1.007213

### SGS Bill Impact Analysis

Small General Service Rate Design			Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)
100	6%	0%	\$ 491	\$ 448	\$ 43	10%	\$ 541	\$ 498	\$ 43	9%
350	20%	2%	519	462	57	12%	692	635	57	9%
750	43%	9%	564	483	81	17%	935	854	81	9%
1,500	65%	22%	648	523	125	24%	1,390	1,265	125	10%
2,000	72%	30%	703	550	154	28%	1,693	1,539	154	10%
3,500	84%	48%	871	629	242	38%	2,603	2,362	242	10%
5,000	91%	63%	1,038	709	329	46%	3,513	3,184	329	10%
6,500	95%	76%	1,206	789	417	53%	4,423	4,006	417	10%
7,500	97%	84%	1,318	842	475	56%	5,030	4,554	475	10%
10,000	100%	100%	1,597	975	622	64%	6,546	5,925	622	10%

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

### LGS Rate Design: Proposed Rate Increase

Missouri Gas Energy Large General Service Rate Design			
Revenues	w/o ISRS	w/ ISRS	
Target Revenues	14,003,741	14,003,741	
Current Revenues (w/o and w/ ISRS)	13,143,865	13,531,516	
\$ Difference	859,877	472,225	
% Difference	6.5%	3.5%	
	<b>Total Use</b>	<b>Peak Use</b>	<b>Off-Peak Use</b>
Usage (therms)	74,357,619	49,525,779	24,831,840
Number of Bills	39,157		
Average Annual Use (Therms)	22,788	66.6%	
Large General Service Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 14,354,620
<b>Proposed Rates</b>			
Customer Charge	\$ 125.00	39,157	\$ 4,894,593
Volume Charge (Nov-Mar)	\$ 0.14819	49,525,779	7,339,175
Volume Charge (Apr-Oct)	\$ 0.08541	24,831,840	2,120,853
Revenue at Proposed Rates			\$ 14,354,620
<b>Current Rates (w/o ISRS)</b>			
Customer Charge	\$ 115.40	39,157	\$ 4,518,688
Volume Charge (Nov-Mar) (Per Therm)	0.1301	49,525,779	6,442,236
Volume Charge (Apr-Oct) (Per Therm)	0.0750	24,831,840	1,861,658
Revenue at Current Rates			\$ 12,822,581
		BF Adjustment	0.975556

### LGS Bill Impact Analysis

Large General Service Rate Design			Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)
10,500	6%	3%	\$ 2,836	\$ 2,676	\$ 160	6%	\$ 8,033	\$ 7,873	\$ 160	2%
12,500	26%	13%	3,090	2,900	191	7%	9,277	9,086	191	2%
15,000	43%	22%	3,408	3,179	230	7%	10,832	10,603	230	2%
17,500	54%	31%	3,726	3,458	268	8%	12,388	12,119	268	2%
20,000	63%	38%	4,044	3,737	307	8%	13,943	13,636	307	2%
25,000	74%	48%	4,681	4,295	385	9%	17,054	16,668	385	2%
50,000	94%	77%	7,861	7,087	774	11%	32,607	31,833	774	2%
75,000	98%	86%	11,042	9,879	1,163	12%	48,161	46,998	1,163	2%
125,000	99%	93%	17,403	15,463	1,940	13%	79,268	77,328	1,940	3%
250,000	100%	98%	33,306	29,422	3,883	13%	157,036	153,152	3,883	3%

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

### LV Rate Design: Proposed Rate Increase

Missouri Gas Energy Large Volume Rate Design			
Revenues	w/o ISRS	w/ ISRS	
Target Revenues	15,278,027	15,278,027	
Current Revenues (w/o and w/ ISRS)	14,339,904	14,799,403	
\$ Difference	938,122	478,623	
% Difference	6.5%	3.2%	
	<b>Total Use</b>	<b>Peak Use</b>	<b>Off-Peak Use</b>
Usage (therms)	266,738,665	129,720,490	137,018,176
Number of Bills	4,745		
Average Annual Use (Therms)	674,522		
Large Volume Rate Design	Rate	Units	Revenues
		BF Adjustment	\$ 14,890,350
<b>Proposed Rates</b>			
Customer Charge	\$ 1,275.00	4,745	\$ 6,050,360
Additional Meter Charge	\$ 1,275.00	660	841,500
Additional Meter Charge	\$ 259.43	516	133,866
First 30,000 therms (Nov-Mar)	\$ 0.04485	37,706,755	1,691,021
Over 30,000 therms (Nov-Mar)	\$ 0.03520	92,013,735	3,239,117
First 30,000 therms (Apr-Oct)	\$ 0.02837	38,349,803	1,087,881
Over 30,000 therms (Apr-Oct)	\$ 0.01872	98,668,373	1,846,606
Revenue at Proposed Rates			\$ 14,890,350
<b>Current Rates (w/o ISRS)</b>			
Customer Charge	\$ 904.56	4,745	\$ 4,292,481
Additional Meter Charge	\$ 904.56	660	597,010
Additional Meter Charge	\$ 259.43	516	133,866
First 30,000 therms (Nov-Mar)	\$ 0.05525	37,706,755	2,083,483
Over 30,000 therms (Nov-Mar)	\$ 0.04337	92,013,735	3,990,870
First 30,000 therms (Apr-Oct)	\$ 0.03495	38,349,803	1,340,363
Over 30,000 therms (Apr-Oct)	\$ 0.02306	98,668,373	2,275,177
Revenue at Current Rates			\$ 14,713,249
		BF Adjustment	1.026035

### LV Bill Impact Analysis

Large Volume Rate Design			Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)	Proposed Annual Bill	Current Annual Bill	Difference (\$)	Difference (%)
30,000	4%	0%	\$ 16,387	\$ 13,126	\$ 3,262	25%	\$ 31,235	\$ 27,973	\$ 3,262	12%
50,000	12%	1%	17,112	14,019	3,093	22%	41,858	38,765	3,093	8%
75,000	24%	2%	18,019	15,136	2,883	19%	55,138	52,255	2,883	6%
182,500	49%	6%	21,916	19,937	1,979	10%	112,239	110,260	1,979	2%
250,000	57%	8%	24,357	22,945	1,412	6%	148,087	146,675	1,412	1%
375,000	66%	12%	28,570	28,136	434	2%	214,165	213,731	434	0%
675,000	78%	21%	36,730	38,189	(1,459)	-4%	370,801	372,260	(1,459)	0%
5,000,000	98%	67%	151,782	179,944	(28,161)	-16%	2,626,382	2,654,544	(28,161)	-1%
15,000,000	99%	84%	417,799	507,700	(89,900)	-18%	7,841,599	7,931,500	(89,900)	-1%
27,600,000	100%	100%	752,981	920,672	(167,691)	-18%	14,412,773	14,580,464	(167,691)	-1%

Note: Current Annual Bill includes Infrastructure System Replacement Surcharge (ISRS)

### LGS/LV Migration Bill Impact Analysis

LV Use Allocation			Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed LV Bill	Proposed LGS Bill	Difference (\$)	Difference (%)	Proposed LV Bill	Proposed LGS Bill	Difference (\$)	Difference (%)
75,000	24%	2%	\$ 18,019	\$ 10,277	\$ 7,742	75%	\$ 55,138	\$ 47,396	\$ 7,742	16%
100,000			\$ 18,925	\$ 13,163	5,762	44%	68,417	62,655	5,762	9%
125,000			\$ 19,831	\$ 16,049	3,783	24%	81,696	77,914	3,783	5%
150,000			\$ 20,737	\$ 18,934	1,803	10%	94,975	93,172	1,803	2%
182,500	49%	6%	\$ 21,916	\$ 22,687	(771)	-3%	112,239	113,009	(771)	-1%
200,000			\$ 22,550	\$ 24,707	(2,157)	-9%	121,534	123,691	(2,157)	-2%
250,000	57%	8%	\$ 24,357	\$ 30,478	(6,122)	-20%	148,087	154,208	(6,122)	-4%
300,000			\$ 26,110	\$ 36,250	(10,140)	-28%	174,586	184,726	(10,140)	-5%
325,000			\$ 26,953	\$ 39,136	(12,184)	-31%	187,802	199,985	(12,184)	-6%
350,000			\$ 27,778	\$ 42,022	(14,244)	-34%	201,000	215,244	(14,244)	-7%
375,000	66%	12%	\$ 28,570	\$ 44,908	(16,338)	-36%	214,165	230,503	(16,338)	-7%

LGS Use Allocation (Lower load factor than LV)			Annual Bill (w/o PGA)				Annual Bill (w/ PGA)			
Annual Use	Cumulative Bills	Cumulative Use	Proposed LV Bill	Proposed LGS Bill	Difference (\$)	Difference (%)	Proposed LV Bill	Proposed LGS Bill	Difference (\$)	Difference (%)
75,000			\$ 18,282	\$ 11,279	\$ 7,003	62%	\$ 55,401	\$ 48,398	\$ 7,003	14%
100,000			\$ 19,276	\$ 14,499	4,777	33%	68,768	63,991	4,777	7%
125,000			\$ 20,270	\$ 17,720	2,550	14%	82,135	79,585	2,550	3%
162,500			\$ 21,761	\$ 22,549	(789)	-3%	102,185	102,974	(789)	-1%
182,500			\$ 22,544	\$ 25,126	(2,582)	-10%	112,867	115,448	(2,582)	-2%
200,000			\$ 23,199	\$ 27,380	(4,181)	-15%	122,183	126,364	(4,181)	-3%
250,000			\$ 24,945	\$ 33,820	(8,875)	-26%	148,675	157,550	(8,875)	-6%
300,000			\$ 26,642	\$ 40,260	(13,618)	-34%	175,118	188,736	(13,618)	-7%
325,000			\$ 27,488	\$ 43,480	(15,992)	-37%	188,337	204,329	(15,992)	-8%
350,000			\$ 28,304	\$ 46,700	(18,397)	-39%	201,526	219,922	(18,397)	-8%
375,000			\$ 29,109	\$ 49,921	(20,812)	-42%	214,704	235,516	(20,812)	-9%

## Workpapers

### Basic Customer Costs

Basic Customer Costs	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume Srv LVS
<b>Basic Customer Costs</b>					
<b>Plant</b>					
376 - Mains	197,613,574	184,500,378	11,672,311	1,285,140	155,745
380 - Services	399,602,056	366,197,599	26,000,781	6,374,562	1,029,114
381 - Meters	40,249,691	27,386,110	7,411,999	3,467,303	1,984,279
382 - Meter installation	94,813,508	69,849,055	13,308,390	9,004,188	2,651,875
383 - House regulators	15,936,615	11,179,286	1,396,676	1,809,435	1,551,217
385 - Industrial Meas & Reg stations	1,004,461	-	-	-	1,004,461
<b>Total</b>	<b>749,219,904</b>	<b>659,112,428</b>	<b>59,790,156</b>	<b>21,940,627</b>	<b>8,376,692</b>
<b>Accumulated Depreciation</b>					
376 - Mains	(66,161,738)	(61,771,393)	(3,907,932)	(430,269)	(52,144)
380 - Services	(217,100,229)	(198,951,886)	(14,125,992)	(3,463,242)	(559,109)
381 - Meters	(5,606,851)	(3,814,932)	(1,032,504)	(483,001)	(276,414)
382 - Meter installation	(37,046,542)	(27,292,166)	(5,199,996)	(3,518,212)	(1,036,169)
383 - House regulators	(5,439,223)	(3,815,530)	(476,690)	(617,567)	(529,436)
385 - Industrial Meas & Reg stations	(252,432)	-	-	-	(252,432)
<b>Total</b>	<b>(331,607,016)</b>	<b>(295,645,907)</b>	<b>(24,743,114)</b>	<b>(8,512,292)</b>	<b>(2,705,703)</b>
<b>Net income before taxes &amp; interest</b>					
Net Plant	417,612,888	363,466,521	35,047,042	13,428,336	5,670,989
Net Income after taxes	32,156,192	\$ 27,986,922	\$ 2,698,622	\$ 1,033,982	\$ 436,666
Add: Income Taxes	11,893,978	10,351,842	998,170	382,451	161,515
<b>Net income before taxes &amp; interest</b>	<b>\$ 44,050,170</b>	<b>\$ 38,338,764</b>	<b>\$ 3,696,792</b>	<b>\$ 1,416,432</b>	<b>\$ 598,181</b>



Basic Customer Costs	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume Srv LVS
<b>Basic Customer Costs</b>					
<u>O&amp;M Expenses</u>					
874 - Mains & services expense	2,868,634	2,678,278	169,440	18,656	2,261
876 - Measurement & Reg - Industrial	-	-	-	-	-
878 - Meter and House Regulator	2,143,852	1,468,300	350,788	197,172	127,593
879 - Customer installation	939,433	692,080	131,862	89,215	26,275
887 - Maintenance of Mains	6,209,626	5,797,569	366,780	40,383	4,894
902 - Meter reading expense	1,976,539	1,845,381	116,747	12,854	1,558
903 - Customer records & collections	12,561,118	11,585,112	869,265	98,428	8,314
909 - Info & Inst Advertising	38,699	36,131	2,286	252	30
913 - Advertising	-	-	-	-	-
916 - Misc Sales Expense	5,500	3,008	2,244	247	2
<b>Total</b>	<b>26,743,402</b>	<b>24,105,858</b>	<b>2,009,411</b>	<b>457,207</b>	<b>170,927</b>
<u>Depreciation Expense</u>					
376 - Mains	3,517,522	3,284,107	207,767	22,875	2,772
380 - Services	10,709,335	9,814,096	696,821	170,838	27,580
381 - Meters	1,151,141	783,243	211,983	99,165	56,750
382 - Meter installation	2,711,666	1,997,683	380,620	257,520	75,844
383 - House regulators	388,853	272,774	34,079	44,150	37,850
385 - Industrial Meas & Reg stations	33,449	-	-	-	33,449
	18,511,966	16,151,902	1,531,270	594,549	234,245
Basic customer-related costs	89,305,538	\$ 78,596,524	\$ 7,237,474	\$ 2,468,188	\$ 1,003,353
Number of customers	501,755	468,460	29,637	3,263	395
Monthly basic cost per customer	\$ 14.83	\$ 13.98	\$ 20.35	\$ 63.03	\$ 211.44

## Workpapers

### Fully Allocated Customer Costs

	Total Company	Residential RS	Small General Srv SGS	Large General Srv LGS	Large Volume Srv LVS
<b>Fully Allocated Customer Costs</b>					
Rate Base	\$ 484,054,271	\$ 424,482,270	\$ 38,808,347	\$ 14,611,984	\$ 6,151,670
Net Income after taxes	37,272,179	32,685,135	2,988,243	1,125,123	473,679
Add: Income Taxes	<u>13,786,286</u>	<u>12,089,624</u>	<u>1,105,295</u>	<u>416,162</u>	<u>175,205</u>
Net income before taxes & interest	\$ 51,058,465	\$ 44,774,758	\$ 4,093,538	\$ 1,541,285	\$ 648,884
Add: O&M	77,128,011	67,883,261	6,450,577	1,759,420	1,034,753
Add: Depreciation	25,047,974	22,049,771	1,996,661	724,111	277,430
Add: Taxes other than income	15,781,126	13,922,805	1,252,799	432,252	173,270
Add: Interest on deposits	226,207	172,506	47,801	5,263	638
Required Customer Revenues	\$ 169,241,782	\$ 148,803,101	\$ 13,841,376	\$ 4,462,331	\$ 2,134,974
Number of Customers	<u>501,755</u>	<u>468,460</u>	<u>29,637</u>	<u>3,263</u>	<u>395</u>
Monthly cost per customer	\$ 28.11	\$ 26.47	\$ 38.92	\$ 113.96	\$ 449.91
Required Total Revenues	249,808,866	199,692,757	22,618,866	12,223,997	15,273,245

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI

In the Matter of Laclede Gas Company's )  
Request to Increase its Revenues for Gas ) File No. GR-2017-0215  
Service )

In the Matter of Laclede Gas Company )  
d/b/a Missouri Gas Energy's Request to ) File No. GR-2017-0216  
Increase its Revenues for Gas Service )

AFFIDAVIT

STATE OF MISSOURI )  
 ) SS.  
CITY OF ST. LOUIS )

Timothy S. Lyons, of lawful age, being first duly sworn, deposes and states:

1. My name is Timothy S. Lyons. My business address is 1900 West Park Road, Suite 250, Westborough, MA 01581 and I am a Partner at ScottMadden Inc..

2. Attached hereto and made a part hereof for all purposes is my direct testimony on behalf of Laclede Gas Company and MGE.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

*Timothy S. Lyons*

Timothy S. Lyons

Subscribed and sworn to before me this 29th day of March, 2017.

*Marcia A. Spangler*  
Notary Public

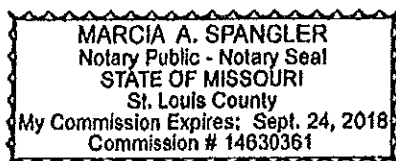


Exhibit No: 010  
Issue: Cash Working Capital  
Witness: Timothy S. Lyons  
Type of Exhibit: Direct Testimony  
Sponsoring Party: Laclede Gas Company;  
Missouri Gas Energy  
Case Nos.: GR-2017-0215; GR-2017-0216  
Date Prepared: April 11, 2017

**LACLEDE GAS COMPANY  
MISSOURI GAS ENERGY**

**GR-2017-0215  
GR-2017-0216**

**DIRECT TESTIMONY**

**OF**

**TIMOTHY S. LYONS**

**APRIL 2017**

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**DIRECT TESTIMONY OF TIMOTHY S. LYONS**

1 Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS  
2 ADDRESS.

3 A. My name is Timothy S. Lyons. I am a Partner at ScottMadden, Inc. My business  
4 address is 1900 West Park Drive, Suite 250, Westborough, Massachusetts 01581.

5 Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

6 A. I am submitting this testimony on behalf of Laclede Gas ("LAC") and Missouri  
7 Gas Energy ("MGE"), operating units of Laclede Gas Company ("Laclede" or  
8 "Company").

9 Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.

10 A. I have more than 30 years of experience in the energy industry. I started my  
11 career in 1985 at Boston Gas Company (now part of National Grid), eventually  
12 becoming Director of Rates and Revenue Analysis. In 1993, I moved to  
13 Providence Gas Company (also now part of National Grid), eventually becoming  
14 Vice President of Marketing and Regulatory Affairs. Starting in 2001, I held a  
15 number of management consulting positions in the energy industry first at KEMA  
16 and then at Quantec, LLC. In 2005, I became Vice President of Sales and  
17 Marketing at Vermont Gas Systems, Inc. before joining Sussex Economic  
18 Advisors, LLC ("Sussex") in 2013. Sussex was acquired by ScottMadden on  
19 June 1, 2016.

20 Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

21 A. I hold a Bachelor's degree from St. Anselm College, a Master's degree in  
22 Economics from The Pennsylvania State University, and a Master's degree in

1 Business Administration from Babson College. A summary of my professional  
2 and educational background, including a list of my testimony in prior  
3 proceedings, is included in Exhibit TSL-D1.

4

5

**I. PURPOSE AND OVERVIEW OF TESTIMONY**

6 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

7 A. The purpose of my testimony is to sponsor the lead-lag study. The lead-lag study  
8 is used to determine the Cash Working Capital (“CWC”) requirement for the  
9 Company.

10 **Q. HAVE YOU PREPARED EXHIBITS SUPPORTING YOUR TESTIMONY?**

11 A. Yes. Schedules TSL-D2 through TSL-D5 support the lead-lag study. The  
12 Schedules were prepared by me or under my direction.

13 **Q. PLEASE DEFINE THE TERM “CASH WORKING CAPITAL” AS A RATE**  
14 **BASE COMPONENT.**

15 A. The term “cash working capital” refers to the net funds required by the Company  
16 to pay for goods and services between the time they are paid for by the Company  
17 and the time payment is received by customers. For the Company, the cost of  
18 goods and services includes: operations and maintenance (“O&M”) expenses,  
19 including labor expenses and non-labor expenses; federal, state, and local taxes;  
20 employment taxes; and interest payments.

21 **Q. HOW DID YOU DETERMINE THE CWC REQUIREMENT?**

22 A. The CWC requirement was determined using the results of a lead-lag study,  
23 which compares the net difference between the revenue lag and the expense lag.

1 The revenue lag represents the number of days between the time customers  
2 receive their service and the time customer payments are made available to the  
3 Company. The longer the revenue lag, the more cash the Company needs to fund  
4 its day-to-day operations. The expense lag represents the number of days between  
5 the time the Company receives goods and services used to provide service, and  
6 the time payments are made for those goods and services, *i.e.*, when those funds  
7 are no longer available to the Company. The longer the expense lag, the less cash  
8 the Company needs to fund its day-to-day operations. Together, the revenue lag  
9 and expense lag measure the net lead/lag to determine the CWC requirement,  
10 which becomes a component of the Company's rate base.

11 **Q. DO THE RESULTS OF THE LEAD-LAG STUDY REPRESENT AN**  
12 **ACCURATE ASSESSMENT OF THE COMPANY'S CWC**  
13 **REQUIREMENT?**

14 **A.** Yes. The lead-lag study represents an accurate assessment of LAC and MGE's  
15 actual CWC needs during the test year by determining the requirements for both  
16 business units. Furthermore, the methods used to conduct this lead-lag study are  
17 generally consistent with those previously used by LAC and MGE in their most  
18 recent rate case proceedings, Nos. GR-2013-0171,<sup>1</sup> and GR-2014-0007<sup>2</sup>.

## 19 **II. LEAD-LAG STUDY APPROACH**

20 **Q. PLEASE SUMMARIZE THE APPROACH USED TO PREPARE THE**  
21 **LEAD-LAG STUDY AND ITS RESULTS.**

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<sup>1</sup> Laclede Gas Company, Order Approving Unanimous Stipulation and Agreement, No. GR-2013-0171, Order (July 8, 2013).

<sup>2</sup> MGE did not file a full lead-lag study in its most recent rate case proceeding, GR-2014-0007. The study was based on the results of the study filed in MGE's prior rate case proceeding, GR-2009-0355 (February 10, 2010).



1 A. The lead-lag study is summarized in Schedule TSL-D2 and TSL-D4, and shows  
2 that the net CWC is approximately \$21.6 million and \$7.1 million for LAC and  
3 MGE, respectively, based on the test year January 1, 2016 through December 31,  
4 2016. The CWC calculation is based on the results of the lead-lag study, which is  
5 applied to the test year amounts as adjusted in the Cost of Service model for  
6 O&M expenses, taxes, and interest expense. I relied on data supplied by the  
7 Company to prepare the lead-lag study, including: financial and customer data to  
8 determine the revenue lags, a sample of invoices to determine expense lags, and  
9 various other supporting documents. In addition, I reviewed the most recent lead-  
10 lag studies that were filed with the Commission

11 **Q. PLEASE DESCRIBE THE DEVELOPMENT OF THE LEAD-LAG STUDY.**

12 A. The lead-lag study consists of two elements: revenue lags and expense lags. The  
13 lags are measured in days, converted to dollar-days to create a weighted average,  
14 and summarized for each element in the lead-lag study. The difference between  
15 the revenue lag and the expense lag determines if there is a net revenue lag  
16 (revenue lag days are more than expense lag days for a component) or a net  
17 expense lead (revenue lag days are less than expense lag days for a component).  
18 The methodology used for both LAC and MGE to determine revenue and expense  
19 lags was consistent for all common revenue and expense items.

20 **Q. PLEASE DESCRIBE THE RESULTS OF YOUR LEAD-LAG STUDY.**

21 A. Schedules TSL-D3 and TSL-D5 provide the calculations of the CWC for LAC  
22 and MGE, respectively, based on the results of the lead-lag study. The Schedules  
23 show the total number of revenue lag days and expense lag days during the test

1 year. The net difference between the computed revenue lag days and expense lag  
2 days was then multiplied by the average daily revenue requirements to produce  
3 the net cash working capital requirement.

4  
5 i. **Revenue Lag**

6 **Q. PLEASE DESCRIBE THE CALCULATION OF THE REVENUE LAG.**

7 A. The calculation of the revenue lag is included in Schedules TSL-D2 and TSL-D4.  
8 The revenue lag is measured from the time service is provided to customers until  
9 the time payment is received from customers. The revenue lags are weighted by  
10 the billed revenues at current rates. This approach is generally consistent with  
11 LAC and MGE's most recent lead-lag studies that were filed with the  
12 Commission

13 **Q. PLEASE DESCRIBE THE COMPONENTS OF THE REVENUE LAG.**

14 A. The revenue lag is based on invoices issued during the test year to customers.  
15 The revenue lag consists of three components: (1) the service lag; (2) the billing  
16 lag; and (3) the collection lag. The total number of days produced by the three  
17 components represents the days from the time service is provided to customers  
18 until payment is received from customers.

19 **Q. WHAT IS THE SERVICE LAG FOR THOSE CUSTOMERS?**

20 A. The service lag represents the number of days from the midpoint of the period  
21 during which service is provided (i.e., the service period) to the end of the service  
22 period. Since service is provided on a monthly basis over the year, the service lag

1 for both Laclede Gas and MGE is one-half of a calendar month, or on average  
2 15.21 days.

3 **Q. WHAT IS THE BILLING LAG FOR THOSE CUSTOMERS?**

4 A. The billing lag represents the number of days from the end of the service period to  
5 the time invoices are issued to customers.

6 **Q. HAVE YOU MEASURED THE BILLING LAG DURING THE TEST**  
7 **YEAR?**

8 A. Yes. The billing lag during the test year was 2.17 days for both LAC and MGE,  
9 as shown on Schedules TSL-D3 and TSL-D5.

10 **Q. WHAT IS THE COLLECTION LAG FOR THOSE CUSTOMERS?**

11 A. The collection lag represents the number of days from the time invoices are issued  
12 to customers to when payment is received. Collection lag is calculated by  
13 dividing the Company's monthly revenues over the test year by the average daily  
14 accounts receivable balance to generate the turnover ratio. This ratio is then  
15 divided into 365, the number of days in the year, to derive the average collection  
16 lag days.

17 **Q. HAVE YOU MEASURED THE COLLECTION LAG DURING THE TEST**  
18 **YEAR?**

19 A. Yes. The collection lag during the test year is 33.78 days and 30.53 days for LAC  
20 and MGE, respectively, as shown on Schedules TSL-D3 and TSL-D5.

21 **Q. WHAT IS THE TOTAL REVENUE LAG IN THE LEAD-LAG STUDY?**

22 A. The total revenue lag in the lead-lag study is 51.16 days and 47.92 for LAC and  
23 MGE, respectively, as shown on Schedules TSL-D2 and TSL-D4.

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ii. Expense Lag

**Q. HOW DID YOU DETERMINE THE LAG DAYS FOR EXPENSES?**

A. The lag days for expenses were determined by first separating the expenses into four groups: (1) Operations and Maintenance (“O&M”) expenses, separated between purchased gas and non-gas O&M expenses; (2) Income Taxes; (3) Taxes Other than Income Taxes; and (4) Interest Payments on long-term debt. The lag days for each of these groups was measured independently.

**1. O&M Expenses**

**Q. HOW DID YOU DETERMINE THE LAG DAYS ASSOCIATED WITH O&M EXPENSES?**

A. O&M Expenses were differentiated into the following categories: Regular Payroll; Benefits; Missouri PSC Assessment; and Other O&M Expenses. The lag days for each of these categories were measured separately and calculated as the weighted lead-lag days for the O&M Expense category. Subtracted from this total were uncollectible expense and non-cash payments, which were removed from O&M expense to conform with the methodology used in prior cases.

**Q. HOW WERE THE LAG DAYS FOR THE REGULAR PAYROLL EXPENSES DETERMINED?**

A. The lag days for regular payroll expenses were determined based on the salary and wage payment schedule, which pays employees on a bi-weekly basis. Employees are paid on the Friday following the end of the pay period. If the

1 Friday payday falls on a holiday, the payment is made one day earlier, on  
2 Thursday. The lag days for regular payroll expenses were calculated by  
3 determining the average number of days between the midpoint of the pay period  
4 and the payment date to employees. The calculations were based on actual pay  
5 periods during the test year. The calculations show that the lag days for regular  
6 payroll expenses were 11.96 days for both LAC and MGE employees paid by  
7 direct deposit.

8 **Q. DID YOU MAKE AN ADJUSTMENT FOR THOSE EMPLOYEES WHO**  
9 **ARE PAID BY CHECK?**

10 A. It was unnecessary to make such an adjustment since all employees are paid by  
11 direct deposit.

12 **Q. HOW WERE THE LAG DAYS FOR THE BENEFITS EXPENSES**  
13 **DETERMINED?**

14 A. The lag days for Laclede Gas's Benefits Expenses were based on payments made  
15 to the pension plan at various points throughout the test year. The lag days were  
16 determined based on the days between the midpoint of the test period and the date  
17 payments were made. The lag days for Benefits were determined by weighing the  
18 amounts associated with those benefits – namely, Pension and Other Post-  
19 Retirement Benefits, Group Insurance, 401(k) matching expense, and Other  
20 Miscellaneous Benefits. Group Insurance is broken into five categories: Medical,  
21 Dental, Vision, Prescriptions, and Administrative Services Only (“ASO”) Fees.  
22 The lag days for each category were calculated and weighed by their respective

1 test year expense amounts to develop a composite lag for all Benefits Expenses of  
2 14.42 for LAC and 13.56 for MGE

3 **Q. HOW WERE THE LAG DAYS DETERMINED FOR THE MISSOURI PSC**  
4 **ASSESSMENT?**

5 A. The lag days for the Missouri PSC Assessment were calculated by taking the  
6 midpoint of each quarterly payment due and adding it to the lag between the end  
7 of the service period and the payment date. This amount was then weighed by the  
8 billed amount to generate the expense lag. The lag days for the Missouri PSC  
9 Assessment for both LAC and MGE were 38.93 days.

10 **Q. HOW WERE THE LAG DAYS DETERMINED FOR OTHER O&M**  
11 **EXPENSES?**

12 A. The lag days for Other O&M expenses were based on a study of a stratified  
13 sample of 413 invoices out of 47,986 invoices paid during the test year.  
14 Transactions that included payments in other components of the study – e.g.  
15 payroll, benefits, purchased gas – were removed. Invoices that had zero or  
16 negative amounts were removed from the sample. Strata of \$0-\$10, \$10.01-\$100,  
17 \$100.01-\$250, \$250.01-\$1,000, and \$1,000+ were established to ensure a  
18 representative distribution across all Other O&M expenses. To generate a  
19 statistically valid and random sample size, every 90<sup>th</sup> transaction from each  
20 stratum greater than \$10 was used and every 500<sup>th</sup> from the stratum of  
21 transactions less than \$10. The expense lag for each stratum was then calculated  
22 and weighed in proportion to the count of transactions in the broader population

1 to generate a weighted expense lag for each strata. The sum of these weighted  
2 expense lags represents the overall Other O&M expense lag.

3 **Q. DOES THIS METHODOLOGY DIFFER FROM THAT USED IN**  
4 **LACLEDE'S PRIOR CASES?**

5 A. Yes, this methodology differs from that in the prior case, which used a three-  
6 month sample from March, June, and October of the test year. By providing a  
7 stratified sample drawn from the entire test year, the study is more representative  
8 of Other O&M expenses for the test year. The study determined the lag days  
9 between the date services were provided to Laclede and the payment date for  
10 those services. If no information was available regarding the date services were  
11 provided, then the date of the invoice was used. If no payment information was  
12 available, the invoice was removed from the sample. The calculations show that  
13 the lag days for Other O&M expenses for both LAC and MGE were 36.90 days,  
14 which represents the sum of the service, check, and payment lags.

15 **Q. DID YOU MAKE AN ADJUSTMENT FOR CHECK FLOAT?**

16 A. Yes. An adjustment was made to total lag when necessary to reflect the "float"  
17 associated with a non-electronic payment.

18

19 **2. Current Income Tax Expense**

20 **Q. HOW WERE THE LAG DAYS DETERMINED FOR CURRENT INCOME**  
21 **TAXES?**

22 A. The lag days for federal and state income taxes were determined based on the  
23 number of days between the midpoint of the applicable period and the payment

1 date. The applicable period is the fiscal year. Payment of estimated tax for the  
2 year is made in quarterly payments on January 15, March 15, June 15, and  
3 September 15. The Company also filed a payment associated with an extension  
4 on December 15. If the scheduled payment date falls on a Saturday, Sunday, or  
5 legal holiday, the payment is due on the next regular business day. The  
6 calculations show that the lag days for Current Income Taxes for both LAC and  
7 MGE were 31.90 days.

8

9 **3. Taxes Other than Income Taxes**

10 **Q. WHAT TAXES ARE INCLUDED IN TAXES OTHER THAN INCOME**  
11 **TAXES?**

12 A. Taxes other than Income Taxes consists of: (1) Payroll Taxes (FICA, Federal  
13 Unemployment, and State Unemployment); (2) Property Taxes; (3) Gross Receipt  
14 Taxes; and (4) Other Taxes.

15 **Q. HOW WERE THE LAG DAYS DETERMINED FOR PAYROLL TAXES?**

16 A. Payroll taxes are paid at the time that payroll expense is recorded for each  
17 employee. Therefore, the lag for all payroll taxes matches the payroll expense lag.

18 **Q. HOW WERE THE LAG DAYS DETERMINED FOR PROPERTY TAXES?**

19 A. The lag days for Property Taxes were determined based on the number of days  
20 between the midpoint of the applicable period, and the due date, which was  
21 December 31, 2016. The calculations show that the lag days for Property Taxes  
22 for both LAC and MGE were 183.00 days.



1 Q. HOW WERE THE LAG DAYS DETERMINED FOR GROSS RECEIPT  
2 TAXES?

3 A. The lag days for Gross Receipt Taxes were determined based on the number of  
4 days between the midpoint of the applicable period and the payment date. Gross  
5 Receipt Taxes for the previous calendar year are generally paid on a monthly,  
6 quarterly, or annual basis. Based on discussions with the Company, there have  
7 been no significant changes in either lead/lag numbers or the proportion of Gross  
8 Receipt Taxes across the payment periods that would significantly impact the  
9 results of the calculation. Consequently, we have utilized numbers from a prior  
10 study. The calculations show that the lag days for Gross Receipt Taxes for both  
11 LAC and MGE were 45.54 days.

12 Q. HOW WERE THE LAG DAYS DETERMINED FOR OTHER TAXES?

13 A. Other Taxes is composed of two components: Sales Tax and Use Tax. Sales Tax is  
14 collected from customers and remitted to the state on a monthly basis. The  
15 calculations show that the lag days for Other Taxes were 40.31 days and 40.49  
16 days for LAC and MGE, respectively.

17

18 4. Interest Expense

19 Q. HOW WERE THE LAG DAYS DETERMINED FOR INTEREST  
20 EXPENSE?

21 A. The lag days for interest expense payments were calculated based on actual  
22 payments associated with long-term borrowings using the number of days  
23 between the midpoint of the applicable period and the payment date. The

1 calculations show that the lag days for Interest Expense for both LAC and MGE  
2 were 83.35 days. The methodology is consistent with that used in LAC's most  
3 recent study but is a slight variation with MGE's most recent study.  
4

5 **CONCLUSION**

6 **Q. WHAT WERE THE NET RESULTS OF THE LEAD-LAG STUDY?**

7 A. The lead-lag study is summarized in Schedules TSL-D2 and TSL-D4, and shows  
8 that the net CWC is approximately \$21.6 million and \$7.1 million for LAC and  
9 MGE, respectively, based on the test year January 1, 2016 through December 31,  
10 2016. I have provided these results to Company witness Keathley for inclusion in  
11 rate base.

12 **Q. DO THE RESULTS OF THE LEAD-LAG STUDY REPRESENT AN**  
13 **ACCURATE ASSESSMENT OF THE COMPANY'S CWC**  
14 **REQUIREMENT?**

15 A. Yes. The lead-lag study represents an accurate assessment of LAC and MGE's  
16 actual CWC needs during the test year. Furthermore, the methods used to conduct  
17 this lead-lag study are generally consistent with those previously filed with the  
18 Commission.

19 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

20 A. Yes, it does.



<b>Sponsor</b>	<b>Date</b>	<b>Docket No.</b>	<b>Subject</b>
<b>Regulatory Commission of Alaska</b>			
ENSTAR Natural Gas Company	06/16	Docket No. U-16-066	Adopted testimony and sponsored lead-lag study.
<b>Connecticut Public Utilities Regulatory Authority</b>			
Yankee Gas Company	07/14	Docket No. 13-06-02	Sponsored report and testimony for review and evaluation of gas expansion policies, procedures and analysis.
<b>Illinois Commerce Commission</b>			
Liberty Utilities (Midstates Natural Gas)	07/15	Docket No. 16-0401	Sponsored testimony for cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new commercial classes and a decoupling mechanism.
<b>Iowa Utilities Board</b>			
Liberty Utilities (Midstates Natural Gas)	07/15	Docket No. RPU-2016-0003	Sponsored testimony for cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new commercial classes.
<b>Maine Public Utilities Commission</b>			
Northern Utilities, Inc. d/b/a Unitil Gas Limited	06/15	Case No. 2015-00146	Sponsored testimony for proposed gas expansion program, including a zone area surcharge.
<b>Maryland Public Service Commission</b>			
Sandpiper Energy, Inc.	12/15	Case No. 9410	Sponsored testimony for cost of service, rate design and bill impact studies for a general rate case proceeding. The testimony includes proposal for new residential and commercial classes.
<b>Massachusetts Department of Public Utilities</b>			
Boston Gas	03/88	Docket No. DPU 88-67-II	Sponsored testimony for rate reclassification of commercial and industrial customers for rate design proceeding.
Boston Gas	03/90	DPU 90-55	Sponsored testimony for weather and other cost of service adjustments, rate design and customer bill impact studies for general rate case proceeding.
Boston Gas	10/93	DPU 92-230	Sponsored testimony describing the Company's position regarding rate treatment of vehicular natural gas investments and expenses.
<b>New Hampshire Public Utilities Commission</b>			
Liberty Utilities d/b/a Granite State Electric Company	04/16	Docket No. DE 16-383	Adopted testimony and sponsored lead-lag study.
<b>New Jersey Board of Public Utilities</b>			
Pivotal Utility Holdings, Inc. d/b/a Elizabethtown Gas Company	8/16	GR16090826	Sponsored testimony for lead-lag study



<i>Sponsor</i>	<i>Date</i>	<i>Docket No.</i>	<i>Subject</i>
<b><i>Rhode Island Public Utilities Commission</i></b>			
Providence Gas Company	01/96	Docket No. 2076	Sponsored testimony for rate reclassification of customers into new rate classes, rate design (including introduction of demand charges), and customer bill impact studies for rate design proceeding.
Providence Gas Company	11/92	Docket No. 2025	Sponsored testimony supporting the Integrated Resource Plan filing, including a performance-based incentive mechanism.
Providence Gas Company	02/96	Docket No. 2374	Sponsored testimony for rate design, customer bill impact studies and retail access tariffs for largest commercial and industrial customers for rate design proceeding.
Providence Gas Company	04/97	Docket No. 2552	Sponsored testimony for rate design, customer bill impact studies and retail access tariffs for commercial and industrial customers, including redesign of cost of gas adjustment clause, for rate design proceeding.
Providence Gas Company	08/01 09/00 08/96	Docket No. 1673	Sponsored testimony for changes in cost of gas adjustment factor related to projected under-recovery of gas costs; Filed testimony and witness for pilot hedging program to mitigate price risks to customers; Filed testimony and witness for changes in cost of gas adjustment factor related to extension of rate plan.
Providence Gas Company	06/97	Docket No. 2581	Sponsored testimony for rate plan that fixed rates for three-year period; included funding for critical infrastructure investments in accelerated replacement of mains and services, digitized records system, and economic development projects.
Providence Gas Company	08/00	Docket No. 2581	Sponsored testimony for extension of rate plan that began in 1997 and included certain modifications, including a weather normalization clause.
Providence Gas Company	03/00	Docket No. 3100	Sponsored testimony for de-tariff and deregulation of appliance repair service, enabling the Company to have needed pricing flexibility.
<b><i>Railroad Commission of Texas</i></b>			
CenterPoint Energy – Texas Gulf Division	11/16	GUD No. 10567	Sponsored testimony for lead-lag study.
Atmos Pipeline – Texas	01/17	GUD No. 10580	Sponsored testimony for lead-lag study.
<b><i>Vermont Public Service Board</i></b>			
Vermont Gas Systems	02/11	Docket No. 7712	Sponsored testimony for market evaluation and analysis to support establishment of system expansion and reliability fund.
Vermont Gas Systems	12/12	Docket No. 7970	Sponsored testimony describing the customers to be served by a \$90 million natural gas expansion project to Addison County, Vermont; also describing the benefits of the project as well as the Company's programs and service offerings.

LEAD/LAG STUDY WORKPAPERS

TSL-D2 Summary

Laclede Gas Company  
 Lead-Lag Study  
 Cash Working Capital Requirement  
 Summary

Line	Description	Revenue Requirement Amount	Average Daily Amount	Revenue Lag	Ref.	Expense Lag	Ref.	Net (Lead)/Lag Days	Working Capital Requirement
	<u>Operation and Maintenance Expenses</u>								
1	Purchased Gas Costs	\$ 302,328,240	828,297	51.16	A	(39.44)	B	11.72	9,709,096
2	Non-Gas O&M Expenses	\$ 180,822,158	495,403	51.16	A	(18.84)	C	32.32	16,010,581
3	<u>Income Taxes</u>								
4	Current Federal Income Taxes	\$ 10,079,456	27,615	51.16	A	31.90	D	83.06	2,293,744
5	State Income Taxes	\$ 1,583,945	4,340	51.16	A	31.90	D	83.06	360,453
6	<u>Taxes Other Than Income Taxes</u>								
7	Payroll Taxes	\$ 5,281,239	14,469	51.16	A	(11.96)	C	39.20	567,193
8	Property Taxes	\$ 16,317,372	44,705	51.16	A	(183.00)	E	(131.84)	(5,893,848)
9	Gross Receipt Taxes	\$ 33,503,393	91,790	51.16	A	(45.54)	F	5.63	516,365
10	Other Taxes	314,901	863	51.16	A	(40.31)	G	10.85	9,358
11	Interest Payments	\$ 21,924,033	60,066	51.16	A	(83.35)	H	(32.19)	(1,933,468)
12	<u>Subtotal</u>	<u>\$ 572,154,737</u>	<u>1,567,547</u>						<u>\$ 21,639,474</u>

LEAD/LAG STUDY WORKPAPERS

TSL-D3 (Tab A)

Laclede Gas Company  
Lead-Lag Study  
Revenue Collection Lag

Line	Description	Service Lag Service Period (365 days/ 12 months/ 2)	Billing Lag Transmission Date less Billing Date	Collection Lag Average Daily A/R Balance	Total Revenue Lag	Reference
1	Revenue Lag	15.21	2.17	33.78	51.16	WP A-1, A-2
2	<u>Composite Revenue Collection Days</u>	<u>15.21</u>	<u>2.17</u>	<u>33.78</u>	<u>51.16</u>	

LEAD/LAG STUDY WORKPAPERS

TSL-D3 (Tab B)

Laclede Gas Company  
Lead-Lag Study  
Purchased Gas

Line	Month	Service Period Start	Service Period End	Midpoint	Expense	(Lead)/Lag Days	Dollar Days	Composite (Lead)/Lag Days
1	January 2016	1/1/2016	01/31/16	(15.50)	\$ 34,303,876	(39.44)	\$ (1,352,859,483)	
2	February 2016	2/1/2016	02/29/16	(14.50)	\$ 27,622,535	(37.84)	\$ (1,045,299,777)	
3	March 2016	3/1/2016	03/31/16	(15.50)	\$ 20,480,845	(39.76)	\$ (814,268,154)	
4	April 2016	4/1/2016	04/30/16	(15.00)	\$ 10,541,920	(37.36)	\$ (393,883,900)	
5	May 2016	5/1/2016	05/31/16	(15.50)	\$ 13,845,021	(39.25)	\$ (543,348,090)	
6	June 2016	6/1/2016	06/30/16	(15.00)	\$ 16,847,800	(38.89)	\$ (655,225,556)	
7	July 2016	7/1/2016	07/31/16	(15.50)	\$ 22,098,269	(40.25)	\$ (889,465,847)	
8	August 2016	8/1/2016	08/31/16	(15.50)	\$ 23,207,788	(40.65)	\$ (943,387,765)	
9	September 2016	9/1/2016	09/30/16	(15.00)	\$ 21,523,543	(38.98)	\$ (839,031,479)	
10	October 2016	10/1/2016	10/31/16	(15.50)	\$ 19,478,209	(38.35)	\$ (747,024,172)	
11	November 2016	11/1/2016	11/30/16	(15.00)	\$ 15,801,303	(40.27)	\$ (636,309,040)	
12	December 2016	12/1/2016	12/31/16	(15.50)	\$ 55,651,729	(40.22)	\$ (2,238,407,092)	
13				Total	\$ 281,402,836		\$(11,098,510,356)	(39.44)

LEAD/LAG STUDY WORKPAPERS

TSL-D3 (Tab C)

Laclede Gas Company  
Lead-Lag Study  
O&M Expenses

Line	Description	Expense	(Lead)/Lag Days	Reference	Dollar Days
1	Regular Payroll Expenses	\$ 70,192,066	(11.96)	WP C-1	\$ (839,605,097)
2	Benefits Expenses	24,776,425	14.42	WP C-2	\$ 357,333,604
3	Labor-Related - Subtotal	\$ 94,968,491	(5.08)		\$ (482,271,493)
4	Missouri PSC Assessment	1,852,809	(38.93)	WP C-4	(72,129,089)
5	Other O&M	59,347,072	(36.90)	WP C-5	(2,189,933,821)
6	Subtotal - Non-Labor O&M Expenses	\$ 61,199,880	(36.96)		\$ (2,262,062,910)
7	Less: Uncollectible Expense	6,257,451			
8	Less: Other Non-Cash	4,272,025			
9	Total O&M Expenses	\$ 145,638,895	(18.84)		\$ (2,744,334,403)



LEAD/LAG STUDY WORKPAPERS

TSL-D3 (Tab D-1)

Laclede Gas Company  
 Lead-Lag Study  
 Federal Income Taxes

Line	Description	Service Period Start	Service Period End	Midpoint of Service Period	Payment Date	Percent of Taxes Due	(Lead)/Lag Days		
							Days from Midpoint to Payment Date	(Lead)/Lag Days	
1	First Payment	1/1/2016	12/31/2016	7/1/2016	1/15/2016	22.50%	168.00	37.80	
2	Second Payment	1/1/2016	12/31/2016	7/1/2016	3/15/2016	22.50%	108.00	24.30	
3	Third Payment	1/1/2016	12/31/2016	7/1/2016	6/15/2016	22.50%	16.00	3.60	
4	Fourth Payment	1/1/2016	12/31/2016	7/1/2016	9/15/2016	22.50%	(76.00)	(17.10)	
5	Extension	1/1/2016	12/31/2016	7/1/2016	12/15/2016	10.00%	(167.00)	(16.70)	
6	<b>Federal Income Tax (Lead)/Lag Days</b>								<b>31.90</b>

## LEAD/LAG STUDY WORKPAPERS

TSL-D3 (Tab D-2)

Laclede Gas Company  
Lead-Lag Study  
State Income Taxes

Line	Description	Service Period Start	Service Period End	Midpoint of Service Period	Payment Date	Percent of Taxes Due	(Lead)/Lag Days		
							Days from Midpoint to Payment Date	(Lead)/Lag Days	
1	First Payment	1/1/2016	12/31/2016	7/1/2016	1/15/2016	22.50%	168.00	37.80	
2	Second Payment	1/1/2016	12/31/2016	7/1/2016	3/15/2016	22.50%	108.00	24.30	
3	Third Payment	1/1/2016	12/31/2016	7/1/2016	6/15/2016	22.50%	16.00	3.60	
4	Fourth Payment	1/1/2016	12/31/2016	7/1/2016	9/15/2016	22.50%	(76.00)	(17.10)	
5	Extension	1/1/2016	12/31/2016	7/1/2016	12/15/2016	10.00%	(167.00)	(16.70)	
6	<u>State Income Tax (Lead)/Lag Days</u>								31.90

LEAD/LAG STUDY WORKPAPERS

TSL-D3 (Tab E)

Laclede Gas Company  
Lead-Lag Study  
Property Taxes

Line	Description	Service Period Start	Service Period End	Midpoint of Service Period	Payment Due Date	Payment Lag	Amount	(Lead)/Lag Days		Composite Lead- Lag Days
								Total (Lead)/Lag Days	Dollar Days	
1	Butler	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 57,441	(183.00)	\$ (10,511,778)	
2	City of St. Louis	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 5,112,423	(183.00)	\$ (935,573,343)	
3	Crawford	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 922	(183.00)	\$ (168,662)	
4	Franklin	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 683,534	(183.00)	\$ (125,086,632)	
5	Iron	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 5,384	(183.00)	\$ (985,239)	
6	Jefferson	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 523,306	(183.00)	\$ (95,765,062)	
7	Madison	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 8,439	(183.00)	\$ (1,544,403)	
8	St. Charles	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 1,447,129	(183.00)	\$ (264,824,580)	
9	St. Francois	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 213,363	(183.00)	\$ (39,045,339)	
10	St. Genevieve	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 36,233	(183.00)	\$ (6,630,601)	
11	St. Louis County	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 7,550,255	(183.00)	\$ (1,381,696,672)	
12	Warren	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 2,046	(183.00)	\$ (374,491)	
							<u>\$ 15,640,474</u>		<u>\$ (2,862,206,802)</u>	<u>(183.00)</u>

LEAD/LAG STUDY WORKPAPERS

TSL-D3 (Tab F)

Laclede Gas Company  
 Lead-Lag Study  
 Gross Receipt Taxes

Line	Description	Midpoint of Service Period	Payment Amount	Days from Midpoint to Payment	Check Float	Total Lead-Lag Days	Weighted Dollar-Days	Composite (Lead)/Lag Days
1	Monthly	(15.21)	\$ 36,784	(30.42)	7.67	(37.96)	\$ (1,396,131)	
2	Quarterly	(45.63)	\$ 1,935	(30.75)	7.67	(68.71)	\$ (132,944)	
3	Semi-Annual	(91.25)	\$ 3,390	(31.00)	7.67	(114.58)	\$ (388,386)	
4	<b>Total</b>		<b>\$ 42,108</b>				<b>\$ (1,917,461)</b>	<b>(45.54)</b>

LEAD/LAG STUDY WORKPAPERS

TSL-D3 (Tab G)

Laclede Gas Company  
Lead-Lag Study  
Other Taxes

Line	Description	Payment	Total (Lead)/Lag Days	Weighted Dollar- Days	Composite (Lead)/Lag Days
1	Sales Tax	\$ 8,204,103	(39.01)	\$(320,078,020)	
2	Use Tax	\$ 358,929	(70.04)	\$(25,139,601)	
3	<b>Total</b>	<b>\$ 8,563,032</b>		<b>\$(345,217,621)</b>	<b>(40.31)</b>

LEAD/LAG STUDY WORKPAPERS

TSL-D3 (Tab H)

Laclede Gas Company  
Lead-Lag Study  
Interest Expense Payment

Line	Description	Service Period Begin	Service Period End	Midpoint of Service Period	Payment Date	Amount	Payment Lag	Lead-Lag Days	Dollar-Days	Composite Lead-Lag Days
1	Int Acord - FMB 2.0%, Due August 15, 2018	8/29/2015	2/29/2016	(92.50)	02/24/2016	\$ 1,000,000	5.00	(87.50)	\$ (87,500,000)	
2	Int Acord - FMB 3.4%, Due August 15, 2023	8/29/2015	2/29/2016	(92.50)	02/24/2016	\$ 4,250,000	5.00	(87.50)	\$ (371,875,000)	
3	Int Acord - FMB 4.625%, Due August 15, 2043	8/29/2015	2/29/2016	(92.50)	02/24/2016	\$ 2,312,500	5.00	(87.50)	\$ (202,343,750)	
4	Int Acord - FMB 7 9/10% , Due Sep 15, 2030	9/30/2015	3/31/2016	(92.00)	03/15/2016	\$ 1,185,000	16.00	(76.00)	\$ (90,060,000)	
5	Interest Accrued 3.0% - FMB - Due March 15, 20.	9/30/2015	3/31/2016	(92.00)	03/15/2016	\$ 825,000	16.00	(76.00)	\$ (62,700,000)	
6	Interest Accrued 3.40% - FMB - Due March 15, 2	9/30/2015	3/31/2016	(92.00)	03/15/2016	\$ 765,000	16.00	(76.00)	\$ (58,140,000)	
7	Int Acord - FMB 5 1/2% , Due May 1, 2019	11/30/2015	5/31/2016	(92.00)	05/05/2016	\$ 1,375,000	26.00	(66.00)	\$ (90,750,000)	
8	Int Acord - FMB 6% , Due May 1, 2034	11/30/2015	5/31/2016	(92.00)	05/05/2016	\$ 3,000,000	26.00	(66.00)	\$ (198,000,000)	
9	Int Acord - FMB 7% , Due Jun 1, 2029	12/30/2015	6/30/2016	(92.00)	06/29/2016	\$ 875,000	1.00	(91.00)	\$ (79,625,000)	
10	Int Acord - FMB 2.0%, Due August 15, 2018	2/29/2016	8/31/2016	(92.50)	09/02/2016	\$ 1,000,000	(2.00)	(94.50)	\$ (94,500,000)	
11	Int Acord - FMB 3.4%, Due August 15, 2023	2/29/2016	8/31/2016	(92.50)	09/02/2016	\$ 4,250,000	(2.00)	(94.50)	\$ (401,625,000)	
12	Int Acord - FMB 4.625%, Due August 15, 2043	2/29/2016	8/31/2016	(92.50)	09/02/2016	\$ 2,312,500	(2.00)	(94.50)	\$ (218,531,250)	
13	Int Acord - FMB 7 9/10% , Due Sep 15, 2030	3/30/2016	9/30/2016	(92.50)	09/20/2016	\$ 1,185,000	10.00	(82.50)	\$ (97,762,500)	
14	Interest Accrued 3.0% - FMB - Due March 15, 20.	3/30/2016	9/30/2016	(92.50)	09/20/2016	\$ 825,000	10.00	(82.50)	\$ (68,062,500)	
15	Interest Accrued 3.40% - FMB - Due March 15, 2	3/30/2016	9/30/2016	(92.50)	09/20/2016	\$ 765,000	10.00	(82.50)	\$ (63,112,500)	
16	Int Acord - FMB 5 1/2% , Due May 1, 2019	5/30/2016	11/30/2016	(92.50)	11/17/2016	\$ 1,375,000	13.00	(79.50)	\$ (109,312,500)	
17	Int Acord - FMB 6% , Due May 1, 2034	5/30/2016	11/30/2016	(92.50)	11/17/2016	\$ 3,000,000	13.00	(79.50)	\$ (238,500,000)	
18	Int Acord - FMB 7% , Due Jun 1, 2029	6/30/2016	12/31/2016	(92.50)	12/14/2016	\$ 875,000	17.00	(75.50)	\$ (66,062,500)	
19	<b>Subtotal</b>					<b>\$ 31,175,000</b>			<b>\$ (2,598,462,500)</b>	<b>(83.35)</b>

LEAD/LAG STUDY WORKPAPERS

TSL-D4 Summary

Missouri Gas Energy  
Lead-Lag Study  
Cash Working Capital Requirement  
Summary

Line	Description	Revenue Requirement Amount	Average Daily Amount	Revenue Lag	Ref.	Expense Lag	Ref.	Net (Lead)/Lag Days	Working Capital Requirement
	<u>Operation and Maintenance Expenses</u>								
1	Purchased Gas Costs	\$ 209,704,476	574,533	47.92	A	(36.37)	B	11.54	6,631,384
2	Non-Gas O&M Expenses	\$ 106,327,800	291,309	47.92	A	(21.01)	C	26.91	7,837,685
3	<u>Income Taxes</u>								
4	Current Federal Income Taxes	\$ 2,710,018	7,425	47.92	A	31.90	D	79.82	592,616
5	State Income Taxes	\$ 425,868	1,167	47.92	A	31.90	D	79.82	93,127
6	<u>Taxes Other Than Income Taxes</u>								
7	Payroll Taxes	\$ 3,894,460	10,670	47.92	A	(11.96)	C	35.96	383,633
8	Property Taxes	\$ 19,418,142	53,200	47.92	A	(183.00)	E	(135.08)	(7,186,484)
9	Gross Receipt Taxes	\$ 24,439,784	66,958	47.92	A	(45.54)	F	2.38	159,395
10	Other Taxes	-	-	47.92	A	(40.49)	G	7.42	-
11	<u>Interest Payments</u>	\$ 14,106,850	38,649	47.92	A	(83.35)	H	(35.43)	(1,369,490)
12	Subtotal	\$ 381,027,399	1,043,911						\$ 7,141,865

LEAD/LAG STUDY WORKPAPERS

Missouri Gas Energy  
Lead-Lag Study  
Revenue Collection Lag

Line	Description	Service Lag Service Period (365 days/ 12 months/ 2)	Billing Lag Transmission Date less Billing Date	Collection Lag Average Daily A/R Balance	Total Revenue Lag	Reference
1	Revenue Lag	15.21	2.17	30.53	47.92	WP A-1, A-2
2	<u>Composite Revenue Collection Days</u>	<u>15.21</u>	<u>2.17</u>	<u>30.53</u>	<u>47.92</u>	



LEAD/LAG STUDY WORKPAPERS

Missouri Gas Energy  
Lead-Lag Study  
Purchased Gas

Line	Month	Service Period Start	Service Period End	Midpoint	Expense	(Lead)/Lag Days	Dollar Days	Composite (Lead)/Lag Days
1	January 2016	1/1/2016	01/31/16	(15.50)	\$ 16,272,532	(36.69)	\$ (597,057,004)	
2	February 2016	2/1/2016	02/29/16	(14.50)	\$ 17,260,013	(35.64)	(615,143,956)	
3	March 2016	3/1/2016	03/31/16	(15.50)	\$ 14,028,965	(34.41)	(482,731,461)	
4	April 2016	4/1/2016	04/30/16	(15.00)	\$ 15,950,257	(34.32)	(547,467,663)	
5	May 2016	5/1/2016	05/31/16	(15.50)	\$ 15,711,014	(35.99)	(565,363,077)	
6	June 2016	6/1/2016	06/30/16	(15.00)	\$ 13,568,108	(35.05)	(475,508,956)	
7	July 2016	7/1/2016	07/31/16	(15.50)	\$ 14,654,899	(36.17)	(530,075,571)	
8	August 2016	8/1/2016	08/31/16	(15.50)	\$ 14,316,577	(37.96)	(543,397,535)	
9	September 2016	9/1/2016	09/30/16	(15.00)	\$ 12,575,698	(35.93)	(451,843,636)	
10	October 2016	10/1/2016	10/31/16	(15.50)	\$ 13,673,129	(34.84)	(476,398,628)	
11	November 2016	11/1/2016	11/30/16	(15.00)	\$ 17,706,553	(37.25)	(659,585,368)	
12	December 2016	12/1/2016	12/31/16	(15.50)	\$ 33,028,647	(38.90)	(1,284,725,332)	
13			Total		\$ 198,746,394		\$ (7,229,298,186)	(36.37)

## LEAD/LAG STUDY WORKPAPERS

TSL-D5 (Tab C)

Page 1 of 1

Missouri Gas Energy  
Lead-Lag Study  
O&M Expenses

Line	Description	Expense	(Lead)/Lag Days	Reference	Dollar Days
1	Regular Payroll Expenses	\$ 34,722,026	(11.96)	WP C-1	\$ (415,328,849)
2	Benefits Expenses	13,161,044	13.56	WP C-2	\$ 178,508,659
3	<u>Labor-Related - Subtotal</u>	<u>\$ 47,883,070</u>	<u>(4.95)</u>		<u>\$ (236,820,190)</u>
4	Missouri PSC Assessment	1,852,809	(38.93)	WP C-4	(72,129,089)
5	Other O&M	41,778,281	(36.90)	WP C-5	(1,541,637,509)
6	<u>Subtotal - Non-Labor O&amp;M Expenses</u>	<u>\$ 43,631,090</u>	<u>(36.99)</u>		<u>\$ (1,613,766,598)</u>
7	Less: Uncollectible Expense	1,755,577			
8	Less: Other Non-Cash	1,684,278			
9	<u>Total O&amp;M Expenses</u>	<u>\$ 88,074,305</u>	<u>(21.01)</u>		<u>\$ (1,850,586,788)</u>

LEAD/LAG STUDY WORKPAPERS

Missouri Gas Energy  
Lead-Lag Study  
Federal Income Taxes

Line	Description	Service Period Start	Service Period End	Midpoint of Service Period	Payment Date	Percent of Taxes Due	(Lead)/Lag Days		
							Days from Midpoint to Payment Date	(Lead)/Lag Days	
1	First Payment	1/1/2016	12/31/2016	7/1/2016	1/15/2016	22.50%	168.00	37.80	
2	Second Payment	1/1/2016	12/31/2016	7/1/2016	3/15/2016	22.50%	108.00	24.30	
3	Third Payment	1/1/2016	12/31/2016	7/1/2016	6/15/2016	22.50%	16.00	3.60	
4	Fourth Payment	1/1/2016	12/31/2016	7/1/2016	9/15/2016	22.50%	(76.00)	(17.10)	
5	Extension	1/1/2016	12/31/2016	7/1/2016	12/15/2016	10.00%	(167.00)	(16.70)	
6	<b>Federal Income Tax (Lead)/Lag Days</b>								<b>31.90</b>

LEAD/LAG STUDY WORKPAPERS

Missouri Gas Energy  
Lead-Lag Study  
State Income Taxes

Line	Description	Service Period Start	Service Period End	Midpoint of Service Period	Payment Date	Percent of Taxes Due	(Lead)/Lag Days		
							Days from Midpoint to Payment Date	(Lead)/Lag Days	
1	First Payment	1/1/2016	12/31/2016	7/1/2016	1/15/2016	22.50%	168.00	37.80	
2	Second Payment	1/1/2016	12/31/2016	7/1/2016	3/15/2016	22.50%	108.00	24.30	
3	Third Payment	1/1/2016	12/31/2016	7/1/2016	6/15/2016	22.50%	16.00	3.60	
4	Fourth Payment	1/1/2016	12/31/2016	7/1/2016	9/15/2016	22.50%	(76.00)	(17.10)	
5	Extension	1/1/2016	12/31/2016	7/1/2016	12/15/2016	10.00%	(167.00)	(16.70)	
6	<b>State Income Tax (Lead)/Lag Days</b>								<b>31.90</b>

LEAD/LAG STUDY WORKPAPERS

Missouri Gas Energy  
Lead-Lag Study  
Property Taxes

Line	Description	Service Period Start	Service Period End	Midpoint of Service Period	Payment Due Date	Payment Lag	Amount	(Lead)/Lag Days		Composite Lead- Lag Days
								Total (Lead)/Lag Days	Dollar Days	
1	Andrew	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 24,641	(183.00)	\$ (4,509,330)	
2	Barry	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 125,881	(183.00)	\$ (23,036,159)	
3	Barton	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 24,599	(183.00)	\$ (4,501,538)	
4	Bates	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 2,162	(183.00)	\$ (395,651)	
5	Buchanan	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 519,621	(183.00)	\$ (95,090,680)	
6	Carroll	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 21,963	(183.00)	\$ (4,019,275)	
7	Cass	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 471,097	(183.00)	\$ (86,210,828)	
8	Cedar	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 36,135	(183.00)	\$ (6,612,720)	
9	Christian	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 210,322	(183.00)	\$ (38,488,856)	
10	Clay	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 2,860,147	(183.00)	\$ (523,406,813)	
11	Clinton	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 122,688	(183.00)	\$ (22,451,922)	
12	Cooper	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 2,793	(183.00)	\$ (511,049)	
13	Dade	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 11,687	(183.00)	\$ (2,138,706)	
14	Dekalb	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 20,186	(183.00)	\$ (3,694,073)	
15	Greene	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 108,286	(183.00)	\$ (19,816,369)	
16	Henry	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 7,693	(183.00)	\$ (1,407,826)	
17	Howard	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 47,164	(183.00)	\$ (8,631,100)	
18	Jackson	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 4,640,855	(183.00)	\$ (849,276,536)	
19	Jasper	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 543,015	(183.00)	\$ (99,371,672)	
20	Johnson	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 162,207	(183.00)	\$ (29,663,921)	
21	Lafayette	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 59,872	(183.00)	\$ (10,956,576)	
22	Lawrence	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 58,540	(183.00)	\$ (10,712,750)	
23	Mcdonald	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 30,885	(183.00)	\$ (5,651,911)	
24	Moniteau	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 9,145	(183.00)	\$ (1,673,614)	
25	Newton	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 92,014	(183.00)	\$ (16,838,487)	
26	Pettis	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 4,500	(183.00)	\$ (823,546)	
27	Platte	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 600,398	(183.00)	\$ (109,872,782)	
28	Ray	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 16,411	(183.00)	\$ (3,003,259)	
29	Saline	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 62,208	(183.00)	\$ (11,384,005)	
30	Stone	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 7,491	(183.00)	\$ (1,370,910)	
31	Vernon	01/01/16	12/31/16	(183.00)	12/31/2016	-	\$ 1,943	(183.00)	\$ (355,600)	
							\$ 10,906,549	\$ (1,995,898,467)	(183.00)	

LEAD/LAG STUDY WORKPAPERS

Missouri Gas Energy  
Lead-Lag Study  
Gross Receipt Taxes

Line	Description	Midpoint of Service Period	Payment Amount	Days from Midpoint to Payment	Check Float	Total Lead-Lag Days	Weighted Dollar-Days	Composite (Lead)/Lag Days
1	Monthly	(15.21)	\$ 36,784	(30.42)	7.67	(37.96)	\$ (1,396,131)	
2	Quarterly	(45.63)	\$ 1,935	(30.75)	7.67	(68.71)	\$ (132,944)	
3	Semi-Annual	(91.25)	\$ 3,390	(31.00)	7.67	(114.58)	\$ (388,386)	
4	<u>Total</u>		\$ 42,108				\$ (1,917,461)	(45.54)

LEAD/LAG STUDY WORKPAPERS

Missouri Gas Energy  
Lead-Lag Study  
Other Taxes

Line	Description	Payment	Payment (Lead)/Lag Days	Total (Lead)/Lag Days	Weighted Dollar-Days	Composite (Lead)/Lag Days
1	Sales Tax	\$ 6,313,130	(2.29)	(38.81)	\$(245,043,592)	
2	Use Tax	\$ 358,929	(83.98)	(70.04)	\$ (25,139,601)	
3	<b>Total</b>	<b>\$ 6,672,059</b>			<b>\$(270,183,193)</b>	<b>(40.49)</b>

LEAD/LAG STUDY WORKPAPERS

Missouri Gas Energy  
Lead-Lag Study  
Interest Expense Payment

Line	Description	Service Period	Service Period	Midpoint of	Payment Date	Amount	Payment Lag	Lead-Lag	Dollar-Days	Composite
		Begin	End	Service Period				Days		Lead-Lag
1	Int Accrd - FMB 2.0%, Due August 15, 2018	8/29/2015	2/29/2016	(92.50)	02/24/2016	\$ 1,000,000	5.00	(87.50)	\$ (87,500,000)	
2	Int Accrd - FMB 3.4%, Due August 15, 2023	8/29/2015	2/29/2016	(92.50)	02/24/2016	\$ 4,250,000	5.00	(87.50)	\$ (371,875,000)	
3	Int Accrd - FMB 4.625%, Due August 15, 2043	8/29/2015	2/29/2016	(92.50)	02/24/2016	\$ 2,312,500	5.00	(87.50)	\$ (202,343,750)	
4	Int Accrd - FMB 7 9/10% , Due Sep 15, 2030	9/30/2015	3/31/2016	(92.00)	03/15/2016	\$ 1,185,000	16.00	(76.00)	\$ (90,060,000)	
5	Interest Accrued 3.0% - FMB - Due March 15, 20	9/30/2015	3/31/2016	(92.00)	03/15/2016	\$ 825,000	16.00	(76.00)	\$ (62,700,000)	
6	Interest Accrued 3.40% - FMB - Due March 15, 2	9/30/2015	3/31/2016	(92.00)	03/15/2016	\$ 765,000	16.00	(76.00)	\$ (58,140,000)	
7	Int Accrd - FMB 5 1/2% , Due May 1, 2019	11/30/2015	5/31/2016	(92.00)	05/05/2016	\$ 1,375,000	26.00	(66.00)	\$ (90,750,000)	
8	Int Accrd - FMB 6% , Due May 1, 2034	11/30/2015	5/31/2016	(92.00)	05/05/2016	\$ 3,000,000	26.00	(66.00)	\$ (198,000,000)	
9	Int Accrd - FMB 7% , Due Jun 1, 2029	12/30/2015	6/30/2016	(92.00)	06/29/2016	\$ 875,000	1.00	(91.00)	\$ (79,625,000)	
10	Int Accrd - FMB 2.0%, Due August 15, 2018	2/29/2016	8/31/2016	(92.50)	09/02/2016	\$ 1,000,000	(2.00)	(94.50)	\$ (94,500,000)	
11	Int Accrd - FMB 3.4%, Due August 15, 2023	2/29/2016	8/31/2016	(92.50)	09/02/2016	\$ 4,250,000	(2.00)	(94.50)	\$ (401,625,000)	
12	Int Accrd - FMB 4.625%, Due August 15, 2043	2/29/2016	8/31/2016	(92.50)	09/02/2016	\$ 2,312,500	(2.00)	(94.50)	\$ (218,531,250)	
13	Int Accrd - FMB 7 9/10% , Due Sep 15, 2030	3/30/2016	9/30/2016	(92.50)	09/20/2016	\$ 1,185,000	10.00	(82.50)	\$ (97,762,500)	
14	Interest Accrued 3.0% - FMB - Due March 15, 20	3/30/2016	9/30/2016	(92.50)	09/20/2016	\$ 825,000	10.00	(82.50)	\$ (68,062,500)	
15	Interest Accrued 3.40% - FMB - Due March 15, 2	3/30/2016	9/30/2016	(92.50)	09/20/2016	\$ 765,000	10.00	(82.50)	\$ (63,112,500)	
16	Int Accrd - FMB 5 1/2% , Due May 1, 2019	5/30/2016	11/30/2016	(92.50)	11/17/2016	\$ 1,375,000	13.00	(79.50)	\$ (109,312,500)	
17	Int Accrd - FMB 6% , Due May 1, 2034	5/30/2016	11/30/2016	(92.50)	11/17/2016	\$ 3,000,000	13.00	(79.50)	\$ (238,500,000)	
18	Int Accrd - FMB 7% , Due Jun 1, 2029	6/30/2016	12/31/2016	(92.50)	12/14/2016	\$ 875,000	17.00	(75.50)	\$ (66,062,500)	
19	Subtotal					\$ 31,175,000			\$ (2,598,462,500)	(83.35)



**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of Laclede Gas Company's )  
Request to Increase its Revenues for Gas ) File No. GR-2017-0215  
Service )

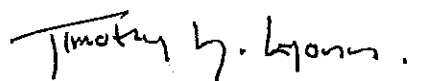
In the Matter of Laclede Gas Company )  
d/b/a Missouri Gas Energy's Request to ) File No. GR-2017-0216  
Increase its Revenues for Gas Service )

AFFIDAVIT

STATE OF MISSOURI )  
 ) SS.  
CITY OF ST. LOUIS )

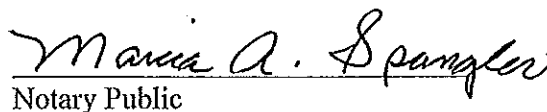
Timothy S. Lyons, of lawful age, being first duly sworn, deposes and states:

1. My name is Timothy S. Lyons. My business address is 1900 West Park Road, Suite 250, Westborough, MA 01581 and I am a Partner at ScottMadden Inc..
2. Attached hereto and made a part hereof for all purposes is my direct testimony on behalf of Laclede Gas Company and MGE.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.



\_\_\_\_\_  
Timothy S. Lyons

Subscribed and sworn to before me this 29th day of March, 2017.

  
\_\_\_\_\_  
Notary Public

