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July 31, 2001

FILED[2]
JUL 31 2001
Missouri Public Service Commission

Dale Hardy Roberts
Secretary/Chief Regulatory Law Judge
Missouri Public Service Commission
P.O. Box 360
Jefferson City, Missouri 65102

RE: *Greeley Gas Company,* Case No. GR-2001-36

Dear Mr. Roberts:

Pursuant to the Commission's Order Establishing ACA Balance And Closing Case issued on July 3, 2001, in the above-referenced matter, enclosed for filing are the original and eight (8) copies of the Greeley Gas Company Reliability Study–Missouri. A copy of the Reliability Study has been hand-delivered or mailed this date to parties of record.

Thank you for your attention to this matter.

Sincerely,

James M. Fischer

James M. Fischer

Enclosures

cc: Office of the Public Counsel
Dana K. Joyce

Greeley Gas Company
Reliability Study
Missouri

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Contents

Traditional Methodogy

Peak Day Design - Market Area (Year 1)
Williams Natural Gas System
Units in Mcf

						Projected Factors
Mean Temperature F	10	5	0	-5	-10	
Degree Days	55	60	65	70	75	
Residential Customers	14,175					
Baseload	855	855	855	855	855	0.0603
Heating Load	10,603	11,567	12,531	13,495	14,459	0.0136
Total	11,458	12,422	13,385	14,349	15,313	
Commercial Customers	1,051					
Baseload	233	233	233	233	233	0.2215
Heating Load	2,491	2,718	2,944	3,171	3,397	0.0431
Total	2,724	2,951	3,177	3,404	3,630	
Public Authority	204					
Baseload	40	40	40	40	40	0.1947
Heating Load	1,034	1,129	1,223	1,317	1,411	0.0922
Total	1,074	1,168	1,262	1,356	1,450	
Industrial	50	50	50	50	50	
Lost & Unaccounted For	260	280	300	320	340	
Total Requirements	15,566	16,870	18,175	19,479	20,784	
Total Requirements - MMBtu	15,815	17,140	18,466	19,791	21,116	

Mcf converted using 1.016
Lost & Uaccounted For = 2%

Subscribed Capacity	18,234	18,234	18,234	18,234	18,234
Flowing Capacity	9,389	9,389	9,389	9,389	9,389

Traditional Methodogy

Peak Day Design - Market Area (Year 2)
Williams Natural Gas System
Units in Mcf

						Projected Factors
Mean Temperature F	10	5	0	-5	-10	
Degree Days	55	60	65	70	75	
Residential Customers	14,459					
Baseload	836	836	836	836	836	0.0578
Heating Load	10,497	11,452	12,406	13,360	14,314	0.0132
Total	11,333	12,287	13,242	14,196	15,150	
Commercial Customers	1,051					
Baseload	226	226	226	226	226	0.2149
Heating Load	2,653	2,894	3,136	3,377	3,618	0.0459
Total	2,879	3,120	3,362	3,603	3,844	
Public Authority	204					
Baseload	35	35	35	35	35	0.1724
Heating Load	957	1,044	1,131	1,218	1,305	0.0853
Total	992	1,079	1,166	1,253	1,340	
Industrial	50	50	50	50	50	
Lost & Unaccounted For	260	280	300	320	340	
Total Requirements	15,514	16,817	18,119	19,422	20,724	
Total Requirements - MMBt	15,763	17,086	18,409	19,733	21,056	

Mcf converted using 1.016
Lost & Uaccounted For = 2%

Subscribed Capacity	18,234	18,234	18,234	18,234	18,234
Flowing Capacity	9,389	9,389	9,389	9,389	9,389

Traditional Methodogy

Peak Day Design - Market Area (Year 3)
Williams Natural Gas System
Units in Mcf

						Projected Factors
Mean Temperature F	10	5	0	-5	-10	
Degree Days	55	60	65	70	75	
Residential Customers	14,748					
Baseload	816	816	816	816	816	0.0553
Heating Load	10,464	11,415	12,366	13,317	14,269	0.0129
Total	11,279	12,231	13,182	14,133	15,084	
Commercial Customers	1,051					
Baseload	219	219	219	219	219	0.2084
Heating Load	2,815	3,071	3,327	3,583	3,839	0.0487
Total	3,034	3,290	3,546	3,802	4,058	
Public Authority	204					
Baseload	31	31	31	31	31	0.1501
Heating Load	879	958	1,038	1,118	1,198	0.0783
Total	909	989	1,069	1,149	1,229	
Industrial	50	50	50	50	50	
Lost & Unaccounted For	260	280	300	320	340	
Total Requirements	15,533	16,840	18,147	19,454	20,761	
Total Requirements - MMBt	15,781	17,109	18,437	19,765	21,093	

Mcf converted using 1.016
Lost & Uaccounted For = 2%

Subscribed Capacity	18,234	18,234	18,234	18,234	18,234
Flowing Capacity	9,389	9,389	9,389	9,389	9,389

Based on 2000 Data

Calculation of Baseload Factor for Peak Day Design - Market Area

A - From Sheet 4 (Actual Consumption from Banner E-Volume Reports)

	Actual			Normalized			
	July	August	September	July	August	September	Total
Residentail	24550	20380	24431	24550	20380	24431	69361
Commercial	8071	5454	7256	8071	5454	7256	20781
Public Authorit	1155	1037	1355	1155	1037	1355	3547

B - From Sheet 4 (Number of Customers from Banner E-Volume Reports)

	July	August	September	July	August	September	Avg
Residential	13547	13542	13537	13547	13542	13537	13542.0
Commercial	1017	1003	1009	1017	1003	1009	1009.7
Public Authorit	205	206	204	205	206	204	205.0

Average Consumption per Customer

	Baseload Consumption	Average No. of Customer	Average Baseload Consumption Per Customer
Residential	69361	13542.0	5.12
Commercial	20781	1009.7	20.58
Public Authorit	3547	205.0	17.30

Average Consumption per Customer Divided by the Total Number of Days

	Average Consumption Per Customer	No. of Days	Baseload Factor
Residential	5.12	91	0.0563
Commercial	20.58	91	0.2262
Public Authority	17.30	91	0.1901

Based on 2001 Data

Calculation of Heat Load Factor for Peak Day Design - Market Area

A. From sheet 4 (Actual Consumption from Banner E-Volumes Report)

	Mcf January	Mcf February	Customers January	Customers February
Residentail	295,579	223,529	13,896	13,917
Commercial	75,195	50,258	1,059	1,054
Public Authority	27,973	21,641	204	204

Minus : Baseload Consumption (See Baseload Factor Calculation)

	Mcf January	Mcf February	Customers January	Customers February
Residential	24,253	21,939	13,896	13,917
Commercial	7,426	6,676	1,059	1,054
Public Authority	1,202	1,086	204	204

Equals: Heat Sensitive Consumption (HSC)
(Total Consumption minus Baseload Consumption)

	Mcf January	Mcf February	Total Mcf	Customers
Residential	271,326	201,590	472,917	13,869
Commercial	67,769	43,582	111,351	1,043
Public Authority	26,771	20,555	47,326	204

B. Heat Load Per Customer Divided by Actual Degree Days = Heat Load Factor(HLF)

	January	February	Peak Month Factor
Cycle HDD =	1366	1097	2,463
Residential	0.0143	0.0133	0.0138
Commercial	0.0476	0.0381	0.0433
Public Authority	0.0961	0.0919	0.0942

Note:
Cycle Heating Degree Days are adjusted from Calender Heating Degree Days in the following manner: January - 12/15 thru 01/14; February - 01/15 thru 02/14

Based on 2001 Data

Calculation of Heat Load Factor for Peak Day Design - Market Area

A. From sheet 4 (Actual Consumption from Banner E-Volumes Report)

	Mcf November	Mcf December	Mcf January	Mcf February	Customers November	Customers December	Customers January	Customers February
Residentail	82,579	213,666	295,579	223,529	13,785	13,878	13,896	13,917
Commercial	14,778	42,037	75,195	50,258	1,020	1,038	1,059	1,054
Public Authority	6,859	20,731	27,973	21,641	203	204	204	204

Minus : **Baseload Consumption (See Baseload Factor Calculation)**

	Mcf November	Mcf December	Mcf January	Mcf February	Customers November	Customers December	Customers January	Customers February
Residential	23,283	24,221	24,253	21,939	13,785	13,878	13,896	13,917
Commercial	6,922	7,279	7,426	6,676	1,020	1,038	1,059	1,054
Public Authority	1,158	1,202	1,202	1,086	203	204	204	204

Equals: **Heat Sensitive Consumption (HSC)**
(Total Consumption minus Baseload Consumption)

	Mcf November	Mcf December	Mcf January	Mcf February	Total Mcf	Average No. of Customers
Residential	59,296	189,445	271,326	201,590	721,657	13,869
Commercial	7,856	34,758	67,769	43,582	153,966	1,043
Public Authority	5,701	19,529	26,771	20,555	72,556	204

B. Heat Load Per Customer Divided by Actual Degree Days = Heat Load Factor(HLF)

	November	December	January	February	Peak Month Factor
Cycle HDD =	396	1021	1366	1097	3,880
Residential	0.0108	0.0134	0.0143	0.0133	0.0134
Commercial	0.0190	0.0326	0.0476	0.0381	0.0381
Public Authority	0.0707	0.0939	0.0962	0.0920	0.0918

Note:
1) Baseload Factor baseload months during 2001.
baseload months during 2001.

2) Cycle Heating Degree Days are adjusted from Calender Heating Degree Days in the following manner: January - 12/15 thru 01/14; February - 01/15 thru 02/14

Greeley Gas Company
Baseload and Heatload Consumption Factors

BASELOAD FACTORS

	Market Zone						
Year	Residential	Residential Delta	Commercial	Commercial Delta	Public Authority	Pub. Auth. Delta	Industrial
1995	0.0689		0.2590				2.8855
1996	0.0655	-0.0034	0.2713	0.0123			0.9670
1997	0.0620	-0.0035	0.2113	-0.0600			0.8571
1998	0.0651	0.0031	0.1924	-0.0189	0.2485		
1999	0.0594	-0.0057	0.2080	0.0156	0.2124	-0.0361	
2000	0.0563	-0.0031	0.2262	0.0182	0.1901	-0.0223	
2001							
2002							
2003							
Projected Factors							
Average Delta		-0.0025		-0.0066		-0.0223	
Year 1	0.0603		0.2215		0.1947		
Year 2	0.0578		0.2149		0.1724		
Year 3	0.0553		0.2084		0.1501		

HEATLOAD FACTORS

	Market Zone						
Year	Residential	Residential Delta	Commercial	Commercial Delta	Public Authority	Pub. Auth. Delta	Industrial
1999	0.0145		0.0377		0.1081		
2000	0.0135	-0.0010	0.0398	0.0021	0.0952	-0.0129	
2001	0.0138	0.0003	0.0433	0.0035	0.0942	-0.0010	
2002							
2003							
Projected Factors							
Average Delta		-0.0004		0.0028		-0.0070	
Year 1	0.0136		0.0431		0.0922		
Year 2	0.0132		0.0459		0.0853		
Year 3	0.0129		0.0487		0.0783		

Year 1 = Average of the factors over the last three years
Year 2 & 3 = Average plus the average Delta

Greeley Gas Company
Baseload and Heatload Consumption Factors

BASELOAD FACTORS

	Market Zone						
Year	Residential	Residential Delta	Commercial	Commercial Delta	Public Authority	Pub. Auth. Delta	Industrial
1995	0.0689		0.2590				2.8855
1996	0.0655	-0.0034	0.2713	0.0123			0.9670
1997	0.0620	-0.0035	0.2113	-0.0600			0.8571
1998	0.0651	0.0031	0.1924	-0.0189	0.2485		
1999	0.0594	-0.0057	0.2080	0.0156	0.2124	-0.0361	
2000	0.0563	-0.0031	0.2262	0.0182	0.1901	-0.0223	
2001							
2002							
2003							
Projected Factors							
Average Delta		-0.0025		-0.0066		-0.0223	
Year 1	0.0603		0.2215		0.1947		
Year 2	0.0578		0.2149		0.1724		
Year 3	0.0553		0.2084		0.1501		

HEATLOAD FACTORS (Includes November and December in calculations)

	Market Zone						
Year	Residential	Residential Delta	Commercial	Commercial Delta	Public Authority	Pub. Auth. Delta	Industrial
2001	0.0134	0.0000	0.0381	0.0000	0.0918	0.0000	
2002							
2003							
Projected Factors							
Average Delta		0.0000		0.0000		0.0000	
Year 1	0.0134		0.0381		0.0918		
Year 2	0.0134		0.0381		0.0918		
Year 3	0.0134		0.0381		0.0918		

Greeley Gas Company
WNG Peak Day Study
Winter Growth Statistics
For the Months of December, January, and February

Williams Central Pipeline System - Total Market

RESIDENTIAL CUSTOMERS

Year	Average Customers	Delta	Annual Growth Percent	Expected Annual Growth	Expected Number of Customers
1995					
1996	12,232				
1997	12,491	259	2.00%		
1998	12,726	235	2.00%		
1999	13,275	549	4.00%		
2000	13,603	328	2.00%		
2001	13,897	294	2.00%		
Expected Growth - Year 1			2.00%	278	14,175
Expected Growth - Year 2			2.00%	284	14,459
Expected Growth - Year 3			2.00%	289	14,748

COMMERCIAL CUSTOMERS

Year	Average Customers	Delta	Annual Growth Percent	Expected Annual Growth	Expected Number of Customers
1995					
1996	1,151				
1997	1,539	388	25.00%		
1998	1,176	-363	-31.00%		
1999	1,039	-137	-13.00%		
2000	1,049	10	1.00%		
2001	1,051	2	0.00%		
Expected Growth - Year 1			0.00%	0	1,051
Expected Growth - Year 2			0.00%	0	1,051
Expected Growth - Year 3			0.00%	0	1,051

PUBLIC AURTHORITY CUSTOMERS

Year	Average Customers	Delta	Annual Growth Percent	Expected Annual Growth	Expected Number of Customers
1995					
1996	0				
1997	0	0	0.00%		
1998	0	0	#DIV/0!		
1999	204	204	100.00%		
2000	205	1	0.00%		
2001	204	-1	0.00%		
Expected Growth - Year 1			0.00%	0	204
Expected Growth - Year 2			0.00%	0	204
Expected Growth - Year 3			0.00%	0	204

Greeley Gas Company
Summary of Tests Results
Comparison of Peak Day Model to Actual Peak Day Requirements

GR-01-394; Data Request No. 45
Schedule B-1

Test Number	1	2	3	4	5	6	7	8
Actual Heating Degree Days	41	57	53	60	57	45	58	33
Day of the Week	Monday	Monday	Monday	Monday	Tuesday	Thursday	Friday	Thursday
Date	November 20, 2000	December 11, 2000	December 18, 2000	January 1, 2001	January 2, 2001	February 1, 2001	February 9, 2001	March 1, 2001
Actual Day Comparison								
(1) Calculation w/ Est. Factors	11,817	16,102	15,056	16,964	16,080	12,961	16,361	9,820
(2) Actual	7,986	16,488	14,419	13,348	12,493	11,799	13,052	8,379
Variance Volume	-3,831	386	-637	-3,616	-3,587	-1,162	-3,309	-1,441
Variance Percent	-32.4%	2.4%	-4.2%	-21.3%	-22.3%	-9.0%	-20.2%	-14.7%

(1) Result of projected peak day baseload and heatload factors from model times actual heating degree days times actual number of customers.
(2) Actual pipeline deliveries less third party transportation.

Selection Criteria = the peak days from the two shoulder months (November & March); two peak days from the remaining winter months.

GR-01-394; Data Request No. 45
Schedule B-2

Test Day # 1

Peak Day Design - Market Area **Williams Natural Gas System** **Units in Mcf**		Actual Factors 2000	Projected Factors	Projected Load
Actual Mean Temperature F	24			
Actual Degree Days November 20, 2000	41			
Residential Customers	13,785			
Baseload	776	0.0563	0.0603	831
Heating Load	7,573	0.0134	0.0136	7,687
Total	8,350			8,518
Commercial Customers	1,020			
Baseload	231	0.2262	0.2215	226
Heating Load	1,656	0.0396	0.0431	1,802
Total	1,887			2,028
Public Authority	203			
Baseload	39	0.1901	0.1947	40
Heating Load	787	0.0946	0.0922	767
Total	826			807
Industrial	50			50
Customer Requirements	11,112			11,403
Lost & Unaccounted For	222			228
Total Requirements	11,334			11,631
Total Requirements - MMBtu Mcf converted using 1.016 Lost & Uaccounted For = 2%	11,516			11,817
WNG Deliveries	8,370			8,370
Less: Transportation	384			384
Greeley Deliveries	7,986			7,986
(Over)/Under Estimated	-3,530			-3,831
Percent	-30.7%			-32.4%

GR-01-394; Data Request No. 45
Schedule B-2

Test Day # 2

Peak Day Design - Market Area **Williams Natural Gas System** **Units in Mcf**		Actual Factors 2000	Projected Factors	Projected Load
Actual Mean Temperature F	7			
Actual Degree Days December 11, 2000	57			
Residential Customers	13,878			
Baseload	781	0.0563	0.0603	837
Heating Load	10,600	0.0134	0.0136	10,758
Total	11,381			11,595
Commercial Customers	1,038			
Baseload	235	0.2262	0.2215	230
Heating Load	2,343	0.0396	0.0431	2,550
Total	2,578			2,780
Public Authority	204			
Baseload	39	0.1901	0.1947	40
Heating Load	1,100	0.0946	0.0922	1,072
Total	1,139			1,112
Industrial	50			50
Customer Requirements	15,148			15,537
Lost & Unaccounted For	303			311
Total Requirements	15,451			15,848
Total Requirements - MMBtu Mcf converted using 1.016 Lost & Uaccounted For = 2%	15,698			16,102
WNG Deliveries	17,124			17,124
Less: Transportation	636			636
Greeley Deliveries	16,488			16,488
(Over)/Under Estimated	790			386
Percent	5.0%			2.4%

GR-01-394; Data Request No. 45
Schedule B-2

Test Day # 3

Peak Day Design - Market Area **Williams Natural Gas System** **Units in Mcf**		Actual Factors 2000	Projected Factors	Projected Load
Actual Mean Temperature F	12			
Actual Degree Days December 18, 2000	53			
Residential Customers	13,878			
Baseload	781	0.0563	0.0603	837
Heating Load	9,856	0.0134	0.0136	10,003
Total	10,637			10,840
Commercial Customers	1,038			
Baseload	235	0.2262	0.2215	230
Heating Load	2,179	0.0396	0.0431	2,371
Total	2,413			2,601
Public Authority	204			
Baseload	39	0.1901	0.1947	40
Heating Load	1,023	0.0946	0.0922	997
Total	1,062			1,037
Industrial	50			50
Customer Requirements	14,162			14,528
Lost & Unaccounted For	283			291
Total Requirements	14,445			14,819
Total Requirements - MMBtu Mcf converted using 1.016 Lost & Uaccounted For = 2%	14,677			15,056
WNG Deliveries	15,055			15,055
Less: Transportation	636			636
Greeley Deliveries	14,419			14,419
(Over)/Under Estimated	-258			-637
Percent	-1.8%			-4.2%

GR-01-394; Data Request No. 45
Schedule B-2

Test Day # 4

Peak Day Design - Market Area **Williams Natural Gas System** **Units in Mcf**		Actual Factors 2001	Projected Factors	Projected Load
Actual Mean Temperature F	5			
Actual Degree Days January 1, 2001	60			
Residential Customers	13,896			
Baseload	782	0.0563	0.0603	838
Heating Load	13,757	0.0165	0.0136	11,339
Total	14,539			12,177
Commercial Customers	1,059			
Baseload	240	0.2262	0.2215	235
Heating Load	3,285	0.0517	0.0431	2,739
Total	3,525			2,974
Public Authority	204			
Baseload	39	0.1901	0.1947	40
Heating Load	1,376	0.1124	0.0922	1,129
Total	1,415			1,169
Industrial	50			50
Customer Requirements	19,529			16,370
Lost & Unaccounted For	391			327
Total Requirements	19,920			16,697
Total Requirements - MMBtu Mcf converted using 1.016 Lost & Uaccounted For = 2%	20,238			16,964
WNG Deliveries	14,003			14,003
Less: Transportation	655			655
Greeley Deliveries	13,348			13,348
(Over)/Under Estimated	-6,890			-3,616
Percent	-34.0%			-21.3%

GR-01-394; Data Request No. 45
Schedule B-2

Test Day # 5

Peak Day Design - Market Area **Williams Natural Gas System** **Units in Mcf**		Actual Factors 2001	Projected Factors	Projected Load
Actual Mean Temperature F	8			
Actual Degree Days January 2, 2001	57			
Residential Customers	13,896			
Baseload	782	0.0563	0.0603	838
Heating Load	13,069	0.0165	0.0136	10,772
Total	13,852			11,610
Commercial Customers	1,059			
Baseload	240	0.2262	0.2215	235
Heating Load	3,121	0.0517	0.0431	2,602
Total	3,360			2,837
Public Authority	204			
Baseload	39	0.1901	0.1947	40
Heating Load	1,307	0.1124	0.0922	1,072
Total	1,346			1,112
Industrial	50			50
Customer Requirements	18,608			15,609
Lost & Unaccounted For	372			312
Total Requirements	18,980			15,921
Total Requirements - MMBtu Mcf converted using 1.010 Lost & Uaccounted For = 2%	19,169			16,080
WNG Deliveries	13,148			13,148
Less: Transportation	655			655
Greeley Deliveries	12,493			12,493
(Over)/Under Estimated	-6,676			-3,587
Percent	-34.8%			-22.3%

GR-01-394; Data Request No. 45
Schedule B-2

Test Day # 6

Peak Day Design - Market Area **Williams Natural Gas System** **Units in Mcf**		Actual Factors 2001	Projected Factors	Projected Load
Actual Mean Temperature F	20			
Actual Degree Days February 1, 2001	45			
Residential Customers	13,917			
Baseload	784	0.0563	0.0603	839
Heating Load	10,333	0.0165	0.0136	8,517
Total	11,117			9,356
Commercial Customers	1,054			
Baseload	238	0.2262	0.2215	233
Heating Load	2,452	0.0517	0.0431	2,044
Total	2,691			2,277
Public Authority	204			
Baseload	39	0.1901	0.1947	40
Heating Load	1,032	0.1124	0.0922	846
Total	1,071			886
Industrial	50			50
Customer Requirements	14,928			12,569
Lost & Unaccounted For	299			251
Total Requirements	15,227			12,820
Total Requirements - MMBtu Mcf converted using 1.011 Lost & Uaccounted For = 2%	15,395			12,961
WNG Deliveries	12,334			12,334
Less: Transportation	535			535
Greeley Deliveries	11,799			11,799
(Over)/Under Estimated	-3,596			-1,162
Percent	-23.4%			-9.0%

GR-01-394; Data Request No. 45
Schedule B-2

Test Day # 7

Peak Day Design - Market Area **Williams Natural Gas System** **Units in Mcf**		Actual Factors 2001	Projected Factors	Projected Load
Actual Mean Temperature F	7			
Actual Degree Days February 9, 2001	58			
Residential Customers	13,917			
Baseload	784	0.0563	0.0603	839
Heating Load	13,319	0.0165	0.0136	10,978
Total	14,102			11,817
Commercial Customers	1,054			
Baseload	238	0.2262	0.2215	233
Heating Load	3,161	0.0517	0.0431	2,635
Total	3,399			2,868
Public Authority	204			
Baseload	39	0.1901	0.1947	40
Heating Load	1,330	0.1124	0.0922	1,091
Total	1,369			1,131
Industrial	50			50
Customer Requirements	18,920			15,866
Lost & Unaccounted For	378			317
Total Requirements	19,298			16,183
Total Requirements - MMBtu Mcf converted using 1.011 Lost & Uaccounted For = 2%	19,510			16,361
WNG Deliveries	13,587			13,587
Less: Transportation	535			535
Greeley Deliveries	13,052			13,052
(Over)/Under Estimated	-6,458			-3,309
Percent	-33.1%			-20.2%

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Schedule B-2

Test Day # 8

Peak Day Design - Market Area **Williams Natural Gas System** **Units in Mcf**		Actual Factors 2001	Projected Factors	Projected Load
Actual Mean Temperature F	31			
Actual Degree Days March 1, 2001	33			
Residential Customers	13,907			
Baseload	783	0.0563	0.0603	839
Heating Load	7,572	0.0165	0.0136	6,241
Total	8,355			7,080
Commercial Customers	1,054			
Baseload	238	0.2262	0.2215	233
Heating Load	1,798	0.0517	0.0431	1,499
Total	2,037			1,732
Public Authority	204			
Baseload	39	0.1901	0.1947	40
Heating Load	757	0.1124	0.0922	621
Total	795			661
Industrial	50			50
Customer Requirements	11,237			9,523
Lost & Unaccounted For	225			190
Total Requirements	11,462			9,713
Total Requirements - MMBtu Mcf converted using 1.011 Lost & Uaccounted For = 2%	11,589			9,820
WNG Deliveries	8,755			8,755
Less: Transportation	376			376
Greeley Deliveries	8,379			8,379
(Over)/Under Estimated	-3,210			-1,441
Percent	-27.7%			-14.7%

Greeley Gas Company
Reserve Margin Calculation
Schedule C

GR-01-0394

Peak Day Design (-10 Mean Temp. & 75 HDD)

	ACA Peak Day 12/11/00	Forecasted Peak Day Year 1	Year 2	Year 3
Residential	11,943	15,313	15,150	15,084
Commercial	2,704	3,630	3,844	4,058
Public Authority	1,193	1,450	1,340	1,229
Industrial	64	50	50	50
Requirements	15,903	20,443	20,384	20,421
Lost & Unaccounted	325	340	340	340
Total Customers Requirements	16,228	20,783	20,724	20,761
Btu Factor	1.016	1.016	1.016	1.016
Peak Day Requirements	16,488	21,116	21,056	21,093
Subscribed Capacity				
TA-0544	15,055	15,055	15,055	15,055
TA -0546	529	529	529	529
TA -0891	2,650	2,650	2,650	2,650
Greeley Deliveries	18,234	18,234	18,234	18,234
Reserve Margin	1,746	-2,882	-2,822	-2,859

Notes:

1. The 16,488 units in MMBtu represent the maximum deliveries net of estimated daily endusers off Williams Central Pipeline.

Greeley Gas Company
Williams Central Pipeline Transportation
Analysis of Penalty vs Additional Capacity
Missouri Case No. GR-01-394

Exceeds MDQ	Penalty Quantity (a)	Penalty Price	Penalty Amount	Annual Demand Fees Full Path (b)	Market Only ©
Up to 3%	540	$0.00	$0		
Between 3% and 10%	1,260	$25.00	$31,500		
Over 10%	1,200	$50.00	$60,000		
	3,000		$91,500	$302,875	$100,850

(a) Rounded capacity deficit shown on Data Request No. 21.
(b) Full Path is the combined capacity in both the production and market areas.
© Market area capacity only.

Williams Penalty Gas Tariff
Under Deliveries of between 3% and 10% are the greater of $10 or 5 times the gas daily price.
Under Deliveries of greater than 10% are the greater of $20 or 10 times the gas daily price.

Williams Demand Charges	
Deficit Quantity (Dth)	3000
Production Demand Rate	$5.6118
Market Demand Rate	$2.8014

Assumption:
(1) Gas Daily for Williams Natural Gas Midpoint is estimated at $5.00.

Greeley Gas Company
Anticipated Steps to Remedy Capacity Deficit

Greeley would attempt to cover any anticipated shortfall above the maximum contract quantities to meet its system requirements by contracting another party's firm transportation capacity bundled with the gas commodity (city gate deliveries). Additionally, Greeley is exploring a number of other options to address the peak day capacity deficit in the Williams Central Pipeline market area. These options include; securing additional capacity on Williams in both the production and market areas or securing additional capacity in the market area coupled with a commodity peaking service delivered to the market area. Greeley has contacted representatives of Williams Central Pipeline to discuss the availability of additional capacity and delivery points on the pipeline.