



Aquila

7101 Mercy Road
Suite 400
Omaha, NE 68106

FILED³

MAR 03 2003

Missouri Public
Service Commission

February 28, 2003

Mr. Dale Hardy Roberts, Secretary, Chief Regulatory Law Judge
Missouri Public Service Commission
200 Madison Street
Jefferson City, MO 65101

Dear Mr. Roberts:

Enclosed are an original and two copies of PSC MO. No. 5, 26th Revised Sheet No. 43 and 29th Revised Sheet No. 44 reflecting changes in the Purchased Gas Adjustment of the Missouri Public Service Purchased Gas Adjustment Clause.

This Unscheduled PGA change will assist MPS more accurately reflect market conditions and prevent unnecessary under recoveries from occurring.

Enclosures 1 and 2 reflect the Purchased Gas Adjustment calculations for the Southern System and Northern System. Each PGA has been developed using NYMEX pricing weighted for the months of April 2003 through October 2003, and the "Inside FERC's Gas Market Report" posted price for February 2003. March gas cost has been developed using the portfolio as filed in the winter filing with any incremental purchases priced at the March Nymex adjusted for basis. The tariff rate changes for the Southern System are based on the Williams Gas Pipelines Central, Inc. filings of their Federal Energy Regulatory Commission (FERC) Gas Tariffs, Twelfth Revised Sheet No. 6, Twenty Second Revised Sheet No. 6A and Fifth Revised Sheet No. 6B. The tariff rate changes for the Northern System are based on the Panhandle Eastern Pipe Line Company filings of their FERC Gas Tariffs, Sixty-Eighth Revised Sheet No. 5, Seventy-First Revised Sheet No. 7, Thirteenth Revised Sheet No. 9, Fifteenth Revised Sheet No. 11 and Twenty-Seventh Revised Sheet No. 19.

Enclosure 3 reflects the Weighted Average Cost of Gas (WACOG) for the last three years, March through October.

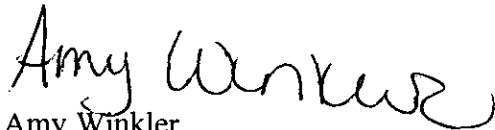
Enclosures 4 and 5 reflect the estimated ACA through August 2003 for the Southern and Northern Systems.

Enclosures 6 and 7 reflect the estimated Deferred Carrying Cost Balance through August 2003 for the Southern and Northern Systems.

The seasonal revenue impact or comparison to the same period last year, for the gas cost recovery portion of the rates is an increase in the amount of \$2,394,810 or 27.02% for the Southern System and an increase in the amount of \$1,595,426 or 72.02% for the Northern System as determined on Enclosures 8 and 9 respectively.

Aquila Networks respectfully requests that the rates proposed in this unscheduled filing become effective with volumes taken on and after March 14, 2003.

Sincerely,

A handwritten signature in cursive script that reads "Amy Winkler".

Amy Winkler
Regulatory Analyst

Enclosures
cc: Office of the Public Counsel

STATE OF MISSOURI, PUBLIC SERVICE COMMISSION

P.S.C. MO. No.	<u>5</u>	<u>26th</u>	(Original)	SHEET NO.	<u>43</u>
			(Revised)		
Cancelling P.S.C. MO. No.	<u>5</u>	<u>25th</u>	(Original)	SHEET NO.	<u>43</u>
			(Revised)		

Aquila Networks - MISSOURI PUBLIC SERVICE
KANSAS CITY, MO 64138

FOR: Southern System

PURCHASED GAS ADJUSTMENT CLAUSE (CONTINUED)
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Adjustment Statement (Southern System)

As provided in this Purchased Gas Adjustment Clause, the following adjustment(s) will be made to the applicable rate schedules:

	Rate Schedule <u>GNG</u>	Rate Schedule <u>LVF</u>	Rate Schedule <u>LVI</u>
Regular PGA	\$.72069	\$.72069	\$.73436
Actual Cost Adjustment	\$.02458	\$.02458	\$ (.00777)
Unscheduled Filing Adjustment	\$.05000	\$.05000	\$ -0-
Refunds	\$ -0-	\$ -0-	\$ -0-
TOP Factor	\$ -0-	\$ -0-	\$ -0-
TC Factor	\$ -0-	\$ -0-	\$ -0-
Total PGA Per Ccf	\$.79527	\$.79527	\$.72659

The TOP and TC Factors, as provided in Sheets 39 through 40, shall also apply to all Ccf delivered to transportation customers on Missouri Public Service's Southern System except as provided for on Sheet No. 20.

STATE OF MISSOURI, PUBLIC SERVICE COMMISSION

P.S.C. MO. No.	<u>5</u>	<u>29th</u>	(Original)	SHEET NO.	<u>44</u>
			(Revised)		
Cancelling P.S.C. MO. No.	<u>5</u>	<u>28th</u>	(Original)	SHEET NO.	<u>44</u>
			(Revised)		

**Aquila Networks - MISSOURI PUBLIC SERVICE
KANSAS CITY, MO 64138**

FOR: Northern System

PURCHASED GAS ADJUSTMENT CLAUSE (CONTINUED)
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Adjustment Statement (Northern System)

As provided in this Purchased Gas Adjustment Clause, the following adjustment(s) will be made to the applicable rate schedules:

	Rate Schedule <u>GNG</u>	Rate Schedule <u>LVF</u>	Rate Schedule <u>LVI</u>
Regular PGA	\$.77298	\$.77298	\$.70417
Actual Cost Adjustment	\$ (.00378)	\$ (.00378)	\$ -0-
Unscheduled Filing Adjustment	\$.05000	\$.05000	\$ -0-
Refunds	\$.00084	\$.00084	\$ -0-
TOP Factor	\$ -0-	\$ -0-	\$ -0-
TC Factor	\$ -0-	\$ -0-	\$ -0-
Total PGA Per Ccf	\$.82004	\$.82004	\$.70417

The TOP and TC Factors, as provided in Sheets 39 through 40, shall also apply to all Ccf delivered to transportation customers on Missouri Public Service's Northern System except as provided for on Sheet No. 20.

MISSOURI PUBLIC SERVICE
Southern System Annualized Gas Cost Calculation
To Reflect Current WNG & Spot Market Rates

Enclosure 1

Page 1 of 4

FIRM	Annual Volume	Monthly Capacity Reserved	No. of Mth Reserved	Tariff Rate	Annual Cost
<u>Williams Natural Gas</u>					
TSS					
No-Notice Fee		39,618	12	\$0.0154	\$7,321
Reservation - FSS Deliverability		25,412	12	\$0.5001	\$152,502
Reservation - FTS-Production		13,841	12	\$5.6118	\$932,075
Reservation - FTS-Market		39,618	12	\$2.8014	\$1,331,830
GRI		39,618	12	\$0.0500	\$23,771
FTS					
Production - Reservation		11,845	12	\$5.6118	\$797,661
Production - Balancing		11,845	12	\$0.1604	\$22,799
Market - Reservation		10,491	12	\$2.8014	\$352,674
Market - Balancing		10,491	12	\$0.1604	\$20,193
Market - GRI		10,491	12	\$0.0500	\$6,295
GSR Costs					\$77,692
Spot Market Purchases	3,896,019			\$6.6067	\$25,739,729
Total Annual Cost					<u>\$29,464,542</u>
Sales Volume at Burnertip	3,823,123				
Cost per MCF at Burnertip					<u>\$7.7069</u>

Highest WACOG (Summer Period)	Mar 00 - Oct 00	Mar 01 - Oct 01	Mar 02 - Oct 02	Average WACOG
	\$3.6065	\$4.0628	\$3.2058	\$3.6250
Highest Avg WACOG-Summer Period (Avg of winter seasons with the highest of 3 averages)				\$3.8439
				March 2003 Gas Commodity Costs \$5.3204
				Adjustment for Unscheduled PGA Filing \$0.5000
Total March 2002 Gas Commodity Costs including Adjustment				\$5.8204

INTERRUPTIBLE

Williams Natural Gas

ITS-P			@150%	
Commodity	126,771		\$0.2492	\$31,585
ITS-M			@150%	
Commodity	125,491		\$0.1289	\$16,170
Spot Market Price Per MCF	129,650		\$6.6067	\$856,552
Total Annual Cost				<u>\$904,307</u>
Sales Volume at Burnertip	123,143			
Cost per MCF at Burnertip				<u>\$7.3436</u>

MISSOURI PUBLIC SERVICE - SOUTHERN SYSTEM
Enclosure 1
Gas Cost Inputs

Page 2 of 4

MPS Line Loss	1.871%
Annual Burnertip Sales	3,946,266

WNG Rates
Firm Rates

TSS	
No-Notice Fee	\$0.0154
Reservation - FSS Deliverability	\$0.5001
Reservation - FSS Capacity	\$0.0285
Reservation - FTS-P	\$5.6118
Reservation - FTS-M	\$2.8014
GRI	\$0.0500

FTS	
Production - Reservation	\$5.6118
Production - Balancing	\$0.1604
Market - Reservation	\$2.8014
Market - Balancing	\$0.1604
Market - GRI	\$0.0500

Production	
Commodity - FTS-P	\$0.0124
GRI Funding Unit - Commodity - Others	\$0.0040
FERC Annual Charge Adjustment	<u>\$0.0021</u>
Production Field Zone	\$0.0185

Commodity - FTS-M	\$0.0061
GRI Funding Unit - Commodity - Others	\$0.0040
FERC Annual Charge Adjustment	<u>\$0.0021</u>
Market Zone	\$0.0122

Injection/Withdrawal - FSS	\$0.0122
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Interruptible Rates

ITS-P	
Commodity-Summer	\$0.1600

ITS-M	
Commodity-Summer	\$0.0798
GRI Funding Unit - Commodity - Others	\$0.0040
FERC Annual Charge Adjustment	\$0.0021

WNG Production Area Loss	2.22%
WNG Market Area Loss	1.01%
WNG Storage Loss	5.91%

Note: From FERC Gas Tariff: Twelfth Revised Sheet No. 6 Effective 11/1/01, Twenty Second Revised Sheet No. 6A Effective 01/1/03, and Fifth Revised Sheet No. 6B Effective 1/1/03.

Calculated Inputs

	<u>Firm</u>	<u>Storage</u>	Total <u>Firm</u>	<u>Interruptible</u>	Total <u>System</u>
Annual Throughput at Burnertip Per GR-93-172	2,796,691	1,026,432	3,823,123	123,143	3,946,266
Annual Throughput at Citygate	2,850,016	1,046,003	3,896,019	125,491	4,021,508
Annual Throughput at Production Area	2,824,064	1,111,705	3,935,769	126,771	4,062,540
Annual Throughput at Wellhead	2,888,181	1,136,945	4,025,126	129,650	4,154,776

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\$	6.1067
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Missouri Public Service
Division of Aquila Networks
Southern System
Gas Commodity Cost Calculation

Enclosure 1

Page 4 of 4

INSIDE FERC FEB 2003	\$	5.12	
WNG Market Area Loss		1.01%	
WNG Production Area Loss		<u>2.22%</u>	
WNG Index Adjusted for Fuel	\$	5.2897	
WNG Cost/Dth Field Zone		\$0.0185	
WNG Cost/Dth - Market Zone		<u>\$0.0122</u>	
		\$5.3204	
Total Gas Commodity Costs		<table border="1"><tr><td>\$5.3204</td></tr></table>	\$5.3204
\$5.3204			

MISSOURI PUBLIC SERVICE
Northern System Annualized Gas Cost Calculation
To Reflect Current PEPL & Spot Market Rates

Enclosure 2

Page 1 of 4

FIRM	Annual Volume	Monthly Capacity Reserved	No. Of Mth Reserved	Tariff/ Contracted Rate	Annual Cost
Panhandle Eastern Pipe Line					
Contract 17005					
EFT Reservation Rates					
Field Zone Reservation		18,000	5	\$4.1683	\$375,147
Market Zone Access		18,000	5	\$2.9081	\$261,731
Market Zone Mileage		18,000	5	\$1.5862	\$142,762
Field Zone Reservation		10,000	7	\$4.1683	\$291,781
Market Zone Access		10,000	7	\$2.9081	\$203,568
Market Zone Mileage		10,000	7	\$1.5862	\$111,037
					\$0
					\$0
Contract 17004					
FS Storage	800,000			\$0.4028	\$322,240
					\$234,500
					\$204,015
Spot Market Purchases	1,521,875			\$6.5320	\$9,940,901
Total Annual Cost					<u>\$12,087,682</u>
Sales Volume at Burnertip	1,468,777				
Cost per MCF at Burnertip					<u><u>\$8.2298</u></u>

Highest WACOG (Summer Period)	Mar 00 - Oct 00	Mar 01 - Oct 01	Mar 02 - Oct 02	Average WACOG
	\$3.9119	\$4.9517	\$3.0651	\$3.9762
Highest Avg WACOG-Summer Period (Avg of winter seasons with the highest 3 averages)				\$4.4640
Marach 2003 Gas Commodity Costs				\$5.2666
Adjustment for Unscheduled PGA Filing				\$0.5000
Total March 2002 Gas Commodity Costs including Adjustment				\$5.7666

INTERRUPTIBLE

Panhandle Eastern Pipe Line					
IT Interruptible Rates					
				@150%	
Field Zone				\$0.2625	\$0.2625
Market Zone Access				\$0.1386	\$0.1386
Market Zone Mileage				\$0.0999	\$0.0999
GRI Funding Unit				\$0.0060	\$0.0060
ACA Unit Charge				\$0.0032	\$0.0032
TOP Volumetric Surcharge				\$0.0000	\$0.0000
Settlement Surcharges				(\$0.0005)	(\$0.0005)
Canadian Resolution Surcharges				\$0.0000	\$0.0000
Stranded Transportation Cost Surcharge				\$0.0000	\$0.0000
Miscellaneous Stranded Costs Surcharge				\$0.0000	(\$0.0000)
Spot Market Price Per MCF	\$6.5320				\$6.5320
Total Annual Cost					<u>\$7.0417</u>
Sales Volume at Burnertip					
Cost per MCF at Burnertip					<u><u>\$7.0417</u></u>

MISSOURI PUBLIC SERVICE - NORTHERN SYSTEM
Enclosure 2
Gas Cost Inputs

Page 2 of 4

MPS Line Loss	3.489%
Annual Burnertip Sales	1,468,777

<u>PEPL Rates</u>	Tariff	Contract
	Rate	Discount Rate
<u>PEPL EFT Reservation Rates</u>		
Field Zone Reservation	\$4.7300	\$4.1683
Market Zone Access	\$3.3000	\$2.9081
Market Zone Mileage 201-300 Block	\$1.8000	\$1.5862

GRI Funding Unit	\$0.0500
Settlement Surcharges	(\$0.0100)
Canadian Resolution Surcharges	\$0.0000
GSR Surcharge	\$0.0000
Stranded Transportation Cost Surcharge	\$0.0000
Miscellaneous Stranded Costs Surcharge	\$0.0000

<u>PEPL EFT Commodity Rates</u>	
Field Zone Commodity	\$0.0195
Market Zone Access	\$0.0006
Market Zone Mileage 201-300 Block	\$0.0075
GRI Funding Unit	\$0.0040
ACA Unit Charge	\$0.0021
TOP Volumetric Surcharge	\$0.0000
Settlement Surcharges	(\$0.0003)
Total Market Zone Commodity	\$0.0139

<u>PEPL IT Interruptible Rates</u>	
Field Zone	\$0.1750
Market Zone Access	\$0.0924
Market Zone Mileage 201-300 Block	\$0.0666
GRI Funding Unit	\$0.0040
ACA Unit Charge	\$0.0021
TOP Volumetric Surcharge	\$0.0000
Settlement Surcharges	(\$0.0003)
Canadian Resolution Surcharges	\$0.0000
Stranded Transportation Cost Surcharge	\$0.0000
Miscellaneous Stranded Costs Surcharge	\$0.0000

<u>PEPL Storage Rates</u>	
Deliverability Charge Field Area	\$3.3500
Capacity Charge Field Area	\$0.4028

<u>Seasonal Sales Volume @ Burnertip</u>	
Jan	288,860
Feb	265,604
Mar	194,613
Apr	117,502
May	64,871
Jun	44,063
Jul	34,272
Aug	33,047
Sep	36,719
Oct	51,407
Nov	118,726
Dec	219,093
	<u>1,468,777</u>

PEPL Gathering Loss	0.70%
PEPL Field Zone Loss	1.22%
PEPL Market Zone Loss	1.23%
PEPL Storage Injection Loss (Field Area)	1.56%
PEPL Storage Withdrawal Loss (Field Area)	0.53%

Note: From FERC Gas Tariff: PEPL Sixth-Eighth Revised Sheet No. 5 Effective 01/1/03 , Seventy-First Revised Sheet No. 7 Effective 01/1/03, Fifteenth Revised Sheet No. 11 Effective 11/01/02 and Twenty-Seventh Revised Sheet No. 19 Effective 10/01/01.

<u>Calculated Inputs</u>	<u>Firm</u>		<u>Total</u>		<u>Interruptible</u>	<u>Total</u>
	<u>Firm</u>	<u>Storage</u>	<u>Firm</u>			
Annual Throughput at Burnertip Per GR-93-172	890,213	578,564	1,468,777	0		1,468,777
Annual Throughput at Citygate	922,396	599,479	1,521,875	0		1,521,875
Annual Throughput at Havenpool	933,882	610,179	1,544,061	0		1,544,061
Annual Throughput at Wellhead	945,416	627,504	1,572,920	0		1,572,920

Current Gas Cost Calculation

	<u>Mar-03</u>	<u>Apr-03</u>	<u>May-03</u>	<u>Jun-03</u>	<u>Jul-03</u>	<u>Aug-03</u>	<u>Sep-03</u>	<u>Oct-03</u>	<u>Totals</u>
SUMMARY OF COMMODITY COSTS									
Sales Requirements	165,656	117,502	64,871	44,063	34,272	33,047	36,719	51,407	547,537
PEPL Market Zone Fuel Loss	1.23%	1.23%	1.23%	1.23%	1.23%	1.23%	1.23%	1.23%	
PEPL Field Zone Fuel Loss	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%	
Gathering Fuel Loss	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	
Total Supply - Fuel Loss	170,987	121,284	66,959	45,481	35,375	34,111	37,901	53,061	

Storage Injection	0	84,000	124,000	120,000	124,000	124,000	120,000	86,800	782,800
Storage Injection Loss	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	
Total Storage - Fuel Loss	0	85,331	125,965	121,902	125,965	125,965	121,902	88,176	

(Storage injection is noted on spreadsheet but not included in commodity cost calculation because MPS does not pay for storage until it is withdrawn in the winter months.)

Purchase Requirements	170,987	121,284	66,959	45,481	35,375	34,111	37,901	53,061	565,159
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Total Supply	80,987	121,284	66,959	45,481	35,375	34,111	37,901	53,061	475,159
Forecasted Price (NYMEX-PEPL Basis)	\$ 8.8880	\$ 7.1450	\$ 5.9850	\$ 5.5650	\$ 5.4550	\$ 5.355	\$ 5.255	\$ 5.245	
Total Cost	\$ 719,812	\$ 866,574	\$ 400,750	\$ 253,102	\$ 192,971	\$ 182,664	\$ 199,170	\$ 278,305	3,093,348

Storage Withdrawal (17007)	90,000	0	0	0	0	0	0	0	90,000
Storage WACOG (17007)	\$ 3.3600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Cost	\$ 302,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 302,400

<u>Forecasted Gas Commodity Cost</u>	1,022,212	866,574	400,750	253,102	192,971	182,664	199,170	278,305	3,395,748
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<u>Forecasted Sales Gas Quantity</u>	170,987	121,284	66,959	45,481	35,375	34,111	37,901	53,061	565,159
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<u>Gas Cost (Commodity) Dth</u>									\$6.0085
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SUMMARY OF UPSTREAM COSTS

Panhandle Eastern Pipeline - Firm									
FT Commodity (Field Zone)	169,790	120,435	66,490	45,163	35,127	33,872	37,635	52,690	
FT Commodity (Market Zone)	167,719	118,965	65,679	44,612	34,699	33,459	37,176	52,047	
Total Units	337,509	239,400	132,169	89,775	69,826	67,331	74,811	104,737	1,115,558

Cost/Dth - Field Zone	\$0.0195	\$0.0195	\$0.0195	\$0.0195	\$0.0195	\$0.0195	\$0.0195	\$0.0195	
Cost/Dth - Market Zone	\$0.0139	\$0.0139	\$0.0139	\$0.0139	\$0.0139	\$0.0139	\$0.0139	\$0.0139	
Total Panhandle Commodity Costs	\$5,642	\$4,002	\$2,209	\$1,501	\$1,167	\$1,126	\$1,251	\$1,751	18,649

<u>Forecasted Northern Upstream Costs</u>	5,642	4,002	2,209	1,501	1,167	1,126	1,251	1,751	18,649
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<u>Forecasted Firm Sales Quantity</u>	170,987	121,284	66,959	45,481	35,375	34,111	37,901	53,061	565,159
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<u>Upstream Cost/Dth</u>									\$0.0330
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Put/Call 99/00 & 00/01 Settlement Adj.									(5,364) (0.0095)
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Wellhead Cost of Gas

\$ 6.0320

Missouri Public Service
Division of Aquila Networks
Northern System
Gas Commodity Cost Calculation

Enclosure 2

Page 4 of 4

INSIDE FERC FEBRUARY 03	\$5.07	
PEPL Market Zone Fuel Loss	1.23%	
PEPL Field Zone Fuel Loss	1.22%	
Gathering Fuel Loss	<u>0.70%</u>	
PEPL Index Adjusted for Fuel	\$ 5.2332	
PEPL Cost/Dth Field Zone	\$0.0195	
PEPL Cost/Dth - Market Zone	<u>\$0.0139</u>	
	\$5.2666	
Total Gas Commodity Costs	<table border="1"><tr><td>\$5.2666</td></tr></table>	\$5.2666
\$5.2666		

Enclosure 3

	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCTOBER		
SOUTHERN SYSTEM (00):										
Purchase Volumes	3,457	176,842	101,708	82,348	71,958	70,172	25,548	56,974	589,007	
Commodity Cost (Highest)	\$2.7109	\$2.7900	\$2.9567	\$4.1302	\$4.2167	\$3.7400	\$4.5500	\$5.2400		
Total Commodity Costs	\$9,372	\$493,389	\$300,720	\$340,114	\$303,425	\$262,443	\$116,243	\$298,544	\$2,124,250	
					Weighted Avg. Commodity Costs					\$3.6065
SOUTHERN SYSTEM (01):										
Purchase Volumes	24,258	172,537	30,963	13,102	13,565	55,581	88,348	4,752	403,106	
Commodity Cost (Highest)	5.0968	\$5.2396	\$4.5996	\$3.7867	\$3.0147	\$2.8691	\$2.1988	\$4.9300		
Total Commodity Costs	\$123,638	\$904,025	\$142,417	\$49,613	\$40,894	\$159,467	\$194,260	\$23,427	\$1,637,741	
					Weighted Avg. Commodity Costs					\$4.0628
SOUTHERN SYSTEM (02):										
Purchase Volumes	136,710	182,591	117,856	110,155	65,333	66,273	65,010	115,646	859,574	
Commodity Cost (Highest)	\$3.6519	\$3.2056	\$3.0367	\$2.8754	\$2.7316	\$2.6173	\$2.6298	\$4.0948		
Total Commodity Costs	\$499,251	\$585,314	\$357,893	\$316,740	\$178,464	\$173,456	\$170,963	\$473,547	\$2,755,628	
					Weighted Avg. Commodity Costs					\$3.2058
								Average of 3 Periods		\$3.6250
								Highest Avg WACOG-Summer Period (avg of summer seasons with the highest of 3 averages)		\$3.4154
								April 2002 Gas Commodity Cost		\$3.4018
		APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCTOBER		
NORTHERN SYSTEM (00):										
Purchase Volumes	10,490	32,684	29,715	24,570	23,035	23,026	21,025	45,247	209,792	
Commodity Cost (Highest)	\$2.6216	\$2.7925	\$2.9400	\$4.2075	\$4.2000	\$3.7000	\$4.4900	\$5.1900		
Total Commodity Costs	\$27,500	\$91,270	\$87,362	\$103,378	\$96,747	\$85,196	\$94,402	\$234,832	\$820,687	
					Weighted Avg. Commodity Costs					\$3.9119
NORTHERN SYSTEM (01):										
Purchase Volumes	18,689	42,901	29,258	3,175	5,611	449	21,879	21,675	143,637	
Commodity Cost (Highest)	\$5.1246	\$5.3075	\$4.8100	\$4.6800	\$4.6800	\$4.6800	\$4.6800	\$4.6800		
Total Commodity Costs	\$95,774	\$227,697	\$140,731	\$14,859	\$26,259	\$2,101	\$102,394	\$101,439	\$711,254	
					Weighted Avg. Commodity Costs					\$4.9517
NORTHERN SYSTEM (02):										
Purchase Volumes	676	1,720	39,115	26,246	28,661	24,271	23,075	65,334	209,098	
Commodity Cost (Highest)	\$4.4550	\$3.2750	\$3.1400	\$2.9500	\$2.9475	\$2.6550	\$2.9250	\$3.3000		
Total Commodity Costs	\$3,012	\$5,633	\$122,821	\$77,426	\$84,478	\$64,440	\$67,494	\$215,602	\$640,906	
					Weighted Avg. Commodity Costs					\$3.0651
								Average of 3 Periods		\$3.9762
								Highest Avg WACOG-Summer Period (avg of summer seasons with the highest of 3 averages)		\$3.9441
								April 2002 Gas Commodity Cost		\$3.4277
	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCTOBER		
EASTERN SYSTEM (00):										
Purchase Volumes	24,719	22,745	11,885	0	5,330	3,901	5,510	15,500	89,590	
Commodity Cost (Highest)	\$2.7032	\$2.7900	\$2.9400	\$0.0000	\$4.2000	\$3.7075	\$4.4900	\$5.1900		
Total Commodity Costs	\$66,820	\$63,459	\$34,942	\$0	\$22,386	\$14,463	\$24,740	\$80,445	\$307,255	
					Weighted Avg. Commodity Costs					\$3.4296
EASTERN SYSTEM (01):										
Purchase Volumes	57,000	24,750	8,587	12,240	8,586	6,355	6,018	21,375	144,911	
Commodity Cost (Highest)	\$5.0000	\$5.3075	\$4.8100	\$3.6150	\$3.0200	\$3.0425	\$2.2100	\$1.6900		
Total Commodity Costs	\$285,000	\$131,361	\$41,303	\$44,248	\$25,930	\$19,335	\$13,300	\$36,124	\$596,601	
					Weighted Avg. Commodity Costs					\$4.1170
EASTERN SYSTEM (02):										
Purchase Volumes	4,500	15,100	14,650	7,310	6,630	6,200	6,844	21,400	82,634	
Commodity Cost (Highest)	\$2.4800	\$3.2725	\$3.1400	\$2.9500	\$2.9475	\$2.6550	\$2.9250	\$3.3000		
Total Commodity Costs	\$11,160	\$49,415	\$46,001	\$21,565	\$19,542	\$16,461	\$20,019	\$70,620	\$254,783	
					Weighted Avg. Commodity Costs					\$3.0833
								Average of 3 Periods		\$3.5433
								Highest Avg WACOG-Summer Period (avg of summer seasons with the highest of 3 averages)		\$3.3133
								April 2002 Gas Commodity Cost		\$2.4840

**Missouri Public Service
Southern System
2002-2003 ACA Year PGA Estimate
(Based on Monthly Actuals and Estimates)**

	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	
Commodity	\$2,3893	\$3,7763	\$4,0545	\$3,7935	\$4,4538	\$6,7128	\$6,0373	\$7,1950	\$6,0350	\$5,6150	\$5,5050	\$5,4050	
Fixed Costs	\$1,7535	\$1,3872	\$0,9194	\$0,6697	\$0,5128	\$0,9542	\$1,0752	\$1,5973	\$3,5589	\$5,0518	\$6,2446	\$7,0466	
Estimated Sales Volume	72,232	94,944	278,603	470,638	631,494	530,036	470,390	316,635	142,113	100,114	80,993	71,775	3,259,967
ACA Factor in Effect	\$1,6038	\$1,6001	\$1,1952	\$0,3116	\$0,2474	\$0,2458	\$0,2458	\$0,2458	\$0,2458	\$0,2458	\$0,2458	\$0,2458	
PGA Factor in Effect	\$4,5857	\$4,5994	\$4,6555	\$4,7779	\$4,7865	\$4,7867	\$7,7069	\$7,7069	\$7,7069	\$7,7069	\$7,7069	\$7,7069	
PGA/ACA Factor - Required	\$4,1428	\$5,1635	\$4,9739	\$4,4632	\$4,9666	\$7,6670	\$7,1125	\$8,7923	\$9,5939	\$10,6669	\$11,7496	\$12,4516	
Over/Under Recovery	\$2,0467	\$1,0360	\$0,8767	\$0,6264	\$0,0673	-\$2,6345	\$0,8402	-\$0,8396	-\$1,6412	-\$2,7142	-\$3,7969	-\$4,4989	
	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Total</u>
Gas Supply Purchased (in Dth)	65,142	229,494	414,831	571,307	746,193	400,968	355,846	239,532	107,507	75,735	61,271	54,297	3,322,123
Sales Volumes (in Mcf)	72,232	94,944	278,603	470,638	631,494	530,036	470,390	316,635	142,113	100,114	80,993	71,775	3,259,967
Cost of Gas Purchased and Produced	269,869	1,184,989	2,063,343	2,549,838	3,323,423	3,074,239	2,530,965	2,106,042	1,031,418	807,865	719,905	676,087	20,337,984
ACA Factor in Effect	115,843	151,920	332,979	146,672	156,212	130,283	115,622	77,829	34,931	24,608	19,908	17,642	1,324,449
PGA Factor in Effect	331,235	436,681	1,297,034	2,248,666	3,022,677	2,537,123	3,625,249	2,440,274	1,095,251	771,569	624,205	553,163	18,983,126
PGA Factor - Required	269,869	1,184,989	2,063,343	2,549,838	3,706,034	3,074,239	2,530,965	2,106,042	1,031,418	807,865	719,905	676,087	20,720,594
Over/(Under) Recovery	177,209	(596,389)	(433,330)	(154,500)	(527,145)	(406,833)	1,209,906	412,061	98,764	(11,689)	(75,792)	(105,282)	(413,020)
Prior ACA Yr Over/(Under) Recovery Balance-Firm	(939,834)												
Monthly ACA Over/(Under) Recovery	115,843	151,920	332,979	146,672	156,212	130,283	115,622	77,829	34,931	24,608	19,908	17,642	1,324,449
Monthly PGA Over/(Under) Recovery	61,366	(748,308)	(766,309)	(301,172)	(683,357)	(537,115)	1,094,284	334,232	63,833	(36,297)	(95,700)	(122,925)	(1,737,468)
Total Monthly PGA/ACA Over/(Under) Recovery	177,209	(596,389)	(433,330)	(154,500)	(527,145)	(406,833)	1,209,906	412,061	98,764	(11,689)	(75,792)	(105,282)	(413,020)
2002-2003 PGA/ACA Yr to Date Over/(Under) Recovery	177,209	(419,179)	(852,509)	(1,007,009)	(1,534,154)	(1,940,987)	(731,081)	(319,021)	(220,256)	(231,945)	(307,737)	(413,020)	
Inception to Date PGA/ACA Over/(Under) Recovery	(762,625)	(1,359,013)	(1,792,343)	(1,946,843)	(2,473,988)	(2,880,821)	(1,670,915)	(1,258,854)	(1,160,090)	(1,171,779)	(1,247,571)	(1,352,853)	

Firm Mcfs 3,823,123

Note: Shaded areas indicate estimates.

Note: Prior months may change from previous spreadsheets due to prior period adjustments entered in appropriate month on this schedule.

Forecasted ACA 11/02 0.3539

Enclosure 4

**Missouri Public Service
Northern System
2002-2003 ACA Year PGA Analysis
(Based on Monthly Actuals & Estimates)**

	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	
Commodity	\$0.9078	\$3.5690	\$3.9577	\$4.1500	\$4.3667	\$4.6320	\$6.4246	\$7.1450	\$5.9850	\$5.5650	\$5.4550	\$5.3550	
Fixed Costs	\$5.4287	\$1.1954	\$0.8382	\$0.6833	\$0.4817	\$0.8663	\$0.7847	\$2.0472	\$2.9418	\$3.3776	\$2.3976	\$3.2773	
Estimated Sales Volume	28,483	20,235	101,276	160,338	219,251	150,371	165,656	117,502	64,871	44,063	34,272	33,047	-
ACA Factor in Effect	\$0.5273	\$0.5273	\$0.3650	\$0.0076	(\$0.0378)	(\$0.0378)	(\$0.0378)	(\$0.0378)	(\$0.0378)	(\$0.0378)	(\$0.0378)	(\$0.0378)	
PGA Factor in Effect	\$4.2391	\$4.2388	\$4.4750	\$5.0289	\$5.0592	\$5.0302	\$8.2298	\$8.2298	\$8.2298	\$8.2298	\$8.2298	\$8.2298	
PGA/ACA Factor - Required	\$6.3365	\$4.7644	\$4.7959	\$4.8333	\$4.8484	\$5.4983	\$7.2093	\$9.1922	\$8.9268	\$8.9426	\$7.8526	\$8.6323	
Over/Under Recovery	(\$1.5701)	\$0.0017	\$0.0440	\$0.2032	\$0.1730	(\$0.5059)	\$0.9827	(\$1.0002)	(\$0.7348)	(\$0.7506)	\$0.3394	(\$0.4403)	
	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Total</u>
Gas Supply Purchased (in Dth)	18,089	82,147	151,653	189,810	269,250	149,704	165,273	63,353	44,087	38,399	54,094	39,573	1,265,433
Sales Volumes (in Mcf)	28,483	20,235	101,276	160,338	219,251	150,371	165,656	117,502	64,871	44,063	34,272	33,047	1,139,366
Cost of Gas Purchased and Produced	114,621	391,382	727,316	917,404	1,175,734	823,125	1,191,497	582,354	393,555	343,383	424,778	341,608	7,426,757
ACA Factor in Effect	15,020	10,671	36,964	1,215	(8,296)	(5,684)	(6,262)	(4,442)	(2,452)	(1,666)	(1,295)	(1,249)	32,524
PGA Factor in Effect	120,743	85,773	453,207	806,324	1,109,241	756,396	1,363,316	967,018	533,875	362,630	282,052	271,970	7,112,545
PGA Factor - Required	114,621	391,382	727,316	917,404	1,305,428	823,125	1,191,497	582,354	393,555	343,383	424,778	341,608	7,556,451
Over/(Under) Recovery	21,142	(294,939)	(237,144)	(109,866)	(204,482)	(72,412)	165,557	380,222	137,868	17,582	(144,022)	(70,887)	(411,382)
Prior ACA Yr Over/(Under) Recovery Balance-Firm	55,532												
Monthly ACA Over/(Under) Recovery	15,020	10,671	36,964	1,215	(8,296)	(5,684)	(6,198)	(4,442)	(2,452)	(1,666)	(1,295)	(1,249)	32,588
Monthly PGA Over/(Under) Recovery	6,121	(305,610)	(274,109)	(111,080)	(196,186)	(66,728)	171,819	384,664	140,321	19,247	(142,727)	(69,638)	(443,906)
Total Monthly PGA/ACA Over/(Under) Recovery	21,142	(294,939)	(237,144)	(109,866)	(204,482)	(72,412)	165,621	380,222	137,868	17,582	(144,022)	(70,887)	(411,318)
2002-2003 PGA/ACA Yr to Date Over/(Under) Recovery	21,142	(273,797)	(510,942)	(620,807)	(825,289)	(897,702)	(732,081)	(351,859)	(213,990)	(196,409)	(340,431)	(411,318)	
Inception to Date PGA/ACA Over/(Under) Recovery	76,674	(218,265)	(455,410)	(565,275)	(769,757)	(842,170)	(676,549)	(296,326)	(158,458)	(140,876)	(284,899)	(355,786)	

Firm Mcfs 1,468,777

Note: Shaded areas are estimated amounts. Light gray shaded area is estimated based on information obtained from accountants.

Note: Prior months may change from previous spreadsheets due to prior period adjustments entered in appropriate month on this schedule.

Forecasted ACA 11/02 0.2422

Enclosure 5

**Missouri Public Service
Southern System
Estimated Deferred Carrying Cost Balance (DCCB) Calculation
2002-2003 ACA Year**

Annual Gas Cost Level

Gas Cost from Nov 02 ACA calculation	15,273,268
Gas Cost from Nov 01 ACA calculation	15,415,511
Gas Cost from Nov 00 ACA calculation	12,869,941
Average of 3 most recent gas cost calculations	14,519,573
	10%
10% of average annual gas cost threshold	1,451,957

	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
Sales Volumes (in Mcf)	72,232	94,944	278,603	470,638	631,494	530,036	470,390	316,635	142,113	100,114	80,993	71,775	3,259,967
Cost of Gas Purchased and Produced	269,869	1,184,989	2,063,343	2,549,838	3,323,423	3,074,239	2,530,965	2,106,042	1,031,418	807,865	719,905	676,087	20,337,984
PGA - Estimated Annualized Unit Cost of Gas	\$4.5857	\$4.5994	\$4.6555	\$4.7779	\$4.7865	\$4.7867	\$7.7069	\$7.7069	\$7.7069	\$7.7069	\$7.7069	\$7.7069	\$7.7069
Actual Annualized Unit Cost of Gas	3.7362	12.4810	7.4060	5.4178	5.2628	5.8001	5.3806	6.6513	7.2577	8.0695	8.8885	9.4195	
Difference	0.8496	-7.8816	-2.7505	-0.6399	-0.4762	-1.0134	2.3263	1.0556	0.4492	-0.3626	-1.1816	-1.7126	
Actual Sales Volumes	72,232	94,944	278,603	470,638	631,494	530,036	470,390	316,635	142,113	100,114	80,993	71,775	
DCCB Monthly Over/(Under) Recovery	61,366	(748,308)	(766,309)	(301,172)	(300,746)	(537,115)	1,094,284	334,232	63,833	(36,297)	(95,700)	(122,925)	
2002-03 DCCB Yr to Date Over/(Under) Recovery	61,366	(686,942)	(1,453,251)	(1,754,423)	(2,055,169)	(2,592,285)	(1,498,001)	(1,163,769)	(1,099,936)	(1,136,233)	(1,231,933)	(1,354,858)	
10% of average annual gas cost threshold	1,451,957	1,451,957	1,451,957	1,451,957	1,451,957	1,451,957	1,451,957	1,451,957	1,451,957	1,451,957	1,451,957	1,451,957	
Absolute Value Rcvry Bal that exceeds threshold	-	-	1,293	302,466	603,212	1,140,327	46,043	-	-	-	-	-	
Over/(Und) Rcvry Bal that exceeds 10% threshold	-	-	(1,293)	(302,466)	(603,212)	(1,140,327)	(46,043)	-	-	-	-	-	
Interest at Prime Rate - Wall Street Journal - 1%	3.75%	3.75%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	
Carrying Costs Refunded/(Collected)	-	-	(4)	(819)	(1,634)	(3,088)	(125)	-	-	-	-	-	(5,669)
DCCB Percent of Avg Annual Gas Costs	0.42%	-4.73%	-10.01%	-12.08%	-14.15%	-17.85%	-10.32%	-8.02%	-7.58%	-7.83%	-8.46%	-9.33%	

Note: The DCCB will become 0 at the beginning of each new ACA period (Sep).

Note: Shaded Area indicates estimate.

**Missouri Public Service
Northern System
Estimated Deferred Carrying Cost Balance (DCCB) Calculation
2002-2003 ACA Year**

Annual Gas Cost Level													
Gas Cost from Nov 02 ACA calculation	6,351,236												
Gas Cost from Nov 01 ACA calculation	6,358,385												
Gas Cost from Nov 00 ACA calculation	4,986,525												
Average of 3 most recent gas cost calculations	<u>5,898,715</u>												
10%	589,872												
10% of average annual gas cost threshold	589,872												
	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Total</u>
Sales Volumes (in Mcf)	28,483	20,235	101,276	160,338	219,251	150,371	165,656	117,502	64,871	44,063	34,272	33,047	1,139,366
Cost of Gas Purchased and Produced	114,621	391,382	727,316	917,404	1,175,734	823,125	1,191,497	582,354	393,555	343,383	424,778	341,608	7,426,757
PGA - Estimated Annualized Unit Cost of Gas	\$4.2391	\$4.2388	\$4.4750	\$5.0289	\$5.0592	\$5.0302	\$8.2298	\$8.2298	\$8.2298	\$8.2298	\$8.2298	\$8.2298	
Actual Annualized Unit Cost of Gas	<u>4.0241</u>	<u>19.3418</u>	<u>7.1815</u>	<u>5.7217</u>	<u>5.3625</u>	<u>5.4740</u>	<u>7.1926</u>	<u>4.9561</u>	<u>6.0667</u>	<u>7.7930</u>	<u>12.3943</u>	<u>10.3370</u>	
Difference	0.2149	-15.1030	-2.7065	-0.6928	-0.3033	-0.4438	1.0372	3.2737	2.1631	0.4368	-4.1645	-2.1072	
Actual Sales Volumes	28,483	20,235	101,276	160,338	219,251	150,371	165,656	117,502	64,871	44,063	34,272	33,047	
DCCB Monthly Over/(Under) Recovery	6,121	(305,610)	(274,109)	(111,080)	(66,492)	(66,728)	171,819	384,664	140,321	19,247	(142,727)	(69,638)	
2002-03 DCCB Yr to Date Over/(Under) Recovery	6,121	(299,488)	(573,597)	(684,677)	(751,169)	(817,898)	(646,079)	(261,415)	(121,095)	(101,848)	(244,574)	(314,212)	
10% of average annual gas cost threshold	589,872	589,872	589,872	589,872	589,872	589,872	589,872	589,872	589,872	589,872	589,872	589,872	
Absolute Value Rcvry Bal that exceeds threshold	-	-	-	94,806	161,298	228,026	56,208	-	-	-	-	-	
Over/(Und) Rcvry Bal that exceeds 10% threshold	-	-	-	(94,806)	(161,298)	(228,026)	(56,208)	-	-	-	-	-	
Interest at Prime Rate - Wall Street Journal - 1%	3.75%	3.75%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	
Carrying Costs Refunded/(Collected)	-	-	-	(257)	(437)	(618)	(152)	-	-	-	-	-	(1,463)
DCCB Percent of Avg Annual Gas Costs	0.10%	-5.08%	-9.72%	-11.61%	-12.73%	-13.87%	-10.95%	-4.43%	-2.05%	-1.73%	-4.15%	-5.33%	

Note: The DCCB will become 0 at the beginning of each new ACA period (Sep).

Note: Shaded Area indicates estimate.

Enclosure 7

Enclosure 8

Aquila Networks Southern System 2002-2003 Summer Season Revenue Impact

Original Calculation Filed

Month	PGA Factor	Month	PGA Factor	PGA Change (03/03)	Revenue Impact (Summer Season)
Mar-02	6.5449	Mar-03	7.9527	1.4078	713,141
Apr-02	6.2609	Apr-03	7.9527	1.6918	517,437
May-02	6.2609	May-03	7.9527	1.6918	285,668
Jun-02	6.2609	Jun-03	7.9527	1.6918	194,039
Jul-02	6.2609	Jul-03	7.9527	1.6918	150,919
Aug-02	6.2609	Aug-03	7.9527	1.6918	145,529
Sep-02	6.2609	Sep-03	7.9527	1.6918	161,699
Oct-02	6.2609	Oct-03	7.9527	1.6918	226,379

Estimated Summer Season Change in Revenue **2,394,810**

Percent Change Between PGA Factors **27.02%**

Firm Sales Volume @ Burnertip

3,823,123

Month	Estimated Customer Usage Mcf/Mnth	Estimated % Mcf/Yr	Estimated Company Sales Mcf/Mnth
Jan	23.6	19.67%	751,881
Feb	21.7	18.08%	691,348
Mar	15.9	13.25%	506,564
Apr	9.6	8.00%	305,850
May	5.3	4.42%	168,855
Jun	3.6	3.00%	114,694
Jul	2.8	2.33%	89,206
Aug	2.7	2.25%	86,020
Sep	3	2.50%	95,578
Oct	4.2	3.50%	133,809
Nov	9.7	8.08%	309,036
Dec	<u>17.9</u>	<u>14.92%</u>	<u>570,283</u>
TOTAL	120	100%	3,823,123

Note: Estimated Customer Usage Obtained from Missouri Public Service Commission.

Enclosure 9

Aquila Networks Northern System 2002-2003 Summer Season Revenue Impact

Original Calculation Filed

Month	PGA Factor	Month	PGA Factor	PGA Change (03/03)	Revenue Impact (Summer Season)
Mar-02	6.7395	Mar-03	8.2004	1.4609	284,310
Apr-02	4.7671	Apr-03	8.2004	3.4333	403,420
May-02	4.7671	May-03	8.2004	3.4333	222,722
Jun-02	4.7671	Jun-03	8.2004	3.4333	151,283
Jul-02	4.7671	Jul-03	8.2004	3.4333	117,664
Aug-02	4.7671	Aug-03	8.2004	3.4333	113,462
Sep-02	4.7671	Sep-03	8.2004	3.4333	126,069
Oct-02	4.7671	Oct-03	8.2004	3.4333	176,496

Estimated Summer Season Change in Revenue **1,595,426**

Percent Change Between PGA Factors **72.02%**

Firm Sales Volume @ Burnertip

1,468,777

Month	Estimated Customer Usage Mcf/Mnth	Estimated % Mcf/Yr	Estimated Company Sales Mcf/Mnth
Jan	23.6	19.67%	288,859
Feb	21.7	18.08%	265,604
Mar	15.9	13.25%	194,613
Apr	9.6	8.00%	117,502
May	5.3	4.42%	64,871
Jun	3.6	3.00%	44,063
Jul	2.8	2.33%	34,271
Aug	2.7	2.25%	33,047
Sep	3	2.50%	36,719
Oct	4.2	3.50%	51,407
Nov	9.7	8.08%	118,726
Dec	17.9	14.92%	219,093
TOTAL	120	100%	1,468,777

Note: Estimated Customer Usage Obtained from Missouri Public Service Commission.