

MPSC CASE NO GR-2014-0086

SURREBUTTAL TESTIMONY OF TIMOTHY R JOHNSTON

SCHEDULE TRJ - 3

**Summit Natural Gas of Missouri
MPSC Case No GR-2014 - 0086
Conservation Study
Prepared by Tim Johnston August 5, 2014**

Conclusion

The billing determinant rate condition under which Summit Natural Gas of MissouriGas, Inc. ("SNG") is required to calculate retail sales and transportation rates should be modified/eliminated to acknowledge the effects of conservation since the system was placed in service in the mid-1990's.

Summit's analysis justifies the complete elimination of the rate condition.

Background

In October 1993, Tartan Energy filed an application with the Missouri Public Service Commission (MPSC) to build a natural gas utility along the Highway 60/63 corridor in southern Missouri¹. Tartan provided analytical support in the form of a feasibility study. The feasibility study included a base case and a number of sensitivity studies. Each sensitivity analysis varied the initial customer counts and assumed growth rates, yielding annual sales volumes.

The base case and all sensitivity analyses assumed annual residential customer usage at 100 Mcf.

The settlement and MPSC Order, issued September 16, 1994, required SNG's predecessor company, Southern Missouri Natural Gas ("SMNG"), to use a minimum annual throughput of 1,797,000 Mcf as the basis upon which to design rates for start-up and subsequent rate increase filings.

Fundamental Propositions

- (1) The rate condition imposed on SMNG in 1994 was designed to protect the customers from the detrimental effects of a too-rosy system growth projection. The rate condition requires the utility to accept the risks related to reduced system growth. By simply requiring the utility to design rates with a minimum annual sales volume in the denominator, the MPSC was able to mitigate the potential risk born by ratepayers. The residential volumes shown in the sensitivity analyses performed by Tartan only varied the annual customer count.

¹ MPSC Case No GA-94-127.

- (2) The residential portion of the rate condition was calculated by multiplying the relevant customer counts each year from start-up by 100 Mcf per year. SNG has been unable to find any suggestion that the annual 100 Mcf per year of residential usage was an inappropriate assumption or that a sensitivity analysis contemplated something different. Further, we can find no suggestion that the 100 Mcf per year assumption was challenged by the intervenors.
- (3) SNG should not be held responsible for customer conservation since the system was placed in service. System growth is SNG's responsibility and it is reasonable to hold SNG responsible for deficient system growth, but not residential conservation.
- (4) The MPSC should not punish utilities for customer conservation.

Analysis

Reduced Residential Demand

SNG examined three different data sources in order to support the hypothesis that SNG's residential customers have materially reduced their annual usage since the system initiated operations.

- Fifteen year trend analysis of annual residential usage per customer.
- Billing determinants in the current rate increase filing.

Analysis #1 - Fifteen Year Residential Usage per Customer

The table displayed below shows the residential usage per customer for as far back as data is available. The data is from internal sources.

| Calendar Year | Weather Adjusted Sales per Customer (Mcf) | | |
|---------------|---|-------------------------------------|----------------------|
| | Residential annual usage | Residential – optional annual usage | Combined Residential |
| 1999 | NA | NA | 124.7 |
| 2000 | NA | NA | 76.4 |
| 2001 | 72.2 | 57.3 | 64.6 |
| 2002 | 69.1 | 55.9 | 63.1 |
| 2003 | 67.1 | 56.2 | 62.7 |
| 2004 | 67.7 | 55.6 | 63.3 |
| 2005 | 62.0 | 50.5 | 58.2 |
| 2006 | 58.8 | 48.8 | 57.1 |
| 2007 | 60.7 | 50.3 | 58.7 |
| 2008 | 59.0 | 50.1 | 57.3 |
| 2009 | 57.8 | 49.8 | 56.1 |
| 2010 | 58.8 | 50.4 | 57.2 |
| 2011 | 57.7 | 47.8 | 54.4 |
| 2012 | 61.4 | 50.6 | 57.1 |
| 2013 | 60.7 | 49.4 | 55.1 |

The trend is clear. During the last fifteen years, the annual demand per residential customer has declined precipitously.

Analysis #2 – Previous MPSC Staff Annual Residential Demand

The residential billing determinants developed by MPSC Staff in Case No GR-2014-0086, as shown on page 4 of 6, show 55.15 Mcf per year on a combined basis.

Comparison of Current Projected Usage per Customer with CPCN Feasibility Studies.

Page 5 of 6 calculates the reduction necessary to acknowledge the effects of residential conservation. Rather than use the baseline annual usage of 100 Mcf, it uses 84 Mcf. The lower usage was published in SMNG's 1996 annual report and may represent a more realistic beginning estimate than the 100 Mcf. The relevant excerpt is attached as page 6 of 6. The 84 Mcf represents the closest representation of actual usage and suggests that the 100 Mcf as used in the initial feasibility study was overstated.

Analytical Summary - The table shown below shows the reconciliation. The calculated annual base volume is 1,797,000 Mcf. Support for the data shown below is provided in Exhibit 2.

| Particulars | Volumes in Mcf |
|--------------------------------------|----------------|
| Feasibility Study total sales volume | 1,797,000 |
| Residential reduction | (270,220) |
| Commercial reduction | (118,891) |
| Industrial reduction | (129,319) |
| Revised rate condition | 1,278,569 |

Conclusions – The original rate condition, as modified, is less than the current system sales and transportation volumes. Therefore, the rate condition should be eliminated for the entire system or, as an alternative, reduced to a level that adequately acknowledges system conservation.

Summit Natural Gas of Missouri, Inc.
Conservation Study Support - for Southern Missouri Natural Gas
Rate Condition Volume Reduction from Conservation Study - Adjusted for 84 Mcf per day

| Line No | Particulars (a) | 1994 Feasibility Study Rate Condition (1) | | Conservation Based on Feasibility Study Volume | |
|---------|-----------------|---|------------------|--|-----------------------------|
| | | Customers (b) | Volumes (c) | 84 Mcf Base Conservation Adjustment (2) (d) | Adjusted Rate Condition (e) |
| 1 | Residential | 9,366 | 936,644 | (270,220) | 666,424 |
| 2 | Commercial | 687 | 412,105 | (118,891) | 293,214 |
| 3 | LVS/Industrial | 4 | 448,251 | (129,319) | 318,932 |
| 4 | Total | <u>10,057</u> | <u>1,797,000</u> | <u>(518,431)</u> | <u>1,278,569</u> |

Notes (1) Customers and volumes taken from Exhibit 17 from Case No. GA-94-127
 (2) The conservation adjustment for the Residential customer class was calculated in the Conservation Analysis tab. The Commercial and LVS/Industrial Conservation adjustment was calculated using a percentage of the total residential volume as was the methodology used in the original GA-94-127 Feasibility study to determine commercial load.

Summit Natural Gas of Missouri, Inc.
Calculation of Current Residential Annual Demand and Appropriate Reduction to Rate Condition
Replaces 100 Mcf Average Annual Residential Usage with 84 Mcf
Volumes in Mcf

| Line No | Month (a) | Residential (note 1) | | Residential - Optional (note 1) | | Residential - combined | | | | | |
|---------|-----------|---|---------------------|---------------------------------|--------------------|------------------------|----------------|---------------------|-----------------|-------------------|----------------|
| | | Customer Count (b) | monthly average (c) | Usage (d) | Customer Count (e) | monthly average (f) | Usage (g) | Total customers (h) | Total usage (i) | Average Usage (j) | |
| 1 | January | 4,934 | 11.78 | 58,107.60 | 4,670 | 9.67 | 45,167.49 | 9,604 | 103,275.09 | 10.75 | |
| 2 | February | 4,964 | 9.98 | 49,549.48 | 4,733 | 8.37 | 39,599.14 | 9,697 | 89,148.61 | 9.19 | |
| 3 | March | 4,974 | 9.24 | 45,938.63 | 4,754 | 7.37 | 35,033.23 | 9,728 | 80,971.86 | 8.32 | |
| 4 | April | 4,950 | 7.67 | 37,985.42 | 4,743 | 6.32 | 29,988.43 | 9,693 | 67,973.85 | 7.01 | |
| 5 | May | 4,855 | 3.95 | 19,168.15 | 4,680 | 3.10 | 14,506.06 | 9,535 | 33,674.22 | 3.53 | |
| 6 | June | 4,776 | 1.84 | 8,768.49 | 4,653 | 1.41 | 6,551.31 | 9,429 | 15,319.80 | 1.62 | |
| 7 | July | 4,736 | 0.92 | 4,363.76 | 4,590 | 0.71 | 3,236.70 | 9,326 | 7,600.46 | 0.81 | |
| 8 | August | 4,702 | 0.92 | 4,327.62 | 4,575 | 0.69 | 3,169.27 | 9,277 | 7,496.89 | 0.81 | |
| 9 | September | 4,701 | 1.46 | 6,862.63 | 4,577 | 1.14 | 5,211.39 | 9,278 | 12,074.01 | 1.30 | |
| 10 | October | 4,775 | 0.29 | 1,383.12 | 4,676 | 0.15 | 709.38 | 9,451 | 2,092.51 | 0.22 | |
| 11 | November | 4,865 | 4.65 | 22,608.22 | 4,788 | 3.71 | 17,740.84 | 9,653 | 40,349.06 | 4.18 | |
| 12 | December | 4,961 | 7.99 | 39,638.28 | 4,899 | 6.77 | 33,156.35 | 9,859 | 72,794.62 | 7.38 | |
| 13 | | 58,192 | 60.68 | 298,701 | 56,338 | 49.40 | 234,070 | 114,529 | 532,771 | 55.15 | |
| 14 | | Annual residential customer usage per 1996 annual report - Replaces 100 Mcf with 84 Mcf | | | | | | | | | 84.00 |
| 15 | | Annual conservation per customer since start-up | | | | | | | | | 28.85 |
| 16 | | Annual residential customer class conservation (9,366 customers) | | | | | | | | | 270,220 |

Notes: (1) all data from MPSC Staff Accounting Schedules from e-mail July 23, 2014

| | | | |
|--|---|--------------------------------|---------------------------------|
| Name of Respondent Southern Missouri Gas Company, L.P. | This Report is: (1) <input checked="" type="checkbox"/> An Original (2) <input type="checkbox"/> A Resubmission | Date of Report (Mo, Da, Yr) | Year of Report Dec. 31, 1996 |
|--|---|--------------------------------|---------------------------------|

RESIDENTIAL AND COMMERCIAL SPACE HEATING CUSTOMERS

A residential space heating customer is a customer whose major fuel for heating is gas.

| Line No. | Item (a) | Residential (b) | Commercial (c) |
|----------|---|-----------------|----------------|
| 1 | Average Number of Space Heating Customers for the Year (Estimate if not known. Designate with an asterisk if estimated.) | 2,125 | 120 |
| 2 | For Space Heating Only, Estimated Average Mcf (14.73 psia at 60°F) Per Customer for the Year | 84.28 | 245.33 |
| 3 | Number of Space Heating Customers Added During the Year | 3,251 | 222 |
| 4 | Number of Unfilled Applications for Space Heating at End of Year | 3,785 | 268 |

INTERRUPTIBLE, OFF PEAK, AND FIRM SALES TO DISTRIBUTION SYSTEM INDUSTRIAL CUSTOMERS

1. Report below the average number of interruptible, off peak, and firm industrial customers on local distribution systems of the respondent, and the Mcf of gas sales to these customers for the year.

2. Interruptible customers are those to whom service may be interrupted under terms of the customer's gas contract, or to whom service is required to be interrupted, regardless of contractual arrangements in emergency periods, by law,

ordinance, directive, or other requirement of government authority. State in a footnote the basis on which interruptible customers are reported.

3. Off peak sales are seasonal and other sales which do not occur during wintertime demands.

4. Report pressure base of gas volumes at 14.73 psia at 60°F.

| Line No. | Item (a) | Number/Amount (b) |
|----------|--|-------------------|
| 1 | Interruptible Customers | |
| 2 | Average Number of Customers for the Year | 0 |
| 3 | Mcf of Gas Sales for the Year | 0 |
| 4 | Off Peak Customers | |
| 5 | Average Number of Customers for the Year | 0 |
| 6 | Mcf of Gas Sales for the Year | 0 |
| 7 | Firm Customers | |
| 8 | Average Number of Customers for the Year | 6 |
| 9 | Mcf of Gas Sales for the Year | 106,178 |
| 10 | TOTAL Industrial Customers | |
| 11 | Average Number of Customers for the Year | 6 |
| 12 | Mcf of Gas Sales for the Year | 106,178 |