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### MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. GR-2014-0086

### SURREBUTTAL TESTIMONY

OF

### TIMOTHY R. JOHNSTON

### **ON BEHALF OF**

### SUMMIT NATURAL GAS OF MISSOURI, INC.

Jefferson City, MO August, 2014

Sammet Exhibit No. 6 Date 8-19-11 Reporter 4F File No. G.R. - 2014 - 0086

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## **REBUTTAL TESTIMONY**

# TIMOTHY R. JOHNSTON

# SUMMIT NATURAL GAS OF MISSOURI, INC.

1	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
2	Α.	Timothy R. Johnston, 7810 Shaffer Parkway, Littleton, CO 80127.
3	Q.	HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY AND SCHEDULES IN
4		THIS CASE?
5	A.	Yes. I adopted the Direct Testimony of Ms. Michelle Moorman and I submitted
6		Rebuttal Testimony in this case on behalf of Summit Natural Gas of Missouri, Inc.
7		(SNG).
8	Q.	WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY IN THIS
9		PROCEEDING?
10	Α.	I will: (1) respond to the Rebuttal Testimony of Missouri Propane Gas Association
11		(MPGA) witness Brian T. Brooks; (2) respond to the recommendation in Office of
12		the Public Counsel (OPC) witness Barbara Meisenheimer's Rebuttal Testimony
13		to reject Summit's proposed tariff sheets; (3) propose a modification to the
14		Commission's Order in GA-94-127, in further response to Ms. Meisenheimer's
15		Rebuttal Testimony; and, (4) propose a partial plan by which to transfer certain
16		assets in the Warsaw and Branson Divisions to Plant Held for Future Use, FERC
17		Account 105, in response to the testimony of Staff witness Amanda McMellen
18		and Ms. Meisenheimer.

1		RESPONSE TO MPGA WITNESS BROOKS' TESTIMONY
2	Q.	MR. BROOKS HAS REFERRED TO REPRESENTATIONS MADE IN THE
3		DIRECT TESTIMONIES OF MS. MOORMAN AND MR. TAYLOR
4		CONCERNING SNG'S REQUEST TO RECOVER LESS THAN THE FULL
5		COST OF SERVICE FROM THE BRANSON DISTRICT, DUE IN PART TO THE
6		FACT THAT THE CUSTOMER COUNT IN THIS SYSTEM IS STILL GROWING
7		(PAGE 6, LINES 1 THROUGH 18). PLEASE EXPLAIN THE USE OF THE
8		TERM "EARLY MOVER" AS IT IS USED IN MS. MOORMAN'S TESTIMONY.
9	Α.	Ms. Moorman explained that SNG sought something less than the full revenue
10		requirement in order to avoid assigning the full cost of new systems to early
11		moving customers. Within that context, an Early Mover is a customer who
12		accepts service when service is made available, rather than waiting for a
13		significant customer penetration to occur. Without early movers, systems may
14		never be built.
15	Q.	AT PAGE 6, LINE 18, OF MR. BROOKS' TESTIMONY, HE ASSERTS, " IF
16		SNG IS PROPOSING A REVENUE SHORTFALL NOW, ONE CAN
17		LOGICALLY INFER THAT FUTURE SUBSTANTIAL RATE INCREASES WILL
18		BE NECESSARY". IS THAT ASSERTION ACCURATE?
19	Α.	No. Distribution mains investments necessary to serve the eventual anticipated
20		customer base have to occur and be placed in-service in advance of customer
21		growth. Approximately 74% <sup>1</sup> of Summit's Branson-related rate base is related to
22		the net plant arising from Distribution Mains, FERC Account 101-376; most of the

<sup>1</sup> See Schedule TRJ-1, page 1 of 1.

amounts posted to this account are the construction costs for the 8 inch and 6 1 2 inch steel mainline that brings natural gas to the Branson area from the meter 3 station on the Southern Star Central Gas Pipeline located just north and west of 4 the town of Aurora, MO. That investment was made to serve the customer base 5 that is ultimately contemplated, and building a pipeline with less capacity would not have been prudent based on the projected ultimate load in the Branson 6 7 service area. As the capacity related to that investment is absorbed by new customers, the costs will also be spread over a larger customer base. So, just 8 the opposite of Mr. Brooks' assertion is true. One can expect rates to decline 9 over time as customer growth occurs. 10 ARE WARSAW'S CAPACITY UTILIZATION ATTRIBUTES SIMILAR TO 11 Q. 12 **BRANSON?** Α. Somewhat. The primary driver of Warsaw future rate relief will come from 13 increased transfer of cost responsibility for those mainline assets shared with the 14Lake of the Ozarks Division. Similar to Branson, 73%<sup>2</sup> of Warsaw's rate base is 15 16composed of the net plant related to Distribution Mains, FERC Account 101-376. 17 AT PAGE 7, LINE 2, OF MR. BROOKS' TESTIMONY, HE SUGGESTS THAT Q. THE CUSTOMERS IN OTHER MISSOURI RATE DIVISIONS WILL SUBSIDIZE 18 19 BRANSON AND WARSAW CUSTOMERS. IS THAT TRUE? No. The revenue requirements of the other SNG divisions are separately 20 Α. calculated based on cost-causation and do not cause interdivision subsidies. 21 The financial burden of lower-than-cost rates falls squarely on SNG's 22

2 See Schedule TRJ-1, page 1 of 1.

1 shareholder.

#### 2 **RESPONSE TO OPC WITNESS MEISENHEIMER'S TESTIMONY** 3 Q. PLEASE DESCRIBE YOUR UNDERSTANING OF MS. MEISENHEIMER'S POSITION AND RECOMMENDATION REFLECTED IN HER REBUTTAL 4 TESTIMONY. 5 6 Α. Ms. Meisenheimer asserts that SNG and its predecessors have not complied with past Commission orders to isolate SNG's customers from financial hazards 7 associated with expansion and therefore the Commission should reject SNG's 8 request for a rate increase. She quotes the Commission's admonitions in 9 numerous Commission orders. She discusses each SNG operating division and 10 offers a comparison of the feasibility studies used to justify the certificates of 11 public convenience and necessity ("CPCN") with her understanding of current 12 13 customer counts and adjusted test period annual sales and transport volumes (as 14found in Tables 1 through 4 of Ms. Meisenheimer's Rebuttal Testimony). 15 Q. ARE THE DATA SHOWN IN TABLES 1 THROUGH 4 OF MS. MEISENHEIMER'S REBUTTAL TESTIMONY CORRECT? 16 No. As demonstrated in SNG Witness Porter's Surrebuttal Testimony, Ms. 17 Α. Meisenheimer's data contains numerous data interpretation errors and arithmetic 18errors. In addition, comparisons of historic per-customer usage figures from past 19 filings to current per customer usage figures is not valid due to the ongoing 20 effects of conservation measures and the increases in the efficiency of natural 21

22 gas fired equipment.

# 1Q.PLEASE DESCRIBE, FOR EACH RELEVANT OPERATING DIVISION, YOUR2RESPONSE TO MS. MEISENHEIMER'S TESTIMONY.

A. First, it is important to state that which may not be obvious. SNG provides a
 service in less-populated areas of Missouri in which other utilities have declined
 to provide service and, more importantly, saves customers money. SNG is not a
 pure monopoly because its customers are not prohibited from fuel switching.

7 Q. ARE SNG'S EARNINGS ROBUST OR IS IT FAIR TO SAY THAT SNG'S

8 COMMON EQUITY HOLDERS HAVE EXPERIENCED DEGRADED EARNINGS

9 THROUGH THE ASSUMPTION OF FINANCIAL RESPONSIBILITY FOR ITS

### 10 EXPANSIONS?

The latter. SNG's ownership has born the financial responsibility for all the growth 11 Α. 12 within Missouri. SNG Witness Anderson's Direct Testimony includes Schedule 1, which provides an historical summary of actual returns to common equity. The 13 data therein supports my financial responsibility assertion. Building new 14distribution systems into areas with existing homes always results in lower 15revenues during the time the system is under construction and for a number of 16 17 years after construction as customers gradually convert to natural gas. This 18 tends to put the company in a situation where the return authorized by the Commission will not be realized until the third year of operation at the least, on 19 smaller systems, and much later on larger investments such as Branson. 20

# 21 Q. IS IT YOUR BELIEF THAT THE RECESSION BEGINNING IN LATE 2008 WAS

22 INSTRUMENTAL IN RETARDING SYSTEM GROWTH?

1	А.	Yes. The Branson, Lake of the Ozarks, and Warsaw areas were among the
2		fastest growing regions in Missouri prior to the recession. The main systems for
3		Branson and Warsaw were sized in part to accommodate projected growth that
4		has not occurred.
5	Q.	WERE YOUR BASE RATES AFFECTED BY THE RECESSION?
6	A.	No.
7	Q.	IN YOUR OPINION HAS SNG PROVIDED BENEFITS TO ITS CUSTOMERS
8		AND VARIOUS AREAS OF THE STATE DUE TO THE AVAILABILITY OF
9		NATURAL GAS AS A FUEL SOURCE ALTERNATIVE?
10	A.	Yes. The availability of natural gas along a street increases property values, and
11		its presence in a community is often critical to economic growth. Most recently,
12		access to natural gas insulated many of our customers from dramatically higher
13		winter propane price spikes.
14		GALLATIN
15	Q.	DOES TABLE 1 ON PAGE 8 OF MS. MEISENHEIMER'S REBUTTAL
16		TESTIMONY ADEQUATELY REFLECT APPROPRIATE FINANCIAL
17		RESPONSIBILITY MEASUREMENTS FOR SNG'S GALLATIN DIVISION?
18	A.	No. The table possesses all the flaws described earlier and should be ignored.
19		See SNG Witness Porter's detailed explanation in his Surrebuttal Testimony.
20	Q.	HAS MS. MEISENHEIMER FULLY ACKNOLWEDGED THE RISKS BORN BY
21		SNG FOR ITS GALLATIN DIVISION?
22	A.	No. She has focused all her attention on feasibility studies as the only indicator

of risk assumption. She has not acknowledged the uncertainties that accompany
 a growth utility and the result that SNG has born the financial responsibility as
 promised.

Q. DID SNG (THEN MISSOURI GAS UTILITY, INC.) CONSTRUCT THE PRIMARY
 SYSTEMS THAT MAKE UP THE GALLATIN OPERATING DIVISION?

No. The original Gallatin and Hamilton systems were built as municipal systems 6 Α. 7 in 1995. For a variety of reasons, the residents of these towns and other communities along the pipeline route did not connect to the system at the rate 8 anticipated in the original projections. By the summer of 2004, both the Gallatin 9 10 and Hamilton town councils had elected to cease payments on the Certificates of Participation used to finance the original system, and the banks representing the 11 holders of those Certificates had foreclosed on the systems. The banks had 12 13 made arrangements with the towns to continue to operate the systems, but 14neither the towns nor the banks were willing to enter into contracts for the gas 15 necessary to provide service for the 2004/2005 heating season. The gas transportation contract for the Gallatin and Hamilton system includes some 16 storage capacity, but the gas remaining in that storage would have only sufficed 17 18 to supply the system until early December, 2004. Summit Utilities, Inc. became 19 aware of this situation in late September, 2004, and was able to obtain approval 20 from this Commission to form Missouri Gas Utility, purchase this system and take over the operations by January 1, 2005. Even prior to that approval, Summit 21 Utilities took steps to purchase additional gas and have it placed into storage to 22

1 enable the system to continue service to these communities.

# 2 Q. CAN YOU PROVIDE AN EXAMPLE OF GALLATIN-RELATED RISKS THAT 3 WERE ASSUMED BY SNG?

A. Yes. A CPCN to serve a single additional customer was approved in
Commission Case No. GA-2007-0421, on June 26, 2007. The construction was
completed before the base rates approved in GR-2008-0060 were in effect. To
the extent the subject expansion underperformed, SNG was on the hook until the
next rate case. This is the next rate case. Underperformance for seven years, if
underperformance has occurred, has been a financial burden for SNG, not the
rate payers.

# 11Q.CAN YOU CITE OTHER FINANCIAL RESPONSIBILITIES BORN BY SNG AND12NOT THE RATE PAYERS?

Α. Yes. Ms. Meisenheimer fails to mention that SNG purchased natural gas for the 13 14winter of 2004-2005, before it even owned the Gallatin and Hamilton systems. 15 This was accomplished in anticipation of a successful acquisition transaction, but 16 represented a significant risk to SNG since it had no assurance of cost recovery 17 when the transaction was completed. Fortunately, the financial hazard did not occur. She also failed to mention that Gallatin's assets were brought onto SNG 18 19 books at a heavily discounted purchase price and it was that amount, rather than the significantly higher outstanding municipal debt related to the system's cost of 20 construction, that became the foundation for Gallatin's rate base going forward. 21 Gallatin's customers, who would otherwise have been required to pay the costs 22

1		associated with the original system investment, were relieved of that
2		responsibility. She also failed to mention that SNG moved quickly to take over
3		these systems and that such movement was instrumental in allowing the Gallatin
4		customers to avoid loss of a heat source during the winter of 2004-2005.
5	Q,	TO YOUR KNOWLEDGE, DID OPC PROPOSE A RATE CONDITION OR
6		OTHER CONSTRAINT ON THE GALLATIN SYSTEM DURING THE
7		STATUTORY PERIOD RELATED TO THE GALLATIN RATE CASE YOU HAVE
8		CITED?
9	Α.	Ms. Meisenheimer's testimony did not include any mention of revenue
10		requirement issues in her direct testimony in Case No GR-2008-0060. Mr. Ted
11		Robertson did provide testimony in that Case related to the amount of utility plant
12		in service.
13	Q.	PLEASE SUMMARIZE YOUR RESPONSE TO MS. MEISENHEIMER.
14	Α.	Ms. Meisenheimer has failed to consider the entire basket of responsibilities born
15		by SNG in the acquisition and growth of the Gallatin Division. SNG has born
16		substantial risk and, in some case, the attendant hazards have occurred, causing
17		SNG to incur degraded earnings.
18	Q.	HAS SNG ACCEPTED THE FINANCIAL RESPONSIBILITY FOR ITS
19		GALLATIN ACQUISITION AND GROWTH?
20	Α.	Yes.
21	Q.	DOES SNG INTEND TO ACCEPT FINANCIAL RESPONSIBILITY FOR ITS
22		GALLATIN ACQUISITION AND GROWTH IN THE FUTURE?

1	Α.	Yes.
2		WARSAW
3	Q.	DOES TABLE 2 ON PAGE 11 OF MS. MEISENHEIMER'S REBUTTAL
4		TESTIMONY ADEQUATELY REFLECT APPROPRIATE FINANCIAL
5		RESPONSIBILITY MEASUREMENTS FOR SNG'S WARSAW DIVISION?
6	Α.	No. Ms. Meisenheimer included the billing determinants for the proposed Buffalo
7		and Bolivar expansion, as approved in Case No GA-2010-0189. This expansion
8		did not occur, and would not, in any case, have been part of or connected
9		physically to the Warsaw system. As designed, the Buffalo and Bolivar system
10		would have been supplied with natural gas from a proposed tap on the Southern
11		Star Central Gas Pipeline line in Brookline, MO. See SNG Witness Porter's
12		detailed explanation in his Surrebuttal Testimony.
13	Q.	HAS MS. MEISENHEIMER FULLY ACKNOWLEDGED THE RISKS BORN BY
14		SNG FOR ITS WARSAW DIVISION?
15	A.	No. As was true for Gallatin, she has focused all her attention on feasibility
16		studies as the only indicator of risk assumption. She has not acknowledged the
17		uncertainties that accompany a growth utility.
18	Q.	DO YOU BELIEVE THE 2008 RECESSION HAD AN IMPACT ON THE
19		GROWTH IN THE WARSAW DIVISION?
20	Α.	Yes. The Commission Order in Case No. GA-2009-0422 occurred on July 8,
21		2009, and SNG began construction shortly thereafter. I believe the recession
22		and its persistence have affected SNG's ability to connect new customers, as

1		well as reducing the organic growth in this area that had been occurring for
2		several years, the effect of which was anticipated in the design of this system.
3	Q.	HOW WERE THE RATES SET FOR THE WARSAW DIVISION?
4	Α.	The rates were established by the Commission based on the results of the
5		original feasibility study in Case No. GA-2009-0264.
6	Q.	HAVE THE BASE RATES CHANGED SINCE THE ORIGINAL RATES WERE
7		SET?
8	Α.	No.
9	Q.	FROM YOUR PREVIOUS ANSWER IS IT REASONABLE TO CONCLUDE
10		THAT WARSAW'S CUSTOMERS HAVE NOT SUFFERED FROM THE POOR
11		GROWTH PERFORMANCE CITED BY MS. MEISENHEIMER?
12	Α.	Yes.
13	Q.	WHY IS SNG REQUESTING LESS THAN FULL COST RECOVERY IN THE
14		WARSAW DIVISION?
15	A.	Warsaw's existing rate base contains a materially underutilized investment in
16		Distribution Mains, FERC Account 101-376. SNG believes it is inappropriate to
17		burden existing customers with the full cost recovery for that investment. The
18		distribution mains installed were designed to serve a larger population than
19		currently exists in this area, due in large part to the reduction in growth caused by
20		the recession. The manner in which the reduction in recovery was calculated
21		was intended to only assign the existing customers the proportionate cost
22		recovery for the fraction of the capacity of the system which they are using.

1	Q.	DO YOU BELIEVE THIS APPROACH IS FAITHFUL TO THE COMMISSION
2		ORDER TO INSULATE THE CUSTOMERS FROM FINANCIAL
3		RESPONSIBILITY?
4	A.	Yes.
5	Q.	IS SNG'S POSITION CONSISTENT WITH THE NEED TO ACCEPT THE
6		FINANCIAL RESPONSIBILITY RELATED TO ASSET UNDERUTILIZATION?
7	A.	Yes. Further on in my testimony, I will describe a formal process for assigning
8		some of the value of the assets in Distribution Mains, FERC Account 101-376, to
9		Plant Held for Future Use, FERC Account 105 to maintain this financial
10		responsibility.
11	Q.	IN MS. MEISENHEIMER'S TESTIMONY AT PAGE 10, LINES 1 - 5, SHE CITES
12		THE NEED FOR TRANSPARENCY AND QUESTIONS THE ADEQUACY OF
13		SNG'S PROPOSED REVENUE REDUCTION. HOW DO YOU PROPOSE TO
14		ACCOUNT FOR THE REVENUE REDUCTION?
15	A.	Ms. Meisenheimer questions the use of "management policy decisions" (page 18,
16		line 12 – 13) as a rate design principle at Warsaw and Branson. Management's
17		decision to reduce the requested revenue was based on a rough comparison of
18		the number of current customers to the number of potential customers. This
19		methodology is fair and results in an adequate reduction.
20	Q.	HAS SNG ACCEPTED THE FINANCIAL RESPONSIBILITY FOR ITS
21		WARSAW EXPANSION?
22	A.	Yes.

1	Q.	DOES SNG INTEND TO ACCEPT FINANCIAL RESPONSIBILITY FOR ITS
2		WARSAW EXPANSION IN THE FUTURE?
3	A.	Yes.
4		ROGERSVILLE
5	Q.	DOES TABLE 4 ON PAGE 17 OF MS. MEISENHEIMER'S TESTIMONY
6		ADEQUATELY REFLECT APPROPRIATE FINANCIAL RESPONSIBILITY
7		MEASUREMENTS FOR SNG'S ROGERSVILLE DIVISION?
8	A.	No. The table possesses all the flaws described earlier and should be ignored.
9		See SNG Witness Porter's detailed explanation in his Surrebuttal Testimony.
10	Q.	IN MS. MEISENHEIMER'S TESTIMONY AT PAGE 15, LINE 5 – 7, SHE CITES
11		THE IMPUTED VOLUME FOR ROGERSVILLE WHICH EMERGED FROM THE
12		ORIGINAL CERTIFICATE FILING, CASE NO. GA-94-127 (ISSUED
13		SEPTEMBER 16, 1994). THAT COMMISSION ORDER CONTAINED AN OPEN-
14		ENDED REQUIREMENT FOR INITIAL BASE RATES AND BASE RATES
15		FROM SUBSEQUENT FILINGS TO USE A MINIMUM THROUGHPUT OF
16		1,797,000 MCF. IS MS. MEISENHEIMER'S ASSERTION CONSISTENT WITH
17		YOUR UNDERSTANDING?
18	Α.	Yes.
19	Q.	DO THE VOLUMES FOR ROGERSVILLE IN SNG'S FILED CASE REFLECT
20		THE IMPUTED VOLUME?
21	Α.	Yes, because the total throughput in SNG's filed case are greater than the
22		imputed volume.

# Q. PLEASE DESCRIBE YOUR UNDERSTANDING OF ROGERSVILLE TEST PERIOD THROUGHPUT.

Α. SNG's Rogersville filed throughput was 1,755,522 Mcf. In addition, SNG'S 3 transportation study included an additional 104.049 Mcf<sup>3</sup> of throughput, the 4 revenues from which were included as a revenue credit to the cost-of-service and 5 6 therefore excluded from billing determinants. So, the filed adjusted test-period throughput was 1,859,571. This exceeds the imputed volume of 1,797,000 Mcf. 7 DOES STAFF'S FILED CASE AGREE WITH SNG'S ANNUAL VOLUMES? 8 Q. Yes. Staff updated its cost-of-service study by moving the test period forward Α. 9 three months. Staff's billing determinant calculations are still under review. 10 11 However, it appears Staff's throughput will be close to 1,900,000 Mcf. 12 Q. DO YOU BELIEVE THE IMPUTED VOLUMES FROM CASE NO. GA-94-127 13 SHOULD BE RELEVANT IN THIS RATE CASE OR FUTURE RATE CASES? 14 Α. No. Even though SNG's and Staff's billing determinants in this case are greater 15 than the imputed volumes now, circumstances have changed substantially since 1994 and this throughput requirement should no longer have an impact. For 16 example, the average residential customer usage is less than 60% of that which 17 was assumed in the original 1994 Rogersville feasibility studies. The 18Commission should acknowledge that the antiquated annual residential customer 19 usage that formed the foundation for the imputed volume should be discarded in 20 the wake of customer conservation efforts in the last twenty years. Later in my 21 22 testimony, I will discuss in more detail SNG's recommendation to eliminate or

3 Highly Confidential TDP-4, Exhibit 4, p. 1 of 2 modified to reflect Mcf (106,650 MMBTU ÷ 1.025)

1		materially modify the rate condition primarily because customer conservation
2		efforts have successfully reduced annual residential consumption.
3	Q.	DOES THE MISSOURI PUBLIC SERVICE COMMISSION ENCOURAGE
4		CONSERVATION PROGRAMS?
5	A.	Yes.
6	Q.	DOES IT MAKE SENSE THAT THE COMMISSION WOULD PENALIZE A
7		UTILITY BY ADHERING TO A 20 YEAR OLD PER CUSTOMER USAGE
8		STANDARD THAT NO LONGER REFLECTS REASONABLE
9		EXPECTATIONS?
10	A.	No.
11	Q.	HOW DO YOU RECOMMEND THE COMMISSION DEAL WITH THE IMPUTED
12		VOLUME ISSUE?
13	A.	Although the imputed volume has been exceeded by the Company in this case, I
14		recommend the Commission eliminate the Rogersville imputed volume
15		requirement from this and future rate cases.
16		BRANSON
17	Q.	HOW WERE CURRENT RATES SET FOR THE BRANSON DIVISION?
18	Α.	The initial base rates were established by the Commission based on the results
19		of the original feasibility study in Case No. GA-2007-0168 (the certificate case),
20		and then again by the Commission in Case No. GR-2010-0347 (a rate case). In
21		both cases, the rates were set by adding a fixed volumetric charge to the base
22		rates then in effect for the Rogersville Division.

### 1 Q. WHY WERE BASE RATES LINKED TO ROGERSVILLE IN CASE NO. GR-

### 2 **2010-0347?**

- A. Retail sales service was initiated in Branson in December 2010. There was no
   useable operating history for Branson when the rates from GR-2010-0347 went
   into effect in early 2011.
- Q. FROM YOUR PREVIOUS ANSWERS, IS IT REASONABLE TO CONCLUDE
   THAT BRANSON'S CUSTOMERS HAVE NOT SUFFERED FROM THE POOR
   GROWTH PERFORMANCE CITED BY MS. MEISENHEIMER?
- 9 A. Yes.

### 10 Q. WHY IS SNG REQUESTING LESS THAN FULL COST RECOVERY?

Like Warsaw, Branson's existing rate base contains a materially underutilized 11 Α. investment in Distribution Mains, FERC Account 101-376. As mentioned 12 previously for Warsaw, SNG believes it is inappropriate to burden existing 13 customers with the full cost recovery for that investment. Much of this 14underutilization is in the 8 inch and 6 inch steel mainline that brings natural gas to 15 16 the Branson area from the meter station on the Southern Star Central Gas 17 Pipeline located just north and west of the town of Aurora, MO. SNG sized this line to serve the existing natural gas load in Branson and also load from the 18 anticipated future growth in the area. The area around Branson includes over 19 20 20,000 platted residential lots in subdivisions that were designed and registered 21 prior to the recession. SNG does not believe it would have been prudent to build 22 this line without building in the capacity to supply these developments; most of

	the developers had stated their intention to work with the company to provide
	access to natural gas for these future residents.
Q.	DO YOU BELIEVE THIS APPROACH IS FAITHFUL TO THE COMMISSION
	ORDER TO INSULATE THE CUSTOMERS FROM FINANCIAL
	RESPONSIBILITY?
Α.	Yes.
Q.	IS SNG'S POSITION CONSISTENT WITH THE NEED TO ACCEPT THE
	FINANCIAL RESPONSIBILITY RELATED TO ASSET UNDERUTILIZATION?
Α.	Yes.
Q.	IN MS. MEISENHEIMER'S TESTIMONY AT PAGE 10, LINES 1 - 5, SHE CITES
	THE NEED FOR TRANSPARENCY AND QUESTIONS THE ADEQUACY OF
	SNG'S PROPOSED REVENUE REDUCTION. HOW DO YOU PROPOSE TO
	ACCOUNT FOR THE REVENUE REDUCTION?
Α.	Ms. Meisenheimer questions the use of "management policy decisions" (page 18,
	line 12 – 13) as a rate design principle at Warsaw and Branson. As mentioned
	earlier in my comments concerning Warsaw, SNG proposes to transfer a portion
	of Distribution Mains, Account 376, assigned to the Warsaw and Branson
	Divisions, to Plant Held for Future Use, FERC Account 105.
Q.	PLEASE DISCUSS MS. MEISENHEIMER'S ADEQUACY ARGUMENT AS
	PRESENTED ON PAGE 19, LINE 2, OF HER TESTIMONY.
Α.	The reduced revenue request for Branson included in SNG's filed cost-of-service
	study represents the continued acceptance of financial responsibility by SNG.
	<b>Q.</b> А. <b>Q.</b> <b>Q.</b> А.

### Q. DO YOU OFFER A DEFINITIVE PROPOSAL FOR THE ACCOUNT 105

### 2 TRANSFER?

- 3 A. As mentioned earlier, SNG has submitted a proposal which it hopes will be
- 4 acceptable and to which the Parties can agree. A more detailed proposal which
- 5 embraces Branson and Warsaw is offered later in my testimony.
- 6 Q. HAS SNG ACCEPTED THE FINANCIAL RESPONSIBILITY FOR ITS
- 7 BRANSON EXPANSION?
- 8 A. Yes.
- 9 Q. DOES SNG INTEND TO ACCEPT FINANCIAL RESPONSIBILITY FOR ITS
- 10 BRANSON EXPANSION IN THE FUTURE?
- 11 A. Yes.
- 12 **RECOMMENDATION TO MODIFY THE COMMISSION'S ORDER IN**
- 13 CASE NO. GA-94-127
- 14 Q. IS IT YOUR BELIEF THAT THE IMPUTED VOLUME REQUIREMENT
- 15 **REFLECTED IN THE COMMISSION'S ORDER IN CASE NO. GA-94-127**
- 16 SHOULD BE ELIMINATED IN THIS PROCEEDING ON A GOING FORWARD
- 17 BASIS?
- 18 A. Yes.

### 19 Q. WHY SHOULD THE IMPUTED VOLUME REQUIREMENT BE REMOVED?

- 20 A. The imputed volume requirement no longer represents a reasonable residential
- customer usage expectation. The feasibility study that formed the basis upon
- which the Commission relied to set the imputed volume, an excerpt from which is

1		attached as Schedule TRJ-2, assumed residential customers would use 100 Mcf
2		per year. The Rogersville Division began operations at a volume lower than 100
3		Mcf per residential customer per year and has steadily decreased since. Today,
4		the average Rogersville annual residential volume from the test period in the
5		instant Case is 55.82 Mcf per year. Although there are doubtless numerous
6		reasons for the decrease, a substantial portion of that decrease is likely related to
7		enhanced customer conservation.
8	Q.	HAVE YOU PERFORMED A STUDY TO SUPPORT YOUR ASSERTIONS?
9	Α.	Yes. It is contained in Schedule TRJ-3.
10	Q.	ARE THERE OTHER REASONS YOU WOULD CITE TO JUSTIFY THE
11		REMOVAL OF THE IMPUTED VOLUME REQUIREMENT?
12	A.	Yes. The original Commission Order contemplated the inclusion of several towns
13		which were not included in the system build-out. At a minimum, the volumes
14		associated with those towns should be eliminated. This issue is further addressed
15		in SNG Witness Porter's Surrebuttal Testimony.
16	Q.	PLEASE SUMMARIZE THE RESULTS OF YOUR CONSERVATION STUDY.
17	A.	The annual usage for residential customers which formed the basis upon which
18		the imputed volume was established as shown in the original feasibility study,
19		may have been a fair representation of expected customer usage twenty years
20		ago. But the clear trend of reduced customer usage is persuasive evidence that
21		current reliance on such an estimate is inappropriate and should be discarded.
22 23		

1 2	<u>TRA</u>	NSFER OF DISTRIBUTION MAINS TO PLANT HELD FOR FUTURE USE, FERC ACCOUNT 105
3 4	Q.	ON PAGE 2 OF HER REBUTTAL TESTIMONY, STAFF WITNESS MCMELLEN
5		STATES THAT "ANY REDUCTIONS IN THE RATES CHARGED TO SNG'S
6		BRANSON AND WARSAW DISTRICT CUSTOMERS, AS COMPARED TO THE
7		LEVELS BASED UPON CURRENT COST-OF-SERVICE VALUES, SHOULD
8		ONLY BE PREMISED UPON A REASONABLE MEASUREMENT OF
9		CURRENT EXCESS PLANT-IN-SERVICE CAPACITY THAT IS NOT NEEDED
10		TO SERVICE CURRENT CUSTOMER LEVELS IN EACH DISTRICT." DOES
11		SNG HAVE A PROPOSAL THAT WILL SATISFY STAFF'S REQUIREMENT?
12	Α.	Yes. SNG is proposing that a portion of its mainline investments in Warsaw and
13		Branson be transferred into Plant Held for Future Use, FERC Account 105.
14	Q.	PLEASE DESCRIBE THE BACKGROUND RELATED TO SNG'S DECISION
15		TO MOVE FORWARD WITH A PROPOSAL TO TRANSFER A PORTION OF
16		ITS MAINLINE INVESTMENTS INTO PLANT HELD FOR FUTURE USE, FERC
17		ACCOUNT 105.
18	Α.	During settlement negotiations and also in the testimony offered by Ms.
19		Meisenheimer, intervenors expressed concern with the method by which SNG
20		proposed to acknowledge the underutilization of mainline assets at Branson and
21		Warsaw. In an attempt to assuage their concerns, SNG has developed a method
22		it believes will address these concerns.
23	Q.	PLEASE DESCRIBE THE ANALYTICAL STEPS YOU PERFORMED TO
24		PROVIDE A MEASUREMENT FOR YOUR ADJUSTMENT.

1	A.	The analytical steps are shown below:
2		(1) calculate the peak capacity of the relevant mainline segments;
3		(2) identify the current peak day utilization related to test period billing
4		determinants;
5		(3) calculate the percentage of total peak day capacity that is currently
6		utilized;
7		(4) calculate the underutilized portion; and,
8		(5) multiply the underutilized percentage by the appropriate gross plant and
9		reserve for depreciation account balances at December 31, 2013, to
10		determine the amount of plant and reserves to transfer.
11	Q.	HAVE YOU PERFORMED AN ANALYSIS?
12	Α.	Yes. It is attached as Schedule TRJ-4.
13	Q.	THE UNIFORM SYSTEM OF ACCOUNTS REQUIRES A UTILITY TO
14		POSSESS A PLAN FOR THE REPATRIATION OF THOSE ASSETS
15		TRANSFERRED TO PLANT HELD FOR FUTURE USE. DO YOU PROPOSE
16		SUCH A PLAN?
17	Α.	Yes. SNG proposes to repatriate a portion of the balance in FERC Account 105
18		annually based on the analytical process described below: .
19		(1) Annual determination based on December 31 (year end) plant balances;
20		(2) Warsaw only - Calculate the amount of FERC Account 376 and FERC
21		Account 378 that should be assigned to Lake of the Ozarks based on most
22		recent winter peak usage/transportation percentages. The amount by

1			which to multiply the percentages will be the sum of year end FERC
2			Accounts 105-376 and 105-378 for plant and reserves, and the year end
3			FERC Accounts 101-376, 101-378, 108-376, and 108-378 balances;
4		(3)	Warsaw only - The applicable Warsaw plant amounts from the calculation
5			in (2) will be subjected to the same calculation shown in Schedule TRJ-4
6			after subtracting the portion applicable to Lake of the Ozarks;
7		(4)	Warsaw only - The resultant unutilized capacity investment will be
8			compared to the plant balances in FERC Account 105, and an accounting
9			adjustment made to transfer a portion of the year end balance of FERC
10			Account 105 to FERC Accounts 101-376, 101-378, 108-376 and, 108-378;
11		(5)	Branson calculations will occur similar to Warsaw except without the need
12			for the intermediate analytical step to split shared assets;
13		(6)	Depreciation expense will not be calculated on FERC Account 105 gross
14			plant balances; and,
15		(7)	Depreciation expense on repatriated gross plant will begin on January 1 of
16			the year that succeeds the year-end calculations.
17	Q.	DOE	S THAT CONCLUDE YOUR SURREBUTTAL TESTIMONY?
18	Α.	Yes.	
19			

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

In the Matter of Summit Natural Gas of ) Missouri Inc.'s Filing of Revised Tariffs ) To Increase its Annual Revenues For ) Natural Gas Service )

Case No. GR-2014-0086

#### **AFFIDAVIT OF TIMOTHY R. JOHNSTON**

STATE OF COLORADO)) ss) ssCOUNTY OF JEFFERSON)

Timothy R. Johnston, being first duly sworn on his oath, states:

1. My name is Timothy R. Johnston and I work in Littleton, Colorado and I am employed by Summit Utilities, Inc. as the Executive Vice President & Chief Strategy Officer.

2. Attached hereto and made a part of hereof for all purposes is my Surrebuttal Testimony on behalf of Summit Natural Gas of Missouri, Inc. consisting of 22 pages, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

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

Timothy R. Johnston

Subscribed and sworn to before me this 6th day of August, 2014.

Notary Public

My commission expires:



# MPSC CASE NO GR-2014-0086

# SURREBUTTAL TESTIMONY OF TIMOTHY R JOHNSTON

SCHEDULE TRJ - 1

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### Summit Natural Gas of Missouri, Inc. MPSC Case No. GR-2014-0086 Percentage of Distribution Mains Net Plant to Total Rate Base All Data taken from Summit Filed

Line No	Particulars	Direct Filing Reference	Amounts
	(a)	(b)	(c)
	Warsaw		
1	Account 101-376 - Distribution Mains at 9-30-13	Sch TDP-2, Exh 2, page 2	\$ 12,821,542
2	Account 108-376 - Distribution Mains at 9-30-13	Sch TDP-2, Exh 3, page 2	(912,293)
3	Net Plant related to Distribution Mains		\$ 11,909,250
4	Total Rate Base as filed	Sch TDP-2, Exh 1, page 1 of 2	\$ 16,228,847
5	Percentage of Net Plant Related to Distribution Mains to Total Rate Base	line 3 + line 4	73.38%
	Branson		
6	Account 101-376 - Distribution Mains at 9-30-13	Sch TDP-2, Exh 2, page 4	\$ 36,789,304
7	Account 108-376 - Distribution Mains at 9-30-13	Sch TDP-2, Exh 3, page 4	(1,932,841)
8	Net Plant related to Distribution Mains		\$ 34,856,463
9	Total Rate Base as filed	Sch TDP-2, Exh 1, page 2 of 2	\$ 46,976,037
10	Percentage of Net Plant Related to Distribution Mains to Total Rate Base	line 8 + line 9	74.20%

# MPSC CASE NO GR-2014-0086

# SURREBUTTAL TESTIMONY OF TIMOTHY R JOHNSTON

SCHEDULE TRJ - 2

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# TARTAN ENERGY COMPANY, L.C.

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# SOUTHERN MISSOURI GAS COMPANY

### FILED

JUL 1 1994

MISSOURI PUBLIC SERVICE COMMISSION

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Supplement #1 to the

# FEASIBILITY STUDY

(Highway 60/63 Project Demand and Economics Sensitivities)

EXHIBIT 4

**JANUARY 1994** 

					HIGH	NAY BO/B3 K	ORECAST		¢		
					SENSITIVITY	#2 . LOW CO	ONVERSION				
Bection 1: HESIDENTIAL	DEMAND					Fat Res					
usumed Data/Calculations;					Estimated	Demand	1st	2nd	Brd	Estimated	
			Estmated %	Estimated # .	Demand per	por Oity	Construction	Construction	Construction	Annual	
	1990	Estimated	Conversions	Conversions	Residence	PACENO	Beaton %	Beason %	Beason %	. Growth	
Dily: .	Population	Residences	(End 3rd Yr)	(End 3rd YA	PACEAYA	(End Bid Yr)	PH CITY	per City	percity	1 30%	
Mansfield	1,429	695	60.0%	1 004	100	100 350	70.0%	20.0%	10.0%	1.30%	
Marshfield	4,0/4	1,020	60.0%	705	100	73,450	0.0%	70.0%	30.0%	1.30%	
Ava	A 182	1.743	60.0%	1.048	100	104.550	70.0%	20,0%	10.0%	1.30%	
Tabad	2.008	636	60.0%	502	100	50,150	70.0%	20.0%	10.0%	1.00%	
Wilder Soriage	2.038	849	60.0%	510	100	50,950	70.0%	20.0%	10.0%	1.80%	
Vest Plains	8,013	0,714	60.0%	2,228	. 100	222,825	70.0%	20.0%	10.0%	1.30%	
Hountain View	2,038	648	60.0%	609	100	60,600	0.0%	70.0%	30.0%	1.60%	
Houston	2,118	683	60,0%	630	100	52,950	0.0%	70.0%	30.0%	1.30%	
Lielding	1,028	553	60.0%	032	100	33,200	0.0%	70.0%	· 30.0%	1,30%	
	31,382	13,068		7,841		784,050					
Probable Additional Cites:			F0.0%		100	01675	0.0%	70.0%	30.0%	1.0%	
Hogoraville	842	410	00.07	240	100	12 075	0.0%	0.0%	100.0%	1.0%	
Pordiana	023	218	60.07	65	100	8450	0.0%	0.0%	100.0%	1.0%	
Criggina	1818	682	60.03	409	100	40,900	0.0%	70.0%	30.0%	1.0%	
Norwood	449	187	60.03	112	100	11.225	0.0%	0.0%	100.0%	1.0%	
	3.681	1.809		985		P8.525					
Section 1 (continued):	0,001	11400									
Calculated Residential Dom	and:	Yoar 1	Year 2	Yeara	Yon 4	Year 5	Yoar 0	YON 7	Year B	Year 9	Yea
City:		, PACENA	PACENYA	ONCF/YA	(HOF/YA	MOFINA	MOFINA	MCF/YA	(MCF/YA	PACENYA	MOP
Mansfield		25,008	32,153	05,725	08,189	38,660	07,138	07,610	08,108	38,604	39,
Marshfield		78,545	08,415	109,350	110,772	112,212	110,670	115,148	118,845	118,101	110,
Ava		0	51,418	73,450	74,405	75,372	78,352	77,345	78,350	79,389	60,
Mountain Grove		73,185	84,096	104,550	105,909	107,288	108,681	110,084	111,525	112,975	114
Cabool		35,105	45,135	50,150	50,802	51,482	52,131	52,809	53,498	64,191	04
Willow Springs		35,685	45,855	50,950	01,812	52,283	02,963	03,652	04,349	00,008	03
Wost Plains		155,976	200,643	222,825	226,722	228,659	231,629	234,640	237,090	240,780	293
Mountain View			35,630	80,800	01,002	02,232	02,811	03,099	04,200	67,001	57
Houston			37,085	62,950	63,038	54,338	00,042	05,700	00,402	07,217	38
Licking .			20,240	33,200	704 042	04,009	615.027	825 823	636 356	847 228	858
Totel hesidenosi Demano,		401,400	000,040	104,030	. 104,243	604,000	DIDIOEI	010,020	000,000	on, etc	
Probable Additional Citles:											
Booardia			17.413	24.875	25.124	25.376	25.629	25.885	28,144	28,405	28
Fordland				13.075	13,206	13.338	13.471	13,603	13,742	13.879	14
Diopins			0 0	. 8.450	8.615	8,580	8.645	6,712	8,779	6,847	8
Saymour			28,630	40,000	41,305	41,722	42,139	42,501	42,988	43,418	43
Norwood			0 0	11,225	11,037	11,451	11,565	11,681	11,705	11,910	12
Total Additional City Domar	nd: ·		48,043	96,525	97,490	03,465	89,450	100,444	101,449	102,483	103
		-								1	
Total Project Residential De	mand:	401,48	5 709,688	.680,675	¥ 891,730	B03,033	814,477	923,067	837,604	849,691	961
Note: Probable demand rea	witing from	farm tops no	Included								
Realize & CONVERCIN	AL DELLAN										
Section 21 COMMERCIA	IL DEMAN	Vanit	Vana	Very 2	Vand	Vante	Vante	Van/7	Vente	Vest 9	Yes
tat calculations		TOW I	Temz	10013	108/4	Toaro	Tear.o	10017	10000	Jeno	1 4 24
1st couculation:	e ladual	A barcauted									-
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Post yr. 3 ennual growth:	<indust< td=""><td></td><td>000 045</td><td>011 010</td><td>037 066</td><td></td><td>244 760</td><td>240.005</td><td>051 697</td><td>355 204</td><td>259</td></indust<>		000 045	011 010	037 066		244 760	240.005	051 697	355 204	259
Post yr. 3 annual growth: As %° of Res. Demand:	<indust 1.09 08.0%</indust 	6 152,58	4 259,843	334,619	337,955	341,344	344,758	348,205	351,687	355,204	358
Post yr. 3 annual growth: As %* of Res. Demand: _*(typical per AGA study) Cad astartelios:	<indust 1.09 08.0%</indust 	6 152,58	4 259,843	334,619	337,985	341,344	344,768	348,205	351,687	355,204	358
Post yr. 3 annual growth: As %* of Res. Demand: _*(typical per AGA study) 2nd calculation: Post yr. 3 annual annubr	<indust 1.09 38.05 &lt; Misso</indust 	6 152,58 burl-specific	4 259,643 dota	334,619	037,965	341,344	. 344,758	348,205	351,687	355,204	358
Post yr. 3 annual growth: As %° of Res. Demand; (typical per AGA study) 2nd calculation; Post yr. 3 annual growth; As MO ava?* rah annual growth;	<indust 1.09 08.09 &lt; Misso 1.09</indust 	6 152,58	4 259,843 dota	334,619	037,965	341,344		348,205	351,687	355,204	358
Post yr. 3 annual growth: As %° of Res. Demand; (typical per AGA study) 2nd calculation: Post yr. 3 annual growth: As MO avg?*, rato comm/m *167-91 avg. per NGA di	<indust 1.0% 38.0% &lt; Misso 1.0% 50.4%</indust 	6 152,58 ourl-specific 6 202,41	4 269,843 dola 3 357,746	334,610 443,952	337,965 448,391	5 341,344 1 452,876		348,205 481,078	351,687 488,598	355,204	358
Post yr. 3 annual growth: As %* of Res. Demand: _*(typical per AGA study) 2nd calculation: Post yr. 3 annual growth: As MG avgr*, rato comm/r **(87-81 avg. per NGA 8) Assunda (agressnation) Co	<indust 1.09 08,09 &lt; Misso 1.0% 50,4% ) magnetial D</indust 	6 152,58 burl-specific ( 6 202,41)	4 259,843 dola 3 357,748	334,610 443,952	037,985 448,391	5 341,344 1 452,876		348,205 481,078	051,687 488,595	355,204	358 475
Post yr, 3 annual growth: As %* of Res. Demand: *(typical per AGA study) 2nd calculation: Post yr, 3 annual growth: As MO avg-*, rato comm/r *(87-91 avg. per NGA 9 Assumed (conservative) Co	<indust 1.05 08.05 &lt; Missoc 1.05 e 50.45 i) mmercial D</indust 	6 152,58 ourl-specific 6 202,41 emand for th	4 259,643 dola 0 057,746 is Study:	334,610 443,052	037,085 448,39	5 341,344 1 452,876		348,205 481,078	351,687 488,595	355,204 471,284	358 475
Post yr, 3 annual growth: As %* of Res. Demand: -{typical per AGA study} 2nd calculation: Post yr, 3 annual growth: As MO avg?*, rabo comr/m. *{37-91 avg. per NGA 91 Assumed (sonsorrative) Co (1st calc. + 2nd calc.V2:	<indust 1.03 08,05 &lt; Misso 1.03 e 50,43 i) mmercial D 44,23</indust 	6 152,58 burl-specific ( 6 202,41) emand for th 6 177,48	4 259,643 dola 3 057,746 is Study: 9 013,695	334,619	037,085 448,391	5 341,344 1 452,876		348,205 481,078 405.092	351,687 488,595 409,143	355,204 471,284 413,234	358 475 417
Post yr. 3 annual growth: As %* of Res. Demand: _*(typical per AGA study) 2nd calculetion: Post yr. 3 annual growth: As MO avg*, reto comm/r **(87-91 avg. per NGA 9) Assumed (conservative) Co (1st calc. + 2nd calc.)/2;	<indust 1.09 08,05 &lt; Misso 1.05 e 50,4% i) mmercial D 44.2%</indust 	6 152,58 burl-specific 6 6 202,41 emand for th 6 177,48	4 259,843 dota 3 057,746 Js Bhudy: 9 013,695	334,619 443,952 389,285	037,085 448,39 V 303,176	5 341,344 1 452,876 3 397,110		348,205 481,978 405,092	351,687 488,595 409,143	355,204 471,284 413,234	358 475 417
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Post yr. 3 annual growth: As %* of Res. Demand: _*(typical per AGA study) 2nd calculation: Post yr. 3 annual growth: As MO avg **, rato comm/n: **(87-81 avg. per NGA 91 Assumed (conservative) Co (1st calc. + 2nd calc.)/2; Section 3; INDUSTRIAL	<indust 1.09 08.09 &lt; Misso 1.05 e 50.49 i) mmercial D 44.27 .DEMAND</indust 	6 152,58 burl-specific 6 6 202,41 emand for th 6 177,48	4 259,843 data 3 357,746 Js Study: 9 313,699	334,619 443,052 389,285	337,865 448,39 203,176 Year	5 341,344	457,404	348,205 481,078 405,092 Year 7	351,687 488,595 409,143 Year 8	355,204 471,284 413,234 Year 9	358 475 417, Yes
Post yr. 3 annual growth: As % of Res. Demand: _(typical per AGA study) 2nd calculation: Post yr. 3 annual growth: As MO avg *, rato commyn. *(37-8) avg. per NGA 9) Assumed (conservative) Co (1st calc. + 2nd calc.)/2; <u>Section 3;</u> <u>INDUSTRIAL</u> 1st calculation:	<indust 1.09 08.05 &lt; Missec 1.03 e 50.45 )) mmercial D 44.27 .DEMANO</indust 	6 152,58 5 152,58 5 202,41: emand for th 6 177,48 Year < Misson	4 259,843 dala 3 357,746 is Study: 9 313,695 1 Your 2 vi-specific dat	1 334,619 1 443,952 1 389,285 2 Year 3	037,965 448,39 003,176 Year	5 341,344 1 452,876 3 397,110 3 Year 5	44,768 457,404 401,081 6 Yoar 8	348,205 481,878 405,092 Year 7	051,667 488,595 409,143 Year 8	355,204 471,284 413,234 Year B	358 475 417 Yes
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Post yr. 3 annual growth: As %* of Res. Demand: (typical per AGA study) 2nd calculation: Post yr. 3 annual growth: As MO avg**.rabo comm/n: *1(37-31 avg. per NGA 91 Assumed (conservative) Co (1st calc. + 2nd calc.)/2; Section 3; INDUSTRIAL Ist calculation: Post yr. 3 annual growth; As MO avg**rato Ind./ros:	<indust 1.09 08.07 &lt; Misso 1.09 0 50.47 1) mmercial D 44.27 .DEMANO 1.09 .05 .05 .05 .05 .05 .05 .05 .05</indust 	6 152,58 burl-specific 6 202,41: emand for U 6 177,48 Year < Misson 6 160,01	4 269,843 dota 3 057,746 Js Study: 9 013,695 1 Yoar 2 un-specific dat 9 019,767	334,619 443,052 389,285 2 Year 3 9 398,800	337,965 448,391 203,176 Year 401,836	3 341,344 1 452,876 3 397,110 4 Year 0 3 409,926	401,031 401,031 Year 8 412,005	348,205 481,078 405,092 Year 7 417,308	351,667 488,598 409,143 Year 8 422,697	355,204 471,284 413,234 Year 9 427,954	358 475 417 Yes 433
Post yr. 3 annual growth: As %* of Res. Demand: _{typical per AGA study) Ind calculation: Post yr. 3 annual growth: As MO avg**.rabo comm/n: *1(87-81 avg. per NGA 81 Assumed (conservative) Co (1st calc. + 2nd calc.)/2: Section 3: INDUSTRIAL 1st calculation: Post yr. 3 annual growth: As MO avg**rato Ind./ros: ***(87-91 avg. per NGA 5	<indust 1.09 08.07 &lt; Misse 1.09 = 50.49 I) #//sectal D 44.27 <u>DEMANO</u> 1.09 : 45,19 I)</indust 	6 152,58 ourl-specific ( 6 202,41) ermand for th 6 177,48 Year < Misson 6 180,91)	4 269,843 dota 3 057,746 is Skudy: 9 010,695 1 Yoar 2 un-specific dat 9 019,767	334,619 443,852 389,285 2 Year 3 9 396,600	337,965 448,391 203,176 Year 401,836	3 341,344 1 452,876 3 397,110 4 Year 5 3 409,928	401,031 401,031 Yoar 8 412,005	348,205 481,878 405,092 Year 7 417,308	051,667 488,598 409,143 Year 8 422,697	355,204 471,284 413,234 <u>Year 9</u> 427,954	358 475 417 Yes 433
Post yr. 3 annual growth: As %* of Res. Demand: "(typical per AGA study) 2nd calculation: Post yr. 3 annual growth: * (37-81 avg. per NGA B) Assumed (conservative) Co (1st calc. + 2nd calc.)/2; Section 3; INDUSTRIAL 1st calculation: Post yr. 3 annual growth: As MQ avg**rato Ind/res: ***(07-91 avg. per NGA E 2nd ompileal determination	<indust 1.03 08.09 &lt; Missc 1.09 0 50.49 )) mmercial D 44.2% .DEMANO 1.09 44.2% 1.09 44.2% 1.09 44.2% 1.09 1.09 1.09 0.09</indust 	6 152,58 burl-specific of 6 202,411 ermand for th 6 177,48 Year <- Misson 6 160,01 < Nonco	4 269,843 dota 3 057,746 1s Bludy: 9 013,695 1 Yoar 2 ynt-specific dat 9 019,767 mprehenstve c	334,619 443,052 389,285 2 Year 3 9 398,800 Street data for	337,965 448,391 203,176 Year 401,835 Highway 60/5	5 341,344 1 452,876 3 397,110 4 Year 5 3 409,926 33 project	4 344,768 457,404 457,404 401,091 5 Year 8 412,005	848,205 481,078 405,092 Year 7 417,308	351,687 488,598 409,143 Year 8 422,697	355,204 471,284 413,234 Year 9 427,954	358 475 417 Yei 433
Post yr. 3 annual growth: As %* of Res. Demand: (typical per AGA study) 2nd calculation: Post yr. 3 annual growth: *(37-81 avg. per NGA 91 Assumed (conservative) Co (1st calc. + 2nd calc.)/2; <u>Section 3:</u> INDUSTRIAL 1st calculation: Post yr. 3 annual growth: As MO avg**rato Ind./res: **(87-91 avg. per NGA 62 2nd empliteal determination Post yr. 3 annual growth: As MO avg**rato Ind./res. ***(87-91 avg. per NGA 62 2nd empliteal determination Post yr. 3 annual growth: ****(87-91 avg. per NGA 62 ************************************	<indust 1.03 08.05 &lt; Misse 1.03 = 50.45 i) monorcial D 44.23 .DEMAHO 1.09 : 45.19 i) : 45.19 i) : 45.19 i) : 45.19 i) : 45.19 : 10 : 45.19 : 45.1</indust 	6 162,58 5 162,58 6 202,41 6 202,41 6 177,48 6 177,48 7 Year < Misson 6 180,01 < Nonco	4 269,843 dola 3 057,746 Js Brudy: 9 013,695 1 Your 2 vrt-spectife dat 9 019,767	334,619 443,852 389,285 2 Year 3 9 398,800 Street data for	037,965 448,091 <u>0303,176</u> <u>Year</u> 401,834 Highway 60/6	5 341,344 1 452,876 3 397,110 5 Year 5 3 409,928	401,091 401,091 Year 8 412,005	348,205 481,078 405,092 Year 7 417,308	351,687 488,598 409,143 Year 8 422,597	355,204 471,284 413,234 Year 9 427,054	358 475 417 Yei 433
Post yr. 3 annual growth: As %* of Res. Demand: (typical per AGA study) 2nd calculation: Post yr. 3 annual growth: As MO avg**, rato comm/n: *1(87-81 avg. per NGA 91 Assumed (conservative) Co (1st calc. + 2nd calc.)/2; Section 3; INDUSTRIAL 1st calculation: Post yr. 3 annual growth; Identified industrial Yr. 3 Vo	<indust 1.07 08.07 &lt; Misse 1.03 • 50.47 1) • 5</indust 	6 162,58 5 162,58 6 202,41 6 202,41 6 177,48 6 177,48 6 180,81 < Misson 6 180,81	4 269,843 dola 3 357,740 1s Study: 9 313,695 1 Your 2 vri-spectile dat 9 319,767 mprehensive o	334,619 443,952 389,285 2 Year 3 a 398,800 Street data for	337,965 448,391 <u>7393,176</u> <u>Year</u> 401,834 Highway 60/6	3 341,344 1 452,876 3 397,110 4 Year 5 3 409,928 33 project	457,404 457,404 401,031 Yoar 8 412,005	348,205 481,078 405,092 Year 7 417,308	051,667 488,598 409,143 Year 8 422,697	355,204 471,284 413,234 Year 9 427,954	358 475 417 Yet 433
Post yr. 3 annual growth: As %* of Res. Demand: "(typical per AGA study) 2nd calculation: Post yr. 3 annual growth: As MQ avg** rabo comm/r **(87-81 avg. per NGA B) Assumed (conservative) Co (1st calc. + 2nd calc.)/2; Section 3; INDUSTRIAL 1st calculation: Post yr. 3 annual growth: As MQ avg**rato Ind/res: ***(87-91 avg. per NGA E 2nd ompileal determination Post yr. 3 annual growth; As MQ avg**rato Ind/res: ***(87-91 avg. per NGA F 2nd ompileal determination Post yr. 3 annual growth; As MQ avg**rato Ind/res: ***(87-91 avg. per NGA F 2nd ompileal determination Post yr. 3 annual growth; denvilled Industrial Yr. 3 Vc (MCF/Yr) Seymour	<indust 1.03 08.04 &lt; Misse 1.05 08.04 1.05 08.04 1.05 44.27 </indust 	6 162,58 5 162,58 5 162,58 6 202,41 emand for th 6 177,48 7 Year <- Misson 6 180,81 <- Nonco 6	4 269,843 dota 3 357,746 is Study: 9 313,695 1 Yoar 2 11 Yoar 2 11 Yoar 2 11 Specific dat 9 319,767 miprehensive c	334,619 443,652 389,285 2 Year 3 3 398,800 Street data for 140,000	337,965 448,391 <u>V 303,174</u> Year 401,633 Highway 60/5 141,400	5 341,344 1 452,876 3 397,110 4 Year 5 3 409,926 3 project 5 142,814	457,404 457,404 401,091 5 Year 8 412,005	848,205 481,078 405,092 Year 7 417,308 145,685	351,687 488,598 409,143 Year 8 422,697 147,141	355,204 471,284 413,234 Year 9 427,954 148,613	358 475 417 417 433 150
Post yr, 3 annual growth: As %* of Res. Demand: (Typical per AGA study) 2nd calculation: Post yr, 3 annual growth: As MO avg**, tabo comm/n *(87-81 avg. per NGA 9) Assumed (conservative) Co (1st calc. + 2nd calc.)/2; <u>Section 3;</u> INDUSTRIAL 1st calculation: Post yr, 3 annual growth: As MO avg***ratio Ind./res: ***(87-91 avg. per NGA 6; Znd omplikeal determination Post yr, 3 annual growth; Identified Industrial Yr, 3 Vc (MCF/Y) Seymour Mansfield	<indust 1.03 08.05 &lt; Missc 1.03 o 50.45 1) 44.27 .DEMANO 1.09 : 45.19 1) x 109 : 45.19 1) x 109 : 50.45 : 50.45 :</indust 	6 152,58 5 152,58 6 202,41 6 202,41 6 177,48 6 177,48 7 Year 4 Nisson 6 150,91 5 Nonco	4 259,843 dota 3 057,744 Is Brudy: 9 010,695 1 Your 2 vrt-spectific dat 9 019,767 mprehenstve 0 0 70,000 0 55,000	334,619 443,852 389,285 2 Year 3 9 398,800 Street data for 140,000 70,000	337,665 448,391 7 303,176 Year 401,633 Highway 60/t 141,400	5 341,344 1 452,676 5 397,110 5 Year 5 3 409,928 3 project 5 142,814 7 1,407	401,091 401,000 400,00000000	481,078 481,078 405,092 Year 7 417,308 145,665 72,842	351,687 488,598 409,143 Year 8 422,697 147,141 73,571	355,204 471,284 413,234 Year B 427,954 148,613 74,503	3558 475 417 417 417 433 433 150 75
Post yr, 3 annual growth: As %* of Res. Demand: (typical per AGA study) 2nd calculation: Post yr, 3 annual growth: As MO avg**, rato comm/n: **(87-91 avg. per NGA 9) Assumed (conservative) Co (1st calc. + 2nd calc.)/2; Section 3; INDUSTRIAL Ist calculation: Post yr, 3 annual growth; Identified and per NGA 6 2nd ompiked determination Post yr, 3 annual growth; Identified industrial Yr, 3 Vo (MCF/Yr) Seymour Mansfield Mansfield Mt. Grove	<indust 1.07 08.07 ( Misse 1.09 0.05 0</indust 	6 162,58 5 162,58 5 162,58 5 202,41 6 202,41 6 177,48 6 177,48 6 177,48 6 180,01 6 180,01 6 180,01 6 35,00 40,00	4 269,843 dota 3 357,746 1s Study: 9 313,695 1 Yoar 2 vrt-spectife dat 9 319,767 mprehensive o 0 70,000 0 65,000	334,619 443,952 389,285 2 Year 3 3 398,800 Street data for 140,000 70,000 80,000	337,953 448,391 V 393,174 Year 4 401,834 Highway 60/5 141,400 70,700 90,500	5 341,344 1 452,876 3 397,110 4 Year 5 3 409,928 3 project 3 142,814 0 142,814 0 142,814 0 142,814	457,404 457,404 457,404 401,031 5 Yoar 8 412,005 4 144,242 72,121 6 1,818	448,205 481,078 405,092 Year 7 417,308 145,685 72,642 62,438	351,667 488,598 409,143 Year 8 422,697 147,141 73,571 63,081	355,204 471,284 413,234 Year 9 427,954 148,613 74,503 83,891	358 475 417 417 417 433 433 150 75 84
Post yr, 3 annual growth: As %* of Res. Demand: *(typical per AGA study) 2nd calculation: Post yr, 3 annual growth: As MO avg**, rabo comm/r **(87-81 avg. per NGA B) Assumed (conservative) Co (1st calc, + 2nd calc.)/2; Section 3; INDUSTRIAL Tat calculation: Post yr, 3 annual growth: As MO avg***rabo Ind,/res: ***(87-81 avg. per NGA E 2nd empikeal determination Post yr, 3 annual growth; Identified industrial Yr, 3 Vc (MCF/Yr) Seymour Mansfield ML Grove Cabool	<indust 1.03 08.09 &lt; Missc 1.09 08.09 &lt; Missc 1.09 = 50.49 )) 44.22 </indust 	6 162,58 5 162,58 5 162,58 6 202,41 6 202,41 6 177,48 7 Year 6 160,81 6 160,81 6 160,81 6 160,81 6 160,81 6 160,81 6 160,81 6 162,58 7 Year 6 102,58 7 Year 6 102,58 7 Year 6 102,58 7 Year 6 102,58 7 Year 6 102,58 7 Year 6 102,58 7 Year 7 Year 6 100,00 7 Year 7 Year 6 100,00 7 Year 7 Year	4 259,843 dota 3 357,746 is Study: 9 313,695 1 Yoar 2 1 Yoar 2 1 Study: 9 319,767 mprehensive c 0 70,000 0 65,000 0 55,000 0 150,000	334,619 443,652 389,285 2 Year 3 3 398,800 398,800 140,000 140,000 190,000	337,965 448,391 <u>V 303,174</u> 401,834 Highway 60/t 141,400 70,700 60,600 191,900	3 341,344 452,876 3 397,110 4 Year 5 3 409,926 3 409,926 3 71,407 9 142,814 0 144,814 0 144,814 0 145,814 0 14	457,404 457,404 457,404 401,091 5 Year 8 412,005 4 412,005 4 144,242 72,121 8 61,816 195,757	481,078 481,078 405,092 Year 7 417,308 145,685 72,642 62,439 197,715	351,687 488,598 409,143 Year 8 422,697 147,141 73,571 63,061 199,692	355,204 471,284 413,234 <u>Year 9</u> 427,954 148,613 74,503 63,681 201,669	3558 4755 4177 4177 433 1500 75 64 203
Post yr, 3 annual growth: As %* of Res. Demand: (Typical per AGA study) 2nd calculation: Post yr, 3 annual growth: As MO avg**, tabo comm/n *(87-81 avg. per NGA 9) Assumed (conservative) Co (1st calc. + 2nd calc.)/2; <u>Section 3;</u> INDUSTRIAL 1st calculation: Post yr, 3 annual growth: As MO avg***ratio Ind./res: ***(87-91 avg. per NGA 6; Post yr, 3 annual growth: Identified industrial Yr, 3 Vc (MCF/Yr) Seymour Cabool W. Pialns	<indust 1.03 08.05 &lt; Missc 1.03 o 50.45 )) </indust 	6 152,58 5 152,58 6 202,41 6 202,41 6 177,48 6 177,48 7 Year < Misson 6 150,91 < Nonco 6 150,91 00,00 20,00 30,00	4 259,843 dota 3 057,744 Is Biudy: 9 010,695 1 Your 2 vit-specific dat 9 019,767 mprehensive 0 0 70,000 0 65,000 0 150,000 0 150,000 0 150,000	334,619 443,852 389,285 2 Year 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	337,665 448,391 V 303,176 V 303,176 401,634 Highway 60/6 141,400 70,707 00,600 181,600 121,200	3 341,344 452,876 3 397,110 4 Year 5 3 409,928 3 project 3 project 1 42,814 7 1,407 6 1,206 1 9 103,016 1 22,412	401,091 401,091 401,091 401,091 401,091 412,005 412,005 4144,242 72,121 81,818 9195,75 2123,638	481,078 481,078 405,092 Year 7 417,308 145,685 72,842 62,438 197,716 124,872	351,687 488,595 409,143 Year 8 422,697 147,141 73,571 63,081 199,682 128,121	355,204 471,284 413,234 Year 8 427,954 148,613 74,503 83,681 201,689 127,382	358 475 417 433 150 75 64 203 128
Post yr, 3 annual growth: As %* of Res. Demand: (typical per AGA study) 2nd calculation: Post yr, 3 annual growth: As MO avg**, rato comm/n: **(87-91 avg. per NGA 9) Assumed (conservative) Co (1st calc. + 2nd calc.)/2; Section 3; INDUSTRIAL Ist calculation: Post yr, 3 annual growth; Identified industrial Yr, 3 Vc (MCF/Yr) Seymour Mansfield Mt. Grove Cabool W. Pialns	<indust 1.07 08.07 ( Misse 1.07 0 50.47 1) = 50.47 1) = 50.47 1) = 50.47 1) = 44.27</indust 	6 162,58 5 162,58 5 202,41 ermand for th 6 202,41 ermand for th 6 177,48 7 ear < Misson 6 150,01 < Nonco 6 35,00 40,00 100,00 30,000 205,00	4 269,843 dola 3 357,746 1s Study: 9 313,695 1 Yoar 2 vid-specific dat 9 319,767 mprehensive o 0 70,000 0 55,000 0 55,000 0 150,000 0 90,000 0 90,000 0 90,000	334,619 443,952 389,285 2 Year 3 3 398,800 5/rect data for 140,000 70,000 190,000 190,000 190,000 190,000	337,653 448,391 V 393,174 Year 4 401,634 Highway 60/5 70,700 90,600 141,600 181,900 181,900 585,600	3 341,344 452,876 3 397,110 4 Year 0 3 409,928 3 project 3 409,928 3 project 0 142,814 0 142,415 0 144 0	457,404 457,404 457,404 401,031 5 Yoar 8 412,005 4 144,242 72,121 61,819 195,757 123,839 697,675	481,078 481,078 405,092 Year 7 417,308 145,685 72,642 62,438 107,716 124,872 603,650	351,687 488,595 409,143 Year 8 422,597 147,141 73,671 63,081 199,692 128,121 809,586	355,204 471,284 413,234 Year 9 427,954 148,613 74,503 63,691 201,699 127,954 615,682	358 475 417 417 417 433 150 75 64 203 128 621
Post y, 3 annual growth: As %* of Res. Demand: "(typical per AGA study) 2nd calculation: Post y, 3 annual growth: As MO avg**, rabo comm/n **(87-81 avg. per NGA B) Assumed (conservative) Co (1st calc. + 2nd calc.)/2; Section 3; INDUSTRIAL Tat calculation: Post y, 3 annual growth: As MO avg***rato Ind,/res: ***(87-81 avg. per NGA E 2nd empirical determination Post y, 3 annual growth; Identified industrial Y, 3 Vc (MCF/rd) Seymour ' Mansfield Mt Grove Cabool W, Pisins	<indust 1.03 08.04 ( Misse 1.05 08.04 (</indust 	6 162,58 5 162,58 5 162,58 5 162,58 6 202,41 5 177,48 6 202,41 7,48 6 177,48 6 177,48 6 180,81 5 100,00 100,00 100,00 200,000 200,000 200,000	4 259,843 dota 3 357,746 is Bludy: 9 313,695 1 Yoar 2 1 Yoar 2 1 Yoar 2 1 Study: 9 319,695 1 Yoar 2 1 Study: 0 70,000 0 55,000 0 65,000 0 65,000 0 150,000 0 410,000 Study:	334,619 443,652 389,285 2 Year 3 396,600 396,600 140,000 140,000 190,000 190,000 190,000 560,000	337,963 448,391 V 303,174 Year 4 401,834 Highway 60/c 141,400 70,700 60,600 181,900 181,900 182,000	3 341,344 452,876 3 397,110 4 Year 6 3 409,926 3 409,926 3 409,926 3 142,814 0 142,814 0 142,814 0 142,814 0 1,206 0 142,814 0 1,206 0 142,814 0 1,206 0 142,814 0 1,206 0 142,814 0 1,206 0 1	457,404 457,404 457,404 401,091 5 Year 8 412,005 4 144,242 7 22,121 8 1,818 9 195,757 2 123,638 6 697,675	481,078 481,078 405,092 Year 7 417,308 145,685 72,642 82,438 197,715 124,872 603,650	351,687 488,598 409,143 Year 8 422,697 147,141 73,571 63,061 109,692 128,121 609,598	355,204 471,284 413,234 Year 9 427,954 148,613 74,503 83,681 201,689 127,352 815,682	358 475 417 417 417 433 150 55 64 203 128 521
Post yr, 3 annual growth: As %* of Res. Demand: "(Npfcal per AGA study) 2nd calculation: Post yr, 3 annual growth: As MO avg**, reto comm/n **(37-81 avg. per NGA 9) Assumed (conservative) Co (1st calc. + 2nd calc.)/2; <u>Section 3</u> ; <u>INDUSTRIAL</u> 1st calculation: Post yr, 3 annual growth: As MO avg***rato Ind./res; ***(87-91 avg. per NGA 6; Zod omplited determination Post yr, 3 annual growth; Identified industrial Yr, 3 Vc (MCF/Yr) Seymour; Mansfield Mt. Grove Cabool W. Pialns	<indust 1.07 08.07 &lt; Missc 1.07 08.07 &lt; Missc 1.07 0 50.47 )) </indust 	6 162,58 5 162,58 6 202,41 6 202,41 6 177,48 7 4 177,48 7 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 259,843 dota 3 057,744 Is Bludy: 9 010,699 1 Your 2 yd-specific dat 9 019,767 mprehenstve of 0 70,000 0 55,000 0 55,000 0 150,000 0 150,000 0 150,000 0 150,000 0 150,000 0 150,000 0 150,000 0 1410,000 Study:	334,619 443,852 389,285 2 Year 3 3 3 398,800 5 8/rect data for 9 140,000 70,000 80,000 190,000 190,000 190,000	337,653 448,391 448,391 401,633 401,633 Highway 60/t 141,400 70,707 60,600 191,600 121,200	5 341,344 1 452,876 3 397,110 4 Year 5 3 409,926 3 project 3 project 5 142,814 0 142,814 0 142,814 0 142,814 0 142,814 0 142,814 0 142,814 0 142,814 0 591,655 0 591,655	457,404 457,404 457,404 401,091 5 Year 8 412,005 4 144,242 7 72,121 6 1,810 1 165,757 2 123,638 5 697,675	481,078 481,078 405,092 Year 7 417,308 145,685 72,642 62,438 107,715 124,872 603,650	351,687 488,598 409,143 Year 8 422,697 147,141 73,571 63,061 199,692 128,121 609,588	355,204 471,284 413,234 Year 9 427,954 148,613 74,503 83,661 201,661 201,661 201,661 201,661	358 475 417 ¥es 433 150 75 84 203 128 621
Post yr, 3 annual growth: As %* of Res. Demand: (typical per AGA study) 2nd calculation: Post yr, 3 annual growth: As MO avg**, rabo comm/n **(37-61 avg. per NGA 61 Assumed (conservative) Co (1st calc. + 2nd calc.)/2; Section 3; INDUSTRIAL Ist calculation: Post yr, 3 annual growth; Identified industrial Yr, 3 Vc (MCF/Yr) Seymour Mansfield Mt. Grove Cabool W. Pialna Assumed (conservative) Inc (1st calc. + 2nd emp. deter	<indust 1.07 08.07 2.07 1.07 08.07 2.07 1.07 2.07</indust 	6 152,58 5 152,58 6 202,41 6 202,41 6 177,48 7 202,41 6 177,48 7 202,41 6 177,48 6 177,48 6 150,91 < Nonco 6 150,91 35,00 40,00 100,000 205,00 100,000 205,00 10,000 205,00 10,000 205,00 10,000 205,00 10,000 205,000 205,0000 205,0000000000	4 269,843 dota 3 357,740 1s Study: 9 313,695 1 Your 2 vrt-spectife dat 9 319,767 mprehensive o 0 70,000 0 65,000 0 70,000 0 70,000 0,	334,619 443,652 389,285 2 Year 3 3 3 398,800 5/rect data for 140,000 70,000 80,000 190,000 120,000	337,663 448,391 448,391 448,391 448,391 401,634 401,634 401,634 401,634 401,634 401,634 401,634 401,634 401,634 401,634 403,010 121,000 685,600	3 341,344 452,876 3 397,110 4 Year 5 3 409,928 3 project 0 142,814 0 71,407 0 81,206 0 193,816 1 22,415 0 591,655 8 499,285	457,404 457,404 457,404 401,031 5 Yoar 8 412,005 4 144,242 72,121 61,818 195,757 123,839 697,675	481,078 481,078 405,092 Year 7 417,308 145,685 72,842 82,438 197,165 197,4672 603,550 510,429	351,687 488,598 409,143 Year 8 422,597 147,141 73,571 63,081 199,692 518,092	355,204 471,284 413,234 Year 9 427,054 148,613 74,503 83,691 201,689 0127,352 615,682 521,618	358 475 417 Yes 433 150 75 84 203 128 621 527
Post yr, 3 annual growth: As %* of Res. Demand: *(typical per AGA study) 2nd calculation: Post yr, 3 annual growth: As MO avg**, rabo comm/r **(37-81 avg. per NGA B) Assumed (conservative) Co (1st calc. + 2nd calc.)/2: Section 3; INDUSTRIAL Ist calculation: Post yr, 3 annual growth: As MO avg***rabo Ind/res: ***(87-91 avg. per NGA E 2nd ompiked detormination Post yr, 3 annual growth: As MO avg***rabo Ind/res: ***(87-91 avg. per NGA E 2nd ompiked detormination Post yr, 3 annual growth: Identified Industrial Yr, 3 Vc (MCFYY) Seymour ' Mansfield Mt. Grove Cabool W. Pialns Assumed (conservative) Inc (1st calc. + 2nd emp. deter	<indust 1.07 08.07 &lt; Misse 1.07 08.07 &lt; Misse 1.07 0 0 0 0 0 0 0 0 0 0 0 0 0</indust 	6 162,58 6 162,58 5 162,58 5 162,58 6 202,41 emand for the 6 202,41 emand for the 6 177,48 Year <	4 259,843 dota 3 357,746 is Study: 9 313,695 1 Yoar 2 1/1-specific dat 9 319,767 mprehensive c 0 70,000 0 65,000 0 65,000 0 410,000 Study: 9 384,876	334,619 443,652 389,285 2 Year 3 3 396,600 376,600 140,000 140,000 190,000 190,000 190,000 190,000	337,965 448,391 V 303,174 Year 4 401,834 Highway 60/6 141,400 70,700 60,500 191,900 181,900 655,500	3 341,344 4 52,876 3 397,110 4 Year 0 3 409,928 3 project 3 142,814 0	401,091 401,091 401,091 401,091 401,091 412,005 4144,242 72,121 81,819 195,757 123,839 567,675	4481,078 4481,078 405,092 Year 7 417,308 145,685 72,642 82,438 197,715 124,872 603,550 610,429	351,687 488,598 409,143 Year 8 422,897 147,141 73,571 109,692 128,121 609,586 518,092	355,204 471,284 413,234 Year 9 427,954 148,613 74,503 83,681 201,889 127,362 615,882 521,818	358 475 417 Yes 433 150 75 64 2033 128 621 527
Post yr, 3 annual growth: As %* of Res. Demand: -{(typical per AGA study) 2nd calculation: Post yr, 3 annual growth: As MO avg**, rabo comm/n *(37-81 avg. per NGA 91 Assumed (conservative) Co (1st calc, + 2nd calc.)/2; Section 3; [NDUSTRIAL Ist calculation: Post yr, 3 annual growth: As MO avg***rabo Ind./res: ***(87-91 avg. per NGA 5 2nd omplical determination Post yr, 3 annual growth: Identified industrial Yr, 3 VG (MCF/Yr) Seymour ' Manafield Mt. Grove Cabool W. Pialna Assumed (conservative) Inc (1st calc, + 2nd emp, deter Total 10 Year SMGC High	<indust 1.03 08.09 &lt; Missc 1.03 08.09 &lt; Missc 1.03  Missc 1.03  Missc 1.05  Missc  Mi</indust 	6 162,58 5 162,58 5 162,58 6 202,41 6 202,41 6 177,48 6 177,48 6 160,61 5 160,61 5 0,00 40,00 100,00 205,00 100,00 205,00 100,00 205,00 100,00 205,00 100,00 205,00 100,00 205,000 205,0000 205,0000000000	4 259,843 dota 3 357,746 1 58udy: 9 313,695 1 Yoar 2 9 319,695 1 Yoar 2 9 319,767 mprehensive of 0 70,000 0 65,000 0 65,000 0 65,000 0 65,000 0 150,000 0 310,000 1 10,000 1 10,00	334,619 443,652 389,285 2 Year 3 3 398,800 398,800 398,800 140,000 190,000 190,000 190,000 190,000 190,000 190,000 190,000 190,000	337,653 448,391 V 303,174 V 647 401,633 Highway 60/c 141,400 70,700 70,700 181,600 121,200 121,200 123,811 Commercles	3 341,344 452,876 3 397,110 4 Year 6 3 409,926 3 project 3 409,926 3 project 0 142,814 0 71,407 0 61,206 1 103,816 0 122,415 0 61,055 8 489,283 1 + Indust(1a)	457,404 457,404 457,404 401,091 5 Year 8 412,005 4 412,005 4 144,242 72,121 61,818 195,757 2 123,639 5 697,675 3 504,830	481,078 481,078 405,092 Year 7 417,308 145,685 72,642 62,438 107,716 124,872 603,650 610,429	351,687 488,598 409,143 Year 8 422,697 147,141 73,571 63,081 199,692 128,121 609,586 518,092	355,204 471,284 413,234 413,234 413,234 427,954 427,954 427,954 148,613 74,503 83,861 201,889 127,382 615,882 521,818	358 475 417 Yes 433 150 75 64 203 128 621 627
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# 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 Missouri<sup>1</sup>. 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.

<sup>&</sup>lt;sup>1</sup> 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.

# <u>Analysis</u>

### 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.

	Weather Adjusted Sales per Customer (Mcf)						
Calendar Year	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	1,797,000
volume	
Residential	(270.220)
reduction	(210,220)
Commercial	(119 801)
reduction	(110,001)
Industrial	(120 310)
reduction	(120,010)
Revised rate	1 278 560
condition	1,270,000

**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

				Conservation Feasibility Stu	Based on dy Volume		
Line		1994 Feasi Rate Cor	bility Study ndition (1)	84 Mcf Base Conservation	Adjusted Rate		
No	Particulars	ars Customers Volumes		Adjustment (2)	Condition		
	(a)	(b)	(c)	(d)	(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	10,057	1,797,000	(518,431)	1,278,569		

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

		Res	idential (not	e 1)	Resider	ntial - Optior	ai (note 1)	<b>Residential - combined</b>			
Line No	Month	Customer Count	monthly average	Usage	Customer Count	monthly average	Usage	Total customers	Total usage	Average Usage	
	(a)	(b )	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(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	Anni	ual residential cu	ustomer usag	e per 1996 ann	ual report - Re	places 100 N	Acf with 84 Mcf			84.00	
15	Anni	ual conservation	per custome	er since start-up					-	28.85	
16	Anni	ual residential cu	ustomer class	conservation (S	9,366 custome	rs)			-	270,220	

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

conservation study - 84 Mcf base 8-6-2014 KDT

## GR-2014-0086

	me of Respondent This Report is:	Det	e of Report	Year of Rep
	CONDANY, L.P.	(MPG	, Da, Tr)	Dec 91 10
	RESIDENTIAL AND COMMERCIAL SPACE	HEATING	CUSTOMERS	rt Year of Repo Dec. 31, 19.9 Heating is gas. ratel Comment (9) 120 245, 3: 222 268 DUSTRIAL CUSTOME r requirement of governm the basis on which intern onal and other sales which isemands. of gas volumes at 14.73 p Number/Ame (0) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
)	A residential space heating customer is a customer	whose ma)	or fuel for heating	is gas.
Line No.	item (a)		Pesidential (D)	Comme (a)
1	Average Number of Space Heating Customers for the Year (Estimate if not known, Designate with an asterisk if estimate	ted.)	2,125	120
2	For Space Heating Only, Estimated Average Mof (14.73 psla Per Customer for the Year	at 60°F)	84.28	245.3
3	Number of Space Heating Customers Added During the Yea	r	3,251	222
4	Number of Unfilled Applications for Space Heating at End of	Year	3,785	268
p sy c b o o t t t ne	1. Report below the average number of interruptible, off eak, and firm industrial customers on local distribution stems of the respondent, and the Mcf of gas sales to these ustomers for the year.       ordina author         2. Interruptible customers are those to whom service may e interrupted under terms of the customer's gas contract, r to whom service is required to be interrupted, regardless f contractual arrangements in emergency periods, by law,       ordina	nce, directh ity. State in stomers are Off peak sale cur during v Report press F.	re, or other require a footnote the basis reported. as are seasonal and wintertime demands sure base of gas vo	ment of govern on which inter other sales whi lumes at 14.73 Number/Ar
<b>*</b> 0.	(a)			(0)
4	Interruptible Customers			
2	Average Number of Customers for the Year			0
3	Mcf of Gas Sales for the Year			0
4	Off Peak Customere		-	
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		<u> </u>	
	Average Number of Customers for the Year			6
11	MCI OT USE SAIRS TOT THE YEAT			1106 178

4

# MPSC CASE NO GR-2014-0086

# SURREBUTTAL TESTIMONY OF TIMOTHY R JOHNSTON

SCHEDULE TRJ - 4

surrebuttal testimony Schedule TRJ-4 page 1 of 2

#### Summit Natural Gas of Missouri, Inc. MPSC Case No. GR-2014-0086 Account 105 Transfer from Warsaw and Branson

Line		SN	G filed o	data at 9-31-13				Staff EMS	runs	12-31-13	
No	Particulars	References		Warsaw		Branson		Warsaw		Branson	
	(a)	(b)		(c)		(d)	_	(e)		(f)	
	Rate Base Adjustment										
	Gross Plant										
1	Account 101-376 - SNG as filed	as filed, TDP-2, exh 2	\$	12,821,542	\$	36,789,304	\$	13,310,226	\$	36,985,144	
2	Account 101-378 - SNG as filed	as filed, TDP-2, exh 2		49,057	_	304,960	_	79,254	_	319,932	
3	percent of account to acct 105	capacity percent tab		63.92%	_	81.18%		63.92%	_	81.18%	
4	reduction to settlement gross plant - acct 101-376	line 10 * line 13	\$	8,195,144	\$	29,865,161	\$	8,507,496	\$	30,024,142	
5	reduction to settlement gross plant - acct 101-378	line 11 * line 13		31,356	2	247,564	L	50,657	_	259,717	
6	total Gross Plant reduction	line 4 + line 5	\$	8,226,499	\$	30,112,725	\$	3,558,153	\$	30,283,859	
	Reserve for Depreciation							Sta	off EM	s	
7	Account 108-376 - SNG as filed	as filed, TDP-2, exh 3	\$	(912,293)	\$	(1,932,841)		(1,090,989)		(2,117,624)	
8	Account 108-378 - SNG as filed	as filed, TDP-2, exh 3		(3,422)		(6,667)		(6,823)		(8,242)	
9	percent of account to acct 105	capacity percent tab		63.92%	_	81.18%		63.92%		81.18%	
10	reduction to settlement RDA - acct 108-376	line 21 * line 24	\$	(583,110)	\$	(1,569,060)	\$	(697,327)	\$	(1,719,064)	
11	reduction to settlement RDA - acct 108-378	line 22 * line 14		(2,187)		(5,412)		(4,361)		(6,691)	
12	total Reserve for Depreciation reduction	line 10 + line 11	\$	(585,297)	\$	(1,574,472)	\$	(701,688)	\$	(1,725,755)	

TRJ-4 surrebuttal Account 105 Transfer v2

transfer amount

GR-2014-0086 Surrebuttal Schedule TRJ-4

surrebuttal testimony Schedule TRJ-4 page 2 of 2

#### Summit Natural Gas of Missouri, Inc. MPSC Case No. GR-2014-0086 Main Line Capacity Utilization Percentage Calculation

No	Particulars	Reference	Warsaw	Branson
	(ə)	(b)	(c)	(b)
1	Relevant pipe capacity (Mcf/day)	note 1	6,288	15,240
	Relevant Peak day calculations			
	Warsaw			
2	base load per retail customer - Dt's	2013-14 Gas Supply Plan	0.0983	
3	retail usage per HDD - Dt's	2013-14 Gas Supply Plan	0.0241	
4	peak HDD'S - Sedalia WTP	2013-14 Gas Supply Plan	82	
5	test period total retail customer count	Rebuttal Schedule TDP-3	1,111	
6	peak retail usage in Dt's	(in 4 * in 3 + in 2) * in 5	2,301	
7	peak retail usage in Mcf at 1.014 BTU factor - 2013 PGA	in 6 + 1.014	2,259	
8	transportation customer usage	NA	<u> </u>	
9	Mainline capacity usage factor	in 7 + in 1	36.08%	
10	Mainline capacity reduction factor	1 - In 9	63.92%	
	Branson			
	2013-2014 Winter regression statistics	2014 15 Gas Supply Plan		0 4018
12	retail usage per Fetal Customer	2014-15 Gas Supply Plan		0.0223
13	neak HDD'S	2014-15 Gas Supply Plan		73
14	test period total retail customer count	Rebuttal Schedule TDP-3		843
15	peak retail usage in Dt's	(lo 13 * lo 12 + lo 11) * lo 14		1.709
16	peak retail usage in Mcf at 1.025 BTU factor - 2013 PGA	In 15 + 1.025		1,667
17	transportation customer usage - Jan 6, 2014 - Mcf	imbalance management analysis		1,201
18	total usage in Mcf	ln 16 + ln 17		2,868
19	Mainline capacity usage factor	in 18 + in 1		18.82%
20	Mainline capacity reduction factor	1 - In 19		81.18%

Notes (1) capacity values taken from System Flow Diagrams attached

TRJ-4 surrebuttal Account 105 Transfer v2

usage factor

8/5/2014



GR-2014-0086 Surrebuttal Schedule TRJ-4



Panhandle-A Equation

$$Q = 435.87 \left(\frac{T_{sc}}{P_{sc}}\right)^{1.0788} * \left(\frac{P_1^2 - P_2^2}{G^{.8539} * L_e * T_m * Z}\right)^{.5394} * D^{2.6182} * E$$
$$L_e = \frac{(e^s - 1)L}{S}$$
$$S = \frac{.0375 * G * \Delta z}{T_m}$$

Variables

 $T_{sc} = Temperature at standard conditions$ 

 $P_{sc} = Pressure at standard conditions (atmospheric pressure)$ 

 $T_m = Average \ temperature \ of \ the \ pipeline \ (Absolute)$ 

 $P_1 \& P_2 = Pressure$  at the pipeline entrance and exit (absolute)

L = Length of pipe in miles

G = Gas density with respect to water

Z = Compressibility factor for gas

 $E = Pipeline \, efficiency$ 

 $L_e = Effective length of the pipeline$ 

 $\Delta z = Elevation difference from entrance to the exit of the pipe$