

Exhibit No.:

Issues: Allocation of Mains, Meters, and Services

Witness: Daniel I. Beck

Sponsoring Party: MoPSC Staff

Type of Exhibit: Surrebuttal Testimony

Case No.: GR-2017-0215 and GR-2017-0216

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MISSOURI PUBLIC SERVICE COMMISSION

COMMISSION STAFF DIVISION

ENGINEERING ANALYSIS UNIT

SURREBUTTAL TESTIMONY

OF

DANIEL I. BECK

SPIRE MISSOURI INC. d/b/a SPIRE

**LACLEDE GAS COMPANY and MISSOURI GAS ENERGY
GENERAL RATE CASE**

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*Jefferson City, Missouri
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8 Q. Please state your name and business address.

9 A. My name is Daniel I. Beck. My business address is Missouri Public
10 Service Commission, P.O. Box 360, Jefferson City, MO 65102.

11 Q. What is your position at the Commission?

12 A. I am the Manager of the Engineering Analysis Unit, Operational Analysis
13 Department, Commission Staff Division.

14 Q. Are you the same Daniel I. Beck who sponsored part of the Staff Report –
15 Class Cost of Service, which was filed as direct testimony on September 22, 2017 or
16 rebuttal testimony on October 20, 2017?

17 A. Yes.

18 Q. What is the purpose of your surrebuttal testimony?

19 A. The purpose of my surrebuttal testimony is to respond to the rebuttal
20 testimony of Company witness Timothy S. Lyons with regard to the allocation of mains,
21 meters, and services and to respond to the rebuttal testimonies of Missouri Industrial
22 Energy Consumers (“MIEC”) witness Brian Collins with regards to the allocation of
23 mains.

1 Q. On page 22, lines 8-13 of the rebuttal testimony of witness Lyons, it states
2 that approximately 85.0 percent of the Company's plant investment is for distribution
3 mains, services, and meters. Do you agree with this statement?

4 A. Generally, I agree with this statement. However, the actual percentage
5 varies slightly between LAC and MGE. It also varies depending on what plant is in
6 service at that particular time. Staff's Direct Accounting Schedules show that for LAC
7 the percentage is 86.2% while the percentage for MGE is 87.6%. I would also note that
8 Account 376, Mains, accounts for the largest investment in plant at 39.2% for LAC and
9 44.7% for MGE. Account 380, Services, also accounts for a significant investment at
10 37.8% for LAC and 31.2% for MGE. Accounts 381, 382, 383 and 385 include metering
11 and regulating plant that make up 9.3% of the plant for LAC and 11.8% for MGE.

12 Q. Since mains account for the single largest investment in plant and was
13 addressed by both witnesses, what are your observations of their testimonies regarding
14 mains?

15 A. First, I would note that neither witness discussed the reality that the
16 investment in mains is a joint cost. As such, the costs cannot be directly assigned to a
17 single customer or to a class of customers. While Staff and the Company have developed
18 allocators that attempt to allocate these joint costs to the classes, there is no perfect
19 method that definitively captures each class' portion of the costs.

20 There are also a couple of specific comments regarding Staff's main allocator that
21 describe the method as not clear, appearing to double count, not using design day
22 weather, and as not being used by gas utilities. I would like to respond to those
23 comments.

1 Q. The first criticism that you listed was that Staff's methodology is not as
2 clear. Are you referring to the rebuttal testimony of witness Lyons, page 25, lines 13-19,
3 where witness Lyons says the zero-inch approach establishes a clear distinction between
4 main investments to provide customers' access while Staff's Stand Alone/Integrated
5 System approach is not as clear?

6 A. Yes. From my perspective, it's impossible to agree that the company's
7 method, which requires one to imagine a system that is similar to the existing system but
8 has a zero-inch diameter, is somehow the clear methodology. While in theory, one can
9 compute the cost of a system with a diameter of zero, I do not believe that is a clear
10 distinction. In contrast, Staff's Stand Alone approach attempts to estimate the cost of the
11 main that would have to be installed to go from your neighbor's house/business to your
12 house/business; and Staff's approach uses the diameter of the average service line that
13 serves a class instead of a theoretical value of zero. Staff maintains that the Stand
14 Alone/Integrated System approach is a reasonable methodology to allocate the joint costs
15 associated with mains.

16 Q. The second criticism that you listed was that Staff's methodology appears
17 to double count. Are you referring to the rebuttal testimony of witness Lyons, page 25,
18 line 20 to page 26, line 6, where witness Lyons says that the Staff methodology "appears
19 to double-count that portion of mains designed to serve customers peak demands"?

20 A. Yes. I contend that much of the costs of the distribution mains system
21 are an investment that has both joint costs and joint benefits. Staff's methodology
22 divides the system into two parts and each part is then allocated separately. The stand-
23 alone portion does not use peak demands to allocate costs but instead uses the costs
24 related to the length and size of the main that would be required to extend to the next

1 customer. I do not understand how this could be considered double counting. Staff uses
2 peak day demands to allocate the integrated portion of the system, but the company's
3 methodology also uses peak day demands to allocate a portion of the cost of mains.
4 Since the cost of distribution mains is a joint cost, it is appropriate to allocate a portion of
5 those costs using peak day demands and therefore there is no double-counting since the
6 stand alone and integrated system are allocated to the classes separately.

7 Q. The third criticism that you listed was that Staff's methodology does not
8 use design day weather. Are you referring to the rebuttal testimony of witness Lyons,
9 page 26, lines 7-15, where witness Lyons says that the Staff methodology does not use
10 the value of 72 heating degree days ("HDD") that is used in design calculations and
11 instead uses a value of 58.3 HDD?

12 A. Yes. However, witness Lyons neglects to explain that the value of 58.3
13 HDD is a predicted normal coldest day of the year based on thirty (30) years of history.
14 A value of 58.3 HDD would equate to an average temperature for the day of 6.7 degrees,
15 which is a very cold day. The value of 72 HDD equates to an average daily temperature
16 of minus seven (-7) degrees which is an extremely cold day. To account for extremes
17 when designing a system is reasonable, but to assume extremes that are beyond the
18 normal range when allocating costs is not reasonable.

19 Q. Did MIEC witness Collins also address the issue of design day weather on
20 page 7, lines 4-13, where he criticizes Staff's use of "actual demands" and advocates the
21 use of "the expected day of greatest demand"?

22 A. Yes. However, a design day demand is not the expected day of greatest
23 demand but is instead a worst case scenario. In addition, the design of a system needs to
24 not only take into account current demand but it also needs to take into account future

1 demand. For example, if the company was planning to extend their system of mains to
2 serve three new customers and the design day calculations showed that a 2 inch main was
3 barely adequate to serve these customers, the company would typically install a larger
4 main to accommodate future customers or greater use per customer than the design day
5 model reflected. The incremental cost to put in the larger main is much less than the cost
6 to either replace that main at a later date because it is undersized or to install a second
7 parallel main. Staff uses normalized peak day demands that reflect the usage of the
8 current customers on the system because that is a reasonable way to allocate a portion of
9 the cost of mains.

10 Q. The last criticism that you listed was that Staff's methodology is not used
11 by gas utilities. Are you referring to the rebuttal testimony of MIEC witness Collins,
12 page 6, lines 12-15, where witness Collins states that he is not aware of any gas utility
13 that uses the stand-alone methodology?

14 A. Yes. Staff does not believe that this is a valid measure of the
15 appropriateness of a methodology. Instead, Staff recommends that the Commission
16 evaluate the methodology itself and determine the reasonableness of that methodology.
17 Staff would also note that in Case No. GR-2001-0292, the Commission determined that
18 the Stand-Alone/Integrated System methodology was reasonable.

19 Q. You previously stated that you would respond to rebuttal regarding the
20 allocation of meters and services filed by witness Lyons. Are you referring to the
21 discussion starting on page 26, line 17 to page 30, line 14?

22 A. Yes. However, the majority of this testimony simply explains the
23 differences, or lack of differences, between Staff's allocators and the Company's
24 allocators. For example, Staff allocates 89.2% of Services to LAC's Residential

1 customers and LAC allocates 92.7% of Services to LAC's Residential customers.
2 Similarly, Staff allocates 90.8% of Services to MGE's Residential customers and MGE
3 allocates 91.6% of Services to LAC's Residential customers. A 3.5% difference and a
4 1.9% difference are both within the range of error that would be expected for a class cost
5 of service allocator and therefore the differences are insignificant.

6 Staff would also note that witness Lyons criticizes Staff's use of a typical or
7 sample of service lines rather than the full population. However, the "full population"
8 that he refers to is made up of meters, not service lines. He then assigns one of 5 values
9 to the various types of meters and uses that value as an estimate of the typical cost of a
10 service line for any meter using that diameter of service line. Therefore, the LAC and
11 MGE service line allocators are actually based on five typical service line cost estimates
12 and not individual cost estimates that examine the cost for each installation in the full
13 population. In addition, one of the five estimates is used for 99.74% of the LAC service
14 lines so practically, instead of having a methodology that examines the cost for the entire
15 population of over 600,000 service line installations; there is one estimate that dominates
16 the calculation. Staff does not believe that it is reasonable to estimate the cost of each
17 individual installation of the full population and that is why Staff chose to use a random
18 sample.

19 Q. Based on your review of the rebuttal testimonies of the various witnesses
20 in this case, do you still support the allocators of mains, meters and services developed
21 by Staff?

22 A. Yes.

23 Q. Are there other factors that should be considered when determining a
24 class' portion of the company's revenue requirement?

Surrebuttal Testimony of
Daniel I. Beck

1 A. Staff witness Robin Kliethermes has testimony outlining other factors that
2 should be considered. In previous cases the Commission has described a class cost of
3 service study as a starting point in the Commission's determination of the amount of
4 revenue that should be recovered from each class. Staff supports this concept.

5 Q. Does this complete your surrebuttal testimony?

6 A. Yes.

