Exhibit No.: 402

Issue: In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase its Revenues for Natural Gas Service
Witness: Louie R. Ervin Sr.
Exhibit Type: Surrebuttal
Sponsoring Party: Missouri School Boards' Association
Case No.: GR-2019-0077
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MISSOURI PUBLIC SERVICE COMMISSION

CASE No. GR-2019-0077

SURREBUTTAL TESTIMONY

OF

LOUIE R. ERVIN, SR.

ON BEHALF OF

MISSOURI SCHOOL BOARDS' ASSOCIATION

Jefferson City, Missouri
July 10, 2019

General

Q. Whose testimonies are you rebutting?

A. I am rebutting testimonies of Ameren's Mr. Harding, Staff's Mr. Patterson, and Spire's Mr. Keathley.

Q. There seems to be a lot of confusion by Staff's Mr. Patterson and Company's Mr. Harding as to why MSBA is in this docket and what it is proposing; will you please clear up the record on this?

A. Yes, perhaps I wasn't clear in my testimony. MSBA is NOT proposing to eliminate "balancing." MSBA is NOT proposing that Ameren eliminate "cash-out" and adopt Spire's tariff. MSBA is NOT proposing that Company review every school nomination every day.

Q. Why is MSBA in this case?

A. MSBA is in this case to: (1) address the narrow $2400 issue of whether Ameren's school cash-out price is cost-based in compliance with Section 393.310 RSMo. and is just and reasonable; and, (2) recommend that Ameren's tariff provisions that are specific only to schools be located in a separate rate schedule section.

Q. Will you put the dollar amount of the cash-out issue in perspective relative to Ameren's total requested revenue?

A. For the 11 months of data that Ameren provided, ending May 2019, MSBA's school pool paid to Ameren about $2,400 in cash-out fees that were in excess of full market price. These penalties, or excess cash-out charges, equate to about 0.002% of Ameren's requested annual revenue of $136,194,385. MSBA's school pool is by far the largest of all other school pools, so the penalty cash-out issue for all school pools combined will likely be less than 0.5% of the expenses of all parties in this case.

Q. Has MSBA attempted to resolve this issue without the substantial expenses of being in this rate case?

A. Yes. MSBA is mindful that schools need to preserve funds for classroom needs. Aggregate purchasing of natural gas provides a savings opportunity for schools, absent a lot of regulatory expenses and utility fees in excess of the cost of serving them. Over the past 17 years, MSBA tried to limit involvement in rate cases because the school aggregate purchasing program issue is very small relative to the expense of navigating a multitude of rate case matters that are not unique to schools.

Q. Is it normally expected that the Company and Staff would ensure that the interests of schools are equally represented in rate cases without the need for MSBA to participate in this case?

A. Yes, but MSBA intervened in this case because its experiences with both Staff and Company have been that they only recommend rejection of school recommended changes without really researching alternative solutions.

Q. What has MSBA done outside of this case to work with utilities and Staff to resolve MSBA's narrow issue?

A. MSBA participated in the last Spire consolidated cases with a focus only on the school program and reached a stipulated agreement which was approved by the Commission. MSBA has attempted to obtain more statewide consistency with regard to cash-out and compliance with the school program enabling statute, Section 393.310 RSMo. In addition to the Commission-approved Spire East and Spire West settlements, MSBA recently reached cash-out agreements with Liberty, Empire, and Summiton cash-out to be submitted for Commission consideration. But, when those agreements were discussed with Staff, the Staff was opposed. So those three utility agreements are being held in abeyance pending the outcome of this Ameren case. MSBA also had discussions with Ameren but no agreement was reached. It appears to MSBA that Staff is opposed to everything MSBA proposes but never offers a single alternative solution to punitive cash-outs; so, MSBA appeals to the Commission to approve MSBA's proposed cash-out solution in this case and correct Ameren's punitive, non-cost-based cash-out provisions.

Stand-alone School-only Rate Schedule Provisions

Q. Will you clarify MSBA's recommendation that the multiple provisions that are specific to schools be located together?

A. Yes. In 2002, for expedience in meeting a very short statutory deadline, Ameren dispersed school-only tariff provisions throughout their existing standard transportation rate schedules to address new requirements of Section 393.310 RSMo. As a result, Ameren has multiple school-only related provisions "shoe-horned" throughout its standard transportation rate schedule in its tariff. This interspersion of school-only provisions throughout the standard transportation rate schedule may not be a problem for Staff, Company, marketers or Pool Operators who deal with tariffs on a daily basis. However, for the convenience of school customers who pay the gas bills, MSBA only asked that the provisions that are only applicable to schools be consolidated. Preferably, the school-only provisions would be in a standalone rate schedule like those of Spire East, Spire West, Summit and Liberty. Alternatively, the school-only provisions could be cut and pasted together in one Section of the general transportation rate schedule which should only take a couple of hours. MSBA doesn't understand why Staff would object to this simple request.

§2400 Balancing and Cash-out Issue

Q. Will you explain "balancing"?

A. Yes. Balancing is the act of, or process of, system operators taking actions to maintain the system in-puts and out-puts in balance, or equilibrium, within system pressure tolerances and other operating parameters.

Q. Will you explain "imbalance?"

A. Yes. Imbalance is the inadvertent difference between system in-puts (supply) and out-puts (customer usage) over a period of time, a day for large volume transportation customers and a month for schools.

Q. Will you explain "cash-out?"

A. Yes. Cash-out is one way for parties to settle inadvertent imbalances, by monetizing the imbalance after the end of the month and making payment to the party that is owed.

Q. Is MSBA proposing to change Ameren's current rate schedule to eliminate monthly balancing for schools?

A. No.

Q. Is MSBA proposing to eliminate the schools' responsibility to be cashed-out at the end of each month for inadvertent imbalances?

A. No. MSBA's primary issue is that Ameren's punitive monthly cash-out price for schools is not cost-based as required by Section 393.310 RSMo. Instead, when the schools owe Ameren for more than a 5% imbalance, Ameren charges the greater of 110% of its PGA or the current market price plus $0.15 per Ccf. But when Ameren owes the schools for greater than 5% imbalance, Ameren only pays the schools 90% of market price. These are not cost-based charges but in fact are penalties originally designed prior to Section 393.310 RSMo. to elicit large volume daily balanced transportation customers (industrials) to minimize imbalances.

Q. Why wouldn't the large volume transportation customer's penalty-based cash-out prices also be appropriate for schools?

A. Large volume transporters are responsible for their own balancing on a daily basis, do not pay Ameren for a balancing service, and only pay cash-out charges on imbalance volumes – not on all delivered volumes as do schools. Section 393.310, paragraph 4 (2) first specifies that gas corporations provide balancing service for schools on a monthly basis and, second, schools must pay a balancing service fee on all therms delivered to the corporation. This is a materially different requirement than for large volume transportation daily balanced customers which only pay on imbalance volumes.

Ameren's Cash-out Penalties are Not Cost-based and are in Conflict with Statute

Q. Were the market price penalty multipliers and PGA provisions applicable to schools adopted from Ameren's pre-existing large volume transportation rate schedule?

A. Yes. Section 393.310 RSMo. was signed into law in July 2002 establishing school natural gas transportation with a very short deadline of November 2002 for the Commission to approve school program rate schedules. To meet this short deadline, the Commission consolidated cases for every Missouri gas corporation for hearing purposes and all parties compromised and achieved negotiated settlements for "experimental" school transportation tariffs which were different for each company. Spire East (fka Laclede), Spire West (fka Missouri Gas Energy), Summit and Liberty (fka Atmos) all had differing stand-alone "experimental" school rate schedules approved by the Commission. Aquila (now owned by Empire) already had a general small commercial transportation rate schedule and provisions of Section 393.310 RSMo. were incorporated into it but it has since changed. For expediency, Ameren used its existing large volume gas transportation rate schedule and "shoe-horned" various requirements of Section 393.310 RSMo. into it, leaving the large volume transportation punitive cash-out market price and PGA multipliers, which effectively made these penalties also applicable to schools.

Q. Is the "no negative impact on others" the only provision in Section 393.310 RSMo. which addresses the level of utility charges to school transportation?

A. No. Section 393.310 RSMo. statutorily created a balanced, dual requirement compact: (1) that there be no negative impacts to others and (2) that charges to schools be at the Company's cost of providing services. Taken together, these dual statutory requirements protect schools, utilities and other customers when gas corporations charge their incremental cost of providing statutorily mandated services without penalties, including for utility-provided monthly balancing service. However, Staff and Company have chosen to only focus on the half of the compact that the program have no negative impact on others and ignore the second statutory provision that services to schools be at the gas corporation's cost. Therefore, MSBA intervened in the case on behalf of schools to seek Commission relief.

Q. Is the purpose of a rate case for the utility to provide cost support for its charges and for the Staff to verify whether the Company's costs are accurate?

A. Yes.

Q. Has either Ameren of Staff provided any actual test year cost data to support the levels of proposed school cash-out charges in this case?

A. No.

Q. Absent cost data in this case to support proposed cash-out charges to schools, what basis do Company and Staff give for supporting the proposed punitive cash-out rate design charges in this rate case?

A. Rather than providing cost data to support the proposed cash-out penalties, Company and Staff use anecdotal rationale that schools should pay the Company for monthly balancing under the same cash-out penalties as for daily balanced large volume customers. Staff and Company have only focused on the statutory provision that the utility charge schools sufficiently to prevent harming the Company or other customers without considering the second statutory requirement for charges to schools to be cost-based. Nor have they recognized that the utility provides, per statute, a monthly balancing service for which schools pay the utility on every therm consumed; whereas, large volume transportation customers are responsible for their own balancing and only pay on their daily imbalance volumes – not every therm.

Q. Has Company or Staff quantified any harm MSBA's school program has had on Company or on other customers?

A. No. There can be no negative impact to the Company because all school cash-out penalty revenue and any associated expense is passed through the PGA. Neither Company nor Staff have attempted to quantify net benefits or costs of school cash-outs due to inadvertent over or under delivery of gas supply, that is imbalance.

Q. Will you explain how schools inadvertent over or under imbalances can either create a benefit or expense to the other system customers?

A. Yes. Ameren must reconcile or balance its receipts and deliveries with the pipelines and the pipelines offer the Company various means of curing imbalances. If the Ameren system is short of supply on a given day and the schools have inadvertently over-delivered gas on that day, then Ameren's system imbalance is reduced and there is a net benefit to the system. If the Ameren system is long on supply on a given day and the schools have inadvertently under-delivered gas on that day, then Ameren's system imbalance is again reduced and this too is a net benefit to the system. The converse situations can add to the Ameren's pipeline imbalance and costs.

Q. What are MSBA's concerns with Ameren's school cash-out provisions?

A. MSBA is concerned that the price Ameren uses to reconcile school imbalances penalizes the schools both when there is a system benefit and when there is an expense to the system. Even after schools pay Ameren for balancing service on every therm consumed, schools are subjected to paying punitive non-cost-based market multipliers. When the schools owe Ameren for more than a 5% imbalance, Ameren charges the greater of 110% of its PGA or the current market price plus $0.15 per Ccf. But when Ameren owes the schools for greater than 5% imbalance, Ameren only pays the schools 90% of market price.

<u>Avoidance of Potential Price Arbitrage</u>

Q. What is price arbitrage to which Staff and Company have expressed concern?

A. Price arbitrage is an intentional under scheduling of gas supply on days when market prices are high and over scheduling on days when prices are low. The volumes that are intentionally over and under scheduled tend to net out at the end of the month but have extracted an unfair price by manipulating the system.

Q. Did Staff or Company provide any evidence of negative impact to other customers from the MSBA school pool operator attempting to price arbitrage?

A. No. Mr. Patterson only selected January 2018 for an apparently ineligible pool operator and claims to have detected potential arbitrage, particularly on January 3, 2018. Mr. Patterson does not indicate, whether those schools in question were even in session on January 3, 2018 or if there are legitimate explanations for the perceived manipulation. We do know that some public schools were closed on January 3, 2018.

Q. Does Mr. Patterson's testimony have fatal errors with regard to price arbitrage?

A. Yes. The gas marketer, or pool operator, that Mr. Patterson reviews for the single month of January 2018 appears to be NOT ELIGILBLE for transportation service under Section 393.310 RSMo. and Ameren's school tariff provisions. Mr. Patterson may not have known if Ameren misapplied its tariff and allowed this ineligible marketer to take school transportation service with monthly balancing. Second, nominations are made in advance of market prices being posted, so any attempt at price arbitrage could backfire when actual prices ae known. Third, attempts at price arbitrage could result in the Commission cancelling the gas suppliers' certificate to provide energy services in Missouri.

Q. Why would the marketer that Mr. Patterson thinks may have committed price arbitrage not be eligible for the statutorily mandated volume school rate schedule?

A. Section 393.310 RSMo. requires eligible school entities be provided service in accordance with aggregate purchasing contracts negotiated by and through a not-for-profit school association. The gas marketer that Mr. Patterson analyzed for one month does not appear to be sponsored by a not-for-profit school association as required.

Q. What does Section 393.310 RSMo. and Ameren's tariff eligibility say with regard to sponsorship through a not-for-profit school association?

A. Section 393.310 RSMo. limits eligibility for school aggregate transportation (Appendix 1 to my direct testimony) and states:

> "4. The tariffs required pursuant to subsection 3 of this Section shall, at a minimum:
>
> (1) Provide for the aggregate purchasing of natural gas supplies and pipeline transportation services on behalf of eligible school entities in accordance with aggregate purchasing contracts negotiated by and through a not-for-profit school association;"

The first paragraph of Ameren's Natural Gas Transportation Service rate schedule (Tariff Sheet No. 10) quotes Section 393.310 RSMo with regard to eligibility being limited through aggregate contracts negotiated by and through a not-for-profit school association.

Q. Has Ameren been following its tariff with regard to eligibility under Section 393.310 RSMo?

A. It appears that Ameren has not been following its tariff for eligible school entities. It appears that Ameren has been allowing more than one ineligible pool operator, including the one Mr. Patterson analyzed for possible price arbitrage, to take service under Section 393.310 RSMo. Perhaps the confusion is a result of the school rate schedule provisions of Section 393.310 RSMo. being intermingled within the large transportation customer transportation service. MSBA recommends a stand-alone school transportation rate schedule as set forth by Section 393.310 RSMo.

Q. Are there reasons that Section 393.310 RSMo. limits school purchasing through not-for-profit school association?

A. Yes. This statute was created for the benefit of schools which alone typically do not have in-house expertise to operate or manage aggregate natural gas purchasing and transportation, but they can cost effectively obtain these services though an association like MSBA. Their school boards can also hold their not-for-profit association(s) responsible for ensuring school interests are protected rather than leaving their interests only to a "for-profit" pool operator or marketing company. It also provides a level of regulatory and gas utility accountability to help ensure issues like potential price arbitrage can be addressed because the not-for-profit school association has the authority to terminate pool operators for cause.

Q. Has MSBA or its pool operator ever attempted to price arbitrage and did Mr. Patterson conduct a similar review of MSBAs' pool operator's actions in January 2018 that might be perceived as an attempt at price arbitrage?

A. Neither MSBA nor its pool operator attempts to price arbitrage. I don't know whether Mr. Patterson reviewed MSBA or other not-for-profit association's school accounts for potential price arbitrage, but I would think he would have because the MSBA pool is several times larger than the other school pool that Mr. Patterson references in his testimony. I presume Mr. Patterson would have pointed it out if there was any indication of MSBA's pool operator attempting to price arbitrage. I do know that MSBA's pool operator does not attempt price arbitrage and has continually worked to improve its nominating accuracy by developing a weather-based winter nomination algorithm that was provided to Staff. The weather algorithm does not consider price.

Q. Do you have a suggestion on how to help ensure non-eligible entities, like the one Mr. Patterson reviewed, is not mistakenly allowed to take Ameren's monthly balanced school rate?

A. Yes. Currently, tariff provisions related to the school aggregate transportation program are intermingled throughout the same Ameren large volume transportation rate schedule. Separation of school rate provisions from standard commercial transportation provisions should make it much easier to determine rate eligibility. School rate provisions should be at one place in the tariff.

Q. Has Company or Staff indicated they have researched alternative methods to using after-the-fact large volume transportation customer's cash-out penalties for preventing price arbitrage by school pool operators?

A. It is interesting that Staff and Company claim that cash-out penalties are needed to prevent price arbitrage but, per Mr. Patterson's testimony, a pool operator, albeit apparently ineligible, potentially committed price arbitrage under the existing penalty cash-out provisions. To my knowledge, neither Company nor Staff researched methods to prevent price arbitrage. Company and Staff simply rejected MSBA's proposed alternative method of a tariff requirement to nominate daily school usage during winter months based on forecasted weather, specifically degree days. MSBA has not suggested that Ameren adopt the Commission-approved Spire East weather algorithm for school nominations but I provided a similar weather-based nomination algorithm that MSBA's pool operator developed from experience. MSBA recommended using forecasted degree days as a method to help ensure that pool operators cannot simply under deliver gas on days with high prices or over deliver gas on days when market prices are low. Deviations from the forecasted weather-based algorithm would be only for known factors, such as school closings, Company critical day or other operating requests, intentional adjustments for previous inadvertent over or under deliveries and the like.

Q. Have both Company and Staff proposed weather adjustments for Ameren revenues?

A. Yes. Company's proposed a revenue adjustment of $935,197 based on the impact of weather on consumer consumption. Staff also proposes a weather adjustment. Both Company and Staff support the concept that heating customers' consumption is related to weather, specifically degree days. But, without review or comment, both Company and Staff recommend rejection of MSBA's Pool Operator's weather-based nominations proposal which was designed specifically to minimize imbalances – a win-win for all. The de minimis MSBA imbalance penalties of about $2,400 annually may be too small for Staff or Company to consider relevant, with but they are not negligible for schools.

Q. Has MSBA provided to Staff a detailed recommended method of nominating deliveries based on degree days which takes potential price arbitrage out of the pool operator's discretion?

A. Yes. MSBA's confidential response to Staff DR 0293 provides intricate details of MSBA's Pool Operator's latest refinement to its weather-based nomination method.

Q. Did Company or Staff offer any suggested improvements to MSBA's weather-based nomination method?

A. No. Neither Company nor Staff provided any indication that they even considered the MSBA proposed weather-based alternative or any other method of preventing potential price arbitrage. Both Company and Staff simply proposed rejection of MSBA's proposal without providing any alternative. Company effectively said they don't have staff time to devote to schools, despite the statutory requirements to base its rates on the gas corporation's cost of providing service to schools.

Q. Would Ameren's Company personnel be required to review every school nomination every day and ensure that it is being made prudently and accurately without attempting arbitrage?

A. No. Ameren and Staff have portrayed a big misconception that somehow MSBA's proposal will take a lot of Ameren's staff time, which it will not. MSBA has stated that it agrees that it is the school's pool operator's responsibility- not the Company's - to nominate according to the provided weather-based method. If a weather-based nomination algorithm is mandated, as may be adjusted by a school pool operator only for known and recorded reasons, then potential arbitrage should be eliminated. It could not have taken an inordinate amount Mr. Patterson's time to analyze and spot potential price arbitrage by an apparently ineligible pool operator in January 2018. Staff could do a similar review for each gas corporation in rate cases or even in conjunction with annual ACAs. The Commission could suspend or terminate a pool operator's Commission-issued certification to any supplier which is found to be attempting price arbitrage. MSBA maintains that it is unfair to punish all pool operators if there is an infraction by one.

Q. Has Staff or Company proposed any additional Commission requirements for school pool operators to be certified, such that certification can be terminated if the pool operator has been found to be attempting price arbitrage?

A. Again, Staff and Company have offered no alternative solutions to school concerns. They both just ignored the schools' concern with no recommendations other than to continue the punitive cash-out provisions that were designed for daily balanced large volume transportation customers prior to creation of the school transportation program in 2002.

Q. Does the Commission already have requirements for certifying energy sellers and require applicants to sign an agreement?

A. Yes. However, neither Staff nor Company have suggested that the Commission add a requirement that certified energy sellers to schools, including pool operators, must agree to use prudent nomination methods based on degree day forecasts for the winter months of November through March and only make adjustments for other known factors, such as school closings, offsets to previous over or under deliveries and to make best efforts to comply with any gas corporation request to change daily nominations due to critical days or to protect the integrity of the gas system.

<u>Harding Testimony</u>

Q. Ameren's Mr. Harding, at Page 13 of his rebuttal testimony, states that schools are not penalized for being out of balance on a daily basis. He also states at page 13 that only schools have the benefit of balancing monthly and on page 14 and that the system absorbs daily price differentials. Do you agree?

A. I do agree because that is precisely why Section 393.310 RSMo. prescribes that gas corporations provide daily balancing services to schools and be compensated via an aggregation and balancing fee for that service.

Q. Is Mr. Harding correct that marketers have the ability to intentionally nominate short on days when prices are high and nominate long when prices are low?

A. Mr. Harding has not provided any data to support or evidence regarding whether there have been any attempts by marketers to game the system. I know MSBA does not attempt to price arbitrage. This is actually the same issue of potential price arbitrage that I covered in my surrebuttal to Staff's Mr. Patterson. Again, my key point on this subject is neither Company nor Staff have offered any tariff language to ensure any attempt at price arbitrage will have consequences for any marketer that attempts to price arbitrage and does not penalize all schools. Instead both Staff and Company have only rejected all attempts by MSBA to find a fair solution to this concern. As I mentioned earlier, the Commission could suspend or terminate a marketer's certification to be a supplier in Missouri if found to have engaged in price arbitrage.

Q. Referencing Mr. Harding's testimony at the top of Page 15, does MSBA's pool operator utilize the Ameren portal to make nomination adjustments to minimize imbalances?

A. Yes. To the extent the data is timely posted, MSBA's pool operator utilizes this information along with degree day forecasts, school closings and the like to minimize imbalances. I am told that sometimes that daily data posting is delayed for a few days, particularly over weekends and sometimes due to meter communication failures, but available information is used.

Q. Beginning at the bottom of page 16, Mr. Harding discusses his rationale as to why schools should pay the PGA rate for short imbalances. Do you agree?

A. No, I do not agree. This is at the core of the main issue that MSBA has in this case – the PGA is not the cost of providing this service to schools. Section 393.310 RSMo. clearly states in paragraph 2: "Provide for the resale of natural gas supplies, including related transportation service costs, to eligible school entities at the gas corporation's cost of purchasing such gas supplies and transportation, plus applicable distribution costs, plus and aggregation and balancing fee to be determined by the commission, not to exceed four-tenths of one cent per therm delivered during the first year;" Ameren's PGA tariff sheets are attached as Appendix A. The PGA rate has many components which are totally unrelated to the current month's cost of gas PGA.

Q. What PGA components are not related to cost of gas for cashing out schools?

A. First the 110% multiplier applied to the PGA is not cost based as required by Section 393.310 RSMo. The PGA is an annualized estimate of gas costs and is not related to the cost of gas only for the current month that is being cashed out. It contains an annual ACA reconciliation component to recover or refund over or under collections of gas costs during the prior PGA year. It contains out of period Ameren financial gas price hedging expenses even though hedging is not done for transportation customers. It contains interest charges. It contains gas demand and seasonal peaking and/or storage charges although the Company does not contract for demand, storage or peaking service for transportation customers. None of these aforementioned costs that are in the PGA have anything to do with the current month cost of purchasing of such gas supplies for schools. Ameren clearly states in its response to MSBA DR #15 (Appendix 3 to my direct testimony): "Ameren Missouri purchases gas supply every day to meet the needs of our distribution system." Thus, Ameren's marginal cost for each respective cash-out month is the actual known market price of gas for that month and is not its multi-month estimated price with out-of-period costs and other non-applicable costs, such as hedging gains and losses for its sales customers.

Q. At the top of Page 17, Mr. Harding makes the point that if the school supply is short then there are the costs of pipeline transportation and fuel in additional to the market price. Do you agree?

A. Yes. Implicit in the market price is the cost of the pipeline transportation and fuel for short deliveries. In fact, Section 393.310 RSMo. paragraph (2), quoted above includes: "gas corporation's cost of purchasing such gas supplies and transportation." So yes, transportation is part of the current cost of purchasing market gas.

Q. Mr. Harding, beginning at Line 4 of Page 18, states that the aggregation and balancing charge is designed to recover additional time and expense to administer the school aggregation program and to cover the price differential between the daily prices that Ameren pays and the monthly cash-out price. Do you agree?

A. I partially agree. The aggregation and balancing fee is designed to recover additional time and expense, if any, to administer the school program, but it also designed to cover all incremental costs of providing monthly balancing service. It is not designed to cover imbalance cash-outs. MSBA accepts Ameren's proposed aggregation and balancing fee in this case. MSBA's issue is with the price Ameren charges for cash-out, which exceeds its monthly marginal cost of gas by virtue of price multipliers of 110% of PGA or market price plus $0.15/therm when the schools pay Ameren and a 90% market price multiplier when Ameren pays the schools.

Q. On Page 19, Mr. Harding states that if school marketers maintain balance, the client will not be cashed-out. Is he correct?

A. Yes, but a scenario of perfect balance or sometimes within 5% is not realistic; that is why Section 393.310 RSMO requires schools to pay gas corporation a fee for balancing service. With inaccuracies in weather forecasts and consumer variable usage characteristics, it is virtually impossible for any marketer, Ameren or any other gas corporation to perfectly forecast consumer daily consumption. That is precisely why Section 393.310 RSMo. provides that Missouri gas corporations will provide monthly balancing for schools and why schools pay the gas corporations an aggregation and balancing fee.

<u>Patterson Testimony</u>

Q. Does Mr. Patterson correctly define "balancing" beginning at Line 4 on Page 3?

A. No. In this context, Mr. Patterson has incorrectly used the term balancing as synonymous with cash-out. He incorrectly defines balancing as the process of reconciling the difference between the amount of gas received by Ameren from the schools' pool operator and the amount of gas delivered by Ameren to school accounts, which is actually a definition for cash-out. Mr. Patterson has failed to recognize that "cash-out", not "balancing", is the process of reconciling inadvertent imbalances between Ameren receipts and deliveries by the transporter or, in this reference, the schools' pool operator. The process of reconciliation, or cash-out, comes after the end of the month. Balancing is the real time actions taken throughout the month to minimize imbalances that are cashed-out after the end of the month. "Balancing" and "cash-out" have two related but different attributes: (a) balancing are the DAILY actions taken to reasonably match supply deliveries into the Company's system to the customers' usage taken from the Company's system, and (b) cash-out is MONTHLY monetization of imbalances after the end of the month to compensate the appropriate party for inadvertent over or under delivery of gas commodity during the prior month.

Q. Is MSBA proposing to eliminate balancing and is Mr. Patterson correct when he states at Line 16, Page 2 of his rebuttal testimony that the MSBA proposal would shift the responsibility for balancing from the school pool operator to Ameren?

A. No. MSBA is NOT proposing to eliminate monthly balancing nor attempting to shift nominating responsibility to Ameren. MSBA agrees that forecasting and nomination functions the pool operator's responsibility, so there should be no dispute on that point.

Q. Do you understand why Mr. Patterson attached and referred to a huge attachment of pipeline tariffs?

A. Mr. Patterson was making the point that pipeline tariffs do not allow Ameren personnel to actually make a nomination change previously made by the schools' pool operator. This is a distinction without a real difference. In my direct testimony I was not referring to pipeline tariffs but to the Commission-approved Spire enforcement language. The Commission-approved Spire tariff language, authorizes the Company to return schools to sales service, after three notices, if the pool operator personnel do not make the nomination changes with the pipeline as recommend by Company. Possibly the pipelines would allow Ameren to make a nomination change if the schools were to provide written authorization or an agency agreement to permit such action, but given Mr. Harding's testimony about how its staff is just too busy to handle any more work, MSBA agrees not to pursue that possible solution. It apparently is not a concern of Ameren as Ameren states in its responses to MSBA DR #13 (Appendix 3 to my direct testimony) that the Company has not called a "Critical Day" in more than ten years.

Q. Is Mr. Patterson correct when he states at Line 22 on Page 4 that transportation customers are responsible for balancing?

A. No, he is not completely correct. Again, I think Mr. Patterson has incorrectly used the terms "balancing" and "cash-out" interchangeably, which they are not, particularly as related to the statutorily mandated school aggregation program. I do agree that the schools' pool operator is responsible to prudently nominate in order to minimize inadvertent over or under deliveries, or imbalances. However, given weather forecasting errors and other factors, no pool operator can be perfect in making daily nominations. For that reason, Section 393.310 RSMo. specifies that the gas corporations provide balancing services to schools and schools pay the gas corporation an aggregation and balancing fee on 100% of use – not just on the imbalance volumes. Contrary to Mr. Patterson's testimony, nothing in my testimony suggests that MSBA intends to change balancing responsibilities and shift balancing responsibility from schools to the Company. My testimony, that he apparently is referencing, relates to cash-out prices not being cost-based.

Q. Again, at Line 19, Page 5, Mr. Patterson states that MSBA's proposal has no provision for correcting imbalances and there is no requirement for calculating, tracking, correcting or adjusting imbalances. Is he correct?

A. No. Just to the contrary. Mr. Patterson is apparently again using the term "balancing" for "cash-out." I cannot stress enough that MSBA does NOT propose to change anything in the Ameren's tariff relating to tracking and cash-out of monthly imbalances, except for the punitive prices being charged for imbalance cash-outs.

Q. Has MSBA proposed to stop paying aggregation and balancing fees?

A. No. Again, MSBA agrees with Staff's recommendation to accept Ameren's aggregation and balancing services fee as proposed in this case. MSBA agrees that the Company should be paid for its costs to balance schools and this balancing service charge is specified by Section 393.310 RSMo. as an aggregation AND balancing fee. MSBA is NOT proposing to eliminate Ameren's balancing requirements with regard to matching deliveries and usage. MSBA is only proposing that Ameren's cash-out price comply with Section 393.310 RSMo. to be cost-based and to be fair, just and reasonable. Currently, Ameren's current cash-out prices penalize schools even when they benefit the system and contain penalty multipliers and PGA price which are unrelated to Ameren's actual incremental cost applicable to schools under provisions of Section 393.310 RSMo.

Q. Does Section 393.310 RSMo. specify how gas corporations are to be compensated for any administrative functions and operating expenses for providing balancing service?

A. Yes. Section 393.310 RSMo. specifies that Missouri gas corporations provide transportation service to the eligible school entities at the gas corporation's cost, plus an aggregation and balancing fee to be determined by the commission, not to exceed four-tenths of one cent per them delivered during the first year.

Q. Is Mr. Patterson correct when he states starting at Line 11 on Page 25 that "The aggregation and balancing fee is mentioned in the context of permitting the gas corporation to charge the school pool the cost of resources it provides to support transportation services?"

A. If he is saying that the aggregation and balancing fee is only to cover Company's administrative costs, then he is not correct. However, he is correct in his following sentence where he says the aggregation and balancing fee allows the utility to recover its costs of providing both aggregation, or administrative, functions AND its cost of providing balancing services. This statutory statement does not and was never intended to address compensation to gas corporation for the inadvertent over or under delivery of gas commodity – that compensation is covered by Ameren's cash-out provisions. MSBA is NOT proposing that Company change anything with regard to its administrative activities to aggregate multiple school accounts into balancing pools and provide a balancing service. Ameren's balancing pools are pretty typical in the industry in that multiple school accounts are aggregated and balanced as a single entity by pipeline. MSBA accepts the aggregation and balancing fee proposed by Ameren and supported by Staff in this case. MSBA does not propose to change Ameren's rate schedule except for the one-sided, non-cost-based, and punitive cash-out price, biased against schools, depending on whether Ameren is paying or charging the schools.

Q. Mr. Patterson states at Line 20, Page 19 that it is appropriate for the utility to recover the costs from those customers as allowed by Section 393.310.4(2). Do you agree with this?

A. Yes. I absolutely agree that the utility should recover its aggregation and balancing services costs from schools via its aggregation and balancing fee. I also agree that the utility should recover its true costs of supplying inadvertent under-delivered gas to school, which actual costs are not the higher of market prices plus $0.15/therm, or 110% of the PGA price when schools pay Ameren for imbalances over 5% but only 90% of market prices when Ameren pay schools for imbalances over 5%. Schools and Ameren should pay each other the full market price of inadvertent over or under deliveries. MSBA objects to receiving a fraction of market price when Ameren owes the schools and Ameren charging above market prices when schools owe Ameren.

Q. On Page 22 and when referring to NICOR in Illinois, Mr. Patterson refers to higher than market prices for "overrun" and "authorized" gas. Are these designations the same as Ameren's cash-out prices?

A. No, not at all. NICOR's authorized and unauthorized gas rates are not at all for the same purpose as Ameren's cash-out rates. See Appendix B, which is NICOR's tariff sheet 51; it clearly states that "unauthorized gas" is a designation for a critical day, which Ameren has not had in over ten years. The NICOR tariff also clearly states that authorized gas has to be pre-approved by the Company and is totally different than inadvertent imbalance that is not known until after the fact. As Mr. Patterson states at Line 1, Page 24, NICOR does not have special tariff provision for schools. NICOR does not charge its customers an "aggregation and balancing fee" as prescribed by Section 393.310, which obviously does not apply to Illinois gas companies. Further, NICOR Rider 25 transportation customers are assigned take and pay for a banking storage service for 30 days of supply, which allows for injections and withdrawals. Whereas Ameren, leases pipeline storage on most pipelines and does mandate customers to take banking or storage service. NICOR Rider 25 is not a monthly balanced school transportation program like in Missouri; Rider 25 has daily balancing. NICOR Rider 34 is simply a provision to allow customers to be balanced as a group, using the group's diversity of use and presumably storage; but NICOR's Rider 34 is still daily balancing – not monthly balancing as required by Missouri statute.

Q. Mr. Patterson states at Line 21, Page 26 that the Spire West balancing fee is payment made in lieu of balancing schools in a pool that do not have EGM, electronic gas meter, equipment. Is he correct?

A. No, Mr. Patterson's statement is wrong. In 2002 when Section 393.310 RSMo. become law with the specified aggregation and balancing fee and the Commission approved Ameren's school tariff provisions, I don't believe any gas corporation had EGM for eligible small volume schools. The aggregation and balancing fee is for balancing eligible school entities, which use 100,000 therm or less annually, and does not make a distinction as to whether the eligible schools have or don't have EGM.

Q. Mr. Patterson states at Line 25, Page 26 that schools on Spire's system that have EGM equipment are pooled separately because it is possible to calculate an imbalance. Is he correct?

A. No. EGM records daily usage relative to the cost conventional monthly-read meters which are used for residential and small commercial customers as well as for most schools. Section 393.310 RSMo. makes the distinction between large and schools. Per Section 393.310, schools with annual use of 100,000 therms or less are not required to have telemetry or special metering. Larger schools take transportation service under standard transportation tariffs which require EGM to record and balance on a daily basis; whereas, smaller schools eligible for monthly balancing under Section 393.310 RSMo. are balanced monthly. Therefore, the reason schools, with and without EGM equipment, are in separate pools is because the former is balanced DAILY under standard transportation rates and the latter is MONTHLY balanced. Perhaps there would not be confusion on this point and other differences between tariff provisions for school and standard transportation rate provision if Ameren's tariff separated school provisions in a standalone rate schedule like those Commission-approved school rate schedules of Liberty, Summit, Spire East and Spire West.

Q. Mr. Patterson states at Line 18, Page 19 and again at Line 4, Page 19 and Line 7, Page 28 that schools do not normally pay for distribution resources when the pool operator delivers too little gas. Is he correct?

A. No. Schools pay the full tariff distribution delivery charges on 100% of gas metered and consumed - not on how much gas was over or under delivered by the pool operator. Plus, schools in the aggregation program pay the tariff extra aggregation and balancing fee.

Q. Mr. Patterson states at Line 15, Page 13 that he anticipates that Spire West will balance school pools as it does with other transportation customers. Is he missing something here?

A. Yes. Mr. Patterson fails to understand that Section 393.310 RSMo. specifies that gas corporations provide a monthly aggregation and balancing service at a cost-based fee for schools with annual use of 100,000 therms or less. The statute for the past 17 years does not give gas corporations the discretion to offer or not offer a monthly balanced program for schools. The statutorily required monthly balancing for school is different from daily balancing for other large volume transportation customers.

Q. Mr. Patterson states at Line 13, page 14 that Staff is not aware of all factors the pool operator uses to nominate gas for schools. Is that a correct statement?

A. No. MSBA provided an extensive response to Staff DR 0293 which details MSBA's pool operator's weather-based nomination algorithm.

Q. Beginning at Line 6, Page 21 of rebuttal testimony Mr. Patterson states that the Illinois Commerce Commission's (ICC) orders in Docket Nos. 11-0282 and 15-0439 did not address the appropriateness of the PGA as a basis for imbalance cash-outs.

Does his down-playing of the ICC orders accurately reflect importance of the ICC's orders?

A. I will let the ICC orders speak for themselves. The fact is that the ICC orders were in both Ameren-Illinois Company (AIC) cases and in both cases the ICC did not approve Ameren's proposed tariff with regard to charging PGA prices to transportation customer for cash-outs. The ICC order in Docket No. 15-0439 states: "The Commission finds, that, as in Docket No. 11-0282, the current cash-out provisions of Rider T are sufficient at this time and AIC's proposed changes are rejected." This indicates Ameren twice proposed to charge transportation customers for cash-out based on PGA price and twice the ICC rejected Ameren's attempt.

Q. At Line 16, page 25 Mr. Patterson states that Staff is unclear how balancing is accomplished through the aggregation and balancing fee and that the fee is applied at a unit rate to all gas delivered. He further states that it does not return gas or cash-out payments to pool operators when they deliver more gas than used. Can you clarify these points for Staff?

A. Yes. MSBA does NOT propose to change anything with regard to Ameren's balancing provisions nor to its cash-out provisions, except for the penalty prices above market price that are applied to cash-outs. MSBA accepts Staff's recommendation that the Commission approve Ameren's proposed aggregation and balancing fee. The aggregation and balancing fee is applied to all school use volumes and not just the inadvertent imbalance volumes as a common mechanism to distribute and socialize discrete expenses over all volumes for the customers within a class or sub-class of schools in this instance. It is the cash-out provisions and not the aggregation and balancing services fee that charges or returns or compensates the pool operator of inadvertently over or under delivered volumes.

Keathley Testimony

Q. Will you comment on Spire's Mr. Keathley's testimony?

A. Yes. Mr. Keathley shares Spire companies' experiences with its experimental school transportation programs and may prefer some of the language in the Ameren school tariff. MSBA welcomes the opportunity with work with Spire and all other Missouri gas companies to achieve more state-wide consistency, where appropriate, among all the companies in implementing the school transportation program.

Conclusion

Q. Will you summarize MSBA's primary issue in this case?

A. Yes. MSBA's primary issue is very narrow; it amounts to about $2400 annually; and, it pertains only to cost-based prices applicable to school transportation service (STP) pursuant to 393.310 RSMo. Neither Company's Revenue Requirement nor Base Rates to any customer class or subclass are affected by MSBA's position.

Staff and Company may view the dollar amount of these penalties to school penalties as being of no real concern when compared to Ameren's proposed annual gas revenues but these overcharges can equate to having and not having class room instruction, computers and other learning equipment. MSBA appeals to the Commission to understand MSBA's narrow issue and order cost-based cash-out rates at full market prices which protects both other customers and schools as required by Section 393.310 RSMo.

Q. Will you summarize MSBA's secondary issue in this case?

A. For administrative efficiency and customer understanding, MSBA wants a separate section or rate schedule within Company's natural gas tariff which applies only to schools taking service pursuant to Section 393.310 RSMo.

Q. Will you state what MSBA wants the Commission to order in this case.

A. MSBA requests the Commission to order:

1. STP customers will continue to be cashed out monthly but at the Company's incremental cost of purchased gas which shall be the month's average daily market index prices for the respective interstate pipelines.
2. To minimize imbalances and as a preventative measure against potential price arbitrage, STP Pool Operators shall nominate deliveries from pipelines to the Company's distribution system prior to the beginning of each month and update nominations intra-monthly. Nominations for November through March shall adhere to a weather forecast algorithm, except for adjustments for known factors such as school closings, to comply with system operations orders or requests and to adjust for prior over or under imbalances. Such adjustments shall be logged by the school Pool Operator by date and a reason noted for each adjustment.
3. Company shall create a separate section or rate schedule within its tariff which applies only to schools taking service pursuant to Section 393.310 RSMo.

Q. Does this conclude your surrebuttal testimony?

A. Yes.

BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company	)	
d/b/a Ameren Missouri's Tariffs to	)	**Case No. GR-2019-0077**
Increase Its Revenues for Natural Gas Service	)	

AFFIDAVIT OF LOUIE R. ERVIN, SR.

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

Louie R. Ervin Sr., being first duly sworn on his oath, states:

1. My name is Louie R. Ervin Sr. I work in Cedar Rapids, Iowa and am employed by Latham, Ervin & Associates as the Executive Vice President.

2. Attached hereto an made a part of hereof for all purposes is my Testimony on behalf of Missouri School Boards' Association which has been prepared in written form for introduction into evidence in the above referenced case.

3. I hereby swear and affirm that my answers contained in the questions therein propounded are true and correct to the best of my knowledge and belief.

Louie R. Ervin Sr.

Louie R. Ervin Sr.
Executive Vice President
Latham, Ervin & Associates

Subscribed and sworn to before me this 10th day of July, 2019.

MELISSA KAY LARGENT
Notary Public, Notary Seal
State of Missouri
Callaway County
Commission # 14630569
My Commission Expires 10-07-2022

Melissa Kay Largent
Notary Public

My commission expires: 10/7/2022

UNION ELECTRIC COMPANY
GAS SERVICE

Applying to MISSOURI SERVICE AREA

RIDER A
PURCHASED GAS ADJUSTMENT CLAUSE

*** APPLICABILITY**

The Purchased Gas Adjustment (PGA) Clause applies to all sales and transportation services provided under all natural gas rate schedules and contracts, including sales to transportation customers. In addition, the Company's Rolla System (consisting of Owensville, Rolla and Salem service areas) has an incremental PGA. For purposes of this clause, the term "cost of gas" shall be as defined under Section I.B.

Any increase or decrease in any PGA factor, including the Actual Cost Adjustment (ACA) factor, resulting from the application of this Rider A, shall be applied prorata to customers' bills for service rendered on and after the effective date of the change. Bills which contain multiple PGA rate changes, including the ACA component of such rate changes, during a customer's billing period shall be prorated between the old and new rates in proportion to the number of days in the customer's billing period that such rates were in effect. For all customers billed under the Company's Residential Service Rate Schedule, the proration of the PGA factors shall be based on the applicable usage-dependent blocked PGA factors.

I. PURCHASED GAS COST ADJUSTMENT

A. Filing of the PGA
The Company shall be allowed to make up to four (4) PGA filings during each calendar year. One such filing will be effective in November of each year, but no more than one PGA filing shall become effective in any two consecutive calendar months unless specifically ordered by the Commission. Such PGA filings shall be made at least ten (10) business days prior to their effective dates.

All PGA filings shall be accompanied by detailed work-papers supporting the filing in an electronic format. Sufficient detail shall be provided so the level of hedging that is used to develop the gas supply commodity charge for the PGA factor can be determined.

B. Contents of PGA Filings - When proposing revisions to its filed PGA factors, the Company shall file PGA tariff sheets with the Commission for approval which consist of:

*Indicates Change.

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*The Regular Purchased Gas Adjustment (RPGA) Factor - A ¢/Ccf factor to reflect the current estimate of the annualized cost of various natural gas services purchased by the Company, including but not limited to firm and interruptible gas supply, gathering services, firm and interruptible transportation service, storage services, gas price volatility mitigation instruments, including but not limited to, financial instruments, and any service which bundles or aggregates these various services. The RPGA factor for the Residential Service Rate will vary depending on customer usage.

The Actual Cost Adjustment (ACA) Factor - A ¢/Ccf factor to reflect the annual reconciliation of actual purchased gas and pipeline service costs with the actual recovery of such costs through the application of this Rider A. Revised ACA factors shall be filed with the PGA filing to be effective in November of each year.

In addition, in any PGA filing, the Company may include a rate adjustment, hereinafter referred to as the "PGA Filing Adjustment Factor (FAF), not to exceed five cents (5.0¢) per Ccf which is designed to refund to, or recover from customers any over or under recoveries of gas costs that have accumulated since the Company's last ACA filing.

**The Residential Service Rate PGA shall be calculated based on customer's usage with the applicable PGA factors as noted in this Schedule.

For the purpose of the computations herein, the cost of gas recoverable through the RPGA and ACA shall include:

a) The cost of any liquid or gaseous hydrocarbons purchased for injection into the gas stream;
b) Gathering, transportation and storage costs related to such liquid or gaseous hydrocarbons;
c) Costs associated with mitigating price volatility in the Company's gas supply portfolio, including but not limited to, financial instruments; and
d) All other costs associated with the purchase, transportation and/or storage of natural gas under a rate, tariff or contract subject to regulation by the Federal Energy Regulatory Commission (FERC) or successor agency including, but not limited to, costs billed as take-or-pay and transition charges.

As used in this Rider, the following definitions shall apply:

"filing month" - the month in which a RPGA or ACA is determined by the Company and filed with the Commission;

* Indicates Change.
** Indicates Addition.

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"base period" - the first twelve (12) of the thirteen (13) months immediately preceding the filing month;

"firm sales" - the sales associated with the Company's Residential, General Service, and Interruptible (Assurance Gas) rate classifications;

II. DETERMINATION OF REGULAR PURCHASED GAS ADJUSTMENT (RPGA)

The RPGA will be determined in accordance with the following:

A. Commodity-Related Charges

The commodity-related charges shall include but not be limited to producer gas supply commodity charges, pipeline transmission and gathering commodity charges, expected costs or cost reductions to be realized for the entire applicable period, storage withdrawals, gas purchases under fixed-price contracts, and the Company's cost of gas price volatility mitigation instruments, including but not limited to, financial instruments, except for call options for which only cost reductions expected to be realized during the months covered by the Company's PGA filing shall be reflected. A commodity-related per unit ¢/Ccf factor shall be determined by dividing commodity-related costs by total sales volumes during the base period.

* One hundred percent (100%) of MoGas Pipeline LLC's, Zone 2 commodity-related costs shall be excluded from the PGA factor determination and included in the incremental PGA factor developed solely for the Company's Rolla System. The divisor for the commodity-related costs shall include the sales volumes of the customers located in the Rolla System. The divisor for the commodity-related costs in the incremental PGA factor shall only include the sales volumes of the customers located in the Rolla System.

B. Demand-Related (Capacity, Reservation, Space, Deliverablity) Charges

For the purpose of the computations herein "demand-related" shall mean gas costs relating to fixed pipeline transportation and storage charges, fixed gas supply charges, and other FERC-authorized fixed charges.

1. Purchased Gas

   For each natural gas supply purchased during the base period multiply the number of units of demand purchased during the base period by their respective charge(s) in effect on the first day of the filing month and divide by firm sales volumes during the base period.

*Indicates Change.

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* 2. Supplemental Gas

For each supplemental (temporary and emergency) gas supply purchased during the base period multiply the number of units purchased each month of the base period by the charge(s) in effect on the first day of the filing month and divide by firm sales volumes during the base period; in the case of a supply initially accounted for as an inventory item, multiply the number of units taken from inventory each month of the base period by the most current inventory unit price for such supply and divide by firm sales volumes during the base period.

3. Purchased Seasonal/Peaking Storage

For each seasonal/peaking type storage service purchased during the base period multiply the units of demand purchased during the base period by their respective charge(s) in effect on the first day of the filing month and divide by firm sales volumes during the base period; if there is no purchase of a specific storage service for the filing month, the last charge(s) paid for such storage service purchased in the base period shall be used.

4. Purchased Balancing Storage

For each balancing type storage service purchased during the base period multiply the units of demand purchased during the base period by their respective charge(s) in effect on the first day of the filing month and divide by total sales volumes during the base period; if there is no purchase of a specific storage service for the filing month, the last charge(s) paid for such storage service purchased in the base period shall be used.

5. Transportation Service

For each separate related transportation service purchased during the base period multiply the number of units of demand purchased during the base period by their respective charge(s) in effect on the first day of the filing month, less 1.25¢ per Ccf times the units of interruptible sales, and divide the resulting balance of demand costs by firm sales volumes during the base period; if there is no purchase of a specific transportation service for the filing month, the last charge(s) paid for such transportation service purchased during the base period shall be used.

* Indicates Reissue.

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* One hundred percent (100%) of MoGas Pipeline LLC's Zone 2 demand-related transportation costs shall be excluded from the PGA factor determination and included in the incremental PGA factor developed solely for the Company's Rolla System. The divisor for the demand-related costs shall include firm sales volumes of the customers located in the Rolla System. The divisor for the demand-related costs in the incremental PGA factor shall only include firm sales volumes of the customers located in the Rolla System.

C. Other Costs of Gas
The total amounts of any costs, different from those referred to above, associated with the supply, transportation and/or storage service of natural gas during the base period under a rate, tariff or contract subject to regulation by the FERC or successor agency, divided by total sales and/or transported volumes, as applicable, during the base period. These costs include, but are not limited to, costs billed as take-or-pay and transition charges.

D. Determination of Class RPGA Factors
The RPGA factor for the firm sales rate classifications of natural gas service shall be calculated by summing the factors determined in Sections II.A. through II.C. above.

The RPGA factor for the interruptible sales rate classification of natural gas service shall be calculated by summing the factors determined in Sections II.A., II.B.4., and II.C. above plus 1.25¢ per Ccf.

The RPGA factor for the transportation rate classification shall be as calculated in Section II.C. above.

*Indicates Change.

Issued Pursuant to the Order of the Mo. P.S.C. in Case No. GR-2010-0363.

DATE OF ISSUE January 21, 2011 DATE EFFECTIVE February 20, 2011

ISSUED BY Warner L. Baxter (Name of Officer) President & CEO (Title) St. Louis, Missouri (Address)

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III. **ACTUAL COST ADJUSTMENT (ACA) ACCOUNT:**

* An ACA account shall be maintained for the Company's service area to which natural gas is transported. In addition, a separate incremental ACA will be maintained for the Company's Rolla System. Said account shall be credited by the amount of any gas costs recovered through the action of this Rider in excess of actual gas costs incurred by the Company, and debited by the amount of any such recovered gas costs which is less than actual gas costs incurred by the Company. Such reconciliation of gas costs incurred and recovered shall be for the twelve (12) month period ending with August of each year, as defined herein.

Such excess or deficiency in total gas cost recovery for each sales rate classification and transportation rate classification shall be determined by a monthly comparison of the actual cost of gas for each month, including the prior period's ACA balance to the gas cost revenues recovered for the corresponding revenue month.

1. Demand-related costs applicable to "Purchased Gas" supply service, "Purchased Seasonal/Peaking Storage" service, "Supplemental Gas" service and "Transportation" of peaking storage service shall be allocated to the firm sales rate classifications.

2. Demand-related costs applicable to pipeline "Transportation" service and "Purchased Balancing Storage" service shall be allocated to firm sales and interruptible sales rate classifications. The interruptible sales customers will be allocated a portion of such "Transportation" demand costs. The balance of demand costs will then be allocated to the firm sales rate classification.

   One hundred percent (100%) of MoGas Pipeline LLC's Zone 2 demand-related transportation costs shall be excluded from the ACA factor determination and included in the incremental ACA factor developed solely for the Company's Rolla System.

*Indicates Change.

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3. Commodity-related costs applicable to "Purchased Gas" supply service, "Purchased Seasonal/Peaking Storage" service, "Purchased Balancing Storage" service and "Transportation" service shall be allocated to each sales rate classification based on the ratio of each such classes' respective actual sales to the sum of total sales for the related revenue month.

* One hundred percent (100%) of MoGas Pipeline LLC's Zone 2 Commodity-related costs shall be excluded from the ACA factor determination and included in the incremental ACA factor developed solely for the Company's Rolla System.

4. "Other Cost of Gas" incurred shall be allocated as applicable to each sales rate classification and transportation rate classification based on the ratio of each such classes' respective actual sales and transported volumes to the sum of such sales and transported volumes for the related revenue month.

5. Any refunds which the Company receives in connection with natural gas services purchased, together with any interest included in such refunds, will be refunded to the Company's applicable customers unless otherwise ordered by the Commission. Such refunds shall be credited to the ACA account in the month received and shall be a part of the overall ACA interest calculation.

   The refund amount will be allocated to each firm sales, interruptible sales and transportation rate classification based upon the same allocation of such costs as calculated during the base period in Section II. herein.

*6. The total gas cost recovered each month shall be equal to the product of the billed Ccf of each rate classification times the sum of the applicable RPGA and ACA factors. The RPGA factor will include, if applicable, the FAF factor.

7. For the ACA period ending with August of each year, the aggregate excess or deficiency in gas cost recovery as described above shall be accumulated to produce a cumulative balance of excess or deficiency of gas cost recovery by sales and transportation rate classifications. ACA factors shall be computed by dividing these cumulative balances by the estimated sales and transportation volumes during the subsequent twelve-month billing period of November - October, for each of the sales and transportation rate classifications. All actual ACA revenue recovered shall be debited or credited to the appropriate monthly balance of the ACA account.

* Indicates Change.

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* The divisor shall include the estimated sales volumes of the customers located in the Rolla System. The divisor for the incremental ACA factor shall only include the estimated sales volumes of the customers located in the Rolla System.

8. For each month during the ACA period and for each month thereafter interest, at a simple rate equal to the prime bank lending rate (as published in the Wall Street Journal on the first business day of the following month), minus two (2) percentage points (but not less than zero) shall be credited to customers for any over-recovery of gas costs or credited to the Company for any under-recovery of gas costs. Interest shall be computed based upon the average of the accumulated beginning and ending monthly ACA account balances. The Company shall maintain detailed work-papers that provide the interest calculation on a monthly basis.

*9. These ACA factors shall be rounded to the nearest 0.01¢/Ccf and applied to billings of each applicable sales and transportation rate classification, commencing in November of each year, and shall remain in effect until superseded by subsequent ACA factors calculated according to this provision.

*Indicates Change.

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10. The Company concurrently with its annual ACA filing, shall:

(a) Provide all documentation necessary to reconcile the Company's actual gas costs with its billed revenue. Provide all documentation of all natural gas purchases (commodity, demand or reservation charges or other charges) to support that the claimed costs are properly attributed to the ACA period and that the pipelines, natural gas suppliers, and any other vendors have charged or invoiced the Company for the volumes nominated and received at the proper rates.

(b) Provide all documentation to support decisions made at the time of the Company's natural gas supply planning, capacity planning, purchasing practices, and operating decisions for the ACA period.

(c) Provide documentation of the financial impact on customers of the Company's decisions regarding its gas supply, transportation and storage contracts.

(d) Provide copies of all contracts in effect at any time during the ACA period. Include copies of all contracts related to the procurement of natural gas including but not limited to transportation, storage, and supply contracts and all schedules and exhibits and letter agreements related to gas procurement, gas costs and/or gas constraints.

* (e) Provide all documentation to support the impact of discontinuing the transition mechanism.

** (f) The documentation provided shall include fully functioning electronic spreadsheets. The term "document(s)" includes publication of any format, workpapers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data, recordings, transcriptions and printed, typed electronic or written materials of every kind in Company's possession, custody or control or within Company's knowledge.

*Indicates Addition.
**Indicates Reissue.

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PGA Statement

The PGAs (in ¢/Ccf) to be applied to the Company's basic rate schedules on and after the effective date of this tariff for gas sold or delivered to customers in this portion of the Company's service area, are as follows:

All Service Areas Other Than the Rolla System:

	RPGA	ACA	TOTAL PGA
Residential			
0 - 30 Ccf	5.42¢/Ccf	-6.64¢/Ccf	-1.22¢/Ccf
All Over 30 Ccf	84.94¢/Ccf	-6.64¢/Ccf	78.30¢/Ccf
General Service	52.64¢/Ccf	-6.64¢/Ccf	46.00¢/Ccf
Interruptible Service	33.08¢/Ccf	-1.21¢/Ccf	31.87¢/Ccf
Transportation Service	0.00¢/Ccf	0.00¢/Ccf	0.00¢/Ccf

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PGA Statement

The PGAs (in ¢/Ccf) to be applied to the Company's basic rate schedules on and after the effective date of this tariff for gas sold or delivered to customers in this portion of the Company's service area, are as follows:

Rolla System Service Area:

	RPGA (a)	Incremental RPGA (b)	ACA (c)	PGA (a)+(b)+(c)	Incremental ACA
Residential					
0 - 30 Ccf	5.42¢/Ccf	21.29¢/Ccf	-6.64¢/Ccf	20.07¢/Ccf	-2.29¢/Ccf
All Over 30 Ccf	84.94¢/Ccf	21.29¢/Ccf	-6.64¢/Ccf	99.59¢/Ccf	-2.29¢/Ccf
General Service	52.64¢/Ccf	21.29¢/Ccf	-6.64¢/Ccf	67.29¢/Ccf	-2.29¢/Ccf
Interruptible Service	33.08¢/Ccf	1.25¢/Ccf	-1.21¢/Ccf	33.12¢/Ccf	0.00¢/Ccf
Transportation Service	0.00¢/Ccf	0.00¢/Ccf	0.00¢/Ccf	0.00¢/Ccf	0.00¢/Ccf

DATE OF ISSUE October 18, 2018 DATE EFFECTIVE November 1, 2018

ISSUED BY Michael Moehn, President, St. Louis, Missouri
Name of Officer Title Address

Terms and Conditions

(Continued From Sheet No. 50.1)

* **Requested Authorized Use.**
Requested Authorized Use shall be available only upon prior request by the Customer and upon authorization by the Company. Authorization shall be granted only on a daily basis in volumes not to exceed the Maximum Daily Contract Quantity. Requested Authorized Use gas shall be accounted for as the first gas delivered on any day for which it has been authorized. If the volume of such Requested Authorized Use is greater than the Customer's usage on any day, the difference shall be accounted for as Customer-owned gas in storage. Requested Authorized Use is not applicable to Rider 25 customers.

Authorization shall be granted only upon determination by the Company that availability of Requested Authorized Use gas will not adversely affect the Company's operations or its cost of gas supplies.

Authorized Use.
Authorized Use in a billing period shall be the sum of Daily Authorized Use.

Daily Authorized Use shall be usage on any day, other than a Critical Day or an OFO Shortage Day, in excess of the sum of: (a) Requested Authorized Use; (b) the volume of Customer-owned gas delivered to the Company less unaccounted-for gas; (c) Customer storage withdrawals; and (d) the contracted for quantity of Firm Backup Service.

Daily Authorized Use shall also be usage on any Critical Day or an OFO Shortage Day of any Company-owned gas within the limitations of the Storage Banking Service. Authorized Use on any Critical Day or an OFO Shortage Day outside the limitations of the Storage Banking Service is not available.

Unauthorized Use.
Unauthorized Use in a billing period shall be the sum of Daily Unauthorized Use.

Daily Unauthorized Use shall be usage on any Critical Day in excess of the sum of: (a) Requested Authorized Use; (b) the volume of Customer-owned gas delivered to the Company less unaccounted for gas; (c) storage withdrawals as limited by SBS; (d) the contracted for quantity of Firm Backup Service; and (e) Authorized Use within the limitations of the SBS.

Payment of the additional charge for Unauthorized Use shall not, under any circumstances, give the Customer the right to Unauthorized Use, nor shall such payment exclude or limit the Company's right to discontinue service to the Customer for Unauthorized Use.

* Unauthorized Use which causes interference with the Company's operations or service to any other Customer of the Company shall make the Customer subject to termination of gas service hereunder upon one (1) hour notice from the Company.

(Continued On Sheet No. 52)

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