MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT

COST OF SERVICE

UNION ELECTRIC COMPANY, d/b/a AMEREN MISSOURI

GENERAL RATE CASE

CASE NO. GR-2019-0077

Jefferson City, Missouri
April 2019

** Denotes Confidential Information **

TABLE OF CONTENTS OF

COST OF SERVICE REPORT OF

UNION ELECTRIC COMPANY, d/b/a AMEREN MISSOURI

Case No. GR-2019-0077

STAFF'S COST OF SERVICE REPORT OF

UNION ELECTRIC COMPANY,
d/b/a AMEREN MISSOURI

Case No. GR-2019-0077

I. Executive Summary – Background and Staff Recommendations

A. Background

On December 3, 2018, Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri") filed a minimum filing letter, supporting direct testimony and certain tariff sheets consisting of gas rate schedules designed to increase its gas base rate annual revenues by approximately $4.26 million exclusive of applicable gross receipts, sales, franchise or occupational fees or taxes, based on a 10.3% return on equity. According to Ameren Missouri, the rate increase was driven by several factors, including rate base additions since the last gas general rate case (Case No. GR-2010-0363) and depreciation rate changes. Other drivers for the filing of this general rate case include Ameren Missouri's desire to begin flowing back the benefit of the federal income tax decrease to customers and the desire to restart its Infrastructure System Replacement Surcharge ("ISRS").[1]

Ameren Missouri filed its rate case using a test year twelve-month period ending June 30, 2018, and proposed adjustments to its case reflecting anticipated changes through the true-up period of May 31, 2019, including those items listed in *Staff's Motion to Establish Test Year and True-Up Cutoff Date*. These dates were adopted by the Commission in its *Order Granting Staff's Motion for Test Year and True-Up Cutoff Date*.

Ameren Missouri also filed a Motion for Approval of Interim Rate Reduction and for Expedited Treatment requesting an order approving tariff sheets implementing interim rates that reflect the effect of the Tax Cuts and Jobs Act of 2017 ("TCJA"). The TCJA, which took effect on January 1, 2018, reduced the federal income tax rate applicable to corporations from 35% to 21%. The increase in general rates reflects the reduced federal income tax rate in the annual revenue requirement, but since the request is subject to an 11-month process, Ameren Missouri expressed its desire to flow back the benefits of the TCJA reductions

---

[1] GR-2019-0077 Minimum Filing Requirements letter.

(approximately $1.05 million on an annualized basis) as soon as practical while new rates are litigated ("interim period").

On December 14, 2018, Ameren Missouri and Staff entered into a Stipulation and Agreement ("TCJA Stipulation"). Instead of reducing rates by the approximately $1.05 million (on an annualized basis) as proposed by Ameren Missouri, the Signatories to the TCJA Stipulation agreed to reduce rates by $1.94 million (on an annualized basis) during the interim period. The tariff sheets attached to the TCJA Stipulation as Attachment A, were to be filed by Ameren Missouri with an effective date of January 2, 2019. The Signatories to the TCJA Stipulation also agreed to establishment of a tracker to defer any amounts of plant-related excess accumulated deferred income taxes ("Excess ADIT") that is above or below the amount set in rates. The proposed tracker is consistent with a similar mechanism approved in File No. ER-2018-0362 for Ameren Missouri's electric operations. The Commission issued an Order Approving [TCJA] Stipulation and Agreement on December 22, 2018.

Ameren Missouri provides natural gas service to 131,040 customers in Missouri[2] and has service territory in central, eastern, and southeastern Missouri. Ameren Missouri last sought a general change in its natural gas retail rates when it filed a request for a $11.9 million annual increase on June 11, 2010 in Case No. GR-2010-0363. As a result of the Commission Order approving a unanimous stipulation and agreement filed by the parties on January 4, 2011 in that proceeding, Ameren Missouri was granted an annual rate increase of $9 million, February 1, 2011.

Staff Expert/Witness: Natelle Dietrich

B. Staff's Revenue Requirement Recommendation

As it pertains to the general rates in the instant case, Staff has conducted a review and investigation of all cost of service components (capital structure and return on rate base, rate base, operating revenues and expenses) that comprise the cost of service calculation and revenue requirement recommendation for Ameren Missouri's gas operations.

[2] According to GR-2019-0077 Minimum Filing Requirements, Schedule 3, page 1.

Staff's recommended revenue requirement for Ameren Missouri based upon a test year of twelve months ending June 30, 2018, including true-up estimates through May 31, 2019 is $1,244,206, which represents an offset to the current $1,935,368 interim rate reduction at Staff's recommended 9.5% mid-point return on equity as more specifically explained below by Staff witness Lisa M. Ferguson. The combination of the $1,935,368 interim rate reduction previously put into effect and Staff's recommended revenue requirement in this case of $1,244,206 would result in a net overall permanent reduction in rates of $691,162 to customers on an annual basis. The impact of Staff's recommended revenue requirement on each of Ameren Missouri's rate classes will be discussed in Staff's rate design and class cost of service report, to be filed May 3, 2019.

Staff Expert/Witness: Natelle Dietrich

C. Staff's Gross Revenue Requirement Recommendation and Impact on Total Retail Rate Revenue

Staff's recommended gross revenue requirement of $1,244,206 would represent an increase in Ameren Missouri's total non-gas retail rate revenues on an annual basis.[3] This increase pertains to Ameren Missouri's margin revenues only and does not include revenues collected through the Purchased Gas Adjustment rate mechanism. It is important to note, that Staff's general rate increase recommendation offsets the approximate $1.94 million (on an annualized basis[4]) interim natural gas rate reduction that is currently in effect as a result of resolution to address the impacts of the TCJA effective on January 2, 2019.

Once permanent rates ordered by the Commission in this rate proceeding go into effect, the interim natural gas rate reduction associated with the TCJA will be reset to zero and the approximate $1.94 million interim rate reduction will then be part of Ameren Missouri's general retail rates. Staff's $1,244,206 gross revenue requirement or

[3] Please refer to Staff's Accounting Schedules filing, Schedule 1, Line 13 for Gross Revenue Requirement of $1,244,207 at Staff's midpoint rate of return recommendation of 7.207%. Staff's recommendation is a $691,162 reduction of permanent rates currently in effect.

[4] On January 23, 2019, the Commission issued an *Order Adopting Procedural Schedule* that ordered a November 2, 2019 Operation of Law date for permanent rates in this rate proceeding. If permanent rates were to go into effect on November 2, 2019, or earlier due to Commission approval of a global settlement, then the actual interim rate reduction would total to some amount less than $1.94 million, due to the fact that interim rate reduction would be in effect for a period less than one year.

incremental rate increase from current interim rates in this rate case, takes into account the interim natural gas rate reduction (on an annualized basis) and is calculated as follows: the difference between the $1,935,368 million of interim natural gas rate reduction and Staff's recommended $691,162 reduction to permanent rates[5]. Stated another way Staff's recommendation reflects a proposed $691,162 **reduction** to the level of **permanent rates** currently in effect.

Staff Witness/Expert: Lisa M. Ferguson

D. Recommendation of Future Filing Requirement

As part of this proceeding, Staff reviewed the Ameren Board of Directors ("BOD") meeting minutes and related materials and presentations. Specifically, during the regular meeting of the Ameren Board of Directors on ** ______________ **, there was a discussion regarding ** ____

- ____
- ____
- ____
- ____
- ____
- ____
- ____ **

[5] Please refer to Staff's Accounting Schedules filing, Schedule 1, Line 10 for Revenue Requirement of ($691,162) and Line 12 for Interim Natural Gas Rate Reduction of approximately $1.94 million.

During this same discussion, the Ameren Board also discussed ** ________ ________ ________

- ________
  - ________
  - ________
  - ________ **

Staff Recommendation For Future Concurrent Electric and Natural Gas Rate Case Filing

During the course of its audit of Ameren Missouri's natural gas books and records, Staff discovered three issues that would be appropriate to address within the context of a concurrent natural gas rate case filing that corresponds with ** ________ ________[6] ________ ________ **

Specifically these three issues are briefly summarized below:

1. Ameren Missouri has potential to ** ________ ________ ________ ** As part of this rate case and described later in this Report, Staff witness Jason Kunst recommends ** ________ ________ ________ ________ ** In addition, Staff witness Kunst also

---

[6] ** ________ **

recommends that Ameren Missouri be required to file a concurrent electric and natural gas rate case ** ________ ** For a complete discussion of this issue please refer to Section VI.E.1. of this Report regarding property tax expense.

2. Ameren Missouri has discovered software allocation issues for existing software items that are jointly used for electric and gas operations that have not been allocated properly in past Ameren Missouri electric rate cases. Later in this Report, Staff witness Kunst describes the software allocation issues. Staff witness Kunst also recommends that ** ________ ** Staff recommends this two-step approach for this issue in order to prevent a double recovery situation that would result if Ameren Missouri's proposal contained in the direct testimony of Ameren Missouri witness Laura M. Moore were accepted by the Commission. The software allocation double recovery solution at issue, as filed in Ameren Missouri's direct testimony, is worth approximately ** ________ ** of Ameren Missouri's approximate $4.3 million overall natural gas rate increase request. Staff recommends addressing the software allocation issue beginning in Ameren Missouri's next electric rate case ** ________ ** in order to remove gas related portions of software costs from electric rates. ** ________

[7] ** For a complete discussion of this issue please refer to Section V.C. of this Report regarding software allocation.

3. A reduction in overall Missouri corporate income tax rates will go into effect on January 1, 2020. Staff estimates that this state corporate income tax rate reduction may reduce Ameren Missouri's natural gas cost of service calculation by approximately $860,000 on an annual basis. In Staff's opinion, it would be appropriate to reflect this reduced tax rate as part of a future concurrent electric and natural gas rate case filing as previously described.

These three issues provide support for Staff's recommendation that the Commission require Ameren Missouri to ** ** Staff's recommendation, if ordered by this Commission, will provide an opportunity for ** ** It will also, allow for an appropriate remedy of the software allocation issue without the need for a double recovery tracking mechanism. Finally, the Commission could timely address the reduction in Ameren Missouri's corporate income tax rates and reflect that reduction in Missouri natural gas rates within a reasonable period of time.

Staff Expert/Witness: Lisa M. Ferguson

[7] Staff recommends the same conditions as stated in footnote 6 above. ** **

Staff Analysis

II. Test Year/True-Up Period

Staff's revenue requirement as presented in its Direct Accounting Schedules includes the expected changes for certain major items within the true-up period, May 31, 2019. For example, the plant and depreciation reserve balances have been adjusted to reflect the anticipated additions through the true-up cutoff of May 31, 2019. Staff plans to review and reflect actual changes to the value of this item along with other additional components of the cost of service during its true-up audit. Staff is not adopting the value of the items quantified as estimated inclusions for the purpose of setting Ameren Missouri's gas rates, but Staff included these items as placeholders, pending completion of Staff's true-up audit. The true-up information to be filed is described in *Staff's Motion to Establish Test Year and True-Up Cutoff Date* that was filed on January 29, 2019 and adopted by the Commission in its order issued on February 19, 2019.

Staff Expert/Witness: Lisa M. Ferguson

III. Rate of Return (Capital Structure, Cost of Debt, Cost of Equity)

A. Summary

Staff estimated the cost of common equity ("COE") for Ameren Missouri natural gas distribution assets by applying well-respected and widely-used methodologies to data derived from a carefully-assembled proxy group of comparable companies in the gas utility industry. Staff compared a current COE estimate for the gas proxy group to a COE estimate for the same group using data from the timeframe during Spire Missouri's last rate cases[8] to provide a relative estimate of a reasonable allowed ROE for Ameren Missouri's current rate case. Staff weighs the Commission's most recent decision in the Spire Missouri cases to maintain consistency and predictability with Commission decisions, and to recommend an ROE that fairly balances industry risks with historically allowed ROEs. Staff's Discounted Cash Flow ("DCF"), Multi-stage DCF, and Capital Asset Pricing Model ("CAPM") analyses for the

[8] ***In the matter of Spire Missouri (Laclede and MGE Divisions)***, Case Nos. GR-2017-0215 & GR-2017-0216 (***Amended Report & Order,*** issued March 7, 2018) at p.28-45.

gas utility proxy group show the COE decreased since the Spire Missouri rate cases. Ameren Missouri's allowed ROE should be based at the mid-point of Staff's recommended allowed ROE range of 9.00% to 10.00%, with a point estimate of 9.50%. This results in a ROR range of 6.96% to 7.46%, with a point estimate of 7.21%. Staff's results are shown in the following table:

**Recommended Allowed Rate of Return as of June 30, 2018
for
Ameren Missouri**

			Allowed Rate of Return Common Equity Return of:		
Capital Component	Percentage of Capital	Embedded Cost	**9.00%**	**9.50%**	**10.00%**
Long-Term Debt	48.99%	4.93%	2.42%	2.42%	2.42%
Preferred Stock	1.01%	4.18%	0.04%	0.04%	0.04%
Common Equity	50.00%		4.50%	4.75%	5.00%
Total	**100.00%**		**6.96%**	**7.21%**	**7.46%**

The details of Staff's analysis and recommendations are presented in Schedules JS-1 – JS-13 in Appendix 2.

B. Analytical Parameters

The determination of a fair rate of return is guided by principles of economic and financial theory and by certain minimum Constitutional standards. Investor-owned public utilities such as Ameren Missouri are private property that the state may not confiscate without appropriate compensation. The United States Supreme Court has described the minimum characteristics of a Constitutionally-acceptable rate of return in two frequently-cited cases:[9] ***Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia***, and ***Federal Power Commission v. Hope Natural Gas Co***.

[9] ***Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*****,** 262 U.S. 679, *43 S.Ct. 675, 67 L.Ed. 1176* (1923); ***Federal Power Commission v. Hope Natural Gas Co.*****,** 320 U.S. 591, 64 S.Ct. 281, 88 L.Ed. 333 (1943).

From these two decisions, Staff derives and applies the following principles to guide it in recommending a fair and reasonable ROR:

1. A return consistent with returns of investments of comparable risk;

2. A return sufficient to assure confidence in the utility's financial integrity; and

3. A return that allows the utility to attract capital.

Embodied in these three principles is the economic theory of the opportunity cost of investment. The opportunity cost of investment is the next best return that investors forego in order to invest in similar risk investment opportunities that vary depending on market and business conditions.

Methodologies of financial analysis have advanced greatly since the ***Bluefield*** and ***Hope*** decisions.[10] Additionally, today's utilities compete for capital in a global market rather than a local market. Nonetheless, the parameters defined in those cases are readily met using current methods and theory. The principle of commensurate return is based on the concept of risk. Financial theory holds that the return an investor may expect is reflective of the degree of risk inherent in the investment, risk being a measure of the likelihood an investment will not perform as expected. Any line of business carries with it its own risks and it follows, therefore, that the return Ameren Missouri shareholders may expect is equal to that required for comparable-risk utility companies.

The COE is a market-constructed artifact; meanwhile, Commission-authorized ROEs are regulatory-constructed artifacts. The COE, theoretically, is the minimum return investors are willing to accept for their investment in a company compared to returns on other available investments. An authorized ROE is an adjudicated return granted to monopoly industries extending them the opportunity to earn fair and reasonable compensation for their investments. Staff intentionally differentiates between the market-determined COE and the allowed ROE because financial officers and stock investment analysts use market-determined

[10] Neither the Discounted Cash Flow ("DCF") nor the Capital Asset Pricing Model ("CAPM") methods were in use when those decisions were issued.

COEs, which are much lower than average allowed ROEs, when making capital allocation decisions and valuing utility stocks.

Staff relied on analysis of a comparable group of companies to estimate the COE for Ameren Missouri, applying a DCF model, a Multi-stage DCF model, and a CAPM to the comparable group of companies. Properly used and applied in appropriate circumstances, these models provide accurate estimates of utilities' COE. It is well-accepted economic theory that a company that earns its cost of capital will be able to maintain its financial integrity. Commission authorized ROEs focus on industry authorized ROEs to facilitate capital attraction. As such, Staff's recommended allowed ROE for Ameren Missouri is higher than its estimate of the market-driven COE.

C. Current Economic and Capital Market Conditions

Determining whether a cost of capital estimate is fair and reasonable requires a good understanding of economic and capital market conditions, with the former having a significant impact on the latter. With this in mind, Staff emphasizes that an estimate of a utility's COE should pass the "common sense" test when considering broader economic and capital market conditions.

1. <u>Economic Conditions</u>

Economic dynamics are important in setting an allowed ROE because they help assess the trajectory of FED Funds Rates and the path of longer-term interest rates. Interest rates determine utilities' debt costs, an input in their overall cost of capital. The interplay of interest rates and their expected effects on capital markets further assists in evaluating how utility stocks behave relative to other assets. Utility stock prices relative to other assets affect their COE, another component in the cost of capital. Understanding these mechanics in an evolving economy helps guide a decision as to what a proper ROE should be going forward.

Real GDP growth in 2017 and 2018 increased by 2.2% and 2.9%, respectively. The Federal Reserve ("FED") projects real GDP growth in 2019 of 2.0%. Long-run projections for real GDP range from 1.7% - 2.2%. Inflation, measured by Personal Consumption Expenditures ("PCE") for 2017 and 2018 averaged 1.6% and 1.9%, respectively. Long-term, inflation should be expected to be near the FED's 2% target. The Federal Open Market Committee ("FOMC") has initiated nine 25-basis point rate increases since December 2015, when it began increasing the FED target Funds Rate ("Funds Rate"). FOMC projections show that the FED will likely leave the Funds Rate between 2.25% - 2.50% for the remainder of 2019.

An important consideration in assessing the relationship between short-term and long-term Treasury rates is the amount of U.S. Treasuries held by the FED. According to the March 28, 2019, Federal Reserve statistical release, H.4.1, the FED held approximately $2.175 trillion in U.S. Treasury notes and bonds, composing approximately 54% of FED assets. On March 20, 2019, during the FOMC press conference, FED Chairman, Jerome Powell, stated that the size of the balance sheet will approximate 17% of GDP and the asset allocation will consist primarily of Treasury securities. The second estimate for fourth quarter 2018 GDP estimated GDP at $20.89 trillion. That places the FED's holdings of Treasury securities at approximately 10.5% of GDP. To accomplish its stated objective for size and asset allocation of a normalized balance sheet, the FED will need to hold significantly more Treasury securities. To accomplish its objective, the FED stated it will begin to slow its balance sheet unwinding in May 2019, and conclude unwinding Treasury securities in September 2019. To focus on an asset allocation consisting primarily of Treasury securities, the FED stated that in October 2019, it will begin reinvesting up to $20 billion per month of the proceeds received from agency debt and mortgage backed securities into Treasury securities "across a range of maturities to roughly match the maturity composition of Treasury securities outstanding."[11] This will have the effect of increasing demand for Treasuries, keeping downward pressure on yields.

Another important factor to consider in the paradigm of long-term and short-term interest rate relationships is foreign central bank ("CB") policies. Research by economists at the Federal Reserve Bank of Chicago finds that "10-year interest rates display a positive and significant response to foreign CBs announcements."[12] Low interest rates offered by other governments, while the U.S. has some of the highest yields in the developed world, increases

[11] Federal Reserve Board of Governors, *Balance Sheet Normalization Principles and Plans*, March 20, 2019.

[12] Anene, D., D'Amico, S., *A tale of Four Tails: Inflation, the Policy Rate, Longer-Term Rates, and Stock Prices.* Federal Reserve Bank of Chicago, December 2017.

foreign demand for U.S. Treasuries. Low yields in other developed markets stem from low policy rates and large balance sheets at other central banks.

The March 15, 2019, Statement on Monetary Policy at the Bank of Japan ("BOJ") shows that the BOJ intends to continue to keep interest rates low. With regard to short-term policy interest rates, the BOJ "will apply a negative interest rate of minus 0.1 percent to the Policy-Rate Balances in current accounts held by financial institutions at the bank." [13] With regard to longer term interest rates, the BOJ "will purchase Japanese government bonds (JGBs) so that 10-year JGB yields will remain at around zero percent."[14]

In a similar note, a March 7, 2019, European Central Bank ("ECB") Monetary policy decisions press release shows that the "interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 0.00%, 0.25% and -0.40% respectively at least through the end of 2019, and in any case for as long as necessary."[15] Also, the ECB "intends to continue reinvesting, in full, the principle payments from maturing securities purchased under the asset purchase program for an extended period of time."[16] Lacking indications of higher interest rates abroad, continued downward pressure on U.S. interest rates will persist.

The relationship between trend GDP growth and estimates of the natural interest rate demarcates approximately when the Funds Rate shifts from accommodative to restrictive, with respect to economic output.[17] Economists at the San Francisco FED estimate a natural interest rate equal to the trend growth rate of output, at the time 2.2%.[18] Given the FOMC's

---

[13] Bank of Japan, *Statement on Monetary Policy*, March 15, 2019, https://www.boj.or.jp/en/announcements/release_2019/k190315a.pdf

[14] *Ibid.*

[15] European Central Bank., *Monetary policy decisions,* March 7, 2019, https://www.ecb.europa.eu/press/pr/date/2019/html/ecb.mp190307~7d8a9d2665.en.html

[16] *Ibid.*

[17] The natural interest rate is the real short-term interest rate that allows for GDP to grow at its trend rate, while allowing for stable inflation. Short-term rates below the natural rate are thought of as expansionary; meanwhile, short-term rates above the natural rate are thought of as contractionary.

[18] Holston, K., Laubach, T., & Williams, C., (2016). *Measuring the Natural Rate of Interest: International Trends and Determinants*. Finance and Economics Discussion Series 2016-073. Washington: Board of Governors of the Federal Reserve System, https://www federalreserve.gov/econresdata/feds/2016/files/2016073pap.pdf

Summary of Economic Projections, FOMC members currently believe the natural rate to be between 2.5% – 3.5%.[19] Estimates of the natural interest rate imply that the FOMC is near the neutral rate.

Slowing economic growth in the U.S. and abroad signal the Funds Rate encountering resistance. Similarly, accommodative support from the FED at the longer end of the yield curve, accompanied by a low-yield global environment, indicates maintained downward pressure on longer-term Treasuries, likely leading to sustained lower utility COE levels.

2. Capital Market Conditions

a. Utility Debt Markets

Schedule JS-4-4 shows the average yields for Moody's public utility bonds and 30 year U.S. Treasury bonds, and Schedule JS-4-5 shows spreads and the long-run average spread between yields on public utility bonds and 30-year U.S. Treasury bonds. Since the end of the Great Recession, public utility bonds have had a 0.95 correlation with 30-year Treasuries and a 0.82 correlation with 10-year Treasuries.

Average public utility bond yields rose throughout most of 2018, but began declining in late 2018 into 2019. The increase in public utility bond yield averages in 2018 is explained by their high correlation to 30-year Treasuries. For example, average utility bond yields increased approximately 25 basis points from an average of 4.07% in 2017 to an average of 4.32% in 2018. Driving the increase, average 30-year Treasury bond yields increased approximately 21 basis points from an average of 2.90% in 2017 to an average of 3.11% in 2018. Average spreads between utility bond yields and 30-year Treasuries rose 6 basis points, from 1.17% in 2017 to 1.23% in 2018. As can be seen on Schedule JS-4-5, spreads between utility bonds and 30-year Treasury bonds were below their long run average in 2017, began rising in 2018, and have been near their long run average the first few months of 2019.

S&P rates Ameren's ("AEE") and all its subsidiaries' senior unsecured debt 'BBB+'. Similarly, Moody's rates both AEE's and Ameren Missouri's senior unsecured debt 'Baa1'. However, Ameren Missouri's secured debt is assigned an "A" rating by S&P and an

[19] Federal Open Market Committee. *Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents under their individual assessments of projected appropriate monetary policy, March 2019*. March 20, 2019.

equivalent "A2" rating by Moody's. Schedule JS-4-7 shows the average yields on 'A'-rated utility bonds compared to 30-year U.S. Treasury bonds. Average 'A'-rated utility bond yields for 2017 and 2018 were 4.00% and 4.25%, respectively. Average spreads between 'A'-rated utility bonds and 30-year Treasuries for 2017 and 2018 were 1.10% and 1.14%, respectively. The historical average spread between 'A'-rated utility bonds and 30-year U.S. Treasuries is 1.28%. As can be seen on Schedule JS-4-8, spreads between 'A' -rated utility bonds and 30-year U.S. Treasury bonds were below their long run average in 2017, began rising in 2018, and have been near their long run historic average the first few months of 2019.

To the extent Missouri's utilities or their parent companies have outstanding bonds traded in the secondary markets, it is relevant to analyze this company-specific data to determine a reasonable estimate of the cost of capital, and a reasonable allowed ROE. Although this company-specific debt yield information is helpful because it informs the Commission as to the yield investors are currently requiring on Missouri utilities' and/or their parent companies' debt capital, Staff notes that some of the bonds are thinly traded, if they are traded at all. Additionally, the terms of some of these bonds may differ, such as the time to maturity, secured/unsecured, callable or not, date it is callable, etc. Staff specifically analyzed bonds that had maturities of approximately 20 years or greater and those that had at least four trades during April, May, and June 2017 (the general period evaluated by Staff in the Spire Missouri rate cases) and four trades for the three months through March 31, 2019 (the period analyzed in the current case).

Ameren Missouri had two bonds with a maturity of 20 years or more that met Staff's trading criteria.[20] These bonds mature in 2042 and 2045, have 'A' ratings from S&P, an 'A2' ratings from Moody's, are callable, and are secured. During the three months ended June 30, 2017, the bonds traded at an average yield-to-maturity of 3.75% and 3.76%, respectively. During the three months through March 31, 2019, the bonds traded at an average yield-to-maturity of 3.91% and 3.98%, respectively. Data related to Ameren Missouri's bond yields reflect a pattern similar to those occurring between public utility bonds and Treasury bonds.

[20] Symbol AEE3899397, CUSIP 906548CJ9 and Symbol AEE4229257, CUSIP 906548CL4.

Unfortunately, no Spire Missouri outstanding bonds met the liquidity criteria necessary for comparative purposes. However, assessing Spire Missouri's credit ratings and reports gives insight to risk profiles between the utilities. Substantially all of Spire Missouri's debt is secured debt. S&P rates both Spire Missouri's and Ameren Missouri's secured debt 'A'. Moody's rates Spire Missouri's secured debt 'A1', one notch above its rating for Ameren Missouri's secured debt, 'A2'.

Broader market data shows long-term borrowing costs increased throughout most of 2018 before plateauing and retreating late in the year. Data on Ameren Missouri's bonds shows that Ameren's borrowing costs displayed similar behavior. Comparing Ameren Missouri's credit ratings to Spire's suggests that the two companies share similar risk, at least according to S&P. However, Staff notes that generally gas utilities have different risk profiles than electric utilities, allowing them to support more debt. For example, S&P generally uses medial volatility benchmarks when assessing electric utilities credit metrics, such as AEE's; meanwhile, it uses low volatility benchmarks when assessing gas utilities credit metrics, such as Spire's. If Ameren Missouri were an all gas company and its ratings were based on the low volatility tables, its financial risk profile would move from "Intermediate" to "Modest," likely improving its credit rating.

Looking forward, economic data point to sustained low long-term interest rates. Considering a slowing economy, pressure on the Funds Rate and longer-term interest rates, and the passing of credit risks from tax reform, 9.50% is a fair and reasonable allowed ROE. For further evidence of such, recall that the average ROE awarded for fully litigated gas rate cases in 2018 was 9.57%.[21]

b. <u>Utility Equity Markets</u>

Sustained low interest rates have allowed utility stocks to outperform the S&P 500 over the last three years. Staff's proxy group outperformed the S&P 500 in 2016, with a total return of 26.60% compared to 13.67%, respectively. Staff's proxy group lagged the S&P 500 in total returns in 2017, with a total return of 15.11% compared to 21.83%, respectively. Staff's proxy group again outperformed the S&P 500 in 2018, with total returns of 7.82%

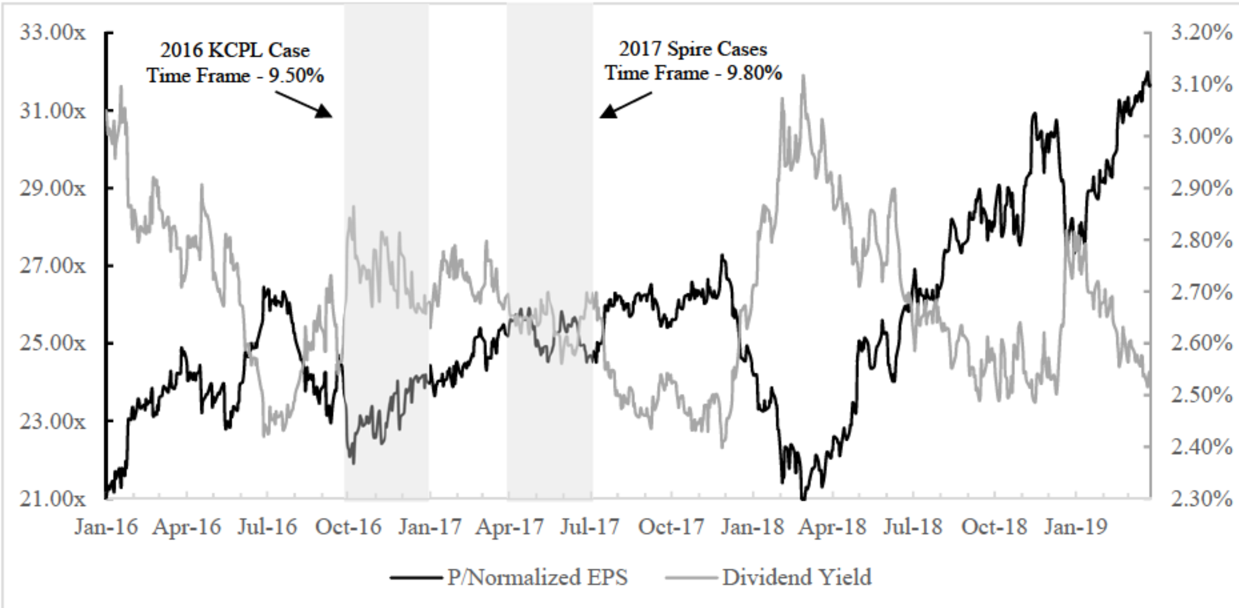
[21] Market Intelligence

compared to -5.18%, respectively. Total returns for Staff's proxy group compared to the S&P 500, from January 2016 to December 2018 were 55.33% compared to 32.42%, respectively. Comparing total returns of Staff's proxy group to total returns of the S&P 500 shows that utility stock returns, at least those in Staff's proxy group, have been more than sufficient to compensate investors, particularly when taking into account that utility stocks have been able to generate higher total returns at lower risk.

The utility industry's outperformance of the S&P 500 is largely because of high valuation levels of utility stocks due to low long-term interest rates, i.e., a low cost of capital. Staff has already elaborated on the interest rate environment. Staff will focus on comparing and contrasting dividend yields and Price to Earnings ("P/E") ratios of the gas proxy group for the period since the spring of 2017 to describe how general costs of capital have changed, and assess an appropriate ROE for Ameren Missouri.

As Staff has explained in recent utility rate case testimonies, the biggest cause for high utility stock P/E ratios has been low long-term interest rates, which resulted in low utility dividend yields. For the three-months ended June, 2017, the average dividend yield and average P/Normalized EPS ratio for Staff's gas utility proxy group were 2.64% and 25.56x, respectively. For the three-month period ending March 31, 2019, average dividend yield and average P/Normalized EPS ratio were 2.65% and 29.90x, respectively. The chart below shows average dividend yields and average P/Normalized EPS from January, 2016, to March, 2019.

continued on next page



Source: S&P Capital IQ

Debt markets show that debt costs have come down in 2019 compared to 2018. Looking forward, markets are pointing to stable debt costs. Equity markets show that equity costs are lower than they were at the start of Spire Missouri's rate cases. Economic and capital market conditions support the notion that utilities' costs of capital will be lower for longer.

D. Ameren Missouri Operations

The following excerpts from AEE's Form 10-K filing with the United States Securities and Exchange Commission ("SEC") for the 2018 calendar year provides a good description of AEE's current organizational structure and Ameren Missouri's current business operations:

> Ameren, formed in 1997 and headquartered in St. Louis, Missouri, is a public utility holding company whose primary assets are its equity interests in its subsidiaries. Ameren's subsidiaries are separate, independent legal entities with separate businesses, assets, and liabilities. Dividends on Ameren's common stock and the payment of expenses by Ameren depend on distributions made to it by its subsidiaries... Ameren has four segments: Ameren Missouri, Ameren Illinois Electric Distribution, Ameren Illinois Natural Gas, and Ameren Transmission. The Ameren Missouri segment includes all of the

> operations of Ameren Missouri. Ameren Illinois Electric Distribution consists of the electric distribution business of Ameren Illinois. Ameren Illinois Natural Gas consists of the natural gas business of Ameren Illinois. Ameren Transmission primarily consists of the aggregated electric transmission businesses of Ameren Illinois and ATXI… Ameren Missouri operates a rate-regulated electric generation, transmission, and distribution business and a rate-regulated natural gas distribution business in Missouri. Ameren Illinois operates rate-regulated electric transmission, electric distribution, and natural gas distribution businesses in Illinois. ATXI operates a FERC rate-regulated electric transmission business.[22]

E. Rate of Return

In order to arrive at Staff's recommended ROR, Staff examined (1) an appropriate ratemaking capital structure, (2) the Ameren Missouri's embedded cost of debt, and (3) an evaluation of a fair and reasonable allowed ROE.

1. Capital Structure

In past Ameren Missouri gas cases, Staff recommended the Commission use Ameren Missouri's operating capital structure for its ratemaking capital structure because it was consistent with how AEE holding company was capitalized; consequently, the use of either capital structure would have produced similar revenue requirements. However, recent use of AEE holding company debt, which has caused AEE to be more leveraged, has caused Staff to change its position. Schedule JS-6-2 shows the diverging trend between the equity ratios at AEE holding company compared to those of Ameren Missouri from 2014 – 2018. Staff's concern leads to Staff's recommended 50% ceiling on Ameren Missouri's common equity ratio. Staff's assessment of a reasonable equity ratio resembles an agreement Ameren Illinois has with the Illinois Commerce Commission, to limit the amount of equity to 50% in ROR calculations for its gas and electric operations.[23] Schedule JS-6-3 shows Staff's gas utility proxy group historical capital structures for the last five years.

---

[22] Staff notes that Ameren Missouri does not separate Ameren Missouri gas as a separate segment like Ameren Illinois does with its gas and electric operations. This is likely due to the small size of Ameren Missouri gas.

[23] Illinois Commerce Commission Dockets 18-0463 and 18-0807.

2. Cost of Debt

** **

3. Cost of Common Equity

Staff estimated Ameren Missouri's cost of common equity through a comparable company cost-of-equity analysis using a proxy group of gas utility companies. Additionally, Staff used a CAPM analysis and a survey of other indicators as a check of the reasonableness of COE findings.

a. The Proxy Group

Staff used a proxy group consisting of companies that are predominately regulated gas utilities to estimate changes in the cost of equity since the Spire Missouri rate cases. Staff ensured companies in the proxy group are confined to regulated gas utility operations by starting with Market Intelligence's screening of U.S. natural gas utilities, and then screened these companies further by ensuring that they

- are publicly traded
- have investment grade credit ratings from two major U.S. credit rating agencies
- have no pending merger or acquisitions
- have at least 80% of assets regulated
- generate at least 80% of income from regulated utility operations
- have long-term growth coverage from at least 2 analysts
- have not reduced dividends since 2016

b. The Constant-growth DCF

Staff started its evaluation of the gas utility industry's cost of common equity by applying values derived from the proxy group to the constant-growth DCF model. The constant-growth DCF model is widely used by investors to evaluate stable-growth investment opportunities, such as regulated utility companies. It may be expressed algebraically as follows:

$$k = D_1/P_0 + g$$

Where: k is the cost of equity;
D_1 is the expected next 12 months dividend;
P_0 is the current price of the stock; and
g is the dividend growth rate.

The term D1/P0, the expected next 12-months' dividend divided by current share price, is the dividend yield. Staff calculated the dividend yield for each of the comparable companies by dividing the calendar year projected dividends per share from Market Intelligence by the monthly high/low average stock price for the three months ending March 31, 2019.[24] The projected average dividend yield for the gas utility proxy group is approximately 2.67%.

i. <u>The Inputs</u>

In the DCF method, the cost of equity is the sum of the dividend yield and a growth rate ("g") that represents the projected capital appreciation of the stock. In estimating a growth rate, Staff considered the actual dividends per share ("DPS"), earnings per share ("EPS"), and book value per share ("BVPS") for each of the comparable companies. Staff also reviewed equity analysts' consensus estimates for long-term compound annual growth rates in EPS as reported by Market Intelligence. The average consensus long-term growth rates in EPS for the proxy group was 5.06% as of March 31, 2019 (*see* Schedule JS-8-3).

While Staff may accept the argument that gas utilities' EPS can grow over the next five years at a growth rate of approximately 5.06%, a rate which is higher than consensus nominal GDP long-term growth rate[25] estimates, Staff notes that it would be unreasonable to conclude that this growth rate is sustainable in perpetuity because it does not give consideration to empirical and logical information that suggests that utility companies should grow at a rate less than that of the overall economy. A projected long-term nominal GDP

---

[24] The monthly high/low averaging technique minimizes the effects of short-term stock market volatility on the calculation of dividend yield. P0 is calculated by averaging the highest and the lowest price for each month during the selected period.

[25] The nominal GDP growth rate, contrasted to the real GDP growth rate introduced earlier, is not adjusted for inflation.

growth rate should be conservatively ascribed as an upper constraint when testing the reasonableness of growth rates used to estimate the cost of equity for a regulated gas utility. Staff will provide more detail on economic growth projections when discussing the multi-stage DCF, but a high-end estimate for nominal GDP is no higher than 4.0%, causing an estimated constant growth rate over this rate to be suspect.

The growth rate used in the DCF is supposed to represent the expected capital gains (growth in the stock price) of the utility. Results of the DCF place the gas utility proxy group's dividend yield at 2.67%. Making the assumption that capital gains equals the dividend yield implies gas utility investors are requiring a return of 5.34% for gas utility stocks. Although Staff considers it unlikely that the fundamental characteristics of gas utility stocks will cause returns from capital gains to be much higher than dividend returns, because historical dividend growth has been approximately 4.4% over the previous 10 years and expected dividend growth over the next five years is expected to be higher, Staff used a constant growth rate of 4% to 5% to arrive at a cost of equity estimate of 6.67% to 7.67%. Compared to the DCF analysis Staff presented in the Spire Missouri rate cases, it appears the COE has come down (*see* Schedules JS-9-1 & JS-9-2).

c. The Multi-stage DCF

i. Overview

Staff compared its COE analysis of the gas utility proxy group using data from the time frame coinciding with Spire Missouri's 2017 gas rate cases to its COE analysis of the same proxy group using more recent data. A multi-stage DCF may use either two or more growth stages, depending on the situation being modeled. In any case, the last stage must use a sustainable rate as it is considered to last into perpetuity. The ability of a multi-stage DCF analysis to reliably estimate the cost of common equity is primarily driven by the analyst using a reasonable growth rate for the final stage because this rate is assumed to last into perpetuity. Where three stages are used, the second stage is generally a transitional phase between the high growth first stage and the constant growth final stage.[26]

[26] John D. Stowe, Thomas R. Robinson, Jerald E. Pinto and Dennis W. McLeavey, *Analysis of Equity Investments: Valuation*, Association for Investment Management and Research, 2002, p. 71-72.

Staff used a three-stage DCF approach, the stages being years 1-5, years 6-10, and years 11 to infinity.[27] For stage one, Staff gave full weight to analysts' five-year EPS growth estimates. For stage two, Staff linearly reduced the growth rate from the stage one level to the constant-growth third stage level. Since the Commission has shown a preference to GDP in past rate cases, Staff used steady state economic growth rate projections in the third stage. Based on average current long-term sustainable real GDP projections of 1.91%, compounded by the expected long-term GDP price deflator of 2.0% ((1.0191 * 1.02) – 1) = .0395), the midpoint estimate of GDP growth is approximately 25 basis points lower than during Spire's rate cases.

Staff's sources for the range of growth rates include the Congressional Budget Office ("CBO"), the Federal Reserve, the Organization for Economic Cooperation and Development ("OECD"), and the U.S. Energy Information Administration ("EIA"). The CBO projects an annual compound growth rate in real GDP of approximately 1.89% through 2029;[28] the Federal Reserve projects real GDP growth in the range of 1.7% - 2.2% in the longer run;[29] OECD projections estimate real GDP growth of approximately 1.87% through 2060;[30] and EIA projections estimate real GDP growth of approximately 1.89% through 2050.[31]

Based on perpetual growth rate ranges of 3.8% to 4.2%, the value of Staff's cost of equity estimate for the gas utility industry is in the range of 6.70% to 7.04%, respectively. Comparing this result to that of a Multi-stage DCF using data from the Spire Missouri rate cases timeframe shows that COE has come down (*see* Schedules JS-10-1 to JS-10-6).

ii. Stage one

The first stage of a multi-stage DCF is usually quite specific due to the ability to forecast cash flows in the near-term with more accuracy. In fact, it is often the case that the first stage of a multi-stage DCF will be based on discrete cash flows projected on an annual

---

[27] In practice, Staff extended the third stage only to year 200.

[28] www.cbo.gov/publication/54918

[29] https://www federalreserve.gov/monetarypolicy/files/fomcprojtabl20190320.pdf

[30] https://data.oecd.org/gdp/real-gdp-long-term-forecast htm#indicator-chart

[31] https://www.eia.gov/analysis/projection-data.php

basis for the next several years. However, in the context of discounting expected future DPS, it is often the case that a compound growth rate is applied to the current DPS to estimate the expected DPS over the next several years. Although it is rare for a company to tie its targeted DPS growth rate directly to a 5-year EPS projected compound growth rate, because equity analysts' 5-year EPS forecasts are widely available and may provide some insight on expected DPS, Staff used these growth rates for the first 5-years of its multi-stage DCF.

iii. Stage two

Stage two, i.e., the transition stage, is simply a gradual movement from above normal growth to more normal/sustainable growth for the final stage. Although stage two can also consist of forecasted discrete cash flows, because it is a transitional period, it is logical to linearly reduce the high growth first-stage growth over a specific period in order to gradually reduce the growth rate to the expected sustainable growth rate. Staff chose to do this over a 5-year period, which is fairly conventional in multi-stage DCF analysis.

iv. Stage three

Stage three is the final/constant-growth stage. In fact, the final stage can be reduced to the single-stage, constant-growth form of the DCF. Although this is the "generic" stage, it is extremely important to select a reasonable growth rate for this stage to arrive at a reliable cost of equity estimate.

F. Tests of Reasonableness

Staff has tested the reasonableness of its DCF results by use of a CAPM analysis and consideration of other evidence.

1. <u>The CAPM</u>

The CAPM is built on the premise that the variance in returns is the appropriate measure of risk, but only the non-diversifiable variance (systematic risk) is rewarded. Systematic risks, also called market risks, are unanticipated events that affect almost all assets to some degree because the effects are economy wide. Systematic risk in an asset, relative to the average, is measured by the Beta of that asset. Unsystematic risks, also called asset-specific risks, are unanticipated events that affect single assets or small groups of assets. Because unsystematic risks can be freely eliminated by diversification, the reward for bearing risk depends on the level of systematic risk. The CAPM shows that the expected return for a particular asset depends on the pure time value of money (measured by the risk free rate), the reward for bearing systematic risk (measured by the market risk premium), and the amount of systematic risk incurred by the asset (measured by Beta). The general form of the CAPM is as follows:

$$k = Rf + \beta\,(Rm - Rf)$$

Where: k is the expected return on equity for a security;
Rf is the risk-free rate;
β is Beta; and
Rm - Rf is the market risk premium.

For the risk-free rate (Rf), Staff used the average yield on 30-year U.S. Treasury bonds for the three-month period ending March 31, 2019; that figure was 3.01%. For beta (β), Staff relied on Market Intelligence betas; the average beta for the proxy group was 0.61. For the market risk premium (Rm – Rf) estimates, Staff relied on the historical difference between earned total returns on stocks and earned total returns on bonds through the end of 2018.[32] The first risk premium was based on the long-term arithmetic average of historical return differences from 1926 - 2018 (6.00 %). The second risk premium was based on the long-term geometric average of historical return differences from 1926 - 2018 (4.50%). The results using the long-term geometric average risk premium and the long-term arithmetic average risk premium are 5.76% and 6.68%, respectively. Comparing Staff's results to the results of the CAPM Staff presented in the Spire Missouri rate cases shows that the COE has come down (*see* Schedules JS-11-1 & JS-11-2).

2. <u>Average Authorized Returns</u>

Staff recognizes the Commission has expressed interest in authorized ROEs and capital structure decisions for other vertically integrated electric and gas utility companies throughout the country. The chart below presents results of fully litigated rate cases of

[32] From Duff & Phelps *2019 SBBI Yearbook: Stocks, Bonds, Bills, and Inflation.*

vertically integrated electric and gas companies, compiled and published by RRA, describing the average allowed ROEs from Commissions around the country along with the percentage of common equity to total capital in rate cases from 2014 – 2018.

Utility	Gas		Electric	
Year	ROE%	% Equity	ROE%	% Equity
2014	9.98	52.86	10.03	51.39
2015	9.58	51.17	9.74	49.03
2016	9.61	52.11	9.62	49.47
2017	9.82	50.39	9.69	47.89
2018	9.57	50.64	9.66	46.02

Source: Regulated Research Associates, an offering of S&P Global Market Intelligence

G. Conclusion

In light of recent Commission decisions, it is Staff's opinion that an allowed ROE in the range of 9.00% to 10.00% is fair and reasonable for Ameren Missouri. Considering information Staff has reviewed, Staff recommends the Commission authorize a ROE of 9.50%. A ROE range of 9.00% – 10.00% leads to a ROR range of 6.96% to 7.46%, respectively (*see* Schedule JS-12). Using the point recommended allowed ROE of 9.50% results in an allowed ROR of 7.21%. Ameren Missouri's ROR was calculated by applying an embedded ** ____________________ ** and an allowed return on common equity of 9.50% to a capital structure consisting of 48.99% long-term debt, 1.01% preferred stock, and 50.00% common equity.

Staff Expert/Witness: Jeffrey Smith

IV. Rate Base

A. Plant-in-Service

The plant-in-service balances represent the direct assigned or allocated plant additions and retirements of Ameren Missouri's gas operations. Staff adjusted the test year plant balances, by account, to reflect the estimated rate base value of Ameren Missouri's gas plant-in-service through the true up cut-off date of May 31, 2019 in its cost of service calculation. The estimated plant-in-service balances will be replaced with actual amounts as part of Staff's true up audit.

Staff Expert/Witness: Paul K. Amenthor

B. Accumulated Depreciation Reserve

The accumulated depreciation reserve balances also represent the direct assigned or allocated amounts to Ameren Missouri's gas operations. Staff adjusted the test year balances, by account, to reflect the estimated level of reserve through the true up cut-off date of May 31, 2019. The estimated reserve balances will be replaced with actual values as part of Staff's true-up audit.

Expert/Witness: Paul Amenthor

C. Negative Accumulated Reserve

Utility companies utilize mass asset accounting in regulation and due to this some assets are retired before their useful life and others after. If assets are retired early or there is mis-booking by the utility company, a negative reserve balance can occur. If these negative reserve values are not moved or removed, the negative reserve will cause rate base to be larger than it necessarily should be. Staff has therefore reallocated negative reserve balances for the following accounts:

1. **<u>Account 311 – Liquefied Petroleum Gas Equipment</u>**

The remaining negative reserve for Account 311 was calculated to be ** ________ **. This negative balance was absorbed into Account 305 (Production Structures and Improvements) and Account 376 (Distribution Mains). Account 305 has ** ________ ____ ____ . ** For this reason, Account 305 absorbed ** ________ ** of the negative balance associated with Account 311.

Account 376 will absorb the remaining negative balance of ** ________ **. Account 376 has a large reserve balance and will be able to absorb the balance.

2. <u>Account 375 – Distribution Structures and Improvements</u>

The remaining negative reserve for Account 375 was calculated to be ** ________. ** This remaining negative balance has been reallocated to Account 376 due to Account 376's large reserve balance.

3. <u>Account 387 – Distribution: Other Equipment</u>

The remaining negative reserve for Account 387 was calculated to be ** ____ ________________________________ . ** This remaining negative balance has been reallocated to Account 376 due to Account 376's large reserve balance.[33]

Staff Expert/Witness: David Buttig, PE

D. Ameren Missouri Gas Operating Facilities

1. <u>Operating Facilities</u>

** ________________________________

[33] Plant in service and depreciation reserve balances have been taken from the confidential workpapers of Ameren Missouri witness Laura M. Moore.

**

2. Columbia, Missouri Gas Operations and Training Facility

** ** In response to Staff Data Request No. 0188.1 in this rate proceeding, Ameren Missouri indicated that ** ** Therefore, Staff has included an adjustment to remove this amount of plant in service in order to exclude this cost from its cost of service calculation.

** **

**

-

**

Staff Expert/Witness: Jason Kunst, CPA

E. Cash Working Capital (CWC)

Cash Working Capital (CWC) is the amount of funding necessary for a utility to pay day-to-day expenses incurred in providing utility services to its customers. Cash inflows from payments received by the utility and cash outflows for expenses incurred by the utility are analyzed using a lead/lag study.

When a utility expends funds to pay expenses necessary for the provision of service before receiving payment from its customers, the utility's shareholders are the source of the funds. The funding from shareholders represents a portion of each shareholder's total investment in the utility. To compensate shareholders for this funding, a positive amount for CWC is included in rate base. Alternatively, customers supply funds to the utility when they pay for utility service before the day-to-day expenses are incurred in providing that utility service. Utility customers are compensated for the funds they provide by a reduction to the utility's rate base.

The CWC requirement can be negative or positive. If the requirement is negative, it indicates that the utility's customers are providing the CWC in the test year, which indicates that customers paid for the utility's day to day expenses before the company incurred them. In that circumstance, CWC would represent a reduction to rate base. A positive CWC requirement indicates that the utility pays its expenses before receiving payment from its customers, which means that shareholders are providing the funds for day-to-day operations, which would result in a rate base addition.

In this case, Staff did not perform a full lead/lag study. However Ameren Missouri did prepare a lead/lag study internally and Staff has reviewed both the revenue and expense lead/lag factors calculated by Ameren Missouri witness Brenda I. Weber for accuracy and reasonableness. While Staff has adopted many of the revenue lags and expense leads lag associated with sales tax and the expense leads for pension expense, payroll, and payroll taxes. These differences are discussed in more detail below:

1. **Revenue Lag**

Sales Tax

Sales tax is collected by Ameren Missouri and then remitted to the taxing authorities and as such is a pass through tax. Similar to the gross receipts tax, Staff has historically not included the service component when determining the revenue lag for sales tax purposes and is recommending a revenue lag of 23.44 for sales taxes in this case.

2. **Expense Leads**

Pensions and OPEBs

During the test year, the 12-months ending June 30, 2018, Ameren made three (2 quarterly, and 1 semi-annual) contributions to its pension fund on July 3, 2017; September 1, 2017; and April 2, 2018. Ameren typically makes four quarterly pension contributions in a given year. For setting rates in the current case Staff is recommending using the pension lead from the previous Ameren Missouri electric rate cases (Case Nos.

ER-2014-0258 and ER-2016-0179) which calculated the lead factor using four quarterly pension contributions which more closely aligns with the historical pension contributions made by Ameren resulting in a lag of 45.44 for pension contributions.

Payroll and Payroll Taxes

In November 2018, Ameren changed the pay dates for the management employees of all Ameren affiliates to the 13th and the 28th of each month as part of a transformation to its internal systems, including a new payroll system in 2020. Prior to this change, management employees were paid on the 15th and the last day of each month. Ameren Missouri's response to Staff Data Request No. 0142 ** ____ **

**

	____	________	________________
____________	____	____________	____
________	____	____________	____

**

The ** ________ ** time associated with the pay date change reduces the expense lead for payroll and payroll taxes, and increases the positive net lag associated with these expenses which results in an increase to CWC and its associated rate base value. In calculating the expense lead for payroll and payroll taxes, Staff has set the lead time ** ________________________________ ** so that Ameren Missouri is not ** ________________________ . ** Staff's changes result in a payroll expense lag of 11.40 days and a payroll tax expense lag of 10.62 days.

Staff's overall lead/lag study resulted in a negative CWC requirement for Ameren Missouri. This means that the ratepayers are currently providing the working capital, in the aggregate, to Ameren Missouri. Therefore, the ratepayers will be compensated for the working capital through a reduction to rate base.

Staff Expert/Witness: Jason Kunst, CPA

F. Natural Gas Storage

** ____

____

____

____________________ **

Natural gas inventory fluctuates over time, where typically gas volumes increase in the summer and decrease during the winter. The stored natural gas represents an investment by Ameren Missouri and, therefore, is included in rate base where the utility has an opportunity to earn a return on that investment. A 13-month average of costs is used to account for the fluctuation in the level of inventory over time; thus, Staff has included in rate base a 13-month average of natural gas inventory quantities and corresponding prices using the month end balances for the period of February 2018 to February 2019. Staff will re-examine the natural gas storage inventory as part of its true-up audit.

Staff Expert/Witness: Paul K. Amenthor

G. Prepayments; Materials and Supplies; Customer Advances & Deposits

1. <u>Prepayments</u>

Prepayments are items for which amounts are expended in advance of the period to which they apply and typically represent items such as insurance, rents, employee benefit costs, and maintenance agreements. As Ameren Missouri is required to provide upfront funding for these expenses, it is appropriate to include them in rate base. The items for which Ameren Missouri has proposed rate base treatment include rents and energy efficiency program costs. After discussions with Ameren Missouri personnel it was determined that these rental costs were not applicable to gas operations and that the energy efficiency program has ended; therefore both rents and the energy efficiency program costs were removed from prepayments.

Prior to this rate case, Ameren Missouri included the regulatory commission assessment fee as a prepayment because it was paid in one lump sum once the bill was received. Ameren Missouri now pays its commission assessment on a quarterly basis and no longer prepays this item, so that cost was not proposed by Ameren Missouri to be included in prepayments in this rate case. Staff agrees with this exclusion. Staff has included in rate base a level of prepayments that reflects the 13-month average ending February 2019.

Staff Expert/Witness: Paul K. Amenthor

2. Materials and Supplies

Materials and supplies are a variety of items kept in inventory for use in meeting the day-to-day needs of the utility. Staff included a 13-month average of materials and supplies inventory ending February 2019 in rate base. Staff will re-examine materials and supplies as part of its true-up audit.

Staff Expert/Witness: Paul K. Amenthor

3. Customer Deposits

Customer deposits represent funds collected from customers as a security against potential losses that may arise from customer's failure to pay the utility service they have received. Until refunded, customer deposits represent a source of funds available to Ameren Missouri and are included as an offset to rate base. Interest is paid to customers for the use of their money. Staff included in rate base a 13-month average ending February 2019 for customer deposits. Please refer to Section VI.D.3. of this Report regarding the income statement and interest on customer deposits for an explanation of the calculation of interest on customer deposits. Staff will re-examine customer deposits as part of its true-up audit.

Staff Expert/Witness: Paul K. Amenthor

4. Customer Advances

Customer advances are funds received from new customers to aid in the cost of construction necessary to connect them to the system. Customer advances are not refundable nor do they earn interest; as such, these funds represent interest free money for the company and therefore are included as a reduction, or offset to rate base. During Staff's review period, there was a noticeable increase in the level of customer advances from the typical level that Ameren Missouri has maintained in the past for gas operations. After discussion with Ameren Missouri personnel, Staff discovered that this ongoing increase in customer advances was due to development and construction of a new $100 million state-of-the art asphalt roofing shingle manufacturing and distribution facility by CertainTeed Corporation in Jonesburg, Mo. which is located in Ameren Missouri's service territory. In December 2018, the balance of customer advances experienced a significant reduction. Ameren Missouri's contract with CertainTeed expired in December 2018 and the remaining balance of advances was transferred to contributions in aid of construction ("CIAC") as an offset to plant-in-service. Staff has included the last known level of customer advances at February 2019 as an offset to rate base. Staff will re-examine customer advances as part of its true-up audit.

Staff Expert/Witness: Paul K. Amenthor

H. Pensions and Other Post Employment Benefit – Rate Base

See the discussion in Section VI.C.3.– Pensions and Other Post-Employment Benefits ("OPEBs").

Staff Expert/Witness: Lisa M. Ferguson

I. Accumulated Deferred Income Taxes (ADIT)

Ameren Missouri's Accumulated Deferred Income Tax Reserve ("ADIT") represents, in effect, a prepayment of income taxes by Ameren Missouri's customers to Ameren Missouri prior to payment being made by Ameren Missouri to taxing authorities. As an example, because Ameren Missouri is allowed to deduct depreciation expense on an accelerated basis for income tax purposes, the depreciation expense deduction used for income taxes paid by Ameren Missouri is considerably higher than depreciation expense used for ratemaking purposes. This results in what is referred to as a "book-tax timing difference" and creates a deferral of income taxes to the future. The net credit balance in the deferred tax reserve represents a source of cost-free funds to Ameren Missouri. Therefore, Ameren Missouri's rate base is reduced by the deferred tax reserve balance to avoid having customers pay a return on funds that are provided cost-free to Ameren Missouri. Staff has included the

ADIT balance as of June 2018 in its direct cost of service. As part of its true-up audit, Staff will re-examine the ADIT balances to make sure all items included in those balances are consistent with the other components of the cost of service and that they reflect the current balances at the true-up cut-off date, May 31, 2019. Based on this true-up examination, Staff may make additional adjustments to the cost of service as necessary.

Staff Expert/Witness: Lisa M. Ferguson

V. Allocations

A subsidiary of Ameren Corporation, Ameren Services Company ("Ameren Services"), provides various management and administrative services to Ameren Missouri and affiliate companies. As part of the audit process, Staff reviewed the methods used by Ameren Services to assign and allocate costs to Ameren Missouri's gas operations. Under Ameren Services' corporate cost allocation system, costs are categorized into four types: Direct, Direct Allocated, Indirect Corporate, and Indirect Functional. The allocations of costs and methods used to allocate costs from Ameren Services are outlined in Ameren Missouri's cost allocation manual ("CAM"). Ameren Missouri, Staff, and The Office of the Public Counsel ("OPC") have continued working to establish an agreed upon CAM that is compliant with the affiliate transactions rules for both electric and gas operations as a part of Case No. EO-2017-0176. This case is scheduled to conclude by the end of 2019. Ameren Services evaluates and updates the allocation factors included in the Ameren Missouri CAM at the beginning of each calendar year, unless there is a significant change in circumstances that would require the allocation factors be updated immediately. Additionally, the Ameren Services Service Request Manual requires that Ameren Services' Internal Audit Department perform an audit and report each year of Ameren Services' Service Request System and Service Request policies, operating procedures, and controls.

A. 2019 Allocation Factors

Ameren Services made no significant changes to the allocation factors for 2019 and made no changes to include new or remove existing allocation factors.

Staff has proposed an adjustment to annualize the Ameren Services costs allocated to Ameren Missouri during the 12 months ending June 30, 2018 using the updated Ameren Services allocation factors for 2019.

B. ** ________________________________ **

** ________________________________

____

____

____

____

____

- ________________________________

  ____

  ____

  ____

  ____

  ____

- ________________________________

  ____

  ____

  ____

____

__________________________ **

Staff will continue to review data and data request responses to determine if further adjustments need to be made through the true-up cutoff date regarding corporate allocations.

Staff Expert/Witness: Jason Kunst, CPA

C. Software Allocation

Ameren Missouri utilizes various software packages in the course of its electric and gas operations. These software packages are owned and used by the various subsidiaries of Ameren. The subsidiary that owns the software asset rents the use of the software to the other subsidiaries and records associated rental revenue. Conversely, if a subsidiary rents software from a different Ameren entity, the subsidiary records rental expense. ** ____________ ** Please refer to Appendix 3, Schedule JK-d3 which summarizes the software at issue.

In the past, general office software costs that were charged to the books of Ameren Missouri were only recorded on Ameren Missouri electric records. Ameren Missouri witness Laura M. Moore indicated in her direct testimony that Ameren Missouri had recently discovered that there was no allocation of these plant assets to Ameren Missouri gas operations during Ameren Missouri's prior electric rate cases. According to Ms. Moore's testimony these software assets and the corresponding revenues that they generate, as well as software expense owned by other affiliates but allocated to Ameren Missouri, have only been recorded on the books of Ameren Missouri electric operations and therefore the portion of these revenues, expenses and investment that should have been allocated to Ameren Missouri's gas operations were included in the rates that were established by the Commission in Case No. ER-2016-0179. In this case, Ms. Moore has proposed to include an allocation of the software assets and related revenues and expenses in the revenue requirement for Ameren Missouri gas operations. Ms. Moore then proposes to track the software amounts that are already being recovered in electric rates beginning with the effective date of rates in this case so Ameren Missouri can begin to return that portion of costs to electric customers in Ameren Missouri's next planned electric rate case filing. The following chart summarizes the amounts proposed for inclusion by witness Moore:

continued on next page

**

**

** **

continued on next page

**

**

The fundamental problem that arises from Ameren Missouri's proposal to include the software assets and the corresponding revenues that it generates in natural gas rates as part of this rate case (Case No. GR-2019-0077), is that it will create a double recovery of the same costs. Currently software investment costs (less any offsetting revenues) are already being fully recovered from electric customers in Ameren Missouri's electric rates as established in the previous rate case, ER-2016-0179. Staff cannot support a tracker that permits Ameren Missouri to double recover from its gas ratepayers for what it is already recovering from its electric ratepayers.

The majority of Ameren Missouri's gas customers are joint customers, meaning they receive both gas and electric service from Ameren Missouri and are billed for both utility services on one customer bill. Given the fact that all of these costs are already being recovered in current electric rates, it is Staff's position that it would be more appropriate to first correct the allocation issue in the ** ** filing by removing the portion of costs that should be allocated to gas. ** **

Staff Expert/Witness: Jason Kunst, CPA

D. Allocation of Ameren Missouri Costs Between Electric and Gas Operations

** **

Staff Expert/Witness: Jason Kunst, CPA

VI. Income Statement

A. Missouri Jurisdictional Rate Revenue

1. Introduction

The following section describes the individual elements for how Staff calculated Ameren Missouri adjusted gas operating revenues. The largest component of operating revenue results from rates charged to Ameren Missouri's retail customers, so a comparison of operating revenue with cost of service is a test to determine the adequacy of the currently effective Missouri jurisdictional gas rates. One of the major tasks in a rate case is not only to determine whether a deficiency (or excess) between cost of service and operating revenues exists, but also to determine the magnitude of any such deficiency (or excess). Any deficiency (or excess) identified can only be made up by adjusting Missouri retail rates prospectively, on a going forward basis.

In order to determine the magnitude of a deficiency in Ameren Missouri's gas rates, the test year revenue needs to be normalized and annualized so as to measure the amount of deficiency in the current level of operating revenue. If the overall normalized and annualized cost of providing service to Missouri retail customers exceeds those operating revenues, an increase in the current rates Ameren Missouri charges its gas retail customers is required.

a. Character of Ameren Missouri Retail Sales

Ameren Missouri gas operations serve a combination of urban and rural areas primarily through residential and general service rates whose load varies due to weather (i.e. heating degree days). However, Ameren Missouri also serves interruptible, transportation and special contract customers.

b. Development of Revenue for this Case

To determine the proper revenue to include in the cost of service, Staff applied common ratemaking adjustments to normalize the gas usage and customer levels. This establishes ongoing revenue at a level that Ameren Missouri gas would collect under normal weather conditions, gas usage, and customer levels. Staff adjusts test year billing determinants to determine the level of revenue that Ameren Missouri gas would have received annually based upon "known and measurable" circumstances at the end of the test year for the 12 months ended June 30, 2018, with customer growth updated for known and measureable changes through December 31, 2018. Staff will also review the impact of customer growth through the true-up date, May 31, 2019.

Staff Expert/Witness: Paul K. Amenthor

2. Regulatory Adjustments to Test Year Sales and Rate Revenue

a. Remove Unbilled Revenue

Ameren Missouri records unbilled revenue to recognize the sales of gas that have occurred, but have not yet been billed to customers. This unbilled revenue must be removed in order to accurately calculate annualized revenue to include in the cost of service. Staff has removed the unbilled revenue from the test year twelve months ending June 30, 2018.

Staff Expert/Witness: Paul K. Amenthor

b. Infrastructure System Replacement Surcharge ("ISRS") Revenue

ISRS investment and related costs are typically included in the cost of service calculation during a rate case to determine permanent rates, with the ISRS surcharge being reset to zero. As a part of that process, ISRS revenue is removed from the test year for purposes of general rate proceedings.

Ameren Missouri collected ISRS revenue through a Commission approved surcharge that became effective in Case No. GO-2015-0274. As a result of that ISRS case, Ameren Missouri was authorized to collect approximately $1,318,513 in ISRS revenue. On August 18, 2016, Union Electric Company d/b/a Ameren Missouri submitted a tariff sheet revising its ISRS values as part of Case No. GO-2017-0061. Ameren proposed to reset those values to "zero" and effectively terminate the ISRS. The Commission allowed the proposed tariff sheet to become effective by operation of law on September 17, 2016. In response to this, Staff requested the case remain open for the purpose of receiving and processing a reconciliation regarding Ameren Missouri's final over- or under-recovered ISRS amount. Commission rule 4 CSR 240-3.265(17) requires a natural gas utility, on an annual basis, to reconcile the differences between the revenues resulting from the ISRS and the appropriate pretax revenue as determined by the Commission for that period, and to submit a reconciliation and proposed ISRS rate schedule revisions to the Commission for approval to recover or refund the difference, as appropriate. Staff reviewed the actual ISRS collections from the previously unreconciled period and determined a small over-recovery. The over-recovery was ordered to be refunded to customers through a one-time bill credit in lieu of the traditional methodology of reflecting differences into future ISRS rates. This treatment was due to Ameren Missouri's discontinuance of its ISRS.

Due to this unique situation, it is not necessary for Staff to remove test year ISRS revenue from the cost of service calculation.

Staff Expert/Witness: Paul K. Amenthor

c. Remove Gross Receipts Taxes: GRT

Ameren Missouri acts as a collector for taxes imposed on utility service revenues by municipalities and other taxing bodies. The Gross Receipts Tax ("GRT") is included on customer's bills and collected by Ameren Missouri and remitted to the proper taxing authorities. The GRT is recorded as both a revenue and expense item on Ameren Missouri's books. Theoretically, the GRT revenue and expense should offset one another and therefore have no impact on the company net income. However, many times there is a timing difference between when taxes are collected and when those taxes are remitted to the appropriate taxing authorities. As such, Staff has removed the test year gross receipts taxes from both revenue and expense to eliminate its effect on net income.

Staff Expert/Witness: Paul K. Amenthor

d. Remove Purchased Gas Adjustment (PGA) Revenue and Removal of Gas Costs

Ameren Missouri collects its gas costs from customers through the use of a Purchased Gas Adjustment ("PGA") clause, which allows the cost of purchased gas to be passed through to customers by a surcharge. The PGA is audited annually by the Commission Staff's Procurement Analysis Department as part of Actual Cost Adjustment ("ACA") filings. Staff has removed all purchased gas expense and purchased gas revenue from the test year ending June 30, 2018.

Staff Expert/Witness: Paul K. Amenthor

e. Provision for Rate Refunds

Ameren Missouri records an accrual for any possible over or under collection that may occur in the PGA/ACA rider mechanism since the time of the previous ACA filing. That over or under collection will be addressed in the next ACA filing and not as a part of permanent rate calculations; thus, Staff removed the provision for rate refunds recorded in the test year.

Staff Expert/Witness: Paul K. Amenthor

f. Customer Growth

Staff's annualization of revenue consists of an annualized base charge and an annualized commodity charge. The base charge is the minimum monthly charge assessed to customers for supplying gas service. Staff annualized the base charge revenue by multiplying Staff's annualized customer count by the monthly base charge that is currently authorized in Ameren Missouri's gas tariffs. The commodity charge is based on customer usage of gas.

Staff annualized commodity revenue by multiplying Staff's normalized customer count by Staff's proposed weather normalized usage per customer.

Staff reviewed and analyzed the historical customer counts for the residential and general service rate classes by pipeline for the period of January 2011 through December 2018. For customer classes that demonstrated an upward or downward trend over time, Staff adjusted the test year to reflect the change in revenue that would have occurred if the number of customers taking service at the end of December 31, 2018 (the update period) had existed throughout the test year. For purposes of customer annualization, Rolla district was included in the analysis of the Panhandle Eastern customers. To calculate an annualized level of commodity revenue, Staff either applied seasonality or utilized the actual number of customers that existed during the 12 month update period ending December 31, 2018 and multiplied those annualized customer counts to the weather normalized usage per customer.

Staff will review all customer levels through May 31, 2019 as part of its true-up audit in this case.

Staff Expert/Witness: Paul K. Amenthor

g. Revenue - Weather Normal Variables Used for Weather Normalization

Natural gas usage and revenue vary from year to year based on weather conditions. The temperature pattern in the test year is the primary determinant for weather-sensitive customers' gas usage and the company's revenue in the test year. Each year's weather is unique, so rates for weather-sensitive customer classes must be based on test year usage and revenue adjusted to a level commensurate with "normal" weather conditions, rather than actual test year usages and revenue.

Weather Variables - Staff obtained weather data from the Midwest Regional Climate Center (MRCC).[34] The Columbia Regional Airport ("COU") and the Cape Girardeau Municipal Airport ("CGI") weather data were used for actual and normal weather variables. The weather data sets consist of actual daily maximum temperature ("T_{max}") and daily

[34] http://mrcc.isws.illinois.edu/CLIMATE/

minimum temperature ("T_{min}") observations. Staff used these daily temperatures to develop a set of normal mean daily temperature ("MDT")[35] values.

Natural gas sales are predominantly influenced by "ambient air temperature,"[36] so MDT and the derivative measure, heating degree days ("HDD"),[37] are the measures of weather used in adjusting test year natural gas sales. HDDs were originally developed as a weather measure that could be used to determine the relationship between temperature and gas usage, and are based on the difference of MDT from a comfort level of 65°F. HDDs are calculated as the difference between 65°F and when MDT is below 65°F, and are equal to zero when MDT is above 65°F.

Normal Weather - According to the National Oceanic and Atmospheric Administration ("NOAA"), a climate "normal" is defined as the arithmetic mean of a climatological element computed over three consecutive decades.[38] In developing climate normal temperatures, the NOAA focuses on the monthly maximum and minimum temperature time series to produce the serially-complete monthly temperature ("SCMT") data series.[39]

Staff utilized the SCMT published in July 2011 by the National Climatic Data Center ("NCDC") of the NOAA. For the purposes of normalizing the test year gas usage and revenues, Staff used the adjusted T_{max} and T_{min} daily temperature series for the 30-year period of January 1, 1987, through December 31, 2016, at COU and CGI. The series are consistent with NOAA's SCMT during the most recent NOAA 30-year normal period ending 2010.

There may be circumstances under which inconsistencies and biases in the 30-year time series of daily temperature observations occur, (e.g. such as the relocation, replacement,

---

[35] By National Climatic Data Center convention, MDT is average of daily maximum temperature (Tmax) and daily minimum temperature (Tmin) e.g. MDT = (Tmax + Tmin) /2

[36] Ambient air temperature is the outside temperature of the surrounding air without taking into account the humidity or wind in the air.

[37] Where MDT < 65°F, HDD = 65 – MDT; otherwise, HDD = 0.

[38] Retrieved on October 17, 2013, https://www ncdc.noaa.gov/data-access/land-based-station-data/land-based-datasets/climate-normals

[39] Retrieved on October 17, 2013, http://www1.ncdc noaa.gov/pub/data/normals/1981-2010/source-datasets/.The SCMT, computed by the NOAA, includes adjustments to make the time series of daily temperatures homogeneous.

or recalibration of the weather instruments). Changes in observation procedures or in an instrument's environment may also occur during the 30-year period. The NOAA accounted for documented and undocumented anomalies in calculating its SCMT.[40] The meteorological and statistical procedures used in the NOAA's homogenization for removing documented and undocumented anomalies from the T_{max} and T_{min} monthly temperature series is explained in a peer-reviewed publication.[41]

Subsequent to determining the homogenized monthly temperature time series described above, the NOAA also calculates monthly normal temperature variables based on a 30-year normal period, e.g. maximum, minimum, average temperatures, and HDDs. These monthly normals are not directly usable for Staff's purposes because the NOAA daily normal temperatures and HDD values are derived by statistically "fitting" smooth curves through these monthly values. As a result, the NOAA daily normal HDD values reflect smooth transitions between seasons and do not directly relate to the 30-year time series of MDT as used by Staff. However, in order for Staff to develop adjustments to normal HDD for gas usage, Staff must calculate a set of normal daily HDD values that reflect the actual daily and seasonal variability.

Staff used a ranking method to calculate normal weather estimates of daily normal temperature values, ranging from the temperature that is "normally" the hottest to the temperature that is "normally" the coldest, thus estimating "normal extremes." Staff ranked MDTs for each month of the 30-year history from hottest to coldest and then calculated the normal daily temperature values by averaging the ranked MDTs for each rank, irrespective of the calendar date. The ranking process results in the normal extreme being the average of the most extreme temperatures in each month of the 30-year normals period. The second most extreme temperature is based on the average of the second most extreme day of each month, and so forth. Staff's calculation of daily normal temperatures is not the same as NOAA's calculation of smoothed daily normal temperatures because Staff calculated its normal daily

[40] Arguez, A., I. Durre, S. Applequist, R. S. Vose, M. F. Squires, X. Yin, R. R. Heim, Jr., and T. W. Owen, 2012: NOAA's 1981-2010 U.S. Climate Normals: An Overview. Bulletin of the American Meteorological Society, 93, 1687-1697.

[41] Menne, M.J., and C.N. Williams, Jr., (2009) Homogenization of temperature series via pairwise comparisons. J. Climate, 22, 1700-1717.

temperatures based on the rankings of the actual temperatures of the test year, and the test year temperatures do not follow smooth patterns from day to day. More details of Staff's ranked average method for normal weather are explained in a peer-reviewed publication.[42] Using these normal daily temperatures, Staff calculated normal HDD for each day of the test year. This information was made available to Staff witnesses Michelle A. Bocklage and Joseph P. Roling to calculate the weather normalization adjustments.

Staff Expert/Witness: Seoung Joun Won, PhD

h. Revenue – Weather Normalization

Introduction and Summary

Since the primary use of natural gas in Missouri is for the purpose of space heating, natural gas sales are dependent upon weather conditions. As natural gas rates are based on usage, it is important to remove abnormal weather influences from the test year in order to provide a more accurate representation of "normal" natural gas usage. This analysis addresses Staff's weather-normalization of natural gas sales for Ameren Missouri customers.

Weather Normalization Adjustment

Staff conducted an analysis of weather normalization for the Residential Service (RS), General Service (GS), Interruptible Service (IS), Standard Transportation (ST) and Transportation classes for the test year ending June 30, 2018. Staff's overall weather normalization analyses determined that the weather during the test year was warmer than normal, so actual sales were lower than normal. In order to account for the reduced sales and warmer weather, Staff performed an adjustment to increase natural gas sales to reflect usage and sales for "normal" weather conditions. The following table illustrates the approximate adjustments to the natural gas volumes of each class.

continued on next page

[42] Won, S. J., Wang, X. H., & Warren, H. E. (2016). Climate normals and weather normalization for utility regulation. Energy Economics, 54, 405-416.

Class	Approximate Adjustment
RS	.48%
GS	.25%
ST	.07%
Transportation	-2.50%

These adjustments account for changes in sales to reflect normal weather and the annual number of days in a billing cycle.

Process Used to Weather Normalize Sales

Staff adjusted billing units for each class to account for customers who switched between rate classes during the test year and to account for known and measurable changes to rate classes during the update and true-up periods. Staff adjusted for these changes by removing the customer accounts that left the GS and Transportation Service and moved those customer accounts to the appropriate GS or Transportation Service.

Staff's weather normalized adjustments of natural gas sales account for deviations from what are considered normal weather conditions that occurred during the test year. Staff adjusted monthly natural gas volumes to normal by first adjusting the annual number of days for each billing cycle to 365. If the annual number of days in a billing cycle is below or above 365, Staff added or subtracted the difference to the non-heating season.[43] This adjustment is performed so that each billing cycle is set to the same total number of days. Since natural gas utilities are winter peaking, any HDDs that are removed based on the 365 day adjustment are added back to October, since it is a shoulder month to the heating season. Using the non-heating months minimizes the impact on the heating season.

After each billing cycle is adjusted so that it contains the proper number of days, the next step is to calculate the difference between normal and actual HDDs for each billing cycle. Then, Staff multiplied these differences by the estimate rendered from the regression

[43] Since it cannot be determined exactly which day is causing the annual number of days to be over or less than 365 days, adding or removing an average non-heating season day results in an adjustment with the lesser impact compared to an average heating season day.

analysis described in further detail below to determine the changes in sales volumes in each billing cycle due to abnormal weather. The next step is to sum each of the changes in sales volumes per month due to abnormal weather. Lastly, Staff adds the monthly adjustments in sales volumes to the total monthly natural gas sales to calculate the normalized volumes.

Application of Weather Normalization Process

Staff witness Dr. Seoung Joun Won provided the daily actual and daily normal HDDs for Ameren Missouri. Dr. Won addresses the calculation of HDDs as part Section VI.A.2.g. of this Report regarding Weather Normal Variables Used for Weather Normalization .

Ameren Missouri has established billing cycles for groups of natural gas accounts where each billing cycle corresponds to different days of the month. Customers' accounts are usually grouped into one of approximately twenty one (21) billing cycles. Staggering the billing of customers' accounts throughout the billing month allows Ameren Missouri to distribute the work required in order to bill its customers. Based on the number of customers, usage, and HDD per billing cycle per month, Staff calculated the average use per customer per day and the number of HDD per day for each of the twelve months of the test period for the rate classes mentioned above for Ameren Missouri.

Staff used a regression analysis to estimate the relationship between the usage per customer per day and the HDD per day for each month. Once the billing cycles were adjusted, Staff calculated the difference between normal and actual HDDs for each billing cycle. The third step was to multiply these differences by the estimate rendered from the regression analysis. The fourth step was to sum the billing cycles' adjusted volumes by billing month. Then, Staff added the monthly adjustments in ccfs[44] to the total monthly natural gas sales to calculate normalized volumes.

The billing month averages are calculated from the data provided by the utility on the numbers of customers, natural gas usage, and summed HDD from the billing cycles for each billing month by customer class. The daily average HDD in each billing month and billing cycle is weighted by the percentage of customers in that billing cycle. Thus, the billing cycles with the most customers are given more weight when computing the daily average HDD for

[44] 100 cubic feet of natural gas.

the billing month. Staff uses the twelve monthly average-usage-per-customer amounts across the billing cycles to calculate the daily average usage for one month. The usage and weather billing month averages are used to study the relationship between space-heating natural gas usage and cold weather, which is used to estimate the change in usage related to a change in HDD.

Staff uses regression analyses to estimate the relationship for each class of customers. The regression equation develops quantitative measures that describe the relationship between daily space-heating sales per customer in ccf to the daily HDD. The regression equation estimates a change in the daily natural gas usage per customer whenever the daily average weather changes by HDD.

Staff recommends that the Commission utilize Staff's weather normalization adjustments that are outlined above and in the supporting work papers.

Staff Expert/Witness: Michelle A. Bocklage

i. <u>Large Volume Customer Adjustments</u>

Ameren Missouri provided monthly billing units and information for every customer who took service on the Interruptible Service, Large Volume Transportation Service, or Special Contract rates during the test year. Staff traditionally uses these units as the basis of its analysis and adjustments of large customer sales. Based upon Staff's investigation and analysis of this information, Staff will make adjustments to reflect the migration of customers to other rate classes ("Rate Switching") for Large Volume Transportation, Interruptible, and Special Contract customers and the effect of weather on certain Large Volume Transportation customers. The weather normalized usage applied in this case was provided by Staff witness Seoung Joun Won. There were no Rate Switchers for Ameren Missouri during this test year so Staff did not make any adjustments to revenues.

Staff/Expert/Witness: Joseph P. Roling

j. <u>Industrial Customers Gains/Losses Adjustment</u>

Adjustments to reflect customer gains and/or losses are made to the large customers' rate revenues. This adjustment reflects the effect of customers that either began taking service on the Ameren Missouri system during the test year, or that quit taking service on the Ameren Missouri system during the test year. The purpose of this adjustment is to provide a more accurate representation of the number of customers taking service in the class. If a customer came on the system, customer revenues were adjusted for the 'missing' months. If a customer dropped off the Ameren Missouri system, their revenues were removed from the current revenue calculation. There were no customers who switched into or out of the Large Volume Transportation or Interruptible service classes during this test year so Staff did not make any adjustments to revenues.

Staff/Expert/Witness: Joseph P. Roling

k. <u>Special Contract Customers</u>

Three customers are currently served under the Ameren Missouri special contract rates tariff[45]. In the test year, one customer's contract reached a level of usage that triggered a rate change per the customer's contract. For this customer Staff annualized revenues as if the rate in effect at the end of the test period was in effect for the entire test period. Also, two customers have exceeded the original expiration date of their contracts; however, the contracts are not canceled or changed unless either Ameren Missouri or the customer requests a change or gives notice of cancellation.[46] Per the Ameren Missouri response to Staff Data Request No. 0250, a detailed analysis of the cost to the customer to bypass Ameren Missouri's system and the current contract rates has not been performed in the last 5 years. Because the decision to allow the contract to continue is an annual decision for Ameren Missouri, Staff cannot recommend reflection of the discounted rate in the absence of information to review the prudency of continuation of the discounted rate. Staff annualized revenue for these two customers as if the two customers were served under the Large Volume Transportation tariff.

Staff Expert/Witness: Joseph P. Roling/Robin Kliethermes

B. Other Revenue Adjustments

Ameren Missouri also receives revenue related to late fees, disconnections, reconnections, forfeited discounts, and rental revenue. Staff analyzed other revenue levels from July 2013 through February 2019. Staff determined the ongoing level of other revenue based on each type of other revenue collected. Staff included test year revenue for forfeited

---

[45] Tariff Sheet No. 18.1.

[46] A contract cancellation requires advanced notice outlined in each customer's individual contracts.

discounts, installation/trouble calls, remittance of sales tax and construction billings as well as connection/disconnection fees.

Staff included February 2019 rental revenues multiplied by 12 as annualized revenue for affiliate rental. ** **

Staff will review each type of other revenue through May 31, 2019 as part of its true-up audit in this case.

Staff Expert/Witness: Paul K. Amenthor

C. Payroll and Employee Benefits

1. Payroll and Payroll Taxes

Payroll

Staff computed annualized payroll by adjusting the test year ending June 30, 2018 to account for the a) changes in employee levels through February 28, 2019, b) the increase in wage rates through February 28, 2019, and c) ** [47], . ** Staff's annualized level of payroll reflects the O&M ratio for the 12 months ending June 30, 2018. In addition, Staff is continuing to evaluate the level of bonus payments made by Ameren during the test year and has submitted Data Request No. 030.1 requesting additional information. Staff may propose additional adjustments to normalize these payments as part of its true-up audit.

[47] See Section VI.D.12.a. of this report regarding lobbying.

Staff distributed its payroll adjustment based upon the actual payroll distribution experienced by Ameren Missouri during the test year ending June 30, 2018. Staff will re-examine the employee levels, O&M ratio, and actual salary data for Ameren Missouri gas direct payroll as well as Ameren Services payroll that is allocated to gas operations to determine if any further adjustments to the cost of service are necessary during Staff's true-up audit.

Staff Expert/Witness: Jason Kunst, CPA

Payroll Taxes

Staff's annualized level of payroll taxes reflects an overall increase in the test year amounts for Federal Insurance Contributions Act ("FICA"), Old Age Survivors and Disability Insurance ("OASDI"), FICA Medicare, Federal Unemployment Tax Act ("FUTA"), and State Unemployment Tax Act ("SUTA") payroll taxes. This increase is primarily due to the increase in the number of employees at both the Ameren Missouri and Ameren Services levels. As part of its true-up audit, Staff will re-examine its analysis of payroll tax expense to determine if any further adjustments are necessary for the cost-of-service calculation.

Staff Expert/Witness: Jason Kunst, CPA

2. Other Employee Benefits

Ameren Missouri offers a number of benefits to its employees including medical, dental, vision, 401-k, and long term disability. Staff has reflected costs for the 12 twelve months ending February 28, 2019 in its cost of service calculation. Staff will continue to analyze employee levels and actual benefit costs data as part of its true-up audit through May 31, 2019 as information becomes available.

In addition to annualizing the benefits above, Staff has made adjustments to exclude certain benefits from the cost of service calculation. ** ____________________________

____

____

____________ ** Staff has removed the costs associated with ** ________________

____________ ** for the test year ending June 30, 2018 as these costs are not necessary for the provision of safe and adequate service and thus provide no direct benefit to the ratepayers.

** ________________ - ____
________________ **

Staff Expert/Witness: Jason Kunst, CPA

3. <u>Pensions and Other Post-Employment Benefits ("OPEBs")</u>

The Financial Accounting Standards Board ("FASB") issued ASU-2017-07, an accounting standard update (ASU) in March 2017 regarding topic 715, Compensation – Retirement Benefits. The update was released to improve the presentation in the financial statements of net periodic pension cost and net periodic postretirement benefit cost in order to improve the consistency, transparency, and usefulness of financial information. The update applies to all employers that offer defined benefit pension plans and other postretirement benefit plans to their employees. Public business entities were required to account for this update for annual periods beginning after December 15, 2017, including any interim periods. Defined benefit pension cost and postretirement benefit cost consist of several components, referred to as service costs and non-service costs, that are grouped in a company's financial statements. This update requires that an employer report the service cost component in the same line item or items as other compensation costs arising from services performed by employees during the period. The other components of net benefit cost are required to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations. The service cost must be disaggregated from the remaining parts of the net benefit costs and is the only component that is now eligible for capitalization.

The amendments delineated in this update are to be applied retrospectively for the presentation of the service cost component and the other components of net periodic pension cost and net periodic postretirement benefit cost in the income statement and prospectively for the capitalization of the service cost component of net periodic pension cost and net periodic postretirement benefit cost in assets on the balance sheet. Disclosures in the financial statements are required for the first period of adoption.

The Federal Energy Regulatory Commission ("FERC") Office of Enforcement issued an accounting guidance order on December 28, 2017 to the industry on how to apply the accounting and reporting requirements when adopting ASU-2017-07. FERC directed that there would be no change in recording of the non-service costs; they would remain in account 926. However, FERC provided two options to utilities:

1. continuance of capitalizing all or a portion of service and non-service net benefit costs; or
2. follow the capitalization requirements under the ASU, and elect to make a one-time non-revocable election to switch to fully expensing the non-service costs to conform to generally accepted accounting principles ("GAAP") reporting and then provide notice of that change to FERC.

Ameren Missouri instituted the new FASB guidance in January 2018 and utilized FERC's one-time election for expense treatment. Staff agrees that this treatment is appropriate. Since that point Ameren Missouri has been fully expensing the non-service pension and OPEB costs and capitalizing a portion of the service cost component. At this time, this update has caused an increase in capitalization (all else equal) of the net benefit costs for pensions and OPEBs for Ameren Missouri's gas operations in the test year due to the overall negative amount. This update will also affect the tracking mechanism in that more expense will be offset against that built into rates for Pensions and OPEBs, when the net benefit cost difference is positive.

a. Pensions

1. Accounting Standards Codification ("ASC") 715-30 (Formerly FAS 87)

Ameren has one qualified pension plan called the Ameren Retirement Plan that covers all of Ameren's operations. Ameren's actuarial consultants, Willis Towers Watson, determine the allocation valuation for Ameren Missouri's portion of net benefit cost. The minimum required cash contributions for the Employee Retirement Income Security Act ("ERISA") funded status are determined at a total plan level. As of January 1, 2018, the Ameren Retirement Plan is overfunded at 112.98% with an effective discount rate of 5.66% based on the requirements of ERISA and the Pension Protection Act of 2006. The results for January 1, 2019 will be available in the summer of 2019 once the 2019 actuarial valuation is completed, however that will occur subsequent to the true-up cutoff date in this case so Staff will reflect actual plan year 2018 costs through May 31, 2019 during its true-up audit.

i. ASC-715-30 Pension Tracker

In Case No. GR-2007-0003, a Stipulation and Agreement was established that required Ameren Missouri to fund its qualified annual pension expense through an external trust and track the difference between the annual funded pension expense and the level included in rates as established in a previous rate case. The agreement between the parties established the ongoing ratemaking treatment for annual qualified pension cost under FASB ASC Subtopic 715-30 (formerly FAS 87). ** ____________________ ** Ameren Missouri's pension expense and rate base amounts include direct charged costs as well as allocated costs from Ameren Services. Staff accumulates the difference between the annual funded pension cost and the amount included in rates in the tracking mechanism, and has then included that balance in rate base and amortized over a period of five years as an addition or reduction to pension expense. Ameren Missouri also has non-qualified pension expense, which relates to the Ameren Supplemental Retirement Program. ** ____________________ ** Staff has verified that the nonqualified pension expense has not been included in the tracker.

Staff is proposing to reflect pension tracker amounts as reflected in Ameren Missouri's direct case, however those amounts contain estimates and Staff intends to reflect actual pension expense and tracking amounts once that information is available. Staff will re-examine the amounts in the pension tracking mechanism and associated amortization and reflect actual amounts through the May 31, 2019 cut-off date, during its true-up audit.

ii. Annualization

Staff annualized the qualified pension expense to reflect the Plan Year 2018 estimated expense for FAS 87 recommended by the actuarial firm of Willis Towers Watson for Ameren Missouri's qualified pension plan. Staff includes this amount to ensure that the amount collected in rates is sufficient to recover the estimated pension expense provided by Willis Towers Watson. This is the new base expense level that will be utilized in the pension tracker, after rates are established in this case, in order to determine the difference between pension expense included in rates and the amount actually incurred and funded by Ameren Missouri on an ongoing basis for qualified pension expense.

Staff is including Ameren Missouri's estimated pension cost as included in its direct filing and provided by Ameren Missouri's actuary, Willis Towers Watson until Staff can update these estimated amounts with actual Plan Year 2018 costs. This level should be the amount used in the pension tracker, after rates are established in this case, to determine the difference between pension expense included in rates and the amount actually incurred and funded by Ameren Missouri. The cost related to the non-qualified pension plan, the Ameren Supplemental Retirement Program, ** ______________________________ ________ ** will be addressed in a separate section of this cost of service report. Staff will re-examine pension expense through the May 31, 2019 cut-off date, during its true-up audit.

Staff Expert/Witness: Lisa M. Ferguson

b. <u>Other Post-Employment Benefits ("OPEBs")</u>

1. ASC 715-60 (formerly FAS 106) OPEBs

Ameren has a postretirement benefit plan ** ______________________________

____

____

____

____

____

____

____

** The results for January 1, 2019 will be available in the summer of 2019 once the 2019 actuarial valuation is completed.

i. ASC 715-60 OPEBs Tracker

The Stipulation and Agreement in Case No. ER-2007-0002 also addresses the ratemaking treatment for the annual OPEBs cost under FASB's ASC Subtopic 715-60 (formerly FAS 106). As with pension expense, the agreement among the parties requires Ameren Missouri to externally fund annual OPEB expense and establish a tracker for the difference between the amount of OPEB expense in rates from the previous rate case and the actual expense incurred. The agreement between the parties established the ongoing ratemaking treatment for annual OPEBs under FASB ASC Subtopic 715-60, formerly known as Financial Accounting Standard No. 106 ("FAS 106"). **

** Ameren Missouri's OPEB expense and rate base amounts include direct charged costs as well as allocated costs from Ameren Services. Staff accumulates the difference between the annual funded OPEB cost and the amount included in rates in the tracking mechanism, and has then included that balance in rate base and amortized over a period of five years as an addition or reduction to OPEB expense.

Staff is proposing to reflect OPEB tracker amounts as reflected in Ameren Missouri's direct case, however those amounts contain estimates and Staff intends to reflect actual OPEB expense and tracking amounts once that information is available. Staff will re-examine the amounts in the OPEB tracking mechanism and associated amortization and reflect actual amounts through the May 31, 2019 cut-off date, during its true-up audit.

ii. Annualization

Staff also annualized OPEB expense to reflect the projected ASC 715-60 cost provided by Ameren Missouri's actuary, Willis Towers Watson. This level will be the amount used in the OPEB tracker, after rates are established in this case, to determine the difference between ASC 715-60 expense included in rates and the amount actually incurred and funded by Ameren Missouri. Staff adjusted test year OPEBs expense to reflect the Plan Year 2018 estimated expense for FAS 106 provided by the actuarial firm Willis Towers Watson for Ameren Missouri's post-retirement benefit plan. Staff used this estimated amount to determine the adjustment necessary to ensure the amount collected in rates is sufficient to recover the estimated OPEBs expense provided by Willis Towers Watson.

Staff is accepting Ameren Missouri's estimated OPEB cost as included in its direct filing and provided by Ameren Missouri's actuary, Willis Towers Watson until Staff can update these estimated amounts with actual Plan Year 2018 costs. Staff will re-examine OPEB expense through the May 31, 2019 cut-off date, during its true-up audit.

Staff Expert/Witness: Lisa M. Ferguson

c. Non-Qualified Pension Expense

Ameren has a non-qualified pension plan called the Ameren Supplemental Retirement Plan ** ** Staff has normalized the non-qualified pension cost using 3 Year and 5 Year averages of historic data.

Staff Expert/Witness: Lisa M. Ferguson

4. Incentive Compensation

Ameren Missouri offers three types of incentive compensation to its employees: short-term compensation, long-term compensation, and an exceptional performance bonus award. The annual incentive compensation expense consists of incentive compensation paid to Ameren Missouri employees as well as costs that are allocated from Ameren Services, who provide various management and administrative functions to Ameren Missouri.

Staff has relied upon the criteria established by the Commission in the Report and Order for *In re Union Electric Co.*, Case No. EC-87-114: "At a minimum, an acceptable management performance plan should contain goals that improve existing performance and the benefits of the plan should be ascertainable and reasonably related to the plan." 29 Mo P.S.C (N.S.) 313, 325, (1987). Additionally Staff took guidance from the Report and Order issued in Case No. ER-2006-0314, Kansas City Power & Light Company, where the Commission noted, that "maximizing EPS could compromise service to ratepayers, such as by reducing customer service or tree-trimming costs, the ratepayers should not have to bear that expense." Based upon the guidance received in those two cases, Staff recommends the disallowance of any incentive compensation that is based on Ameren Missouri achieving earnings related goals.

a. Short-Term Incentive Compensation

**

[48] ** **

-

[49]

[49] **

**

[redacted] **

b. <u>Long-Term Incentive Compensation</u>

** [redacted] **

c. <u>Exceptional Performance Bonus (EPB)</u>

Ameren offers an Exceptional Performance Bonus (EPB) Program. ** [redacted] **

Staff recommends allowing the full amount of these awards.

Staff Expert/Witness: Jason Kunst, CPA

D. Other Expenses

1. <u>Property Tax Expense</u>

For property assessment purposes, Ameren Missouri is required to file with its respective taxing authorities a valuation of utility property at the beginning of each assessment year, which is January 1st. Several months later, based on the information provided by the utility the taxing authority will in turn send the utility what are known as "assessed values" for every category of the company's property. The taxing authority will issue to the utility company a property tax rate later in the year. The final step in the process is when the taxing authority issues a property tax bill to the company late in each calendar year with a "due date" of December 31. The billed amount of the property taxes is based on the property tax rate applied to the previously determined assessed values of the utilities plant-in-service balances as of January 1 of the same year. Staff included approximately ** ________ ** of property tax expense in its cost-of-service calculation which is based on actual property taxes paid by Ameren Missouri during December 2018.

a. <u>Property Tax Appeals</u>

**

[50] **

**

**

**

[50] ** **

[51] ** **

- [52]

**

b. Staff's Recommendation To Address **

**

**

[53]

[52] **

**

[53] **

**

[54] **

This is similar to the tracking treatment that the Commission authorized in connection with a previous Ameren Missouri electric investment property tax appeal that occurred in Ameren Missouri Case No. ER-2011-0028. In Case No. ER-2011-0028, Ameren Missouri appealed various Missouri counties' assessment of its 2010 distributable property and paid the full amount of the taxes due; however, approximately $28.9 million of the payments were paid under protest and were held in escrow by the various counties. The Commission stated in the *Report and Order* issued in Case No. ER-2011-0028:

> Ameren Missouri shall track any state tax refund it receives because of its appeal of its 2010 assessment. The Commission will decide in a future rate case how any such refunds are to be handled.

**

---

[54] ** **

-

**

c. Staff Recommendation For Concurrent Electric and Natural Gas Rate Case Filing

** [55] [56] [57] **

Staff Expert/Witness: Jason Kunst, CPA

[55] ** **

[56] See footnote 55 above.

[57] See footnote 55 above.

2. Rate Case Expenses

Utility companies incur various expenses in the preparation and presentation of a rate case before the Commission. Included in these costs are expenses for outside counsel, expert witnesses, and miscellaneous expenses for items such as travel expenses and copying costs.

a. Normalization

Staff has reviewed Ameren Missouri's rate case expenses through February 28, 2019 related to this current case for reasonableness and prudence for all of the services and costs incurred. Staff has calculated a normalized level of expense to include in its cost-of-service calculation based on costs incurred through February 28, 2019, to be normalized over ** ____ ________ ** as discussed earlier in this Report as well as in the property tax, software allocation and gas facilities sections of this Report.

Due to the fact that Staff is calculating a normalized level of expense based on the costs incurred to process the current rate case, which is ongoing, Staff will continue to review Ameren Missouri's incurred rate case expenses for prudence and reasonableness as the case progresses. Staff will review expenses incurred through the filing of the true-up reply brief date on August 23, 2019 in this case. Staff requests that the Commission require Ameren Missouri to provide all documentation of rate case expense no later than two weeks after the true-up reply brief date above. Staff will require a reasonable amount of time to review the provided costs and supporting documentation, and will then update the normalized rate case expense to include approved actual incurred expenses.

b. Sharing Recommendation

In the Report and Order in ER-2014-0370, the Commission stated the following:

> The Commission finds that in order to set just and reasonable rates under the facts in this case, the Commission will require KCPL shareholders to cover a portion of KCPL's rate case expense. One method to encourage KCPL to limit its rate case expenditures would be to link KCPL's percentage of recovery of rate case expense to the percentage of its rate increase request the Commission finds just and reasonable.[47] The Commission determines that this approach would directly link KCPL's recovery of rate case expense to both the reasonableness of its issue positions and the dollar value sought from customers in this rate case.[48]

> The Commission concludes that KCPL should receive rate recovery of its rate case expenses in proportion to the amount of revenue requirement it is granted as a result of this Report and Order, compared to the amount of its revenue requirement rate increase originally requested.

Additionally in Spire Missouri Case Nos. GR-2017-0215 and GR-2017-0216, the Commission wrote the following in its Report and Order regarding the sharing of rate case expenses.

> The Commission has broad discretion to determine which expenses a utility may recover from ratepayers. The Commission determines that it is reasonable for Spire Missouri shareholders and ratepayers to share most of the rate case expenses in these cases. However, the Commission recognizes that certain expenses, such as the customer notices and the depreciation study, were required by Commission rule or order and should not be part of the shared rate case expense.

In Case Nos. GR-2017-0215 and GR-2017-0216, the Commission ultimately determined that the rate case expense should be split "50/50" between the shareholders and the ratepayers based upon the number of issues contested at the hearing.

Based upon the recent guidance from the Commission and the evidence and circumstances in the current rate case, Staff recommends that rate case expense be shared by Ameren Missouri's ratepayers and shareholders by utilizing the same method suggested by Staff in Case No. AW-2011-0330, and ordered by the Commission in Case No. ER-2014-0370. Staff is recommending that the percentage of rate case expense that will be borne by the ratepayers is equal to the percentage of Ameren Missouri's initial rate request that is ultimately awarded by the Commission.

Staff is not including Commission required costs such as the depreciation study and customer notices in the sharing recommendation consistent with the Commission's Report and Orders from Case Nos. ER-2014-0370, GR-2017-0215, and GR-2017-0216. Staff proposes to normalize the cost of the depreciation study over five years which represents the interval for which Ameren Missouri is required to complete such analysis. Staff also proposes to normalize the cost of the customer notices over ** ____________________________

____ . **

Staff Expert/Witness: Jason Kunst, CPA

3. Interest on Customer Deposits

Ameren Missouri is required to pay interest on customer deposits equal to one percentage point above the prime rate as published in the Wall Street Journal as being effective on the last business day of each November. Generally, interest is calculated by applying the tariffed interest rate to the level of customer deposits reflected in rate base. Staff has multiplied the tariffed rate by Staff's level of customer deposits to determine the annualized amount of interest expense to include in rates. Staff will re-examine interest on customer deposits as part of its true-up audit.

Staff Expert/Witness: Paul K. Amenthor

4. Advertising & Promotional Expense

In determining its recommended level of allowed advertising expense for Ameren Missouri, Staff has applied the principles it has consistently relied on by adhering to the Commission's decision in Re: Kansas City Power and Light Company, Case Nos. EO-85-185 et al., 28 Mo.P.S.C. (N.S.) 228, 269-71 (1986). In that case, the Commission adopted an approach that classifies advertisements into five categories and provides rate treatment of recovery or disallowance based upon a specific rationale. The five categories of advertisements recognized by the Commission are as follows:

1. General: informational advertising that is useful in the provision of adequate service;
2. Safety: advertising which conveys the ways to safely use gas and to avoid accidents;
3. Promotional: advertising used to encourage or promote the use of gas;
4. Institutional: advertising used to improve the company's public image;
5. Political: advertising associated with political issues.

The Commission utilized these categories of advertisements to explain that a utility's revenue requirement should: 1) always include the reasonable and necessary cost of general and safety advertisements; 2) never include the cost of institutional or political advertisements; 3) include the cost of promotional advertisements only to the extent the utility can provide cost-justification for the advertisement (Report and Order in KCPL Case Nos. EO-85-185, et al., 28 Mo. P.S.C. (N.S.) 228, 269-271 (April 23, 1986)).

In a previous Ameren Missouri electric rate case, Case No. ER-2008-0318, the Commission issued a Report and Order that indicated that the KCPL standard for advertising should be used to evaluate advertising campaigns as a whole. In the response to Staff Data Request No. 0017, Ameren Missouri did not provide information regarding specific gas advertising campaigns for the advertisements in the twelve months ending June 30, 2018. Therefore Staff has not evaluated the advertisements on a campaign basis, only on an individual ad basis.

Staff also reviewed advertising related items that were allocated to Ameren Missouri gas operations from the Ameren level. General and safety advertising costs were not adjusted by Staff. Staff recommends removal of advertising costs associated with items found to be promotional, political, or institutional in nature. Please refer to Appendix 3, Schedule CDC-d1 to view copies of all advertisements for which Staff has disallowed rate recovery.

Staff Expert/Witness: Christopher D. Caldwell

5. **External Auditor Fees**

Ameren Missouri is a publicly traded company and as such is required to disclose financial information that is independently audited. In addition to financial statement audits, the external audit firm typically provides other services such as tax advice and consulting work. Staff analyzed historical external auditor costs from January 2015 through December 2018 and determined that using an average of the costs for the four years ending December 31, 2015, 2016, 2017, and 2018 is an appropriate level of outside auditor expense to include in its cost of service calculation. ** ** Staff has made an adjustment to exclude this charge from the cost of service calculation.

Staff Expert/Witness: Christopher D. Caldwell

6. Board of Directors and Executive Expenses

During the test year ending June 30, 2018, Ameren Missouri gas operations was allocated approximately ** ____ ** for certain expenses related to the Ameren Corporation Board of Directors. ** ____ ____ ** During its review Staff found additional information regarding ** ________________________ ________________________ ** Staff has submitted Data Request No. 0236 seeking additional information on these expenses. Staff may propose further adjustments as part of its true-up audit after reviewing the responses to these data requests.

Staff Expert/Witness: Jason Kunst, CPA

7. Lease Expense

During the test year, Ameren Missouri incurred expenses related to leases on land, equipment, and facilities utilized to provide service. Staff removed the amount for each lease not being renewed and included the annualized level of expense for each ongoing lease in effect as of February 2019 in Ameren Missouri's cost of service calculation.

FASB promulgates accounting standards that define how companies must account for their costs, including leases, for financial reporting purposes. Until recently, leases were classified as either operating or capital (now called "finance") leases. However, a new lease accounting standard has been introduced by FASB that will change how companies account for this item, namely Accounting Standards Update 2018-11, Leases Topic 842, Targeted Improvements ("ASC 842"). The most significant change in accounting due to ASC 842 is that most leases formerly classified as operating in nature will now be capitalized on the balance sheet. Under ASC 840, the previous lease expense guidance, FASB permitted operating leases to be reported only in the footnotes of corporate financial statements and the lease payments were charged to expense as incurred. Under ASC 842, the only leases that are exempt from the capitalization requirement are short-term leases for which the lease period is less than or equal to 12 months in length.

Ameren Missouri began to implement the new lease guidance on January 1, 2019, and assessed its effect on the accounting for the regulated utilities: ** ** According to Ameren Missouri employees they have no gas operation leases that meet the criteria of ASC 842.

Staff has requested what the impact of FASB ASC 842 would have on accounting of Ameren Missouri's gas operations in Data Request No. 0262. If there is additional information received by Staff that, through the response, suggests any further changes to the cost of service, Staff may propose further adjustments in this area.

Staff Expert/Witness: Christopher D. Caldwell

8. <u>Outside Services</u>

Ameren Missouri incurs direct charged and allocated expenses for outside businesses to perform various types of work for both electric and gas operations. **

____________________ -____
____________ **

Staff Expert/Witness: Jason Kunst, CPA

9. Insurance Expense

Ameren Missouri maintains insurance policies with various third-party insurance providers for the purpose of mitigating potential risk of financial loss. Insurance coverage for Ameren Missouri includes crime, excess property, directors and officers, workers' compensation, fiduciary, cyber liability, and owners and contractors protection. Staff's annualization reflects the most current premium amounts as of February 2019 in order to determine an ongoing level of insurance expense. Staff will review this issue as part of true-up and examine any further policy renewals.

Staff Expert/Witness: Christopher D. Caldwell

10. Injuries and Damages

Injuries and damages represent the portions of legal claims against a utility that are not subject to reimbursement under the utility's insurance policies. Ameren Missouri records an accrual for injuries and damages for an anticipated amount of future payouts. Staff reviewed the actual injuries and damages payment levels and compared that to the ongoing reserve for this item recorded by Ameren Missouri gas from July 2013 through February 2019. Ameren Missouri also indicated that there are currently no injury or damage lawsuits pending against Ameren Missouri gas operations in its response to Staff Data Request No. 0067. Based on this analysis, Staff has determined that the test year accrual for injuries and damages is excessive in relation to actual costs incurred. Staff recommends including a three year average of injuries and damages payouts for the periods ending June 30, 2016, 2017 and 2018 in its cost of service calculation as it is the most appropriate reflection of recent experience and the best indication of an ongoing level of these expenses.

Staff Expert/Witness: Christopher D. Caldwell

11. Environmental Costs

Ameren Missouri has experienced costs related to environmental cleanup activities at various former manufactured gas plant ("MGP") sites. As of December 31, 2013, Ameren Missouri had one remaining former MGP site for which remediation was scheduled, the Columbia site. Remediation was complete at the other Ameren Missouri former MGP sites prior to December 31, 2013. Ameren Missouri completed all known cleanup activities for gas operations with the receipt of the completion certificate for the Columbia MGP from MoDNR in October 2018. ** ____ ____________ ** did not incur any environmental costs during the test year, and has informed Staff that there are no further environmental cleanup activities.

Staff Expert/Witness: Christopher D. Caldwell

12. Dues and Donations

Staff reviewed the membership dues paid and donations made to various organizations by Ameren Missouri during the test year ending June 30, 2018. Staff recommends disallowance of certain dues and donations included by Ameren Missouri in its test year expenses, because these costs are not necessary for the provision of safe and adequate service, and thus provide no direct benefit to ratepayers. Staff's disallowance is consistent with prior Commission practice. In *Re: Missouri Public Service, a Division of UtiliCorp United, Inc.,* Case Nos. ER-97-394, et al., Report and Order, 7 Mo.P.S.C.3d 178, 212 (1998), the Commission stated:

> The Commission has traditionally disallowed donations such as these. The Commission finds nothing in the record to indicate any discernible ratepayer benefit results from the payment of these donations. The Commission agrees with Staff in that membership in the various organizations involved in this issue is not necessary for the provision of safe and adequate service to the MPS ratepayer.

Ratepayers involuntarily contribute to these organizations when recovery of these expenses by Ameren Missouri is allowed in rates.

Staff Expert/Witness: Christopher D. Caldwell

a. Lobbying

Staff reviewed the dues and donations expense recorded during the test year and determined that some of the organizations to which Ameren Missouri belongs use a portion of member payments received to fund government affairs or lobbying activities. Staff traditionally disallows the cost of these activities and, therefore, has removed the associated amounts from Ameren Missouri's test year expense level.

In addition, Staff reviewed the calendars and itineraries of certain employees involved in lobbying activities that record time to Ameren Missouri gas operations, and removed a portion of employee's salaries that recorded time for lobbying activities above-the-line.

Staff Expert/Witness: Christopher D. Caldwell

13. Distribution Maintenance Expense

Staff has reviewed Ameren Missouri's actual historical non-labor distribution maintenance costs for the period of July 2013 through December 2018, and is recommending an ongoing level of maintenance expense based on the most recent three year average due to the fluctuation over time of these costs. Staff will re-examine the non-labor distribution maintenance costs as part of its true-up audit.

Staff Expert/Witness: Paul K. Amenthor

14. Uncollectible Expense

Uncollectible expense represents a portion of retail rate revenue that Ameren Missouri has been unable to collect from customers due to non-payment of their bills.

During Staff's review, Staff learned that ** ______________________________

____

____

____

____

____

____

____

____

** Ameren Missouri also still utilizes third party collections agents to recover its bad debt expense.

Staff examined actual net write-off data for the period July 2013 through December 2018 and has seen a general decline in uncollectibles. Staff has included actual net write-offs experienced during the test year in the cost of service. Staff will re-examine the level of uncollectible expense as part of its true-up audit.

Staff Expert/Witness: Paul K. Amenthor

15. <u>PSC Assessment</u>

Commission operations are funded by assessments levied upon the utility companies under its jurisdiction. The required funding level from each utility is re-evaluated each year, and a new assessment amount is billed to each regulated utility on July 1. All of the assessments collected in total are used to meet the Commission's operating costs for regulating those utilities. Staff's PSC assessment annualization adjustment represents the difference between the amount of PSC assessment recorded on Ameren Missouri's gas books during the test year, or the twelve months ending June 30, 2018, and the most recent PSC assessment that went into effect as of July 1, 2018 (fiscal year 2019), which is within the Commission-established true-up cutoff of May 31, 2019.

Staff Expert/Witness: Christopher D. Caldwell

16. <u>Energy Efficiency and Low Income Programs</u>

Ameren Missouri gas currently has two Commission approved programs in its energy efficiency portfolio: (1.) Missouri Energy Efficient Natural Gas Equipment and Building Shell Measure Rebate Programs ("Efficiency Programs") and (2.) Missouri Energy Efficient Natural Gas Co-Delivery Program ("Co-Delivery Program") with Ameren Missouri electric. The Efficiency Programs are designed to encourage more effective utilization of natural gas through the replacement of less efficient natural gas equipment with high efficient ENERGY STAR® qualified natural gas equipment and other high efficiency equipment and building shell measures. The Co-Delivery Program is designed to deliver energy savings through one or more energy efficiency programs offered by Ameren Missouri electric.

The Commission approved Stipulation and Agreement in Case No. GR-2010-0363[58] authorized a funding level for the Efficiency Programs and the Co-Delivery Program annually at $700,000 collected in base rates, $263,000 of which is annually dedicated to the company's Weatherization Program[59]. The Energy Efficiency Advisory Group ("EEAG"), composed of Ameren Missouri, Staff, OPC and the Missouri Division of Energy ("DE"), operates as an advisory group that provides input on the design, implementation and evaluation of the Efficiency Program and the Co-Delivery Program.

The Efficiency Program and Co-Delivery Program are intended to benefit all eligible Ameren Missouri Residential or General Service natural gas rate class customers. Staff recommends continuation of both programs as they are currently structured.

Staff Expert/Witness: Kory Boustead

a. <u>Weatherization Program</u>

The Ameren Missouri Weatherization Program ("Program") is intended to assist qualified residential gas customers in reducing their use of energy through weatherization and conservation. This is a voluntary program available to customers receiving service under the Residential Service Rate. This program is administered by DE and the Program funds are administered by the State Environmental Improvement and Energy Resources Authority ("EIERA") with an annual funding level of $263,000 included in base rates. The Program provides a residential weatherization grant program, including energy education, for primarily lower income customers, per the Commission order approving the Unanimous Stipulation and Agreement in Case No. GR-2010-0363. Staff recommends continuation of the Weatherization Program as it is currently structured.

Staff Expert/Witness: Kory Boustead

[58] In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Natural Gas Service Provided to Customers in the Company's Missouri Service Area, UNANIMOUS STIPULATION AND AGREEMENT, paragraph 2 Revenue Requirement page 1.

[59] In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Natural Gas Service Provided to Customers in the Company's Missouri Service Area, UNANIMOUS STIPULATION AND AGREEMENT, paragraph 6 Energy Efficiency Programs, page 3.

b. Accounting Treatment of Energy Efficiency and Weatherization Programs

In the Stipulation and Agreement from Case No. GR-2010-0363, the parties agreed to include annual funding for weatherization in the amount of $263,000 and $437,000 for other energy efficiency programs for a total of $700,000. Staff is examining the level of actual expenditures for energy efficiency in comparison to the amount collected in rates and may propose further adjustments later if necessary. The level of actual non-weatherization energy efficiency expenditures has not exceeded the level of funds included in rates since the last rate case and a regulatory liability (no rate base inclusion) of $388,282 remains as of December 31, 2018. Ameren Missouri has proposed, and Staff agrees, to retain this regulatory liability while maintaining the level of funding at $263,000 for weatherization and $437,000 for other energy efficiency programs. Also, please refer to the Energy Efficiency Programs section of the Report sponsored by Staff witness Kory Boustead for an overview of all existing programs.

Staff Expert/Witness: Lisa M. Ferguson

17. Amortization of Regulatory Assets and Liabilities

In Ameren Missouri's electric rate case, Case No. ER-2010-0036, the Commission approved a Stipulation and agreement regarding the amortization of severance cost and equity issuance (flotation) costs incurred in 2009. In that case the severance cost was amortized over three years and the issuance cost was amortized over five years. Staff recommended that same treatment and same amortization periods in Ameren Missouri's last gas rate case, Case No. GR-2010-0363. Staff maintains that the allocated gas portion of both the equity issuance and severance amortizations were included in the cost of service in that case based on the Commission approved Stipulation and Agreement. However, Ameren Missouri amortized the equity issuance amount from the effective date of rates, February 2, 2011, in Case No. GR-2010-0363 through the expiration of the five year amortization period but did not record an amortization for the companion gas portion of the severance costs. Once the amortization period expired for the equity issuance costs, Ameren Missouri removed the equity issuance amortization from its records. However, after removal of the amortization, the amounts of these two amortizations are still being recovered in rates through the effective date of rates in this proceeding. Staff recommends a return of the overcollection related to these amortizations over a period of five years.

Staff Expert/Witness: Lisa M. Ferguson

18. <u>Miscellaneous Expense</u>

Ameren Missouri recorded a variety of miscellaneous expenses that are charged to various FERC Uniform System of Accounts ("USOA") accounts during the 12 months ending June 30, 2018. Staff reviewed the costs recorded in the 900 accounts for items that were not already addressed by Staff in other areas such as dues and donations, advertising, lobbying etc. As part of this review Staff examined the monthly expense reports for the officers of Ameren, Ameren Services, and Ameren Missouri. Staff has removed from the test year costs for items that provided no benefit to ratepayers, such as ** ____________________________ ____ ________________ . **

Ameren has requested an extension for response to Data Request No. 0186.1. Staff will review the response and make the necessary adjustments once the response and justification are received, if needed.

Staff Expert/Witness: Christopher D. Caldwell

E. Income Taxes

Income tax expense, as calculated by Staff, is largely consistent with the methodology used in Ameren Missouri's last electric rate case, Case No. ER-2016-0179. The income tax calculations begin by taking Staff's adjusted net operating income before taxes amount and adding to or subtracting from net operating income various timing differences in order to obtain the net taxable income amount for ratemaking purposes. These "add back" and/or subtraction adjustments are necessary to identify new amounts for the tax deductions that are different from those levels reflected in the income statement as revenues or expenses. A tax timing difference occurs when the timing used in reflecting a cost (or revenue) for financial reporting purposes (book purposes) is different than the timing required by the IRS in determining taxable income (tax purposes). Current income tax reflects timing differences consistent with the timing required by the IRS. The tax timing differences used in calculating taxable income for computing current income tax are as follows:

Add Back to Operating Income Before Taxes:

- Book Depreciation Expense
- Book Depreciation Charged to O&M

Subtractions from Operating Income:

- Interest Expense – Weighted Cost of Debt X Rate Base
- Tax Straight-Line Depreciation
- Preferred Dividend Deduction

Tax timing differences can be treated for ratemaking purposes under either the "flow-through" or "normalization" approaches. The tax normalization method defers, for ratemaking purposes, the deduction taken for tax purposes for certain tax timing differences. The effect of use of tax normalization is to allow utilities the net benefit of certain net tax deductions for a period of time before those benefits are passed on to the utility's customers in rates. The flow-through tax method essentially provides for the same tax deduction taken as a deduction for ratemaking purposes as is taken for tax purposes. For purposes of this rate case, Staff has normalized the depreciation deduction but has flowed through the preferred dividend deduction and the interest expense deduction. However, under either the tax normalization or tax flow-through approach, the resulting net taxable income for ratemaking is then multiplied by the appropriate federal, state and city tax rates to obtain the current liability for income taxes. A federal tax rate of 21 percent, a state income tax rate of 6.25 percent, and a city tax rate of .1097 percent were used in calculating Ameren Missouri's current income tax liability. The difference between the calculated current income tax provision and the per book income tax provision is the current income tax provision adjustment.

Ameren Missouri was in a taxable position as of the third quarter of 2018, meaning that any remaining net operating loss ("NOL") balance that remained will be used to offset taxable income and all deductions are expected to be utilized on the 2018 consolidated tax return when it is completed and filed with the IRS in August or September 2019.

Staff will review income tax expense as part of its true-up audit and make additional adjustments as necessary.

Staff Expert/Witness: Lisa M. Ferguson

1. <u>Excess ADIT</u>

The Tax Cuts and Jobs Act was signed into law in December 2017, and a resulting reduction in the corporate tax rate required the revaluation of accumulated tax timing differences that were previously valued at 35% to be revalued at 21%. This excess deferred tax value is required to be returned to customers over different periods based on whether the excess deferred taxes are protected or unprotected. Protected excess ADIT is the portion associated with accelerated depreciation tax timing differences that must be "normalized" for ratemaking purposes and where the flow back of excess ADIT cannot be returned to customers any more quickly than over the estimated life of the assets that gave rise to the ADIT. Unprotected excess ADIT is the portion of the deferred tax reserve that resulted from normalization treatment of tax timing differences other than accelerated depreciation. Unprotected excess ADIT can be returned to customers over any period approved by the Commission.

The amortization of the return of excess ADIT was initially included in rates for Ameren Missouri gas customers as part of the interim rate decrease that was ordered by the Commission to take effect on January 2, 2019. That interim rate decrease was reviewed by Staff, agreed to amongst the parties and approved by the Commission in order to promptly reduce rates in recognition of the amounts Ameren Missouri gas operations will save due to the corporate federal income tax reduction resulting from the Tax Cuts and Jobs Act of 2017. Staff has continued to include this ongoing excess ADIT tracking mechanism as part of restating rates in this current proceeding. This amount has been reflected in the deferred taxes section of the income tax schedule contained in Staff's Direct Accounting Schedules, Schedule 11 – Line 40.

Staff Expert/Witness: Lisa M. Ferguson

VII. Depreciation

A. Summary

During the data request period, Staff requested data to support the 2014 depreciation study and an update of plant additions and retirements through December 31, 2018 in Staff Data Request Nos. 0238, 0239, and 0240. On April 11, 2019, Staff received the responses to Staff Data Request Nos. 0239 and 0240. Staff will use all Ameren Missouri proposed depreciation rates[60] until Staff can perform a depreciation study of its own. Staff will amend the depreciation schedule as necessary in Staff's rebuttal testimony.

Staff Expert/Witness: David Buttig, PE

1. Capitalized O&M Depreciation Expense

Ameren Missouri uses power operated equipment and transportation equipment for various construction projects. A portion of the depreciation expense related to the amount of time this equipment is used for construction is capitalized and charged to specific projects once those projects are placed in plant-in-service. Staff has removed a portion of depreciation expense related to power operated equipment and transportation equipment from total depreciation expense. Capitalized depreciation must be deducted from overall depreciation expense for these accounts in order to prevent double recovery and to reflect total annualized depreciation expense related to operations and maintenance. Staff will re-examine the amount of capitalized O&M depreciation in relation to the May 31, 2019 plant balances as part of its true-up audit.

Staff Expert/Witness: Paul K. Amenthor

VIII. Appendices

Appendix 1 - Staff Credentials

Appendix 2 - Support for Staff Cost of Capital Recommendation

Appendix 3 - Other Staff Schedules

---

[60] Depreciation rates found in Schedule JFW-D1 pages 50 and 51 of the Direct Testimony of John F. Wiedmayer filed in this case.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF PAUL K. AMENTHOR

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

COMES NOW PAUL K. AMENTHOR and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Report - Cost of Service*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

Paul K. Amenthor

PAUL K. AMENTHOR

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 12th day of April 2019.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF MICHELLE A. BOCKLAGE

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

COMES NOW MICHELLE A. BOCKLAGE and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Report - Cost of Service*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Michelle A. Bocklage

MICHELLE A. BOCKLAGE

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 17th day of April 2019.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF KORY J. BOUSTEAD

STATE OF MISSOURI COUNTY OF COLE	)))	ss.

COMES NOW KORY J. BOUSTEAD and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Report - Cost of Service*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Kory J. Boustead

KORY J. BOUSTEAD

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 18th day of April 2019.

D. Suzie Mankin

Notary Public

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF CHRISTOPHER D. CALDWELL

STATE OF MISSOURI COUNTY OF COLE	)))	ss.

COMES NOW CHRISTOPHER D. CALDWELL and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Report - Cost of Service*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

Christopher D. Caldwell
CHRISTOPHER D. CALDWELL

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 12th day of April 2019.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin
Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF DAVID BUTTIG, PE

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

COMES NOW DAVID BUTTIG, PE and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Report - Cost of Service*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

David Buttig

DAVID BUTTIG, PE

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 17th day of April 2019.

D. Suzie Mankin

Notary Public

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF NATELLE DIETRICH

STATE OF MISSOURI COUNTY OF COLE	)))	ss.

COMES NOW NATELLE DIETRICH and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Report - Cost of Service*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Natelle Dietrich

NATELLE DIETRICH

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 18th day of April 2019.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF LISA M. FERGUSON

STATE OF MISSOURI COUNTY OF COLE	)))	ss.

COMES NOW LISA M. FERGUSON and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Report - Cost of Service*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Lisa M. Ferguson

LISA M. FERGUSON

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 12th day of April 2019.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF ROBIN KLIETHERMES

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

COMES NOW ROBIN KLIETHERMES and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Staff's Report - Cost of Service*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Robin Kliethermes

ROBIN KLIETHERMES

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 19th day of April 2019.

D Suzie Mankin

Notary Public

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF JASON KUNST, CPA

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

COMES NOW JASON KUNST, CPA and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Report - Cost of Service*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

JASON KUNST, CPA

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 12th day of April 2019.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin
Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF JOSEPH P. ROLING

STATE OF MISSOURI COUNTY OF COLE	)))	ss.

COMES NOW JOSEPH P. ROLING and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Report - Cost of Service*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

Joseph P. Roling

JOSEPH P. ROLING

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 18th day of April 2019.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D. Suzie Mankin

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF JEFFREY SMITH

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW JEFFREY SMITH and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Report - Cost of Service*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

JEFFREY SMITH

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 18th day of April 2019.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin
Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF SEOUNG JOUN WON, PhD

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

COMES NOW SEOUNG JOUN WON, PhD and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Staff's Report - Cost of Service*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

Seoung Joun Won

SEOUNG JOUN WON, PhD

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 17th day of April 2019.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

D Suzie Mankin

Notary Public