MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT

COST OF SERVICE

UNION ELECTRIC COMPANY
d/b/a Ameren Missouri

CASE NO. ER-2021-0240

Jefferson City, Missouri
September 3, 2021

** Denotes Confidential Information **

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I. Executive Summary

Staff has conducted a review in Case No. ER-2021-0240 of all revenue requirement cost of service components (capital structure and return on rate base, rate base, depreciation expense and other operating expenses) which comprise Union Electric Company's d/b/a Ameren Missouri ("Ameren Missouri") revenue requirement. This audit was in response to Ameren Missouri's filing made on March 31, 2021, seeking to increase its retail rates approximately $299,468,000 million on an annual basis.

Staff's recommended increase of $221,386,208 million in revenue requirement is based upon a test year for the twelve months ending December 31, 2020, including true-up estimates through September 30, 2021. Staff recommends a return on equity ("ROE") of 9.50% for Ameren Missouri. This ROE combined with recommended capitalization ratios and senior capital cost rate results in an overall rate of return or cost of capital for Ameren Missouri of 6.725%.

The impact of Staff's recommended revenue requirement for each retail rate customer class will be addressed in Staff's rate design direct testimony and report that is scheduled to be filed on September 17, 2021.

Below are definitions of technical terms that will frequently be used in the Cost of Service Report:

Test Year: The test year income statement is the starting point for determining a utility's existing annual revenues, operating costs, and net operating income. In this case, the test year is the 12 months ending December 31, 2020.

Update: An update period considers factors that occur subsequent to test year through a specific date. Updating a case does not change the test year, but adjusts the test year to reflect the audited results associated with factors considered through the update period. The update period represents the last date through which historical data is available to be audited by Staff

prior to filing of direct testimony. There has been no update period ordered as part of this rate proceeding.

True-Up: A true-up date generally is established when significant changes in a utility's cost of service occur after the end of the test year (or, if applicable, the end of the update period), but prior to the operation-of-law date, and one or more of the parties have decided these significant changes in cost of service should be considered for cost-of-service recognition in the current case. True-up audits may involve the filing of additional testimony and, if necessary, additional hearings beyond the initial testimony filings and hearings for a case. The true-up date ordered in this case is September 30, 2021.

Normalization: Utility rates are intended to reflect normal ongoing operations. A normalization adjustment is required when the test year reflects the impact of an abnormal event. For example, overtime expense may be normalized to remove an unusual weather event, and revenue may be normalized to remove abnormal weather conditions.

Annualization: Annualization adjustments are the most common adjustment made to test year results to reflect the utility's most current annual level of revenue and expenses. Annualization adjustments are required when changes have occurred during the test year and/or update period, which are not fully reflected in the unadjusted test year results. For example, signing a new labor contract would necessitate annualizing the new level of wages to expense. Similarly, an addition of a large industrial customer would necessitate an annualization of billing determinants and revenues.

Disallowances: In examining test year results, Staff makes disallowances to costs that should not be recovered in rates. Examples of these types of costs are certain advertising costs and donations made to charitable organizations.

Return on Equity: The ROE is the return allowed in rates on the shareholders' equity investment in a regulated utility.

Rate of Return: The ROR is the overall cost of capital; that is, the cost of debt and the Commission-selected ROE weighted by the capital structure.

Staff Expert/Witness: Lisa M. Ferguson

II. Background

Ameren Missouri provides electric utility service to 1,286,072 million retail customers. Ameren Missouri's service area is primarily in the eastern half of Missouri, but also includes limited areas in northwestern Missouri. Ameren Missouri is wholly owned by Ameren Corporation ("Ameren"), which also provides utility service in Illinois through its Ameren Illinois operating subsidiary. Ameren Missouri also operates a natural gas distribution business in Missouri, which serves 134,809 customers.

Ameren Missouri last sought a general change of its electric retail rates when it filed a request for an $811,016 million annual decrease on July 3, 2019, in Case No. ER-2019-0335. As a result of the Missouri Public Service Commission's ("PSC" or "Commission") Order approving the Unanimous Stipulation and Agreement in that proceeding, Ameren Missouri was granted an annual rate decrease of approximately $32.0 million, effective April 1, 2020.

Staff Expert/Witness: Lisa M. Ferguson

III. Test Year/True-Up Period

Ameren Missouri filed its case based upon a test year of the twelve-month period ending December 31, 2020, and made adjustments to its case to reflect the impacts of anticipated changes through the true-up period ending September 30, 2021. These dates were adopted by the Commission in its *Order Setting Procedural Schedule and Adopting Test Year* issued on June 9, 2021, which set the test year as the twelve months ending December 31, 2020 and trued-up through September 30, 2021.

Based on current information, Staff's revenue requirement as presented in its Accounting Schedules includes the expected changes for certain major items within a true-up period ending September 30, 2021. For example, the plant and depreciation reserve balances have been adjusted to reflect the anticipated additions through the September 30, 2021, true-up cut-off point. Staff will include actual changes to the value of these items in its case, as well as update additional components of the cost of service, within the upcoming true-up filing later in this proceeding. Staff is not now adopting the value of the items quantified in Staff's true-up estimate inclusions for the purpose of setting Ameren Missouri's rates. Staff has only included these items as placeholders, pending Staff's completion of its true-up audit. Fuel expense has also been adjusted to reflect coal commodity contract prices and coal transportation contract

prices, which were effective on January 1, 2021. The true-up information to be filed is described in a footnote to the *Jointly Proposed Procedural Schedule and Procedures* that was filed on June 2, 2021, and adopted by the Commission in its *Order Setting Procedural Schedule and Adopting Test Year* that was issued on June 9, 2021.

Staff Expert/Witness: Lisa M. Ferguson

IV. Ameren Board of Directors and Board Committee Meeting Documentation

Ameren Corporation ("Ameren") has a board of directors that oversees all of Ameren's affiliate operations and Ameren Missouri also has a board of directors that meets periodically. Ameren's and Ameren Missouri's boards have board meeting minutes that Staff reviews. Ameren also has several board committees that monitor different aspects of corporate business and then report to the Board. These committees are:

Audit & Risk
Finance
Human Resources
Nominating & Corporate Governance
Nuclear & Operating

In addition, Ameren also has different divisions of its employees based on their level of employment within the organization. Below are the teams listed from higher level employees to lower level employees:

ELT – Executive Leadership Team
SLT – Senior Leadership Team
ALT – Ameren Leadership Team

The Boards, the Committees, and the Teams all meet on a cyclical basis, some more often than others. Each of these groups have documentation, presentations, meeting minutes, etc. that contain discussions and important information regarding business operations and plans of the companies.

Historically, Staff has requested and has viewed this documentation as part of its audit during a general rate case proceeding. This has taken Staff an average of 3-4 weeks to get through all of the documentation, if timely provided, depending on how long it has been between

Ameren Missouri's rate case proceedings. There is only one Ameren employee who has access to all of the board documents provided to Ameren Missouri's legal team for review prior to Staff receiving the documents for analysis and possible data request ("DR") issuance. There have been times recently that this Ameren employee was unavailable. With the statutory limitation of time to process Ameren Missouri's rate cases and the size of the utility and number of items generally at issue in rate cases, Staff requests that these documents be provided to Staff upon Staff's request at any point, such as between general rate case proceedings. This will allow Staff the time to log the items reviewed and allow for more efficient issuance of data requests during the limited review time of a general rate case proceeding.

Staff recommends that the Commission order Ameren and Ameren Missouri to continually maintain and provide to Staff upon Staff's request all board, committee, and team documentation, presentations, etc. between general rate case proceedings. Staff is aware of other utilities regulated by this Commission that allow this method for Staff review. This will assist Staff in conducting a quality and timely review of Ameren Missouri's requests in general rate case proceedings.

Staff Expert/Witness: Lisa M. Ferguson

V. Coronavirus Pandemic ("COVID") AAO Cost Recovery

In the Non-Unanimous Stipulation and Agreement filed in Case No. EU-2021-0027, which the Commission approved on March 10, 2021, the parties agreed to an accounting authority order (AAO) in which Ameren Missouri was allowed track and defer into a regulatory asset the following costs beginning March 1, 2020 until March 31, 2021:

1. New or incremental, direct or allocated, Ameren Missouri operating and maintenance expense related to protecting Ameren Missouri employees and customers, and Ameren Services Company employees, as follows:
    i. Additional cleaning of facilities and vehicles;
    ii. Personal protective equipment (i.e. masks, gloves, sanitizing sprays, temperature testing, face shields, etc.);
    iii. Technology upgrades and associated contract labor directly related to enabling Ameren Missouri and Ameren Services employees to work from home, provided that such deferred costs shall not extend to costs normally incurred by the

employee, including internet connectivity at the home and cellular phones and service. In addition, one-half of the $62 per month stipend paid to employees domiciled in Illinois related to the requirement that they work from home during the Pandemic shall be deferred;

iv. Employee sequestration preparation costs (and employee sequestration costs if that become necessary).

2. Write-offs of bad debt expense, net of any recoveries of debt that was written-off to the extent cumulative write-offs exceed $7,885,039;
3. COVID-19 related customer communication costs, including production, distribution, printing, and postage;
4. Expenses for COVID-19 related temporary operating centers, security for equipment and supplies at such temporary operating centers, and temporary toilet and trailer rentals at these temporary operating centers;
5. Mileage or rental vehicle costs for employees who no longer share service vehicles due to COVID-19; and
6. Waived late payment and reconnection fees (foregone revenues) up to $9,541,983.

Ameren Missouri also agreed to track and record operating cost reductions in a separate regulatory liability. The operating costs reductions that were to be tracked and netted against deferred costs are as follows:

1. Travel expense (hotels, airfare, meals, entertainment) (net of any cancellation cost for travel cancelled due to COVID-19);
2. Training expense;
3. Office supplies;
4. Utility service provided to facilities leased or owned by Ameren Missouri;
5. Staffing reductions;
6. Reduced employee compensation and benefits;
7. Any taxable net operating loss that is carried back to previous tax years per the 2020 Coronavirus Aid, Relief, and Economic Security (CARES) Act; and

8. Any federal, state, or local assistance Ameren Missouri directly receives related to COVID-19 relief, and any federal, state, or local assistance Ameren Missouri receives through an affiliate, directly or by allocation.

Staff used the base amounts savings that the signatories to the stipulation agreed to for the following items:

1. Travel, training and office supplies expense: $9,596,296
2. Utility service provided to facilitates leased or owned by Ameren Missouri: $646,076
3. Reduced benefits: $35,798,398

Staff reviewed Ameren Missouri's workpapers and the report filed by Ameren Missouri in Case No. EU-2021-0027 on May 17, 2021. Some of the amounts contained in the workpapers and in the report did not match for the months of March 2020 through December 2020. In cases where the amount did not match, Staff used the amounts listed in the report. Staff examined the following revenues, expenses and savings for the period of March 1, 2020 through March 31, 2021:

Bad Debt Expense - Staff used the net write-offs for the amount of bad debt expense to include in the deferral. Net write-offs are used in determining bad debt expense when setting rates and the amount of bad debt expense included in the previous case and use of write-off information is how Staff calculated bad debt expense in this case and in Ameren Missouri's last rate case. The amount of bad debt expense to include in the deferral is a savings of $1,178,312.

COVID 19 Related Customer Communications – Staff recommends the appropriate amount to include in the deferral COVID-19 related customer communications is $280,555.

Additional Cleaning Costs and Personal Protective Equipment, Etc. - Staff included O&M costs related to protecting Ameren Missouri employees and customers, and Ameren Services Company. The amount of these costs that should be deferred is $11,120,093.

Savings Related to Travel and Office Supplies - The amount of savings that should be included as an offset to the expenses in this deferral is $5,292,137.

Late Payment Fees and Reconnection Fees - Staff has included an amount for both fees combined in the deferral in the amount of $3,805,964.

Staff recommends the amount of deferral as of March 31, 2021 should be $8,736,163. Staff proposes to amortize this amount over a 5-year period. The annual amortization would accordingly be $1,747,233.

Staff Expert/Witness: Kimberly K. Bolin

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

A. Summary

Staff estimated the market based cost of common equity ("COE"), and calculated an authorized return on equity ("ROE") recommendation for Ameren Missouri's vertically integrated electric utility operations using a comparative COE analysis. Staff's analysis takes into account changes in economic and capital market conditions by employing widely-used COE estimation methodologies: the constant-growth discount cash flow model ("DCF") and the capital asset pricing model ("CAPM"). The comparative analysis method allowed Staff to calculate the change in authorized ROE based on the change in its COE estimate from period to period by using the Commission's decision in the most recent The Empire District Electric Company ("Empire") rate case[1] as a benchmark. The most recent Empire rate case was fully litigated before the Commission, including rate of return/capital structure issues.

In the Empire rate case, the Commission authorized an ROE of 9.25% and Staff estimated a corresponding DCF COE of 7.74% (see PC-11).[2] Staff's DCF COE estimate for the current case is 8.29% (see PC-11), which indicates that COE has increased by up to 55[3] (see PC-11) basis points ("bps") since the Commission's decision in the Empire rate case. However, Staff believes that current utility COE estimates are unusually and unsustainably high due to the effects of the COVID-19. When COVID-19 hit in 2020, it caused massive volatility in the economy - gross domestic product ("GDP") fell sharply, followed by an equally sharp recovery.[4] The recovery from the COVID-19 is spurring fears of high inflation expectations and,

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[1] ***In the matter of Empire District Electric Company***, Case Nos. ER-2019-0374 **(*Report & Order,*** issued February 21, 2018) at page35.
[2] Staff's COE estimate is the average of DCF model and CAPM COE estimates.
[3] 8.22% minus 7.74%.
[4] https://www.cnbc.com/2020/07/30/us-gdp-q2-2020-first-reading.html.

consequently, high market risk.[5] The effects of the high market risk are most notable in the CAPM where the beta coefficient is unusually and unsustainably high compared to the period of the Empire rate case.[6] Inflation fears can increase market risk for utilities as investors believe that regulators will not adjust revenues fast enough to compensate for rising input costs.[7] Higher market risk means that investors require higher returns (COE) for their investments. Staff's opinion is, however, just like many economic and financial experts, that inflation concerns, and consequently, the current high market risks, are likely to be transitory.[8] [9]

Based upon the above discussion, Staff's position is it is reasonable that the ROE be increased by 25 basis points, instead of 55 bps; from the 9.25% ROE authorized for Empire, to 9.50%, the midpoint of Staff's recommended zone of reasonableness of 9.25% to 9.80%. Staff set the zone of reasonableness by adding 55 bps (the total increase in COE since the Empire rate case) to the Commission's authorized ROE (9.25%) in the Empire rate case, for a total of 9.80%. For the lower limit of the range of reasonableness, Staff used the Commission-authorized ROE, 9.25%, in the Empire rate case.

Staff also recommends that the Commission set Ameren Missouri's allowed Rate of Return ("ROR") based on Ameren Missouri's own capital structure of 50.32% common equity, 48.93% long-term debt and 0.75% preferred stock, as of June 30, 2021. Likewise, Staff recommends Ameren Missouri's own cost of debt of 3.85% for setting ROR in this proceeding. The summary of Staff's ROR recommendation is in the following Table:

continued on next page

[5] https://www.spglobal.com/en/research-insights/featured/inflation.
[6] Staff's Beta was 0.54 in the Empire rate case. Empire Company's witness used an average Beta of 0.54. Currently the Beta coefficient is about 0.88 per Company witness's Value Line Beta.
[7] https://www.hartfordfunds.com/dam/en/docs/pub/whitepapers/WP597.pdf.
[8] https://www.cbsnews.com/news/interest-rates-inflation-federal-reserve-transitory/.
[9] https://www.spglobal.com/en/research-insights/featured/inflation.

Table 1

	Percentage of Capital	Embedded Cost	Allowed Rate of Return Using Common Equity Return of:		
Capital Component			9.25%	**9.50%**	9.75%
Common Equity	50.32%	----	4.66%	**4.78%**	4.91%
Preferred Stock	0.75%	4.18%	0.03%	**0.03%**	0.03%
Long-Term Debt	48.92%	3.91%	1.91%	**1.91%**	1.91%
Total	100%		6.60%	**6.73%**	6.85%

In the remainder of this testimony, Staff will present economic and capital market evidence to show that COE has increased since the period of Staff's analysis for the Empire rate case. Staff will also present evidence to support the reasonableness of using Ameren Missouri's own capital structure and cost of debt to set ROR in this proceeding. The details of Staff's analysis and recommendations are presented in Schedules PC-1 – PC-12 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:[10] ***Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia***, and ***Federal Power Commission v. Hope Natural Gas Co***.

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 on 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.

[10] ***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).

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 their chosen investment. Investors' opportunity costs vary depending on market and business conditions.

Methodologies of financial analysis have advanced greatly since the ***Bluefield*** and ***Hope*** decisions.[11] 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, with risk measured as 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.

COE is a market-determined minimum return investors are willing to accept for their investment in a company compared to returns on other available investments. An authorized ROE, on the other hand, is a Commission-determined return granted to monopoly industries, allowing them the opportunity to earn fair and reasonable compensation for their investments.

Staff has relied primarily on the analysis of a comparable group of companies to estimate the COE for Ameren Missouri, applying this comparable-company approach through the use of the DCF and CAPM. Properly used and applied in appropriate circumstances the DCF and CAPM can provide accurate estimates of utilities' COE. It is a well-accepted economic theory that a company that earns its cost of capital will be able to attract capital and maintain its financial integrity; therefore, Staff's recommended authorized ROE based on the COE, derived from comparison of peer companies, is consistent with the principles set forth in *Hope* and *Bluefield*.

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

C. Current Economic and Capital Market Conditions

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

1. Economic Conditions

The economy is currently recovering from the COVID-19 pandemic recession of 2020. The economic recovery is punctuated by fears of increased inflation expectations and the resurgence of the COVID-19.[12] Fears of increased inflation expectations are raising concern among investors that they will not be able to earn enough return on their investments to cover the increased expected inflation.[13] High inflation reduces real returns from investments.[14] To compensate for the high expected inflation, investors demand higher return for their investments.[15] [16] Higher returns mean higher cost of capital. However, as Staff already pointed out, the fears of inflation are probably overblown and transitory, which means that current COEs are likely exaggerated.

In the period since the Empire rate case, the economy experienced enormous volatility, with real GDP falling by 32.9%, on an annual basis, in the second quarter of 2020.[17] The sharp fall in real GDP in the second quarter was preceded by a 5% decline in the first quarter of 2020. Third and fourth quarters of 2020 saw real GDP increase by 33.4% and 4.3%; sharp increases that coincided with the opening up of the economy after the shutdown induced by efforts to combat the COVID-19 pandemic. In 2019, when Staff presented testimony in the Empire rate

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[12] https://www.schwab.com/resource-center/insights/content/market-volatility.
[13] https://www.cnbc.com/2021/05/13/heres-why-stock-investors-are-watching-inflation-so-closely.html
[14] https://www.usbank.com/financialiq/invest-your-money/investment-strategies/effects-of-inflation-on-investments.html.
[15] Inflation is one of the building blocks of cost of capital/equity – the higher the inflation, the higher the COE, and vice-versa.
[16] https://www.cnbc.com/2021/05/13/heres-why-stock-investors-are-watching-inflation-so-closely.html.
[17] Bureau of Economic Analysis: Gross Domestic Product, 2nd Quarter 2020 (Advance Estimate) and Annual Update | U.S. Bureau of Economic Analysis (BEA).

case, real annual GDP rose by 2.3%, down from the 2018 increase of 2.9%.[18] Real GDP is projected to grow at 3.1%, 3.2% and 2.3% in 2021, 2022 and 2023, respectively. In the next 10 years, real GDP is projected to grow 2.1%, on average.[19] The Federal Open Market Committee's ("FOMC") long-running projection for real GDP growth is 1.80%.[20] The Congressional Budget Office ("CBO") projects a 3.70% long-term nominal GDP growth rate.[21] The long-running real GDP growth rate projection was 1.89%, estimated in 2019 when Staff presented testimony in the Empire rate case. Availability of vaccines, increased vaccination rates and the Fed's assurances to continue to support the economy, are boosting prospects for continued economic recovery. During economic recovery, utilities tend to underperform the broader market which, consequently, pushes COE for utilities higher. Compounded by the current fears of transitory inflation, utility equities are currently depressed and COE elevated. As Staff alluded to, inflation fears are likely to subside in the near future, meaning that COE should come down to more reasonable levels. Already there is evidence that inflation fears are subsiding. Long-term interest rates (yields) have come down from the high of about 2.45% reached in March, to about 1.99%, as of July 9, 2021. All else the same, high inflation expectation means higher interest rates (yields).[22, 23, 24]

Fears of increased inflation are real, though likely overstated. Larry Summers, a noted economist and former Treasury Secretary, noted that, "The Federal Reserve shouldn't raise interest rates today but should at least start to express more concern about the inflation outlook", (https://www.marketwatch.com/story/summers-says-fed-should-express-more-concern-over-inflation-outlook-11619029595?siteid=yhoof2). Warren Buffet added his voice, on May 1, 2021, to the concern about rising inflation, saying that they, at Berkshire Hathaway, are seeing substantial inflation.[25] The Fed, led by Jerome Powell, has made assurances that it is ready to act

[18] Gross Domestic Product, 2nd Quarter 2020 (Advance Estimate) and Annual Update | U.S. Bureau of Economic Analysis (BEA).
[19] Congressional Budget Office: (cbo.gov) www.cbo.gov/publication/56965.
[20] The Fed - March 17, 2021: FOMC Projections materials, accessible version (federalreserve.gov).
[21] https://www.cbo.gov/system/files/2021-07/57218-Outlook.pdf.
[22] https://www.investopedia.com/articles/bonds/09/bond-market-interest-rates.asp.
[23] https://www.thebalance.com/the-impact-of-inflation-on-bonds-417071.
[24] https://www.cnbc.com/2021/02/25/why-stock-investors-are-starting-to-really-worry-about-rising-bond-yields.html.
[25] https://www.cnbc.com/2021/05/03/warren-buffett-says-berkshire-hathaway-is-seeing-very-substantial-inflation-and-raising-prices.html.

to make sure inflation will not get out of hand. The general opinion is that high inflation will be transitory and therefore, that fears are exaggerated.[26] It is important to note that current COE estimates are pricing in exaggerated fears.[27] The impact of the high inflation expectation has been notable in the increase in interest rates between December 2020 and May 2021 when long-term interest rates (30-year Treasury yields) steadily rose from 1.67% to 2.32% (see PC-3-1).[28]

The Fed projects that inflation will be 2.4% in 2021, above its previous estimate of 1.8% for 2021 and the 2.0% inflation target it has set.[29,30] In 2022 and 2023, inflation is expected to run around 2.0% and 2.1%, respectively. The Fed still expects long-run inflation to average 2%. From the perspective that investors' current sentiments are affected by higher expectations of inflation than in 2019, it is reasonable to accept that COE has increased, albeit by not as much as indicated by the DCF and CAPM results, since Staff presented testimony in the Empire rate case.

Long-term interest rates were 3.04% in January 2019 before they moved up and down throughout 2019, to finally settle at 2.30% in December 2020. With the COVID-19 causing widespread economic shutdown and pushing interest rates higher, the Fed intervened in March 2020 to cut the federal discount rate to a range of 0% to 0.25%. In addition to cutting the federal discount rate, the Fed announced it would purchase an additional $700 billion worth of Treasury bonds and mortgage-backed securities.[31] The Fed also struck a deal with five other foreign central banks, the Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank, and the Swiss National Bank, to lower their rates on currency swaps to keep the financial markets functioning normally. Lowering rates on currency swaps make borrowing U.S dollars by banks around the world cheaper. The aggregate effect of the Fed's actions was a decline in interest rates from 1.97% in February 2020 to a low of 1.31% in July 2020. However, because of inflation fears, interest rates started to rise in August 2020. 30-Year Treasury yields are 11 bps higher in the current period (March, April and May 2021), on average, than they were in the period (September, October and November 2019) of Staff's

[26] https://www.cnn.com/2021/04/09/perspectives/inflation-fears-us-economy-covid/index.html.
[27] https://www.cnbc.com/2021/05/13/heres-why-stock-investors-are-watching-inflation-so-closely.html.
[28] https://www.cnbc.com/2021/07/13/us-bonds-treasury-yields-rise-ahead-of-inflation-data-update.html.
[29] https://www.cnbc.com/2021/03/17/heres-where-the-federal-reserve-sees-interest-rates-the-economy-and-inflation-going-in-the-future.html.
[30] https://www.federalreserve.gov/monetarypolicy/fomcprojtabl20210317.htm.
[31] https://www.wsj.com/articles/fed-faces-crucial-decisions-to-alleviate-virus-shock-11584303662.

analysis for the Empire rate case (see PC-3-1). Higher long-term interest rates in the current rate case period than the Empire rate case period mean that COE is higher as well in the current period than in the Empire rate case period.

The current unemployment rate remains higher, at 6%, currently, than the pre-pandemic level of 3.5%.[32] The higher unemployment rate means that the economy is still far off its pre-pandemic level and that supports a reasonable belief that the Fed will maintain its 'easy money' policies to continue to support economic growth. The Fed has a dual mandate: maximum employment and stable prices.[33] As Staff already mentioned, currently the Fed's task is harder: if they step in to restrain inflation, it means slowing economic growth. Either way the Fed goes in the event of inflation ramping up, COE will rise. Given the current and projected economic climate, it is reasonable to allow Ameren Missouri the opportunity to earn a somewhat higher authorized ROE than the 9.25% authorized for Empire in 2020.

2. Capital Market Conditions

a. Utility Debt Markets

Average public utility yields fell from a high of 4.48% in January 2019, to a low of 3.16% (see PC-4-1) in February 2020. The downward trend in public utility bond yields reversed when yields rose sharply by 43 bps to 3.59% in March 2020 (see PC-4-1). The sharp rise in public utility bond yields in March 2020 coincided with the closure of the economy and the subsequent sharp decline in the GDP. Public utility bond yields started to fall again in April 2020 after the Fed cut the federal funds rate to 0.0% to 0.25%, and ramped up Treasury bond-buying activity. By August 2020, public utility bond yields had fallen to 2.76% (see PC-4-1). The changes in public utility bond yields mirrored the changes in the 30-Year Treasury bond yields. 30-Year Treasury bond yields have historically, with a few exceptions, been positively correlated with public utility bonds (see PC-4-2). The biggest factor currently driving interest rates is the fear of a rise in expected inflation. In an article in Kiplinger's on March 18, 2021, economist David Payne noted that, "Despite the Federal Reserve's latest

[32] https://www.statista.com/statistics/273909/seasonally-adjusted-monthly-unemployment-rate-in-the-us/.
[33] https://www.federalreserve.gov/faqs/what-economic-goals-does-federal-reserve-seek-to-achieve-through-monetary-policy.htm.

commitment to low short-term interest rates and easy-money policies into 2023, long-term rates rose again on continued inflation fears."[34]

Staff has in the past, highlighted that interest rates were the main driver of COE change, but the current economic climate is so dislocated that the impact of interest rates on utilities performance is atypical.[35] Lower interest rates would normally mean lower COEs, all else the same. Staff compared interest rates during the Empire rate case period (September, October and November 2019) to the current rate case and noticed that interest rates as measured by the Mergent public utility yields decreased by about 14 basis points.[36] Important in understanding the current economic dynamics is increased risk as measured by "Beta." Beta is a measure of the volatility or systematic risk of a security or portfolio compared to the market as a whole. Beta values of Current Betas for Staff's electric proxy group are about 0.67 compared to 0.54 in the period of the Empire rate case analysis. Higher Betas, all else the same, means higher COEs.

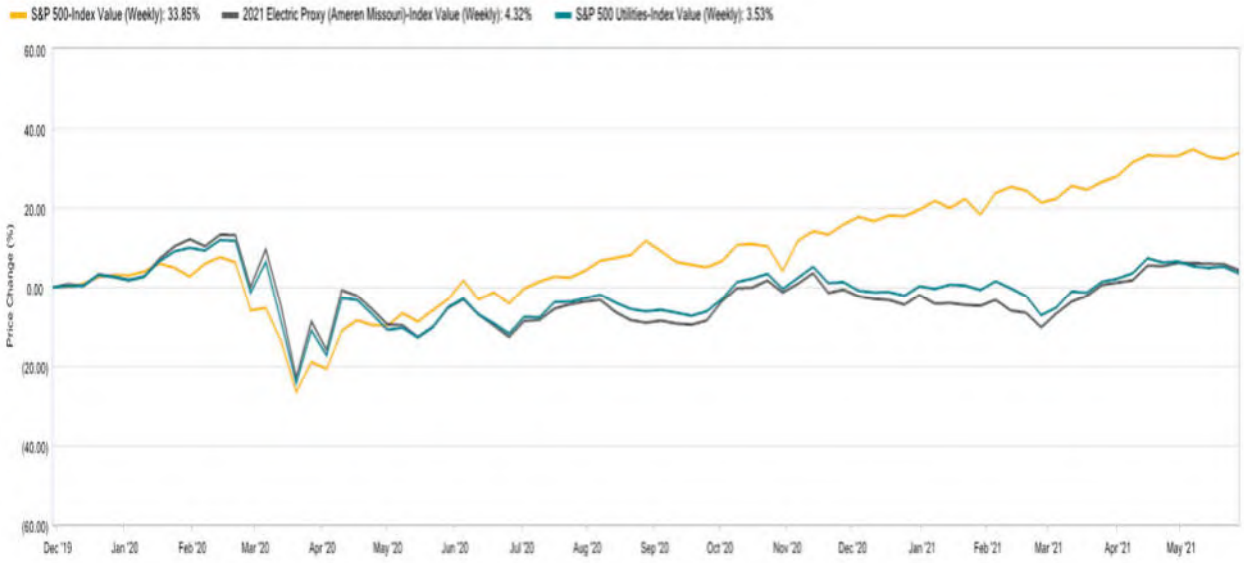
b. Utility Equity Markets

In the period between December 2019 and May 2021,[37] the utilities sector underperformed the broad market (S&P 500). The S&P 500 had total returns of 37.37% compared to 8.77% for the utilities sector. Staff's electric proxy group of companies similarly underperformed, returning 10.09% in the same period. A detailed analysis of the performance of the equity market since December 2019 reveals tremendous volatility. Graph 1 shows the volatility experienced by the stock market since December 2019. At the onset of the economic shutdown in March 2020, the S&P 500 and the Dow Jones Industrial fell 12.5% and 13%, respectively.[38] Utilities were 35% off (down) their January 2020 high.[39] The decline of the utilities was unusual given that utilities are historically considered a defensive sector – when the capital market goes down, utilities rise as investors 'run for the safety' of utilities. "The utilities sector did not act as defensively as we have seen in previous market downturns," (Edward Jones, Utilities Sector Outlook, April 13, 2021, page 1). The stock market recovered immediately and

[34] Kiplinger's: https://www.kiplinger.com/economic-forecasts/interest-rates.
[35] Edison Electric Institute (EEI) 2020 Financial Review, page 2.
[36] Three-month average interest rates for the Empire rate case was 3.53% compared to 3.39% for the current rate case.
[37] This is the period between Staff's last analysis for the Empire rate case and the current rate case. Staff is focusing on the changes in capital market markets that impacted COE.
[38] The stock market crash of March 12, 2020 was of the same proportion as the crash of 1987.
[39] Edison Electric Institute (EEI) Financial Review, page 1.

sharply from the March 2020 sharp decline (see Graph 1), with the utilities sector briefly leading the broader market. Starting in May 2020, the utilities sector has lagged the broader market. Total returns for utilities, in general, for the entire year 2020 were negative 0.6%.[40] Edison Electric Institute (EEI) Index returned negative 1.6% compared to the Dow Jones' and S&P 500's positive 9.7% and 18.4%, respectively, for the year 2020.

Graph 1



The combined effect of the utility sector unusual decline in 2020, and the subsequent sluggish recovery, is that the utilities have not recovered fully from the COVID-19 recession. Average stock prices for Staff's proxy group of companies is at $67.34, as of July 30, 2021, compared to the pre-COVID recession high of about $72.40 reached in January 2020. Declining stock prices, all else the same, means increasing COE.[41] The principal reason for stock prices to decline is adverse perception about the stock's risk and or risk in the economy. Currently, the utilities sector faces two major risks that have the potential to keep stock prices depressed and COE elevated – fears of high inflation and increasing interest rates.[42] As a consequence, the

[40] Ibid.
[41] In the DCF COE model, declining stock prices, all else the same, leads to higher dividend yields. Dividend yields are a component of COE.
[42] Whether inflation fears materialize or not, current utility stock prices are pricing in the fear that inflation will be higher.

current economic climate justifies increasing authorized ROE by 25 bps to 9.50% from the 9.25% authorized Empire in 2020.

As Staff alluded to above, the two potential downsides for utilities, currently and in the near future, are increased inflation and increasing interest rates. It is important to understand the dynamics of these two potential risks to utilities in order to have a reasonable estimation of the trajectory of COE. Firstly, the fear of increased inflation means that investors will try to avoid low return utilities because they fear that utilities will not provide a high enough return to compensate for the increased expected inflation. "… [S]ome sectors prove more durable during inflationary times than others, but the utilities sector is usually not a place to seek shelter from inflation," (https://finance.zacks.com/utilities-stocks-perform-well-during-inflationary-periods-8933.html).The belief that utilities are 'not a place to seek shelter from inflation' stems from the general belief, among investors, that regulators are not flexible enough with adjusting rates to compensate for increasing inflation.[43] The fear of increased inflation will potentially keep utilities depressed, and COE elevated.

Secondly, the fear of increased inflation has suddenly brought about talk about increasing interest rates sooner than expected.[44] Increasing interest rates is one of the tools at the disposal of the Fed to curtail inflation. Controlling inflation by increasing interest rates inadvertently causes COE to rise. Historically, utilities have moved in the opposite direction of interest rates, meaning that as interest rates rose, utilities stock prices fell.[45] As Staff already pointed out, the lower the stock prices, all else the same, the higher the COE.

Staff has already showed that utilities stock prices are currently lower than they were when Staff presented testimony for the Empire rate case in 2020. Lower stock prices, all else the same, means higher COE. Staff also analyzed other variables that affect change in COE – dividend yields and expected growth rates. Higher dividend yields, all else the same, means higher COE. Staff compared dividend yields from the period (September, October and November 2019) of the Empire rate case to the dividend yields of the current period (May, June and July 2021). Average dividend yields were 3.14% (see PC-9-2) during the period of Empire

[43] https://finance.zacks.com/utilities-stocks-perform-well-during-inflationary-periods-8933.html.
[44] https://www.wsj.com/articles/federal-reserve-meeting-interest-rates-bond-purchases-june-2021-11623777582.
[45] Because utilities are a capital-intensive industry that borrows huge sums of money to fund its operations, an increase in cost of capital directly reduces revenues.

rate case, compared to 3.49% (see PC-9-1) in the current period – that is an increase of 35 bps. Estimated growth rates by analysts increased from 5.16%, estimated during the period (September, October and November 2019) Staff conducted analysis for the Empire rate case, to 5.41% in the current period (March. April and May 2021). Higher estimated growth rates, all else the same, signal a higher required return to investors. The net effect of the changes in stock prices, dividend yields and growth rates is that COE increased by up to 55 basis points (unadjusted for expected inflation, see PC-11) since Staff conducted its analysis for the Empire rate case.

Ameren Missouri Operations

The following excerpts from Ameren Corporation ("AEE")'s Form 10-K filing with the United States Securities and Exchange Commission ("SEC") for the 2020 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.

D. Rate of Return

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

1. Capital Structure

Staff recommends Ameren Missouri's standalone capital structure, as of June, 2021, consisting of 48.93% long-term debt, 50.32% common equity and 0.75% preferred stock, for setting ROR for Ameren Missouri.[46] Ameren Missouri's witness, Darryl T. Sagel, recommends Ameren Missouri's pro forma capital structure composed of 51.93% common equity, 47.34% long-term debt and 0.73% preferred stock, as of the true-up date of September 30, 2021, for use in this proceeding. In his Direct Testimony, Mr. Sagel presented two capital structures, the September 30, 2021, pro forma capital structure, and Ameren Missouri's per book capital structure, as of December 31, 2020. The December 31, 2020, per book capital structure is composed of 51.26% common equity, 47.92% long-term debt, and 0.82% preferred stock. Mr. Sagel explained that the December 31, 2020 per book capital structure is different from the proposed pro forma capital structure because of "unplanned delays in consummating the acquisitions of approximately $1.14 billion of wind generation facilities, [which resulted] in approximately $500 million in company funding needs being deferred into 2021, from 2020."[47]

Staff issued data requests to assess the progress on the eventual disbursement of funds anticipated to take place in 2021. As of March 31, 2021, according to the response to Staff DR No. 0651, "** [redacted] **". The resultant capital structure as of March 31, 2021, was 47.17% long-term debt 0.80% preferred stock, and 52.02% common equity. In response to Staff DR No. 0651, Ameren Missouri provided what it called a preliminary capital structure, as of June 30, 2021, composed of 48.92% long-term debt, 0.75% preferred stock, and 50.32% common equity. Ameren Missouri explained that the June 30, 2021, capital structure differs from the pro forma capital "** [redacted]

[46] Response to Staff DR No. 0651.
[47] Darryl T. Sagel's Direct Testimony, pages 11 and 12.

[redacted] **".

Ameren Missouri added, in its response to Staff DR No. 0651, that it still expects to achieve its projected capital structure, the pro forma capital structure as of September 30, 2021, based on its expectation of strong seasonal cash flows in the third quarter of 2021. In this Direct Testimony, Staff recommends the June 30, 2021, capital structure composed of 48.93% long-term debt, 0.75% preferred stock, and 50.32% common equity. Staff will keep monitoring and assessing any changes to the capital structure in the period up to September 30, 2021, to see if any changes to capital structure are necessary.

In deciding to use Ameren Missouri's own capital structure for ratemaking purposes in this proceeding, Staff considered several factors that determine whether a subsidiary entity can use its own capital structure instead of its parent's capital structure. First, Ameren Missouri operates as an independent entity, when considering Ameren Missouri's procurement of financing and the cost of that financing. Ameren Corporation, Ameren Missouri's parent company, is not the primary source of long-term and short-term debt financing for Ameren Missouri. Since January 2018, Ameren Missouri has not received long-term financing from Ameren, Inc. or other Ameren subsidiaries.[48]

Second, Ameren Missouri's stand-alone capital structure support its own credit rating.[49] Ameren Missouri's debt is rated based on its own stand-alone credit quality. Currently, Moody's and S&P rate Ameren Missouri 'Baa1' and 'BBB+', respectively.[50]

Third, none of Ameren Missouri's debt is secured by the assets of Ameren Corporation or any of Ameren Corporation's other subsidiaries, and vice versa.[51] Therefore, Ameren Missouri's regulatory asset is independent from Ameren's financial obligation.

2. Embedded Cost of Debt

Staff recommends Ameren Missouri's own standalone long-term debt cost and preferred stock cost of 3.91% and 4.18%, as of June 30, 2021.[52]

[48] Staff DR No. 0328, GR-2021-0241.
[49] S&P Global Market Intelligence.
[50] Ibid.
[51] Staff DR No. 0328, GR-2021-0241.
[52] Response to Staff DR No. 0114, Case No. GR-2021-0241.

3. Cost of Common Equity

Staff estimated Ameren Missouri's cost of common equity through a comparable company cost-of-equity analysis using the proxy group of electric utility companies, applying the DCF analysis.

a. The Proxy Group

Staff used a proxy group consisting of companies that are predominantly vertically-integrated, regulated, electric utilities to estimate changes in the cost of equity since Ameren Missouri's last rate case. Staff ensured companies in the proxy group are confined to vertically-integrated, regulated, electric utility operations by starting with the list included in the Edison Electric Institute's[53] ("EEI") regulated electric utility index, and then screened these companies further by ensuring that they:

- are publicly traded
- have investment grade credit ratings from two of the three major U.S. credit rating agencies
- have long-term growth coverage from at least 2 analysts
- have no pending merger or acquisitions
- have not reduced dividends since 2016
- have 50% of plant from electric utility
- have at least 25% of plant from electric generation
- generate at least 80% of income from regulated utility operations

The 15 electric utilities that met these criteria are presented in Table 2:

continued on next page

[53] EEI is an association that represents all U.S. investor-owned electric companies. It classifies electric public utilities as 'regulated' and 'mostly regulated', with 'regulated' having 80% or more total assets regulated.

Table 2

Number	Company Name	Ticker Symbol
1	Alliant Energy Corporation	LNT
2	Ameren Corporation	AEE
3	American Electric Power Company, Inc.	AEP
4	Avista Corporation	AVA
5	CMS Energy Corporation	CMS
6	Duke Energy Corporation	DUK
7	Evergy, Inc.	EVRG
8	IDACORP, Inc.	IDA
9	NorthWestern Corporation	NWE
10	OGE Energy Corp.	OGE
11	Pinnacle West Capital Corporation	PNW
12	PNM Resources, Inc.	PNM
13	Portland General Electric Company	POR
14	Southern Company	SO
15	Xcel Energy, Inc.	XEL

b. The Constant Growth DCF

Staff started its evaluation of the electric utility industry's COE 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 D_1/P_0, 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 consensus analysts' expected dividend per share over the next four quarters

(*see* schedule PC-9-1) by the average daily closing stock prices for the three months ending July 30, 2021.[54] The projected average dividend yield for the electric utility proxy group is approximately 3.49%.

i. The Inputs

In the DCF method, the cost of equity is the sum of expected dividend yield and a growth rate ("*g*") that represents the projected capital appreciation of the stock. Expected dividend yield equals the expected dividend for the next twelve months divided by the current stock price. Staff used the analysts' annual projected dividends for the next twelve months divided by the average of the recent three months closing stock prices. The average expected dividend for Staff's electric comparable group of companies is $2.33 (see PC-9-1). The average closing stock price for the recent three months ending July 30, 2021, is $67.34 (see PC-9-1).

In estimating a growth rate, Staff reviewed Value Line's 10-Year and 5-Year historical earnings per share ("EPS"), book value per share ("BVPS"), dividend per share ("DPS") and analysts' projected EPS for each of the comparable companies. 10-Year historical EPS, DPS and BVPS averaged 5.79%, 5.39% and 3.88%, respectively (see PC-8-1). The average of the averages of EPS, DPS and BVPS was 5.0% for the electric comparable group of companies. The 5-Year historical averages were 5.14%, 6.07% and 4.12%, respectively. The average of averages was 5.20%. It is a common practice in financial analysis to average the averages of the three growth measures, EPS, DPS and BVPS, to discern the appropriate growth rate for the DCF model. Historical averages of 5.0% and 5.20% for 10-Year and 5-Year, respectively, are not materially different, indicating some consistency in growth rates. Staff also reviewed projected EPS estimates from Market Intelligence and Value Line. Analysts' average projected EPS estimate, as of July 30, 2021, was 5.34%, (see PC-8-2), also consistent with the historical growth rates.

The growth rates that Staff has reviewed are short-term, less than ten years for the historical growth rates and less than five years for the analysts' projected growth rates. Short-term growth rates are unsuitable for use, exclusively, in the constant-growth DCF, because

[54] The monthly high/low averaging technique minimizes the effects of short-term stock market volatility on the calculation of dividend yield. P_0 is calculated by averaging the highest and the lowest price for each month during the selected period.

the constant-growth DCF assumes a long-term investment horizon. In addition, short-term growth rates, especially the analysts' projected growth rates, are often too high to be sustainable forever. Utilities are not expected to grow at the 5-year projected growth rates such as the 5.24% growth rate projected for Staff's proxy group of companies for a long period of time. One of the determinants of growths for business is the growth rate of the economy as a whole, measured by the GDP growth rate. It is therefore reasonable to assume that businesses' perpetual growth rate cannot exceed the long-term growth rate of the economy, forever. In the long-run, it is expected that growth rates of all businesses will converge to the level of GDP's long-run growth rate. To reflect the long-term assumption in the growth rates for use in the constant-growth DCF, Staff combined the analysts' projected growth with the long-term projected GDP growth rate at two-thirds analysts' projected growth rates plus one-third projected long-term GDP growth rate to form one perpetual growth rate. It is a common practice among analysts and ROR witnesses to combine analysts' projected growth rates with projected long-term GDP growth rates to estimate a reasonable growth rate for use in the constant-growth DCF.[55] Currently, the FOMC is projecting a long-run nominal GDP growth rate of 3.80%. The Congressional Budget Office ("CBO") is projecting nominal GDP growth rate of 3.70%.[56] Analysts' average projected 5-year growth rate for Staff' proxy group of companies is 5.24%[57] (see pc-8-2). Combining the two growth rates result in a reasonable growth rate of 4.76%.

In the Empire rate case, Staff estimated its growth rate a slightly different way. Staff considered the same variables in estimating its growth rate; analysts' growth rates, historical growth rates, and GDP growth rate for an estimated growth rate range of 4.20% to 5.00%, corresponding to an average of 4.60%.[58] For consistency in estimation of growth rate, if Staff had used the same approach used in the current case to estimate growth rate for the Empire rate case, growth rate for the DCF for the Empire rate case would have been 4.64%, an immaterial

[55] The Federal Energy Regulatory Commission ("FERC") ordered that analysts' estimated growth rates be combined with long-term GDP growth rates for a reasonable growth rate that reflects the long-term horizon assumed in the constant-growth DCF model.
[56] https://www.cbo.gov/system/files/2021-07/57218-Outlook.pdf.
[57] Average of SNL and Value Line estimates.
[58] Staff Direct Testimony, Case No. ER-2019-0374.

difference of about +4 bps.[59] Considering this small difference in growth rate estimate, Staff's current estimation would have shown that COE increased by 44 bps, instead of 48 bps.

ii. Tests of Reasonableness

Staff has tested the reasonableness of its COE estimates and the recommended authorized ROE using the CAPM, bond yield-plus risk premium method and a survey of the nationally authorized ROEs.

c. CAPM

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:

$$k = R_f + \beta(R_m - R_f)$$

where: k is the expected return on equity for a security;
R_f is the risk-free rate;
β is Beta; and
$R_m - R_f$ is the market risk premium.

For the risk-free rate (R_f), Staff used the average yield on 30-year U.S. Treasury bonds for the three-month period ending May 31, 2021; that figure was 2.32%. For beta (β), Staff relied on Market Intelligence generated betas; the average beta for the electric comparable group

[59] (4.20% + 5.00%)/2 = 4.60%.

of companies is 0.67, as of May 31, 2021.[60] For the market risk premium ($R_m - R_f$) estimates, Staff relied on the historical difference between earned total returns on stocks and earned total returns on bonds.[61] The first risk premium (6.07%) was based on the long-term arithmetic average of historical return differences from 1926-2020. The second risk premium (4.62%) was based on the long-term geometric average of historical return differences from 1926 to 2020. The CAPM COE results range from 6.15% to 7.75%, with an average of 6.83% (see Schedule PC-10) for Staff's electric comparable group of companies.

To the extent that the CAPM COE estimate range (6.15% to 7.75%) overlaps with Staff's DCF COE model estimate range of 6.84% to 9.52%, it confirms the reasonableness of Staff's COE estimates.

i. Bond Yield-Plus Risk Premium

Staff conducted a simple test of reasonableness on its COE estimates using the bond yield-plus risk premium. The bond yield-plus risk premium estimates the required return on an equity by adding an equity risk premium to the yield-to-maturity on a company's long-term debt. Since Staff is using a proxy group of companies to estimate COE in this case, the appropriate yield-to-maturity to use is the average yield-to-maturity of the companies in the Staff's proxy group of companies. Staff's proxy group of companies have credit ratings ranging from A- to BBB+, with a mean of about BBB+. Moody's public utility bond yields on A-rated bonds and Baa-rated bonds had a three-month average of 3.35% and 3.62%, respectively, as of May 31, 2021. The average of the two yields is 3.49%. While opinions vary on the appropriate risk premium to use for the U.S capital market, a range of 3% to 5% is considered acceptable. Adding 3.49% to 3% and 5% yields a COE estimate range of 6.49% to 8.49%. To the extent that the bond yield-plus risk premium COE estimate range overlaps with the DCF model, it supports the reasonableness of Staff's COE estimates.

d. Average Authorized ROE

Although Staff believes it has appropriately considered this Commission's recent authorized ROE and capital structure decisions for purposes of its recommendation in this case,

[60] Beta calculated by Market Intelligence Template are unadjusted. Staff adjusted the Betas using the Blume formula: 0.3333+0.6666*Unadjusted Beta.
[61] From Duff & Phelps *2019 Valuation Handbook: A Guide to the Cost of Capital.*

Staff recognizes that the Commission may also be interested in recent authorized ROE decisions for other utility companies throughout the country. For consideration of recent authorized ROEs, the chart below presents information compiled and published by Regulatory Research Associates (RRA) which details the average electric and gas utilities authorized ROEs by Commissions around the U.S. in rate cases from 2010 to 2021:

Table 3

	Natural Gas						Electric					
	Fully Litigated		Settled		Natural Gas Total		Fully Litigated		Settled		Electric Total	
Year	ROE (%)	Case (No.)	ROE (%)	Case (No.)	ROE (%)	Case (No.)	ROE (%)	Case (No.)	ROE (%)	Case (No.)	ROE (%)	Case (No.)
2010	10.08	27	10.30	12	10.15	39	10.35	27	10.39	34	10.37	61
2011	9.76	8	10.08	8	9.92	16	10.39	26	10.12	16	10.29	42
2012	9.92	21	9.99	14	9.94	35	10.28	29	10.06	29	10.17	58
2013	9.59	12	9.80	9	9.68	21	9.85	17	10.12	32	10.03	49
2014	9.98	15	9.51	11	9.78	26	10.05	21	9.73	17	9.91	38
2015	9.58	5	9.60	11	9.60	16	9.66	16	10.04	15	9.84	31
2016	9.61	10	9.50	16	9.54	26	9.74	25	9.80	17	9.77	42
2017	9.82	7	9.68	17	9.72	24	9.73	24	9.75	29	9.74	53
2018	9.59	17	9.59	23	9.59	40	9.63	22	9.57	26	9.60	48
2019	9.74	12	9.70	20	9.71	32	9.58	27	9.76	20	9.66	47
2020	9.44	12	9.47	22	9.46	34	9.43	32	9.46	23	9.44	55
2021	9.61	6	9.63	10	9.62	16	9.44	15	9.48	9	9.46	24

Of particular relevance to the current case are ROEs authorized in 2020 and 2021. In 2020, the average authorized ROE was 9.43%. In 2021, as of August 25, the average authorized ROE is 9.44%. Staff's recommended authorized ROE of 9.50% is generally consistent with ROEs recently authorized for other utilities around the country. Staff believes that in order for Ameren Missouri to be competitive on the capital market, it has to be given the opportunity to earn an ROE that is reasonably consistent with ROEs awarded to other utilities around the country.

4. Conclusion

Using the widely-accepted methods of financial analysis, Staff believes that the cost of common equity has increased by up to 55 basis points since Staff presented testimony in 2019/2020 in the Empire rate case. Based on the evolving current economic conditions, Staff believes that it is reasonable to increase the authorized ROE by 25 basis points, from the 9.25% ROE authorized for Empire by the Commission in 2020, to 9.50%. Therefore, Staff recommends

that the Commission authorize Ameren Missouri an ROE of 9.50%, which is close to the midpoint of Staff's reasonable range of 9.25% to 9.75%.

Using the recommended authorized ROE of 9.50%, Staff recommends an authorized ROR of 6.73%, calculated by applying an embedded cost of long-term debt of 3.91% and preferred stock cost of 4.18% to a capital structure consisting of 50.32% common equity, 48.92% long-term debt and 0.75% preferred stock.

Staff Expert/Witness: Peter Chari

E. Regulatory Lag and Risk Mitigation

Staff's position on rate of return, including return on equity, is bolstered by the risk reduction associated with the numerous mechanisms that allow for rate changes in between rate cases. Staff will expound upon this supporting position as part of its rebuttal testimony as well as address the direct testimony of Ameren Missouri witness Ann E. Bulkley.

Staff Expert/Witness: Jason Kunst, CPA

VII. Rate Base

A. Plant in Service and Depreciation Reserve

1. Plant in Service – Accounting Schedule 3

The plant-in-service balances represent the direct assigned or allocated plant additions and retirements of Ameren Missouri's actual plant as of December 31, 2020, with estimated adjustments to reflect the value of plant-in-service through true-up cutoff of September 30, 2021 These estimates will be replaced with actual amounts as part of Staff's true-up audit. Staff has adjusted Ameren Missouri's plant balances to allocate a portion of the company's general plant to Ameren Missouri's natural gas business. Due to the impending retirement of the Meramec generating facility at the end of 2022 and the establishment of a tracking mechanism in this proceeding. Staff included one fifth (1/5) of Meramec's estimated plant in service at September 30, 2021, in the cost of service and provided four fifths (4/5) of the estimated plant-in-service to be included in the tracking mechanism. For a complete discussion regarding the Meramec tracking mechanism, refer to the Meramec Energy Center Retirement Tracker section of this report, sponsored by Staff witness Lisa M. Ferguson.

Staff Expert/Witness: Christopher D. Caldwell

2. Depreciation Reserve – Accounting Schedule 6

The depreciation reserve balances represent the rate base value of Ameren Missouri's actual depreciation reserve as of December 31, 2020 with estimated adjustments to reflect the value of accumulated depreciation reserve through the true-up cutoff of September 30, 2021. Due to the impending retirement of the Meramec generating facility at the end of 2022 and the establishment of a tracking mechanism in this proceeding, Staff included one fifth (1/5) of Meramec's estimated depreciation reserve at September 30, 2021 in the cost of service and provided four fifths (4/5) of the estimated depreciation reserve to be included in the tracking mechanism. The estimates to adjust test year accumulated depreciation reserve will be replaced with actual amounts as part of Staff's true-up audit. Staff has also included adjustments to Ameren Missouri's depreciation reserve balances in order to allocate a portion of the company's general plant depreciation reserve to Ameren Missouri's natural gas business.

Staff Expert/Witness: Christopher D. Caldwell

B. Accumulated Depreciation

Accounts 336 (Osage Hydraulic Production Plant – Roads, Railroads, Bridges) and 359 (Transmission Plant – Roads and Trails) have accrued reserve balances greater than the original book costs. Staff has reallocated reserve balances greater than the original book cost from these accounts to Accounts 331 (Osage Hydraulic Production Plant – Structures) and 355 (Transmission Plant – Poles and Fixtures).

Staff Expert/Witness: Cedric E. Cunigan

C. Callaway Energy Center Forced Outages

The Callaway Energy Center ("Callaway") is a nuclear power plant owned and operated by Ameren Missouri that is located west of Fulton in Callaway County. It has a net generating capacity of approximately 1,190 megawatts and typically represents 20-25% of Ameren Missouri's annual electrical generation. From December 24, 2020 through August 4, 2021, Callaway experienced a 223 day forced outage due to an electrical fault on its main generator. An outage of that length is without precedent at Callaway since it began commercial operation in December 1984.

Forced, or unplanned, outages are defined as conditions in which equipment is unavailable due to an unanticipated failure. In this context, a forced outage results in the power plant being unable to supply any electricity to the transmission grid. In contrast, refueling outages are regularly scheduled events that allow for a portion of the nuclear fuel necessary for continued power generation to be replaced. Refueling outages typically last around forty days, but can be longer or shorter depending on the scope of work that is scheduled. While refueling activities are taking place, additional maintenance tasks and equipment upgrades are performed by both Ameren Missouri and by outside contractors.

Starting in the fall of 2020, Callaway experienced three nearly back-to-back outages. Ameren Missouri designated these outages as: Forced Outage 72 (September 27, 2020 to October 4, 2020), Refueling Outage 24 (October 4, 2020 to December 22, 2020), and Forced Outage 73 (December 24, 2020 to August 4, 2021).

Forced Outage 72

Early on the morning of September 27, 2020, the Callaway Energy Center was online and operating at 98% reactor power. Forced Outage 72 was precipitated by a main generator fault that occurred at 2:03 am. The cause of the fault was the failure of a flexible link located on one of the conductors that leads from the output of the generator to the main transformers. A piece of the flexible link had become detached and caused an electrical short between the conductor and the metal duct that it runs through.[62] That short actuated the main generator protection system and resulted in a turbine trip and automatic reactor trip. Subsequent to this event, all flexible links were inspected and repaired as necessary.[63] Ameren Missouri determined there was insufficient time to complete repairs and return to power operation prior to the planned start of the refueling outage on October 4, 2020. As a result, Callaway remained shut down and transitioned directly from Forced Outage 72 into Refuel 24.

Refuel 24

Refuel 24 began on October 4, 2020 and would last a total of 79 days. During this refueling outage one of the planned tasks was to perform rework on the main generator stator.

[62] Nuclear Regulatory Commission, "Callaway Plant - Integrated Inspection Report and Assessment Follow-up Letter (05000483/2020004)", NRC Adams Accession Number ML21040A410, pages 13-14.
[63] Licensee Event Report 2020-006-00 "Reactor Trip Due to Main Generator Ground Fault", NRC Accession Number ML20330A267.

During Refuel 22 (October 07, 2017 to December 17, 2017) Ameren Missouri employed contractors to perform a modification to the main generator stator. During post-modification tests, some results came back lower than designed, but still acceptable. At that time, Ameren Missouri decided to defer the work to restore design values until a future refueling outage. The same contractors were brought back to Callaway during Refuel 24 to restore the affected components to their design values and to correct other related issues that had developed since the end of Refuel 22.[64]

When the generator was first opened up during Refuel 24, damage was discovered on the main generator that required repairs including the partial replacement of the phase ring conductor. Ameren Missouri determined that the repair could not be completed with "in-house" resources and so it was performed by the same contractor that was used for the generator modification in Refuel 22. Refuel 24 ended on December 22, 2020 when Callaway resumed power operations.

Forced Outage 73

At 12:35pm on December 24, 2020, another forced outage began at Callaway. At the time of the event, Callaway was operating at approximately 90% reactor power and was continuing its power ascension as it came out of Refuel 24. Forced Outage 73 was caused by a fault on the main generator. However, it was of a different nature than the fault that caused Forced Outage 72. In this case, a failure of the connection rings on the main generator stator resulted in an electrical path from the generator stator to ground. This electrical fault actuated the main generator protection system which resulted in a turbine trip and automatic reactor trip. Ameren Missouri's investigation concluded that the fault originated from the part of the generator that had been repaired during Refuel 24.[65] While in the forced outage, actions were taken by Ameren Missouri to replace the damaged connection rings and to refurbish some of the

[64] Nuclear Regulatory Commission, "Callaway Plant – Integrated Inspection Report 05000483/2021002 and Independent Spent Fuel Storage Installation Inspection Report 07201045/2021001," NRC Accession Number ML21216A312, page 15.
[65] Nuclear Regulatory Commission, "Callaway Plant – Integrated Inspection Report 05000483/2021002 and Independent Spent Fuel Storage Installation Inspection Report 07201045/2021001," NRC Accession Number ML21216A312, page 17.

associated generator support systems.[66] The same contractor was used for these generator repairs that had also been responsible for the modification in Refuel 22 and the rework and repairs in Refuel 24. After being shut down for 223 days, Forced Outage 73 ended on August 4, 2021 and Callaway was returned to its full power output shortly thereafter.[67]

NRC Findings

In response to the events precipitating Forced Outage 73, the Nuclear Regulatory Commission ("NRC") reviewed a, "self-revealing, Green finding and associated non-cited violation of Technical Specification 5.4.1.a, 'Procedures,' for [Ameren Missouri's] failure to properly pre-plan and perform maintenance on the main generator that affected safety-related components." The NRC inspectors concluded that Ameren Missouri, "failed to properly pre-plan the work on the main generator which contributed to a reactor trip. Despite significantly changing the main generator work scope from problems being identified, including unusual conditions with incomplete information, [Ameren Missouri] did not implement appropriate risk mitigating actions to increase contractor oversight." The NRC also concluded that the event was of "very low safety significance" because while the event did cause a reactor trip, "it did not result in the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition," and that, "safety systems remained available and the plant responded per design without any complications."[68]

Additionally, the reactor trip that occurred as a result of the December 24, 2020 generator fault caused one of Callaway's NRC performance indicators ("Unplanned Scrams per 7,000 Critical Hours") to change from green to white. This, in turn, has triggered a supplemental inspection from the NRC as a part of its Reactor Oversight Process.

All of the NRC documents referenced in this testimony are included as Appendix 3, Schedule CTP-d1 to this report.

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[66] Licensee Event Report 2020-008-00 "Reactor Trip Due to Main Generator Ground Fault", NRC Accession Number ML21049A109.

[67] A phone call between Staff and Ameren Missouri on 08-06-21 indicated that Callaway closed its output breakers at 5:09pm on 08-04-21 after the reactor went critical around 3:00pm on 08-02-21.

[68] Nuclear Regulatory Commission, "Callaway Plant – Integrated Inspection Report 05000483/2021002 and Independent Spent Fuel Storage Installation Inspection Report 07201045/2021001," NRC Accession Number ML21216A312, pages 16-18.

Staff Recommendations

Due to the recent end of the Forced Outage 73 at Callaway, a complete accounting of the associated costs has not yet been made. In the direct testimony of Ameren Missouri witness Mitchell Lansford, Ameren Missouri proposed that Callaway's unplanned outage expenses would be included as a true-up item.[69] Within this rate case, the Commission ordered a test year that ended on December 31, 2020 with a true-up cut-off date of September 30, 2021. Forced Outage 73 began one week before the end of the test year and it ended approximately two months before the true-up cut-off date. Also considering that the forced outage ended one month prior to the filing of Staff's direct testimony, it is not yet possible to know the full extent of the financial and operational impacts that have resulted or will result from Forced Outage 73. The testimony of Staff witness Lisa M. Ferguson below documents Staff's recommendations for the treatment of expenses related to Forced Outage 73.

The length of Forced Outage 73 is unique in the history of Callaway and for that reason Staff chose to remove it from the calculation of inputs for its production cost model. Since the repairs completed during Forced Outage 73 returned the main generator to its pre-outage condition, Callaway is represented in the production cost model as a baseload power plant with its nominal generating capacity. The testimony of Staff witness Shawn E. Lange, PE further discusses the method of calculation for the planned and forced outages used in production cost modeling.

Staff has been in repeated contact with Ameren Missouri regarding this issue and will continue to assess the financial and operational impacts as more information becomes available.

Staff Expert/Witness: Charles T. Poston, PE

1. <u>Callaway Unplanned Outage Accounting Considerations</u>

Ameren Missouri's Callaway nuclear plant went down for the Refuel 24 outage on October 4, 2020. During this refueling outage, Ameren Missouri completed several projects using internal labor and an outside vendor. Once Refuel 24 was completed, Callaway began to be brought back online on December 24, 2020. As the plant was brought back online, the main electrical generator experienced an internal electrical malfunction and the plant was forced to be

[69] Case No. ER-2021-0240, Direct Testimony of Mitchell Lansford, page 6, lines 12-21.

taken back offline. Ameren Missouri notified the Commission of the event on January 4, 2021. For further discussion regarding the engineering aspects of this outage, please see Staff witness Charles T. Poston's testimony in the section above.

According to company's response to Staff DR No. 0462, Ameren Missouri summarizes that the generator fault was due to failure of the connection rings on the main generator stator. The connection ring failures were the result of the development of a crack in the phase ring. This ultimately resulted in thermal and electrical conditions that damaged the generator rotor and stator. The location of this phase ring failure is in a location that was subject to repairs during the most recent refueling outage 24. However the vendor who completed the repairs performed their own investigation of the failure and came to different conclusions about the root cause of the forced outage.

Ameren Missouri relayed to Staff that contractor workmanship issues during the outage and that the workmanship issues ultimately caused the outage issues as Ameren Missouri's comprehensive investigation revealed that the phase ring wedging connection bolting was not installed as specified by design during fabrication by the generator stator rewind vendor; the phase ring replacement section installed during refuel 24 was not tested for local resonance vulnerabilities by the vendor and that information was not communicated to the employees at the Callaway plant; and the vendor workers were not adequately prepared (e.g. lacked proficiency, familiarity and understanding) to successfully install the partial phase ring replacement during repairs made in refuel 24.

This outage event caused the Callaway plant to be offline until the investigation and repairs could be made. Callaway slowly ramped up the facility at the end of July 2021 into the beginning of August 2021 and has been back at full generation since around August 8th, 2021.

The major projects / types of capital spending that Callaway incurred related to the forced outage were related to the following:

- The rewind of both the stator and rotor windings and will keep the stator windings at a rating of 1600MVA, but the stator winding bars design will be modified to a different design
- Additional capital spending was related to work on stator leak monitoring system upgrade and duplex strainer basket replacement

- Root Cause Analysis to determine the cause of the forced outage
- Diesel Fuel needed to support plant at Modes 3 and 5 for a number of months after the forced outage. Along with this was engineering analysis performed, related to evaluations of extended operations at Modes 3 and 5
- Equipment repairs/refurbishment

2. Financial Impact and Insurance Reimbursement

During the time period of December 24, 2020 through June 30, 2021, Ameren Missouri incurred approximately $48.5 million in total labor and non-labor expense and capital costs due to the Callaway outage as outlined below:

- $404,000 in labor expense
- $2,725,286 in non-labor expense
- $913,300 in capitalized labor
- $44.5 million in capitalized non-labor

As of July 28, 2021, Ameren Missouri has submitted insurance claims for property damage and accidental outage insurance. The claims adjustment process for the property damage was supposed to begin in more detail once the project was completed and all costs are recorded and submitted to the insurance companies. Ameren Missouri has layered insurance policy coverage for Callaway. The accidental outage insurance primary property insurance are through Nuclear Electric Insurance Limited (NEIL) and European Mutual Association for Nuclear Insurance (EMANI). NEIL currently is aware of property damage costs through May 31, 2021 for review. The accidental outage policy has a 12 week waiting period in lieu of the deductible. Ameren Missouri claimed an estimated $88.6 million on December 24, 2020 due to lost revenue due to the outage at Callaway. As of July 23, 2021, Ameren Missouri has received approximately $66.1 million. See below for dates and amounts received.

Submission #1 for which payment was received on May 21, 2021:

Week Ending	Indemnity
3/24/21	$4,500,000
3/31/21	$4,500,000
4/7/21	$4,500,000
4/14/21	$3,809,445
4/21/21	$4,500,000
4/28/21	$4,500,000
Total	$26,309,445

Submission #2 for which payment was received on June 25, 2021:

Week Ending	Indemnity
5/5/21	$4,345,648
5/12/21	$4,126,329
5/19/21	$4,500,000
5/26/21	$4,500,000
6/2/21	$4,311,916
Total	$21,783,892

Submission #3 for which payment was received on July 23, 2021:

Week Ending	Indemnity
6/9/21	$4,500,000
6/16/21	$4,500,000
6/23/21	$4,500,000
6/30/21	$4,500,000
Total	$18,000,000

Submission #4 for which payment has not yet been received:

Week Ending	Indemnity
7/7/21	$4,500,000
7/14/21	$4,500,000
7/21/21	$4,500,000
7/28/21	$4,500,000*
8/4/21	$4,500,000*
Total	$22,500,000*

*Estimated

The accidental outage insurance payments that have been received by Ameren Missouri up to this point have been recorded in FERC account 456.NEIL. This revenue has begun to be included in the current fuel adjustment rate (FAR) review that is currently ongoing before the Commission, ER-2022-0026 and this and any subsequent payments will continue to flow through the FAC until fully recovered by customers.

The primary property policy has a $10 million deductible. Ameren Missouri claimed an estimated $40 million on December 24, 2020 due to rotor and stator rewind expenses. EMANI covers 10% of the total property damage claim amount and follows NEIL's lead on the claim adjustment. For the property damage claim, Ameren incurred approximately $10.8 million in actual capital and expense costs, thus exceeding the $10 million deductible, in January 2021. Ameren Missouri recorded the actual deductible of $10 million on its books pro rata based on how the actual expense to FERC accounts 531, 932, 323, and 374 was recorded. Staff notes that two of these accounts are capital accounts and two of these accounts are expense accounts with FERC Account 932 being a labor loading account that in and of itself is not an above the line expense account this is recorded in the cost of service but rather is a clearing account to other expense accounts that are included in the cost of service. As mentioned above, Ameren Missouri has submitted invoices and paid expenses incurred (excluding accruals) to NEIL through 5/31/21. The estimated recovery is $40 million after the deductible. To date, no expenses have been submitted and formally denied or rejected from NEIL on the property damage claim. NEIL will not reimburse for overheads such as indirect overheads, AFUDC, or Purchasing,

Transportation and Storeroom loadings. As of June 30, 2021, Ameren Missouri has incurred loading costs of $5.3 million in capitalized labor and $13,903 of non-labor expense. Also, per the NEIL policy, the Root Cause Analysis expenses exceeding the cap of $150,000, are not eligible for reimbursement. Ameren Missouri has incurred approximately $738,305 of Root Cause Analysis costs that were expensed to FERC account 531 and 932. This leaves $588,305 of these costs ineligible for insurance reimbursement. The Company intends to seek reimbursement for all internal labor costs incurred, subject to the deductible and cap of root cause analysis in its property damage claim. In addition, $44.6 million of the total $48.5 million of the costs related to this unplanned outage is investment that if allowed to be recorded as such in this case will begin to incur return on the investment and return of the investment (depreciation expense) as soon as rates become effective for this rate proceeding. That would incur costs for rate payers in the current case that would not be relieved by reimbursement as that investment will continue to sit in rates until it is fully depreciated.

The correct method of recording should be similar to how Ameren Missouri already has recorded, and Staff recommended, for the reimbursements from the United States Department of Energy (DOE) for the capital costs Ameren Missouri was required to expend on dry cask storage for Callaway spent nuclear fuel. This method directly offsets the capital with the reimbursements and it does not incur future ongoing costs for Ameren Missouri's customers. According to Ameren Missouri, this outage is due to poor contract workmanship and Ameren Missouri's customers should not be harmed by this event. Customers will already begin to pay for the Refuel 24 costs (normalized over 18 months) as part of this rate proceeding. The very refuel for which the unplanned outage was caused, due to poor workmanship.

As of Ameren's 2nd quarter 2021 earnings presentation on August 6, 2021, the company does not expect this outage to have a significant impact on its financial results.

Staff is unaware if Ameren Missouri intends to pursue legal action or legal damages as remedies for the unplanned outage at Callaway regarding the contractor workmanship and any possible breach of contract.

Staff Accounting Recommendation

Ameren Missouri has received recovery of nuclear insurance premiums, labor and non-labor day to day operations and refuel costs for Callaway from customer rates. Customers

should not incur costs related to investment and expense that has not been fully offset with insurance proceeds for which they have funded in rates for this event. All capital associated with the outage should be considered contributions in aid of construction (CIAC) as Ameren Missouri is to receive property damage insurance proceeds that will reimburse the company for those costs. There are very minimal costs related to the Callaway unplanned outage recorded on Ameren Missouri's books and records during Staff's test year ending December 31, 2020 because of the date when Callaway went offline occurring December 24, 2020. That combined with the uncertainty surrounding the timing of determining and quantifying final capital and expense for the unplanned outage, the timing of full insurance reimbursement, any possible legal action or damages received due to the outage; Staff believes it is appropriate for Ameren Missouri to remove any capital and expense related to the event from its rate case and defer all capital costs, insurance deductibles, insurance reimbursements, (possible) legal fees, and (possible) legal damages until all of the items can be fully known and measureable and captured in customer rates in the next rate proceeding. At that time all ratemaking elements of the event can be reviewed and analyzed and netted to determine what costs remain that Ameren Missouri has not been reimbursed for through insurance. All costs can be reviewed for prudence and method of recording and a recovery period can be proposed for the unamortized balance by the parties, as this length of unplanned outage is highly unusual at Callaway. Staff has removed all non-labor expense related to the unplanned outage from the test year and has proposed an adjustment to remove all capital related costs through June 30, 2021 for its direct filing. As Callaway is now back to full generation, Staff has included Callaway at full generation in its modeling of fuel, purchased power and sales in this case. Staff will continue to review this issue during its true-up audit and may propose additional adjustments at that time.

Staff Expert/Witness: Lisa M. Ferguson

D. Ameren Missouri Research & Development (R&D)

As one of many R&D projects that Ameren Missouri has instituted, the company has recently executed a project in which it mines Bitcoin cryptocurrency using a converted shipping container with computers that is located on the distribution lines at the Sioux generation facility. Ameren Missouri only recently disclosed the full nature of this R&D project to Staff, and this R&D Project is at least potentially an issue in four current cases that Ameren Missouri has filed

before this Commission. In each of these cases, Ameren Missouri did not clearly state in testimony, or in some cases even discuss in testimony at all, what exactly the R&D project in question consisted of. In fact, in the cases that referenced the R&D Project in testimony, the testimony only vaguely stated that the project was to study improvements to system operations and reliability, with no discussion of the intention to mine Bitcoin. In addition, Ameren Missouri did not explain that this project impacts four different cases filed for requested authorization to include the associated costs and revenues in customer rates, nor did Ameren Missouri file its requests at one time in order to demonstrate the interrelated aspects of the cases. These cases are addressed by different departments of the Commission Staff and only after multiple meetings with Company did it become apparent what Ameren Missouri's filing requests actually entailed. The interrelated cases are Case Nos. ER-2021-0240 (general base rate proceeding), ER-2022-0026 (FAC rider recovery), EU-2022-0030 (AAO regulatory liability request), and potentially EM-2021-0309 (request for lease of fiber optic assets). A discussion of each case follows.

ER-2021-0240 – General Rate Proceeding

Ameren Missouri filed its request for a general increase of approximately $299 million in base rates on March 31, 2021. There was no discussion in the Company's filed direct testimony of the R&D project at Sioux regarding data centers installed to be used for mining of Bitcoin. After the meetings mentioned above, Staff discovered that Ameren Missouri included, as part of its estimated investment increase in its direct case, assets such as a modified shipping container and computers that are used for this Bitcoin mining project. The project began in April 2021. Ameren Missouri has incurred approximately $955,724 of capital costs, however a portion of that amount remains in overhead accounts that have not yet been recorded to individual plant accounts. As such, Staff has proposed an adjustment of approximately $616,000 in its direct case to remove these assets from the estimated plant additions that have been recorded to plant accounts. Staff will remove the remainder from plant in service during its true-up audit.

ER-2022-0226 & EU-2022-0030 – FAC Rider Review and AAO Regulatory Liability Requests

Ameren Missouri recently filed for recovery of its fuel adjustment rate (FAR) on July 30, 2021 in Case No. ER-2022-0226 and discussed in its testimony:

> There is one minor item, which increased ANEC $8,042 -during Accumulation Period 37. This small increase arose from electricity consumed for a research and development project being conducted near the Sioux Energy Center. The project is evaluating flexible data centers to determine whether, among other things, they can be operated as a dispatchable resource supporting the network's stability or delivering other benefits to the grid. These data centers may also provide new revenues (e.g., by producing digital assets) that if put into day-to-day operation in providing service could be used to contribute to affordability of service. However, they do consume electricity and therefore slightly increased the Company's load acquired from the MISO market (by 309,587 kWh). …While the company believes this research project will ultimately prove beneficial to its operation of the system used to serve customers, the Company recognizes that no party has had the opportunity to address the topic and will therefore with the necessary Commission permission create a regulatory liability commencing on the date the FAR from this filing takes effect (October 1, 2021) and defer to that regulatory liability that part of the FAR billings arising from the $8,042 arising from the project, which will give the Commission the ability to consider in a future general rate proceeding whether or not that sum should be returned to customers.[70]

On August 6, 2021, in Case No. EU-2022-0030, Ameren Missouri requested that the Commission give its permission to defer to a regulatory liability the impact on ANEC arising from the R&D project commencing October 1, 2021, the day new FAR rates take effect which will have been impacted by electricity consumption from the R&D project, with such deferral authority to continue until further order of the Commission. Such authority will allow the Company to defer a total of $8,042 between October 1, 2021 and July 31, 2022, plus additional sums arising from this R&D project's impact on the Company's loads from and after June 1, 2020, as those impacts manifest themselves in ANEC for Accumulation Periods 38 and thereafter. Ameren Missouri's direct testimony in both of these cases was not clear on the precise nature of the project at Sioux, what digital assets the Company was referring to, nor any details on how this project would be beneficial to operations of the system. On August 11th, 2021, Staff and The Office of the Public Counsel's ("OPC") had a conference call with Company personnel to discuss these R&D costs. Staff was then informed the power used at Sioux plant for these R&D costs was used to mine Bitcoin. Staff requested and met with Company personnel in a

[70] Ameren Missouri, *Direct Testimony of J. Neil Graser*, ER-2022-0026, page 5, line 12 through page 6, line 11.

second meeting held on August 23rd, 2021 to seek further detail regarding the project. Staff has sent out several data requests seeking more information on these additional costs; however, there will be insufficient time for review and follow-up of these responses prior to the filing of this direct cost of service report.

EM-2021-0309 – Fiber Optic Lease Request

On June 11, 2021, in Case No. EM-2021-0309, Ameren Missouri requested authorization to enter into a contract with a third-party for utilization of fiber optic capacity not currently utilized for electric operations. Ameren Missouri owns and operates communications infrastructure used for its provision of electric service to its customers, including fiber optic cable that is part of the Optical Ground Wire Cable ("OPGW") that is installed throughout its electric transmission system. The fiber optic cable is used for a variety of growing communication needs, including operation of Ameren Missouri's SCADA system, for protection and control of its transmission lines, for other Company voice and communication needs, and more specifically in the case of the transmission system, for line differential relaying, high-speed stability protection, and to provide synchrophasor capabilities. A typical fiber optic cable included within OPGW installed today generally consists of 72 to 96 strands, not all of which are currently needed for electric service purposes but which, over time, are expected to be needed for electric service. The existence of fiber capacity not needed for electric operations today affords Ameren Missouri the opportunity to lease or otherwise contract with third parties (such as telecommunications providers) for their use of such excess capacity in exchange for fees for that use. Specifically, Ameren Missouri has entered into a Dark Fiber Lease Agreement (the "Lease") with internet services provider MCC Network Services, LLC ("Lessee"). Under the Lease, Lessee will lease 12 strands of "dark fiber" over an approximately 1.67-mile portion of Ameren Missouri's Sioux to Meppen 345 kilovolt transmission line where it crosses the Mississippi River between Missouri and Illinois. The Lease term is for 20 years, and can be extended by mutual agreement, and includes annual payments to lease the fiber. Upon 780 days' notice, Ameren Missouri may terminate the lease without any financial or other liability if during the term Ameren Missouri needs the leased fibers for its own purposes. As noted, the revenues received under the Lease can be used to offset Ameren Missouri's revenue requirement. Now that Staff has at least a better understanding of some of the aspects of the R&D project, Staff

now has concerns as to whether any portion of this fiber optic network will be utilized by Ameren Missouri to maintain its R&D project related to mining Bitcoin, due to the proximity of the portion of Ameren Missouri's Sioux to Meppen 345 kilovolt transmission line for which the lease relates. It is unclear at this time if this fiber optic line has any association with the R&D project at Sioux as none of the cryptocurrency aspects of the project were discussed in any testimony nor how any of these multiple cases are impacted because of the project. Discovery has been submitted in the fiber optic lease case on this topic. Staff's recommendation in Case No. EM-2021-0309 is now due on September 13, 2021.

In each of its cases Ameren Missouri's testimony was not at all clear on exactly what the project was that is occurring at Sioux. The language describes digital assets that would be beneficial to operations of the system and reliability. The project was portrayed as a venture supporting operations reliability and flexibility when in reality the project proposes to include computer hardware/software and associated facilities in customer rates to engage in a project that appears to be not at all necessary for safe and reliable service. In fact, the project is described as producing additional revenue that would drive down revenue requirement; however, there is no discussion regarding the conflict of interest in driving up load and reducing possible sales of energy (that offsets fuel and purchased power costs) that could occur if the project is included in rates. Ameren Missouri has no policies and procedures in place to protect customers for a project that is based on highly volatile market valuations. While Staff's investigation of the R&D Project is still at a preliminary stage, Staff currently has serious concerns regarding inclusion of the project costs in retail customer rates. Commission decisions on this issue in Case Nos. ER-2021-0240, ER-2021-0226 and EU-2022-0030 (and possibly EM-2021-0309) will determine whether any portion of the R&D Project costs will potentially be included in customer rates.

Staff Expert/Witness: Lisa M. Ferguson

E. Tracking Mechanism Proposals

In this rate proceeding, Ameren Missouri is requesting to establish two trackers; (1) a Meramec Energy Center Retirement Tracker and (2) a Two-Way Rate Switching Tracker. Staff supports Ameren Missouri's proposal for the Meramec Energy Center Retirement Tracker with a few suggested changes. However, Staff opposes Ameren Missouri's proposed Two-Way Rate Switching Tracker.

The term "tracker" refers to a rate mechanism under which the amount of a particular cost of service item actually incurred by a utility is "tracked" and compared to the amount of that item currently included in a utility's rate levels. Any over-recovery or under-recovery of the items in rates compared to actual expenditures made by the utility is then booked to a regulatory asset or regulatory liability account, and would be eligible to be included in the utility's rates set in its next general rate proceeding through an amortization.

The use of trackers should not be a common occurrence in Missouri rate regulation of utilities. Rates are normally set in Missouri to allow a utility an opportunity to recover its cost of service, measured as a whole, on an ongoing basis from the utility's customers. However, under this approach, with rare exceptions, neither utilities nor utility customers are allowed to be reimbursed through the rate case process for any prior under or over-recovery of costs experienced by the utility in rates, either measured for its cost of service as a whole or for individual cost of service components. For this reason, use of trackers in order to provide reimbursement in rates to utilities or customers of any over or under-recovery of individual rate component items is rare and should be dependent on unique and unusual circumstances.

The use of trackers may be justified under the following circumstances: (1) when the applicable costs demonstrate significant fluctuation and up-and-down volatility over time, and for which accurate estimation is difficult; (2) new costs for which there is little or no historical experience, and for which accurate estimation is accordingly difficult; and (3) costs imposed upon utilities by newly promulgated Commission rules. In addition, the costs should be material in nature.

Trackers are sometimes justified for significantly fluctuating and volatile costs because it allows for the reduction of risk associated with material inaccuracy in estimating the particular costs for the purposes of setting the utility's rates. All major utilities operating in Missouri, including Ameren Missouri, have tracker mechanisms in place for their pension and other post-employment benefit (OPEB) expenses. Annual pension and OPEB expense amounts have at times in the past had significant annual volatility, primarily because pension and OPEB funding amounts are impacted by investment outcomes in equity and debt markets, which, of course, can swing upward or downward based upon trends in the general economy. In addition, in Missouri, utilities place amounts intended for later payment to retired employees for pension

and OPEBs into external trust funds to help ensure that such funds are available when due to utility employees. Staff believes it is good policy for utilities to keep as current as possible on funding of pension and OPEB amounts because it encourages utilities to stay current on pension and OPEB expense allowances currently included in their rate levels. Of course, if pension and funding amounts turn out to be less than the amounts for these items currently included in a utility's rate level, use of trackers also ensure that the funding/rate differential would ultimately be flowed back to its customers.

Costs deferrals resulting from use of trackers are different from cost deferrals resulting from an accounting authority order (AAO). In Missouri, when someone refers to an AAO, it is understood that person is referring to a Commission order that allows a utility to defer certain costs on its balance sheet for potential recovery of the deferred costs in rates through amortization to expense in a general rate proceeding. This is similar to how deferrals resulting from trackers may be treated in general rate case proceedings. However, the nature of the costs to which AAOs are normally granted, and the nature of the costs to which tracking treatment is normally granted, are quite different.

Typically, AAOs have been used to allow utilities to capture certain unanticipated and "extraordinary" costs that are not include in their ongoing rate levels. The term ""extraordinary costs" are defined as costs associated with an event that is unusual, unique and non-recurring in nature. The classic example of an extraordinary even is the occurrence of a natural disaster, such as a wind or ice storm, or major flood that affects a utility's service territory.

In contrast, trackers have been used in Missouri to track certain costs that are ongoing to a utility and for which some allowance has been built into the company's existing rate levels. For this reason, while costs subject to trackers exhibit some highly usual or unique attributes which justify the use of a tracker, these costs are not "extraordinary" in the sense that this term is commonly applied to costs covered by AAOs.

Excessive use of trackers would tend to skew ratemaking results either in favor of the utility or in favor of its customers. Broad use of trackers would not provide the incentive a utility has to operate as efficiently and productively under the rate regulation approach in Missouri.

With certain exceptions, the policy in Missouri has been to set a utility's rates based upon measurement of "all relevant factors," taking into account levels of revenues, expenses, rate base and rate of return that are calculated at or approximately at the same point in time. Use of an "all relevant factors" approach is necessary to ensure that a utility's rate levels are based upon an accurate measurement of its cost of service at a particular point in time.

When using trackers as part of setting rates, certain cost factors inevitably receive different and inconsistent treatment compared to other cost factors. For example, if a utility tracks expenses that tend to increase in amount over time, but does not track cost of service factors that may reduce its cost of service (factors such as revenue growth, or increases in rate base offsets for accumulated depreciation or deferred taxes), the utility will have the potential of receiving retroactive dollar-for-dollar recovery of certain cost increases in its customer rates through the operation of its trackers while pocketing for itself any beneficial changes in other cost of service components that occur over the same period. In this manner, inappropriate use of trackers can lead to skewed and unfair ratemaking results.

An inevitable byproduct of the Missouri ratemaking approach is "regulatory lag." "Regulatory lag" is simply the passage of time between when a utility experiences a change in the cost of service, and the reflection of that change in its rate levels. While regulatory lag is often portrayed by utilities as a phenomenon that is entirely negative or harmful, the existence of regulatory lag does provide utilities with incentive to be as efficient and cost-effective over time as they can. Excessive use of trackers can serve to eliminate or weaken these beneficial incentives.

Regulatory lag can affect the earnings of a utility between general rate proceedings. The operation of regulatory lag as part of the normal ratemaking process exposes a utility to the prospect of lower earnings if its cost of service increases between general rate proceedings. However, it also allows the utility to experience higher earnings if the utility is able to reduce its cost of service that was established in the most current rate proceeding. This "penalty/reward" aspect of current Missouri ratemaking policy would be damaged by use of trackers if applied to normal cost of service items. A company that experiences an increase in an expense that is being tracked will experience no reduction in earnings related to that increase of costs (because the cost increase will be capture on its balance sheet and not on its income statement) and therefore, the

utility will have less incentive to attempt to minimize any such cost increase. On the other hand, a utility that experiences a reduction in an expense that is being tracked will experience no increase to its ongoing earnings level as a result of the decreased costs (again, because the cost decrease will be capture on its balance sheet and not on its income statement) and, therefore, would have less incentive to produce the lower cost levels in the first place.

1. Meramec Energy Center Retirement Tracker

Ameren Missouri plans to retire the Meramec Energy Center in December 2022, which is ten months after the operation of law date in the case (February 28, 2022). To include the full annual costs of the Meramec Energy Center into rates will create a situation in which Ameren Missouri may experience material over-earnings following the plant retirement. In recent history, Every Missouri[71] and The Empire District Electric Company[72] have both retired large generating facilities. In both instances, the full annual amount of costs for each generating facility were included in rates resulting from the most recent general rate case but with an AAO also established to defer the financial impact of costs and revenues no longer incurred by the utility following the retirement of the plant.

Ameren Missouri's proposal, while somewhat different from the other two scenarios listed above, also provides another means of ensuring that Ameren Missouri's customers receive the benefit of any cost savings over time from the retirement of the Meramec Energy Center, while Ameren Missouri is made "whole" for operating the plant between the effective date of rates in this case and the date of the Meramec Energy Center retirement. Staff witness Lisa M. Ferguson further discusses the mechanics of this tracker and Staff's proposed changes to Ameren Missouri's tracker request.

a. Development of Tracking Mechanism Base

The Meramec fossil fuel generating facility is planning to be retired by December 31, 2022 based on Ameren Missouri's current Integrated Resource Plan (IRP) filings. In this case, Ameren Missouri has proposed to include one fifth (1/5) of the costs listed below associated

[71] Case No. EC-2019-0200.
[72] Case No. ER-2019-0374.

with the Meramec facility in the cost of service and defer the remaining four fifths (4/5) in a tracking mechanism:

- Rate of Return including income taxes on the following items:
  - Plant-In-Service and Accumulated Depreciation Reserve at September 30, 2021
  - Coal Inventory – 13 month average ending June 30, 2021
  - Materials & Supplies – 13 month average ending June 30, 2021
  - Accumulated Deferred Income Taxes
- Depreciation Expense at September 30, 2021
- Power Plant Maintenance Expense at December 31, 2020

This base cost amount included in rates resulting from this case will then be used to compare to the actual costs incurred by Ameren Missouri to operate the Meramec facility from the effective date of rates until its retirement. In Ameren Missouri's next electric rate proceeding, the difference between the costs included for the Meramec facility in this case and one fifth (1/5) of the actual costs incurred to operate the plant until its retirement would be amortized in rates over a 5 year period. Ameren Missouri is also seeking carrying costs to be included in the deferred balances in its next rate case. Any items that normally have rate base treatment has been requested to be included in rate base at the weighted average cost of capital that will be determined as part of this current rate case. Any expense amount in the deferral mechanism would accrue carrying costs at Ameren Missouri's short term debt rate. As part of its direct testimony, the Company has not proposed to defer costs in the tracking mechanism past the retirement of Meramec (i.e. for any costs incurred subsequent to the retirement) nor have they proposed to include any cost savings that may occur during the time period Company has proposed.

Staff has reviewed the calculations regarding company's proposal. Staff agrees with the items Ameren Missouri has proposed to be included in base rates and the tracking mechanism; however, not necessarily the amount of each item. Ameren Missouri's proposed depreciation expense and rate of return are premised on the weighted average cost of capital and depreciation rates that they have proposed in their direct testimony in this case. Staff has differing positions regarding the depreciation rates, the return on equity, and capital structure for

electric operations. Staff agrees to use test year maintenance costs as a base amount for that item and Staff is using a thirteen month average regarding materials & supplies and coal inventory for purposes of the tracker.

There are a couple of items that Ameren Missouri did not propose to be included in the tracking mechanism that Staff believes would be appropriate to track as the costs are related to the Meramec facility, insurance expense and property tax expense. These costs cannot be delineated down to the dollar in regard to the amount specifically for Meramec. This is because insurance is procured on all of Ameren Missouri's assets, not each single asset and property taxes are assessed on a distributable property basis, not by asset. However, there are reasonable allocation methods that Staff has utilized based on company's responses to Staff data requests that have been used to determine the amounts that Staff has included in base rates and the tracking mechanism for property taxes and insurance. The one fifth portion of all expenses are either included in the individual line items or through the cash vouchers line item in Staff's cash working capital (CWC) schedule.

At the time of Staff's direct testimony, the plant and accumulated reserve and any associated return and depreciation expense are estimated until actual amounts are known at September 30, 2021. In addition, ADIT will not be known until September 30, 2021. Staff does not intend on adopting estimates for the ongoing operation of the tracker but rather will finalize the amounts for both the portion of Meramec's costs within the cost of service and the tracking mechanism during its true-up audit. Staff accepts company's proposal regarding carrying costs for the rate base and non-rate base items.

Please see Staff witness Kimberly K. Bolin's testimony section for a general policy discussion regarding Staff's position. In addition, $1/5^{th}$ of Meramec property tax has been included in Staff witness Jason Kunst's annualization. There is also $1/5^{th}$ of insurance expense related to Meramec included in Staff witness Christopher D. Caldwell's insurance expense annualization.

Staff Expert/Witness: Lisa M. Ferguson

2. <u>Rate Switching Tracker</u>

Ameren Missouri proposes to establish a two-way tracker to track changes in revenue that are directly attributable to residential customers optimizing their rate as new rates are

adopted. Staff is opposed to this tracker. Ameren Missouri is barred from requesting a Revenue Stabilization Mechanism (RSM) under Section 386.266.3., RSMo. because it has provided the Commission notice under subsection 5 of Section 393.1400., RSMo that it has elected the plant in service accounting treatment provided for in that section. [73] This tracker would track "lost revenues" which would essentially act as RSM. Also in contrast to "out-of-pocket expenditures costs incurred by the utility there is no "out-of-pocket" expenditure associated with lost revenues that would need to be tracked. It is merely a reduction in the earnings level of the affect utility. Staff will further address Ameren Missouri's tracker proposal in Rebuttal testimony.

Staff Expert/Witness: Kimberly K. Bolin

F. Automated Meter Infrastructure (AMI)

** [redacted] [74] [redacted] **[75] Ameren will also ** [redacted]

[73] See Sections 386.266.3. and 393.1400.5, RSMo.
[74] Ameren Missouri response to Staff DR No. 0319, attachment titled Smart Meter Program Report.
[75] Ibid.

[redacted] **[76]

Ameren Missouri has identified several benefits of AMI meter deployment most notably including: ** [redacted] **[77]

Staff Expert/Witness: J Luebbert

G. Cash Working Capital (CWC)

Cash working capital (CWC) represents the amount of cash required for day-to-day expenses incurred in providing service to ratepayers. In some instances, payments for goods and services are paid shortly after, or even before, the goods are utilized or the services are performed. In other instances, the payment for the good or service may occur long after the good or service is received. If, on average, the payment for goods or services utilized in the provision of utility service is made before the receipt of related customer revenues, the utility will have a relatively constant investment in cash working capital (i.e., an investment in the prepayment of cash expenses made in advance of the receipt of related service revenue.) In this instance, the utility's shareholders are compensated for the funds they provide in advance by inclusion of these funds in rate base. In that way, the shareholders earn a return on the funds they have invested. Conversely, if, on average, the payment for goods or services utilized in the provision of utility service is made after receipt of related customer revenues, the utility will enjoy a relatively constant source of cost-free funds supplied by ratepayers (i.e., ratepayers provide cost free capital to the utility in the form of payment for utility service prior to the time that the utility is required to pay "cash" for the goods and services consumed in providing the utility service). Ratepayers under this circumstance are compensated for the funds they provide by reducing rate base consistent with the amount of the customer-provided cash working capital.

[76] Ameren Missouri response to Staff DR No. 0319.
[77] Ameren Missouri response to Staff DR No. 0319, attachment titled Smart Meter Program Report.

To determine the amount of cash working capital provided by both the ratepayers and shareholders, Staff performs a lead/lag study. The lead/lag study involves analysis of the timing of when expenses are paid to suppliers, employees, etc., and when the utility receives revenues from customers for the services it provides. A positive cash working capital requirement indicates that the shareholders provided the working capital for the test year. This means, on average, the utility paid the expenses incurred to provide the electric service to the ratepayers before the ratepayers paid for the service. A negative cash working capital requirement indicates that the ratepayers provided the working capital during the test year. This means, on average, the ratepayers paid for their electric service before the utility paid the expenses incurred to provide that service.

In this case, Staff did not perform a full lead/lag study as Ameren Missouri has recently been before the Commission for a rate review. However, Ameren Missouri did prepare a lead/lag study specific to costs incurred during the 12 month period ending December 31, 2020. Staff has reviewed both the revenue and expense lags calculated by Ameren Missouri for accuracy and reasonableness. While Staff has adopted many of the revenue and expense lags proposed by Ameren Missouri, Staff determined that an analysis was needed with respect to the revenue lag and expense lags associated with sales tax and the expense lags for fuel, payroll, and payroll taxes. These differences are discussed in more detail below.

Staff has proposed a different revenue lag than Ameren Missouri. Staff agrees with the Company's calculations, the difference in lag amounts is due to Staff's use of updated information. Ameren Missouri's calculation of collection lag is based on data covering the 12 months beginning September 2019 through August 2020. Staff's adjustment is based on bill payment data for the 12 month period beginning January 2020 and ending December 2020.

Sales tax is collected by Ameren Missouri from its ratepayers and then remitted to the taxing authorities based on the arrangement established with the taxing authorities. Since the Company collects the tax for the taxing authority and a service is not provided to the ratepayer by the Company, measurement of the revenue and expense lag calculations start with the beginning point of the collection lag for sales tax. The collection lag is the period of time between the day the bill is placed in the mail by the Company and the day the Company receives Payment from the ratepayers for services provided. As a result the sales tax has a shortened

revenue and expense lag. Staff recommends a shortened revenue and expense lag for sales tax in this case.

** [redacted] **

The negative lead 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 for the management payroll to zero for an overall expense lag of 12.01 to reflect the management payroll as it was prior to the change in November 2018.

Ameren Missouri has proposed different expense lags for electric operations and gas operations for payroll and withholdings, employee benefits, pensions and OPEBS, incentive compensation, and gross receipts taxes. Ameren Missouri incurs costs for both its electric and gas employees for payroll, incentive compensation and all employee benefits at the same time as the dates these payments are made are the same for both of company's operations and the dollar

amounts expended are all at once, not separately calculated and then separately expended for gas and electric operations. The same is true for gross receipts taxes. Whether the company is receiving payment for an electric or gas bill, the same percentage of tax is being applied to the revenue and that revenue must be paid to the taxing authority at the same time. Staff had expected that these lags would be the same. The Company's response to Staff DR No. 0515 in case No. ER-2021-0241, explains "for example, there are two components of the incentive compensation expense lag. The Executive Incentive Compensation Plan is paid in February, while all other payments occur in March. Even though these payments occur on the same dates for gas and electric the relative amounts paid on these dates are different between gas and electric. It is the difference in these relative amounts that results in the expense lag for Incentive Compensation in total to be different between gas and electric." The difference in these lags is due to Ameren Missouri's use of a weighted average of the applicable components of each lag, in this case the component that is causing the difference between gas and electric operations is the specific dollar amounts. Rather than taking all of payroll and performing the calculation, the gas amounts are first allocated and then the separate lags are calculated. Staff has set these lags to be the same to reflect the reality of the transaction, which is that all of the items above are paid at one time.

All of Staff's recommended revenue and expense leads can be found in Accounting Schedule (8). 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 in rate base.

Staff Expert/Witness: Jane C. Dhority

H. Plant-In-Service Accounting ("PISA") Regulatory Asset Balance

Staff has included adjusted PISA deferrals through June 30, 2021 with an estimate through September 30, 2021 as an addition to rate base. As part of Staff's true-up audit, Staff will examine actual deferred amounts through the September 30, 2021 cutoff. For a complete discussion on PISA, please refer to the Plant-In-Service-Accounting Amortization section of this revenue requirement cost of service report.

Staff Expert/Witness: Jason Kunst, CPA

I. Pays Regulatory Asset

As part of the Commission approved stipulation and agreement in Case No. EO-2018-0211 the parties agreed to allow Ameren Missouri to operate a Pay As You Save (PAYS) program as part of the MEEIA 3 offerings. The program allows Ameren Missouri to offer financing to eligible customers for energy efficiency upgrades. Participants are charged a 4% financing fee on their bill, while non-participants are charged the difference between pre-tax Plant-In-Service Accounting rate and the 4% financing cost until the regulatory asset is moved into base rates. The parties agreed that Ameren Missouri would offer $5 million in financing to eligible customers beginning in 2021, and would offer $10 million in 2022. The stipulation and agreement also called for the PAYS regulatory asset to be included in rate base and given typical cost of capital treatment in future rate cases with offsetting revenues being calculated from participants bills. Staff has included the regulatory asset balance of ** [redacted] ** as of June 30, 2020 in the cost of service calculation. The PAYS program is currently ** [redacted] ** spend for calendar year 2021 as agreed to in the Stipulation and Agreement in EO-2018-0211. Staff will continue to review the regulatory asset balance through the September 30, 2021 true-up cut-off date.

Staff Expert/Witness: Jason Kunst, CPA

J. Prepayments and Materials and Supplies

Ameren Missouri utilizes shareholder funds for prepaid items such as insurance, rents, employee benefits, and maintenance agreements. These items are included in rate base, so that the up-front investment made by Ameren Missouri related to prepayments is recognized in customer rates. Staff has included a 13-month average level ending June 30, 2021, of prepayments in rate base. Staff will review prepayments during its true-up audit.

Ameren Missouri maintains a variety of materials and supplies in its inventory in order to meet the day-to-day needs of its utility operations. Due to the impending retirement of the Meramec generating facility at the end of 2022 and the establishment of a tracking mechanism in this proceeding, Staff determined it appropriate to include one fifth (1/5) of Meramec's materials and supplies in the cost of service and include four fifths (4/5) of the materials and supplies in the tracking mechanism. For the remainder of the materials and supplies, Staff included a

13 months ending June 30, 2021, in rate base. Staff will reexamine the level of both materials and supplies as part of its true-up audit.

Staff Expert/Witness: Christopher D. Caldwell

K. Customer Deposits

Customer deposits are funds received from Ameren Missouri's customers as a security against potential loss arising from failure to pay for utility service received. Until the deposit is refunded, customer deposits represent a source of funds available to the Company and are included as an offset of rate base investment. Staff included a 13-month average from June 2020 through June 2021 of customer deposits in the cost of service. Staff will re-examine the amount of customer deposits to include in rate base as part of its true-up audit.

Staff Expert/Witness: Christopher D. Caldwell

L. Customer Advances

Customer advances are funds that individual Ameren Missouri customers provide to the Company to assist in the costs of the provision of electric service to them. Unlike customer deposits, customer advances are never refunded and no interest is paid to the customers for the use of their money, these funds represent an interest-free source of capital to the Company. Therefore, it is appropriate to include these funds as an offset to rate base. Staff included a 13-month average from June 2020 through June 2021 of customer advances in the cost of service. The level of customer advances will be re-examined as part of Staff's true-up cut-off, September 30, 2021.

Staff Expert/Witness: Christopher D. Caldwell

M. Renewable Energy Credits (RECs) and Emission Allowances

Ameren Missouri maintains a balance of RECs and Solar RECs (SRECs) which primarily represent the energy generated from renewable energy sources that they receive through their contract with the Pioneer Prairie wind and solar generation respectively. Ameren Missouri also maintains a small balance of emission allowances that are distributed to utilities (and other industries) as part of a cap and trade system which is designed to limit pollution emissions. The cap on greenhouse gas emissions is a firm limit on pollution and becomes stricter over time.

The trade part is a market for companies to buy and sell allowances that let them emit only a certain amount of pollution, as supply and demand set the price. An emission allowance authorizes a utility to emit one ton of emissions during a given compliance period. Allowances are a fully marketable commodity. Once allocated to the utility, allowances may be bought, sold, swapped or banked for use in the future. Trading of emission allowances gives utilities an incentive to save money by cutting emissions in a cost effective manner. The Environmental Protection Agency administers this cap and trade system as part of its Acid Rain Program that was established under the 1990 Clean Air Act Amendment.

Staff noted a significant decline in the balance of RECs and SRECs from December 2017 through August 2018 but the balances stabilized with some monthly variation subsequent to September 2018. Ameren Missouri's emission allowance balances levels have also exhibited some variation as well. However when Staff reviewed the data through June 2021, the balance of RECs and emission allowances reached a net zero. According to company's response to Staff DR No. 0444, Ameren Missouri expects account balances to decrease over time if Renewable Energy Standard (RES) compliance can be met through self-generated RECs and if compliance with emission regulation can be met through allocated allowances. Staff discussed this company personnel and there may be further RECs and emissions allowances purchased but any amount is unknown at this time. Therefore, Staff has included in rate base zero emission allowances, RECs and SRECs that existed as of June 30, 2021. Staff will continue to examine these balances through the September 30, 2021 true-up cutoff established by the Commission in this rate case and may recommend further adjustments for this issue based on activity through that time period.
Staff Expert/Witness: Lisa M. Ferguson

N. Fuel Inventories

1. Fuel Inventory – Coal On-Site and Coal-In Transit

Ameren maintains fuel inventories of nuclear fuel, natural gas, oil and coal for its production facilities. For the coal inventory at Ameren Missouri's coal-fired power plants (Labadie, Rush Island, Sioux Energy Center, and Meramec Energy Center), Staff calculated thirteen-month averages ending June 30, 2021 of the actual coal inventory levels and coal in transit during that period. For all coal plants, Staff has included coal-in-transit balances in the

coal inventory. Coal-in-transit is coal that is in-route to Ameren Missouri facilities, either by truck, train or, barge, but has not yet arrived at the plant. Staff then multiplied the normalized quantity of coal by the current coal prices to calculate the rate base value for coal inventory. Staff's normalized coal inventory does not include an amount of inventory for what was formally referred to as the Hillcrest Pile, as Ameren Missouri has ceased maintaining the coal pile due to Meramec's pending retirement. Staff has included 1/5th of the normalized coal inventory for Meramec in Staff's cost of service and have then included 4/5th of the remaining Meramec coal inventory in the tracker mechanism.

2. Fuel Inventory – Non Coal

Ameren maintains fuel inventories of nuclear fuel, natural gas, and oil for its non-coal production facilities. The average inventory levels, calculated as described below, are for periods ended June 30, 2021:

Fuel	Calculation
Nuclear	18-month average of unspent fuel in the fuel core and fuel held on-site.
Gas	13-month average of the quantity held multiplied by the current cost of inventory.
Oil	13-month average of inventory balances.
Coal	13-month average of inventory balances.

Staff will update its fuel inventories for the September 30, 2021 true-up period.

Staff Expert/Witness: Lisa M. Ferguson

O. Pensions and Other Post Employment Benefit - Rate Base

See the discussion in Income Statement, Payroll and Benefits section of this report.

Staff Expert/Witness: Paul K. Amenthor

P. 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 2021 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, September 30, 2021. Based on this true-up examination, Staff may make additional adjustments to the cost of service as necessary.

Staff Expert/Witness: Lisa M. Ferguson

VIII. Solar Programs

A. Community Solar

Community Solar is a voluntary program that Ameren Missouri first proposed as a pilot program in Case No. EA-2016-0207. This program has a separate and distinct tariff and rate from the rest of Ameren Missouri's tariff and rates. Ameren Missouri has proposed several changes to the Community Solar Tariff in the context of this rate case. For detail regarding Staff's position on Ameren Missouri's proposed changes to the Community Solar program, please see Staff witness Amanda Coffer's testimony that will be included in Staff's Direct Class Cost of Service report.

The program is designed for electric customers that want to take part in utilizing solar generation for the electricity they use but are unable to install solar panels. Those customers in the residential (1M) and Small General Service (2M) customer classes who have not received a disconnection notice in the last 12 months, have not requested an optional time of use rate, or participate in net metering are eligible for the program. Customers' sign up, on a first come, first serve basis, to subscribe to 100 kWh blocks of a single generation asset in which that asset's total

generation is shared by all subscribers to the program. These blocks of energy replace an equivalent kWh amount of electricity customers receive from their standard class of service. The first asset to be built and utilized for this purpose was the solar array built at Lambert International Airport in St. Louis, MO. This facility was interconnected and operational in August 2019 but did not complete testing for in-service until December 2019. The Lambert solar facility is 942 kW-AC and as of July 1st, 2021 is fully subscribed. Customers who have not been able to join the program due to limited availability are on a waiting list and when blocks for a solar asset open up, those customers can then subscribe to the program by paying a generation fee.

Ameren Missouri recently expanded its Community Solar program in Case No. EA-2020-0371. Ameren Missouri sought and was given permission by the Commission to build a second solar facility in Montgomery County, MO. Ameren Missouri broke ground on this 6.16 MW-AC facility in June 2021 and it is expected to be complete in December 2021.

The investment, revenue and expense for the Lambert facility is fully included in rates at this time. Ameren Missouri records 85% of any return and depreciation related to the facility in its PISA deferral until the actual plant is in service and included in base rates. There is no RESRAM treatment related to Community Solar.

However, it has been Staff's position that because this program is voluntary, and it is included in the cost of service, if at any time during the life of the Community Solar program, the program revenues do not fully offset the investment and expense related to the program, then Staff will propose an adjustment to remove the excess cost that occurs above the revenue during a base rate case. If this adjustment is not proposed, non-participant customers would be subsidizing the program for which they do not participate. This would drive the cost of service away from actual cost based rates. As such, Staff recommends that Ameren Missouri record all elements of its investment, revenue and expense related to the Community Solar Program with distinct coding in its general ledger so as to clearly delineate this program from the rest of the cost of service. Any items that cannot be clearly defined, such as tax related items, insurance or property tax, should be reasonably allocated with all supporting documentation for that allocation available to Staff during a rate case proceeding. Company has committed to this for

its Montgomery County facility and should commit to providing this information going forward for future program costs and revenues.

At this time, Staff is not proposing to adjust any of the cost of service aspects of the Lambert facility as it is fully subscribed; however please see Staff witness Kunst' testimony regarding the removal of the 85% of depreciation and return and carrying costs associated with the Lambert facility from the date it went into service until the facility was included in base rates on April 1, 2020. Ameren Missouri has a separate and distinct tariff that addresses the Community Solar Program and that rate is designed to cover all costs of the program, Staff considers inclusion of this amount as double recovery because Ameren Missouri began to receive for this program as soon as it went into service. There was no delay between when the facility began to operate and tariff rate recovery as opposed to the rest of base rates changing on April 1, 2020 for the remaining investment. Staff will review the levels of program participation as part of its true-up audit at September 30, 2021 and may propose further adjustment at that time.

B. Neighborhood Solar

In this program, Ameren Missouri is investing in solar facilities similar in nature to that of the O'Fallon solar facility but at a much smaller scale. Ameren Missouri will finance, build, and operate solar canopies in parking areas at partner sites and in return the partner provides the land for the solar facility for up to 38 years. An Exclusive Solar Energy Project License and Easement Agreement will be executed between Ameren Missouri and each partner facility. This is not a voluntary program like Community Solar and does not have a separate and distinct tariff. The investment, revenue, and expense related to these facilities will be included in the overall cost of service and resulting overall customer tariffed rates once the facilities go into service.

Workforce development and educational opportunities are expected to be generated through the construction of these facilities. These facilities are not necessary to meet Missouri's Renewable Energy Statute (RES) at this time but these facilities will produce solar rebates.

As part of Senate Bill 564, effective as law on June 1, 2018, Section 393.1665(2)(3) requires:

> An electrical corporation with one million or more Missouri electric customers shall invest in the aggregate no less than fourteen million dollars in utility-owned solar facilities

> located in Missouri or in an adjacent state during the period between the effective date of this section and December 31, 2023. If the rate impact of the electrical corporation's investment in such facilities would cause the electrical corporation to exceed the one percent maximum average retail rate increase limitation required by subdivision (1) of subsection 2 of section 23 393.1030, that part of such costs that would cause such one percent limitation to be exceeded shall be deferred by the electrical corporation to a regulatory asset. Carrying costs at the electrical corporation's weighted average cost of capital shall be added to the regulatory asset balance and the regulatory asset shall be recovered through rates set under section 393.150 or through a rate adjustment mechanism under section 393.1030, as soon as is practical.
>
> An electrical corporation's decision to invest in utility-owned solar facilities consistent with subsection 2 of this section shall be deemed to be prudent. An electrical corporation shall not be required to obtain the permission of the commission to construct the facilities required by this section, notwithstanding the provisions of section 393.170. The commission shall retain the authority to review the specific costs incurred to construct and own the facilities to ensure that rates are based only on prudently incurred costs.

As subsections 2 and 3 of Section 393.1665 states above, Ameren Missouri is allowed by this law to build these specific type of facilities without the requirement to seek a certificate of convenience and necessity (CCN). Staff is allowed to review the costs associated with these facilities prior to these costs going into base rates. Ameren Missouri plans to include 85% of the program return and depreciation on the investments in the Plant in Service Accounting (PISA) deferral balance once the facilities go into service. Ameren Missouri is not seeking RESRAM treatment for the capital or expense for this program as they do not consider these projects necessary to meet RES compliance.

At this time, Ameren Missouri has notified Staff of two projects as part of the program that will be used for generation of energy into the grid. The first facility is located at Habitat for Humanity in south St. Louis (South St. Louis Renewable Energy Center). The site was selected in January 2020, is a 192 KW-AC facility and its expected output is 308.4 MWh/year. The site preparations and construction began for this facility in December 2020 and is expected to be in-service in August 2021 with substantial completion by August 1, 2021.

The second facility is located at Southeast Missouri State University in Cape Girardeau. The site was selected in January 2020, is a 1.2 MW-AC facility and its expected output is 1,792 MWh/year. The site preparation and construction for this facility is expected to begin in August 2021 and is anticipated to go into service in early 2022 with substantial completion by May 12, 2022.

At the time of Staff's direct testimony, neither facility has gone into service nor has been assessed for in-service criteria. Staff will review the costs for the first facility as part of its true-up audit and will include the investment, revenue, and expense in the cost of service once it has met in-service criteria. As far as Staff is aware, inclusion of the Habitat for Humanity facility will not exceed the one percent rate limitation set by Senate Bill 564. A fully executed contract between Ameren Missouri and the partner facilities will need to be provided to Staff prior to each facility being included in base rates. The one percent limitation as well as all project related contracts will also be reviewed during Staff's true-up audit.

Staff Expert/Witness: Lisa M. Ferguson

IX. In-Service Criteria Overview

A. Wind Facility Construction Audits

In order to meet the Missouri Renewable Energy Standards, Ameren Missouri applied for and was granted two Certificates of Convenience and Necessity to construct and own two wind generation facilities High Prairie[78] and Atchison[79]. As part of the stipulation and agreements reached in the respective cases, the parties agreed to not challenge the prudence of the decision to construct the facilities or purchase the facilities under the terms of the BTA[80, 81].

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[78] Order Approving Third Stipulation and Agreement effective November 3, 2018 in EA-2018-0202. "Union Electric Company d/b/a Ameren Missouri is granted a certificate of convenience and necessity to construct and own a wind generation facility to be constructed in Schuyler and Adair Counties in Missouri under the Build Transfer Agreement with TG High Prairie Holdings, LLC, as described in its application, subject to the conditions set forth in the Third Stipulation and Agreement."

[79] Order Approving Stipulation and Agreement effective August 25, 2019 in EA-2019-0181. "Union Electric Company d/b/a Ameren Missouri is granted a certificate of convenience and necessity to construct and own a wind generation facility, which includes gen-tie facilities, to be constructed in Atchison County, Missouri under the Build Transfer Agreement with Enel Kansas, LLC, as described in its application, subject to the conditions set forth in the Stipulation and Agreement."

[80] Prudence: The Signatories agree that they shall not challenge the prudence of the decision to acquire the facility under the terms of the BTA, including Non-Compliant wind turbine generators under the terms of the BTA, and to merge TG High Prairie, LLC into Ameren Missouri if the acquisition of the facility closes pursuant to the BTA. Nothing in this Stipulation limits the ability of any Signatory or other party from challenging the prudency of the

At the time of Staff's direct filing in this case, Staff is including the estimated true-up value of the High Prairie and Atchison Renewable Energy Centers with the exception of ** [redacted] ** in the revenue requirement. ** [redacted] ** While Staff has included the estimated costs of ** [redacted] ** in the cost of service report, as part of its direct filing, Staff will continue to review the actual costs through the September 30, 2021 true-up cut-off date established in this case.

Appendix 5 – provides a more detailed description regarding the Construction Audits for the High Prairie and Atchison Renewable Energy Centers.

Staff Experts/Witnesses:
Jason Kunst, CPA; Claire M. Eubanks, PE; J Luebbert, and Shawn E. Lange, PE

1. Atchison Facility Asset Removal

As further described below in the Renewable Energy Standard Rate Adjustment Mechanism and in Appendix 5, Staff is removing ** [redacted] ** from plant and ** [redacted] ** from accumulated reserve to account for ** [redacted] ** that is unlikely to be in service by the true-up cut-off date established by the Commission in this case.

Staff Expert/Witness: Jason Kunst, CPA

In order for Staff to recommend inclusion of generating units, including solar or wind facilities in rate base, the plant must be "fully operational and used for service." A new facility usually will not have any historical operating information from which Staff can make a

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design, construction costs, interconnection costs, and all other project related costs, including costs impacted by construction duration."

[81] "Prudence: The Signatories agree that they shall not challenge the prudence of the decision to construct the facility for RES compliance purposes under Section 393.1030, RSMo., and to merge Outlaw Wind Project, LLC into Ameren Missouri upon acquisition of the facility. Nothing in this Stipulation limits the ability of any Signatory or other party from challenging the prudency of the design, construction costs, interconnection costs, and all other project related costs, including costs impacted by construction duration."

recommendation to the Commission as to whether the new unit is fully operational and used for service; therefore, operational tests must be established and performed. Staff refers to these operational tests or requirements as in-service criteria.

The Commission has used in-service testing since at least 1978, after Section 393.135 went into effect in 1976, to determine whether the inclusion of a facility in rates is just and reasonable. Section 393.135, RSMo. 2016 states:

> Any charge made or demanded by an electrical corporation for service, or in connection therewith, which is based on the costs of construction in progress upon any existing or new facility of the electrical corporation, or any other cost associated with owning, operating, maintaining, or financing any property before it is **fully operational and used for service, is unjust and unreasonable, and is prohibited**. [Emphasis added.]

In-service testing has been completed on a wide range of generating plant types and specific plant upgrades, such as environmental retrofits. Staff typically recommends similar tests across types of generating plant types (i.e. base load, intermediate, and peaking), however each specific plant type may also have different tests unique to the specific generating unit. Staff also commonly recommends criteria which applies to all generating plants and environmental retrofits, such as, that all major construction work is complete.

Staff includes certain tests that will give an indication of how a new unit will perform under various conditions. Staff recommends several criterion, which in combination are needed to determine that a unit is both fully operational and used for service. Certain fundamental tests are included to prove whether the unit can start properly, shut down properly, operate at its full design capacity, operate for a period of time without tripping off line, operate at multiple load points, or operate at its design minimum load point. Other items Staff would consider are whether the unit can meet the emissions requirements, and whether the full output of the unit can be delivered into the electrical distribution/transmission system. An additional factor Staff will consider is whether contractual testing has been performed prior to the company accepting the unit.

There have been instances where the Commission determined a generating plant was used for service but not fully operational. An early case in which the Commission considered in-

service criteria specifically was Case No. ER-79-60, a rate case in which the date of Jeffery Energy Center Unit 1 becoming fully operational and used for service was at issue. In that case, the Commission found that even though the Jeffery Energy Center Unit 1 was used for service, it must also be fully operational prior to inclusion in rates.

B. Wind In-Service

Staff and Ameren Missouri agreed to in-service criteria to be used for the Atchison and High Prairie Wind Farms as a part of the respective certificate of convenience and necessity (CCN) cases.[82] Staff witnesses Shawn E. Lange, PE and J Luebbert present the status of Engineering Analysis' evaluation and recommendation in the attached Construction Audit report, Appendix 5.

C. Solar In-Service

The solar in-service criteria includes the typical criterion that Staff always includes, such as all major construction work is complete and whether there are sufficient distribution assets for the facility. In addition to confirmation that the solar facility is producing energy, the solar in-service testing includes a capacity test. This test evaluates the system's power generating capability. Solar generation has inherent uncertainties related to weather conditions such as temperature, irradiance, and seasonal variability. The benefit of the capacity test is that it is a shorter-duration test, which corrects for these weather conditions.

D. BJC Solar

In late 2016, Ameren Missouri received approval to offer a distributed solar pilot, which involved partnering with local businesses to install Ameren Missouri-owned solar (EA-2016-0208). Ameren Missouri partnered with Barnes-Jewish Hospital to install an approximately 1.818 MW DC[83] facility on top of a parking garage at 4456 Duncan Avenue.[84] The BJC solar facility includes solar panels mounted on a steel canopy (carport) and inverters. Capacity testing of the solar facility was being conducted toward the end of the last Ameren Missouri rate case, ER-2019-0335, therefore, it was stipulated that "[t]he solar facility

[82] Case Nos. EA-2018-0181 and EA-2018-0202.
[83] Approximately 1.57 MW AC.
[84] Site Documentation in EA-2016-0208 indicated the address was 4466 Duncan, however, the location is 4456 Duncan per response to Staff DR No. 0422.

installed at the BJC Healthcare site shall not be included in rates until in-service criteria contained in Exhibit H are shown in a future general rate proceeding to be satisfied."[85] Appendix 3, Schedule CME-d1 provides the in-service criteria for this facility and Staff's review. Staff concludes that the BJC solar facility is now fully operational and used and useful for service.

E. South St. Louis Renewable Energy Center

A parking structure mounted solar facility at the Habitat for Humanity headquarters in St. Louis, MO is nearing completion. The South St. Louis Renewable Energy Center is a 192 kW-AC solar facility[86] and part of Ameren Missouri's Neighborhood Solar program. The South St. Louis Renewable Energy Center consists of solar panels mounted on canopy structures and inverters. Ameren Missouri was not required to seek a CCN for this facility per 393.1665.3 RSMo, which requires certain electric utilities to spend $14 million on solar projects. This project represents approximately ** [redacted] ** of the required $14 million. Staff proposes to utilize the in-service criteria in Schedule CME-d1 for this facility. ** [redacted] **[87] Staff proposes Ameren Missouri demonstrate that the South St. Louis Renewable Energy Center meets the in-service criteria contained in Schedule CME-d1 by the true-up cutoff date, September 30, 2021, in order to include the solar facilities in rate base.

F. Future Solar Projects

Ameren Missouri is planning to construct a 6.16 MW-AC solar facility in Montgomery County, MO to support its Community Solar program and an additional 1.2 MW-AC project at Southeast Missouri State University for the Neighborhood Solar program. These two facilities are expected to be complete in late 2021 and 2022, respectively.[88] Ameren Missouri and Staff recently filed in-service criteria to use for the future Montgomery Solar Facility approved as part

[85] Order Approving Stipulation and Agreements in ER-2019-0335.
[86] Response to Staff DR No. 0043.1.
[87] ** [redacted] **
[88] 2021 Q1 Community Solar PSC Report in EA-2020-0371 and Response to Staff DR No. 0434.

of Case No. EA-2020-0371. These projects will not be completed prior to the true-up cutoff in this current rate case and as such will not be considered in this case.

Staff Expert/Witness: Claire M. Eubanks, PE

X. Facilities and Donations

During its review in Ameren Missouri's last gas rate case (GR-2019-0077), Staff learned that Ameren Missouri initiated a facility action plan that received ** [redacted]. ** The plan called for an evaluation of all facilities with the goal of either combing facilities or exiting older facilities to reduce the number of facilities that were owned or leased by Ameren Missouri for its electric and gas operations. In this case, Staff has reviewed any facilities changes made by Ameren Missouri since its last rate filing and is recommending the following adjustments:

A. Bank of America Lease

In July of 2021, Ameren Missouri was able to cancel the lease for the swing space located at the Bank of America Building at 800 Market Street in downtown St. Louis. The swing space was initially leased to allow for extra space while Ameren Missouri completed renovations on its general office building. Due to COVID-19, Ameren Missouri shifted non-essential employees to remote working conditions and was able to accelerate the renovations of the general office building; additionally the leased space was no longer necessary due to Ameren Missouri and Ameren Services employees being able to work from home. Staff has made an adjustment to remove all costs and revenues associated with the leased space and the associated parking garage from the test year.

B. Eldon Transmission Building

In October of 2019 Ameren sold the property located in Eldon Missouri, which was split between two buildings. During a meeting with Staff it was confirmed that the property was sold and no longer in use, however Ameren Missouri neglected to remove the plant from service for the transmission building that was located in Eldon Missouri. Staff has made an adjustment to remove the land and structures from rate base. Staff has also removed the O&M costs that were charged to the building during the test year.

C. Sunset Hills Office

** [redacted][89] [redacted] ** Staff has submitted DR Nos. 0758 and 0760 seeking additional information regarding the facility.

D. Edina Facility

During the test year, Ameren Missouri retired the old Edina facility at 204 E. Fulton in Edina, MO and replaced it with a new facility at 402 Fulton in Edina, MO. Ameren Missouri did not move the old Edina facility to non-utility property until June of 2021, therefore Staff has included an adjustment to remove the old facility from rates until rate base is updated as part of the true-up audit. As of this filing, Ameren Missouri has the old Edina facility on the market and Staff may propose an adjustment to calculate any gain on the sale of the old Edina facility to offset the new higher costs of the new facility in a future rate case.

E. Eldon and Versailles O&M Costs

Staff has removed the O&M Costs for the Eldon and Versailles facilities that were incurred during the test year as these facilities were sold and no longer in service.

F. Saint Louis University ("SLU") Donation

During the course of its review during Ameren Missouri's last general rate case, (ER-2019-0335 Staff discovered that Ameren Missouri had planned to donate the site of the former central substation in midtown St. Louis to SLU during the fourth quarter of 2019. The donation was completed in the fourth quarter of 2019, and Ameren Missouri was credited with a donation to SLU in the value of the appraised property.[90]

[89] The facility was placed on the market in May of 2021.
[90] $1,095,000.

Prior to the donation to SLU, the university had approached Ameren Missouri regarding purchasing the land and had offered to purchase the land for $913,020. During the negotiations for the sale of the land, SLU approached Ameren Missouri to see if they would be willing to donate the land to SLU as part of the university's fundraising campaign. Ultimately, the decision was approved to donate the land to SLU rather than make a cash contribution to the campaign. The replacement substation, which is located less than one mile from the donated site was constructed on land purchased by Ameren Missouri for ** [redacted] ** and additional costs were necessary to prepare the site for the substation. In total, the replacement substation went into service in November of 2012, with a capital cost of $22.2 million.

As part of its rebuttal testimony in the previous case (ER-2019-0335), Staff proposed an adjustment to reduce the value of the land for the replacement substation by the amount of the gain Ameren Missouri would have received by selling the land to SLU, less the costs incurred by Ameren Missouri to prepare the site for sale/donation. Staff is proposing the same adjustment in this case, as it relates to rate base and what was addressed in the stipulation and agreement filed in the prior Ameren Missouri rate proceeding. Staff contends that it was inappropriate and imprudent for Ameren Missouri to donate property that was included in rates without Commission consent and without giving consideration to ratepayers when the proceeds of the sale could have been used to offset the construction of the replacement substation site.

Staff Expert/Witness: Jason Kunst, CPA

XI. Allocations

A. Corporate Allocations

A subsidiary of Ameren Corporation, Ameren Services Company (Ameren Services), provides various management and administrative support services to Ameren Missouri and affiliate companies. As part of its audit process, Staff reviewed the methods used by Ameren Services to assign and allocate costs to Ameren Missouri's electric and gas operations. Under Ameren Services' corporate cost allocation system, costs are categorized into four types:

1) Direct – Costs that can be identified as being applicable to products or services provided to a single affiliate;

2) Direct Allocated – Costs that can identified as being applicable to products or services provided to two or more affiliates;

3) Functional Indirect – Costs such as office supplies and administrative labor accumulated by functional area and allocated to all affiliates based on the ratio of total direct and direct allocated costs charged to each affiliate;

4) Corporate Indirect – Costs such as the Service Company's banking activities and rent allocated based on the ratio of total direct and directly allocated costs charged to each affiliate.

The allocation of costs and methods used to allocate costs from Ameren Services are outlined in Ameren Missouri's cost allocation manual (CAM) in Appendix 3, Tab Q filed May 14, 2021 under Tracking No. BAFT-2021-1870 in the Commission's Electronic Filing Information System (EFIS).

Ameren Missouri filed a CAM in Case No. EO-2017-0176, however that CAM has yet to be approved. On June 17, 2018, Staff filed a motion to open a working docket, Case No. AW-2018-0394, for a review and consideration of rewriting of existing and writing of new Affiliate Transaction Rules. On August 16, 2019, Staff and Ameren Missouri filed a Motion to Stay the proceedings of Case No. EO-2017-0176 until completion of the workshop docket and a formal rulemaking respecting the Affiliate Transaction Rules.

In Case No. ER-2019-0335, the parties agreed that Ameren Missouri would file or provide (concurrently with its provision of direct case workpapers) the following items with regard to affiliate transactions in its next general rate case (this proceeding):

1. The total amount of affiliate transactions charges to Ameren Missouri and affiliate transactions charges by Ameren Missouri to an affiliate in the test year, by account and affiliate.
2. The Fully Distributed Cost Study (the "FDC Study") being conducted as agreed upon with the Staff as provided in the Non-Unanimous Stipulation and Agreement submitted in File No. EO-2017-0176 (the "EO-2017-0176 Stipulation").
3. To the extent the FDC Study did not study the fully distributed cost of Ameren Missouri to itself to perform a function currently performed by Ameren Services Company ("AMS") (legal, human resources, accounting, etc.), and only studied costs to AMS, a detailed explanation for each function that demonstrates why an FDC study for Ameren Missouri is not necessary or reasonable.

4. Where benchmarking is used to assess AMS costs: (1) a detailed description of how Ameren performed or obtained its benchmarking; (2) identification of all benchmarking results and any steps taken to address the results; and (3) all associated AMS or Ameren Missouri work-papers and supporting documents.
5. Identification of all affiliate transaction costs in the test year that were incurred by Ameren Missouri following a request for proposal issued by or on Ameren Missouri's behalf and receipt of bids.
6. Identification of all affiliate transaction costs in the test year that were incurred by Ameren Missouri without a request for proposal issued by or on Ameren Missouri's behalf and receipt of bids, and an explanation of why competitive bidding was not necessary.
7. Identification of Ameren Corporation board of director and investor relations costs being charged to Ameren Missouri through an allocation process, and a detailed explanation of the allocation factors or process by which the charges are allocated to Ameren Missouri.
8. The General Office Building space study as provided for in the EO-2017-0176 Stipulation.
9. Year-end Ameren Missouri and AMS employee organization charts showing all position at year end 2019, it being agreed that the "organization charts" can consists of a spreadsheet all such employees and their titles, by employer.

Staff verified that Ameren Missouri provided all of the above items except for Items 5 and 6. Ameren Missouri claims no costs fall into either category and thus did not identify the costs.

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. Ameren Services' Service Request Manual requires that Ameren Services' Internal Audit Department perform an audit and report each year of Ameren Service's Service Request System and Service Request policies, operating procedures, and controls.

1. 2021 Allocation Factors

Ameren Services made no significant changes to the allocation factors for 2021 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 December 31, 2020, using the updated Ameren Services allocation factors for 2021.

Staff Expert/Witness: Kimberly K. Bolin

2. Software Allocations

Before January 1, 2017, Ameren Corporation software assets were owned entirely by a subsidiary, such as Ameren Missouri, Ameren Illinois, or Ameren Transmission. An affiliate using the software was charged rental expense for its use, and the subsidiary owning the software recognized rental revenue. This policy was changed in 2017 to allow joint ownership between Ameren Missouri, Ameren Illinois, and Ameren Transmission of software assets. This eliminated the need for intercompany rental charges. Under the new policy, these affiliates agree to an ownership allocation percentage based on allocation factors and sign a joint ownership agreement for use of the software assets.

However, prior to May 2019 the use of the enterprise-wide software by affiliates other than Ameren Missouri, Ameren Illinois, and Ameren Transmission was not considered when developing joint allocation agreements. During its last gas rate case, GR-2019-0077, Ameren Missouri acknowledged that although prospectively, use of the software assets would be allocated to affiliates enterprise-wide, no adjustment would be made to prior agreements to allocate assets to affiliates other than Ameren Missouri, Ameren Illinois, and Ameren Transmission. In Ameren Missouri's last electric rate case, ER-2019-0335, Ameren Missouri agreed to remove a percentage of enterprise-wide software from rate base and to remove the associated amortization that represents the aggregate usage of Ameren Corporation's other subsidiaries.

In response to Staff DR No. 0204.3, in this current electric case, Ameren Missouri provided recording entries of adjustments that removed a portion of shared software and reallocated them to Ameren Corporation. Staff reviewed plant and reserve amounts associated

with the shared software assets and they appear to be reasonable for inclusion in the rate base calculation. Staff will continue to review this issue through the true up cutoff date of September 30, 2021.

Staff Expert/Witness: Paul K. Amenthor

XII. Income Statement

A. Rate Revenues

1. Introduction

Since the largest component of operating revenues result from rates charged to retail customers by Ameren Missouri, comparing operating revenues to the cost of service is a fundamental test of the adequacy of the currently effective Missouri jurisdictional retail electricity rates. If the overall cost of providing service to Missouri retail customers exceeds Ameren Missouri's operating revenues, an increase in the current rates Ameren Missouri charges its Missouri retail customers for electricity is required. Conversely, if Ameren Missouri's operating revenues exceed the overall cost of providing service to Missouri retail customers, then a decrease in the current rates is warranted.

Staff Expert/Witness: Jason Kunst, CPA

a. Definitions

Operating Revenues are composed of Rate Revenue, Revenue from Energy and Capacity Sales and Other Operating Revenues. Each is defined respectively as follows:

Rate Revenues: Test year rate revenues consist solely of the revenues derived from the current rates Ameren Missouri charges for providing electric service to its Missouri retail customers (i.e., native load and customer charges). Ameren Missouri's charges are determined by multiplying each customer's usage by the per unit rates established in its tariff. During the year Ameren Missouri's retail customers are charged summer rates (June-September) and winter rates (October-May). These charges are broken down for Missouri retail customers into two categories: (1) a demand charge; and (2) an energy charge. Missouri retail customers' rates are additionally broken down by rate class based upon the type and amount of usage. These rate classes include: Residential, Small General Services, Large General Service, Small Primary Service, Large Primary Service, Public and Private Lighting. Additionally there is a separate

category for Metropolitan Sewer District ("MSD"), a large industrial customer. The revenues Ameren Missouri collects from its fuel adjustment clause ("FAC") represent the collections or refunds of prior period fuel costs and are excluded from the calculation of annualized ongoing rate revenues.

Revenue from Energy and Capacity Sales: Revenue from energy and capacity sales is realized as a result of Ameren Missouri's sale of electricity to other utilities at non-regulated prices. The gross revenue from these sales, less the generation or purchased power expense incurred by Ameren Missouri to make these sales, is the profit margin on energy and capacity sales. The rationale for assigning the profit margin on energy and capacity sales to ratepayers and including it in operating revenues is that the electricity sold by Ameren Missouri is generated by power plants that are being paid for by ratepayers through the electric rates charged by Ameren Missouri.

Other Operating Revenues: This category includes the various revenues Ameren Missouri collects from charges such as rental income from affiliates, rental of pole space, and other miscellaneous charges.

Staff Expert/Witness: Jason Kunst, CPA

2. <u>Regulatory Adjustments to Test Year Sales and Rate Revenue</u>

a. Remove Unbilled Revenues

Staff has made an adjustment to remove unbilled revenues from its calculation of the revenue requirement. The recording of unbilled revenue to the books of Ameren Missouri recognizes the sales of electricity that have occurred, but have not yet been billed to the customer. Therefore, it is necessary to remove unbilled revenue in order to accurately determine the revenue requirement based upon electricity sales actually billed to customers to ensure that only 365 days of revenue are included in the calculation of normalized and annualized revenues.

Staff Expert/Witness: Jason Kunst, CPA

b. Remove Gross Receipts Tax

Ameren Missouri acts as tax collector for certain taxes imposed on utility service revenues by municipalities and other taxing authorities. These taxes include gross receipt taxes ("GRT"), which Ameren Missouri collects from customers and passes on to the appropriate

taxing authority. Since GRT is a pass through item, Staff has made an adjustment to remove the test year amounts from both Ameren Missouri's revenues and expenses in the cost-of-service calculation; however because of timing differences the adjustments may be similar but are not identical. The elimination of both the expense and revenues associated with the GRTs ensures that there will be no impact on the calculation of net income for revenue requirement purposes.

Staff Expert/Witness: Jason Kunst, CPA

c. Adjustment to Eliminate MEEIA Revenue

The Missouri Energy Efficiency Investment Act ("MEEIA") was passed by the Missouri legislature and signed into law by the governor in 2009. The MEEIA program is designed to encourage Missouri's investor-owned electric utilities to offer energy efficiency programs and projects designed to reduce the amount of electricity used by the utility's customers. Commission rule 20 CSR 4240-20.093 makes available a Demand-Side Program Investment Mechanism that allows for the periodic rate recovery of MEEIA program costs, recovery of lost revenues related the programs, and a utility performance incentive for investment in demand side programs. As these program costs are recovered though the MEEIA Rate Rider mechanism rather than base rates, it is necessary to make an adjustment to exclude the MEEIA revenues from the calculation of electric retail revenues in the cost-of-service calculation.

Staff Expert/Witness: Jason Kunst, CPA

d. RESRAM Revenue Removal

In Case No. EA-2018-0202, the Commission approved Ameren Missouri's request for a RESRAM which allows Ameren Missouri to recovery RES related capital investment and expenses through a rider mechanism between rate cases. As these RES related costs will be rebased into current rates in this case, it is necessary to make an adjustment to remove these revenues from the calculation of normalized and annualized revenues.

Staff Expert/Witness: Jason Kunst, CPA

e. Removal of FAC Revenues

Ameren Missouri's fuel costs are currently collected through a fuel adjustment clause ("FAC"). In order to reflect a normal ongoing level of actual billed revenue, it is necessary to remove FAC revenue that was recording during the test year.

Staff Expert/Witness: Jason Kunst, CPA

f. Removal of Rate Refunds

Ameren Missouri's fuel costs are currently recovered through the FAC. The provision for rate refunds can be an accrual for any possible over or under-collection that may occur since the previous FAC filing. As these revenues are considered within Ameren Missouri's FAC filings and not a part of permanent rate calculations, it is necessary to remove them to reflect an accurate revenue requirement for ratemaking purposes.

Staff Expert/Witness: Jason Kunst, CPA

g. Removal of Loss on Disposition of Allowances

During the test year, Ameren Missouri recorded a loss on the sale of sulfur dioxide (SO2) allowances. Staff is proposing an adjustment to eliminate this loss as it relates to a non-recurring revenue stream, to properly reflect actual billed retail revenues and non-retail revenues that are recognized for revenue normalization purposes.

Staff Expert/Witness: Jason Kunst, CPA

3. <u>The Development of Rate Revenue in this Case</u>

This section discusses Staff's determined normalized and annualized test year usage and revenues by rate class. The intent of Staff's adjustments is to determine the level of revenue that Ameren Missouri would have collected on an annual, normal-weather basis, based on information "known and measurable" at the end of the test year December 31, 2020 and in this case, updated through April 30, 2021, as explained below. The two major categories of revenue adjustments are known as "normalization" and "annualization." Normalizations deal with test year events that are unusual and unlikely to be repeated in the years when the new rates from this case are in effect. Test year weather is an example. Annualizations are adjustments that re-state test year results as if conditions known at the end of the test year had existed throughout the entire test year. Adjustments for customer growth are an example of an annualization.

Staff Expert/Witness: Kim Cox

a. Update Period Adjustment

The purpose of the update period adjustment is to provide a more current level of normalized and annualized customer usage data, referred to as billing determinants, in which to establish rates in this case. In this case Staff was able to update billing determinants to reflect the 12-month period ending April 30, 2021. Billing determinants are the detailed customer usage

data for each rate schedule that are necessary to calculate retail rate revenue for each rate schedule charge type. For example, if a rate schedule consists of a customer charge billed per customer, an energy charge billed per kWh and a demand charge billed per kW, then the billing determinants should consist of the number of customers, number of kWh sold at each level of energy charge and the level of customer kW subject to each type of demand charge.

Staff Expert/Witness: Kim Cox

b. Economic Development Incentive Rider

An Economic Development Incentive (EDI) discount on base rates is available to qualifying new or expanding industrial customers for up to five years. The Rider offers incentive, in conjunction with other Economic Development programs, to attract new and developing businesses in Missouri. Customers must sign an agreement contract with the Company which specifies a discount rate per contract year averaging 40% over the five years. A Beneficial Location of Facilities (BLF) discount is also offered to customers taking service from an under-utilized circuit. Discount is available to qualifying customers for one year after the Rider EDI discount ends. The BLF discount is a 10% reduction in base rate.

Staff reviews (EDI) Rider information submitted by the Company, upon execution of an EDI agreement with a customer, ensuring EDI Rider tariff requirements are met. This information is updated during a rate case and Staff verifies that calculations and information provided by the Company are correct, reasonable and comply with tariff requirements.

Staff uses EDI discount amounts to make an adjustment to rate class revenues in rate cases to reflect the value of the discount. Based on data provided by the Company, adjustments to rate class revenues to reflect EDI Rider Discounts for the 2020 calendar year test period were a reduction in revenue of $81,119 for the Large General Service (LGS) class and $84,558 for the Small Primary Service (SPS) class, for a total EDI Discount of $165,677.

continued on next page

EDI Rider Discount Adjustoment		
2020 Calendar Year Test Period		
(reduction to revenue)		
	raw data	12 mo adj.
LGS	82,002	81,119
SPS	84,558	84,558
Total EDI		165,677
Discount Adj.		

EDI Discount data was adjusted by Staff to reflect 12 months of discounts for all customers served on the EDI tariff. Staff will review EDI discounts through the true-up period and will make any additional adjustments in its true-up filing in this case.

When reviewing individual customer EDI data, Staff would like to point out that the Load Factor calculation provided by the Company for ** [redacted]. ** did not follow the Load Factor formula in the tariff. Staff's calculation of Load Factor for this customer is 54.04% which is below the tariff required 55% minimum. Staff is aware that this customer is still in the process of expanding service and will likely meet the minimum requirement by the end of the second contract year, April 3, 2022, as the tariff specifies.

Staff has no other recommendations or disallowances at this time.

Staff Expert/Witness: Nancy L. Harris

c. Customer Growth Adjustment

Staff made adjustments to reflect the impact in the change of customer levels on test period kWh sales, kW demand,[91] and revenues. Staff's customer growth adjustment reflects the level of kWh sales, kW demand and rate revenues that would have occurred if the number of customers taking service at the end of April 30, 2021, had existed throughout the test year.

[91] Class kW demand was only adjusted for the Large General Service and Small Primary Service classes that have demand charges.

Staff has calculated customer growth for the following customer classes: Residential, Small General Service, Large General Service and Small Primary Service. The customer growth adjustment takes into account normalized weather usage, as well as the adjustment for 365 days and rate changes that occurred during the test year.

Customer classes that did not exhibit growth remain at unadjusted t levels, and they are: Outdoor lighting and Metropolitan Sewer District (MSD). As part of its true-up audit, Staff will review customer growth through September 30, 2021, true-up cut-off and make adjustments as necessary to reflect the change in customer levels.

Staff Expert/Witness: Kim Cox

d. Community Solar Adjustment

Staff made an annualization adjustment for community solar. Each solar block a customer signs up for is equivalent to 100 kWh reduction on their metered usage billed on Residential basic service rates. Staff adjusted the usage and revenues for Residential basic service rate class by 100 kWh per each solar blocks purchased. Staff used the monthly subscribed solar blocks provided by Ameren Missouri to adjust the Residential basic rate class revenues. Lastly, Staff priced out the solar block kWh at the Community Solar rate. Staff witness, Lisa M. Ferguson discusses this further in her testimony in the Community Solar section.

Staff Expert/Witness: Kim Cox

e. PAYS Revenue

The Company's response to Staff DR No. 0507 states that the Company has not collected any revenue from participants bills from January 2020 through April 2021. Staff anticipates updating revenues through the true-up period.

Staff Expert/Witness: Kim Cox

f. Seasonal Proration Adjustment

Ameren Missouri tariff sheet number 130, A. states:

> Where bills are rendered for periods of use in excess of or less than the period provided for herein, all base rate components will be prorated. Beginning in calendar year 2021, summer rates will be

> applicable for service rendered from June 1st through September 30th. Where a bill includes any portion of both Summer and Winter periods the rate application will be prorated.

Staff utilized billing cycle sales to best quantify the level of usage that had previously been billed on winter rates, but would be billed on summer rates and vice versa due to the Company's proration starting on June 1, 2021. Staff then took the net change in kWh and multiplied it by the average change in the seasonal rate to derive a revenue adjustment for bills that included any portion of both Summer (June 1st through September 30th) and Winter (October 1st through May 31st) periods. Staff performed this calculation using the level of usage information available to Staff. Staff requested a more precise calculation from the Company, but Staff's Data Request was objected to by the Company and to date the Company has not provided a more precise calculation. Staff anticipates updating the seasonal proration based on additional information from Company if the Company provides additional information. For example, Staff currently has only estimated the impact of the proration on kWh sales, but kW demands will also be necessary for the non-residential classes where the demand charge is also prorated. Staff estimates that the impact of the proration on only kWh sales is estimated to be approximately $8,807,969.[92]

Staff Expert/Witness: Robin Kliethermes

g. Large Customer Annualization

For Staff's calculation of the Large Primary Service (LPS) class retail rate revenues, Staff utilized the test year ending December 31, 2020 and updated through April 30, 2021 to provide a more current basis for normalization, annualization, and growth calculations. There were 63 customers in the LPS rate class during at the 12 months ending April 30, 2021. Staff performed a data check for billing corrections prior to doing other adjustments and reviewed LPS customers on an individual customer (account) basis. The LPS customer adjustments are as follows:

[92] After the preparation of this testimony, Ameren Missouri responded to Staff DR No. 0554 which was submitted to the Company 78 days prior to Ameren Missouri's response. Staff has not yet reviewed the data provided.

Annualization

The general intent of an annualization is to restate the billing units as if conditions known at the end of the 12 months ending April 30, 2021 had existed throughout the entire time period taken into consideration. Staff reviews each of Ameren Missouri's largest customers to determine if adjustments need to be made to reflect any major growth or decline in kWh usage and rate revenues due to the entrance of new customers, the exit of existing customers, and load growth or decline of specific existing customers. Staff annualized these customers' billing units and revenues for all twelve (12) months. During the update period, one customer moved into the Large Primary Service (LPS) rate class from Small Primary Service (SPS) class, and one LPS customers moved to the SPS class. Therefore, Staff proposed adjustments to account for the new customer joining the LPS class and the customer leaving the LPS class.

Weather Normalization

Staff normalized update period usage data provided by Ameren Missouri by applying weather normalization factors calculated by Staff witness Michael L. Stahlman for each month. Staff adjusted the billing units by these factors, and applied current rates to determine weather-normalized revenue. The difference between these weather-normalized revenues and the update period revenues determined the amount of the Weather Normalization Adjustment.

365-Days Adjustment

Staff normalized the update period usage so that the test period included usage reflective of 365 days for each customer. Staff witness Michael L. Stahlman calculated the 365-day adjustment. The adjustment was added to Staff's overall weather normalization factor and applied to LPS customer usage by month to calculate the overall revenue adjustment.

COVID-19 Normalization

Staff looked at the historical usage for each individual LPS customer through April 30, 2021 to determine if the customer experienced a change in kWh usage and kW demand due to COVID. Staff found that two customers were impacted and adjusted the customers' usage to reflect an average of pre- and post-COVID usage and demand. This adjustment is consistent with the Company's COVID-19 adjustment for the LPS class.

Staff Expert/Witness: Joseph P. Roling

h. MEEIA Annualization

The Stipulation and Agreement in File No. EO-2018-0211 requires that, during a rate case, an adjustment be made to account for energy efficiency measures that were installed during the test period. Staff annualized that level of energy efficiency (EE) savings that occurred at the end of the year as if they had occurred throughout the year. In Staff's review of the Company's EE measures, Staff found that the Company's online store allowed customers to purchase more than 2 thermostats over a 12 month period. Staff made an adjustment to the overall level of EE savings to remove a level of estimated deemed savings attributable to thermostats in excess of 2 received by an individual customer. This adjustment was made because Ameren Missouri's Technical Resource Manual ("TRM"), which is used to calculate the saving attributable to a thermostat, does not define the level of square footage included in the savings calculation but rather uses an average household. For Ameren Missouri's demand response program, customers should only be allowed to register 2 thermostats or one per HVAC system per the program tariff. Seemingly, the savings attributable to one thermostat per household will be different per additional thermostat added. Based on a review of the TRM, there is currently not a different level of savings attributable to additional thermostats in excess of 1 per HVAC system. Staff has requested further information from the Company and is still reviewing the level of EE measures allowed to be purchased at discounted prices by a single customer through Ameren Missouri's online store. Staff anticipates revising the EE adjustment through the true-up period.

Staff witness Robin Kliethermes provided total kWh adjustment for the Res, SGS, LGS, and SPS classes to Staff witness Kim Cox. The kWh adjustments were equally applied to all rate blocks.

Staff Expert/Witness: Kim Cox

i. Weather Normalization of Revenue and 365 Day Adjustment

Staff normalized and annualized update period usage data provided by Ameren Missouri for the Res, SGS, LGS and SPS rate classes. Staff did not adjust the Outdoor lighting rate class or the Metropolitan Sewer District rate class since weather does not affect the usage of these classes. Staff witness Joseph P. Roling discusses the weather normalization and 365 days adjustment for the LP class.

The Residential basic service rate class consists of a seasonal differentiated energy charge for summer and winter. The summer energy charge (June 1- September 30 billing period) is billed at a flat non-blocked energy rate. The winter energy charge (October 1-May 1 billing period) is billed using a two block rate. The first rate block applies to the first 750 kWh used in a billing period and second block is applied to all kWh billed in excess of 750 kWh. For the Residential basic service rate class, the weather adjustment factor was combined with the 365-day adjustment factor that was provided by Staff witness Michael L. Stahlman. Mr. Stahlman explains how the factors are derived in the weather normalization section below. Staff applied the combined factor to all usage for the summer months. However, for the winter months Staff applied the weather adjustment differently than the summer months because not all customers will have usage billed in the second rate block, so it is not appropriate to spread normalized kWh equally to the winter rate blocks. Staff used the cumulative frequency bill distribution data provided by Ameren Missouri to determine the appropriate percentage of normalized winter block usage. The percentages were then applied to monthly usage per customer before and after the weather and 365-day adjustments using the normalization factors provided by Staff witness Michael L. Stahlman. This computation resulted in normalized usage by rate block, which was then converted to the total normalized revenues by multiplying rate block usage by the appropriate rates found in Ameren Missouri's effective tariff sheets.[93]

For the Residential time of use rate classes, Staff applied the combined weather adjustment factor and 365-day adjustment factor to each rate block by an equal percent.

The SGS class consists of a customer charge and an energy charge that includes a seasonal energy charge distinction in the winter months.[94] However, the seasonal energy charge distinction is not defined by a specific level of customer usage in a given billing month as done for the Residential class but rather the level of customer usage in a given winter month compared to the customer's summer month usage. Therefore, Staff used a simple linear regression to quantify the relationship between the change in usage and the percent of usage billed in the first

[93] As customers transfer to the default or Ameren Missouri's other time-of – use (TOU) rate options established in Ameren Missouri's last rate case, Case No. ER-2019-0335, Staff will continue to review its method for applying weather normalization adjustments based on the various rate designs. At the time of the test period the majority of Residential customers were still served on Ameren Missouri's basic service rate and not on a TOU rate.
[94] Winter months for SGS are defined the same as the Residential class.

winter rate block or non-seasonal rate block. Staff applied the regression results to the 12 months ending April 2021.

For the LGS and SPS class the weather adjustment factor was combined with the 365-day adjustment factor and applied to each energy rate block by an equal percent. The LGS and SPS rate classes are billed using energy and demand charges. The energy charge rate blocks are separated based on the customer's relationship between kWh usage and kW demand in each month. Since kW demand is not weather normalized the weather adjustment was applied to each energy block by an equal percent. The difference between these normalized and annualized revenues and the update period revenues determined the amount of the overall revenue adjustment.

Staff Expert/Witness: Kim Cox

j. 365-Days Adjustment to Usage

Calendar months and revenue months differ from one another because of the periods they cover and the differing beginning and ending times. Calendar months coincide with the calendar, beginning on the first day of the month and ending on the last day of the month. Ameren Missouri's customers' usage is measured and rate revenues are collected over a period known as a revenue month, which is the interval over which Ameren Missouri reads customers' meters and issues bills. A bill rendered for a given revenue month may charge for usage in parts of two calendar months. Revenue months usually take their names from the calendar month in which the customer's bill is rendered. For example, assume a customer's meter was read and usage determined on June 8 and then again on July 8 and that the bill was sent to the customer on July 15. The revenue month for this bill is July even though 22 days of the usage measured for this bill occurred from June 9 through June 30 and it contained only eight days of usage in July.[95]

The length of a revenue month is dependent upon the interval between meter readings and does not necessarily have the same number of days that occur in a given calendar month of the same name; that is, a revenue month may have more than or less than the number of days for

[95] Primary months are used to distinguish in which month the usage is billed under and whether summer or winter rates apply. For example, a customer's sixth bill of the year is deemed the customer's June bill even if it is billed to the customer on May 29. In this example, the primary month is June and the summer rate will apply to all usage on the bill, even though the revenue month would be May.

the same-named calendar month. For the example given above, the usage is for 30 days (June 9 through July 8), even though the revenue month is July, which has 31 days. When revenue month usage is totaled over the year, the resulting revenue year will include usage from the immediately prior calendar year and assign usage to the next calendar year, meaning a revenue year may contain more than or less than 365 days' usage. Therefore, since the costs and expenses are accounted over a calendar year, Staff calculates an annualization adjustment to bring the revenue year kWh into a 365-days interval. This adjustment is stated in kWh and is referred to as the 365-Days Adjustment. Staff calculated the 365-Days Adjustment by adjusting individual bill cycles that had more than or less than 365 days' usage from the first date in that cycle's revenue test year to the last meter read date in that cycle's revenue test year. The overall average usage per day of that cycle was then multiplied by the days over/under 365 days to determine the kWh adjustment.

The 365-Days Adjustment for RES, SGS, LGS, SPS, and LPS were provided to Staff witness Kim Cox, who used the 365-Days Adjustment to adjust the revenues of the weather-normalized class revenues months to the twelve months ended April 30, 2021.

Staff Expert/Witness: Michael L. Stahlman

k. Weather Normalization

In many of the classes of service, electricity consumption is highly responsive to the weather, specifically temperature. As the temperature reaches higher levels, the demand for cooling, air conditioning and fans increases the customers' consumption of electricity. As the weather becomes colder, the demand for additional heating, via electric space heating, also forces an increase in electricity consumption. Electric air conditioning and space heating is prevalent in Ameren Missouri's service territory; therefore, it follows that Ameren Missouri's electric load is linked with and responsive to temperature.

Ameren Missouri's test year ran from January 1, 2020, through December 31, 2020. In an attempt to capture a more likely forward-looking indictor of non-weather electricity usage per customer, Staff decided to use the most recent temperature and load data available and, therefore, based its analysis on the twelve months of May 1, 2020, through April 30, 2021.

For the update period, Staff's weather analysis showed an overall warmer than normal year. The months of May 2020 through October 2020 were generally slightly cooler than normal and the months of November 2020 through April 2021 were generally warmer than normal with the notable exception of February 2021, which was much colder than normal.

The method and model used by Staff is similar to those used by Ameren Missouri. Staff's model and method contained elements important in the class-level weather normalization process: use of daily load research data to determine non-linear, class-specific responses to changes in temperature with the incorporation of different base usage parameters to account for different days of the week, months of the year and holidays. The results of Staff's analysis were provided to Staff witness Kim Cox to be used in the normalization of revenues for weather sensitive classes, Residential (RES), Small General Service (SGS), Large General Service (LGS), Small Primary Service (SPS) and Large Primary Service (LPS).

Staff Expert/Witness: Michael L. Stahlman

i. Weather Variables

Historical Data Used to Calculate Weather Variables - Each year's weather is unique; consequently, test year usage, hourly loads, revenue, and fuel and purchased power expense need to be adjusted to "normal" weather so that rates will be designed on the basis of normal weather rather than any anomalous weather in the test year. In the quantification of the relationship between test year weather and energy sales, Staff used weather observations of Lambert - St. Louis International Airport ("STL"), Missouri for the twelve months of May 1, 2020, through April 30, 2021.

Weather Variables - Staff obtained weather data from the Midwest Regional Climate Center (MRCC). Weather data of St Louis Lambert International Airport ("STL") was used for the service territory of Ameren Missouri due to the availability and reliability of the weather data as well as their approximate location to Ameren Gas's customer base. The weather data sets consist of actual daily maximum temperature ("Tmax") and daily minimum temperature ("Tmin") observations. Staff used these daily temperatures to develop a set of mean daily temperature ("MDT") values.

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.[96] 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.[97]

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 electric usage and revenues, Staff used the adjusted T_{max} and T_{min} daily temperature series for the 30-year period of January 1, 1988, through December 31, 2017, at STL. NOAA has updated the 30-year normal period to end in 2020 in May 2021, but Staff has not been able to analyze the SCMT for the most recent period. AS discussed below, the SCMT is based on the NOAA 30-year normal period ending 2010, with observed data through 2017.

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, 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.[98] 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.[99]

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, and average temperatures. These monthly normals are not directly usable for Staff's purposes, because the NOAA daily normal temperatures values are

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

[97] 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.

[98] 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.

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

derived by statistically "fitting" smooth curves through these monthly values.[100] As a result, the NOAA daily normal 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 weather for electric usage, Staff must calculate a set of normal daily temperature 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 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.[101] More details of a ranking method for normal weather are explained in a peer-reviewed publication.[102] Using these normal daily temperatures, Staff calculated normal MDT for each day of the test year. Staff then used this information for weather normalization of the test year kWh usage and update period hourly loads.

Staff Expert/Witness: Michael L. Stahlman

ii. Load Requirement at Transmission

Hourly load requirement is the hourly electric supply necessary to meet the energy demands of both the company's customers and the company's own needs. The hourly loads used

[100] A more detailed description is discussed in Won, S. J., Wang, X. H., & Warren, H. E. (2016). Climate normals and weather normalization for utility regulation. Energy Economics, 54, 405-416.
[101] It is important to note that Staff's calculation of daily weather normal temperatures do not assign a temperature to a specific calendar date; the method assigns a rank to a normal temperature which is matched to the rank of the actual temperature for a given period.
[102] Won, S. J., Wang, X. H., & Warren, H. E. (2016). Climate normals and weather normalization for utility regulation. Energy Economics, 54, 405-416.

in the analysis of the update period May 2020, through April 2021, were obtained from Ameren Missouri's data provided in accordance with 20 CSR 4240-3.190 (1)(C).

Due to the high saturation of air conditioning, and the presence of significant electric space heating in Ameren Missouri's electric service territory, the magnitude and shape of Ameren Missouri's load requirement are directly related to daily temperatures. The actual daily temperatures for the update period differed from normal conditions. Therefore, to reflect normal weather, daily peak and average load requirement are adjusted independently, but using the same method.

Independent adjustments are necessary because average loads and peak loads respond differently to weather. Daily average load is calculated as the daily energy divided by twenty-four hours and the daily peak is the maximum hourly load for the day. Separate regression models estimate both a base component, which is allowed to fluctuate across time, and a weather sensitive component, which measures the response to daily fluctuations in weather for daily average loads and peak loads. The regression parameters, along with the difference between normal and actual cooling and heating measures, are used to calculate weather adjustments to both the average and peak loads for each day. The adjustments for each day are added respectively to the actual average and peak loads for each day. Staff witness Michael L. Stahlman provided actual and normal daily temperatures used in this analysis.

The starting point for allocating both the weather-normalized daily peak and the weather-normalized average loads to the hours is the actual hourly loads. A unitized load curve is calculated for each day as a function of the actual peak and average loads for that day. The corresponding weather-normalized daily peak and average loads, along with the unitized load curves, are used to calculate weather-normalized hourly loads. This process includes many checks and balances, which are included in the spreadsheets that are used. In addition, the analyst is required to examine the data at several points in the process. For more information, the process is described in greater detail in the document "Weather Normalization of Electric Loads, Part A: Hourly Net System Loads".[103]

[103] "Weather Normalization of Electric Loads, Part A: Hourly Net System Loads" (November 28, 1990), written by Dr. Michael Proctor, Manager of the Economic Analysis Department.

Once Staff's normalized, annualized test year usage for Ameren Missouri's retail customer classes is completed, weather-normalized wholesale usage is added. Then, the non-LTS class annual usage was increased by the average annual loss factor supplied by Staff witness Alan J. Bax. The LTS class' annualized usage was added to the non-LTS annual usage to produce an annual sum of the hourly load requirement that equals the adjusted test year usage and is consistent with Staff's normalized revenues.

A factor was applied to each hour of the weather-normalized loads to produce an annual sum of the hourly load requirement that equals the adjusted test year usage, plus losses, and is consistent with normalized revenues. Once completed, the test-year hourly normalized system loads were given to Staff witness Shawn E. Lange, PE to be used in developing the test year fuel and purchased-power expense.

Staff Expert/Witness: Michael L. Stahlman

iii. COVID-19 Usage Normalization

Staff included an additional variable in the weather normalization regression analysis to estimate the impact of COVID-19 on usage. The variables were developed using Google mobility data for the state of Missouri. Google monitored the locations of cell phones and provided an estimate of how much time people spent at various locations compared to a base of February 14, 2020. This data was made available to assist public health officials in making policies concerning COVID-19.[104]

The categories provided are the change in time spent at retail/recreation, grocery/pharmacies, parks, in transit, at work, and at home. Staff included the change in time spent at home in the residential weather normalization regression analysis and the change in time spent at work in the SGS, LGS, SPS, and LPS weather normalization regression analyses to estimate the impact of COVID-19 on those customer classes. The variable was forced to equal 1 prior to March 15, 2020 since the changes in activity prior to that date were largely unrelated to the virus. The variable was smoothed by using the average of the prior three days (residential) or seven days (work) to account for weekends and other fluctuations. The resulting regression

[104] COVID-19 Community Mobility Reports. (2021) https://www.google.com/covid19/mobility/ (8/11/2021).

analysis indicated that these variables had more explanatory power than a simple dummy variable, where all dates after March 23, 2020 would be given a 1.

Staff normalized the usage for COVID-19 by assuming that continuing customer usage would more reflect the latter months of Staff's update period (i.e. a "new normal") rather than the period before March 2020. The Google mobility data indicates that customers continue to spend less time at work and more time at home when compared to the time before the pandemic. This is likely due to many of Ameren's customers continuing to have the work-from-home option through the update period. The results of this analysis were given to Staff witness Kim Cox as part of the weather normalization factors.

Staff Experts/Witness: Michael L. Stahlman

l. Lighting Revenues

Ameren Missouri has two lighting classes: Street and Outdoor Area Lighting-Company Owned, and Street and Outdoor Area Lighting-Customer Owned. Staff made an adjustment to Ameren Missouri's lighting revenue to update revenue through the twelve months ending April 2021. Staff will update revenue from both lighting classes for growth through September 30, 2021 in the true-up.

m. Total Normalized and Annualized Revenue

Below is Staff's ending revenue after the adjustments discussed above were applied.

Rate Class		Total MO Normalized Revenue
Res	$	1,273,603,410
SGS	$	269,587,077
LGS	$	507,174,834
SPS	$	216,542,465
LPS	$	188,797,740
Light	$	36,840,553
MSD	$	74,966
Total	$	2,492,621,046

Staff Expert/Witness: Kim Cox

B. Miscellaneous Other Revenues

Ameren Missouri collects revenue for items such as forfeited discounts, late payment charges, rents, disconnects and reconnect fees, customer installation fees, and other miscellaneous revenue. As part of its review Staff has performed an analysis of each of the separate types of revenues listed below to determine an annualized amount to include in the revenue requirement.

Customer Late Fees - Staff is recommending calendar 2019 be used as the annualized level of revenue to include in rates;

Customer Installations – Trouble Calls, Collection and Remittance of Taxes, and Other Misc. Bill Adjustments - Staff is recommending a five year average for the months ending June 30, 2020 for due to the high variability from year to year in the accounts;

Joint Licensing Revenues - Staff is recommending a three year average for the period ending June 30, 2020 due to the high variability from year to year in the account;

Disconnects/Reconnects, Rentals – Pole Space, Rentals – Other Leased Land, Rentals – Agricultural lands, Rentals – Facilities Other Customers – Staff is recommending the 12 months ending June 30, 2021 as the annualized level of revenue.

For accounts not mentioned above, or detailed below Staff believes that the test year level of revenue is reasonable.

Affiliate Rentals

Ameren Missouri receives rental revenue from its affiliates for the use of space in the Ameren general office building and other facilities. Staff has made an adjustment to reflect these intercompany revenues to reflect the current use of the space.

Bank of America Lease

Ameren Missouri had leased swing space at the Bank of America building located at 800 Market Street in downtown St. Louis while renovations were ongoing at the Ameren general office building. Ameren Missouri was receiving rental income from Ameren Services for the use of the swing space. Due to the cancelation of the lease, Staff has made an adjustment to remove the lease revenue from the test year.

Staff will continue to review miscellaneous revenues through the true-up period and may propose further adjustments as part of its true-up audit.

Staff Expert/Witness: Jason Kunst, CPA

Software Rental Revenue

Ameren Missouri owns several software programs and charges its affiliates rental costs for using them. Staff annualized affiliate software rental revenue by applying the last known amount of rental revenue in June 2021 over a 12-month period. Staff will continue to review this issue through the true up cutoff date of September 30, 2021.

Staff Expert/Witness: Paul K. Amenthor

C. Non-Rate Revenues

1. Coal Refinement Projects

The Cross-State Air Pollution Rule ("CSAPR") issued by the Environmental Protection Agency requires reductions in emissions of pollutants, such as Sulfur Dioxide ("SO_2") and Nitrogen Oxide ("NOx"). To this end, Ameren Missouri installed measures at its Rush Island, Sioux, and Labadie Energy Centers to treat its coal through a refinement process to reduce regulated emissions. Under current IRS guidelines, the Section 45 tax credits regarding refined coal are ending on December 31, 2021. Thus, Staff has removed all revenue and expense which increased the cost of service by approximately $20 million associated with coal refinement related to the amounts received by Ameren Missouri for lease payments, coal handling charges and license fees.

Staff Expert/Witness: Lisa M. Ferguson

2. Energy and Capacity Sales

a. Capacity

When not necessary to serve its own load, Ameren Missouri is able to sell a portion of its generation capacity to other utility companies. Receipt of revenues from capacity sales to other utilities reduces Ameren Missouri's cost-of-service. Ameren Missouri is able to sell its capacity first through independent contracts with other utility parties. Any remaining capacity is sold through the Midcontinent Independent System Operator ("MISO") planning resource auction ("PRA"). The MISO planning year spans the period of June 1 to May 31. The MISO resource

adequacy auction is annual, with the PRA only covering the immediate planning year. Ameren Missouri's capacity revenue changes each year as of June 1 as that date coincides with the start of the next planning year. Ameren Missouri clears all available generation remaining after independent contracts in each planning year's PRA. The MISO resource adequacy construct does not differentiate capacity requirements by month, but does establish an annual value. The capacity which satisfies the requirements as set by MISO is a fixed annual volume.

In this case Staff has included a three year average of capacity sales and zonal deliverability benefits based on contracts and MISO expenses from the 2019-2020, 2020-2021, and 2021-2022 planning years. Staff will re-examine the level of capacity sales and any new capacity contracts as part of its true-up audit using information through September 30, 2021.

Staff Expert/Witness: Lisa M. Ferguson

b. Energy

Sales of electricity on the MISO market are made after Ameren Missouri has met all obligations to serve its native load customers, both retail and wholesale. By engaging in energy sales, Ameren Missouri generates profits which represent the net of gross proceeds and the associated cost of generation or purchased power. It is appropriate to include the revenues earned from energy sales in the cost of service because the facilities used in generating the electricity sold are paid for by ratepayers, as is the electricity purchased in order to meet Ameren Missouri's native load. For these reasons, the customers should benefit from these revenues earned by Ameren Missouri. Energy sales represent an efficient utilization of Ameren Missouri's electric facilities and systems that have been put in place to meet the electricity needs of its customers.

Energy sales revenues were calculated in Staff's production cost model by using the hourly-market energy prices as determined by Staff witness Shawn E. Lange, PE. Staff's cost of service calculation includes the annualized energy sales revenue as calculated by Staff witness Shawn E. Lange, PE using Staff's production cost model. It should be noted that Staff has reflected contracts for sale of power to Missouri municipalities as energy sales, consistent with its treatment for these contracts in previous rate proceedings. Staff will continue to examine energy sales revenues through September 30, 2021, which represents the true-up cut-off date.

Staff Expert/Witness: Lisa M. Ferguson

c. Bilateral Sales, Financial Swaps, and Real-time Deviation Adjustments

Physical bilateral transactions and financial swaps are hedging mechanisms used to mitigate some of the volatility in Off-System Sales Revenue. The bilateral adjustment is for net sales (sales minus purchases) made by the Company to counterparties outside the MISO market to increase revenues.

The financial swap adjustment is for transactions made by the Company to lock-in the sales price of underlying generation assets.

The real-time load and generation deviation adjustment is intended to capture the difference in dollars between the production cost model (which looks at day-ahead) and the operation of the MISO market, which has both a day ahead and real-time component.

Staff made three adjustments outside the production cost model to account for revenues earned from net physical bilateral energy trades, financial swaps, and real time load and generation deviation adjustment. Physical bilateral margins, financial swaps, and real time deviation of ** [redacted] ** should be utilized for these adjustments.

Typically to determine the normal level of for Physical bilateral margins, financial swaps, and real time deviation, Staff uses a three year monthly average. In February 2021, winter storm Uri affected the region with cold weather causing increased electricity demand and natural gas demand which increased the prices of electricity and natural gas. For further explanation of the effects of Winter Storm Uri please see Staff's report in AO-2021-0264. Staff made adjustments to normalize the market effects caused by Winter Storm Uri to the bilateral transactions, financial swaps, and real-time deviation adjustments following the same method as outlined in Staff witness J Luebbert's direct report section on Market Prices. Due to the lag of data, it was only possible to include data through May 30, 2021 from data provided as part of 20 CSR 4240-3.190. Reporting Requirements for Electric Utilities and Rural Cooperatives and the virtual data is not being reported by Ameren Missouri. Staff also requested an update for this analysis through June 30, 2021 in DR No. 0577 but Ameren Missouri objected to the request. Staff will update these recommendations with the True-up data Ameren Missouri provides to Staff.

Staff Expert/Witness: Shawn E. Lange, PE

D. Expense

1. Midcontinent Independent System Operator ("MISO")

a. Capacity Expenses

Similar to Staff's discussion of off system sales capacity revenue, the MISO utilizes an annual resource adequacy method to determine the amount of capacity expenses Ameren Missouri incurs. Ameren Missouri owns sufficient generation to meet the MISO resource adequacy requirements; however, to meet MISO's capacity planning requirements during each planning year (June – May), Ameren Missouri utilizes "self-scheduling" for capacity offers and purchases as opposed to using a Fixed Resource Adequacy Plan ("FRAP"), which must be used in "retail choice" states, such as Illinois. Ameren Missouri incurs capacity expense due to self-scheduling whereas it would not from utilizing the FRAP, because with self-scheduling all capacity is offered and purchased in the auction versus only the capacity in excess of demand (and the reserve requirement) with the FRAP method. However, Ameren Missouri also experiences benefits from self-scheduling that it would not be able to enjoy if it utilized the FRAP. The capacity expense for the entirety of the 2021-2022 planning year which ends May 31, 2022, is fixed as a result of the MISO auction. Staff adjusted capacity expense based on the new planning year information. Ameren Missouri's current capacity expenses are not affected by the FERC ROE complaint ruling discussed below. Staff will re-examine the level of capacity expense as part of its true-up audit using information through September 30, 2021.

Staff Expert/Witness: Lisa M. Ferguson

b. Day 2 Revenues and Expenses

Ameren Missouri participates in MISO activities, including the MISO day-ahead and real-time energy markets (often called the MISO "Day 2 Market"). As part of its participation in the MISO Day 2 market, Ameren Missouri received payments during the test year from the MISO related to the Revenue Sufficiency Guarantee ("RSG") provision of MISO's tariff. These payments are determined hourly and are designed to ensure that companies participating in the MISO Day 2 markets are made whole when utilities' total energy offer prices in the market are not covered by the actual market prices. MISO Day 2 revenue is purely energy market related and is not affected by changes in load. However, that is not the case for MISO Day 2 expenses.

MISO Day 2 expenses are based on the amount of energy settled at the "AMMO.UE" Commercial Pricing node. Since these offer prices include a margin for profits, it is important not to exclude the profit margins in the calculation. Currently, Staff is utilizing a 61.15% profit margin rate based on the calculations of margins embedded in the RSG make-whole payments during the recent 12-months ending June 30, 2021. In addition, Staff has annualized both test year revenue and expense levels for Day 2 Market items based on data provided for the 12-months ending June 30, 2021, however there were a couple of costs that required a three year average to normalize them. Staff will re-examine these adjustments through September 30, 2021, during its true-up audit.

In addition, Price Volatility and Net Regulation revenues were received by Ameren Missouri from MISO during the test year. Price Volatility payments are received when there is a deviation from real-time prices and Net Regulation Adjustment revenues are received to make generators price neutral for deploying energy above or below the dispatch target price. Staff has removed this amount from its cost of service calculations and Net Base Energy Cost ("NBEC") calculations given the fact that Staff's fuel model does not model non-economic dispatch; therefore, these revenues would not be reflected in the model's output. However, these items are taken into account in subsequent FAC filings to ensure that the actual revenues and costs experienced by Ameren Missouri are being flowed through to ratepayers.

Staff Expert/Witness: Lisa M. Ferguson

c. Transmission Revenue and Expense

All transmission revenues and expenses since September 2016 reflect the reduced ROE from the order in the first ROE complaint proceeding discussed further below. However, transmission revenue and expense will be subject to change due to the recent decision from those proceedings as well as ongoing activity surrounding this issue. In addition, the decrease in the federal income tax rate was reflected in MISO transmission rates as of January 1, 2018. The flow back of excess deferred income taxes was reflected in Ameren Missouri's revenue requirement as of June 1, 2019 as this calculation was based on 2018 information. Ameren Missouri is reflecting its excess deferred income taxes that flow through the transmission rates in the same manner as was agreed with the parties to the stipulation & agreement in Case No.

ER-2018-0362. The protected excess is being returned using the Average Rate Assumption Method (ARAM) and the unprotected excess is being returned over a 10 year period.

Staff has adjusted the test year level of MISO transmission revenue and expense, including the Transmission schedule 26A charges, by using data provided for the 12-months ending June 30, 2021 as the FERC ROE refunds continue to be an issue that is embedded within the transmission rate schedules. Schedule 26A charges deal with Multi-Value Projects ("MVPs") that are determined by the MISO and for which costs are allocated to the individual transmission owner ("TO") members. These projects are regional projects that originally began as reliability projects and have since developed into market efficiency projects. When determining costs for the next year, MISO will estimate a total "revenue requirement" early each year. Around September or October of the year prior to the new MISO rates being put into effect, the individual TOs will estimate what their individual cost allocation responsibility for the total MISO revenue requirement costs will be regarding schedule 26A charges. Then in January the new MISO rate will be known and will go into effect. For purposes of its direct filing, Staff annualized the schedule 26A expenses using Ameren Missouri's twelve months ending June 30, 2021 expense as the new MISO planning year does not being until January 1, 2022. Staff will continue to review all of Ameren Missouri's transmission transactions and the transmission transactions affecting Ameren Missouri as additional information becomes available through the true-up period.

FERC Return on Equity ("ROE") Complaint Cases

The MISO Transmission Owners' return on common equity of 12.38% was the subject of two FERC complaint proceedings, the November 2013 complaint case (EL14-12-000) and the February 2015 complaint case (EL15-45). These complaint cases challenged the allowed base return on common equity for MISO Transmission Owners and resulted in a 15 month period for which transmission rate refunds may be required. The total allowed return on equity for the Ameren Transmission Owning Companies was reduced to 10.82% until the order issued in the second complaint proceeding made by FERC regarding ROE on November 21, 2019. In Opinion No. 569, issued in November 2019, FERC said it would use the discounted cash flow (DCF) methodology and capital asset pricing model (CAPM) to determine if an existing base ROE is unjust and unreasonable, and, if so, what replacement ROE is appropriate. Applying the

new methodology to the complaints against the Midcontinent Independent System Operator (MISO) transmission owners, Opinion No. 569 determined that their base ROE should be 9.88 percent.

On May 21, 2020, the Federal Energy Regulatory Commission (FERC) further refined its methodology for analyzing the base return on equity (ROE) and found that the MISO transmission owners' base ROE should be set at 10.02 percent. The order granted rehearing of Opinion No. 569 to use the risk premium model, DCF model, and CAPM and calculate the ranges of presumptively just and reasonable base ROEs by dividing the overall composite zone of reasonableness into equal thirds, instead of using the quartile approach that was applied in Opinion No. 569. The MISO transmission owners were required adopt a 10.02% base ROE effective September 28, 2016, and were required to provide refunds based on that 10.02% base ROE, with interest, for the First Complaint proceeding's 15-month refund period from November 12, 2013 through February 11, 2015, and for the period from September 28, 2016 to the date of the order. The Commission's dismissal of the Second Complaint was upheld and no refunds will be ordered in the Second Complaint proceeding.

On April 15, 2021, FERC issued a Notice of Proposed Rulemaking ("NOPR") to supplement its March 2020 NOPR regarding its electric transmission incentive policy. The FERC's March 2020 NOPR proposed to provide all utilities that turn over their wholesale transmission facilities to a Regional Transmission Organization ("RTO") a fixed 100 basis-point increase in return on equity ("ROE") ("RTO Participation Incentive"). The Supplemental NOPR proposes instead to codify its current practice of granting a 50 basis-point RTO Participation Incentive for utilities that join an RTO. In addition, FERC proposed that a utility will only be eligible for the incentive for the first three years after transferring operational control of its facilities to an RTO.

The Supplemental NOPR proposes that the 50 basis-point ROE adder for RTO participation will only be available for the first three years after the transmitting utility transfers operational control of its facilities to the RTO. FERC further proposes that each utility that previously received an ROE incentive for joining and remaining in an RTO must, within 30 days of the effective date of the final rule, submit a compliance filing removing the incentive from its

tariff, or if it joined an RTO in the last three years, adding language to its tariff to terminate its incentive three years from the date it turned over operational control.

FERC also proposes that a utility will only be eligible for the incentive if it has not previously been a member of an RTO/ISO; to adopt the clarification proposed in the March 2020 NOPR that utilities must turn over operational control of their facilities to the RTO/ISO in order to be eligible for the incentive; and that utilities may not receive the incentive for transmission plant if the asset was already under the operational control of an RTO, whether as part of an affiliate or a separate owner. As Ameren Missouri has been a member of MISO longer than three years, a decision on this NOPR could possibly end Ameren's ROE incentive adder.

Recommendation

Staff was incorrect in its direct testimony regarding this issue in Ameren Missouri's last electric rate case, ER-2019-0335, in that Ameren Missouri has not yet returned FERC ROE refunds back to customers through the FAC, but in fact has still been recording all amounts to the deferral as set up in Case No. ER-2016-0179. Staff recommends that the Commission order Ameren Missouri to continue to continue to defer the FERC ordered refunded amounts in a regulatory liability account from the first complaint case and then again from the time period ordered upon the FERC's last order that are applicable to Ameren Missouri so that appropriate ratemaking treatment can be proposed in Ameren Missouri's next rate proceeding.

d. Ancillary Services Market Revenue and Expense

Ameren Missouri also participates in MISO's Ancillary Services Market ("ASM") where services beyond that of generation and transmission can be acquired to maintain grid stability and security. These services include frequency control, spinning reserves and operating reserves. Ameren Missouri entered the ASM to acquire ancillary services for its retail load and to be able to sell the ancillary services from its generation. Staff has accepted test year ASM revenue and expense levels and will continue to review Ameren Missouri's ASM transactions as additional information becomes available through the true-up period.

Staff Expert/Witness: Lisa M. Ferguson

2. Southwest Power Pool (SPP)

a. Revenue and Expense

Ameren Missouri's wind facilities generate energy that is put into the grid as the company's other generating centers do. The High Prairie wind facility generates electricity into the Midwest Independent System Operator (MISO) regional transmission organization (RTO) due to the facility's location in Northeast Missouri. The Atchison wind facility is located in northwest Missouri and its generation goes into the Southwest Power Pool (SPP) regional transmission organization (RTO).

In its most basic form, the SPP marketplace operates similarly to the MISO marketplace where generation is offered in day ahead and real-time that is then settled and cleared (purchased and sold). The RTO's then determine the energy needs and locations in which to send generation that the members of the RTO need. The main difference between SPP and MISO is that SPP does not have a capacity market where generator capacity can be purchased or sold nor do they have a rate schedule for Real-Time Price Volatility Make-Whole Payments. These payments protect the day ahead margin for generators if they offer their full ramp rate and follow independent system operator (ISO) dispatch instructions in real time. MISO and SPP both have the standard make-whole payment, however MISO also offers this other type of make-whole payment. Ameren Missouri offers up all of its generation into MISO, and now SPP, and then purchases back what it needs to meet native load. Any additional generation not used to meet native load is sold as energy sales. The Atchison wind facility does not need to transport any of their energy as that energy can be directly inserted into the grid within close proximity to the facility, thus the Atchison wind farm does not incur transmission costs as Ameren Missouri's other generators do in MISO. Atchison has just begun to interconnect into SPP and very little data exists regarding the energy revenues and expenses related to the facility. Staff is including an annualized level using the data from January 1, 2021 through June 30, 2021 of ancillary revenue and an annualized level using the data from January 1, 2021 through June 30, 2021 of expense related to the SPP in its cost of service. Staff will review these costs as part of its true up audit.

Staff Expert/Witness: Lisa M. Ferguson

3. Fuel and Purchased Power Expense

Ameren Missouri's electric supply is primarily generated from Company owned generation centers; however Ameren Missouri does at times purchase power in instances such as when energy centers have outages, extreme weather conditions, or availability of power at a lower cost than generation. As part of its audit in this rate case, Staff reviewed Ameren Missouri's coal commodity and coal transportation contracts, as well as nuclear, natural gas, fuel oil prices and purchased power agreements as provided in Ameren Missouri's fuel reports, workpapers, and responses to Staff data requests. The chart below identifies the generating facilities that Ameren Missouri owns and operates for the production of electric power with descriptions of each facility:

Unit	Type	Year Placed in Service	Summer Net MW Capability	Primary Fuel
Callaway	Base Load	1984	1,194 MW	Nuclear
Rush Island 1 - 2	Base Load	Unit 1: 1976 Unit 2: 1977	1,178 MW	Coal
Labadie 1 - 4	Base Load	Unit 1: 1970 Unit 2: 1971 Unit 3: 1972 Unit 4: 1973	2,372 MW	Coal
Sioux 1 - 2	Base Load	Unit 1: 1967 Unit 2: 1968	972 MW	Coal
Meramec 1 - 2[105]	Base Load/ Cycled Based on Economics	Unit 1: 2016 Unit 2: 2016	236 MW	Natural Gas
Meramec 3 - 4	Base Load/ Cycled Based on Economics	Unit 1: 1958 Unit 2: 1961	591 MW	Coal
Keokuk	Run of River	1914	144 MW	Water
Osage	Ponded Hydro	1931	235 MW	Water
Taum Sauk	Pump Storage	1963	440 MW	Pumped Water
Kirksville	Peaking	1967	Retired 6/30/18	Natural Gas

[105] Meramec units 1 and 2 converted to natural gas in early 2016.

Unit	Type	Year Placed in Service	Summer Net MW Capability	Primary Fuel
Venice CT 2 - 5	Peaking	Unit 2: 2002 Unit 3-5: 2006	492 MW	Natural Gas
Fairgrounds	Peaking	1974	55 MW	Natural Gas
Meramec CT 1	Peaking	1974	Retired 12/29/20	Oil
Meramec CT 2	Peaking	2000	46 MW	Natural Gas
Mexico	Peaking	1978	54 MW	Natural Gas
Moberly	Peaking	1978	54 MW	Natural Gas
Moreau	Peaking	1978	54 MW	Natural Gas
Peno Creek 1 - 4	Peaking	2002	192 MW	Natural Gas
Pinckneyville 1 - 8	Peaking	Units 1-4: 2000 Units 5-8: 2001	316 MW	Natural Gas
Kinmundy 1 - 2	Peaking	2001	210 MW	Natural Gas
Audrain 1 - 8	Peaking	2001	608 MW	Natural Gas
Goose Creek 1 - 6	Peaking	2003	438 MW	Natural Gas
Raccoon Creek 1 - 4	Peaking	2002	304 MW	Natural Gas
Maryland Heights	Renewable	2012	8 MW	Methane Gas
O'Fallon	Renewable	2014	3 MW	Solar
BJC	Renewable	2020	1.5 MW	Solar
Lambert	Renewable	2019	1 MW	Solar
High Prairie	Renewable	2020	400 MW	Wind
Atchison County	Renewable	2021	300 MW*	Wind

*One turbine has not yet been placed in service that is 4.2 MW.

Staff witness Shawn E. Lange, PE also reviewed multiple years of market energy prices. Staff's annualized and normalized level of fuel and purchased power expense was calculated to be sufficient for Ameren Missouri to serve its native load and to enable it to make off-system sales through the MISO day-ahead market. Staff's fuel expense adjustment includes all changes to coal commodity and transportation costs based upon contracts in effect January 1, 2021. Staff's fuel expense adjustment for nuclear fuel is based on generation and cost data for the 16 month period from Refuel 23 through September 30, 2020 prior to Refuel 24 as there is no data to rely on past the date Callaway went down for the Refuel 24.

Staff's fuel cost calculation also includes the fixed and variable demand cost of natural gas and costs associated with fly ash, both of which are discussed in their respective sections of testimony in this cost of service report. Staff's annualized purchased power expense is based upon the output of the fuel model, as sponsored by Staff witness Shawn E. Lange, PE. Staff will continue to examine each component of fuel expense through the true-up period ending September 30, 2021, so that any significant changes that occur through that date are addressed.

Staff Expert/Witness: Lisa M. Ferguson

a. Accounting Coal Prices

Staff's coal prices are used to compute Ameren Missouri's fuel costs based on the total coal unit generation that is determined by Staff's production cost model. Staff performed a review of all of Ameren Missouri's current coal commodity and transportation contracts. Staff's coal prices on a per-MMBtu basis reflect Ameren Missouri's mine-specific coal commodity, coal rail car costs including depreciation, and coal rail and barge transportation contracts that will be in effect as of January 1, 2021. Staff also included an ongoing level of expense of fuel hedge surcharges associated with rail transportation. These hedges are tied to the prices of on-highway diesel as reported by the Energy Information Administration, an agency of the U.S. Department of Energy ("DOE").

Staff Expert/Witness: Lisa M. Ferguson

i. Fly Ash

Historically, Ameren Missouri's expenses associated with fly ash have been partially or entirely offset by revenues generated by selling the fly ash to third parties. Staff has proposed to include the twelve months ending June 30, 2021 for both fly ash revenue and expense in its cost of service. Staff will continue to review information regarding fly ash costs and sales through the true-up cut-off in this case.

Staff Expert/Witness: Lisa M. Ferguson

b. Nuclear Fuel Prices

Uranium is a naturally radioactive metal that undergoes a complex three-stage process, involving conversion, enrichment, and fabrication, in order to be transformed into fuel rod

assemblies (long metal tubes filled with precisely fashioned small fuel pellets) that are used in the Callaway reactor as its source of fuel. The nuclear fuel price calculated by Staff represents the cost of all of the fuel rod assemblies that are currently loaded into the reactor. Callaway has been down due to an unplanned outage that lasted from December 24, 2020 to August 7, 2021 and as such Staff used available data for calendar 2020 (test year) to calculate the fuel price used in its direct filing. Staff will reexamine the actual nuclear fuel prices through September 30, 2021 as part of its true-up audit, and will reflect these costs as part of its true-up filing.
Staff Expert/Witness: Lisa M. Ferguson

c. Fixed Natural Gas Cost

Staff has included a three year average ending December 31, 2020 of the fixed demand cost of gas, in its recommended revenue requirement. Staff's production cost model only includes variable commodity gas costs. Therefore, the cost of fixed gas must be added to the production cost model's results to determine the total net fuel and purchased-power expense. Staff will examine this cost through the true-up cut-off date of September 30, 2021, in this case.
Staff Expert/Witness: Lisa M. Ferguson

d. Variable Natural Gas Cost

Staff has provided a three year average of variable natural gas costs as an input to Staff's production cost model. The annualized amount that will be produced from the production cost model will be utilized to determine the net fuel and purchased power expense. Staff will examine this cost through the true-up cut-off date of September 30, 2021, in this case.
Staff Expert/Witness: Lisa M. Ferguson

e. Fuel Oil

Fuel oil represents a small portion of the total fuel costs for Ameren Missouri, it is mainly used for startup and auxiliary purposes at generating stations. Staff included a three year average of fuel oil costs as an input to Staff's Production Cost Model. Staff will examine this cost through the true-up cutoff date, September 30, 2021.
Staff Expert/Witness: Lisa M. Ferguson

f. Market Prices

The market price represents the dollar-per-megawatt-hour amount paid for electric energy in the Midcontinent Independent System Operator ("MISO") market in any given hour. A market price for each hour of the test year was provided to Staff witness Shawn E. Lange, PE as a key input in Staff's fuel modeling. For each hour, the fuel model is programmed to economically dispatch each unit based on the inputs provided. The market price therefore sets the marginal generator, determines which of the Company's generators will run, and the cost of fuel for those generators.

In order to account for the variability of market prices, Staff developed a normalized set of prices by looking at three years of market data ending May 2021 and calculating monthly peak and off-peak prices. Generally, Staff calculated peak and off-peak adjustment factors for each month based on the ratio of the three-year averages to the monthly averages in the test period. The adjustment factors were then applied to the hourly weighted average market price for the Ameren Missouri generation fleet. This method minimizes extreme price points caused by such things as weather, new market operation, and economic downturns while reasonably representing peak and off peak prices. However, Staff altered its method for the month of February due to the high market prices experienced during 2021 as a result of Winter Storm Uri. Market prices in February of 2021 were higher than expected. As a point of reference, the average market price for the Ameren Missouri aggregate load node[106] in February 2021 ** [redacted] [107] [redacted]. [108] ** Therefore, Staff based the February adjustment factors on the ratio of the two-year average of February peak and off-peak prices in 2019 and 2020. The adjustment factor was then applied to the market price data of February 2020 as a proxy for the February 2021 data set (adjusted slightly to account for

[106] AMMO.UE.

[107] ** [redacted] **.

[108] Ameren Missouri response to Staff DR No. 0684.

the difference in the timing of weekends and weekdays), because February 2020 is the nearest data set for that month that did not include the effects of Winter Storm Uri.[109]

Staff Expert/Witness: J Luebbert

4. Fuel and Purchased Power Cost Modeling

a. Normalization of Hourly Load Requirements at Transmission

i. System Energy Losses

System energy losses largely consist of the energy losses that occur in the electrical equipment (e.g., transmission and distribution lines, transformers, etc.) of Ameren Missouri's system. Historically, this calculation has represented the amount of losses between its generating sources and the customers' meters. However, with its participation in the Midcontinent Independent System Operator ("MISO") market, Ameren Missouri sells its generation into the MISO market and buys back from MISO what is to be delivered to its customers' loads, an amount referenced as the Load Requirement at Transmission ("LRT"). In addition, small, fractional amounts of energy either stolen (diversion) or not metered are included as system energy losses.

The basis for calculating system energy losses is that LRT equals the sum of "Total Sales," "Company Use," and "System Energy Losses." Thus, System Energy Losses can be expressed mathematically as:

System Energy Losses = LRT – (Total Sales + Company Use)

The System Energy Loss Percentage can be expressed as:

System Energy Losses X 100%

LRT is also equal to the sum of the Company's net generation and net interchange, considered to be at the transmission level. Net generation is the total energy output of each generating plant minus the energy consumed internally to enable the production of electricity at each plant. Net interchange is the difference between off-system purchases and off-system sales.

[109] ** [redacted] **

The output of each generating plant is monitored continuously, as is the net of off-system purchases and sales.

Staff has calculated a system energy loss percentage of 4.602%. This system energy loss calculation has been provided to Staff witness Michael L. Stahlman to be utilized in the development of hourly loads that are used in Staff's fuel model.

ii. Loss Study As It Applies To The Fuel Adjustment Clause

Ameren Missouri supplied Staff with a Loss Study in its Response to Staff DR No. 0239. This loss study includes analyses based on data collected during calendar year 2018. Therefore, Ameren Missouri is in compliance with the rule requiring a current loss study be provided in conjunction with a request to continue a Rate Adjustment Mechanism ("RAM"), i.e. its Fuel Adjustment Clause ("FAC") in the current case, per 20 CSR 4240-20.090(13).[110]

Voltage adjustment factors ("VAF"s) account for the energy losses experienced in the delivery of electricity from the generation level to the retail customer. The existing FAC tariff utilizes two VAFs: "Secondary" and "Primary." In its Direct Testimony, Ameren Missouri has proposed two additional voltage adjustment factors for customers that receive electric service at higher voltage levels: VAFs for "High Voltage Primary" and "Transmission" levels. Ameren witness Michael Harding indicates that this is being proposed in view of the Stipulation and Agreement in the 2019 Ameren rate case. Therefore, in its recommended revised FAC tariff, attached to the Direct Testimony of Michael Harding, Ameren Missouri is proposing four VAFs (Transmission, $HV_{Primany,}$ $LV_{Primany}$, and Secondary voltage levels) instead of the current two VAFs.

Adding additional voltage level factors better reflects costs for those customers taking service at higher voltages and thus Ameren's proposal seems reasonable. VAFs for each of the four voltage levels is calculated based upon information included in the aforementioned loss study.

[110] 20 CSR 4240-20.090(13) Rate Design of the RAM. The design of the RAM rates shall reflect differences in losses incurred in the delivery of electricity at different voltage levels for the electric utility's different rate classes as determined by periodically conducting Missouri jurisdictional system loss studies. …When the electric utility seeks to continue or modify its RAM, the end of the twelve- (12-) month period of actual data collected that is used in its Missouri jurisdictional system loss study must e no earlier than four (4) years before the date the utility files the general rate proceeding seeking to continue or modify its RAM.

Staff has calculated the following VAFs:

Transmission	0.9954
$HV_{Primany}$	1.0085
$LV_{Primany}$	1.0248
Secondary	1.0567

The VAFS will be utilized by Staff witness Brooke Mastrogiannis in determining Fuel Adjustment Rates ("FARs"). The FARS are applicable to the individual voltage service classification of a particular customer in the corresponding FAC tariff, if the Commission authorizes Ameren Missouri to continue its utilization of its FAC tariff.

Staff Expert/Witness: Alan J. Bax

b. Variable Fuel Expense

Staff estimates the variable fuel and purchased power expense for Ameren Missouri for the update period, as defined in the Rate Revenue Section of Staff's Cost of Service Report, ending June 30, 2021, to be $ 348,740,175.

Staff uses the Plexos production cost model to perform an hour-by-hour chronological simulation of a utility's generation and power purchases. Staff uses this model to determine annual variable cost of fuel and net purchased power energy costs and fuel consumption necessary to economically serve the utility's load and operate within the Midcontinent Independent System Operator ("MISO") energy market. These amounts are supplied to the Auditing Department Staff who use these inputs in its calculation of the annualization of net fuel and purchased power expense.

Staff used market prices in its fuel model dispatch to simulate Ameren Missouri's operations in the MISO Integrated Marketplace ("IM"). The price for energy in the IM dictates the amount of energy Ameren Missouri sells in the IM. Consequently, Staff's fuel run dispatches Ameren Missouri's generation to match the MISO market price, thus simulating how the MISO would dispatch generation if it were being dispatched into the MISO IM based on prices set by the MISO's regional load requirements. Similar to constraints applied in Ameren Missouri's modeling, Staff applies constraints within the model to reasonably align the modeled unit performance with historical unit performance. This is intended to simulate Ameren Missouri's IM bidding strategies.

The model operates in a chronological fashion, meeting each hour's energy demand before moving to the next hour. It will schedule generating units to dispatch in a least cost manner based upon fuel cost and purchased power cost while taking into account generation unit operation constraints and firm purchased power contract requirements. This model closely simulates the way a utility should dispatch its generating units and purchase power to meet the net system load in a least cost manner.

Model inputs calculated by Staff are: fuel prices, spot market purchased power prices and availability, hourly load requirements at transmission, and unit planned and forced outages. Staff relied on Ameren Missouri responses to data requests and workpapers for factors relating to each generating unit. These factors include: capacity of the unit, unit heat rate curve, primary and startup fuels, ramp-up rate, startup costs, fixed operating and maintenance expense as well as information from Ameren Missouri's wholesale loads. Firm purchased power contract information, such as hourly energy available and prices, are also inputs to the model.

The Staff model was benchmarked by using Ameren Missouri's model inputs. The difference between Staff's model benchmark results and the Ameren Missouri model results, supported by Mark Peters' direct testimony, was, for the coal and nuclear generation units, less than 1.5% difference in the level of generation.

Staff Expert/Witness: Shawn E. Lange PE

c. Capacity Contract Prices and Energy

Capacity contracts are contracts for a specific amount of capacity (megawatts or MW) and a maximum amount of hourly energy (megawatthours or MWh). Prices for the energy from these capacity contracts are based on either a fixed contract price or the generating costs of providing the energy. The contract relevant to this case is the Horizon Pioneer Prairie wind contract.

Actual hourly contract transaction prices were obtained from the Horizon Pioneer Prairie contract provided by Ameren Missouri. The hourly energy was developed by averaging the actual hourly energy from 2010 through May 2021 from data Ameren Missouri supplied to comply with 20 CSR 4240-3.190 Reporting Requirements for Electric Utilities and Rural Cooperatives.

Staff Expert/Witness: Shawn E. Lange, PE

d. Planned and Forced Outages

Planned and forced outages are infrequent in occurrence, and variable in duration. In order to capture this variability, the Ameren Missouri generating unit outages were normalized by averaging six years (January 2015 through May 2021) of actual values taken from data Ameren Missouri supplied to comply with 20 CSR 4240-3.190.

Staff witness Charles T. Poston, PE has testimony on the forced outage at Callaway starting on December 24, 2020. Staff models normal outages, since this forced outage was not normally occurring, Staff has removed it from the Callaway forced outage rate in this case.

Staff Expert/Witness: Shawn E. Lange, PE

5. <u>Other Fuel-Related Items</u>

a. Fuel Additive – Limestone for Sioux Scrubbers

In order to properly operate the Sulfur Dioxide ("SO_2") scrubbers at the Sioux Energy Center ("Sioux"), Ameren Missouri utilizes limestone as a fuel additive. After being purchased, but before being transported to Sioux, the limestone must undergo a pulverization process in order to meet the standards of quality necessary for use in the scrubbers. Ameren Missouri maintains contracts with three vendors for this operation—one from whom the limestone is purchased, one to process the limestone so that it is useable, and one who will transport the processed limestone to Sioux.

Staff included a three year average ending December 31, 2020 price for limestone applied to Staff's normalized kWh generation as modeled in Staff's fuel model for limestone and will continue to review limestone data through September 30, 2021 to be reflected in its true-up filing.

Staff Expert/Witness: Lisa M. Ferguson

b. Fuel Additive – Activated Carbon

In order for Ameren Missouri to comply with mercury emission limits established by the EPA's Mercury and Air Toxics Standards ("MATS"), powdered activated carbon is used at Ameren Missouri's generating units to reduce mercury emissions. The activated carbon is processed (or "activated") so that it produces carbon particles with high porosity and greater

surface area. The activated carbon is injected into and absorbed by the flue gas and is then captured in the electrostatic precipitators at the Labadie, Rush Island, Meramec, and Sioux Energy Centers. Ameren Missouri has contracted with a handful of vendors to acquire and transport activated carbon to its plants as necessary.

Staff annualized the cost of activated carbon by including a three year average ending December 31, 2020 as applied to Staff's normalized kWh generation as modeled in Staff's fuel model for activated carbon.

Staff will continue to review activated carbon use data at all energy centers through September 30, 2021 to be reflected in its true-up filing.

Staff Expert/Witness: Lisa M. Ferguson

c. Heat Rate and Efficiency Testing

Whenever an electric utility requests that a rate adjustment mechanism ("RAM") such as a Fuel Adjustment Clause ("FAC") be continued or modified, Commission Rule 20 CSR 4240-20.090(2)(A)(15) specifies that the electric utility shall file supporting information, in electronic format where available, with all links and formulas intact, as part of, or in addition to, its direct testimony as part of its direct filing in a general rate proceeding.

> 20.090(2)(A)(15). A level of efficiency for each of the electric utility's generating units determined by the results of heat rate/efficiency tests or monitoring that were conducted or obtained on each of the electric utility's steam generators, including nuclear steam generators, heat recovery steam generators, steam turbines and combustion turbines within twenty-four (24) months preceding the filing of the general rate increase case.

Heat rates of generating units are an indicator of each unit's performance. A heat rate is a calculation of total volume of fuel burned for electric generation multiplied by the average heat content of that volume of fuel for a given time period divided by the total net generation of electricity in kilowatt hours (kWh) for that same time period. Heat rates are inversely related to the operating efficiency of the generating unit. Increasing heat rates of specific units over time may indicate that a specific unit's efficiency is declining. Heat rates can vary greatly depending on operating conditions including but not limited to load, hours of operation, shutdowns

and startups, unit outages, derates[111], and weather conditions. Therefore, a good indication of unit performance for a utility's frequently used units is an analysis of the trend of heat rates over time.

Ameren Missouri witness Andrew Meyer included Schedule AMM-D1 (Section O) in his testimony that stated the results of the most recent heat rate/efficiency tests for Ameren's generating units would be sent in a "separate workpaper specifically denominated as such." On April 7, 2021, Rachel DuMey provided Staff with an email containing some of the relevant workpapers. Staff also received a disc containing work papers as some of the work papers were too large to be emailed. Staff has conducted a review of the results contained in those workpapers and found them to be reasonable based on comparisons with data filed in previous FAC prudency reviews, general rate case proceedings and known changes in power plant operating parameters. All of the testing dates submitted by Ameren Missouri were found to be in accordance with the twenty-four (24) month requirement of 20 CSR 4240-20.090(2)(A)(15).

Staff Expert/Witness: Jordan T. Hull

d. Spent Fuel and Department of Energy (DOE) Breach of Contract Settlements with Ameren Missouri

Ameren Missouri has maintained with the United States Department of Energy an executed settlement agreement regarding spent nuclear fuel fees that began in 2011 with several addendums to the original agreement in 2014 and 2017. The current addendum was executed on November 1, 2020 and Ameren Missouri intends to extend the Settlement Agreement beyond 2022. The Settlement Agreement and addendums to extend said agreement delineate the original reimbursement amount as well as sets out the process for subsequent claims for reimbursement related to spent nuclear fuel costs, allowable costs and cost categories to be claimed, modifications to the generation plant, final determinations of costs and other legal requirements.

During the calendar year after a calendar year where costs are incurred related to its Independent Spent Fuel Storage Installation (ISFSI), Ameren Missouri submits a written claim per the terms of the settlement agreement to the DOE. The DOE assesses Ameren Missouri's

[111] Derate - To lower the rating of (a device), especially because of a deterioration in efficiency or quality.

claim against the regulations set out in the Settlement Agreement and then determines the amount to reimburse to Ameren Missouri at a later date.

Ameren Missouri has requested and received the following reimbursements:

Year	Requested Reimbursement	Reimbursement Received	Disallowed by DOE
2009/2010	$79,634	$73,894*	$5,740
2011	$849,544	$818,692	$30,851
2012	$6,264,937	$6,227,978	$36,959
2013	$15,107,849	$14,933,364	$174,485
2014	$15,032,120	$13,847,006	$1,185,114
2015	$23,682,151	$23,586,656	$95,495
2016	$2,960,860	$2,920,420	$40,440
2017	$11,859,249	$11,035,375	$823,874
2018	$21,293,549	$21,176,040	$117,508
2019	$21,176,549	$21,176,040	$509
2020	$9,896,559	$9,896,559	$0
2021	$9,519,159	Currently Pending Review	------

*The total amount received for 2009/2010 from the DOE was $10,551,468. This amount includes reimbursement for spent fuel racks of $10,477,574 in addition to the dry cask storage reimbursement shown above

The difference between the amounts claimed and the amounts reimbursed were due to the DOE determining that certain costs claimed for reimbursement did not meet the criteria set forth in the Settlement Agreement.

Ameren Missouri has received the reimbursement for all capital costs incurred relative to the ISFSI for which the DOE has classified as meeting the criteria set out in the Settlement Agreement. The costs requested for reimbursement fluctuate based on actual expenses that are incurred based on the tasks that are completed during any calendar year. Typically during the year prior to a loading of spent fuel into the ISFSI, significant costs for materials are incurred. Also, the reimbursements for years where spent fuel loading takes place can differ due to the number of fuel canisters loaded into dry cask storage and labor. Ameren Missouri is not incurring capital costs at this time but continues to receive reimbursements for ongoing spent

nuclear fuel expenses. Ameren Missouri is recording the ongoing spent nuclear fuel costs as a receivable on its balance sheet and then offsetting that receivable when the reimbursement is applied. Staff has no changes to this method at this time.

Staff Expert/Witness: Lisa M. Ferguson

6. Payroll and Benefits

a. Payroll

Staff computed annualized payroll by adjusting the test year labor costs, as of the twelve months ending December 31, 2020, in order to reflect:

A) Staff's inclusion of wage increases to each payroll class, which were ** [redacted] ** for contract employees and ** [redacted] ** for management, on January 1, 2021[112];

B) Staff's removal of portions of certain employees' salaries dedicated to lobbying activities, as Staff witness Jane C. Dhority proposes;

C) Staff's inclusion of the current O&M ratio for the 12 months ending June 30, 2021,

D) Staff's inclusion of the change in headcount of ongoing management and contract employees through June 30, 2021; and,

E) Staff's normalization of the overtime associated with the Callaway nuclear refueling that occurs every 18 months, as addressed by Staff witness Lisa M. Ferguson.

Staff's adjustment for payroll expense was distributed by account based on Ameren Missouri's actual payroll distribution during the test year ending December 31, 2020.

There were no severance costs during the test year. Staff will reexamine payroll and any payroll related costs during its true up audit to determine whether any further adjustments to the cost of service are necessary.

Staff Expert/Witness: Paul K. Amenthor

[112] For the purposes of calculating the annualized effect of the wage increases, Staff removed all incentive compensation and bonus payments from the test year payroll expense in order to isolate base payroll expense before applying the wage increases.

b. MEEIA Labor

A component of Ameren Missouri's Missouri Energy Efficiency Investment Act (MEEIA) is a portfolio of demand-side programs which are funded through the Demand-Side Investment Mechanism (DSIM) rider.

On December 5, 2018 the Commission approved a Stipulation and Agreement in Case No. EO-2018-0211 approving Ameren Missouri's 2019-2021 MEEIA Energy Efficiency Plan. As part of its plan, Ameren Missouri may include incremental labor costs in the MEEIA rider until those costs are included in base rates if four requirements are met. The employee must have been 1) hired after Commission approval of this plan, 2) not hired to replace an existing employee, 3) hired to work exclusively on MEEIA programs, and 4) not an existing Ameren Missouri or Ameren Services employee. Between January 1, 2020 and April 1, 2020 Ameren Missouri hired three incremental MEEIA employees. The payroll and benefits for these employees was charged through the MEEIA rider until April of 2020. Staff made an adjustment to remove these employees' labor costs incurred in the test year that were recovered through the MEEIA rider.

Additionally as part of Staff's prudence review in Case No. EO-2021-0157, Ameren Missouri indicated that it charged additional incremental labor through the MEEIA rider for work performed on billing upgrades in the Pay as You Save ("PAYS") program. However, Ameren stated that it did not hire additional employees to do this work, so the labor would not meet the four requirements above. Staff made no adjustment to remove the incremental labor performed on the PAYS billing program, and these costs should be removed as part of Ameren Missouri's next MEEIA review.

Staff Expert/Witness: Paul K. Amenthor

c. Payroll Taxes

Staff applied the current 2021 tax rates for the Federal Insurance Contributions Act (FICA), the Federal Unemployment Tax Act (FUTA), and the State Unemployment Tax Act (SUTA) to Staff's annualized payroll to determine the ongoing level of payroll taxes. Staff's payroll tax adjustment reflects Ameren Missouri's level of payroll as of June 30, 2021. Staff will re-examine this issue as part of its true up audit.

Staff Expert/Witness: Paul K. Amenthor

d. Other Employee Benefits

Ameren Missouri offers employee benefits comprised of medical, dental, and vision insurance, as well as a 401k. Staff annualized these expenses based on the benefit plan in place during the test year, as applied to the actual level of employees for each payroll class (contract and management) on June 30, 2021. Staff will reexamine employee benefits costs and any new benefit plans as part of its true up audit.

Staff Expert/Witness: Paul K. Amenthor

e. Pensions and Other Post-Employment Benefits ("OPEBs")

Defined benefit pension costs and postretirement benefit costs consist of several components, referred to as service costs and non-service costs, and these costs are grouped in a company's financial statements. Service costs represent the present value of pension benefits earned during the year, whereas non-service costs are mostly related to employees' prior service. 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. Further, the Federal Energy Regulatory Commission ("FERC") Office of Enforcement issued an accounting guidance order on December 28, 2017 on how to apply the accounting and reporting requirements when adopting ASU-2017-07. FERC directed that there would be no change in recording non-service costs. Those costs are to 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 agreed to reflect this treatment for regulatory purposes. Since its adoption, Ameren Missouri has been fully expensing the non-service pension and

OPEB costs and capitalizing a portion of the service cost component.

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

Ameren has a qualified pension plan, called the Ameren Retirement Plan, and a non-qualified pension expense program, called the Ameren Supplemental Retirement Program. Ameren's actuarial consultants, Willis Towers Watson, determines the allocation valuation for Ameren Missouri's portion of net benefit cost. Staff included Ameren Missouri's estimated pension cost (forecast as of 12/31/2020) in its direct filing. The most current actuarial report is expected to be reviewed at the true-up September 30, 2021. Staff will reflect the most current plan costs available for the qualified pension plan in its true-up calculation.

ASC-715-30 Pension Tracker

In Case No. ER-2007-0002, the Commission accepted a stipulation and agreement 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. To calculate whether an addition or reduction to ongoing pension expense should be applied, Staff accumulates the difference between the annual funded pension cost and the amount included in rates in the tracking mechanism and then includes that balance in rate base and amortizes it over a period of five years.

Non-qualified pension expense is not included in the pension tracking mechanism as it is a supplemental benefit program.

Staff updated the pension tracker amounts through June 30, 2021. Staff recommends a five-year amortization of the new pension tracker balance and to reset the prior case tracking mechanisms over 3 years. In this current case, Staff recommends that only the service portion of the tracking amounts receive rate base treatment. Since the time that Ameren Missouri adopted the one-time election to fully expense the non-service portion of Pensions, only the service portion has been allocated to capital. Thus only the service portion of the tracker amount should

receive rate base treatment. Staff is recommending that this change in rate base treatment for the tracker balances be applied prospectively, starting with the current tracker balance for this rate case. Staff will re-examine the amounts in the pension tracking mechanism, associated amortization, and reflect the expensed amounts and updated plan costs through September 30, 2021, the true up cut-off date in this case.

Annualization

Staff annualized the qualified pension expense to reflect the 2021 plan estimated expense for FAS 87, as recommended by the actuarial firm 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 included in its direct filing the current amount provided by Ameren Missouri's actuary, Willis Towers Watson for qualified pension expense, until Staff can update these estimated amounts with updated plan costs.

Staff will re-examine pension expense through the September 30, 2021 cut-off date, during its true-up audit.

Staff Expert/Witness: Paul K. Amenthor

Other Post-Employment Benefits ("OPEBs") - ASC 715-60 (formerly FAS 106)

Ameren has a postretirement benefit plan called the Ameren Retiree Welfare Benefit Plan, which covers all of Ameren's operations and provides health benefits to eligible retirees, their spouses and other eligible dependents.

Staff included Ameren Missouri's current estimated OPEB cost in its direct filing. The most current actuarial report is expected to be reviewed at the true-up September 30, 2021. Staff will reflect the most current plan costs available for the post employment benefit plan in its true-up calculation.

ASC 715-60 OPEBs Tracker

The stipulation and agreement in Case No. ER-2007-0002 also addresses the ratemaking treatment for the annual OPEB 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 includes that balance in rate base and amortizes it over a period of five years as an addition or reduction to OPEB expense. Staff updated the OPEB tracker amounts through June 30, 2021. Staff recommends a five-year amortization of the new OPEB tracker balance and to reset the prior case tracking mechanisms over 3 years. In this current case, Staff recommends that only the service portion of the tracking amounts receive rate base treatment. Since the time that Ameren Missouri adopted the one-time election to fully expense the non-service portion of OPEBs only the service portion has been allocated to capital. Thus, only the service portion of the tracker amount should receive rate base treatment. Staff recommends that this change in rate base treatment for the tracker balances be applied prospectively, starting with the current tracker balance for this rate case. Staff will re-examine the amounts in the OPEB tracking mechanism and associated amortization, and reflect the expensed amounts and updated plan costs through the September 30, 2021 cut-off date in its true-up audit.

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 OPEB expense to reflect the 2021 plan estimated expense for FAS 106 provided by 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 included in its direct filing the current amount Willis Towers Watson

provided for OPEB expense, until Staff can update these estimated amounts with updated plan costs. Staff will re-examine OPEB expense through September 30, 2021, the true up cut-off date in this case.

Staff Expert/Witness: Paul K. Amenthor

Non-Qualified Pension Expense

Ameren Missouri has a non-qualified pension plan, called the Ameren Supplemental Retirement Plan, which is a benefit to qualified executives, in addition to Ameren Missouri's qualified pension plan. This plan is unfunded and the plan benefit payments are made on either a lump sum or an annuity disbursement basis. Non-qualified pension expense is not included in the tracking mechanism due to it being a supplemental plan. Staff has included a normalized amount of actual non-qualified pension expense in the cost of service, as the amount provided by Ameren Missouri's actuary is merely an estimate, not known actual expense. Staff included test year for annuity payments and a five year average of lump sum payments. Staff will review non-qualified pension expense again as part of its true-up audit.

Staff Expert/Witness: Paul K. Amenthor

7. <u>Short-Term and Long-Term Incentive Compensation</u>

Ameren Missouri has both short-term and long-term incentive compensation plans; additionally Ameren Missouri has an exceptional bonus award program. The annual incentive compensation expense consists of incentive compensation paid to Ameren Missouri employees as well as incentive compensation costs that are allocated from Ameren Services Corporation ("Ameren Services") which provides various management and administrative functions to Ameren Missouri.

Staff has relied upon the criteria established by the Commission in the Report and Order 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 Kansas City Power & Light Case No. ER-2006-0314 where the Commission noted, that "maximizing [Earnings Per Share

> ("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 EPS goals.

Short Term Incentive Compensation

The short-term incentive compensation is broken into four plans:

**

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted] **

Long Term Incentive Compensation

** [redacted]

[redacted] **

Exceptional Performance Bonus

In addition to the above plans, Ameren Missouri offers an Exceptional Bonus Plan ("EPB") to non-Ameren Leadership Team ("ALT") employees for exceptional performance. The awards are limited to performance that is truly outstanding. Staff has reviewed the historical payouts related to the EPB and is recommending an adjustment to normalize the payouts.

Capitalized Incentive Compensation

Similar to payroll dollars, a portion of Ameren Missouri's short-term and long-term incentive compensation payments are capitalized and included in rate base. Staff has made an adjustment based upon its removal of the expense portion of incentive compensation to assign a portion of the capitalized incentive compensation to shareholders. Staff will continue to review capitalized incentive compensation through the true-up cut-off date in this case.

Staff Expert/Witness: Jason Kunst, CPA

E. Other Expenses

1. Rate Case Expenses

Rate case expenses are the costs incurred by a utility for the preparation and filing of a rate case. In the current case, Ameren Missouri has incurred expenses associated with external legal counsel, outside consultants, and expert witnesses. In this case Staff is recommending that the rate case expense be split between the shareholders and the ratepayers of Ameren Missouri on a 50/50 basis with the exception of Commission ordered costs such as the deprecation study and customer notices. Staff's recommended level of rate case expense includes one fifth of the most recent Ameren Missouri depreciation study costs. This is split is based upon the guidance from the Commission in the recent Spire Missouri Inc. ("Spire Missouri") rate cases, Case Nos. GR-2017-0215 and GR-2017-0216. The total amount of rate case expense is based upon the average of the three most recent Ameren Missouri rate cases.

Staff's recommendation to share rate case expense is based upon the following:

1) The sharing of rate case expenses creates an incentive for the utility to control rate case expenses to a reasonable level, while eliminating the disincentive for the utility to control the rate case expenses;

2) Ratepayers and shareholders both benefit from the rate case process. While the ratepayer receives safe and adequate service at a just and reasonable rate, the shareholder is afforded the opportunity to earn an adequate return on their investment;

3) Ratepayers will continue to pay for the majority of the rate case expenses regardless of any sharing mechanism when including the internal labor costs that are not included in the sharing mechanism, therefore it is a fair and equitable to allocate a portion of the rate case expenses to the shareholders; and

4) It is highly probably that some recommendations advocated by the utility through the rate case process will ultimately be determined to be not in the public interest by the Commission.

Rate case expenses are defined to be all incremental costs incurred by a utility directly related to an application to change its general rates. Normally, these applications are initiated by a utility filing, however rate case expenses could also be incurred as a result of an earnings complaint case filed by another party. While rate case expenses do include costs for document preparation and filing, the largest costs incurred during a rate case are typically for external legal, consultants, and outside expert witnesses contracted by the utility for the rate case proceeding.

Utility management typically has a high degree of control over rate case expense. Attorneys, consultants, and other services used during a rate case can be provided by existing utility personnel or sourced from an outside party. Some Missouri utilities employ in-house counsel and primarily utilize internal labor to processes rate filings; thus it is not always necessary to contract with outside attorneys and consultants in rate proceedings. The incremental rate case expenses included in the sharing mechanism proposed by Staff in this case do not include the cost for internal labor as those cost are reflected in the annualized level of payroll included in Staff's revenue requirement. Those non-incremental costs are fully included in the cost of service calculation.

There are four categories of costs that are incurred during a regulatory filing and in particular a rate case filing:

1) The costs incurred by the Commission for itself and Staff,
2) The cost incurred by the Office of the Public Counsel
3) The cost incurred by interveners in Commission proceedings, and
4) The costs incurred by the utility itself during the regulatory process

Category 1 are the costs incurred by the Commission. This includes all operating expenses, salaries, wages, and benefits of the Commission and Staff. The Commission's operating expenses are limited to the amount the Missouri General Assembly appropriates for that purpose. On an annual basis, the Commission assesses each utility it regulates an amount of operating expenses, which are subsequently passed on to ratepayers through rates. The utility is not charged for the direct costs of processing its filings or company-specific activities. Ameren Missouri is charged based on an assignment of the Commission's budget to regulation of the electric industry, which is allocated based upon the percentage of Ameren Missouri's regulated revenues compared to the total of electric regulated revenues in Missouri.

Category 2 are the costs incurred by the OPC. The Office of the Public Counsel represents the public and the interests of the utility's customers in proceedings before the Commission. An amount for OPC's annual operating expenses is appropriated by the Missouri General Assembly, which is sourced from general revenue paid by Missouri taxpayers.

Category 3 are the costs incurred by interveners to the Commission's proceedings. Interveners may be involved in a Commission proceeding for various reasons, but rate design and revenue requirement are the typical concerns brought up by interveners in a general proceeding. Intervening parties can represent a large individual utility customer or a group of utility customers. In this case, there are several interveners, some of which who have retained their own experts and legal counsel to review Ameren Missouri's proposed rate increase. The interveners to a case are responsible for their own rate case expenses.

Category 4 are the costs incurred by the utility itself during the regulatory and rate setting process. In prior rate cases, utilities were allowed to pass through the full amount of normalized and prudently incurred rate case expense and regulatory expenses to the ratepayer through rates. If utilities are allowed to pass full rate case costs to ratepayers, the utilities are the only

participant who does face an inherit limit in the amount of rate case expenses they choose to incur. The other participants in the rate case processes are constrained by the amount of rate case expense they can occur by budgetary decisions of the General Assembly or by the willingness of an intervening party to fund rate case activities. When allowed full recovery of rate case expenses, utilities are free to plan their rate case activities with the knowledge that the associated costs will be passed on to customers and recovered in rates.

By allowing a utility to recover all, or almost all, of its rate case expense from ratepayers creates an inherent disincentive for the utility to control rate case expenses. For every other participant in the rate case proceeding, their funds are ultimately limited by a budgetary and financial constraints. The ability to pass through the entire amount of expenses along with significant financial resources creates what can be viewed as an unfair advantage over the parties during a rate case proceeding.

Other discretionary utility expenses are not recovered by the utility during the rate setting process. Charitable contributions, which are discretionary amounts paid to individuals or organizations for charitable reasons that have no direct business benefit, are examples of costs that have not historically been included as an expense in the cost of service calculation. While the utility believes it has the responsibility to be a "good corporate citizen," these donations would represent an involuntary contribution by the ratepayer if they were to be included in rates. Another cost that is routinely disallowed by Staff is for political activities ("lobbying"). Lobbying and charitable contributions represent costs which are not necessary for the provision of safe and adequate service, and not recovered through rates. The lack of recovery of those costs has not dissuaded utilities from participating in them. While the sharing of rate case expense may act as an incentive to control those costs, Auditing Staff has not identified any substantial curtailment of incremental rate case expenses by the utilities affected by sharing.

In 2011, the Commission established Case No. AW-2011-0330 to investigate current rules and practices regarding the recovery of rate case expense by Missouri utility companies. The report included discussion of both sharing rate case expense 50/50 as well as sharing based upon ordered rate increase versus requested rate increase were discussed in that report.

> In KCPL's rate Case No. ER-2014-0370, the Commission ordered sharing of KCPL's rate case expenses.
>
> The Commission finds that in order to set just and reasonable rates under the facts of 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 recovery of rate case expense to the percentage of its rate increase request the Commission finds just and reasonable. 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 sough from customers in this rate case.
>
> 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. This amount should be normalized over three years. The Commission also finds that it is appropriate to require a full disclosure to ratepayers of the expenses for KCPL's depreciation study, recovered over five years, because this study is required under Commission rules to be conducted every five years. [Footnotes omitted][113]

The omitted footnote in the reference above provides further clarification for the Commission's conclusions regarding the recovery of rate case expenses:

> It is understood that some of the issues litigated in this case do not directly affect the overall revenue requirement granted by the Commission; but it is also clear that the vast majority of litigated issues do have a direct or indirect impact on the revenue requirement. Accordingly, percentage sharing is a reasonable approach to correlating recovery of rate case expense to the relationship between the amount of litigation that benefited both ratepayers and shareholders and that which benefited only shareholders[114]

In the more recent, Spire Missouri rate cases, the Commission ordered a 50/50 sharing of rate case expense between the ratepayers and the shareholders:

[113] Report and Order, Case No. ER-2014-0370 page 72.
[114] Report and Order, Case No. ER-2014-0370, page 72, Footnote 251.

> Therefore, it is just and reasonable that the shareholders and the ratepayers, who both benefited from the rate case, share in the rate case expense. The Commission finds that in order to set just and reasonable rates under the specific facts in this case, the Commission will require Spire Missouri shareholders to cover half of the rate case expense and the ratepayers to cover half with the exception of the cost of customer notices and the depreciation study.[115]

After reviewing the facts and circumstances in Ameren Missouri's filings, Staff is recommending that the Commission order a 50/50 sharing of incremental rate case expense.

To normalize rate case expense, Staff divides rate case expense over the period of time that will pass before the utility's next rate case and includes an annual amount in the revenue requirement. These costs are not "amortized" for ratemaking purposes, and the utility's recovery of these expenses are not tracked versus actual rate case expense for any over- or under-recovery. It is Staff's recommendation that these costs should be "normalized" by including a normal level in the revenue requirement calculation. In this case Staff is proposing a two year normalization due to the frequency of Ameren Missouri's rate case filings. Staff has also included the costs of Ameren Missouri's most recent depreciation study costs over five years outside of the sharing mechanism, as the study is required to be completed every five years.

Staff is recommending including a 50% sharing of the average of the rate case expense incurred by Ameren Missouri over its three most recent general rate Case Nos. ER-2014-0258, ER-2016-0179, and ER-2019-0335. The actual costs incurred for those cases is summarized below:

Case No.	Total Rate Case Expense
ER-2014-0258	$2,588,900
ER-2016-0179	$792,2111
ER-2019-0335	$1,127,833
Three Case Average	$1,502,981
50% Shared Amount	$751,491
Two Year Normalization	$375,745

[115] Report and Order, Case Nos. GR-2017-0215 and GR-2017-0216, page 52.

For perspective Ameren Missouri has incurred $249,730 of rate case expense through June 30, 2021 for processing this rate proceeding.

To summarize, Staff is recommending a 50% share of the average incremental rate case expenses from the most recent three Ameren Missouri rate cases and then normalizing that expense over a two year period. Staff is including $375,745 as the annualized amount of rate case expense in its recommended revenue requirement in this case. The recommended rate case expense would not be subject to true-up in this case for any actual expenses incurred, nor would it be tracked for any over- or under-recovery.

Staff is also recommending to include the annualized amount of Ameren Missouri's most recent depreciation study in the revenue requirement. Staff used the most recent costs from the depreciation study from Ameren Missouri's last general rate Case No. ER-2019-0335. Staff has included one fifth of expense to determine the annualized amount to include in rates, which resulted in a deduction to the test year level expense of $12,095.

Staff Expert/Witness: Jason Kunst, CPA

2. Dues and Donations

Staff reviewed all membership dues paid and donations made by Ameren Missouri, or allocated to Ameren Missouri from Ameren Corporate and Ameren Services, to various organizations during the test year ending December 31, 2020. Staff proposed adjustments to disallow various dues and donations to organizations that were incurred during the test year as they are not necessary for the provision of safe and adequate service. Examples of such disallowances include memberships to the Missouri Athletic Club and the St. Louis Zoo Association as well as donations to the St. Louis Symphony Orchestra, among others.

There is growing concern within utility regulation as to whether investor owned utilities are ultimately passing lobbying costs through to ratepayers when lobbying has either been removed from the cost of service by the utility itself (e.g. recording the lobbying portion of a membership expense below the line) or through proposed adjustment by other parties to a rate

case (see Appendix 4).[116] There is concern that while utilities are required to remove the lobbying portion of membership dues to certain trade groups, some of the remaining membership amount paid may still go toward these group's efforts to shape policy. Some memberships provide the utilities invoices with a lobbying percentage specifically delineated and some do not. However there is still concern that there is a lack of understanding of what that percentage amount of lobbying that is billed to the utility is based on. In addition there is concern that the remaining membership fee that is not delineated as lobbying could ultimately be used by the organization to pursue lobbying activities. Staff has analyzed Ameren Missouri's memberships in certain trade groups and at this time has removed 50% of all memberships that may have lobbying activity or for which Staff does not know how the organization determines the invoiced lobbying percentage Staff will continue to work with Ameren Missouri to ensure a proper amount of test year membership dues are included in the cost of service in this case.

Staff discovered that some of the memberships that Staff disallowed were recorded in capital overhead accounts. Staff has removed the charge from plant and has also removed estimated reserve from Account 398. These amounts will be addressed further once Staff has determined what capital accounts these charges were finally recorded in as well as calculate the actual reserve based on that account's depreciation rates.

Edison Electric Institute Dues

Based on information from the Edison Electric Institute's (EEI's) website (www.eei.org), EEI is an association of investor-owned electric utilities and industrial affiliates. From the information concerning EEI reviewed by the Staff in this case, it is clear that part of EEI's function is to represent the interests of the electric utility industry regarding legislative and regulatory matters on local, state and federal levels. This role includes engagement in lobbying activities by EEI.

In Case No. ER-83-49, *In the Matter of Kansas City Power & Light Co.*, 26 Mo.P.S.C. 104, 155 (1983), the Commission stated its position respecting EEI dues:

> In the Company's last rate case, ER-82-66, the Commission reiterated its position that while there may be some possible benefit

[116] "MISSOURI, KANSAS UTILITIES MAY USE LOOPHOLE TO CHARGE CUSTOMERS FOR FOSSIL FUEL LOBBYING", Allison Kite, The Missouri Independent, June 7, 2021. APPENDIX 4 IS INCLUDED HEREIN.

> to the Company's ratepayers from Company's membership in EEI, the dues would be excluded as an expense until the company could better quantify the benefit accruing to both the Company's ratepayers and shareholders.

This position has been re-affirmed by the Commission in subsequent rate proceedings.

In *Re: Kansas City Power & Light Co.*, Case Nos. EO-85-185 et al., Report and Order, 28 Mo.P.S.C. (N.S.) 228, 259 (1986), the Commission stated:

> The argument that allocation is not necessary if the benefits lessen the cost of service to the ratepayers by more than the cost of the dues misses the point.
>
> It is not determinative that the quantification of benefits to the ratepayer is greater than the EEI dues themselves. The determining factor is what proportion of those benefits should be allocated to the ratepayer as opposed to the shareholder. It is obvious that the interests of the electric industry are not consistently the same as those of the ratepayers. The ratepayers should not be required to pay the entire amount of EEI dues if there is benefit accruing to the shareholders from EEI membership as well. The Commission finds this to be the case. The Company has been informed in prior rate cases that it must allocate its Quantified benefits from membership in EEI. That has not been done herein. Therefore, no portion of EEI dues will be allowed in this case.

Based on the above criteria and the lack of providing quantification of benefits exceeding costs on the part of Ameren Missouri, Staff has disallowed all EEI dues incurred during the test year.

Staff Expert/Witness: Jane C. Dhority

3. Lobbying

Staff reviewed the dues and donations expense recorded during the test year and has determined that some of the organizations to which Ameren Missouri is a member, use a portion of member payments to fund government affairs or lobbying activities. Staff traditionally disallows costs related to lobbying recorded above the line and, therefore, has removed any portion of costs related to lobbying from test year expenses. Staff also reviewed the calendars

and itineraries of certain executives who dedicated time to lobbying activities during the test year and removed a portion of their salaries proportionate to the time spent on those activities.

Staff has also removed expenses relating to economic development activities as these costs are recovered through Ameren Missouri's economic development tariff stemming from Senate Bill 564.

Staff Expert/Witness: Jane C. Dhority

4. Insurance Expense

a. Annualization

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, nuclear property, non-nuclear property, nuclear liability, boiler and machinery, directors and officers, workers' compensation, fiduciary, cyber liability, marine, and cyber liability. Staff's annualization reflects the most current amounts as of July 2021 in order to determine an ongoing level of insurance expense. Staff also removed a portion of the marine insurance policy relating to coverage of the non-utility property. In addition to the portion of the insurance removed for the non-utility property, Ameren Missouri indicated in response to Staff DR No. 0344 that maintenance costs for the non-utility boat were incorrectly charged to Ameren Missouri. Staff made an adjustment to remove these costs from the test year. Staff will review this issue as part of true-up and further examine policy renewals.

Staff reviewed all insurance policies through July 31, 2021, however, certain insurance contracts have been renewed as of September 1, 2021 were not available for Staff to review at this time. Staff will continue to review this issue through the true-up cutoff.

Due to the impending retirement of the Meramec generating facility at the end of 2022 and the establishment of a tracking mechanism in this proceeding, Staff determined it was appropriate to include one fifth (1/5) of Meramec's insurance expense in the cost of service and include four fifths (4/5) of the insurance expense in the tracking mechanism. In order to determine the amounts to include in the cost of service and tracking mechanism, an allocation of the overall insurance expense applicable to the Meramec facility was calculated. Ameren Missouri's response to Staff DR No. 0032.1, describes insurance costs as not assignable to

specific assets or investments but rather to the entirety of the Company or grouping investments. Ameren Missouri suggested the method of allocation, which entails calculating the relevant amounts for Meramec by using the "Statement of Values" (SOV)[117] to calculate a ratio that is then applied to the overall annualized insurance expense. Staff utilized the suggested method of allocation and has included one fifth of this allocated amount for Meramec insurance in the cost of service and provided four fifths of the allocated amount for inclusion in the tracking mechanism. The reason this method was suggested is because on September 1, 2019, Ameren Missouri's coverage for Meramec was reduced to demolition and debris removal only. However, the value of the plant on the SOV must remain at full value for modeling purposes for the insurance carriers, then the carriers will make an adjustment for the reduced coverage.

b. NEIL Distributions/Credits

Nuclear Electric Insurance Limited (NEIL) is an insurance company that is owned and controlled by its members that provides insurance coverage related to replacement power for long-term interruptions of electric supply, damage to insured sites, decontamination expenses incurred at sites arising from nuclear contamination and premature decommissioning costs. In 2001, NEIL expanded its insurance product lines and began to provide conventional, non-nuclear coverage to its members. The U.S. Government imposes a federal tax, referred to the NEIL Excise Tax, on these insurance policies since the insurance policies are issued by foreign insurers. NEIL coverage is issued in the country of Bermuda. The Excise Tax is assessed on the insurance coverage on a quarterly basis.

Historically, NEIL has had distributions and credits, specifically a supplementary and secondary distribution, performance & participation credits (PPC) and renewal credits that it may issue to its members. The PPC is based on a member's claim history and whether that member is purchasing available coverage from NEIL. NEIL typically nets any PPC against the premium invoice and distributions are paid directly to Ameren Missouri. The PPC was replaced with a renewal credit in 2018, which is a credit given to members for continually purchasing coverage from NEIL. The renewal credits and supplementary distributions were eliminated in 2019 and replaced with primary and secondary distributions. Distributions are based on NEIL's overall

[117] A statement of values is a reference document included in certain insurance policy purchasing available information that supports the assessment of risk for insurance underwriters.

underwriting results and investments and credits are netted against the premium charged to Ameren Missouri. The credits are encompassed in Staff's annualization of insurance expense. Staff reviewed the primary and secondary distributions and determined that test year should be included in the cost of service at this time. Staff will continue to review these distributions through the true-up date of September 30, 2021.

Staff Expert/Witness: Christopher D. Caldwell

5. Interest on Customer Deposits

Generally, interest is calculated on customer deposits and paid to the customers for the use of their money. Customers earn an interest rate equal to the prime rate that was 3.25%, as published in the Wall Street Journal on the last day of the month of November 2020, plus an additional 1% on their deposits. Staff applied this interest rate to the 13-month average of customer deposits. Staff will re-examine the amount of interest expense related to customer deposits as part of its true-up audit.

Staff Expert/Witness: Christopher D. Caldwell

6. Paperless Bill Credit

In its most rate case No. ER-2019-0335, Ameren Missouri proposed a $0.50 "paperless bill credit" for a 12 month period for customers who signed up for paperless billing. As part of the Stipulation and Agreement filed in that case, the parties agreed that Ameren Missouri could offer the bill credit, however Ameren Missouri would not seek any recovery of the incentives or costs directly associated with paperless billing. Additionally, the credits were to be excluded from the revenues used to determine the revenue requirement in the next case. The language from the stipulation and agreement is cited below:

> Paperless Bill Credit: The signatories agree that Ameren Missouri may implement its paperless bill credit proposal as outlined in the Direct Testimony of Mark Birk. The Company shall exclude bill credits from revenues used to determine the revenue requirement in its next rate case. Ameren Missouri shall not seek recovery for any incentives or other costs directly associated with paperless billing.[118]

[118] Corrected Stipulation and Agreement, Case No. ER-2019-0335, page 47.

As part of its review, Staff reviewed the costs associated with the paperless bill credit, which included costs for advertising paperless billing and capital upgrades to the billing system to process the bill credit. Staff has made an adjustment to remove the advertising costs associated with the paperless billing as well as the capital costs and associated depreciation reserves for the software upgrades. Additionally Staff has imputed revenue to exclude the credits from the revenue requirement.

Staff Expert/Witness: Jason Kunst, CPA

7. Property Tax Expense

Ameren Missouri provides the taxing authorities a valuation of its property based upon January 1 of the current year. The taxing authority then provides Ameren Missouri with its assessed values and dues dates for the property taxes payments based upon the assessed value of the property and the current tax rate. These payments are typically due by December 31 of the tax year. Ameren Missouri records a monthly accrual to record property tax expenses throughout the year. In this case, Staff is proposing to use the most current property taxes, which were paid in December of 2020 as the annualized level of property tax expense.

Additionally, during the discovery process, Staff learned that Ameren Missouri inherited a tax abatement agreement with Atchison County as part of its purchase of the Atchison Renewable Energy Center. The agreement provides a ** [redacted] ** tax abatement for the period of October 1, 2020 through September 30, 2030.

8. Meramec Property Taxes

As discussed above by Staff witnesses Lisa M. Ferguson and Kimberly K. Bolin, Ameren Missouri has proposed a tracker mechanism for the costs associated with the Meramec Energy Center. Staff has proposed an adjustment to only include one fifth of the property taxes for the Meramec energy center in base rates.

Staff Expert/Witness: Jason Kunst, CPA

9. Uncollectible Expense

Uncollectable expense, or "bad debt expense," is the portion of retail revenues that Ameren Missouri is unable to collect from retail customers due to non-payment of bills. After a

certain amount of time, these accounts are "written off" by Ameren Missouri and turned over to third party collection agencies for collection efforts. Ameren Missouri is sometimes successful in collecting on accounts that have been written off due to the efforts of the third party collection agencies. These collections are then netted with the write-offs to determine "net write-offs". The amount of bad debt expense recorded by Ameren Missouri during the test year reflects an accrual, or estimation by Ameren Missouri to provide a reserve for bad debt expense.

Ameren Missouri filed Case No. EU-2021-0027 seeking to recover expenses and revenues impacted by COVID-19, this included expenses for bad debts as Ameren Missouri voluntarily suspended disconnections during the pandemic. During the COVID-19 pandemic, Ameren Missouri incurred lower net write-offs than in prior periods partially due to Ameren Missouri offering extended deferred payment plans to customers. Additionally the amount of write-offs were impacted by the availability of assistance for customers having difficulties paying their bill, such as Ameren Missouri's COVID-19 Clean Slate program[119] as well as additional funding that as made available to the Low Income Home Energy Assistance Program ("LIHEAP"). For a complete discussion of the COVID-19 AAO please see the COVID AAO Recovery section by Staff witness Kimberly K. Bolin earlier in this report.

Staff traditionally determines the amount of uncollectable expense to include in rates by analyzing the actual historical net write-offs for a period of time. Staff proposes an adjustment to normalize the amount of uncollectible expense in rates by reflecting the actual net write-offs for calendar year 2019. Staff's proposed adjustment results in a decrease to the test year level of expense of $6,545,615. Staff will continue to review the actual net write-offs incurred by Ameren Missouri through the true-up date of September 30, 2021, and may make further adjustments as part of its true-up audit.

Staff Expert/Witness: Jason Kunst, CPA

10. <u>Advertising Expense</u>

In determining its recommended level of allowed advertising expense for Ameren Missouri, Staff applied the principles in the Commission's decision in Re: Kansas City Power

[119] Through the COVID-19 Clean Slate program Ameren Missouri provided an additional $3.5 million in energy assistance to customers.

and Light Company, Case Nos. EO-85-184 et al., 28 Mo.P.S.C. (N.S.) 338, 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:

> **General:** informational advertising that is useful in the provision of adequate service;
>
> **Safety:** advertising which conveys the ways to safely use electricity and to avoid accidents;
>
> **Promotional**: advertising used to encourage or promote the use of electricity
>
> **Institutional:** advertising used to improve the company's public image;
>
> **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; and (3) include the cost of promotional advertisements only to the extent the utility can provide cost-justification for the advertisements. (Report and Order in KCPL Case Nos. EO-85-185, et al., 28 Mo.P.S.C. (N.S.) 338, 269-271 (April 23, 1986)).

In a prior Ameren Missouri rate Case No. ER-2008-0318, the Commission issued a Report and Order that indicated that the KCPL standard for advertising continued to be useful but also introduced an additional test which essentially required that advertising costs should also be reviewed and analyzed on a campaign basis. Specifically, the Commission's Order in ER-2008-0318 indicated the following:

If on a balance a campaign is acceptable then the cost of individual advertisements within that campaign should be recoverable in rates. If the campaign as a whole is unacceptable under the Commission's standards, then the cost of all advertisements within that larger campaign should be disallowed.

In accordance with the standards set out in KCPL Case Nos. EO-85-185, et al., 28 Mo.P.S.C. (N.S.) 338, 269-271 (April 23, 1986), as well as the Report and Order issued in Case No. ER-2008-0318, Staff recommends adjustments to exclude the costs of institutional advertising and promotional items from recovery in rates in the current case. A quantification of

Staff's disallowed advertising adjustments as well as the advertisements themselves are included in Appendix 4. General and safety advertising costs that were directed towards benefiting customers were not adjusted by Staff. Additionally, Staff reviewed advertising related items that were allocated from the Ameren corporate level. Consistent with the categorization of Ameren Missouri direct advertising, Staff recommends adjustments to remove the allocated advertising costs associated with items found to be institutional in nature.

Staff recognizes the guidance established in Ameren Missouri case number ER-2008-0318; however, Staff's position is that reviewing advertising strictly on a "campaign" basis would not be appropriate in this particular circumstance given the very broad nature of Ameren Missouri's Energy at Work ("EAW") campaign. Staff performed an analysis of the EAW campaign in the previous electric rate case (ER-2019-0335) and found that over 50% of the advertisements were not recoverable under the KCP&L standard. To make adjustments on a campaign basis in that case meant that Ameren Missouri would not have been able to recover costs for advertisements that were considered general or safety related. Staff performed the same campaign-based analysis of Ameren Missouri's advertising in this case and found that less than 50% of the Energy at Work campaign was not recoverable. To allow the EAW campaign to be recovered as a whole means that ratepayers would bear the costs of institutional advertising such as the "Every Direction" commercial that is not deemed recoverable under the KCP&L standard. Therefore, it is Staff's position that adjustments should be made on an ad-by-ad basis as this allows Ameren Missouri to recover the full cost of advertising attributable to general or safety messages and ratepayers are not burdened with costs for advertising that is not allowed under the KCP&L standard. However, should the Commission choose to allow the entire amount of the campaign as structured by Ameren Missouri, Staff has also attached a workpaper reflecting costs on the campaign basis.

Staff has had chronic issues regarding Ameren Missouri's responses to advertising data requests. With every case, Staff submits a standard set of DRs that are consistent from case to case. Ameren Missouri is well aware of the information Staff is requesting as it has not changed in the past several rate cases. That being said, the Company has consistently failed to provide complete answers to Staff's advertising data requests in a timely manner. Staff has reviewed the

Company's responses to these data requests for the past 3 electric rate cases and found the following:

In case No. ER-2014-0258, only 1 of 7 data requests were answered on time. DR No. 0034 asked for copies of all advertising and associated costs. 135 days elapsed (including 4 supplemental responses) before the Company provided all the information Staff asked for. Ameren Missouri took 102 days and 5 supplemental responses to fully respond to Staff's request for advertising agency invoices.

In case No. ER-2016-0179, none of Staff's advertising data requests were answered on time. 238 days elapsed and 5 supplemental responses were given before Ameren Missouri provided all the advertisements and costs Staff asked for.

In case No. ER-2019-0335, 193 days elapsed before Company provided all of the advertisements and costs requested in DR No. 0003. None of the requests were answered on time.

In this case, 96 days elapsed before all of the advertisements and associated costs were provided and 76 days elapsed before Staff had all the relevant social media items requested. Staff recommends the Commission order Ameren Missouri to explore methods that can be utilized so Staff can receive the quickest and most efficient responses that are adequate at the outset. For example, Ameren Missouri can provide Staff actual shots to view of social media posts that company is seeking recovery for, rather than providing hyperlinks. Also, company can clearly lay out the spreadsheet of all costs and then ensure that all invoices, such as the HLK[120] invoices, are provided that make up the costs shown in the spreadsheet. This will hopefully prevent the multiple follow up DRs that have had to be asked in several of Ameren Missouri's past rate cases as well as allow for more productive meetings.

Staff Expert/Witness: Jane C. Dhority

11. Callaway Refueling Labor and Non-Labor Adjustment

Ameren Missouri's Callaway nuclear power plant undergoes routine refueling and maintenance outages every eighteen months. During these outages, in addition to the refueling process, Ameren Missouri typically performs maintenance tasks, inspections, and testing that can

[120] HughesLeahyKarlovic advertising and digital marketing agency.

only be completed when the reactor is offline. The most recent outage of this nature occurred in fall 2020, concluding on December 22, 2020 and is known as "Refuel 24."

Ameren Missouri sought authority to defer and amortize certain costs related to Callaway Energy Center ("Callaway") refueling outages as part of case No. EU-2020-0114. On January 29, 2020, the parties to the case stipulated that the Commission should issue its order authorizing Ameren Missouri, starting with "Refuel O & M costs" incurred and to be incurred for Callaway refueling outage number 24 (which commenced in the fall of 2020), and for subsequent refueling outages, to defer such costs to Federal Energy Regulatory Commission ("FERC") Uniform System of Account No. 174 and to amortize the deferred costs as follows: a. Ameren Missouri will track the deferred costs within Account No. 174 to allow direct assignment of the costs, via an amortization of the costs to FERC Account No. 524 (miscellaneous nuclear power expenses) and FERC Account No. 530 (maintenance of reactor plant equipment), as appropriate. The amortization begins in the month Callaway is brought back online after completion of each refueling outage if such date occurs on or before the 15th day of the month in which Callaway is brought back online; otherwise, the amortization begins in the month following the month in which Callaway is brought back online; and b. the deferral is on a straight line basis starting in the month described above and ending the month prior to the month in which amortization of the next refueling outage is scheduled to begin. The deferral balance is not included in the Company's rate base for ratemaking purposes.

Staff verified that all costs were deferred correctly and that amortization began per the stipulation. Ameren Missouri, as part of its direct case, has proposed to average the actual non-labor costs from the last three refuels to establish a normalized level of Callaway refueling expense. Staff agrees and has included two thirds of the average of the labor and non-labor costs from the last three Callaway refuelings so as to build in an appropriate level of ongoing costs in the cost of service.

Staff Expert/Witness: Lisa M. Ferguson

12. Nuclear Regulatory Commission ("NRC") Fees

The Nuclear Regulatory Commission (NRC) is an agency that regulates the operation of nuclear power plants within the United States. Ameren Missouri is subject to NRC's regulation

because it owns and operates the Callaway Nuclear Power Plant, and thus must pay for NRC services to fund such regulation. There are two components to the NRC Fees:

1) A fixed annual fee, which Ameren Missouri pays in quarterly installments, for the maintenance of its license to operate the Callaway Nuclear Facility.

2) A variable fee, based on the number of hours billed to Ameren Missouri, by the NRC for costs such as baseline inspections, resident inspector expenses, and operator licensing activities. Both of these fees are set each year by statute.

Staff annualized the cost of these fees by using the most recent, effective fixed annual fee, and per hour fee amounts. Staff applied the most current NRC fee as of April 2021, to the number of hours billed to Ameren Missouri during the twelve months ending December 31, 2020, to include in the cost of service as well as the most current fixed annual fee. Staff will continue to review NRC Fees as part of its true-up audit.

Staff Expert/Witness: Christopher D. Caldwell

13. Board of Directors Expense

During the test year ending December 31, 2020, Ameren Missouri was allocated certain expenses related to the activities of the Ameren Corporation Board of Directors. These expenses include ** [redacted] **. Ameren Missouri witness Mitchell Lansford proposed an adjustment to remove $349,000 of these expenses as part of Ameren Missouri's direct filing. The costs proposed for removal relate to the ** [redacted] **.

Staff has proposed an adjustment to remove additional expenses beyond those proposed for removal by Ameren Missouri witness Lansford. The costs which Staff disallowed are related to additional costs within the test year for ** [redacted] **, ** [redacted] **, and the use of ** [redacted] ** that were not included in the adjustment proposed by Ameren Missouri as part of its direct filing. It is Staff's position that these costs are

excessive in nature as Ameren has other options available them for holding board meetings and airline travel. These additional expenditures are not necessary and Missouri ratepayers should not bear the costs.

Additionally, during the test year, Ameren Corporation ** [redacted]. ** Staff has proposed an adjustment to ** [redacted] ** as this expense is non-recurring in nature.

Staff Expert/Witness: Jane C. Dhority

14. Leases

During the test year, Ameren Missouri incurred lease expense for items such as land, equipment and facilities that are utilized to provide service to ratepayers. Staff reviewed leases in order to remove leases that have expired and were not renewed, to include an annualized level of cost associated with new leases, and to annualize the expense for leases with premiums that have increased. Staff has also proposed an adjustment to remove costs associated with the Bank of America lease from test year expenses as this contract expired on June 30, 2021 and will not be continued. Staff witness Lisa M. Ferguson will address all new lease/easement agreements regarding the High Prairie and Atchison wind facilities that recently went into service.

Staff Expert/Witness: Jane C. Dhority

15. Software Rental Expense

Ameren Missouri leases several software programs from its affiliates. Staff annualized affiliate software rental expense by applying the last known amount of rental expenses in June 2021 for a 12-month period. Staff will continue to review this issue through the true up cutoff date of September 30, 2021.

16. Software Maintenance Expense

Staff proposed adjustments to remove software maintenance agreements that have expired and to include contracts that were renewed during the test year, as well as to reflect the current contract pricings. Staff will continue to review this issue through the true up cutoff date of September 30, 2021.

Staff Expert/Witness: Paul K. Amenthor

17. PSC Assessment

Commission operations are funded by assessments levied upon 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 electric books during the test year, or twelve months ending December 31, 2020 and the most recent PSC assessment that went into effect as of July 1, 2021, (fiscal year 2022).

Staff Expert/Witness: Christopher D. Caldwell

18. Call Center Costs

Ameren Missouri has a contractual agreement with First Contact/IQOR to manage part of its incoming customer calls. Staff learned during its review that the initial three-year contract between Ameren Missouri and First Contact/IQOR expired in November 2020 and the parties are negotiating an amendment. Ameren Missouri records an accrual of this expense at the beginning of each month and reverses it once it pays it. Staff annualized call center costs by applying the current hourly rate to the actual hours worked during the twelve months ending June 2021. Staff will review the new contract once it is finalized and propose an adjustment, if necessary, as part of its true up audit.

Staff Expert/Witness: Paul K. Amenthor

19. Miscellaneous Expenses

Miscellaneous expenses are recorded in FERC Uniform System of Accounts (USOA) 900 accounts and are expenses that have not been included within lobbying, dues & donations, memberships, advertising, outside services and board of directors' expenses. Staff reviewed these miscellaneous expenses along with the monthly expense reports of Ameren Missouri and Ameren Services officers. Staff removed from the test year costs for items such as contributions to civic groups, sponsorships of community events, and various charges that are not necessary in the provision of safe and adequate service.

Staff discovered that some of the miscellaneous expense that Staff disallowed were recorded in capital overhead accounts. Staff has removed the charge from plant and has also removed estimated reserve from Account 398. These amounts will be addressed further once Staff has determined what capital accounts these charges were finally recorded in as well as calculate the actual reserve based on that account's depreciation rates.

Staff Expert/Witness: Jane C. Dhority

20. Mark Twain Transmission Costs

In case EA-2017-0345, Ameren Missouri applied for and received a certificate of convenience and necessity ("CCN") to construct transmission lines that would carry 345,000 volts of electricity 96 miles from Palmyra, Missouri through Northeast Missouri to the Iowa border. The project also includes a 161,000 volt line to interconnect the existing Adair substation to the new Zachary substation. This project was approved by the Missouri Public Service Commission on January 10, 2018 after receiving multiple counties' approval, and the project is being constructed by Ameren Missouri's affiliate, Ameren Transmission Company of Illinois ("ATXI"). The Mark Twain Transmission Project was a MISO multi-value project ("MVP") approved in 2011 that was developed to address grid reliability, relieve congestion, promote renewable energy and meet local load serving needs. ATXI broke ground on the project in May 2018 and the project was placed into service on Dec.19, 2019. As part of this rate proceeding, Staff must make an adjustment to account for the Commission's Order in a separate case, EO-2011-0128. In that case, the Commission agreed with OPC concern about potential conflicts of interest between Ameren Missouri and its affiliates regarding capacity markets and construction of transmission resources. Under FERC Order 1000, a utility with a certificated service territory, such as Ameren Missouri, no longer has a right of first-refusal to construct transmission projects within its service territory if the reliability projects are subject to regional cost allocation. That means that both Ameren Missouri's affiliate company, ATXI, and other transmission companies not affiliated with Ameren Missouri, may be allowed to develop such projects within Ameren Missouri's service territory. Due to FERC Order 1000 and Ameren Missouri's participation in MISO, ATXI or another Ameren subsidiary could build transmission projects in Missouri, including MVP projects such as the Mark Twain Transmission Project.

MISO would allocate a part of the cost of those projects to Ameren Missouri, with the costs ultimately to be recovered from Ameren Missouri's ratepayers.

Another complication is the "filed rate doctrine" which ensures that sellers of wholesale power governed by FERC can recover the costs incurred by their payment of just and reasonable FERC-set rates. When FERC sets a rate between a seller of power and a wholesaler-as-buyer, a state may not exercise its undoubted jurisdiction over retail sales to prevent the wholesaler-as-seller from recovering the costs of paying the FERC-approved rate; such so-called "trapping" of costs is prohibited. This means that Ameren Missouri cannot be denied the ability to recover in rates the amounts that it must pay to transmission owners for FERC-established rates for power transmission, even if those FERC-established transmission rates are higher than would have been approved by the Missouri Public Service Commission. That is also true even if the transmission owner with a FERC-established rate is affiliated with Ameren Missouri. In order for Ameren Missouri to follow the "filed rate doctrine", and for Missouri ratepayers to not be disadvantaged in rates for affiliates using ROE values authorized by FERC that are higher than what has been established by the Missouri Public Service Commission, the Commission ordered in EO-2011-0128, pages 29-30 part S:

> For transmission facilities located in Ameren Missouri's certificated service territory that are constructed by an Ameren affiliate and that are subject to regional cost allocation by the MISO, for ratemaking purposes in Missouri, the costs allocated to Ameren Missouri by the MISO shall be adjusted by an amount equal to the difference between: (i) the annual revenue requirement for such facilities that would have resulted if Ameren Missouri's Commission-authorized ROE and capital structure had been applied and there had been no CWIP (if applicable), or other FERC Transmission Rate Incentives, including Abandoned Plant Recovery, recovery on a current basis instead of capitalizing pre-commercial operations expenses and accelerated depreciation, applied to such facilities and (ii) the annual FERC-authorized revenue requirement for such facilities.

Because Ameren Missouri has been allocated costs for construction of the Mark Twain Transmission Project that ATXI constructed, Staff has, for purposes of this direct testimony, accepted Ameren Missouri's adjustment to remove the revenue requirement difference between

FERC's ROE and Ameren Missouri's ROE that was established as part of their last general rate case, 9.53 percent.

The Mark Twain Transmission Project is now complete which means that Ameren Missouri's billings of its allocated portion of costs will be ending. Staff will continue to review the amount to be removed and will verify that all adjustments for the billings from MISO have been contemplated and that the calculations reflect all removals and to determine if the ongoing FERC ROE proceedings will have an effect on this project's billings during the true-up phase of this rate case.

ATXI – Limestone Ridge Project

In case, EA-2021-0087, Ameren Transmission Company of Illinois (ATXI) is proposing to construct a 15-mile, 138 kV greenfield transmission line (the "Transmission Line") and a 138 kV 15 to 161 kV switching station (the "Whipple Substation" referred to collectively with the Transmission Line) in cooperation with Citizens Electric Cooperative ("Citizens") and Wabash Valley Power Alliance ("Wabash Valley") in Perry and Cape Girardeau Counties in Southeast Missouri ("the ATXI-Wabash Development"). Ameren Services was approached by Wabash Valley in 2018 about the prospect of pursuing a transmission project in Southeast Missouri intended to provide a new source of transmission-voltage supply to the area. In particular, one main driver this project is to provide an additional networked transmission source to support a critical distribution substation (Trail of Tears) in Citizens' distribution system, as well as a large manufacturing facility in the area. That facility sits in Citizens' retail service territory. Wabash Valley communicated that they intended to pursue a project with or without ATXI or Ameren Missouri's involvement, but offered to partner in the endeavor in an effort to leverage experience in the transmission development business.

Staff had concerns that this project was similar in nature to the Mark Twain transmission project and thus was planning to propose similar adjustments to, construction work in process (CWIP), capital structure, and return on equity. Staff issued discovery to determine what impacts would occur for Ameren Missouri's transmission schedules and if Ameren Missouri believed the projects were similar and needed to be accounted for as such. Ameren Missouri responded to Staff DR No. 0757, stating

> The transmission line and switching station to be constructed by ATXI as part of the ATXI-Wabash Development would be

> included in the development of the AMMO pricing zone Schedule 9 rate. Therefore, Ameren Missouri would pay its load ratio share of the resulting revenue requirement. In response to a data request in EA-2021-0087 (Staff-ATXI DR No. 0020 (subpart 4 and the corresponding [Confidential] attachment)), ATXI estimated its portion of the project would result in a first year cost to Ameren Missouri of approximately $3.90 million which would be included in Ameren Missouri's cost of service. There would be no meaningful change in Ameren Missouri's transmission revenues. This project should be treated differently than Mark Twain. The Limestone Ridge Project is not subject to the ratemaking adjustments contained in the Report and Order in Docket No. EO-011-0128 (see Ordering paragraph 2(S)) in that the facilities to be constructed by ATXI are not in Ameren Missouri's certificated service territory, nor are they subject to regional cost allocation. Also, please note that ATXI did not seek a FERC incentive for CWIP in rate base for the Limestone Ridge Project like it did for Mark Twain, so Limestone Ridge will be treated like typical projects which accrue AFUDC during construction and are included in rates upon being placed in-service.

As this project is in its beginning stages, Staff will need to perform discovery on this issue in Ameren Missouri's next general rate proceeding to determine the full effect of this project on Ameren Missouri's customer rates. Staff will need to review the details of the project, including whether the order in case EO-2011-0028 does or does not apply and determine any impact on capital structure and return on equity, if any.

Staff Expert/Witness: Lisa M. Ferguson

21. <u>Netting of Amortizations of Regulatory Assets and Liabilities</u>

The *Unanimous Stipulation and Agreement* that was approved by the Commission in Ameren Missouri Case No. ER-2016-0179 provided guidelines for the accounting treatment for over and under-recovery of various regulatory assets and liabilities as part of this rate case, Case No. ER-2021-0240. Staff recommends that the total balance of these seven "netted" amortizations be recovered by Ameren Missouri through an amortization over three years, beginning with the effective date of rates in this rate case.

Staff has examined all of Ameren Missouri's existing amortizations related to various regulatory assets and liabilities as part of its audit in this rate proceeding. Consistent with the

terms of the Commission approved *Unanimous Stipulation and Agreement* referenced above, Staff recommends a "netting" of the following seven amortization balances that will exist at the February 28, 2022 operation of law date:

FIN 48 – Case No. ER-2016-0179 – No Rate Base Inclusion
Storm Restoration Tracker – ER-2014-0258 – No Rate Base Inclusion
Storm Restoration Tracker – ER-2016-0179 – No Rate Base Inclusion
Over/Under Collection Amortization ER-2019-0335 – No Rate Base Inclusion
Over/Under Collection Amortization ER-2019-0335 – Rate Base Inclusion

By the February 28, 2022 effective date of rates, Ameren Missouri will have under-recovered approximately $6.5 million for these seven amortizations collectively. The intended goal of the recommended ratemaking treatment is to simplify the accounting required for all of these various amortizations, as well as to ultimately prevent over-recovery or under-recovery of the costs associated with all of these amortizations that are addressed above.
Staff Expert/Witness: Lisa M. Ferguson

22. Renewable Energy Standard Costs

Renewable Energy Standard ("RES") related expense consists of items such as customer solar renewable energy credits ("RECs"), non-customer solar RECs, wind RECs and Maryland Heights Energy Center fuel costs. For purposes of its direct RES related expense consists of items such as customer solar RECs, non-customer solar RECs, wind RECs and Maryland Heights Energy Center fuel costs. For purposes of its direct filing, Staff has reflected approximately $6.98 million for RES related expense in the Staff's cost of service calculation which includes an annualized cost of methane fuel used to power its Maryland Heights Energy Center. Staff will analyze actual RES spending through the September 30, 2021, true-up cut-off and may recommend further adjustment to this level as a result of the true-up audit.
Staff Expert/Witness: Lisa M. Ferguson

23. Maryland Heights

The Maryland Heights Renewable Energy Center began operations in 2012 and is an 8MW facility where methane gas from the nearby landfill is used to power combustion turbine generators. Methane gas is considered a renewable resource for meeting Ameren Missouri's

required Renewable Energy Standard (RES) requirement. As such, the cost of the methane gas that Ameren Missouri procures for operations is included in rates through its Renewable Energy Standard Accounting Authority Order (RES AAO) deferral. This cost will remain in the RES AAO per the stipulation & agreement between the parties as ordered by the Commission in case EA-2018-0202. Staff has annualized the cost for methane gas for inclusion in the cost of service by pricing out the actual volumes experienced for the twelve months ending June 30, 2021 by the most recent cost per MMBtu of methane gas. Staff will review this issue again as part of its true-up audit.

Staff Expert/Witness: Lisa M. Ferguson

24. Renewable Energy Standard AAO Amortization

As part of Case No. ER-2019-0335, the Commission established a base level of approximately $10.9 million for Ameren Missouri's Renewable Energy Standard Compliance Cost Tracker. As part of its audit in this rate proceeding Staff examined all RES costs incurred by Ameren Missouri during the period covering January 1, 2020, through June 30, 2021[121] and that are eligible for deferral and recovery in the existing RES AAO regulatory deferral rate mechanism. Based upon this examination, Staff determined that a regulatory liability exists. Staff has included a three-year amortization of this regulatory liability balance in the cost of service calculation, with no rate base treatment for the unamortized balance. This ratemaking treatment is consistent with the Commission's decision that established the ongoing AAO treatment for deferred RES costs in Ameren Missouri Case No. ER-2012-0166. Staff has continued to follow the Commission's guidance from that Order concerning all RES AAO regulatory asset and liability balances.[122] Staff will examine all actual RES costs eligible for recovery through the RES AAO through September 31, 2021 and may recommend further adjustments as part of its true-up audit in this rate proceeding.

Staff Expert/Witness: Lisa M. Ferguson

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[121] SB 564 and the terms of the Stipulation and Agreement approved by the Commission in Ameren Missouri Case No. EA-2018-0202 specify how Ameren Missouri is required to seek recovery of certain RES costs going forward under the RESRAM rate mechanism.

[122] Staff has already netted all three prior RES AAO amortizations that were established in Case Nos.: ER-2012-0166, ER-2014-0258 and ER-2016-0179. Staff has proposed inclusion of the RES AAO amortization from Case No. ER-2019-0335 also be netted as part of this current rate proceeding. The most current amortization is included in the netting of regulatory assets and liabilities section of this Report.

25. Renewable Energy Standard Rate Adjustment Mechanism (RESRAM)

The renewable energy standard requires a certain percentage of Ameren Missouri's retail sales to come from renewable energy sources (RES), in order to meet that requirement Ameren Missouri filed a case seeking a certificate of convenience and necessity to own and operate a wind facility. In Case No. EA-2018-0202, Ameren Missouri also requested a RESRAM, which is a special ratemaking mechanism that allows Ameren Missouri to recover RES-related capital investment and expenses through a rider in between rate cases. In the stipulation and agreement that was approved by the Commission in that case Ameren Missouri's RESRAM tariff and related parameters regarding exactly how the mechanism will work. Additionally, Ameren Missouri also requested approval of certain waivers to the RESRAM rule that addressed the following items: (a) exactly what portion of the accumulated RESRAM costs will be moved to base rates during a rate case, (b) how the RESRAM charge will be billed to customers as a flat rate per kWh of energy consumed, (c) allowing a RESRAM rate change of 2% or more to take effect 120 days after filing (similar to FAC rules), and (d) allowing RES energy and capacity sales revenue to be included in the Fuel Adjustment Clause (FAC) so as to prevent a potential double recovery of RES amounts through both the FAC and RESRAM. All RES costs already being recovered in base rates, all current and future costs associated with existing renewable generation facilities, renewable energy credits (RECs) from existing renewable purchase power agreements and REC's purchased prior to the January 1, 2019 establishment of the RESRAM must be recovered by Ameren Missouri through the existing RES AAO tracker and existing solar rebate tracker that was established in prior rate proceedings.

In Ameren Missouri's most recent electric rate case, Case No. ER-2019-0335 the parties agreed in the Commission approved Non-Unanimous Stipulation and Agreement not to rebase the RESRAM and did not include any RESRAM costs in the revenue requirement.

In addition to the RESRAM mechanism, Ameren Missouri elected to use Plant-in-Service Accounting ("PISA") on September 31, 2018 as part of Case No. EO-2019-0044. Investment that is eligible for RESRAM recovery must first pass through the PISA mechanism, which allows for the deferral of 85% of the depreciation and return on assets. The Commission found in Case No. EA-2018-0202 that Ameren Missouri could recover "depreciation expense and return associated with the High Prairie project recorded to plant-in-service on the utility's books

as it is permitted to do by the RES statute, exclusive of the eighty-five percent of that expense and return deferred for future recovery pursuant to the PISA statute. As part of its review, Staff reviewed the amounts that were included in both PISA deferral and RESRAM rider to ensure that no duplication of the capital investment was contained with the two recovery mechanisms. Additionally Staff met with Ameren Missouri on June 16, 2021 to discuss the RESRAM rider and on July 26" 2021 to discuss the interaction between the PISA deferral and the RESRAM rider.

a. Return on Plant

As part of its direct filed cast, Staff is including the estimated plant-in-service and reserve balances as of September 30, 2021 in the revenue requirement. However during its discovery ** [redacted] ** The proposed reduction to the plant in service reduces the amount of the return on plant included in the RESRAM base.

Staff has reviewed the historical levels of RESRAM eligible expenses through June 30, 2021 to determine a base level of RESRAM expenses to include in the RESRAM Base. These include RECS purchased after January 1, 2019, solar rebates authorized in Section 393.1670, RSMo (Senate Bill 564), operations and maintenance ("O&M") expenses for the Atchison and High Prairie Renewable Energy Centers, insurance, property taxes, and interconnection expenses for the Atchison and High Prairie Renewable Energy Centers

b. RECS

Staff is including the test year amount of RECs incurred in the test year as the base level of expense. Staff will continue to review the level of RECs to include RESRAM base through the September 30, 2021 true-up cut-off date.

c. Solar Rebates

Staff is including the test year level of solar rebates paid as the base level of expense in the RESRAM base and will continue to review the amount of solar rebates paid under Section 393.1670, RSMo (Senate Bill 564) through the true-up cut-off date in this case.

d. Wind Facility Operations & Maintenance Expense

The High Prairie Wind Facility was considered in service by Ameren Missouri in December 2020. The facility consists of 175 wind turbines for an overall capacity of 400 MW. The Atchison Wind Facility was considered in service by Ameren Missouri, with the exception of 1 wind turbine in June 2021. The final wind turbine at Atchison is anticipated to be in service in the fourth quarter of 2021.

The wind facilities incur operations and maintenance costs similar to any of Ameren Missouri's other generating facilities. The wind facilities incur transmission interconnection costs, employee labor costs, easement costs, outside vendor maintenance and environmental monitoring costs. Property taxes and insurance costs related to the wind facilities will be addressed in their respective sections in this report. In its direct case filing, Ameren Missouri included the current 5 year forecast of each wind facility for turbine maintenance, land lease payments, and balance of plant costs. These estimates excluded transmission maintenance fees. The company included an estimated level of O&M costs as no vendor contracts had been executed at their time of filing.

** [redacted]

[redacted] **

Ameren Missouri is currently in the process of developing contracts for general site maintenance but at the time of Staff's direct testimony filing, these contracts have not been finalized. If agreements are executed with known and measureable terms prior to September 30, 2021, Staff will include a level of costs associated with these contracts in the cost of service.

As for the service agreements with ** [redacted] **, the contracts state terms regarding the ** [redacted]

[redacted] **

Each facility also incurs costs related to ** [redacted]

[redacted] **

The labor portion for the two employee site supervisors at each wind facility will be included in Staff's annualized payroll addressed by Staff witness Paul K. Amenthor. In regards to the non-labor O&M, Staff has included an annualized level of easement lease payments based on the most current easement contract terms. For vendor contracts with variable contract rates, Staff has included the most current contract rates applied to the total MW of wind turbines that have met in-service criteria. For vendor contracts with non-variable rates, Staff has included an annual level of the fixed costs also based on the most current executed contract terms.

These annualized operations and maintenance costs as well as an annualized level of transmission interconnection costs will be included by Staff witness Jason Kunst in the cost of service as part of this rate case as well as the RESRAM base in which to track future accumulated renewable costs.

Staff Expert/Witness: Lisa M. Ferguson

e. Property Taxes

Staff has included the actual property taxes paid in December of 2020 as the base level of property tax expenses in the RESRAM base. The actual property taxes has been adjusted to reflect Staff's recommendation to remove plant that was determined to not be in service.

f. Insurance Expense

Staff has included an annualized amount of insurance expense for the wind facilities in the RESRAM rebase.

g. Interconnection Costs

Staff has included an annualized level of annual facility service agreement payments based upon the payments in place through June 30, 2021. Staff will continue to review these costs through the true-up cut-off in this case. The annualized amount has been adjusted to reflect Staff's adjustment to remove plant that was determined to not be in service.

h. Production Tax Credits

Staff included an estimated amount of grossed up production tax credits in the RESRAM based upon the full production of Staff's in-service MWs for the facilities. Staff will continue to review this calculation through the true-up cut-off in this case.

i. Depreciation Expense

Staff has included an annualized level of depreciation expense based on Staff's plant-in-service amount and Staff's proposed depreciation expense for the facilities. Staff will continue to review the depreciation expense through the true-up cut-off.

j. Capitalized Incentive Compensation

Ameren Missouri capitalizes a portion of the incentive compensation that is paid to employees, this includes both long- and short-term incentive compensation. Historically, both Staff and Ameren Missouri have proposed adjustments during rates cases to remove capitalized incentive compensation that is tied to earnings or otherwise deemed to be of no benefit to the ratepayers of Ameren Missouri. During a rate proceeding the portion of the incentive compensation that is tied to earnings would be removed from rate base and Ameren Missouri would not earn a return or recovery depreciation expense on that portion of the investment

through rates. Therefore, Staff is recommending a disallowance to remove a portion of the capitalized incentive compensation from the plant-in-service that is being included in the RESRAM Base amount. Staff will continue to review the capitalized incentive compensation that is included in RESRAM eligible projects through the September 30, 2021 true-up cut-off date in this case.

k. RESRAM Rebase

Staff has calculated a new base level of RESRAM expense based upon the value of the production tax credits, the return on eligible plant, depreciation expense, and the normalized level of RESRAM eligible O&M expenses.

l. RESRAM Accruals

Additionally as the RESRAM is being rebased in this case, it is necessary to remove the amortizations that were recorded in the test year. Therefore, Staff has made an adjustment to remove the amounts recorded during the test year.

Staff Expert/Witness: Jason Kunst, CPA

m. RESRAM Prudence Review

The Commission first authorized a Renewable Energy Standard Rate Adjustment Mechanism (RESRAM) for Ameren Missouri in Case No. EA-2018-0202. RESRAM is a mechanism which allows periodic billing rate adjustments to recover prudently incurred Renewable Energy Standards (RES) compliance costs or pass-through savings benefits from RES to customers as billing credit. The RESRAM charge or credit is a line item on all Ameren Missouri customers' bills. Commission rule 20 CSR 4240-20.100(6)11 and 20.100(6)26 requires the interval for prudence reviews to be established when the RESRAM is established. Ameren Missouri's RESRAM tariff specifies the interval for prudence reviews to be no less than every 24 months. In this first prudence review of Ameren Missouri's RESRAM for the period January 1, 2019 through December 31, 2020, Staff reviewed items affecting Ameren Missouri's Renewable Energy Standard Compliance costs.

For Renewable Energy Standards compliance, Ameren Missouri purchases Renewable Energy Credits (REC) from various sources via brokers and direct negotiated transactions. A REC represents that one megawatt hour of electricity has been generated from renewable

energy resources. Renewable energy resources includes energy produced from wind, solar, biomass, and other qualified sources. RECs expire three years from the date the electricity was generated.[123] Solar rebates are offered to customers installing or expanding approved solar systems. Depreciation, operation and maintenance, interconnection, and property tax expenses are also recovered through the RESRAM.

Staff reviewed Ameren Missouri's 2019 and 2020 RES Compliance Plans (EO-2020-0328 and EO-2021-0325), annual tariff adjustment filings (ER-2021-0090) for the RESRAM rate applied to customers' bills, general ledger data, and various data request responses from Ameren Missouri.

Staff found no evidence that Ameren Missouri's management of RES compliance costs during the review period was imprudent. Staff did find a Missouri solar system installer whose Secretary of State business registration was dissolved on October 28, 2019 for failure to pay taxes. While there is no rule in statute or tariff about a matter such as this, Staff recommends that Ameren Missouri consider checking contractor standing with Missouri Secretary of State periodically, to ensure that participating solar installers are in good standing with the State of Missouri. Staff has no other recommendations or disallowances at this time.

Staff Expert/Witness: Nancy L. Harris

26. <u>Solar Rebates from Case No. ET-2014-0085</u>

The Commission approved a *Non-Unanimous Stipulation and Agreement* in Ameren Missouri Case No. ET-2014-0085, allowing Ameren Missouri to record solar rebate spending up to $91.9 million, plus a 10% cost adder for "carrying costs," in a regulatory asset to be considered for recovery in subsequent general rate cases, utilizing a three-year amortization. The Stipulation also stated that if Ameren Missouri had not paid $91.9 million by the completion of its next rate case, then one or more regulatory assets shall be subsequently reflected on Ameren Missouri's books to record additional solar rebate payments made, equaling the difference between the amount of solar rebate payments deferred in the initial regulatory asset and $91.9 million, plus a 10% adder. Ameren Missouri cannot defer in the regulatory asset balance

[123] RECs may be used for compliance during a calendar year in which it expired so long as it was valid at any time in that year.

any solar rebate amounts paid that are in excess of the $91.9 million cap. Finally, once the $91.9 million cap is met, Ameren Missouri is required to track and to produce a true-up of all differences and between the normalized billing units used to calculate rates in a general rate proceeding where some or all of the balance of the regulatory asset will be included in rates through a three year amortization and the actual billing units associated with cost recovery, among other factors,[124] once Ameren Missouri had paid solar rebates totaling $91.9 million. This tracking and true-up, shall be addressed in the first general rate case occurring after the general rate case when the last dollar of the $91.9 million balance of solar rebates has been paid out to customers.

27. Solar Rebate Regulatory Asset Balances

The over-collection balance in Case No. ER-2014-0258 was included in the netting of over and under collected regulatory asset and liability balances in case ER-2019-0335.

The over-collection balance in Case No. ER-2016-0179 was included in the netting of over and under collected regulatory asset and liability balances in Case No. ER-2019-0335.

In Ameren Missouri's last electric rate case, Case No. ER-2019-0335, Staff determined that Ameren Missouri had deferred and accumulated approximately $367,933 for solar rebate payments in a regulatory asset account for the period covering January 1, 2017, (the first day following the true-up cut-off established by the Commission in Case No.: ER-2016-0179) through September 30, 2019. Coupled with the 10% cost adder of approximately of approximately $36,793, Ameren Missouri started to recover approximately $410,996 over a three year amortization period, beginning with the April 1, 2020, effective date of rates in Case No. ER-2019-0335. Staff verified in the last rate case that Ameren Missouri had prudently paid $91.9 million of solar rebates and did not attempt to seek recovery in the deferred regulatory asset for any amount that exceeds the $91.9 million solar rebate cap agreed to in Case No. ET-2014-0085.

[124] Tracking and true-up is specifically addressed in subparagraph e. found on pages 6 through 7 in the Nonunanimous Stipulation and Agreement approved by the Commission in Ameren Missouri Case No. ET-2014-0085.

Over or Under-Collection of Solar Rebates

Since Ameren Missouri has now paid a total of $91.9 million of solar rebates to its customers according to the terms and conditions of the stipulation in Case No. ET-2014-0085, Ameren Missouri was required to track and provide a true-up as part of this general rate case as outlined in the stipulation in subparagraph e. as follows:

Because of the likely difference between the normalized billing units used to calculate rates in a general rate proceeding where some or all of the balance of the regulatory asset provided for in subparagraph d will be included in rates through the three-year amortization and actual billing units associated with cost recovery, and also because of the likely difference between the three year amortization period and the actual time interval between when rates are set in rate cases, a true-up will be required to reflect whether the sums billed to customers through the amortization are greater or less than the sums that it was assumed would be billed to customers based on the billing units and amortization period used to calculate rates in the general rate proceeding. Because of this, Ameren Missouri shall track such differences. In the first general rate case occurring after the general rate case when the last dollar of the balance of the regulatory asset provided for in subparagraph (d) was included in rates, the difference shall be included as either a positive or negative amortization in rates over a three-year period. It is the intent of the Signatories that Ameren Missouri shall ultimately bill customers for an amount as close as reasonably practicable (separately for the residential and non-residential customer classes) to the total solar rebates paid plus the additional amount provided for in subparagraph d above.

As of September 30, 2019 Ameren Missouri had paid out $91.9 million of solar rebates to customers prior to the true-up cutoff in Ameren Missouri's last rate proceeding, December 31, 2019. As such this current rate case is the "first general rate case occurring after the general rate case when the last of the solar rebate balance had been paid out to customers. Staff reviewed the actual billing units associated with the cost recovery of the solar rebates and Staff included the under recovered amount amortized over three years in the cost of service in this case.

Staff Expert/Witness: Lisa M. Ferguson

28. Callaway License Extension and Regulatory Asset Amortization

On March 6, 2015, the Nuclear Regulatory Commission ("NRC") issued a license extension that will allow Ameren Missouri to continue to operate its Callaway Nuclear Power Plant through 2044. Ameren Missouri recorded the costs associated with obtaining the Callaway license extension from the NRC in FERC plant account 302, Franchises and Consents, soon after the NRC issued the license extension. None of these costs were included in the cost of service calculation in Ameren Missouri rate case ER-2014-0258. Instead, Ameren Missouri was granted an accounting authority order as part of that case to defer carrying costs at the company's short term interest rate as well as amortization accruals related to the Callaway relicensing balance at the effective date of rates of that 2014 case. That AAO was effective until base rates changed in case no. ER-2016-0179. This approved stipulation allowed Ameren Missouri to defer and amortize certain items pertaining to its completed efforts to extend Callaway's operating license through 2044. In Case No. ER-2016-0179, Staff reflected an appropriate amortization of these costs that were recorded through the December 31, 2016 true-up cutoff that was established by the Commission in that general rate case. This amortization was included in the cost of service calculation and the recovery period was synchronized with the remaining life of the Callaway license, which is effective through October 2044.

As part of this rate case, Staff included an amortization of the regulatory asset which consists of the original amount as well as the short term interest rate carrying costs that were established in Ameren Missouri's electric rate case, Case No. ER-2016-0179, in the cost of service calculation over a recovery period that is synchronized with the remaining life of the Callaway license, which is effective through October 2044.

Staff Expert/Witness: Lisa M. Ferguson

29. Sioux Construction Accounting

Ameren Missouri began construction of the Sioux Wet Flue Gas Desulfurization Project ("scrubber") during April 2005 and the project was declared in service in November 2010. As part of Case No. ER-2010-0036, Ameren Missouri was granted construction accounting as part of the Commission ordered First Unanimous Stipulation and Agreement. Ameren Missouri was allowed to defer the depreciation expense (but no other Sioux scrubber related expense) related

to the Sioux Scrubbers until they were recorded into plant-in-service. As a result, two separate construction accounting deferrals were amortized over 22 years and 20 years, respectively, in prior rate proceedings. In this current case, Staff has reviewed the test year amortization expense levels and verified that Ameren Missouri is correctly amortizing these two amounts in accordance with the Stipulation.

Staff Expert/Witness: Christopher D. Caldwell

30. Permanent Cleaning Expense

Ameren Missouri initiated ongoing permanent cleaning procedures due to the COVID-19 pandemic that are beyond cleaning costs currently in base rates. Ameren Missouri seeks recovery of this additional cleaning cost. Staff annualized this cost by including the actual expense incurred from July 2020 through June 2021. Staff will review Ameren Missouri's new cleaning contract once it is approved and propose an adjustment, if necessary, as part of its true up audit.

Staff Expert/Witness: Paul K. Amenthor

31. Vegetation Management & Infrastructure Inspections

In Ameren Missouri's previous rate case, Case No. ER-2019-0335, Staff discovered that Ameren Missouri had initiated an ** [redacted] ** Staff reviewed the historical costs for the vegetation management program which show that the costs have decreased since Ameren Missouri implemented the cost savings measures. Staff is recommending to include the 12 months ending June 30, 2021 as the annualized level of costs for vegetation management expenses.

As part of its cost savings measures, Ameren Missouri indicated to Staff in response to Staff DR No. 0345 and in the cost savings report presented to Staff in July, ** [redacted] ** After reviewing the cost savings measures implemented by Ameren Missouri and the historical

costs, Staff is recommending that 12 months ending June 30, 2021 be included as the annualized level of costs for infrastructure inspections.

Staff will continue to review the actual costs and cost savings implementations for each of the programs through the end of the true-up period of September 30, 2021, and make further adjustments if necessary based upon updated information.

a. Amortization Expense

Ameren Missouri had an outstanding amortization relating to the previous vegetation management and infrastructure inspection tracker which was discontinued in ER-2014-0258 for a regulatory liability for the tracker balance that occurred between January 1, 2015 and May 30, 2015. The balance was fully amortized as the effective dates in the last Ameren Missouri rate case ER-2019-0335 and it was netted with the other expiring or expired amortizations. Staff has made an adjustment to remove the amortizations that occurred in the test year.

Staff Expert/Witness: Jason Kunst, CPA

32. <u>Storm Restoration Costs</u>

a. Annualization

In order to determine a normalized level of non-labor storm restoration expenses, Staff has reviewed historical non-labor major related expenses for Ameren Missouri. Staff is recommending inclusion of a normalized level of major storm restoration expense based upon a five year average ending June 30, 2021 which is consistent with past practice as variability exists in the level of storm costs experienced on a year to year basis. As part of its true-up audit, Staff will continue to review the actual non-labor major storm costs through September 30, 2021.

b. Amortization

In Ameren Missouri Case No. ER-2012-0166, the Commission approved Ameren Missouri's request to implement a two-way tracking mechanism for its non-labor major storm restoration costs. As part of the approval, a base level of expected major storm restoration costs was established and included in Ameren Missouri's revenue requirement. The actual non-labor storm costs incurred by Ameren Missouri were tracked against the base level to create a regulatory asset if the costs exceeded the base level or a regulatory liability if the costs were

below the base level to create a regulatory liability. The resulting regulatory asset or liability would then be amortized as part of the next general rate case. In Ameren Missouri Case No. ER-2014-0258, the Commission determined the storm tracker was no longer appropriate.

The two outstanding regulatory assets that were being amortized from the tracker that was previously authorized are proposed to be included in the unamortized portion in its netting of under- and over-amortized assets and has removed the test year costs amounts.

Staff Expert/Witness: Jason Kunst, CPA

33. Amortization of Excess ADIT

a. Federal Corporate Tax Rate Reduction

The Tax Cuts and Jobs Act was signed into law in December 2017, and as part of that a 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 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 rate making 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. As part of the Stipulation & Agreement in case ER-2018-0362, the Parties agreed to track the protected excess ADIT and return that using the Average Rate Assumption Method (ARAM) as described above and return the unprotected ADIT over a 10 year period.

b. State Corporate Tax Rate Reduction

In the last Ameren Missouri electric rate case, Staff reflected the ongoing state corporate tax reduction that was set to occur on January 1, 2020 and as part of that a reduction in the corporate tax rate accumulated tax timing differences that were previously valued at 6.25% had to be revalued at 4.00%. All of Ameren Missouri's state related accumulated deferred taxes are considered unprotected and began amortization as of the effective date of rates in the last electric rate case, April 1, 2020.

Staff recommends continuation of the amortization of the return of excess ADIT for both the federal and state corporate tax reductions in rates for Ameren Missouri gas customers as part of restating rates in this rate proceeding.

Staff Expert/Witness: Lisa M. Ferguson

34. Nuclear Safety Study Costs Amortization

In Case No. ER-2014-0258, a ten-year amortization of costs associated with a mandatory study to address nuclear power safety in the aftermath of the Fukushima incident was first included in Ameren Missouri's rates. A full year of amortization expense was included in the cost of service calculation in Ameren Missouri's previous rate cases, ER-2016-0179 and ER-2019-0335. The amortization began on May 30, 2015, the effective date of rates established in Ameren Missouri Case No. ER-2014-0258 and is scheduled to expire on May 29, 2025. In this case, during the test year ending December 31, 2020, Ameren Missouri recorded a full year of amortization expense associated with this nuclear power safety study as there was no resetting of the amortization period in the last rate case, therefore Staff proposes no adjustment to this amortization as part of this general rate proceeding.

Staff Expert/Witness: Lisa M. Ferguson

35. Plant in Service Accounting Amortization

On June 1, 2018, Senate Bill 564 was signed into law, which allowed investor owned utilities in the State of Missouri the option of deferring 85% of all depreciation expense and return associated with qualifying electric plant that was recorded to plant-in-service as a regulatory asset on or after the date the utility elects the PISA option. Qualifying plant for the purposes of the PISA deferral is all rate base additions that are not new nuclear, coal, or gas-fired generation or investment for new services. During a general rate case after the PISA election, the regulatory asset must be amortized over twenty years and the unamortized balance is included in rate base and allowed a return. Any utility that elects the PISA deferral must file every year a five-year capital investment plan with the Commission on February 28th with specific capital investment detailed within the plan. Additionally in the years after filing the first capital investment plan the utility must submit an annual report detailing the actual capital investment from the prior year. At least 25% of the capital investment included in the plan must

be for grid modernization projects and additionally during the first five years, and smart meter investment is limited to 6%. PISA remains in effect until December 31, 2023; however electric utilities may request the Commission approve a five year continuation prior to the cutoff date. Any existing balances that remain after the expiration of the PISA option would continue to be amortized and recovered through base rates by the electric utility. Additionally Ameren Missouri received Commission approval for a RESRAM in Case No. EA-2018-0202. RESRAM eligible investment must first pass through the PISA Mechanism and then as the Commission determined in their Report and Order in Case No. EA-2018-0202, "that Ameren Missouri may recover depreciation expense and return associated with the High Prairie project recorded to plant-In-service on the utility's books as it is permitted to do by the RES statute, exclusive of the eighty-five percent of that expense and return deferred for future recovery pursuant to the PISA statute."[125]

Ameren Missouri filed its election to use PISA on September 31, 2018 as part of Case No. EO-2019-0044. Ameren Missouri submitted its five-year capital investment plan on February 14, 2019, and has submitted subsequent plans and reports on February 26, 2020 and February 19, 2021 in compliance with the PISA requirements. Ameren Missouri has established a regulatory asset account on its books and has recorded all return and depreciation on eligible plant additions.

In the previous Ameren Missouri rate case, Case No. ER-2019-0335, Staff reviewed the PISA regulatory asset balance through true-up cut-off date in that case of December 31, 2019. The regulatory asset established for the first accumulation period (September 1, 2018 through December 31, 2019) was included in rate base and a twenty-year amortization was calculated. The second accumulation period which started on January 1, 2020 includes the deferred amounts from the prior accumulation period that were not included in the regulatory asset as of December 31, 2019 but accumulated until the effective date of rates in the prior case.

Staff has reviewed the costs that were included in the regulatory asset for the period of January 1, 2020 through June 30, 2021 and met with Ameren Missouri to discuss how Ameren Missouri determined PISA eligible amounts and as well as the calculations for the amounts included in the regulatory asset. Staff has determined that the amounts included in the PISA

[125] Report and Order, Case No. EA-2018-0202, Page 11.

deferral are in compliance with the statutes, and has included them in the deferred asset. Staff is recommending two adjustments to the PISA regulatory asset that are further described below. Staff has included in the revenue requirement a twenty-year amortization of the PISA regulatory asset as required and included the adjusted unamortized balance as of June 30, 2021 in rate base as required by statute, along with estimated amounts through September 30, 2021. Staff will continue to review the costs included in the PISA deferral through the September 30, 2021 true-up cut-off in this case and will adjust the amortization and rate base inclusion based upon the actual costs. Any qualifying electric plant amounts that are incurred subsequent to the rate base cutoff date of September 30, 2021 will be deferred into a new regulatory asset account until the true-up cut-off in the next Ameren Missouri general rate proceeding.

a. Capitalized Incentive Compensation in PISA

Ameren Missouri capitalizes a portion of the incentive compensation that is paid to its employees, this includes both long- and short-term incentive compensation. Historically, both Staff and Ameren Missouri have proposed adjustments during rate cases to remove incentive compensation that is tied to earnings or otherwise deemed to be of no benefit to the ratepayers of Ameren Missouri. During a rate proceeding the portion of the incentive compensation that is tied to earnings would be removed from rate base and Ameren Missouri would not earn a return or recovery depreciation on the investment through rates. However, as the adjustment to remove earnings based incentive compensation is a regulatory adjustment during a rate case proceeding, the investment that flows through the PISA mechanism includes capitalized incentive compensation that should also be adjusted out of rate base once the plant is included in base rates. Staff believes that is inappropriate for Ameren Missouri to earn a deferred return and depreciation expense on costs that normally would be removed as part of a rate case proceeding. Staff has proposed an adjustment to remove a portion of the capitalized incentive compensation that is aligned with Staff's proposed adjustment to remove capitalized incentive compensation in this case from projects that were included in the PISA deferral mechanism since January 1, 2020 through June 30, 2021. Staff's adjustment reduces the deferred depreciation expense and deferred return on investment and reduces the overall amount of the deferred regulatory asset. Staff will continue to review the capitalized incentive compensation that is included in the PISA projects through the September 30, 2021 true-up cut-off date and will propose an adjustment to

remove the additional earnings based incentive compensation that is capitalized on PISA eligible projects during that period. Staff recommends an adjustment of $603,100 to remove capitalized incentive compensation from the PISA deferred asset.

b. Community Solar Removal

The community solar programs, O'Fallon and Lambert, are designed so that if fully subscribed the subscribers will cover 100% of the costs of the facilities over the life of the systems through the levelized cost of energy. The levelized cost of energy constitutes all costs of the facility as structured by the program, thus the solar generation charge, when calculated using the levelized cost of energy assumes the full recovery of the depreciation expense and return on the investment. It is Staff's position that since that Ameren will recover 100% of the costs of the facilities from the subscribers, that allowing Ameren Missouri to recover the 85% of the deferred deprecation and return that has been recorded to the PISA regulatory asset would amount to double recovery of those costs, once through the solar generation charge and again through the PISA deferral. Staff is proposing an adjustment to remove the costs for the community solar facilities from the PISA deferred regulatory assets. The removal of the community solar projects from the deferred assets results in a decrease to the deferred asset from the first PISA deferral period of $46,522 and a reduction to the regulatory asset for the second PISA deferral period of $65,936.

Staff Expert/Witness: Jason Kunst, CPA

36. <u>TCJA Stub Period Amortization</u>

The Trump administration introduced a Congressional revenue act that amended the Internal Revenue Code of 1986, called the Tax Cuts and Jobs Act (TJCA). This Act became law on December 20, 2017, and modified both personal and business tax law effective for tax years subsequent to December 31, 2017. A major change to the tax code that was brought about due to this Act was a reduction in the corporate tax rate on businesses from 35% to 21%. This tax rate reduction affected the current income tax calculation as well as the accumulated deferred income tax (ADIT) calculation included in the base rates of a utility. The ADIT tax timing changes were initially calculated assuming a 35% rate but going forward they were overstated as the new tax

rate was only 21%. This difference in the tax rate as applied to individual tax timing differences is considered "excess" ADIT.

Ameren Missouri was to quantify and track all impacts of the Tax Cuts and Jobs Act of 2017 potentially affecting electric service rates from January 1, 2018, going forward. Once Senate Bill 564 was signed into law, the 90 day deadline mandated under Section 393.173.3 began for the Commission to reflect the tax rate change, establish excess accumulated deferred income tax (ADIT) deferrals, and order the amount that would be included in a regulatory liability for the "stub period" (*the period of January 1, 2018, through the date the electrical corporation's rates were adjusted on a one-time basis for the tax rate change*).

On June 4, 2018, Case No. ER-2018-0362 was opened to reflect the impact of the TCJA on the rates of Ameren Missouri electric customers as called for under SB 564. The Parties joined a unanimous stipulation and agreement that reflected, among other things, that the amortization period for the stub period deferrals would also be determined in Ameren Missouri's next rate case, case No. ER-2019-0335. The stipulation & agreement was approved by Commission on July 5, 2018 with new rate schedules going into effect on August 1, 2018. This action also established the stub period deferral period as running from January 1, 2018 through July 31, 2018.

In Ameren Missouri's last rate case, ER-2019-0335, Staff recommended and all of the parties stipulated to amortizing the stub period regulatory liability back to customers over a 3 year period. In this current case, Staff reviewed the amortization and has reset this amortization period in this case to 2 years.

Staff Expert/Witness: Lisa M. Ferguson

37. Low-Level Radioactive Waste Expense

In its cost of service calculation, Staff has included a three year average ending June 30, 2021 of actual expense incurred by Ameren Missouri associated with low-level radioactive waste disposal. Staff will continue to examine these costs through the true-up cut-off date in this case and evaluate whether revision of its recommendation is warranted.

Staff Expert/Witness: Lisa M. Ferguson

38. Non-Labor Power Plant Maintenance Expense

Staff reviewed Ameren Missouri's historical non-labor power plant maintenance costs, including the costs of major outages, for the period of January 2015 through June 2021. Because these costs' fluctuate, Staff recommends an ongoing level of maintenance expense based on a 6-year average ending June 2021. Due to the impending retirement of the Meramec generating facility at the end of 2022 and the request for a tracking mechanism in this proceeding, Staff included one fifth (1/5) of Meramec's normalized power plant maintenance in the cost of service and four fifths (4/5) of the power plant maintenance in the tracking mechanism. Staff will re-examine the non-labor power plant maintenance costs as part of its true up audit.

Staff Expert/Witness: Paul K. Amenthor

39. Cybersecurity Expense

In order to enhance its cybersecurity capabilities, Ameren Missouri invested in key capabilities and processes, including phase three multi-year network access control, multi-year network segmentation projects and a cybersecurity tool suite. Further, it developed a third party cybersecurity risk team to respond to upcoming North American Electric Reliability Corporation ("NERC") CIP-013 supply chain standards. Staff analyzed the non-labor cyber security costs and noted its significant increase during the test year. Staff normalized these costs using a three-year average ending June 2021.

Staff will reexamine these costs through September 30, 2021 as part of its true up audit.

Staff Expert/Witness: Paul K. Amenthor

40. MEEIA Non-Labor Expense

Staff removed all MEEIA-related expenses from the test year to avoid double recovery through both the rider and base rates. For a complete discussion of the MEEIA revenue removal from the test year, refer to the MEEIA revenue section of this report, sponsored by Staff witness Jason Kunst.

Staff Expert/Witness: Paul K. Amenthor

41. Customer Convenience Fees

Ameren Missouri proposes including the costs of convenience fees[126] incurred at walk-in locations and credit card processing fees in its revenue requirement. These fees are currently paid by individual customers who choose to utilize these services. The convenience fees at walk-in locations are $1.10 and credit card payment fees are $1.85 per transaction.

Current Payment Methods and Fees

Ameren Missouri currently provides customers several options and methods to pay their utility bill. The chart below shows the fee customers currently pay associated with each payment type[127]:

Mobile App	Electronic Check (No Fee)	Credit Card ($1.85)	Debit Card ($1.85)
Guest Pay/Website	Electronic Check (No Fee)	Credit Card ($1.85)	Debit Card ($1.85)
Quick Pay/E-mail Link	Electronic Check (No Fee)	Credit Card ($1.85)	Debit Card ($1.85)
By Phone	Electronic Check (No Fee)	Credit Card ($1.85)	Debit Card ($1.85)
Walk-in Location or Convenience Fee	Cash ($1.10)	Check/Cashier's Check ($1.10)	Money Order ($1.10)
to Pay (Direct Debit)	Auto Deduction Checking (No Fee)	Auto Deduction Savings (No Fee)	
Electronic Data Interchange (EDI)	Electronic Payment (No Fee)		
CheckFree	Bank Website (No Fee)		
Non-Authorized Walk-in Locations or Pay Stations	Various payment methods no contract (Unknown)		
Mail	Check (No Fee)		

Ameren Missouri's Payment Vendors

Ameren Services has contracted with FirsTech, Inc. to provide customers an option to pay their utility bills at certain authorized partner locations. Currently each customer utilizing this method is charged a processing fee of $1.10 that is distributed between FirsTech and the partner location to assist with paying for the computer equipment, supplies, internet connection,

[126] Convenience fees are a charge for making a payment in person at a pay station or a walk-in location.
[127] Ameren Missouri Data Request Response to Staff DR No. 0165.

and customer service. At these walk-in locations, customers can only pay with check, cash, cashier's check or money order. Credit cards are not accepted at the walk-in locations.[128] Ameren Services contacted FirsTech to inquire about anticipated increase of utilization of walk-in locations if the fee to customers is waived. FirsTech indicated there is no expectation of an increase due to the fact that many customers pay at these locations because that is their only option and most payments taken at walk-in locations are cash.[129]

Ameren Missouri uses Speedpay ACI Payments Inc. (Speedpay) to offer credit card or debit payment options for customers. A request for proposal (RFP) was conducted to select this vendor. The final selection was made based on the vendor meeting certain cyber and security requirements and being the lowest cost option to Ameren Missouri's customers.[130] Ameren Missouri discussed the anticipated increase of credit card usage with its vendor. Based on similar instances with other regulated utility clients, Speedpay indicated that credit card payments may increase 15-30%. Ameren Missouri could not identify any point within the range that seemed more or less likely, so it estimated the anticipated increase of utilization of credit card payments to be 22.5%.[131]

Staff's Analysis

Ameren Missouri has a contract in place for all of the authorized walk-in locations and the fee ($1.10) remains consistent for all of its authorized locations. Staff reached out to other large Missouri investor owned utilities (IOU's) and found that some have contracts with authorized locations and others do not. Most Missouri utilities stated various locations charge different amounts and some do not charge a fee at all. Customers are encouraged to call ahead as the locations can make changes to hours and fees. Most of the utilities' authorized walk-in payment locations only take cash or check. Some walk-in locations are trying to eliminate customers paying via personal checks.

Staff recognizes other states include the convenience fees in their rates. According to Ameren Missouri, ** [redacted] ** are the IOU's that include walk-in fees in their rates. The states that allow these in their rates include

[128] Ameren Missouri Data Request Response to Staff DR No. 0629.
[129] Ameren Missouri Data Request Response to Staff DR No. 0629.
[130] Ameren Missouri Data Request Response to Staff DR No. 0625.
[131] GR-2021-0241 Ameren Missouri Data Request Response to Staff DR No. 0342.

** [redacted] **.[132] Currently, Evergy includes convenience fees in its revenue requirement.[133]

Ameren Services states that it works with payment transaction providers to renegotiate payment fees to make fees as affordable as possible for its customers. Credit card transaction fees have been reduced over the last several years from over $3.00 to $1.85. Ameren Missouri indicated that discussions have taken place at various industry meetings and more utilities are removing the fees associated with the various options for customer payment. During focus groups and transactional surveys, customers' expectations include no fees for paying with credit cards.[134]

Every payment option has associated costs to both the customer and Ameren Missouri. For example, if a customer pays by a paper check, the customer will pay for a stamp to mail the payment and Ameren Missouri will be assessed a fee of $.10 per transaction to have that check processed.[135] Ameren Missouri does not pass on the fee it is assessed for processing those checks to the individual customer. The fee is shared by every customer in the rates they pay whether or not that customer utilizes the paper check option. In Case No. ER-2019-0374, the Commission stated, "As bank fees are already recovered in the cost of service, credit card transaction fees should be similarly treated."[136]

The Commission currently allows credit card fees in the overall cost of service for other utilities. The Commission started allowing credit card fees in the overall cost of service in 2006 for Kansas City Power and Light[137], and most recently for Empire District Electric Company in 2020.[138] Currently Evergy, Spire Missouri and Empire have credit card fees included in their overall cost of service.

Recommendations

From a customer service perspective, Staff does not oppose including convenience fees and credit card fees in the overall cost of service. However, Staff recommends Ameren Missouri

[132] Ameren Missouri Data Request Response to Staff DR No. 0628.
[133] Ameren Missouri Data Request Response to Staff DR No. 0746.
[134] Ameren Missouri Data Request Response to Staff DR No. 0628.
[135] Ameren Missouri Data Request Response to Staff DR No. 0745.
[136] ER-2019-0374, Amended Report and Order, Page 76, Line 1-2.
[137] ER-2006-0314.
[138] ER-2019-0374.

track performance, savings, usage, and communication plans pertaining to payment options. If the Commission approves this treatment, Staff recommends that Ameren Missouri be ordered to track performance and savings for both the Company and its customers from this initiative. Staff further recommends that should the Commission order convenience and credit card fees to be included in the overall cost of service, Ameren Missouri be required to monitor the level of customers using the walk-in location and credit card options, along with the increase in the number of payments, if any, for these methods. In addition, Staff recommends that the savings to the customer and/or Ameren Missouri be tracked. Staff requests that the communication plan that Ameren Missouri utilizes to inform customers that there is no fee to pay their bill by walk-in and credit card, be provided to Staff.

Staff witness Jane C. Dhority is sponsoring the adjustments proposed by Staff in regard to inclusion of convenience fees and customer credit card payment processing costs in cost of service.

Staff Expert/Witness: Tammy Huber

a. Accounting for Customer Convenience Fees

Customers who pay by credit card or at walk-in locations are charged a convenience fee per transaction. Ameren Missouri is proposing to eliminate individual customer-facing convenience charges and include them for recovery in the cost of service for this case.

Staff is not opposing the elimination of fees charged to customers paying by credit card or at walk-in locations and including them in Ameren Missouri's cost of service.

Ameren Missouri's adjustment is based on current convenience fees for walk-in and credit card payments for a forecasted number of transactions. The Company arrived at this number using 2019 actual payment levels adjusted to represent an estimated change in transactions due to the impact of the COVID-19 pandemic. However the magnitude of this impact is not clearly known at this time.

Staff's proposed adjustment is based on analysis of a 5-year history of actual payment transactions ending June 30, 2021. This is the known and measureable level of actual customer transaction experience and takes into account some of the impact COVID-19 has had on transaction levels. Staff normalized this amount and then applied the current contracted fees for

processing payments through Ameren Missouri's third-party vendors to arrive at the amount to be included in the cost of service for this case. Staff will update its position on this issue during its true-up audit.

Staff Expert/Witness: Jane C. Dhority

42. Electric Vehicle Employee Incentive

** [redacted] ** Staff has made an adjustment to remove the incentive payments that were charged to Ameren Missouri during the test year, as these charges should be borne by ratepayers.

Staff Expert/Witness: Jason Kunst, CPA

43. Charge Ahead Program

In Case. No. EA-2018-0132 Ameren Missouri filed an application seeking to approve new tariffed programs that were referred to as "Charge Ahead". Included in these programs were proposed tariffs to implement electric vehicle charging stations incentives. The four sub-programs were: corridor charging, multi-family charging, public charging, and work place charging. In its order issued on February 6, 2019, the Commission approved the corridor charging sub-program and allowed for deferral accounting for the program costs. The Commission also opened a working group, EW-2019-0229 to allow the parties to continue discussions regarding solutions for electric vehicle charging station installations. The parties later came to an agreement and filed a stipulation and agreement with regards to the other sub-programs. As part of the Commission approved agreement the parties agreed to a budget of $6.6 million for the programs[139] for program costs and allowed for deferral accounting as ordered by the Commission for the corridor charging program. Through June 30, 2021 Ameren Missouri

[139] The parties agreed to a $6.6 million budget for the program, with a maximum for incentives of $6 million and $600,000 for administrative and marketing expenses.

has spent $3.1 million on the corridor charging program and $710,000 on the other three programs, which are within the budgets for the programs. Staff has reviewed the costs for the program through June 30, 2021 and is recommending a seven year amortization of the costs as proposed by Ameren Missouri. Staff will continue to review the costs through the September 30, 2021 true-up date.

Staff Expert/Witness: Jason Kunst, CPA

44. <u>Misbooking of Electric Costs during Test Year</u>

During the discovery process in this case, Staff reviewed the electric charges that were erroneously allocated to gas operations in during the test year. These instances were limited to the administrative and general accounts (A&G) 921 through 935 because of the recording process in which Ameren Missouri allocates electric and gas in these particular accounts. During the last gas case, GR-2019-0077, after the problem was brought to Ameren Missouri's attention in the spring of 2019, Ameren Missouri relayed to Staff that a special code would be added to the general ledger recording process that will distinctly identify electric and gas charges in order to prevent this mis-recording. Based on discussions with Company personnel this coding change to Ameren Missouri's general ledger has not occurred as the Company expects to change its general ledger software around the end of 2022 or beginning of 2023. Staff expects that that Ameren Missouri would have had this issue resolved by this current case and recommends the Commission order Ameren Missouri to make the changes necessary to prevent this mis-recording in the future.

Staff is not including the mis-recorded charges for the Alliance for Transportation Electrification, the Western Coal Traffic League, USWAG Annual Dues (Lobbying Org.), 2017 Utility Air Regulatory Group (UARG) Fees, the Steptoe & Johnson (Midwest Ozone Group) fees nor the dues for Illinois Environmental Regulation. Please see elsewhere in this report for discussion on Staff's treatment of these types of costs. These groups endeavor in legislative goals for the utility.

Staff Expert/Witness: Christopher D. Caldwell

45. Company Owned Life Insurance

During the test year, Ameren Missouri recorded Company Owned Life Insurance (COLI) gains net of the premiums paid in the amount of $11,458,268 in FERC Account 920 (Administrative and General Salaries). Ameren Missouri is requesting to normalize the gains and losses by using a five-year average to include COLI gains in cost-of-service. The gains and losses related to the COLI are due to market fluctuation and death claims. Staff recommends that all gains/losses and premiums be excluded from the cost of service and booked into FERC Account 426.2 (Life Insurance) in the future. FERC Account 426.2 is a below-the-line account.

COLI is a life insurance policy that pays a benefit to the company if an insured employee dies. Usually this policy is taken out on one or more critical employees. The Company pays the premium and retains full ownership of the cash value of the policy. According to Ameren Missouri, the intent of the COLI program is to provide an income stream that will approximately offset the expenses of its deferred compensation program.[140]

In FERC Docket No. ER20-1237-000 Ameren Illinois Company was ordered to book COLI amounts to account 426.2. FERC stated in the Order of Formal Challenge:

> 67. We find that Ameren Illinois improperly recorded company-owned life insurance amounts for officers and other employees for policies in which Ameren Illinois is the beneficiary in Account 920, instead of Account 426.2 (Life Insurance). As a result, Ameren Illinois overstated Account 920 in the challenged rate year, which is included in the wholesale transmission formula rate, and overbilled wholesale transmission customers. Account 426.2 states, "This account shall include all payments for life insurance of officers and employees where company is beneficiary (net premiums less increase in cash surrender value of policies)," while Account 920 states, "This account shall include the compensation (salaries, bonuses, and other consideration for services, but not including directors' fees) of officers, executives, and other employees of the utility properly chargeable to utility operations and not chargeable directly to a particular operating function."
>
> 68. We are not persuaded by Ameren's argument that company-owned life insurance falls within the parameters of employee compensation includable in operations. Nor has Ameren

[140] Ameren Missouri Response to Staff DR No. 0463.

> provided any regulatory approval that would indicate to us that such amounts are properly included in rates.

Staff agrees with FERC's position on this expense as it applies to Ameren Missouri.

Staff made a positive adjustment of $11,458,268 to FERC Account No. 920 to reflect the removal of COLI amounts. Staff recommends that Ameren Missouri record future COLI amounts in FERC Account No. 426.2. For the test year, Ameren Missouri did not record any of the COLI amounts to the gas operations, thus no adjustment is needed for the gas operations.

Staff Expert/Witness: Kimberly K. Bolin

46. Equity Issuance Costs

As of February 2021, Ameren Missouri has incurred $7,003,504 to issue equity in connection with its new wind generation facilities. If additional costs are incurred after February 2021 and prior to September 30, 2021, Staff will include those costs in its true-up audit. Staff is recommending a five-year amortization of these costs. Staff also proposes that the unamortized balance be excluded in rate base since the nature of these costs are included in the return on equity.

Staff Expert/Witness: Kimberly K. Bolin

47. Legal Expense

Prior to January 2019, Ameren Missouri and Ameren Services would accrue legal expense, and then compare that to actual legal spending each month and then adjust the accrual accordingly. As of January 2019, Ameren Missouri and Ameren Services still maintain an accrual reserve, but now monitors the accrual balance for legal expenses to ensure it is appropriate based on the current level of legal expenses and current facts and circumstances of ongoing legal matters. However, the comparison and, if needed, adjustment of the accrual to the actual legal payouts is now completed on an annual basis. The change in mechanics or procedure still has no effect on expense incurred in any given period. Staff has included the twelve months ending legal expense in the cost of service.

Amongst other litigation, Staff will specifically address two specific issues currently litigated for which Ameren Missouri is incurring or being allocated costs: the Environmental

Protection Agency's case against Ameren Missouri regarding the Clean Air Act and the two complaint cases for Ameren's (Ameren Missouri, Ameren Illinois and Ameren Transmission) arguments for maintaining a higher return on equity for the FERC formula rate allocation.

a. Rush Island Clean Air Act Litigation

In 2011, the United States Environmental Protection Agency (USEPA) filed a case against Ameren Missouri for violating the Clean Air Act (CAA) for not having the proper emission controls at the Rush Island Power Plant.

Rush Island is a pulverized coal-fired power plant located in Jefferson County, directly adjacent to the Mississippi River. It was grandfathered into the amended Clean Air Act of 1977, due to the two units coming on-line in 1976 and 1977, immediately before the Amended Clean Air Act of 1977. The 1977 amendments to the Clean Air Act allowed existing plants to continue to operate for their natural lifespan without pollution controls, as long as they were not modified in any way beyond routine maintenance that increased emissions. Rush Island's major boiler components were experiencing performance problems which required Ameren Missouri to take the aging units offline for repairs. After Ameren Missouri completed these capital improvements at each unit, each unit's electric generating capacity as well as emissions increased.

Ameren Missouri must comply with the federal environmental regulations including the Clean Air Interstate Rule (CAIR), published in the Federal Registry on May 12, 2005; the Clean Air Mercury Rule (CAMR), published in the Federal Registry on May 18, 2005; the Missouri NOx SIP (State Implementation Plan) Call; PM2.5 standards; Ozone Standards; and Regional Haze rules. In addition, the State of Missouri participates in the Central Regional Air Planning Organization which is one of five regional planning organizations (RPO) that determines the requirements for emission controls known as Best Available Retrofit Technology (BART). Ameren Missouri's power generation that is BART eligible under the rules set by the RPO are Labadie Unit Nos. 1-4, Rush Island Unit Nos. 1-2 and Sioux Unit Nos. 1-2, however only Sioux Unit Nos. 1-2 are currently outfitted with scrubbers.

On January 23, 2017, Judge Rodney Sippel of the United States District Court for the Eastern District of Missouri the federal court initially ruled against Ameren Missouri, stating that the Rush Island Power Plant violates the Clean Air Act due to the plant emitting significantly more pollution after Ameren Missouri made major modifications to boost the output of the

power generating units without obtaining the proper permits. Ameren Missouri appealed and on February 27, 2019, the 8th Circuit Court of Appeals upheld the previous ruling that Ameren Missouri violated the Clean Air Act and ordered Ameren to apply for a permit within 90 days. Ameren appealed again and was yet again ruled against on September 30, 2019. Ameren Missouri appealed again to the Eight Circuit Court of Appeals.

** [redacted] ** According to evidence provided by United States Environmental Agency (USEPA) in the Eastern District Court of Missouri, the lifespan of Rush Island's component parts is 30 to 40 years. Based on a 30-year lifespan, Unit 1 parts were installed in 2007 and are close to the halfway point of their useful life. Unit 2 parts were installed in 2010 and are close to 1/3 of their useful life.

On August 20, 2021, the Eighth Circuit Court of Appeals issued its opinion affirming the District Court's liability determination. The Court of Appeals reversed the portion of the District's decision regarding remedial measures for the Labadie plant. The Eighth Circuit case is still within the fourteen day timeframe for any party to file a petition for panel rehearing. Ameren Missouri still has appeal options available for this issue so Staff has normalized the legal costs in the case and included the twelve months ending June 30, 2021 costs in the cost of service. ** [redacted] ** Staff will continue to review this issue through the true-up cutoff of September 30, 2021.

b. FERC ROE Complaint

Ameren Missouri participated in three FERC ROE dockets (EL14-12 in November 2013, EL15-145 in February 2015 and ER15-358 in November 2014) as part of the MISO Transmission Owners Group (MISO TO Group) that was represented by the law firm Wright & Talisman. Wright & Talisman hired a consultant to submit updated analysis on the appropriate rate of return on equity. Ameren Missouri (nor its affiliates) did not separately hire consultants;

rather, the MISO TO Group as a whole utilized the services of the consultants and shared the associated costs.

The total billing from Wright & Talisman for all the work related to the dockets and the external fees were not a separate line item, therefore an amount was allocated to each Transmission Owner who was involved in the respective docket using the ratio of the Owner's transmission gross plant divided by the total gross plant of all Owners listed on the appropriate docket. For Ameren, this allocation is then split further by the gross plant percentage for each Ameren segment divided by the total Ameren gross plant and then applied to Ameren Missouri, Ameren Illinois and Ameren Transmission Company of Illinois.

Similar to Ameren Missouri's last rate Case No. ER-2019-0335, Staff proposes disallowing the legal and consultant fees that were incurred during the 2020 test year related to the ongoing FERC ROE complaint cases. The FERC ROE is a return on investment. ROE is the amount of revenue that is left-over after all expenses have been paid. Therefore, the FERC ROE legal fees were incurred for the benefit of the Company because the level of ROE is purely a benefit to shareholders and not customers. As such, customers should not have to pay the legal fees associated with arguing for a higher ROE.

Staff Expert/Witness: Christopher D. Caldwell

48. Sales Tax Audit Cost Adjustment

During the course of its review, Staff discovered payments made by Ameren Missouri to the Missouri Department of Revenue as a result of a sales tax audit for years 2015 through 2017. In response to Staff DR No. 0640, Ameren Missouri indicated that the audit is still ongoing, however Ameren Missouri made the payments to avoid paying interest. Ameren Missouri indicated they are in the process of appealing the audit results. Staff is recommending that these payments be removed from the test year as they represent a non-recurring payment and has made an adjustment to remove them from the revenue requirement.

Staff Expert/Witness: Jason Kunst, CPA

49. Research & Development Expense

Ameren Missouri has a membership with the Electric Power Research Institute ("EPRI") in which Ameren Missouri received research and development ("R&D") information. During

the course of its review, Staff inquired if Ameren Missouri was able to determine any quantifiable benefit to Ameren Missouri ratepayers for the research and development work performed by EPRI and other parties. Ameren Missouri's response was that they conduct a value analysis that determines the amount of cost savings to Ameren Missouri for performing the equivalent research in house, but do not conduct any cost savings with regards to the research itself. Staff is concerned that Ameren Missouri spending money on research and development and does not have a method for determining if the research and development actually results in cost savings or other tangible benefits for Ameren Missouri ratepayers. In the future Staff needs to see additional justification for Ameren Missouri's research and development costs. This would include listing and tracking each individual research and development project or pilot program that Ameren Missouri undertakes; which would include tracking the start date, implementation dates, costs associated with the project expense and capital, as well as a timeline for each project. Additionally it should include a list of all qualitative and quantitative benefits that Ameren Missouri ratepayers will receive as a result of the research. Additionally Staff would like to see a cost benefit analysis for each project rather than a value analysis for the savings to Ameren Missouri for not conducting the research internally.

Additionally Staff has become aware in Ameren Missouri's FAC filing in Case No. ER-2022-0026 that Ameren Missouri is engaging in a research and development venture at the Sioux Power Plant regarding the mining of digital assets. Staff has reviewed the invoices received from EPRI and found no costs associated with the Sioux R&D project. For additional information please see the R&D testimony by Staff witness Lisa M. Ferguson at the beginning of this report.

Staff Expert/Witness: Jason Kunst, CPA

50. <u>Keeping Current Low-Income Pilot Program</u>

The Keeping Current component of the Low Income Pilot Program provides participants with year round monthly bill credits and arrearage reduction for customers who continue to make monthly bill payments. Ameren Missouri introduced the Keeping Current Program ("Program") in Case No. ER-2010-0036. The Keeping Current Program was approved by the Commission on April 14, 2010 in the *Third Non-Unanimous Stipulation and Agreement.* The Program is the

result of discussions resulting from the Commission's *Order Directing the Parties To Address the Concerns Raised By AmerenUE's Low-Income Residential Customers* issued February 10, 2010. The parties involved were Ameren Missouri, Staff, OPC, Missouri Industrial Energy Consumers ("MIEC"), AARP/Consumers Council, and the Missouri Retailers Association, collectively known as "the Signatories". A representative from each Signatory group make up the members of the advisory collaborative group ("Collaborative")

The energy assistance program has two components – The Keeping Current year-round component and the Keeping Cool summer assistance component.

The Keeping Cool component of the Program provides participants bill credits in the summer months, primarily June, July, and August to offset the costs of air conditioning usage. The Program is reevaluated in Ameren's Rate Cases.

The objectives of the program are as follows.

- Improve affordability of utility payments for very low-income customers.
- Promote a level of usage that ensures health and safety.
- Minimize program costs and maximize efficiencies by working with agencies that serve low-income households.
- Minimize program costs and maximize efficiency by linking program participation to application for Weatherization and the Low Income Home Energy Assistance Program ('LIHEAP").

The Signatories agreed an evaluation would be performed annually[141] on the Program to determine its effectiveness in addressing the challenges faced by low-income customers, as well as the effect on costs borne by all Ameren Missouri ratepayers. The Collaborative was tasked with the selection of an independent third party evaluator ("Evaluator"). Up to 7% of the funds allocated may be used for administrative costs of the administering agencies and 3% to secure the services of the Evaluator.

[141] Due to the length of time each evaluation took from start to finish, the start of each evaluation would be within 12 months of the completion of the previous evaluation but y were not completed within each calendar year.

Applied Public Policy Research Institute for Study and Evaluation ("APPRISE, Inc")[142], was contracted to conduct the first program evaluation and ultimately conducted all four process and impact evaluations of the program. These evaluations assess program design, implementation, participation, retention, impacts to the participants and ratepayers, and make recommendations for program improvements. The evaluations have found that the Keeping Current Program has been successful in enrolling low-income households, improving energy affordability, improving participants' bill payment regularity, coverage rates, and reducing collections actions. The evaluations have led to recommendations for Program refinements that Ameren implemented and have resulted in improved outcomes for participants.

In Ameren's most recent rate case, ER-2019-0335,[143] the Commission approved an agreement that the total budget for the Keeping Current Program was to be increased from $1.3 million to $2 million, with a 50/50 ratepayer/shareholder funding sharing mechanism for the entire budget. The Commission also ordered a third party independent evaluation be conducted on the Program's sustainability and potential growth going forward.

On March 18, 2020, the Commission issued an *Order Approving Stipulation and Agreements*[144] approving the *Corrected Non-Unanimous Stipulation & Agreement.* Shortly after the funding increase was approved, the COVID-19 global pandemic began to have a more significant impact in the Company's service territory and Keeping Current Program enrollment decreased 57% from 2019 to 2020, leaving approximately $1.3 million of the 2020 budgeted program funds unused.

The representatives of the Keeping Current Collaborative discussed reallocating the unused funding and identified an appropriate use of the unused program funds and on August 12, 2021 filed the *Unanimous Stipulation and Agreement Regarding Keeping Current Funds and Motion For Expedited Treatment*. The Signatories agreed:

[142] APPRISE is a non-profit research institute dedicated to collecting and analyzing data and information to assess and improve public programs, for federal and state government agencies, utility companies, and nonprofit organization.
[143] *Corrected Non-Unanimous Stipulation & Agreement,* page 17, paragraph 45 filed March 2, 2020, EFIS #229.
[144] *Order Approving Stipulation and Agreements,* page 4 paragraph 1, filed March 18,2020, EFIS Item No. 248.

- $150,000 shall be used to fund for a two-year period a Keeping Current Program Manager position, inclusive of salary, benefits, incidentals, and administrative support;
- $150,000 will be distributed to the Keeping Current agencies to facilitate hiring of additional personnel, communications and outreach, or other administrative overhead costs to help with the processing of the increasing volume of applications for weatherization, LIHEAP, and rental and mortgage assistance;
- $1 million will be provided as energy assistance to vulnerable customers in need of assistance, and;
- The Keeping Cool program will expand to include shoulder months from the currently approved June through August to May through September.[145]

APPRISE, Inc. was selected to conduct the program design review, ordered by the Commission, to assess alternative bill payment designs and make recommendations for refinement or redesign of Ameren's program.

Recommendations

1. Administration: Ameren should continue to administer the Keeping Current Program with assistance from the agencies on outreach, intake, and data management.

2. Outreach: Ameren should conduct additional outreach for the Keeping Current Program through agencies and their own call center representatives. Agencies may need additional education to consider the Program not only as a special option for extreme circumstances and not only for customers with high arrearages. This may require ongoing outreach and education at the agencies due to turnover and seasonal employees.

a. Agencies should develop plans that specify several outreach methods to reach various segments of their populations in need. Ameren should re-assess the agency payments ($25 for each Keeping Current enrollment and $10 for each Keeping Cooling enrollment) and consider whether higher fees should be paid to compensate agencies adequately for outreach, intake, and referrals.

[145] The Keeping Current Collaborative's exploration of whether the Keeping Cool program period should be expanded was a settlement term found at Paragraph 14 of the Unanimous Stipulation and Agreement submitted on July 22, 2020, in File No. EE-2019-0382.

b. Ameren call center representatives should be trained to screen payment-troubled customers for eligibility, refer eligible customers to their local agency, and send lists of eligible customers to their local agency so that the agency can also follow up with the customers.

3. Intake: Agencies should continue to encourage customers to visit offices for in-person Program intake. This process allows for in-depth education about the Program, referrals to LIHEAP and weatherization, and education about other potential sources of assistance. However, agencies should provide flexibility to customers who are unable to visit the office because they are homebound, are working during the agency's office hours, or do not have transportation or childcare available.

4. Income Eligibility: Ameren should maintain the current income eligibility level of 150 percent of the FPL. They should base eligibility on one month of income to ensure that customers who recently became unemployed due to COVID-19 are eligible.

5. Other Eligibility Requirements: Ameren should continue the following additional eligibility requirements:

- Weatherization: Apply for the Program. (continued)
- LIHEAP: Apply for the Program (continued) and apply benefits to Ameren bill if an Ameren gas or Ameren electric heating customer (new).
- Consistent Bill: Enroll in budget billing (in the absence of a new Percentage of Income Program that provides a fixed monthly bill).

6. Additional Populations: Ameren should consider enhanced benefits for formerly homeless customers to help them pay off past balances and open a new Ameren account.

7. Recertification: Ameren should continue to require participants to re-certify their eligibility every two years. This will be especially important if they move to a Percentage of Income Payment program ("PIPP").

8. Enrollment Level: Ameren and their agencies should provide additional outreach as discussed above to educate more customers about the Program.

9. Bill Subsidy Determination: Ameren should consider moving to a Percentage of Income Payment Program (PIPP) to provide participants with a fixed energy burden at an

affordable level. The end of this section provides a comparison of the costs of the current program to the costs of a PIPP.

10. Target Energy Burden: Ameren should consider targeting a three percent energy burden for alternative electric heat participants and a six percent energy burden for electric heat participants. If the cost of these energy burden targets is beyond a target program budget, Ameren should consider a somewhat higher energy burden to reduce costs.

11. Minimum Payments and Maximum Credits: Ameren should consider a minimum monthly payment and a maximum annual credit to limit program costs. Customers who reach the maximum annual credit should be targeted for weatherization.

12. Arrearage Forgiveness: Ameren should continue the arrearage forgiveness program where participants pay 1/12 of their arrearages when they enroll and have 1/11 of the remaining amount forgiven each month. We recommend that forgiveness be provided for bills that are made up following the initial bill due date. Participants should receive education so that they understand that this is an important benefit of the program.

13. LIHEAP: Ameren and the agencies should provide additional education and outreach to ensure that participants apply for LIHEAP assistance. They should send reminders to participants to re-apply to LIHEAP and emphasize that they can receive benefits from both LIHEAP and Keeping Current at the same time.

14. Energy Efficiency: Ameren should prioritize high usage Keeping Current Program participants for weatherization. They should educate landlords about the Program and encourage landlords to provide authorization for program measures.

15. Program Removal: Participants are currently removed from the Keeping Current Program if they are not current within two billing cycles. We recommend that customers remain on the Program as long as they remain customers and are not terminated due to nonpayment. We also recommend that customers receive monthly bill credits for all made up past due monthly bills.

The Keeping Current Program Stakeholders have reviewed the study and have had some discussion on what next steps are however due to the COVID-19 pandemic, the recent changes to

the Program have been related to reallocating the unspent funds to help enhance and sustain the Program during the pandemic.

Staff recommends the Commission order the program to be funded at the current approved amount of $2 million with the 50/50 pay structure between shareholders and ratepayers.

Staff Expert/Witness: Kory J. Boustead

51. "Keeping Current" Revenue and Expense

In the stipulation and agreement filed in the most recent Ameren Missouri rate case (ER-2019-0335), the parties agreed to increase the budget from $1.3 million to $2 million, with fifty percent of the funding coming from ratepayers. Staff has made an adjustment to remove both the revenue and the expense for the surcharge.

Due to the COVID-19 pandemic, there was approximately $1.3 million of unused assistance from the Keeping Current budget for 2020. On August 25, 2021 the Commission approved a Stipulation and Agreement in Case No. ER-2019-0335 with how to use the unspent funds as follows:

- $150,000 will fund a Keeping Current Program Manager position for a two-year period.
- $150,000 will be distributed to the Keeping Current agencies to facilitate those agencies hiring additional personnel and other outreach to help with the processing of the increasing volume of applications.
- The remaining $1 million will be distributed to provide energy assistance for vulnerable customers.

Staff Expert/Witness: Jason Kunst, CPA

52. Income Eligible Weatherization Assistance Program ("LIWAP")

The Ameren Missouri low-income weatherization program ("LIWAP") provides supplemental funding in support of the larger federally funded nationwide US Department of Energy ("DOE"), Low-Income Weatherization Assistance Program. LIWAP provides eligible households with home energy conservation services. The program provides cost-effective, energy-efficient home improvements to Missouri's low-income households, especially the elderly, children, those with physical disadvantages and others most affected by high utility costs.

The purpose of LIWAP programs is to lower utility bills and improve comfort while ensuring health and safety. Income eligible home owners and tenants with their landlord's permission are eligible. Typical weatherization measures include air sealing to reduce infiltrations, attic insulation, sidewall insulation, floor and foundation insulation, pipe or duct insulation, water heater blankets, energy efficient lighting replacement and heating and cooling system repair or replacement.

The Commission authorized Ameren Missouri's LIWAP (or "Program") on August 14, 2007, in Case No. ER-2007-0002. In that case, the Commission approved the agreement between the Company and Missouri Department of Natural Resources ("DNR"), Division of Energy to allow social service agencies operating in Ameren Missouri's service territory to receive the supplemental funding to the DOE LIWAP program to weatherize homes. The Commission initially approved $1.2 million in annual funding for the Ameren LIWAP. This amount is to be paid in one lump sum by the Company to the State Environmental Improvement and Energy Resources Authority ("EIERA").[146] In later rate cases, the Commission approved the Ameren LIWAP to continue at the current funding level and administration.[147]

In Ameren's most recent rate case, ER-2019-0335, it was agreed in a *Non-Unanimous Stipulation and Agreement* issued February 28, 2020 and approved March 16, 2020, that the Company would assume administration of the program from DE and would work with DE to transition the administration to the Company. The annual budget of $1.2 million would remain the same and allow rollover of unspent funds to subsequent years. The Company agreed to take over the administration of the weatherization program which would stop the forwarding of the program funds to the EIERA and allow the Company to pay the social service agencies directly. With the change of administration the strict adherence to the USDOE guidelines on how the weatherization dollars were able to be used was removed. This allows the social service agencies to utilize the supplemental funds provided by the utility for broader repair issues which previously would have caused the home to be ineligible for weatherization. The name of the program was also changed to the Income-Eligible Weatherization Assistance Program ("IEWAP").

[146] In Case No. ER-2011-0028, Report and Order, the terms of how the program funds are administered by the State Environmental Improvement and Energy Resources Authority are detailed.
[147] Case Nos. ER-2011-0028, ER-2012-0166, ER-2014-0285 and ER-2016-0179 and ER-2019-0335.

Staff has confirmed with the Company the transition from DNR to Ameren Missouri is complete and the program funds paid directly to the social service agencies for their use in the current program year. Staff has reviewed the program year budgets and quarterly weatherization reports from the social service agencies. Staff reserves the right to comment on this program or respond to any testimony filed at a later date in this case.

Recommendation

It is Staff's recommendation that the Commission authorize the Income Eligible Weatherization Assistance Program to remain at the current level of $1.2 million annually.

Staff Expert/Witness: Kory J. Boustead

XIII. Depreciation

A. Depreciation Rate Recommendations

Staff reviewed the depreciation study provided in the Direct Testimony of John J. Spanos, of Gannett Fleming, Valuation and Rate Consultants, LLC. Staff also requested the source data for the depreciation study in Staff DR Nos. 0505 and 0636. Staff analyzed the data submitted and is proposing the rates as shown in Accounting Schedule 5.

Staff also recommends that Ameren Missouri correct issues in its Continuing Property Record ("CPR") and update this information in Ameren's next depreciation study.

Discussion

Ameren Missouri is required to submit a depreciation study as part of rate increase requests under rule 20 CSR 4240-3.160, unless the Commission Staff has received a study within 5 years prior to the filing for a rate increase. On March 31, 2021, Ameren Missouri submitted a depreciation study prepared by Gannett Fleming, Valuation and Rate Consultants, LLC for the capital assets of Ameren based on plant balances as of December 31, 2020. This study was submitted in the Direct Testimony of John J. Spanos.

Depreciation is defined as "the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in

demand and requirements of public authorities."[148] Staff accounts for depreciation by recording the actual purchase cost of the asset, known as book cost, and charging depreciation expense over the expected or average service life of the asset. Average service life can be determined by plotting the percentage of assets surviving against the age of the assets in a survivor curve, and calculating the area under that curve. For an account in which all plant is retired, the full survivor curve is available and average service life can be calculated. Accounts with plant remaining have a partial curve, which is known as a stub curve. The average service life can be estimated by comparing a stub curve to Iowa curves and fitting the best matched curve. Iowa curves represent common survival rates and patterns of assets, and are widely used to estimate depreciation.

Using the data supplied by Ameren, and the methods below, Staff calculated its own depreciation rates of Ameren's plant in service and recommends the rates as listed in Accounting Schedule 5. Staff receives data in excel or notepad format for retirements and salvage information. The data includes installment year (vintage), FERC account, type of transaction, transaction year, amount of transaction, and group or location codes. Staff uses a version of Gannett Fleming Software to complete the following actions with the company provided data. First the data is sorted and checked for errors. Next, the software allows staff to analyze the amount of plant that has been retired at each age and plot the stub curve. Then, Staff matches an appropriate Iowa curve to the stub curve data. Curves are fitted using a mixture of mathematical and visual fitting practices. Once a curve is chosen, Staff has an estimate of the average service life.

Staff calculated an estimated net salvage percentage for each account by reviewing the accounts gross salvage and cost of removal data:

$$Net\ Salvage = Gross\ Salvage - Cost\ of\ Removal$$

Gross salvage is the removed market value of the retired asset. Cost of removal is the cost associated with the retirement and disposition of the asset from service. Net salvage percentages were developed by dividing the experienced net cost of removal by the original cost of plant retired during the same time period to calculate the net cost of removal percentage. Staff then

[148] 18 CFR Part 101 Uniform System of Accounts Prescribed for Public Utilities and Licensees Subject to the Provision of the Federal Power Act Definition 12.

analyzes net salvage percentage using a 3-year or 5-year moving average to determine trends. Staff then uses the average life and salvage percentage to calculate a depreciation rate, annual accrual, and remaining life. Where there was adequate data to support it, Staff's recommendation is informed by statistical analysis of plant retirements. For accounts that did not have adequate data to produce a reasonable result using statistical analysis, Staff relied on its engineering experience, informed judgement, and previous cases to prepare recommended rates. Staff used the straight-line method, broad group-averaging life procedure, and remaining life technique for its calculations. The straight line method allocates expense evenly over the expected life of the asset. The broad group life procedure bases annual depreciation on the average service life of the account group rather than the specific vintage year. The broad group method views each vintage of asset in the continuous group as having identical life and salvage characteristics A remaining life accrual basis applies that depreciation over the estimated remaining useful life of the asset group. The remaining life technique calculates the depreciation rate by taking into account the depreciation reserve for the account. This corrects any under or over accrual that may have accrued in the accounts. It then applies the remaining balance over the estimated average remaining life of the assets in the accounts.

Staff used this technique for the majority of accounts with the exception of miscellaneous equipment and general plant accounts that have previously been amortized. The amortized accounts are accounts 316.21, 316.22, 316.23, 325.21, 325.22, 325.23, 335.21, 335.22, 335.23, 346.21, 346.22, 346.23, 390.05, 391, 391.2, 391.3, 392.05, 393, 394, 394.05, 395, 396, 397, 397.05, and 398.

Staff did not include rates for surge protection devices as the program was recently rejected in Case No ET-2021-0082.

Staff noted that certain units of property were misclassified in account 369 according to data request MPSC 0666. The property units were CABLE,5KV,3-1/0 X 1-2,RUBBER; BREAKER,OIL CIRCUIT,7.9KV; CABLE,5KV,1- 6,RUBBER; CABLE,5KV,3-500MCM,LEAD; CABLE,5KV,3-2,RUBBER,CONC NEUT; CABLE,5KV,1-4/0,LEAD; CABLE,5KV,3-350MCM X 1-1/0,LEAD; CABLE,35KV,1- 750MCM,LEAD; CABLE,5KV,3-750MCM X 3-2,RUBBER; CABLE,1KV,1- 2000MCM,CU,LEAD; CABLE,15KV,3-

750MCM,AL,XLP; CABLE,5KV,2-8,RUBBER; CABLE,5KV,3-4/0,1-1/0,LEA ; CABLE,5KV,3-450MCM,LEAD. Ameren Missouri stated

> Subject to the Company's objections, these assets would be used to provide service to Primary customers. Please note, these assets appear to be potentially misclassified as being recorded in Account 369. The original book value of these assets represent approximately $1,570,000 in an account with an original book value of approximately $182,120,000 and the vast majority of the asset value has vintage years prior to the year 2000. Due to the small impact this potential misclassification would have on the total revenue requirement, additional research was not conducted.[149]

Staff recommends that Ameren Missouri review its CPR for misclassification errors and correct any errors discovered in its CPR and any other account tracking software prior to submitting its next depreciation study.

Staff Expert/Witness: Cedric E. Cunigan

B. Capitalized O&M Depreciation Expense

Construction related costs are accumulated in construction-work-in-progress accounts and are then capitalized and included in rates subsequent to the completion of the project, when that project goes into service. Capitalized amounts include depreciation expense that is associated with assets used in construction, such as power operated equipment and transportation equipment. Capitalized depreciation must be subtracted from annualized depreciation expense calculated using Ameren Missouri's total plant-in-service balances in order to prevent double recovery. Therefore, Staff removed capitalized depreciation from its annualized depreciation expense in order to arrive at the amount of depreciation expense associated with operations and maintenance related functions.

Staff Expert/Witness: Jane C. Dhority

C. Elimination of Depreciation on Coal Cars

Staff removed from its case the estimated amount of depreciation expense accrued for Ameren Missouri's coal cars as estimated through September 30, 2021. Because this cost is

[149] Response to data request MPSC 0666.

reflected as part of fuel costs that are included as an input in Staff's production cost model, it should be excluded from annualized depreciation expense to avoid double-counting.

Staff Expert/Witness: Jane C. Dhority

XIV. Income Tax

Income tax expense, as calculated by Staff, begins by taking adjusted net operating income before taxes and adding to or subtracting from net income various timing differences in order to obtain net taxable income 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. The adjustments are the result of various book versus tax timing differences and the effect of such differences under separate tax ratemaking methods: flow-through versus normalization. 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
- Intangible Amortization
- Hydraulic Amortization
- Transmission Amortization
- Callaway Post Operational Costs
- Non-Deductible Parking Lot Expenses

Subtractions from Operating Income:

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

For ratemaking purposes, the tax normalization method defers the deduction taken for tax purposes for certain tax timing differences. The effect of using 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.

In Ameren Missouri case no. ER-2016-0179 normalized deductions and credits were unable to be used due to the Net Operating Loss situation that Ameren and Ameren Missouri had. Ameren Missouri had to first use its loss before it was able to take advantage of its normalized credits or deductions. Ameren Missouri has paid tax to the Ameren consolidated group for 2017, 2018, 2019, and is expected to for the 2020 tax year which means that Ameren Missouri is in a taxable position. Ameren Corporation was in a taxable position in 2019 but did not pay tax due to a previous tax overpayment and is expected to pay tax to the IRS for the 2020 tax year. In this case, Staff has included the preferred dividend deduction, research tax credit, empowerment zone credit, production tax credit, fuel tax credit, alternative fuel vehicle refueling property credit and the St. Louis payroll tax credit.

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 21.00 percent as a result of the recent TCJA federal tax reform, a state income tax rate of 4.00 percent as a result of Missouri state tax reform beginning January 1, 2020, and a city tax rate of 0.122 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.

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

XV. Fuel Adjustment Clause ("FAC")

A. Policy

In summary, Staff makes the following recommendations to the Commission regarding Ameren Missouri's Fuel Adjustment Clause ("FAC"):

- Continue Ameren Missouri's FAC with modifications;
- Order Ameren Missouri to include the information provided in Attachments c to d1 of Andrew Meyer's direct testimony filed in this proceeding in Ameren Missouri's FAC Monthly Reports, to clarify the major/minor accounts included and excluded within the FAC, and detailed designations and descriptions for each account, along with any changes to them between rate cases;
- Order Ameren Missouri to specifically delineate Research and Development ("R&D") project costs noted in case no. ER-2022-0026 within the general ledger by establishing its own individual major/minor accounts, activity code, or resource type, etc. and communicate that specific coding to Staff. In addition, order Ameren Missouri to specifically exclude those R&D specific coded items from the FAC;
- Continue to include one Base Factor for summer and one Base Factor for winter in the FAC tariff sheets, calculated from the Net Base Energy Costs ("NBEC") that the Commission includes in the revenue requirement upon which it sets Ameren Missouri's general rates in this case;
- Clarify that the only transmission costs and revenues that are included in Ameren's FAC are those that Ameren Missouri incurs for Purchased Power and Off-System Sales;
- Order Ameren Missouri to include language in its FAC tariff that any retirement and/or decommissioning costs related to the retirement of the Meramec Plant be removed from the FAC after the official retirement date, and no other costs will be included for recovery in the FAC after that date;
- Order Ameren Missouri to include language in its FAC tariff that all wind revenues associated with High Prairie and Atchison Wind Farms will be included for recovery in the FAC; and

- Order Ameren Missouri to change the FAC tariff Fuel Cost definition to state: "Fuel costs incurred to support sales and revenues associated with the Company's in service generating plants consisting of the following".

History

The Commission first approved Ameren Missouri's request for an FAC in Case No. ER-2008-0318. In Case Nos. ER-2010-0036, ER-2011-0028, ER-2012-0166, ER-2014-0258, ER-2016-0179, and ER-2019-0335, Ameren Missouri requested and received authorization to continue its FAC.

The primary features of Ameren Missouri's present FAC (tariff sheet MO. P.S.C. Schedule No. 6 Original Sheet No's 71 through 71.15) include:

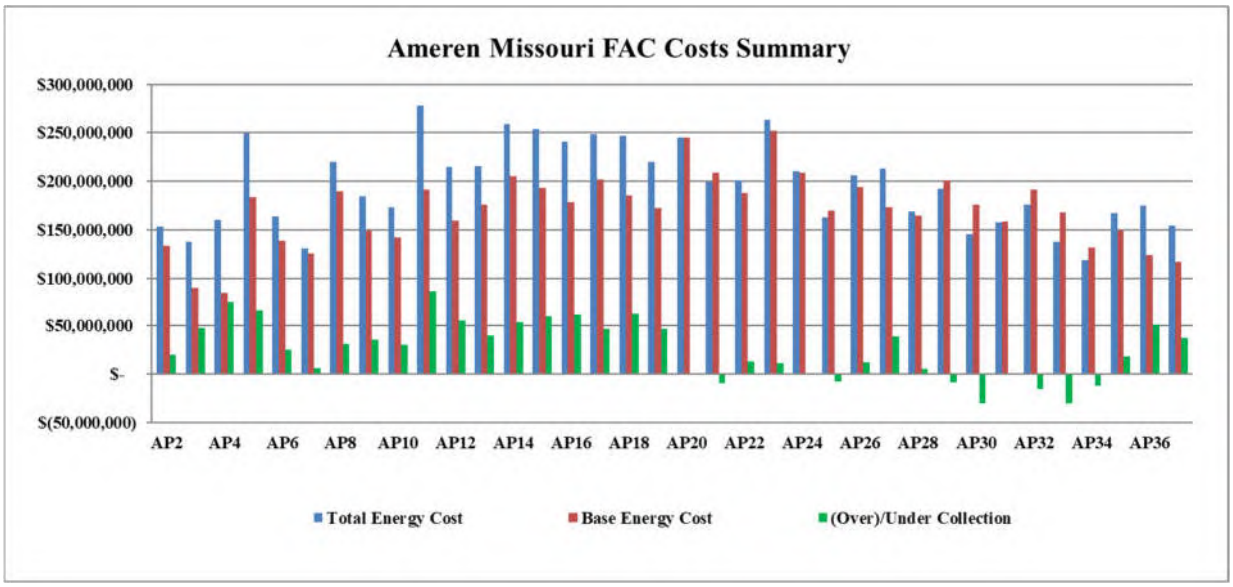
- Three 4-month accumulation periods[150] ("AP"): February through May, June through September, and October through January;
- Three 8-month recovery periods[151] ("RP"): October through May, February through September, and June through January;
- One Base Factor[152] for June through September calendar months (Summer) and one Base Factor for October through May calendar months (Winter);
- A 95%/5% sharing mechanism[153];
- Fuel Adjustment Rates[154] ("FAR") for individual service classifications adjusted for the two Ameren Missouri service voltage levels, rounded to the nearest $0.00001, and charged on each kWh billed; and
- True-up of any over- or under- recovery of revenues following every recovery period with a true-up amount being included in the determination of FAR for a subsequent recovery period.

[150] An AP is the calendar months during which the actual costs and revenues are accumulated for the purposes of the Fuel Adjustment Rate.
[151] A RP is the billing calendar months during which the FAR is applied to retail customer usage on a per kWh basis, as adjusted for service voltage.
[152] The Base Factor, which is equal to the normalized value for the sum of allowable fuel costs, plus costs of purchased power, and emission costs and revenues, less revenues from off-system sales, divided by corresponding normalized retail kWh as adjusted for applicable losses. At this time Staff does not have its estimate for the Base Factor for the FAC, but will provide it and a discussion on the calculation of the Base Factor when Staff files its Class Cost of Service/Rate Design Report on September 17, 2021. Staff will use the Base Energy Cost and the kWh at the generator from its fuel run to develop the Base Factor.
[153] 95% of the difference between the ANEC and B for each respective AP will be used to calculate the FAR.
[154] The FAR for each accumulation period is the amount that is returned to or collected from customers as part of a decrease or an increase of the FAC Fuel and Purchased Power Adjustment per kWh rate.

B. Ameren Missouri's Fuel and Purchased-Power Costs Net of Off-System Sales Revenues

Chart 1 below shows, for each full accumulation period[155] since the Commission authorized Ameren Missouri's FAC, a summary of Ameren Missouri's Actual Net Energy Cost ("ANEC"),[156] NBEC, and the over- or under-collection of fuel and purchased-power costs minus off-system sales revenues through its permanent rates.

Chart 1



At the conclusions of its electric rate cases, during AP5, AP8, AP12, AP22, AP26, and AP34 – Case Nos. ER-2010-0036, ER-2011-0028, ER-2012-0166, ER-2014-0258, ER-2016-0179 and ER-2021-0022, respectively – the Base Factors in Ameren Missouri's FAC were re-set. Over all full accumulation periods except for AP20, AP21, AP25, AP29, AP30, AP31, AP32, AP33, and AP34, Ameren Missouri under-collected its fuel and purchased-power costs in its permanent rates as a result of Ameren Missouri's ANEC exceeding the NBEC for the accumulation period.

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[155] Accumulation Period 1 was not a full accumulation period because it only covered the three calendar months of March 2009 through May 2009. All other accumulation periods cover four calendar months.

[156] Actual Net Energy Cost is defined in Ameren Missouri's current FAC tariff sheet, MO. P.S.C. Schedule 6, Original Sheet No. 71.1, as: Fuel costs and revenues (FC) plus purchased-power costs and revenues (PP) plus costs and revenues for SO_2 and NO_x emissions allowances (E) plus costs and revenues for net insurance recoveries (R) minus off-system sales revenues (OSSR). The formula appears as: ANEC = FC + PP + E + R – OSSR.

Chart 1 also shows that the range of Ameren Missouri's ANEC varies from approximately $119 million for AP34 (February 2020 – May 2020), to approximately $278 million for AP11 (June 2012 – September 2012). Based on this varied range of Ameren Missouri's ANEC, Chart 1 shows that Ameren Missouri's ANECs have continued to be large and volatile.

Revising the Base Factor

Correctly setting the Base Factor in Ameren Missouri's FAC tariff sheets is critical to both a well-functioning FAC and a well-functioning FAC sharing mechanism. For the reasons below, Staff recommends the Commission require the Base Factor in Ameren Missouri's FAC be set based on the NBEC that the Commission includes in the revenue requirement, which is to be set in Ameren Missouri's general rates in this case.

Table 1 shows three scenarios in which the FAC Base Energy Cost used to set the FAC Base Factor are equal to, less than, or greater than the Base Energy Cost in the revenue requirement upon which the Commission sets general rates:

Table 1: Base Energy Cost Case Studies

		Case 1	Case 2	Case 3
Line	**95%/5% Sharing Mechanism**	Energy Cost in FAC **Equal To** Base Energy Cost in Rev. Req.	Energy Cost in FAC **Less Than** Base Energy Cost in Rev. Req.	Energy Cost in FAC **Greater Than** Base Energy Cost in
a	Revenue Requirement	$ 10,000,000	$ 10,000,000	$ 10,000,000
b	Base Energy Cost in Rev. Req.	$ 4,000,000	$ 4,000,000	$ 4,000,000
c	Base Energy Cost in FAC	$ 4,000,000	$ 3,900,000	$ 4,100,000
	Outcome 1: Actual Energy Cost **Greater Than** Base Energy Cost in Revenue Requirement			
d	Actual Total Energy Cost	$ 4,200,000	$ 4,200,000	$ 4,200,000
	Billed to Customer:			
= b	in Permanent Rates	$ 4,000,000	$ 4,000,000	$ 4,000,000
e = (d - c) x 0.95	through FAC	$ 190,000	$ 285,000	$ 95,000
f = b + e	Total Billed to Customers	$ 4,190,000	$ 4,285,000	$ 4,095,000
g = f - d	**Kept/(Paid) by Company**	**$ (10,000)**	**$ 85,000**	**$ (105,000)**
	Outcome 2: Actual Energy Cost **Less Than** Base Energy Cost in Revenue Requirement			
h	Actual Energy Cost	$ 3,800,000	$ 3,800,000	$ 3,800,000
	Billed to Customer:			
= b	in Permanent Rates	$ 4,000,000	$ 4,000,000	$ 4,000,000
i = (h - c) x 0.95	through FAC	$ (190,000)	$ (95,000)	$ (285,000)
j = b + i	Total Billed to Customers	$ 3,810,000	$ 3,905,000	$ 3,715,000
k = j - h	**Kept/(Paid) by Company**	**$ 10,000**	**$ 105,000**	**$ (85,000)**

Case 1 illustrates that if the FAC Base Energy Cost used for the Base Factor is equal to the Base Energy Cost in the revenue requirement used for setting general rates, the utility does not over or under-collect as a result of the level of total actual energy costs. The FAC works as it is intended to do.

Case 2 illustrates that if the FAC Base Energy Cost used for the Base Factor is less than the Base Energy Cost in the revenue requirement used for setting general rates, the utility will collect more than was intended and customers pay more than the FAC was designed for them to pay, regardless of the level of actual energy costs.

Case 3 illustrates that if the FAC Base Energy Cost used for the Base Factor is greater than the Base Energy Cost in the revenue requirement used for setting general rates, the utility will not collect all of the costs that was intended in the FAC design, and customers pay less than the entire amount intended regardless of the level of actual energy costs.

These three cases illustrate the importance of setting the Base Factor in the FAC correctly, i.e., revising the Base Factor to match the Base Energy Cost in the revenue requirement used for setting general rates. Case 1 is the preferred case, because the amount refunded to or collected from customers is closest to zero.

Table 2 below contains a comparison of Ameren Missouri's FERC account expenses and revenues, annual kWh's, cents per kWh, and NBEC approved in the last general rate case, Case No. ER-2019-0335 and Ameren Missouri's proposed NBEC in this case. Ameren Missouri's proposed fuel and purchased-power expenses decreased a total of 3.10 percent compared to the fuel and purchased-power expenses approved in Case No. ER-2019-0335. Ameren Missouri's proposed FAC revenues increased a total of 9.05% compared to the revenues approved in Case No. ER-2019-0335. Although the FAC revenues increased a total of 9.05%, the overall NBEC is decreasing by 12.24%; this explains the overall decrease in revenues and fuel and purchased-power expenses which is consequently why the proposed Base Factor is decreasing.

continued on next page

Table 2
Comparison of Ameren Missouri's NBEC From ER-2019-0335 to ER-2021-0240

		ER-2019-0335	ER-2021-0240	Difference	Percent Difference
FERC Account Expenses	**501 Coal**	$ 523,247,171	$ 498,669,946	$ (24,577,225)	-4.70%
	502 AQCS	$ 7,737,564	$ 7,807,244	$ 69,680	0.89%
	518 Nuclear	$ 80,726,617	$ 80,163,000	$ (563,617)	-0.70%
	547 Natural Gas	$ 29,127,313	$ 20,417,629	$ (8,709,684)	-29.90%
	555 Purchased Power	$ 45,852,392	$ 48,257,503	$ 2,405,111	5.25%
	565 Transmission by Others	$ 1,089,545	$ 1,625,255	$ 535,710	49.17%
	Capacity Expense	$ 8,208,207	$ 16,814,666	$ 8,606,459	104.85%
	925 Replacement Power Ins.	$ -	$ 638,206	$ 638,206	100.00%
Total FERC Account Expenses		**$ 695,988,809**	**$ 674,393,449**	**$ (21,595,360)**	**-3.10%**
FERC Account Revenues	**447 OSSR Energy**	$ 259,827,205	$ 282,149,000	$ 22,321,795	8.59%
	447 Capacity Sales	$ 17,633,058	$ 23,804,324	$ 6,171,266	35.00%
	447 Other (Note 1)	$ 20,887,281	$ 19,346,476	$ (1,540,805)	-7.38%
	456 Transmission Revenues	$ 406,498	$ 495,886	$ 89,388	18.03%
Total FERC Account Revenues		**$ 298,754,042**	**$ 325,795,686**	**$ 27,041,644**	**9.05%**
Net Base Energy Costs		**$ 397,234,767**	**$ 348,597,763**	**$ 48,637,004**	**12.24%**
	Annual kWh	33,095,994,000	32,389,488,116	706,505,884	2.13%
	Annual Cents per kWh	$ 12.00	$ 10.76	$ 1.240	10.33%
	Winter 1 Cents per kWh	$ 1.167	$ 1.036	$ (0.131)	-11.19%
	Winter 2 Cents per kWh	$ 1.167	$ 1.036	$ (0.131)	-11.19%
	Summer Cents per kWh	$ 1.259	$ 1.149	$ (0.110)	-8.73%

Note 1: Other revenues in FERC Account 447 include the following:
MISO Make Whole Payments Margins
Ancillary Services Revenue
Financial Swaps
Real-Time Load and Generation Deviation

Source: Column ER-2019-0335 amounts were approved per order by the Commission in Case No. ER-2019-0335.
Column ER-2021-0240 amounts are from Company Witness Mitchell Lansford's Schedule D-17, updated in Data Request 244.1.

Staff recommends continuation of Ameren Missouri's FAC. Ameren Missouri's fuel and purchased-power costs, less off-system sales revenues, continue to be volatile. While some FAC related costs can be controlled by the company there are some that are more difficult for Ameren

Missouri to control, and at $348,597,763, represent approximately 10.85%[157] of Ameren Missouri's proposed annual revenue requirement for this case.

In the current rate case Ameren Missouri is proposing to re-base the Base Factor to $0.01266 per kWh for June to September calendar months and $0.01208 per kWh for October through May calendar months. At this time Staff does not have its estimate for the Base Factor for the FAC, but will provide it and a discussion on the calculation of the Base Factor when Staff files its Class Cost of Service/Rate Design Report on September 17, 2021. Staff will use the Base Energy Cost and the kWh at the generator from its fuel run to develop the Base Factor.

Staff witness Alan J. Bax addresses the Voltage Adjustment Factors in the Fuel and Purchased Power Modeling section of this Cost of Service Report.

Additional Filing Requirements

In addition to the recommendations listed at the beginning of this section, due to the accelerated Staff review process necessary with FAC adjustment filings,[158] just as it did in previous Ameren Missouri rate cases, Staff is recommending the Commission order Ameren Missouri to do the following:

- As part of the information Ameren Missouri submits when it files a tariff modification to change its Fuel and Purchased Power Adjustment rate, include Ameren Missouri's calculation of the interest included in the proposed rate;
- Continue to provide monthly filings that will aid the Staff in performing FAC tariff, prudence and true-up reviews; these filings should specifically include tabs 5D, 5E, and 5F within the current monthly filings;
- In addition to the monthly reports required by 20 CSR 4240-20.090(5), provide Ameren Missouri's MISO Ancillary Services Market ("AMS") market settlements and revenue neutrality uplift charges;
- Maintain at Ameren Missouri's corporate headquarters, or at some other mutually-agreed-upon place within a mutually-agreed-upon time for review, a copy of each and every nuclear fuel, coal, and transportation contract Ameren Missouri has that is or was in effect for the previous four years;

[157] This percentage is comprised of the proposed Net Base Energy Costs of $348,597,763, divided by the total proposed annual revenue requirement of $3,212,523,000.
[158] The Company must file its FAC adjustment 60 days prior to the effective date of its proposed tariff sheet. Staff has 30 days to review the filing and make a recommendation to the Commission. The Commission then has 30 days to approve or deny Staff's recommendation.

- Within 30 days of the effective date of each and every nuclear fuel, coal, and transportation contract Ameren Missouri enters into, provide both notice to Staff of the contract and opportunity to review the contract at Ameren Missouri's corporate headquarters or at some other mutually-agreed-upon place;
- Maintain at Ameren Missouri's corporate headquarters, or provide at some other mutually-agreed-upon place within a mutually-agreed-upon time, a copy for review of each and every natural gas contract Ameren Missouri has that is in effect;
- Within 30 days of the effective date of each and every natural gas contract Ameren Missouri enters into, provide both notice to Staff of the contract and an opportunity for review of the contract at Ameren Missouri's corporate headquarters or at some other mutually-agreed-upon place;
- Provide a copy of each and every Ameren Missouri hedging policy that is in effect at the time the tariff changes ordered by the Commission in this rate case go into effect for Staff to retain;
- Within 30 days of any change in an Ameren Missouri hedging policy, provide a copy of the changed hedging policy for Staff to retain;
- Provide a copy of Ameren Missouri's internal policy for participating in the MISO ASM, including any Ameren Missouri sales/purchases from that market that are in effect at the time the tariff changes ordered by the Commission in this rate case go into effect for Staff to retain;
- If Ameren Missouri revises any internal policy for participating in the MISO ASM, within 30 days of that revision, provide a copy of the revised policy with the revisions identified for Staff to retain;
- The monthly as-burned fuel report supplied by Ameren Missouri required by 20 CSR 4240-3.190(1)(B) shall explicitly designate fixed and variable components of the average cost per unit burned including commodity, transportation, emission, tax, fuel blend, and any additional fixed or variable costs associated with the average cost per unit reported (Staff is willing to work with Ameren Missouri on the electronic format of this report);
- Monthly natural gas fuel reports that include all transactions (spot and longer term), including terms, volumes, price and analysis of number of bids;
- Include within the FAC Monthly Reports information related to the Renewable Choice Program, as referenced in the Non-Unanimous Stipulation and Agreement approved in ET-2018-0063;
- Include within the FAC Monthly Reports information to reflect the tracking of Ameren Missouri's efforts to make and maximize off system sales and revenues flowing through the FAC; and

- Notification to Staff within 30 days of entering a new long-term contract for purchased power or changes to a purchased power contract.

Staff Expert/Witness: Brooke Mastrogiannis

XVI. Other Issues

A. Cost Savings Measurement Reporting

As part of the Stipulation and Agreement filed in Case No. ER-2019-0335, Ameren Missouri agreed to provide Staff and other Signatories with a Cost Savings Measurement report for cost savings measures with a threshold of $500,000 for projects that are focused on operational efficiencies. Prior to the settlement in that case Ameren Missouri had indicated in its response to Staff's Data Requests in various rate cases that they did not track and quantify cost savings from the various cost savings initiatives under taken. ** [redacted] **

Staff would like Ameren Missouri to continue to provide the information that is already contained within the report, however Staff would like to see some modification to the report. First, Staff would like to see the actual quantified costs savings for the period examined, and secondly Staff would like to see the amount of any variance between actual cost savings and the budgeted/forecasted cost saving with a detailed description regarding what lead to the variance. Staff recommends that the Commission order Ameren Missouri to include the additional detail requested by Staff in the next cost savings report due in July of 2022. It is important to be able to quantify these cost savings so that during a rate case, the savings can be passed on through rates to ratepayers.

McKinsey Study & KMPG Study

In the previous Ameren Missouri gas case, GR-2019-0077, Staff discovered that Ameren Services had contracted with Klynveld Peat Marwick Goerdeler ("KPMG") to perform a benchmarking study of Ameren Services. In March of 2021, Ameren contracted with McKinsey to perform a similar study to identify areas of potential cost savings within the various workstreams of Ameren Corporation and its affiliates. The first part of the project was to get a baseline of the current Customer Affordability programs and provide an assessment, which involved reviewing the target areas and current initiatives by segment and area, i.e., Ameren Missouri Nuclear. The next step was to identify new areas where cost savings initiatives could be implemented and to refine existing ones. Then McKinsey would work with the segment groups to "blueprint" the move from the current spend to the targeted 2025 spend. Finally McKinsey would prepare a "2021-2022 integrated masterplan" that would provide a high level view of expected outcomes, recommended targets, resourcing, and investment to deliver on the 24 month plan. Additionally McKinsey would provide Ameren with a "playbook" for Ameren Missouri to use going forward for to support similar performance improvement diagnostic efforts going forward. During the study, McKinsey ** [redacted] . **

Cost Savings Reflected in Revenue Requirement

As part of the Smart Meter program, Ameren Missouri is replacing AMR meters with AMI meters. There is a meter reading fee associated with the AMRs that are still in use by Ameren Missouri, as the AMR is replaced by an AMI meter, the meter reading fees are eliminated. Staff has included an annualized amount for meter reading fees based on the costs for reading fees incurred in June of 2021 times twelve to reflect as a current ongoing level of expense.

** [redacted]

[redacted] These changes are reflected in the payroll annualization. **

Staff will continue to review the cost savings measures implemented by Ameren Missouri through the true-up cut-off of September 30, 2021 and may propose additional adjustments.

Staff Expert/Witness: Jason Kunst, CPA

B. Smart Energy Plan

In February 2019, Ameren Missouri introduced their Smart Energy Plan that includes $5.3 billion of electric investment and $1 billion in wind investment from 2019 through 2023. This plan is meant to accelerate investment in smart grid technologies and renewable energy while hardening and upgrading the electric grid for efficient and reliable use. This will establish an integrated grid where energy and information is bi-directional and flowing to and from customers and generation sources. Ameren Missouri plans to complete projects to upgrade the grid in their service territory to promote safety, security, reliability and resiliency. These projects include:

1. Installation of switching devices and communications technologies to reduce the length of outages
2. Installation of 1,000 new and fortified utility poles to better withstand severe weather
3. Upgrading aging and under-performing assets such as substations to improve service reliability
4. Upgrading specific portions of its system from 4 kV to 12 kV
5. Upgrading infrastructure and incorporating route diversity and smart grid sensor technology into operations for reliability and faster outage response times
6. Employing smart grid technologies into new and existing substations
7. Developing a communications network to monitor and enable analytics from connected grid devices

** [redacted] **

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Staff Expert/Witness: Jane C. Dhority

Staff Investigation

As part of Staff's investigation of the Smart Energy Plan ("SEP"), Staff reviewed the process by which Ameren Missouri identified projects of need, how projects were evaluated, and how the evaluation process was developed. While the processes for project identification and

project evaluation appear to be reasonable, Staff will continue to review supporting documentation to confirm if Ameren Missouri adhered to those procedures.

Ameren Missouri relies on field personnel and Ameren Missouri subject matter experts in areas of distribution planning and operations who have detailed knowledge in the daily operation of the grid to make the best judgment, based on their expertise, in identifying potential projects for the distribution system. Given this focus, the subject matter experts ("SMEs") identifying potential projects for the distribution system consider a number of factors when proposing a project, such as: age of assets, safety, reliability history, worst performing circuits, number of customers impacted, operating experience in the field, operating performance during storms, asset loading, expected future load growth, and many others.[159] In all situations the SMEs will identify the constraint on the system that needs to be addressed and consider if current grid assets can be reconfigured and if not, develop potential solutions which run the spectrum of cost and complexity.[160] Once the need for a given project is established, a range of solutions are identified and evaluated to identify the project scope that best addresses the solution for the project, while also factoring costs of the final solution to allow Ameren Missouri to address other needs both within the category and across the system into the final decision.[161]

After distribution system projects have been identified for consideration in the Smart Energy Plan they are entered into a project portfolio management system. A three "gate" review and approval process is utilized so that as the project is considered for inclusion in the SEP, additional project details are entered, including final scoping and project costs. The level of authority required to approve a project increases at each gate starting with the project submitter's supervisor at gate 1, the responsible director at gate 2, and finally the Category Owner (director level) at gate 3.[162] Any project over $5M is subject to additional review and scrutiny through an Oversight Committee. Projects of this scale are subject to the same scrutiny as all other projects by subject matter experts and category owners, but require additional documentation and discussion around project scope, alternative analysis, total project costs, benefits, and contract

[159] Ameren Missouri response to Staff DR No. 0605.
[160] Ameren Missouri response to Staff DR No. 0605.
[161] Ameren Missouri response to Staff DR No. 0612.
[162] Ameren Missouri response to Staff DR No. 0609.

structure.[163] Staff requested additional project-level information regarding the Smart Energy Plan projects that were subject to Oversight Committee review and may modify Staff's ultimate recommendation based upon the information provided.

Ameren Missouri established a structure of six categories to classify projects based on the need being addressed by the project.[164] The project categories are grid resiliency, smart grid, substation condition-based modernization, system hardening, underground cable, and underground revitalization.[165] Each category has an assigned Category Owner who has direct oversight responsibilities for the projects included in their assigned categories. These category owners rely on extensive experience operating Ameren Missouri's distribution system to review projects and approve those projects that best address the needs of the distribution system based on their expert judgment. The category owners consider a number of factors when evaluating potential such as: safety, reliability history, worst performing circuits, number of customers impacted, age of assets, operating experience in the field, operating performance during storms, asset loading, expected future load growth, and many others. A final list of projects for all categories is reviewed and approved by the Director, Operation Excellence, Vice President, Operations and Technical Services, and Senior Vice President Customer and Power Operations.[166]

Projects that are approved, but not yet included in the plan based on the review of the business function SME's and Ameren Missouri Capital Governance Team will be reevaluated for inclusion in the next five-year plan.[167]

After the passage of Senate Bill 564 and in preparation for the planning and execution of the Smart Energy Plan, Ameren Missouri Leadership established a centralized Capital Governance Team to oversee the development of the five-year Smart Energy Plan. This team worked across the Ameren Missouri functions to gather lists of projects that each function believed needed to be completed so that the Team plus the subject matter experts could evaluate them for consideration in the plan subject to funding and resource availability. Each category

[163] Ameren Missouri response to Staff DR No. 0612.
[164] Ameren Missouri response to Staff DR No. 0609.
[165] Ameren Missouri response to Staff DR No. 0605.
[166] Ameren Missouri response to Staff DR No. 0609.
[167] Ameren Missouri response to Staff DR No. 0610.

was assigned a category owner (the SME) who has oversight responsibilities for developing the category strategy in relation to the Smart Energy Plan (SEP) vision and reviewing and approving the proposed projects included in their category.[168]

Given the level of overall investment and complexity of the projects included within the Smart Energy Plan, Ameren Missouri should be able to provide documentation that supports the investment decisions and documentation that verifies that the Company is adhering to the approval process it developed for evaluating potential SEP projects.

Through the discovery process of this case, Staff requested various documentation and cost benefit analyses for the projects that were included within the Smart Energy Plan. Several of the data requests issued by Staff with respect to Smart Energy Plan project documentation were objected to by Ameren Missouri and have been the subject of discovery conferences within this case. Staff received documentation for several projects that were subject to Oversight Committee review on August 25, 2021 nearly seven weeks after the original due date of Staff's initial request for supporting documentation. Staff will continue to review the supportive documentation for the Smart Energy Plan projects through the pendency of this case.

Staff Expert/Witness: J Luebbert

Smart Energy Plan Investments

Through the process described by Staff witness J Luebbert above, Ameren Missouri has identified approximately ** [redacted], ** as being operational during January 2019 through June 2021. Included in its Smart Energy Plan are ** [redacted] ** related to the Smart Meter Program totaling approximately ** [redacted]. ** The largest projects are the installation of AMI meters and the Smart Meter System Integration system.

The following table provides the Smart Energy Plan spending through June 2021 broken down by classification rather than by the Capital Plan category:

[168] Ameren Missouri response to Staff DR No. 0608.

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Engineering Analysis reviewed a selection of Ameren Missouri's Smart Energy Plan projects with consideration of the following: whether the projects are needed for safe and reliable service, whether the projects provide reliability improvements, and whether there were significant variances in costs from an individual project's budget and its actual cost.

In order to complete this review, Engineering Analysis selected 52 projects (44 individual projects and 8 projects which were Standing Work Orders[169]) to review in more detail. All of the projects selected were identified by Ameren Missouri as operational during the period January 2019 through February 2021. The 44 individual projects selected generally totaled more than ** [redacted] ** in capital expenditures from 2019 through 2021. The projects fall under the classification of ** [redacted][170], [redacted]. ** Staff intentionally did not select projects that were noted to be related to ** [redacted]. **

The table below provides a sample of projects reviewed, the 5-Year Capital Plan Category, and the justification Ameren Missouri used in its internal process:

**

[redacted]

[169] A Standing Work Order is used to fund similar work which are less than $100,000 each.
[170] Such as renewables.
[171] Response to 102.2 ** [redacted]. **

[redacted]

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[172] Response to 102.2 ** [redacted] **

[173] Response to 102.2 ** [redacted] **

[174] Response to 102.2 ** [redacted] **

[175] Public response to Staff DR No. 0102.2.

Ameren Missouri provided Staff with project specific documentation for the 44 individual projects. This included items such as the project notification or work authorization, change orders and purchase orders over $100,000, and final cost summary. For the 8 Standing Work Order projects, Ameren Missouri provided Staff a budget and final cost summary but providing additional information was impractical.

Generally, with respect to the 44 individual projects reviewed by Engineering Analysis, the justification for the individual projects were documented and reasonable. However, Staff continues to review documentation regarding whether the Company is adhering to its internal approval process discussed in J Luebbert's testimony above.

As with any construction project, there are instances where Engineering Analysis found variances in an individual project's budget and its actual cost. For example, a project may see an increase in actual cost due to unforeseen field conditions. Engineering Analysis reviewed the individual project Change Orders and Purchase Orders over $100,000 and is continuing to follow-up with Ameren Missouri regarding specific questions. Additionally, ** [redacted]. ** Staff will continue its review, however, at this time no specific disallowance is being recommended.

Staff Expert/Witness: Claire M. Eubanks, PE

C. Smart Metering Program

** [redacted] **

Ameren Missouri began replacing existing AMR meters with AMI meters in July 2020, with full replacement of all electric (1.2 million) end-points anticipated by year-end 2025. The systems and functionality to support the new Ameren Missouri Advanced Metering

Infrastructure (AMI) platform was successfully deployed on May 31, 2020. Ameren Missouri has deployed 230,788 meters for electric customers as of April 30, 2021.

Staff Expert/Witness: Jane C. Dhority

D. Renewable Choice Program "Green Tariff"

In case ET-2018-0063, Ameren Missouri requested approval of an accounting authority order, along with tariff sheets in order to implement a new service known as the Renewable Choice Program, or Green Tariff program. The program was designed to provide customers with a load of 2.5 MW or greater, or governmental entities, the opportunity to subscribe to wind energy either through construction of wind generation or through a wind purchased power agreement. The subscriptions are in addition to, not a replacement for, a customer's normal electric service. Customers acquire the renewable characteristics of the wind energy acquired or produced for the Program by obtaining the renewable energy credits (RECs) associated with the energy they are subscribed. The Commission ordered the approval of the stipulation & agreement establishing the renewable energy tariff and it became effective on August 15, 2018.

As of June 30, 2021, the Renewable Choice Program is still a tariffed program of the Company. However, there are currently no wind generation assets in service under, or under development for, the program, and no customers are enrolled or receiving service under the program. Company states that there are no active plans to develop a resource under the Renewable Choice Program due to challenges with the Renewable Choice Program that have resulted in the inability to execute a project under the program. The Company has determined that the subscription model made getting alignment between the timing of binding customer commitments and potential project contracting challenging in that the subscription model contemplated having firm pricing based on the cost of a specific resource to be developed for the program prior to having customers make a binding commitment to participate. Uncertain participation levels prevented the Company from securing a project commitment from developers on reasonable pricing terms. Also, the nature of the projects available compared to the pricing model of the program resulted in difficulty finding projects that would be expected to be economically attractive to potential customers.

At this time the Company has not made a final decision to discontinue the program. The Company opened a docket in Case No. EA-2021-0342, in which it expects to file a program tariff and CCN application to implement a voluntary renewable subscription program targeting the customers originally contemplated to be served by the Renewable Choice Program. The expected program proposal, which is expected to be called Renewable Solutions, has many similar features compared with Renewable Choice, but adds solar as a potential resource (Renewable Choice only features wind resources), and features changes to the subscription model and pricing model to address the challenges that were identified in executing projects under Renewable Choice. The Renewable Solutions program is expected to be filed late in the summer of 2021. The Company anticipates the costs and revenues, along with certain deferrals for which it will seek regulatory authorizations, of the Renewable Solutions program to be reflected in the revenue requirement in general rate cases as was the request with the Renewable Choice Tariff.

Staff Expert/Witness: Lisa M. Ferguson

Appendix 1 - Staff Credentials

Appendix 2 - Support for Staff Cost of Capital Recommendations

Appendix 3 - Other Staff Schedules

Appendix 4 - Advertising

Appendix 5 - Construction Audit and Engineering Review Report

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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF PAUL K. AMENTHOR

STATE OF MISSOURI)
) ss.
COUNTY OF ST. LOUIS)

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 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 St. Louis, State of Missouri, at my office in St. Louis, on this 3rd day of September 2021.

LISA M. FERGUSON
Notary Public - Notary Seal
State of Missouri
Commissioned for St. Louis County
My Commission Expires: June 23, 2024
Commission Number: 16631502

Lisa M. Ferguson
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF ALAN J. BAX

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

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

Further the Affiant sayeth not.

ALAN J. BAX

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 1st day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF KIMBERLY K. BOLIN

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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

Further the Affiant sayeth not.

Kimberly K. Bolin
KIMBERLY K. BOLIN

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 1st day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF KORY J. BOUSTEAD

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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 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 1st day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF CHRISTOPHER D. CALDWELL

STATE OF MISSOURI)
) ss.
COUNTY OF ST. LOUIS)

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 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 St. Louis, State of Missouri, at my office in St. Louis, on this 3rd day of September 2021.

LISA M. FERGUSON
Notary Public - Notary Seal
State of Missouri
Commissioned for St. Louis County
My Commission Expires: June 23, 2024
Commission Number: 16631502

Lisa M. Ferguson
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF PETER CHARI

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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

Further the Affiant sayeth not.

PETER CHARI

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 1st day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF KIM COX

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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

Further the Affiant sayeth not.

Kim Cox
KIM COX

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 2nd day of September 2021.

D Suzie Mankin
Notary Public

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF CEDRIC E. CUNIGAN

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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

Further the Affiant sayeth not.

CEDRIC E. CUNIGAN

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 2nd day of September 2021.

Notary Public

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF JANE C. DHORITY

STATE OF MISSOURI)
) ss.
COUNTY OF ST. LOUIS)

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

Further the Affiant sayeth not.

JANE C. DHORITY

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of St. Louis, State of Missouri, at my office in St. Louis, on this 3rd day of September 2021.

LISA M. FERGUSON
Notary Public - Notary Seal
State of Missouri
Commissioned for St. Louis County
My Commission Expires: June 23, 2024
Commission Number: 16631502

Lisa M. Ferguson
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF CLAIRE M. EUBANKS, PE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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

Further the Affiant sayeth not.

Claire M Eubanks
CLAIRE M. EUBANKS, 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 2nd day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF NANCY L. HARRIS

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

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

Further the Affiant sayeth not.

Nancy L. Harris

NANCY L. HARRIS

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 1st day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF TAMMY HUBER

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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

Further the Affiant sayeth not.

Tammy Huber
TAMMY HUBER

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 1st day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF JORDAN T. HULL

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

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

Further the Affiant sayeth not.

Jordan Hull

JORDAN T. HULL

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 15th day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

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 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

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 2nd day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF JASON KUNST, CPA

STATE OF MISSOURI)
) ss.
COUNTY OF ST. LOUIS)

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 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 St. Louis, State of Missouri, at my office in St. Louis, on this 3rd day of September 2021.

LISA M. FERGUSON
Notary Public - Notary Seal
State of Missouri
Commissioned for St. Louis County
My Commission Expires: June 23, 2024
Commission Number: 16631502

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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF SHAWN E. LANGE, PE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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

Further the Affiant sayeth not.

Shawn E Lange
SHAWN E. LANGE, 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 2nd day of September 2021.

D Suzie Mankin
Notary Public

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF J LUEBBERT

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

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

Further the Affiant sayeth not.

J LUEBBERT

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 2nd day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF BROOKE MASTROGIANNIS

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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

Further the Affiant sayeth not.

Brooke Mastrogiannis
BROOKE MASTROGIANNIS

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 1st day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF CHARLES T. POSTON, PE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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

Further the Affiant sayeth not.

CHARLES T. POSTON, 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 2nd day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF JOSEPH P. ROLING

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

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 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 2nd day of September 2021.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
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 Adjust Its Revenues for Electric Service	)))	Case No. ER-2021-0240

AFFIDAVIT OF MICHAEL L. STAHLMAN

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

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

Further the Affiant sayeth not.

MICHAEL L. STAHLMAN

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 2nd day of September 2021.

Notary Public

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070