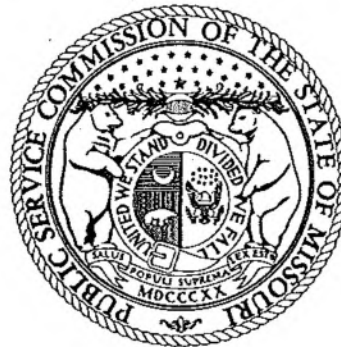


Exhibit No. 201

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 **

COST OF SERVICE REPORT

**UNION ELECTRIC COMPANY,
d/b/a Ameren Missouri**

CASE NO. ER-2021-0240

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1 **COST OF SERVICE REPORT**

2 **UNION ELECTRIC COMPANY,**
3 **d/b/a Ameren Missouri**

4 **CASE NO. ER-2021-0240**

5 **I. Executive Summary**

6 Staff has conducted a review in Case No. ER-2021-0240 of all revenue requirement cost
7 of service components (capital structure and return on rate base, rate base, depreciation expense
8 and other operating expenses) which comprise Union Electric Company's d/b/a Ameren
9 Missouri ("Ameren Missouri") revenue requirement. This audit was in response to Ameren
10 Missouri's filing made on March 31, 2021, seeking to increase its retail rates approximately
11 \$299,468,000 million on an annual basis.

12 Staff's recommended increase of \$221,386,208 million in revenue requirement is based
13 upon a test year for the twelve months ending December 31, 2020, including true-up estimates
14 through September 30, 2021. Staff recommends a return on equity ("ROE") of 9.50% for
15 Ameren Missouri. This ROE combined with recommended capitalization ratios and senior
16 capital cost rate results in an overall rate of return or cost of capital for Ameren Missouri of
17 6.725%.

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

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

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

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

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

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

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

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

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

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

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

28 *Staff Expert/Witness: Lisa M. Ferguson*

1 **II. Background**

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

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

13 *Staff Expert/Witness: Lisa M. Ferguson*

14 **III. Test Year/True-Up Period**

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

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

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

5 | *Staff Expert/Witness: Lisa M. Ferguson*

6 | **IV. Ameren Board of Directors and Board Committee Meeting Documentation**

7 | Ameren Corporation (“Ameren”) has a board of directors that oversees all of Ameren’s
8 | affiliate operations and Ameren Missouri also has a board of directors that meets periodically.
9 | Ameren’s and Ameren Missouri’s boards have board meeting minutes that Staff reviews.
10 | Ameren also has several board committees that monitor different aspects of corporate business
11 | and then report to the Board. These committees are:

12 | Audit & Risk

13 | Finance

14 | Human Resources

15 | Nominating & Corporate Governance

16 | Nuclear & Operating

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

20 | ELT – Executive Leadership Team

21 | SLT – Senior Leadership Team

22 | ALT – Ameren Leadership Team

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

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

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

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

16 *Staff Expert/Witness: Lisa M. Ferguson*

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

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

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

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

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

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

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

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

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

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

- 6 1. Travel, training and office supplies expense: \$9,596,296
- 7 2. Utility service provided to facilitates leased or owned by Ameren Missouri:
8 \$646,076
- 9 3. Reduced benefits: \$35,798,398

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

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

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

24 **Additional Cleaning Costs and Personal Protective Equipment, Etc.** - Staff
25 included O&M costs related to protecting Ameren Missouri employees and customers, and
26 Ameren Services Company. The amount of these costs that should be deferred is
27 \$11,120,093.

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

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

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

6 *Staff Expert/Witness: Kimberly K. Bolin*

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

8 **A. Summary**

9 Staff estimated the market based cost of common equity (“COE”), and calculated an
10 authorized return on equity (“ROE”) recommendation for Ameren Missouri’s vertically
11 integrated electric utility operations using a comparative COE analysis. Staff’s analysis takes
12 into account changes in economic and capital market conditions by employing widely-used COE
13 estimation methodologies: the constant-growth discount cash flow model (“DCF”) and the
14 capital asset pricing model (“CAPM”). The comparative analysis method allowed Staff to
15 calculate the change in authorized ROE based on the change in its COE estimate from period to
16 period by using the Commission’s decision in the most recent The Empire District Electric
17 Company (“Empire”) rate case¹ as a benchmark. The most recent Empire rate case was fully
18 litigated before the Commission, including rate of return/capital structure issues.

19 In the Empire rate case, the Commission authorized an ROE of 9.25% and Staff
20 estimated a corresponding DCF COE of 7.74% (see PC-11).² Staff’s DCF COE estimate for the
21 current case is 8.29% (see PC-11), which indicates that COE has increased by up to 55³
22 (see PC-11) basis points (“bps”) since the Commission’s decision in the Empire rate case.
23 However, Staff believes that current utility COE estimates are unusually and unsustainably high
24 due to the effects of the COVID-19. When COVID-19 hit in 2020, it caused massive volatility
25 in the economy - gross domestic product (“GDP”) fell sharply, followed by an equally sharp
26 recovery.⁴ The recovery from the COVID-19 is spurring fears of high inflation expectations and,

¹ *In the matter of Empire District Electric Company*, Case Nos. ER-2019-0374 (*Report & Order*, issued February 21, 2018) at page 35.

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>.

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

8 Based upon the above discussion, Staff's position is it is reasonable that the ROE be
9 increased by 25 basis points, instead of 55 bps; from the 9.25% ROE authorized for Empire, to
10 9.50%, the midpoint of Staff's recommended zone of reasonableness of 9.25% to 9.80%. Staff
11 set the zone of reasonableness by adding 55 bps (the total increase in COE since the Empire rate
12 case) to the Commission's authorized ROE (9.25%) in the Empire rate case, for a total of 9.80%.
13 For the lower limit of the range of reasonableness, Staff used the Commission-authorized ROE,
14 9.25%, in the Empire rate case.

15 Staff also recommends that the Commission set Ameren Missouri's allowed Rate of
16 Return ("ROR") based on Ameren Missouri's own capital structure of 50.32% common equity,
17 48.93% long-term debt and 0.75% preferred stock, as of June 30, 2021. Likewise, Staff
18 recommends Ameren Missouri's own cost of debt of 3.85% for setting ROR in this proceeding.
19 The summary of Staff's ROR recommendation is in the following Table:

20
21
22
23
24
25 *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

Capital Component	Percentage of Capital	Embedded Cost	Allowed Rate of Return Using Common Equity Return of:		
			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).

1 Embodied in these three principles is the economic theory of the opportunity cost of
2 investment. The opportunity cost of investment is the next best return that investors forego in
3 order to invest in their chosen investment. Investors' opportunity costs vary depending on market
4 and business conditions.

5 Methodologies of financial analysis have advanced greatly since the *Bluefield* and *Hope*
6 decisions.¹¹ Additionally, today's utilities compete for capital in a global market rather than a
7 local market. Nonetheless, the parameters defined in those cases are readily met using current
8 methods and theory. The principle of commensurate return is based on the concept of risk.
9 Financial theory holds that the return an investor may expect is reflective of the degree of risk
10 inherent in the investment, with risk measured as the likelihood an investment will not perform
11 as expected. Any line of business carries with it its own risks and it follows, therefore, that the
12 return Ameren Missouri shareholders may expect is equal to that required for comparable-risk
13 utility companies.

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

18 Staff has relied primarily on the analysis of a comparable group of companies to estimate
19 the COE for Ameren Missouri, applying this comparable-company approach through the use of
20 the DCF and CAPM. Properly used and applied in appropriate circumstances the DCF
21 and CAPM can provide accurate estimates of utilities' COE. It is a well-accepted economic
22 theory that a company that earns its cost of capital will be able to attract capital and maintain
23 its financial integrity; therefore, Staff's recommended authorized ROE based on the COE,
24 derived from comparison of peer companies, is consistent with the principles set forth in *Hope*
25 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

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 \(BEA\)](#).

1 case, real annual GDP rose by 2.3%, down from the 2018 increase of 2.9%.¹⁸ Real GDP is
2 projected to grow at 3.1%, 3.2% and 2.3% in 2021, 2022 and 2023, respectively. In the next
3 10 years, real GDP is projected to grow 2.1%, on average.¹⁹ The Federal Open Market
4 Committee's ("FOMC") long-running projection for real GDP growth is 1.80%.²⁰ The
5 Congressional Budget Office ("CBO") projects a 3.70% long-term nominal GDP growth rate.²¹
6 The long-running real GDP growth rate projection was 1.89%, estimated in 2019 when Staff
7 presented testimony in the Empire rate case. Availability of vaccines, increased vaccination
8 rates and the Fed's assurances to continue to support the economy, are boosting prospects for
9 continued economic recovery. During economic recovery, utilities tend to underperform the
10 broader market which, consequently, pushes COE for utilities higher. Compounded by the
11 current fears of transitory inflation, utility equities are currently depressed and COE elevated.
12 As Staff alluded to, inflation fears are likely to subside in the near future, meaning that COE
13 should come down to more reasonable levels. Already there is evidence that inflation fears are
14 subsiding. Long-term interest rates (yields) have come down from the high of about 2.45%
15 reached in March, to about 1.99%, as of July 9, 2021. All else the same, high inflation
16 expectation means higher interest rates (yields).^{22, 23, 24}

17 Fears of increased inflation are real, though likely overstated. Larry Summers, a noted
18 economist and former Treasury Secretary, noted that, "The Federal Reserve shouldn't raise
19 interest rates today but should at least start to express more concern about the inflation outlook",
20 ([https://www.marketwatch.com/story/summers-says-fed-should-express-more-concern-over-](https://www.marketwatch.com/story/summers-says-fed-should-express-more-concern-over-inflation-outlook-11619029595?siteid=yhoof2)
21 [inflation-outlook-11619029595?siteid=yhoof2](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,
22 2021, to the concern about rising inflation, saying that they, at Berkshire Hathaway, are seeing
23 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>.

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

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

12 Long-term interest rates were 3.04% in January 2019 before they moved up and down
13 throughout 2019, to finally settle at 2.30% in December 2020. With the COVID-19 causing
14 widespread economic shutdown and pushing interest rates higher, the Fed intervened in
15 March 2020 to cut the federal discount rate to a range of 0% to 0.25%. In addition to cutting the
16 federal discount rate, the Fed announced it would purchase an additional \$700 billion worth of
17 Treasury bonds and mortgage-backed securities.³¹ The Fed also struck a deal with five other
18 foreign central banks, the Bank of Canada, the Bank of England, the Bank of Japan, the
19 European Central Bank, and the Swiss National Bank, to lower their rates on currency swaps to
20 keep the financial markets functioning normally. Lowering rates on currency swaps make
21 borrowing U.S dollars by banks around the world cheaper. The aggregate effect of the Fed's
22 actions was a decline in interest rates from 1.97% in February 2020 to a low of 1.31% in
23 July 2020. However, because of inflation fears, interest rates started to rise in August 2020.
24 30-Year Treasury yields are 11 bps higher in the current period (March, April and May 2021), on
25 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>.

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

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

13 2. Capital Market Conditions

14 a. Utility Debt Markets

15 Average public utility yields fell from a high of 4.48% in January 2019, to a low of
16 3.16% (see PC-4-1) in February 2020. The downward trend in public utility bond yields
17 reversed when yields rose sharply by 43 bps to 3.59% in March 2020 (see PC-4-1). The sharp
18 rise in public utility bond yields in March 2020 coincided with the closure of the economy and
19 the subsequent sharp decline in the GDP. Public utility bond yields started to fall again in
20 April 2020 after the Fed cut the federal funds rate to 0.0% to 0.25%, and ramped up
21 Treasury bond-buying activity. By August 2020, public utility bond yields had fallen to 2.76%
22 (see PC-4-1). The changes in public utility bond yields mirrored the changes in the 30-Year
23 Treasury bond yields. 30-Year Treasury bond yields have historically, with a few exceptions,
24 been positively correlated with public utility bonds (see PC-4-2). The biggest factor currently
25 driving interest rates is the fear of a rise in expected inflation. In an article in Kiplinger’s on
26 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>.

1 | commitment to low short-term interest rates and easy-money policies into 2023, long-term rates
2 | rose again on continued inflation fears.”³⁴

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

13 | **b. Utility Equity Markets**

14 | In the period between December 2019 and May 2021,³⁷ the utilities sector
15 | underperformed the broad market (S&P 500). The S&P 500 had total returns of 37.37%
16 | compared to 8.77% for the utilities sector. Staff’s electric proxy group of companies similarly
17 | underperformed, returning 10.09% in the same period. A detailed analysis of the performance of
18 | the equity market since December 2019 reveals tremendous volatility. Graph 1 shows the
19 | volatility experienced by the stock market since December 2019. At the onset of the economic
20 | shutdown in March 2020, the S&P 500 and the Dow Jones Industrial fell 12.5% and 13%,
21 | respectively.³⁸ Utilities were 35% off (down) their January 2020 high.³⁹ The decline of the
22 | utilities was unusual given that utilities are historically considered a defensive sector – when the
23 | capital market goes down, utilities rise as investors ‘run for the safety’ of utilities. “The utilities
24 | sector did not act as defensively as we have seen in previous market downturns,” (Edward Jones,
25 | 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.

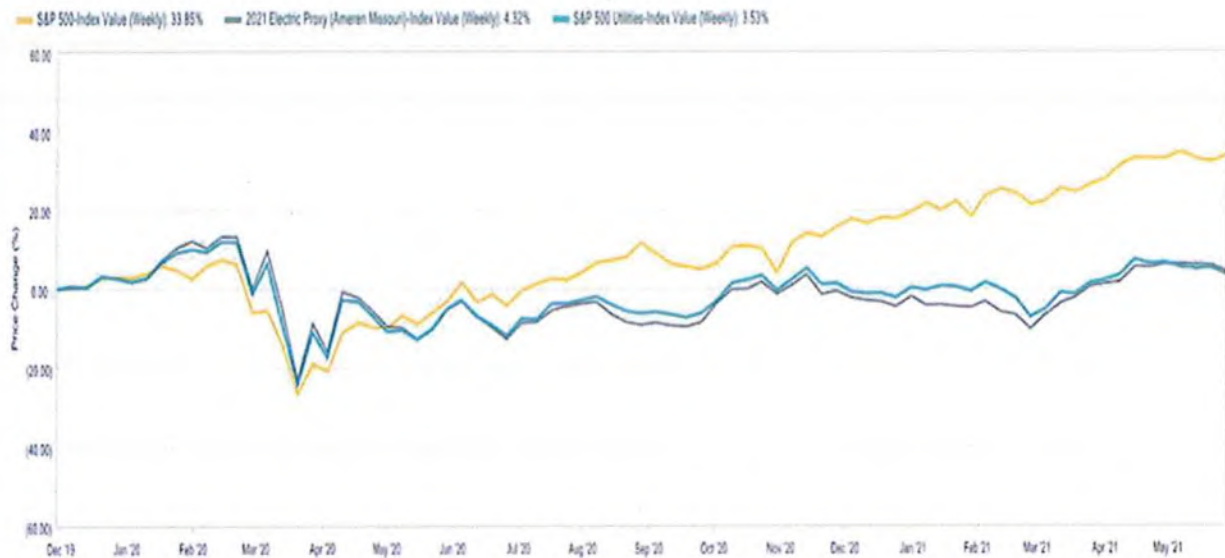
³⁷ This is the period between Staff’s last analysis for the Empire rate case and the current rate case. Staff is focusing on the changes in capital market markets that impacted COE.

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.

1 sharply from the March 2020 sharp decline (see Graph 1), with the utilities sector briefly leading
2 the broader market. Starting in May 2020, the utilities sector has lagged the broader market.
3 Total returns for utilities, in general, for the entire year 2020 were negative 0.6%.⁴⁰ Edison
4 Electric Institute (EEI) Index returned negative 1.6% compared to the Dow Jones' and S&P
5 500's positive 9.7% and 18.4%, respectively, for the year 2020.

6 **Graph 1**



7
8 The combined effect of the utility sector unusual decline in 2020, and the subsequent
9 sluggish recovery, is that the utilities have not recovered fully from the COVID-19 recession.
10 Average stock prices for Staff's proxy group of companies is at \$67.34, as of July 30, 2021,
11 compared to the pre-COVID recession high of about \$72.40 reached in January 2020. Declining
12 stock prices, all else the same, means increasing COE.⁴¹ The principal reason for stock prices to
13 decline is adverse perception about the stock's risk and or risk in the economy. Currently, the
14 utilities sector faces two major risks that have the potential to keep stock prices depressed and
15 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.

1 current economic climate justifies increasing authorized ROE by 25 bps to 9.50% from the
2 9.25% authorized Empire in 2020.

3 As Staff alluded to above, the two potential downsides for utilities, currently and in the
4 near future, are increased inflation and increasing interest rates. It is important to understand the
5 dynamics of these two potential risks to utilities in order to have a reasonable estimation of the
6 trajectory of COE. Firstly, the fear of increased inflation means that investors will try to avoid
7 low return utilities because they fear that utilities will not provide a high enough return to
8 compensate for the increased expected inflation. "... [S]ome sectors prove more durable during
9 inflationary times than others, but the utilities sector is usually not a place to seek shelter from
10 inflation," ([https://finance.zacks.com/utilities-stocks-perform-well-during-inflationary-periods-
11 8933.html](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
12 general belief, among investors, that regulators are not flexible enough with adjusting rates to
13 compensate for increasing inflation.⁴³ The fear of increased inflation will potentially keep
14 utilities depressed, and COE elevated.

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

21 Staff has already showed that utilities stock prices are currently lower than they were
22 when Staff presented testimony for the Empire rate case in 2020. Lower stock prices, all else the
23 same, means higher COE. Staff also analyzed other variables that affect change in COE –
24 dividend yields and expected growth rates. Higher dividend yields, all else the same, means
25 higher COE. Staff compared dividend yields from the period (September, October and
26 November 2019) of the Empire rate case to the dividend yields of the current period (May, June
27 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.

1 rate case, compared to 3.49% (see PC-9-1) in the current period – that is an increase of 35 bps.
2 Estimated growth rates by analysts increased from 5.16%, estimated during the period
3 (September, October and November 2019) Staff conducted analysis for the Empire rate case, to
4 5.41% in the current period (March, April and May 2021). Higher estimated growth rates, all
5 else the same, signal a higher required return to investors. The net effect of the changes in stock
6 prices, dividend yields and growth rates is that COE increased by up to 55 basis points
7 (unadjusted for expected inflation, see PC-11) since Staff conducted its analysis for the Empire
8 rate case.

9 **Ameren Missouri Operations**

10 The following excerpts from Ameren Corporation (“AEE”)’s Form 10-K filing with the
11 United States Securities and Exchange Commission (“SEC”) for the 2020 calendar year provides
12 a good description of AEE’s current organizational structure and Ameren Missouri’s current
13 business operations:

14 Ameren, formed in 1997 and headquartered in St. Louis, Missouri,
15 is a public utility holding company whose primary assets are its
16 equity interests in its subsidiaries. Ameren’s subsidiaries are
17 separate, independent legal entities with separate businesses,
18 assets, and liabilities. Dividends on Ameren’s common stock and
19 the payment of expenses by Ameren depend on distributions made
20 to it by its subsidiaries... Ameren has four segments: Ameren
21 Missouri, Ameren Illinois Electric Distribution, Ameren Illinois
22 Natural Gas, and Ameren Transmission. The Ameren Missouri
23 segment includes all of the operations of Ameren Missouri.
24 Ameren Illinois Electric Distribution consists of the electric
25 distribution business of Ameren Illinois. Ameren Illinois Natural
26 Gas consists of the natural gas business of Ameren Illinois.
27 Ameren Transmission primarily consists of the aggregated electric
28 transmission businesses of Ameren Illinois and ATXI... Ameren
29 Missouri operates a rate-regulated electric generation,
30 transmission, and distribution business and a rate-regulated natural
31 gas distribution business in Missouri. Ameren Illinois operates
32 rate-regulated electric transmission, electric distribution, and
33 natural gas distribution businesses in Illinois. ATXI operates a
34 FERC rate-regulated electric transmission business.

1 **D. Rate of Return**

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

5 **1. Capital Structure**

6 Staff recommends Ameren Missouri’s standalone capital structure, as of June, 2021,
7 consisting of 48.93% long-term debt, 50.32% common equity and 0.75% preferred stock,
8 for setting ROR for Ameren Missouri.⁴⁶ Ameren Missouri’s witness, Darryl T. Sagel,
9 recommends Ameren Missouri’s pro forma capital structure composed of 51.93% common
10 equity, 47.34% long-term debt and 0.73% preferred stock, as of the true-up date of
11 September 30, 2021, for use in this proceeding. In his Direct Testimony, Mr. Sagel presented
12 two capital structures, the September 30, 2021, pro forma capital structure, and Ameren
13 Missouri’s per book capital structure, as of December 31, 2020. The December 31, 2020, per
14 book capital structure is composed of 51.26% common equity, 47.92% long-term debt, and
15 0.82% preferred stock. Mr. Sagel explained that the December 31, 2020 per book capital
16 structure is different from the proposed pro forma capital structure because of “unplanned delays
17 in consummating the acquisitions of approximately \$1.14 billion of wind generation facilities,
18 [which resulted] in approximately \$500 million in company funding needs being deferred into
19 2021, from 2020.”⁴⁷

20 Staff issued data requests to assess the progress on the eventual disbursement of
21 funds anticipated to take place in 2021. As of March 31, 2021, according to the response to Staff
22 DR No. 0651, “** [REDACTED]
23 [REDACTED] **”. The resultant capital structure as of
24 March 31, 2021, was 47.17% long-term debt 0.80% preferred stock, and 52.02% common
25 equity. In response to Staff DR No. 0651, Ameren Missouri provided what it called a
26 preliminary capital structure, as of June 30, 2021, composed of 48.92% long-term debt, 0.75%
27 preferred stock, and 50.32% common equity. Ameren Missouri explained that the June 30, 2021,
28 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.

1 [REDACTED]

2 [REDACTED] ***.

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

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

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

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

24 **2. Embedded Cost of Debt**

25 Staff recommends Ameren Missouri's own standalone long-term debt cost and preferred
26 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.

1 **3. Cost of Common Equity**

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

5 **a. The Proxy Group**

6 Staff used a proxy group consisting of companies that are predominantly vertically-
7 integrated, regulated, electric utilities to estimate changes in the cost of equity since Ameren
8 Missouri’s last rate case. Staff ensured companies in the proxy group are confined to vertically-
9 integrated, regulated, electric utility operations by starting with the list included in the Edison
10 Electric Institute’s⁵³ (“EEI”) regulated electric utility index, and then screened these companies
11 further by ensuring that they:

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

21 The 15 electric utilities that met these criteria are presented in Table 2:
22
23
24
25

26
27 *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.

1

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

2

3

b. The Constant Growth DCF

4

5

6

7

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:

8

$$k = D_1/P_0 + g$$

9

where:

10

k is the cost of equity;

11

D_1 is the expected next 12 months dividend;

12

P_0 is the current price of the stock; and

13

g is the dividend growth rate.

14

15

16

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

1 (see schedule PC-9-1) by the average daily closing stock prices for the three months ending
2 July 30, 2021.⁵⁴ The projected average dividend yield for the electric utility proxy group is
3 approximately 3.49%.

4 **i. The Inputs**

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

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

25 The growth rates that Staff has reviewed are short-term, less than ten years for the
26 historical growth rates and less than five years for the analysts' projected growth rates.
27 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.

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

19 In the Empire rate case, Staff estimated its growth rate a slightly different way. Staff
20 considered the same variables in estimating its growth rate; analysts' growth rates, historical
21 growth rates, and GDP growth rate for an estimated growth rate range of 4.20% to 5.00%,
22 corresponding to an average of 4.60%.⁵⁸ For consistency in estimation of growth rate, if Staff
23 had used the same approach used in the current case to estimate growth rate for the Empire rate
24 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.

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

3 **ii. Tests of Reasonableness**

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

7 **c. CAPM**

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

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

19 where: k is the expected return on equity for a security;

20 R_f is the risk-free rate;

21 β is Beta; and

22 $R_m - R_f$ is the market risk premium.

23
24 For the risk-free rate (R_f), Staff used the average yield on 30-year U.S. Treasury bonds
25 for the three-month period ending May 31, 2021; that figure was 2.32%. For beta (β), Staff
26 relied on Market Intelligence generated betas; the average beta for the electric comparable group

⁵⁹ $(4.20\% + 5.00\%)/2 = 4.60\%$.

1 of companies is 0.67, as of May 31, 2021.⁶⁰ For the market risk premium ($R_m - R_f$) estimates,
2 Staff relied on the historical difference between earned total returns on stocks and earned total
3 returns on bonds.⁶¹ The first risk premium (6.07%) was based on the long-term arithmetic
4 average of historical return differences from 1926-2020. The second risk premium (4.62%) was
5 based on the long-term geometric average of historical return differences from 1926 to 2020.
6 The CAPM COE results range from 6.15% to 7.75%, with an average of 6.83% (see Schedule
7 PC-10) for Staff's electric comparable group of companies.

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

11 **i. Bond Yield-Plus Risk Premium**

12 Staff conducted a simple test of reasonableness on its COE estimates using the bond
13 yield-plus risk premium. The bond yield-plus risk premium estimates the required return on an
14 equity by adding an equity risk premium to the yield-to-maturity on a company's long-term debt.
15 Since Staff is using a proxy group of companies to estimate COE in this case, the appropriate
16 yield-to-maturity to use is the average yield-to-maturity of the companies in the Staff's proxy
17 group of companies. Staff's proxy group of companies have credit ratings ranging from A- to
18 BBB+, with a mean of about BBB+. Moody's public utility bond yields on A-rated bonds and
19 Baa-rated bonds had a three-month average of 3.35% and 3.62%, respectively, as of May 31,
20 2021. The average of the two yields is 3.49%. While opinions vary on the appropriate risk
21 premium to use for the U.S capital market, a range of 3% to 5% is considered acceptable.
22 Adding 3.49% to 3% and 5% yields a COE estimate range of 6.49% to 8.49%. To the extent that
23 the bond yield-plus risk premium COE estimate range overlaps with the DCF model, it supports
24 the reasonableness of Staff's COE estimates.

25 **d. Average Authorized ROE**

26 Although Staff believes it has appropriately considered this Commission's recent
27 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: $0.3333 + 0.6666 * \text{Unadjusted Beta}$.

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

Year	Natural Gas						Electric					
	Fully Litigated		Settled		Natural Gas Total		Fully Litigated		Settled		Electric Total	
	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

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

3 Using the recommended authorized ROE of 9.50%, Staff recommends an authorized
4 ROR of 6.73%, calculated by applying an embedded cost of long-term debt of 3.91%
5 and preferred stock cost of 4.18% to a capital structure consisting of 50.32% common equity,
6 48.92% long-term debt and 0.75% preferred stock.

7 *Staff Expert/Witness: Peter Chari*

8 **E. Regulatory Lag and Risk Mitigation**

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

13 *Staff Expert/Witness: Jason Kunst, CPA*

14 **VII. Rate Base**

15 **A. Plant in Service and Depreciation Reserve**

16 **1. Plant in Service – Accounting Schedule 3**

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

29 *Staff Expert/Witness: Christopher D. Caldwell*

1 **2. Depreciation Reserve – Accounting Schedule 6**

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

13 *Staff Expert/Witness: Christopher D. Caldwell*

14 **B. Accumulated Depreciation**

15 Accounts 336 (Osage Hydraulic Production Plant – Roads, Railroads, Bridges) and
16 359 (Transmission Plant – Roads and Trails) have accrued reserve balances greater than the
17 original book costs. Staff has reallocated reserve balances greater than the original book cost
18 from these accounts to Accounts 331 (Osage Hydraulic Production Plant – Structures) and
19 355 (Transmission Plant – Poles and Fixtures).

20 *Staff Expert/Witness: Cedric E. Cunigan*

21 **C. Callaway Energy Center Forced Outages**

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

1 During Refuel 22 (October 07, 2017 to December 17, 2017) Ameren Missouri employed
2 contractors to perform a modification to the main generator stator. During post-modification
3 tests, some results came back lower than designed, but still acceptable. At that time, Ameren
4 Missouri decided to defer the work to restore design values until a future refueling outage. The
5 same contractors were brought back to Callaway during Refuel 24 to restore the affected
6 components to their design values and to correct other related issues that had developed since the
7 end of Refuel 22.⁶⁴

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

14 **Forced Outage 73**

15 At 12:35pm on December 24, 2020, another forced outage began at Callaway. At the
16 time of the event, Callaway was operating at approximately 90% reactor power and was
17 continuing its power ascension as it came out of Refuel 24. Forced Outage 73 was caused by a
18 fault on the main generator. However, it was of a different nature than the fault that caused
19 Forced Outage 72. In this case, a failure of the connection rings on the main generator stator
20 resulted in an electrical path from the generator stator to ground. This electrical fault actuated
21 the main generator protection system which resulted in a turbine trip and automatic reactor trip.
22 Ameren Missouri’s investigation concluded that the fault originated from the part of the
23 generator that had been repaired during Refuel 24.⁶⁵ While in the forced outage, actions were
24 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.

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

5 NRC Findings

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

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

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

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.

1 **Staff Recommendations**

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

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

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

22 *Staff Expert/Witness: Charles T. Poston, PE*

23 **1. Callaway Unplanned Outage Accounting Considerations**

24 Ameren Missouri's Callaway nuclear plant went down for the Refuel 24 outage on
25 October 4, 2020. During this refueling outage, Ameren Missouri completed several projects
26 using internal labor and an outside vendor. Once Refuel 24 was completed, Callaway began to
27 be brought back online on December 24, 2020. As the plant was brought back online, the main
28 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.

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

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

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

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

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

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

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

6 **2. Financial Impact and Insurance Reimbursement**

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

- 10 • \$404,000 in labor expense
- 11 • \$2,725,286 in non-labor expense
- 12 • \$913,300 in capitalized labor
- 13 • \$44.5 million in capitalized non-labor

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

1 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	<u>\$4,500,000</u>
Total	\$26,309,445

2

3 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	<u>\$4,311,916</u>
Total	\$21,783,892

4

5 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	<u>\$4,500,000</u>
Total	\$18,000,000

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