Exhibit No.:_____
Issue: Depreciation
Witness: John J. Spanos
Sponsoring Party: Ameren Missouri
File No.: GR-2025-0369

MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. GR-2025-0369

REBUTTAL TESTIMONY OF

JOHN J. SPANOS

ON BEHALF OF

AMEREN MISSOURI

Mechanicsburg, Pennsylvania

April 4, 2025

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I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is John J. Spanos. My business address is 300 Sterling Parkway, Mechanicsburg, Pennsylvania (formerly 207 Senate Avenue, Camp Hill, Pennsylvania).

Q. ARE YOU THE SAME JOHN J. SPANOS WHO PREFILED DIRECT TESTIMONY IN THIS MATTER?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my testimony is to rebut the testimony filed by Missouri Public Service Commission Staff ("Staff") witness Malachi Bowman and Office of the Public Counsel ("OPC") witness John A. Robinett related to depreciation.

Q. WHAT IS THE SUBJECT OF YOUR REBUTTAL TESTIMONY?

A. The primary subject of my testimony is depreciation. More specifically, my testimony will address depreciation concepts and methods as they relate to Staff witness Bowman's positions on how to achieve the most appropriate depreciation rates for each account. Specifically, I will address Staff's position to use the whole life technique instead of the currently utilized and most commonly used remaining life technique. This discussion will include Staff's adjustment of the depreciation rate to incorporate a reserve imbalance. I will rebut the alternative life estimates that Staff proposes for five accounts. Additionally, I will address Staff's unsupportable adjustment to the reserve for three accounts. As for the subjects related to OPC witness Robinett, I will address his testimony related to general plant amortization.

II. WHOLE LIFE VERSUS REMAINING LIFE TECHNIQUE

Q. WHAT DOES STAFF RECOMMEND RELATED TO THE DEPRECIATION TECHNIQUE USED FOR CALCULATING DEPRECIATION RATES?

A. Staff witness Bowman is recommending changing from the past practice of using the remaining life technique to the whole life technique for all plant accounts. While witness Bowman recommends this change in technique for all accounts, this recommendation relies on an improper reserve imbalance using the remaining life technique. The technique that Staff is recommending is not only unnecessary but inappropriate when the remaining life technique is designed to properly address the issues and does so systematically and rationally.

Q. WHAT DO YOU RECOMMEND RELATED TO THE DEPRECIATION TECHNIQUE USED FOR CALCULATING DEPRECIATION RATES?

A. The determination of proper depreciation rates requires the selection of a depreciation technique. The most common technique used for public utility depreciation is the remaining life technique. My recommendation is to continue to use the remaining life technique for all plant accounts. The remaining life technique has been used to calculate the approved rates since the last several Ameren Missouri rate case.[1] While Staff is recommending use of the whole life technique, Staff is actually intermingling the whole life and remaining life techniques in the developed rates which creates an intergenerational inequity and will only create continual adjustment to rates due to a theoretical reserve that continually changes during each rate case. This creates swings in depreciation expense that are not justified for current or future customers.

[1] Last proceeding: Case GR-2021-0241. While the case was settled, depreciation rates were agreed upon using remaining life.

Q. WHY IS USE OF THE WHOLE LIFE TECHNIQUE INFERIOR TO USE OF THE REMAINING LIFE DEPRECIATION TECHNIQUE?

A. The whole life technique is used in a few jurisdictions, but is not nearly as prevalent as the remaining life technique and for good reason. For the whole life technique, depreciation is calculated based on the basis of the full service life, or "whole life," estimated for a group of assets. If the service life-estimate for an asset that costs $100 is 10 years, and no net salvage is expected, then the annual depreciation rate would be 10% (or (100%)/10). However, issues can arise with the whole life technique if service life or net salvage estimates change or if the real-world experience of the group does not perfectly match the service life and net salvage estimates, which in reality happens quite often at every utility. Using the same example of an asset that costs $100 but has an original life-estimate of just over 8 years, after five years of the asset's life the accumulated depreciation would be $60.[2] Then assume that after five years the life-estimate is extended to 10 years. A 10% (and $10) whole life depreciation rate would now be applied for each of the remaining five years of the asset's life, which would result in a total recovery through depreciation of $110 (the $60 in accumulated depreciation plus $10 per year for the remaining five years). As a result, the whole life technique would, without an adjustment, result in the recovery of the incorrect amount (in this example, too much) of depreciation expense. Such situations can, and do, arise regularly because determining depreciation expense is, by its nature, a forecast of the future for thousands of individual assets.

[2] Applying approximately $12 of depreciation per year over the first 5 years.

The remaining life technique properly addresses the issue described in the previous paragraph by taking a prospective approach and allocating costs over the expected time the related assets will remain in service. Rather than calculating depreciation based on the whole service life, the remaining life technique allocates the amount remaining to be recovered (which is the original cost for the group less net salvage less accumulated depreciation) as and when each depreciation study is performed over its estimated remaining life. As a result, the remaining life technique ensures that the full service value (original cost less net salvage) will be reflected in rates through depreciation expense – and no more or no less. In part for this reason, the remaining life technique is used in the vast majority of U.S. regulatory jurisdictions and has routinely been used in Missouri.

Q. WHAT REASONS DOES STAFF OFFER IN SUPPORT OF THE WHOLE LIFE TECHNIQUE?

A. First, Staff states that both whole life and remaining life will accomplish the goal of recovering full investment. Second, Staff states the whole life will produce more consistent rates and remaining life rates will fluctuate more. Third, Staff feels the whole life technique will allow for reserve imbalance reviews. All of these premises are incorrect.

The whole life techniques does not achieve full recovery of the full service value unless every asset in the account lives as long as the determined life and the life does not change for the account from the beginning of time until the entire asset class is gone. This is completely unrealistic as I explained above.

The remaining life technique is designed to ensure full service value recovery and to smooth the recover over the entire life of the asset class. For example, if an account has a life of 50 years the rate using the whole life technique would be 2.00 percent. However, if the life changes to 55 years than the rate would change to 1.82 percent. In contrast, using the remaining life technique would result in the same 2.00 percent originally, but when the life goes to 55 years the rate would be between 2.00 and 1.82 percent which would be less of a fluctuation than the whole life technique. Relating to reserve imbalances, when using the remaining life method there is no reserve imbalance because the rate is smoothed over the remaining life based on the imbalance. This results in a much smoother process than the whole life technique. Additionally, the reserve imbalance with the whole life method, if applied, will create an intergenerational inequity and therefore, swings in charges to customers without a change in service. Finally, the depreciation study based on remaining life shows the comparison of the theoretical reserve to actual reserve for every account. Therefore, all of Staff's reasons for the benefit of the whole life method are not accurate. The remaining life technique is the superior method and most equitable to all parties.

Q. CAN YOU ELABORATE ON THE ISSUES WITH STAFF'S ARGUMENTS SUPPORTING THE WHOLE LIFE TECHNIQUE?

A. There are several issues with Staff's arguments to support the whole life technique over the remaining life technique. The first issue is that regardless of the technique, if service lives change between studies, then the Company will collect depreciation at a rate that is different than the depreciation they would collect if they used the updated service life estimate. All else equal, decreasing service lives will lead to increased

depreciation for both the remaining life technique and the whole life technique. However, the whole life method will not result in full recovery. Recovery could be more or it could be less, which is contrary to the key goal of depreciation: to recover the *actual* investment over the service life, as indicated by *NARUC's Public Utilities Depreciation Practices* manual, which is considered the most authoritative source used in the industry.[3] The Commission also recognizes that this is the purpose of depreciation. *See, e.g., Report and Order*, File No. ER-2008-0318 (a Company rate case), 271 P.U.R.4th 475, 2009 WL 248218 (Mo. P.S.C.) (Jan. 27, 2009), p. 39 ("Depreciation is the means by which a utility is able to recover the full service value of its investment [not more, not less than it invested]….").

Another issue with Staff's argument is the idea that using the remaining life technique will lead to more fluctuations in depreciation expense and more pronounced under- or over-recovery of depreciation than what would result from using the whole life technique. Staff is wrong. On the contrary, the remaining life technique leads to less variability in annual depreciation because any under- or over-recovery that has happened in the past is included in the updated remaining life rates that will be filed from rate case to rate case after the completion of periodic depreciation studies and smoothed over the remaining life of the asset. Witness Bowman's application of the whole life method did not include the necessary amortization of the reserve imbalance or any reserve transfers that are necessary when switching depreciation techniques in order to ensure full recovery. For example, switching from remaining life to whole

3 The Commission has relied on this manual as an authoritative source for establishing the use of proper depreciation principles and techniques, including in its decision in *In the Matter of Laclede Gas Company's Tariff to Revise Natural Gas Rate Schedules,* Third Report and Order, File No. GR-99-315 (Jan. 11, 2005).

life without the proper reserve reclassification will create over or under recovery situations as described in the whole life example on page 5 of this testimony. Failure to do so will create a reserve imbalance, and if there is a reserve imbalance, depreciation rates would fluctuate more, not less, drastically. In contrast, the remaining life method smooths the recovery between the theoretical and actual reserve over the remaining life of the entire asset class.

Q. IN REVIEW OF STAFF'S CALCULATIONS, DOES STAFF REALLY USE JUST THE WHOLE LIFE TECHNIQUE?

A. No. Staff actually uses a hybrid approach that not only misrepresents the whole life techniques but incorporates an unnecessary reserve imbalance calculation to Staff's proposed depreciation rates. First, Staff conducts a whole life calculation to establish a reserve imbalance. Second, Staff takes the reserve imbalance that is known not to be an accurate measure of the actual book reserve and adds to the future recovery. Third, Staff adds the reserve imbalance to future recovery to create a future recovery amount over the whole life of the asset class, however, this creates a recovery pattern that is not consistent with the life of the assets that are in service. This will create future swings in the recovery pattern even if the life parameters do not change. Basically, an inappropriate calculation of the whole life technique and an inconsistent process for the remaining life technique. This is an inaccurate calculation to avoid saying Staff is using the remaining life technique which is known to be the most systematic and rational calculation for all customers.

Q. ARE THE CURRENT RATES BASED ON THE REMAINING LIFE METHOD?

A. Yes.

III. STAFF'S ALTERNATIVE LIFE ESTIMATES

Q. DOES STAFF RECOMMEND ALTERNATIVE LIFE ESTIMATES FOR ANY ACCOUNTS?

A. Yes. Staff recommends maintaining the current service lives for a select few accounts without justification as to why these accounts should not utilize all the information obtained during the depreciation study as was done for all other accounts. The decision for Staff to maintain the current estimates based on witness Bowman's opinion that there was no justification for changing the lives. Additionally, Staff proposes a life estimate for the new Account 381.02, Meters – AMI based on another company instead of a determination on the Ameren meters who will own and operate the assets.

Q. WHAT ACCOUNTS HAS STAFF PROPOSED NO CHANGE FROM THE CURRENT LIFE ESTIMATE?

A. The four accounts that Staff recommends different life estimates from the Company are Account 367.00, Mains; Account 369.00, Measuring and Regulating Station Equipment; Account 378.00, Measuring and Regulating Station Equipment – General; and Account 379.00, Measuring and Regulating Station Equipment – City Gate. In each case, Staff proposes to maintain the current life estimate.

Q. IS THERE ANY INFORMATION WITHIN THE DEPRECIATION STUDY OR OBTAINED FROM AMEREN MISSOURI SINCE THE LAST STUDY THAT SHOULD BE IGNORED?

A. No. All the asset classes should incorporate all the new historical data and informed judgment obtained while conducting the updated depreciation study. This is consistent with the practices of all authoritative texts in the field of depreciation. Even if the new historical data are consistent with past studies, the current life estimates would need to consider informed judgment and current practices and plans. Staff does not consider all factors when maintaining the same life estimates. In the four accounts that Staff disagrees with the Company depreciation study, informed judgment is necessary to understand how life characteristics have changed since the last study.

Q. WHAT ARE SOME OF THE KEY FACTORS THAT AFFECT DEPRECIATION RATES?

A. Depreciation rates are affected by depreciation methods and procedures, life estimation, net salvage percentages, plant to reserve relationship and age of surviving plant at the date of calculation, which in the proposed depreciation study is December 31, 2023. All of these factors will affect the depreciation rate in order to achieve full-service value recovery over the life of the asset class in a systematic and rational manner, which is the primary goal of depreciation. Therefore, Staff is maintaining the current life estimate coupled with the whole life technique affects the depreciation rate.

Q. DO ANY DEPRECIATION AUTHORITIES SUPPORT THAT THE ESTIMATION OF SERVICE LIVES SHOULD BE BASED ON MORE THAN MATHEMATICAL RESULTS AND THAT THE CURVE SHOULD MATCH THE UTILIZATION OF THE ASSETS OVER THE ASSET'S LIFE?

A. Yes. For example, NARUC makes clear that factors other than the statistical analysis

must be considered. Chapter XIII of *Public Utility Depreciation Practices*, entitled "Actuarial Life Analysis" discusses and emphasizes the subjective nature of the process of estimating service lives. NARUC starts this chapter by explaining that the analysis of historical data is only one part of the process of estimating service lives:

> Actuarial analysis objectively measures how the company has retired its investment. The analyst must then judge whether this historical view depicts the future life of the property in service. The analyst takes into consideration various factors, such as changes in technology, services provided, or capital budgets.[4]

NARUC makes clear that the process of estimating service lives must go beyond any objective measurement of the past. In describing the determination of a survivor curve estimate (referred to as the "projection life" in this passage), NARUC states:

> The projection life is a projection, or forecast, of the future of the property. Historical indications may be useful in estimating a projection life curve. Certainly, the observations based on the property's history are a starting point. Trends in life or retirement dispersion can often be expected to continue. Likewise, unless there is some reason to expect otherwise, stability in life or retirement dispersion can be expected to continue, at least in the near term.
>
> Depreciation analysts should avoid becoming ensnared in the mechanics of the historical life study and relying solely on mathematical solutions. The reason for making an historical life analysis is to develop a sufficient understanding of history in order to evaluate whether it is a reasonable predictor of the future. The importance of being aware of circumstances having direct bearing on the reason for making an historical life analysis cannot be understated. These circumstances, when factored into the analysis, determine the application and limitations of an historical life analysis.[5]

Thus, NARUC strongly advises against the approach apparently used by Staff (or at least is the result of Staff's position). NARUC clearly states that "relying solely on

4 National Association of Regulatory Utility Commissioners, *Public Utility Depreciation Practices*, 1996, p. 111.

5 National Association of Regulatory Utility Commissioners, *Public Utility Depreciation Practices*, 1996, p. 126. Emphasis added.

mathematical solutions" should be avoided. NARUC further elaborates on the need for a subjective component to forecasting service lives:

> A depreciation study is commonly described as having three periods of analysis: the past, present, and future. The past and present can usually be analyzed with great accuracy using many currently available analytical tools. The future still must be predicted and must largely include some subjective analysis. *Informed judgment* is a term used to define the subjective portion of the depreciation study process. It is based on a combination of general experience, knowledge of the properties and a physical inspection, information gathered throughout the industry, and other factors which assist the analyst in making a knowledgeable estimate.
>
> The use of informed judgment can be a major factor in forecasting. A logical process of examining and prioritizing the usefulness of information must be employed, since there are many sources of data that must be considered and weighed by importance. For example, the following forces of retirement need to be considered: Do the past and current service life dispersions represent the future? Will scrap prices rise or fall? What will be the impact of future technological obsolescence? Will the company be in existence in the future? The analyst must rank the factors and decide the relative weight to apply to each. The final estimate might not resemble any one of the specific factors; however, the result would be a decision based upon a combination of the components.[6]

Q. HAVE YOU INCORPORATED THE VARIOUS FACTORS DISCUSSED BY NARUC INTO YOUR ESTIMATES?

A. Yes. I have conducted site visits for this and prior studies as well as engaged in discussions with Company personnel to familiarize myself with the Company's assets and plans for the assets. In addition, throughout my career, I have performed hundreds of depreciation studies for numerous utilities. The information obtained from this experience has also been incorporated into my recommendations for all accounts.

Q. PLEASE EXPLAIN WHY THE LIFE FOR ACCOUNT 381.02, METERS –

6 National Association of Regulatory Utility Commissioners, *Public Utility Depreciation Practices*, 1996, p. 128. Emphasis added.

AMI IN THE DEPRECIATION STUDY IS BETTER THAN THE ESTIMATE PROPOSED BY STAFF.

A. Staff bases its estimate on assets from a different company without determining if the meters are the same for Ameren as the other Company. These are new assets so I agree there is no statistical analysis for Ameren to consider, however, there are key factors that should be considered. First, what are the estimates utilized by companies within the industry? Second, what are the key factors for causes of retirement? Third, how will the company monitor the assets for replacement? Most companies for AMI or smart meters have a life that averages 15 years. These companies have had a longer history of use than Ameren. Some of the other key factors to consider are that the manufacturer has a battery life of 20 years which would be the maximum life and once the battery goes then the entire meter will be replaced. These meters are technology based so it is likely that many will need to be replaced before the battery is needed to be replaced. All of these factors support an average life of 15 years as proposed in the Depreciation Study as compared to Staff's proposal of 20 years only because one other company uses 20 years.

IV. STAFF RESERVE BALANCE ADJUSTMENTS

Q. ARE STAFF'S RESERVE ADJUSTMENTS APPLICABLE TO THE DEPRECIATION STUDY?

A. No. Necessary and appropriate adjustments to reserve balances are a component of a Depreciation Study and such adjustments are inputs to the determination of reasonable depreciation rates. Witness Bowman proposes reserve adjustments across functional accounts which is not appropriate and more importantly he recommends these changes

while utilizing the whole life technique which does not calculate depreciation expense as a component of the depreciation rate. Not only has witness Bowman's moved reserve from depreciable accounts to non-depreciable accounts which does not make sense but there is no basis for making the adjustment. The negative reserve amounts that Staff identified should not be randomly offset to unrelated accounts. If a reserve amount is to be adjusted, it should go to the related account and part of the future recovery. This is not considered in witness Bowman's testimony and not applied properly since witness Bowman uses the whole life technique.

Q. ARE RESERVE ADJUSTMENTS WHEN USING THE WHOLE LIFE METHOD OF ANY VALUE?

A. No. First, reserve adjustments do not have any meaning when properly using the whole life techniques because depreciation rates are not developed with a relationship of the reserve to plant. That in itself is a reason not to use whole life, since there is no measurement of full recovery of service value. Second, a reserve adjustment should not be random. Reserve adjustments should be the result of past transactions or at a minimum must remain in the same function. In other words, adjusting production plant reserve to distribution plant can only be done if there was plant reclassified or assets changed function. Additionally, moving reserve to a non-depreciable account like Account 374 does not have any basis.

V. GENERAL PLANT AMORTIZATION

Q. HAS OPC CHALLENGED THE CURRENT USE OF GENERAL PLANT AMORTIZATION?

A. No. The Company has been applying general plant amortization consistently since approximately 2010. While Mr. Robinett expressed these same concerns in File No. GR-2019-0077, he had no such concerns in File No. GR-2021-0241. In both cases, settlement agreements were reached that allowed for the Company's continued use of this appropriate method.

Q. ARE THE PROPOSED RATES IN THE DEPRECIATION STUDY CONSISTENT WITH THE AMORTIZATION PERIODS FOR EACH ACCOUNT OR SUBACCOUNT?

A. Yes.

Q. ARE THE AMORTIZATION RATES IN THE DEPRECIATION STUDY DEVELOPED USING THE REMAINING LIFE METHOD?

A. Yes. Once full implementation of general plant amortization occurs, which includes aligning the book reserve to the plant balances and making the necessary retirements at the time the amortization period ends, then the depreciation rates will remain stable for existing and future assets in the account.

Q. WHAT ISSUES RELATING TO GENERAL PLANT AMORTIZATION DOES MR. ROBINETT CHALLENGE IN HIS TESTIMONY?

A. Mr. Robinett appears to challenge the continued use of general plant amortization based primarily on his desire to challenge the determination of amortization periods going forward. The amortization period for assets for which a general plant amortization approach is used is not determined by statistical analysis but instead is determined by informed judgment as to the appropriate useful life of the assets in each account, which in turn is based on the nature of the assets and how those assets will

be utilized. This process is the feedback Mr. Robinett desires that is outside of the "information loop" he appears to be stuck in. Mr. Robinett has all the information available to him that is necessary to complete this task, just as I have done. The concept of general plant amortization was initiated in the early 1990s. Also in the 1990s, FERC released Accounting Release 15 to further provide guidance as to how reasonable amortization periods should be applied. Using general plant amortization, which eliminates incurring the high costs associated with maintaining physical inventories and the unnecessary tracking of low value, high volume assets, makes recovery more stable and allows accounting and operations staff to focus time on more critical assets. Mr. Robinett completely ignores the benefits of general plant amortization in making his recommendation to discontinue the Company's longstanding practice. If assets in the account have a changed useful life or there is a substantially different asset mix, then an amortization period can be changed. But there is no evidence that either of those facts exist and, in fact, my examination of the data in preparation of the Depreciation Study indicates that those conditions do not exist.

Q. HOW DOES THIS GENERAL PLANT AMORTIZATION RELATE TO THE COMPANY'S ELECTRIC OPERATIONS?

A. The Company uses many of the same laptops and desk chairs[7] in support of its gas operations as it does in support of its electric operations. By necessity, an allocation is performed for regulatory and ratemaking purposes. Discontinuing general plant

7 Two of the types of assets that make up the less than 2% of the Company's rate base applicable to general plant amortization.

amortization in this case could have an obvious detrimental impact on the Company's electric customers via a requirement for more costly methods relating to many more electric-operations-supporting assets or create considerable confusion as to how to treat assets supporting both electric and gas operations.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

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 Natural Gas Service.	)))	File No.: GR-2024-0369

AFFIDAVIT OF JOHN J. SPANOS

COMMONWEALTH OF PENNSYLVANIA)
) **ss**
COUNTY OF CUMBERLAND)

John J. Spanos, being first duly sworn on his oath, states:

My name is John J. Spanos, and hereby declare on oath that I am of sound mind and lawful age; that I have prepared the foregoing *Rebuttal Testimony*; and further, under the penalty of perjury, that the same is true and correct to the best of my knowledge and belief.

John J. Spanos

Sworn to me this 3rd day of April 2025.

Notary Public

My Commission Expires: February 20, 2027

Commonwealth of Pennsylvania - Notary Seal
Cheryl Ann Rutter, Notary Public
Cumberland County
My commission expires February 20, 2027
Commission number 1143028
Member, Pennsylvania Association of Notaries