

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

Application of Union Electric Company d/b/a)
Ameren Missouri for Approval of Decommissioning)
Cost Estimate for Callaway Energy Center and Funding) File No. EO-2015-
Level of Nuclear Decommissioning Trust Fund.)

**APPLICATION FOR APPROVAL OF DECOMMISSIONING COST ESTIMATE FOR
CALLAWAY ENERGY CENTER AND FUNDING LEVEL OF NUCLEAR
DECOMMISSIONING TRUST FUND**

COMES NOW Union Electric Company, d/b/a Ameren Missouri (Ameren Missouri or the Company), and pursuant to 4 CSR 240-3.185(3), hereby respectfully requests that the Missouri Public Service Commission (Commission) approve Ameren Missouri's decommissioning cost estimate and the continuation of the funding level of its nuclear decommissioning trust fund at the current \$6,758,605 annual amount. Ameren Missouri further requests that the Commission find that the \$6,758,605 annual funding level of its decommissioning trust fund is included in Ameren Missouri's current cost of service for ratemaking purposes and confirm that this funding level is based on the parameters and assumptions stated in this Application.

In support thereof, Ameren Missouri states the following:

BACKGROUND

1. Ameren Missouri is a Missouri corporation, in good standing in all respects, with its principal office and place of business located at 1901 Chouteau Avenue, St. Louis, Missouri 63103. Ameren Missouri is engaged in providing electric and gas service in portions of Missouri as a public utility under the jurisdiction of the Commission. Ameren Missouri is the owner and operator of the Callaway Energy Center, a nuclear generating unit whose decommissioning trust fund is the subject of this Application.

2. Attached to this Application is a Certificate of Good Standing. There is already on file with the Commission a certified copy of Ameren Missouri's Restated Articles of Incorporation (see Commission Case No. EA-87-105), and a copy of Ameren Missouri's Fictitious Name Registration as filed with the Missouri Secretary of State's Office (see Commission Case No. EN-2011-0069). Said documents are incorporated herein by reference and made a part hereof for all purposes.

3. Pleadings, notices, orders and other correspondence concerning this Application should be addressed to:

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4. Other than its pending rate case, File No. ER-2014-0258, Ameren Missouri does not have any pending action or unsatisfied judgments or decisions against it from any state or federal agency or court involving customer service or rates, which action, judgment or decision has occurred within the last three (3) years.

Furthermore, Ameren Missouri does not have any annual report or assessment fees that are overdue.

BASIS FOR FILING

5. 4 CSR 240-3.185(3) states, in part, the following:

On or before September 1, 1990, and every three (3) years after that, utilities with decommissioning trust funds shall perform and file with the commission cost studies detailing the utilities' latest cost estimates for decommissioning their nuclear generating unit(s)

along with the funding levels necessary to defray these decommissioning costs. These studies shall be filed along with appropriate tariff(s) effectuating the change in rates necessary to accomplish the funding required.

6. On August 15, 2014, Ameren Missouri filed a request to allow it to file this report no later than April 1, 2015, due to its license extension request that was pending before the Nuclear Regulatory Commission (NRC) and the potential impact of that request upon the necessary funding level of its decommissioning trust. The Commission issued an order on March 4, 2015 granting this request. (File No. EE-2014-0046).

7. On March 6, 2015, the NRC approved the Company's application for a 20-year operating license extension. Consequently, the expiration date of the Callaway Energy Center's operating license is now October 18, 2044. The decommissioning cost estimate and funding adequacy analysis presented with this application are based on this extended life of the Callaway Energy Center.

2014 COST STUDY

8. Ameren Missouri contracted with TLG Services, Inc. (TLG) to perform, under the direction of Ameren Missouri, the site specific cost study to determine the estimated cost for decommissioning the Callaway Energy Center. Since 1982, TLG has provided engineering and field services for contaminated facilities including estimates of decommissioning costs for nuclear generating units. In fact, TLG is an industry leader in nuclear power plant decontamination and decommissioning planning, cost estimating, and project field supervision and they have prepared and updated decommissioning cost estimates for the vast majority of nuclear generation units in the country. TLG also is the company that prepared the decommissioning cost estimate that was filed with and approved by the Commission in 1993, 1999, 2002, 2005, 2008 and 2011.

9. Attachment 1, which is attached hereto and made a part hereof for all purposes, is the updated decommissioning cost estimate prepared by TLG, titled *Decommissioning Cost Analysis for the Callaway Energy Center*. TLG estimated the cost to decommission the Callaway Energy Center employing the DECON alternative as \$864,734,000 in 2014 dollars, based on an assumed 60-year plant operating life.

REQUIRED ANNUAL FUNDING LEVEL

10. Ameren Missouri's analysis of the required annual funding level for the Missouri jurisdictional sub account is based on the premise that the current annual contribution to the decommissioning trust should be changed only if that annual contribution continued over the licensed life at the Callaway Energy Center does not result in a final trust account balance which is just sufficient to cover the estimated decommissioning cost given in Attachment 1 under a reasonable set of economic, financial, and investment assumptions and at a reasonable decommissioning inflation rate assumption. The Company has developed a funding adequacy model that computes the required annual decommissioning contribution based on specified economic and financial parameters and on a specified decommissioning inflation rate. Conversely, the model can also be used to derive the decommissioning inflation rate for which a given annual contribution amount would provide adequate funding, under a given set of investment return assumptions. Attachment 2, Ameren Missouri's analysis of the required funding level under a 2044 operating license expiration date, is attached hereto and made a part hereof for all purposes.

FUNDING ADEQUACY MODEL ASSUMPTIONS

11. The Company's funding adequacy model was used to derive the decommissioning inflation rate for which the current annual decommissioning expense and contribution amount of \$6,758,605 would be adequate for an operating license expiration date of October, 2044.

12. The economic, financial and investment assumptions used as the basis for this modeling are as follows:

- Beginning value of the fund -
After-tax liquidation value; as of 12/31/2014:
 - Missouri jurisdictional sub-account\$ \$ 488,916,373
 - Wholesale (FERC) jurisdictional sub-account \$ 13,276,273
 - Total fund \$ 502,192,646
- Total decommissioning cost estimate:
 - 2044 Operating License Expiration \$ 864,734,000
- Base year of the cost estimates: 2014
- Missouri jurisdictional allocator: 100%
- Federal income tax rate: 20%
- State income tax rate: 0%
- Projected investment management and trust fees: 15.00 basis points
- Asset allocation: 65% equities and 35% Bonds
- Nominal Return on Bonds (Pre-Tax & Expense) 3.50%
- Nominal return on Equities (Pre-Tax & Expense) 9.00%
- Weighted-Average Return (Pre-Tax & Expense)
(During period of investment in bonds & equities) 7.075%
- General inflation level (CPI): 2.350%
- Real Rate of return (Pre-Tax & Expense)
(During period of investment in bonds & equities) 4.725%
- Real Rate of return (Pre-Tax & Expense)

(During period of investment in bonds alone)	1.150%
○ Year in which divestiture from equity investments occurs: 2044 Operating License Expiration	2043
○ Annualized pre-tax and expense nominal return over the life of the fund	6.578%
○ Decommissioning inflation rate:	3.966%

13. The “Non-Unanimous Stipulation and Agreement” approved by the Commission

Order in File No. EO-2012-0070, states:

The Parties agree that, it is reasonable to use capital market return expectation information provided by Ameren Missouri’s pension plan consultant, or the 2% real rate of return set forth in 10 CFR §50.75(e)(1)(ii), for purposes of developing expected portfolio returns for Ameren Missouri’s nuclear decommissioning trust fund. The Parties agree that any proposed changes to the annual contribution to Ameren Missouri’s nuclear decommissioning trust fund shall be based on capital market return expectation information provided by Ameren Missouri’s pension plan consultant, or the aforementioned 2% real rate of return, unless the Parties agree to use a different source and/or methodology for capital market return expectations or the Commission finds in a contested case that different source and/or methodology for capital market return expectation are more appropriate.

14. The nominal return on bonds and equities indicated above are consistent with the “October 1, 2014 capital market assumptions” provided by Towers Watson, Ameren Missouri’s pension plan consultant. The 3.50% nominal return on bonds is that associated with the “Long-Term Expected Return” for “Bonds (US Inv Grade / Munis / Long)” for “OPEB Assets”. The 9.00% nominal return on equities is that associated with the “Long-Term Expected Return” for “US Large Cap Equity” for “Retirement Plan” assets.

15. 10 CFR 50.75(e)(1)(ii) states, in part, as follows:

(ii) External sinking fund. An external sinking fund is a fund established and maintained by setting funds aside periodically in an account segregated from licensee assets and outside the

administrative control of the licensee and its subsidiaries or affiliates in which the total amount of funds would be sufficient to pay decommissioning costs at the time permanent termination of operations is expected...A licensee that has collected funds based on the formulas in § 50.75(c) of this section may take credit for collected earnings on the decommissioning funds using up to a 2 percent annual real rate of return up to the time of permanent termination of operations. **A licensee may use a credit of greater than 2 percent if the licensee's rate-setting authority has specifically authorized a higher rate.** (emphasis added.)

16. Consequently, the Company requests that the Commission authorize the return assumptions used in the Company's funding analysis on which the proposed decommissioning expense and contribution amount is based.

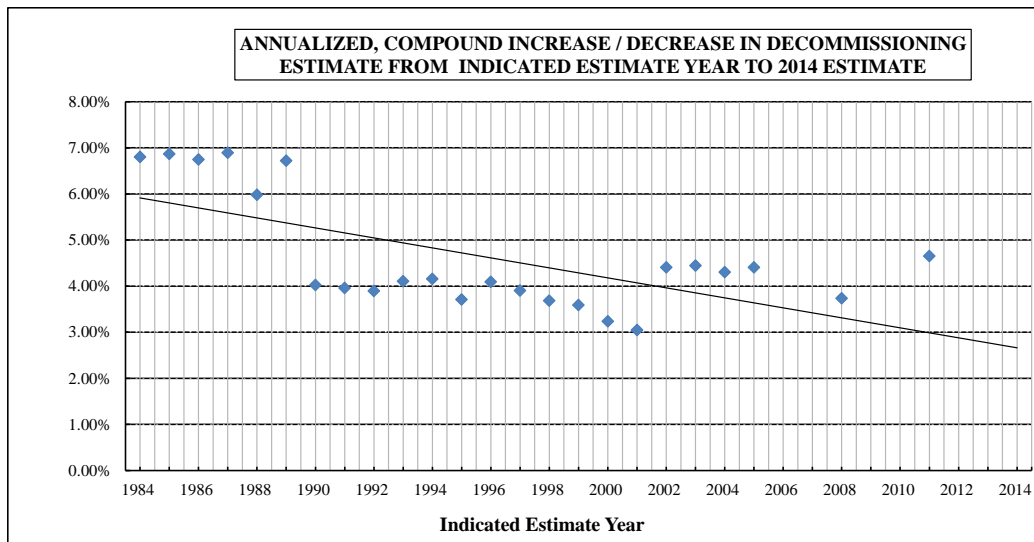
FUNDING ADEQUACY MODEL RESULTS

17. As a basis for recommending that the current annual contribution amount remain unchanged for the 2044 operating license expiration date, the Company calculated the decommissioning inflation values for which an annual funding level of \$6,758,605 would be adequate under the economic, financial and investment assumptions indicated in the foregoing section.

18. For an operating license with an expiration date of 2044 and the economic, financial and investment assumptions indicated in the foregoing section, an annual contribution of \$6,758,605 would be adequate up to a decommissioning inflation level of 3.966%. Pre-tax and expense nominal returns on the fund's investments would be 7.075% through 2043, and 3.500% thereafter. The annualized pre-tax and expense nominal return over the life of the fund would be 6.578%.

19. Although future levels of decommissioning inflation are very difficult to project, the Company feels that a 2% to 4% range is reasonable, given historical trends in the escalation rate of the site specific decommissioning cost estimate for the Callaway plant. The vast majority

of annualized compound escalation rates from historical site specific estimates to the current 2014 estimate fall within the 2% to 5% range, as indicated in the chart, below:



The funding adequacy model output obtained from these analyses is presented in Attachments 2.

20. Page 1 of Attachment 2 illustrates the escalation of the decommissioning expense cash flows at the 3.966% decommissioning inflation rate, which is the maximum rate at which the proposed annual contribution level of \$6,758,605 would be adequate under the 2044 operating license expiration date assumption. Page 2 of Attachment 2 contains a spreadsheet illustrating how the proposed annual contribution amount will adequately cover decommissioning expenses with a \$0 balance upon completion at a decommissioning inflation rate of 3.966% and the economic and financial assumptions specified in the foregoing section. Page 3 of Attachment 2 illustrates the derivation of the annualized return that the fund's assets would be required to earn, from 2015 through 2053, to adequately cover decommissioning expenses with a \$0 balance upon completion at a decommissioning inflation rate of 3.966% and the economic and financial assumptions specified in the foregoing section.

21. In conclusion, the calculations set forth in Attachment 2 validate Ameren Missouri's request to continue funding the decommissioning trust fund using the same annual amount previously authorized by the Commission, with a 2044 operating license expiration and the economic and financial assumptions specified in the funding adequacy model and summarized in this application.

22. Because Ameren Missouri is not seeking a change to the funding level, there is no need for Ameren Missouri to file new tariffs. Because it is unnecessary for Ameren Missouri to change the funding level of the decommissioning trust, and unnecessary to file new tariffs, Ameren Missouri does not request a hearing, nor does it believe one is required.

**MAKING CONTRIBUTIONS TO THE
TAX-QUALIFIED DECOMMISSIONING TRUST**

23. In its orders in the early cases regarding the establishment of the decommissioning trust fund (Case No. EO-85-17 and Case No. ER-85-160), the Commission stated, "The Commission, though, requires that UE establish the external fund to take the maximum advantage of the 1984 tax law and follow the requirements of the tax law in making investments for the fund." Consequently, Ameren Missouri is required by Commission order to fund the future decommissioning liability through contributions to the tax-qualified trust fund. In order to make the proposed contributions to the tax-qualified trust fund, Ameren Missouri must comply with section 468A of the Internal Revenue Code. Specifically, in order to make contributions to the tax-qualified trust, a schedule of ruling amounts must be applied for and obtained from the Internal Revenue Service (IRS). *See* Treasury Regulations § 1.468A-3(a)(1), which reads, in part:

Except as otherwise provided in paragraph (g) of this section or in § 1.468A-8 (relating to deductions for special transfers into a nuclear decommissioning fund), an electing taxpayer is allowed a

deduction under section 468A(a) for the taxable year in which the taxpayer makes a cash payment (or is deemed to make a cash payment) to a nuclear decommissioning fund only if the taxpayer has received a schedule of ruling amounts for the nuclear decommissioning fund that includes a ruling amount for such taxable year. Except as provided in paragraph (a)(4) or (5) of this section, a schedule of ruling amounts for a nuclear decommissioning fund (schedule of ruling amounts) is a ruling (within the meaning of § 601.201(a)(2) of this chapter) specifying the annual payments (ruling amounts) that, over the taxable years remaining in the funding period as of the date the schedule first applies, will result in a projected balance of the nuclear decommissioning fund as of the last day of the funding period equal to (and in no event greater than) the amount of decommissioning costs allocable to the fund.

In order for the IRS to issue a schedule of ruling amounts, the assumptions upon which it is based must be reasonable. *See* Treasury Regulations § 1.468A-3(a)(3), which reads, in part:

The Internal Revenue Service (IRS) shall provide a schedule of ruling amounts that is identical to the schedule of ruling amounts proposed by the taxpayer in connection with the taxpayer's request for a schedule of ruling amounts (see paragraph (e)(2)(viii) of this section), but no schedule of ruling amounts shall be provided unless the taxpayer's proposed schedule of ruling amounts is consistent with the principles and provisions of this section and is based on reasonable assumptions.

Under Treasury Regulations, section 1.468A-3(a)(4), Ameren Missouri can satisfy this obligation by documenting that the proposed contributions are calculated using the decommissioning assumptions used by the Commission in its most recent order.

The taxpayer bears the burden of demonstrating that the proposed schedule of ruling amounts is consistent with the principles and provisions of this section and is based on reasonable assumptions. If a public utility commission established or approved the currently applicable rates for the furnishing or sale by the taxpayer of electricity from the plant, the taxpayer can generally satisfy this burden of proof by demonstrating that the schedule of ruling amounts is calculated using the assumptions used by the public utility commission in its most recent order.

24. Finally, Treasury Regulations, section 1.468A-3 (e)(2)(v), indicates specific information that a taxpayer such as Ameren Missouri must disclose to the IRS when requesting a schedule of ruling amounts:

(A) Whether the public utility commission has determined the amount of decommissioning costs to be included in the taxpayer's cost of service for ratemaking purposes;

(B) The amount of decommissioning costs that are to be included in the taxpayer's cost of service for each taxable year under the current determination and amounts that otherwise are required to be included in the taxpayer's income under section 88 and the regulations thereunder;

(C) A description of the assumptions, estimates and other factors used by the public utility commission to determine the amount of decommissioning costs;

(D) A copy of such portions of any order or opinion of the public utility commission as pertain to the public utility commission's most recent determination of the amount of decommissioning costs to be included in cost of service; and

(E) A copy of each engineering or cost study that was relied on or used by the public utility commission in determining the amount of decommissioning costs to be included in the taxpayer's cost of service under the current determination.

COMMISSION ACTION REQUESTED

25. In order for Ameren Missouri to comply with the requirements of the foregoing regulations, Ameren Missouri requests that the Commission state in its order for this case that the annual decommissioning expense and contribution to the Callaway Energy Center Tax Qualified Nuclear Decommissioning Trust Fund in the amount of \$6,758,605 is included in Ameren Missouri's cost of service for ratemaking purposes and acknowledge that this annual decommissioning expense and contribution amount is based on Attachment 1, the March 2015, *Decommissioning Cost Analysis for the Callaway Energy Center*, and on the parameters and assumptions contained in Attachment 2 and summarized below :

- The after-tax value of Missouri jurisdictional sub-account of the Callaway Energy Center Tax-Qualified Nuclear Decommissioning Trust Fund as of December 31, 2014 was \$502,192,646.
- The proposed expense and contribution amount is to be effective beginning with calendar year 2015.
- The present, total decommissioning cost estimate is \$864,734,000 in terms of 2014 dollars.
- The Missouri jurisdictional allocator is 100%.
- The federal income tax rate is 20%.
- The state income tax rate is 0%.
- The composite federal & state income tax rate is 20%.
- An asset allocation of 65% equities and 35% bonds is assumed to exist through 2043, at which time all equity investments will be divested.
- Investment management and trust fees are estimated at 15 basis points annually.
- An inflation rate of 2.350% is assumed for general (CPI) inflation.
- The pre-tax & expense nominal return on bonds is assumed to be 3.500%.
 - The pre-tax & expense real return on bonds is assumed to be 1.150%
- The pre-tax & expense nominal return on equities is assumed to be 9.000%.
 - The pre-tax & expense real return on equities is assumed to be 6.650%
- The pre-tax & expense nominal weighted-average return is assumed to be 7.075% through the 2043 date of divestiture of equity investments.
 - The pre-tax & expense real weighted-average return is assumed to be 4.725% through the 2043 date of divestiture of equity investments.
 - The pre-tax & expense real weighted-average return is assumed to be 1.150% following the 2043 date of divestiture of equity investments.
 - The annualized pre-tax and expense nominal return over the life of the fund will be 6.578%.
- Decommissioning cost escalation is assumed to be 3.966%.

WHEREFORE, Ameren Missouri requests that the Commission (1) approve Attachments 1 and 2, which are Ameren Missouri's estimate of decommissioning costs and the funding level necessary for said costs, and (2) specifically find that the annual funding level

contributed to the decommissioning trust fund is included in Ameren Missouri's current cost of service for rate-making purposes, and is based on the parameters and assumptions contained in Attachment 2 and summarized above.

Respectfully submitted,

/s/ Wendy Tatro
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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and copy of the foregoing Notice of Dismissal was served on all parties of record via United States first-class mail, postage prepaid, or by electronic mail (e-mail) on this 1st day of April, 2015.

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