

NRC Decommissioning Funding Status Report – 2013

10 CFR 50.75(f)(1) requires each power reactor licensee to report to the NRC on a calendar year basis, beginning on March 31, 1999, and every 2 years thereafter, on the status of its decommissioning funding for each reactor or share of reactor it owns. Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri") hereby reports the decommissioning funding status for its Callaway Plant ("Callaway Energy Center").

1. The minimum decommissioning cost estimate, pursuant to 10 CFR 50.75(b) and (c)¹ is \$521,200,000 based on "Generic" LLW disposal site and use of a "Combination" of compact-affiliated and non-compact affiliated facilities². This assumption is consistent with the assumptions used in preparing the site specific decommissioning cost analysis for the Callaway Energy Center.

The most recent site-specific analysis for decommissioning of the Callaway Energy Center was performed for Ameren Missouri by TLG Services, Inc. of Bridgewater, Connecticut in August 2011. It calculated a decommissioning cost estimate of \$754,498,000 in terms of 2011 dollars. Ameren Missouri considers this site-specific decommissioning cost estimate of \$754,498,000 as the estimate for which funding adequacy must be assured. Due to its site specific nature, it is a more accurate estimate of projected decommissioning costs. It reflects the use of waste vendors for a portion of the low-level waste disposal and also exceeds the decommissioning cost derived in accordance with 10 CFR 50.75(b) and (c). It is also more conservative as it includes full green fielding of the site. Approximately 81.8% (\$617,324,000) of the site specific cost estimate is associated with physical decontamination and dismantling of radioactive systems and structures such that the license can be terminated. Management and transfer of spent fuel accounts for 4.5% (\$33,726,000) of the site specific cost estimate. The remaining 13.7% (\$103,448,000) is for demolition of designated non-radioactive structures and limited site restoration.

Enclosure 2 provides a copy of the 2011 Decommissioning Cost Analysis for the Callaway Energy Center. The cost estimates contained in the report are in 2011 dollars. This specific Study was conducted to comply with Missouri Law:

4 CSR 240-3.185 Submission of Reports Pertaining to the Decommissioning of Electric Utility Plants

(3) 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. In addition, the commission, at

any time for just cause, may require a utility to file an updated decommissioning cost study, funding requirement and associated tariff(s).

2. The amount accumulated in the decommissioning fund to the end of calendar year preceding the date of this report for items included in 10 CFR 50.75(b) and (c) is \$382,169,694. This is an “after tax liquidation value” which reflects the final funds that would be received upon liquidation of the fund’s assets and the payment of income taxes on realized capital gains. This is calculated as follows:

	Market Value:	\$ 407,659,804.20
Less:	Book Value:	280,209,254.36
Equals:	Unrealized Gain	\$ 127,450,549.84
Income Tax Rate = 20%		
	Income Tax on Unrealized Gain:	\$ 25,490,109.97
	After-Tax Liquidation Value:	\$ 382,169,694.23

A copy of the trustee’s “Statement of Net Assets Available for Benefits” as of December 31, 2012 confirming the foregoing valuation amounts is provided in Enclosure 3.

This decommissioning fund balance indicated above is a total amount intended to cover the full green fielding of the site. The funds in the trust fund are not segregated into those required for radiological decommissioning versus non-radiological decommissioning.

Missouri’s definition of decommissioning encompasses both the radiological and non-radiological structures, systems and components of the plant, as stated in the following section from the Missouri Code of State Regulations:

4 CSR 240-20.070 Decommissioning Trust Funds

(1) As used in this rule, decommissioning means those activities undertaken in connection with a nuclear generating unit’s retirement from service to ensure that the final removal, disposal, entombment or other disposition of the unit and of any radioactive components and materials associated with the unit, are accomplished in compliance with all applicable laws, and to ensure that the final disposition does not pose any undue threat to the public health and safety. Decommissioning includes the removal and disposal of the structures, systems and components of a nuclear generating unit at the time of decommissioning.

Missouri law requires triennial updates of the decommissioning cost estimate and of funding adequacy. Missouri law also provides for the changing of rates charged to ratepayers to recover any changes in funding levels necessitated by the triennial update analyses. For this reason, Ameren Missouri considers the amount in the fund to be fully adequate to cover radiological decommissioning with an excess that could be applied to non-radiological decommissioning. The triennial update process required by Missouri statutes is considered adequate to ensure that any funding shortfalls will be addressed and corrected in a timely manner.

The applicable sections from the Missouri Code of State Regulations are as follows:

4 CSR 240-3.185 Submission of Reports Pertaining to the Decommissioning of Electric Utility Plants

(3) 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. In addition, the commission, at any time for just cause, may require a utility to file an updated decommissioning cost study, funding requirement and associated tariff(s).

4 CSR 240-20.070 Decommissioning Trust Funds

(7) Upon the filing of the appropriate tariff(s) as set in 4 CSR 240-3.180, the commission shall establish a schedule of proceedings which shall be limited in scope to the following issues:

- (A) The extent of any change in the level or annual accrual of funding necessary for the utility's decommissioning trust fund; and
- (B) The changes in rates which would reflect any change in the funding level or accrual rate.

In past triennial filings, the Missouri Public Service Commission (MPSC) has accepted the site specific decommissioning cost estimates and the funding adequacy analyses based on full green fielding of the unit, as would be indicated under Missouri's legal definition of decommissioning. There is no basis for assuming any change in this practice in the future.

Consequently, it can be considered that the trust fund balance indicated is a total balance, not segregated on the basis of radiological versus non-radiological funding. As the Missouri mechanism for assuring funding adequacy and for recovering decommissioning expenses from ratepayers includes the non-radiological decommissioning expenses as well as the radiological expenses, it is not necessary to segregate the decommissioning fund balances. Any shortfalls in funding for full green fielding are expected to be recovered from ratepayers as part of the triennial funding adequacy updating process.

3. The schedule of the annual amounts remaining to be collected for items in 10 CFR 50.75(b) and (c): \$6,758,605 per year for year 2013 through year 2023. Only \$5,068,953.75 will be collected for year 2024 as Callaway Plant's operating license expires October 18, 2024 and the collection will not be for a full year³.

On September 1, 2011, Ameren Missouri filed its "Application for Approval of Decommissioning Cost Estimate for Callaway Energy Center and Funding Level of Nuclear Decommissioning Trust Fund" (Case No. EO-2012-0070).

Attachment 2 to this application contained Ameren Missouri's analysis of the required funding level for the decommissioning trust fund, including all of the financial and economic assumptions on which the funding analysis was based. On May 29, 2012, the funding level analysis was revised based on recommendations from the MPSC Staff. On September 21, 2012, Ameren Missouri and the MPSC Staff entered into a "Non-Unanimous Stipulation and Agreement" that received Ameren Missouri's application and funding level analyses into evidence and requested the MPSC to approve the funding level requested by Ameren Missouri in the application, as well as the real rate of return assumption used in the May 29, 2012 funding level analysis.

On October 3, 2012, the MPSC issued an "Order Approving Stipulation and Agreement" that approved the foregoing "Non-Unanimous Stipulation and Agreement" as well as continuing the contribution to the decommissioning trust fund at the current level of \$6,758,605 annually and affirming that Missouri is 100% responsible for the decommissioning liability. The MPSC Order also approved the rates of return described in the "Non-Unanimous Stipulation and Agreement" and used in the funding level analysis.

Copies of the "Non-Unanimous Stipulation and Agreement" (which contains the May 29, 2012 revision of the funding level analysis) and the MPSC "Order Approving Stipulation and Agreement" are provided in Enclosures 4 and 5 respectfully.

4. The Company used the following investment and return assumptions in its funding adequacy analysis filed with the MPSC in Case No. EO-2012-0070 and these values are being provided for your information⁴:

- Total decommissioning cost estimate: \$754,500,000

• Base year of the cost estimate:	2011
• Federal income tax rate:	20%
• State income tax rate:	0%
• Composite federal & state income tax rate:	20%
• Projected investment management and trust fees:	15.00 Basis Points
• Asset allocation:	65% Equities / 35% Bonds
• Real rate of return on bonds:	2.25%
• CPI Inflation:	2.00%
• Nominal return on bonds	4.25%
• Equity premium over bonds:	4.75%
• Nominal return on equities:	9.00%
• Weighted average return:	7.338%
• Real rate of return through 2023:	5.338
• Year in which divestiture from equity investments occurs:	2023

Based on the foregoing assumptions, the anticipated annual decommissioning contributions of \$6,758,605 would be adequate up to an annual decommissioning inflation rate of 1.352%. The annualized rate of earning on decommissioning fund return (pre-tax and fee) required at the above level of inflation is 6.4695%.

The MPSC Order provided in Enclosure 5 also approved the rates of return as described in the “Unanimous Stipulation and Agreement” and used in the funding level analysis.

5. Any contracts upon which the licensee is relying on pursuant to 10 CFR 50.75(e)(1)(v): None
6. Any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report: None. (The Company has used the “External Sinking Fund” method since 1985.)
7. Any material changes to trust agreements: There have been no material changes to the qualified trust agreement since the last report. The non-qualified trust that was required by Illinois has been eliminated, as Ameren Missouri no longer has customers in Illinois. This non-qualified trust was never funded⁵.

¹ The NRC formulas in section 10 CFR 50.75(c) include only those decommissioning costs incurred by licensees to remove a facility or site safely from service and reduce residual radioactivity to levels that permit: (1) release of the property for unrestricted use and termination of the license; or (2) release of the property under restricted conditions and termination of the license. The cost of dismantling or demolishing non-radiological systems and structures is not included in the NRC decommissioning cost estimates. The costs of managing and storing spent fuel on site until transfer to DOE are not included in the cost formulas.

² The indicated cost estimate is based on 4th quarter 2012 labor escalation factors, December 2012 energy escalation factors and burial factors contained in NUREG 1307, Revision 15, published in January 2013.

³ Through December 31, 2010, the company was contributing a total of \$6,758,605 annually to the decommissioning trust fund. This was comprised of a \$6,486,378 annual Missouri jurisdictional contribution and a \$272,227 annual Wholesale jurisdictional contribution. As of December 31, 2010, the Company's Internal Revenue Service (IRS) Schedule of Ruling Amounts (SRA) for contributions to the Wholesale jurisdictional decommissioning fund expired and no further contributions were made to the Wholesale jurisdictional sub-account. Wholesale power sales are currently based on market pricing and do not contain a component for decommissioning expense. Consequently, the Company did not apply for an updated SRA for the Wholesale jurisdiction. No further contributions to the Wholesale jurisdictional fund are anticipated at this time. MPSC Case No. ER-2011-0028, effective July 31, 2011, increased the Missouri jurisdictional allocation for nuclear decommissioning to 100%. This increased the Missouri decommissioning expense and contribution amount by \$272,227 (the amount of decommissioning expense previously borne by Wholesale customers). The Company applied for and received a revised IRS SRA allowing this increased contribution to the Missouri jurisdiction of the decommissioning trust fund. The contribution for the 3rd quarter of 2011 was pro-rated to reflect the July 31st effective date, resulting in a contribution for the quarter of \$1,667,458.83. Contributions for the 4th quarter of 2011 and subsequent quarters are at the full, increased amount of \$1,689,651.25 per quarter (\$6,758,605 annually). Missouri law requires the Company to file updated funding adequacy analysis every three years. The last update filing was submitted September 1, 2011. Effective October 13, 2012, the MPSC issued an Order in Case No. EO-2012-0070 approving the continuation of the annual Missouri contribution amount at the current level of \$6,758,605. The MPSC Order also contained language stating, "The 5.338% annual real rate of return through 2023, which is based on the weighted average return of 7.338% minus the CPI inflation of 2.000%, is approved." The next triennial funding adequacy update filing for the Missouri jurisdiction is required by September 1, 2014.

⁴ The funding adequacy analysis filed with the MPSC by the Company in this Case No. EO-2012-0070 was based on the indicated return assumptions. As stated in a prior footnote, an MPSC order in this case approved the continuation of the annual Missouri contribution at its current level of \$6,758,605, effective October 13, 2012. At the time of this update filing, the Missouri jurisdiction comprised about 97% of the decommissioning trust fund's valuation. The remaining 3% was comprised of Wholesale jurisdictional assets.

⁵ On February 10, 2005, the MPSC approved Ameren Missouri's proposed transfer of its Illinois electric and gas properties to an Illinois affiliate, Ameren Illinois. The closing date for the property transfer was May 2, 2005. In accordance with the MPSC Order, the tax-qualified decommissioning trust's Illinois jurisdictional sub-account was eliminated following the closing. Ninety-eight percent of the assets in the existing Illinois sub-account as of the closing date were reallocated to the Missouri sub-account and the

remaining two percent were reallocated to the Wholesale sub-account. As a result of the transfer, Ameren Missouri no longer has any Illinois ratepayers and will no longer collect decommissioning contributions in Illinois for its Callaway Plant, which is located in Missouri. The decommissioning liability previously borne by the Illinois ratepayers was transferred to Ameren Missouri and Wholesale customers. Decommissioning expenses collected from Missouri jurisdictional ratepayers was increased by \$272,194 annually in accordance with the MPSC Order to account for the increased decommissioning liability borne by the Missouri ratepayers following the property transfer.