

MEMORANDUM

TO: Missouri Public Service Commission Official Case File,
File No. EO-2012-0070, Union Electric Company, d/b/a Ameren Missouri

FROM: Shana Atkinson, Utility Regulatory Auditor III, Financial Analysis Unit

/s/ Shana Atkinson 09-24-12

Shana Atkinson
Financial Analysis Unit/Date

/s/ Steven Dottheim 09-24-12

Steven Dottheim
Staff Counsel's Office/Date

SUBJECT: Staff's Memorandum in Support of Non-Unanimous Stipulation and Agreement to Approve Union Electric Company's Application for Decommissioning Cost Estimate and Funding Level of Nuclear Decommissioning Trust Fund

DATE: September 24, 2012

Background

The U.S. Nuclear Regulatory Commission (NRC) defines the term "decommission" as follows in 10 C.F.R. §50.2, and limits decommissioning to the radiological part of the facility:

Decommission means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits—

- (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.

This Commission defines "decommissioning" and "decommissioning costs" as follows in 4 CSR 240-20.070:

(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.

(2) As used in this rule, decommissioning costs means all reasonable costs and expenses incurred in connection with decommissioning, including all expenses to be incurred in connection with the preparation for decommissioning, including, but not limited to, engineering and other planning expenses; and to be incurred

after the actual decommissioning occurs, including, but not limited to, physical security and radiation monitoring expenses, less proceeds of insurance, salvage or resale of machinery, construction equipment or apparatus the cost of which was charged as a decommissioning expense.

In addition, 4 CSR 240-3.185(3) states, in part:

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.

Filing History

The Company has made its triennial filings on a timely basis since Callaway went into operation on December 19, 1984. The Company filed its first decommissioning study on March 29, 1991, in Case No. EO-91-300. Subsequent filings were made in Case Nos. EO-94-81, EO-97-86, EO-2000-0205, EO-2003-0083, EO-2006-0098 and EO-2009-0081.

Ameren Missouri Application

On September 1, 2011, Union Electric Company, d/b/a Ameren Missouri (Ameren Missouri or Company), filed an Application for Approval of Decommissioning Cost Estimate for Callaway Energy Center and Funding Level of Nuclear Decommissioning Trust Fund (Application) with the Missouri Public Service Commission (Commission) requesting that the Commission: 1) approve Attachments 1 and 2 of the Application, 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 Nuclear Decommissioning Trust Fund is included in the Company's current cost of service for rate-making purposes and is based on the underlying assumptions contained in Attachments 1 and 2, as summarized in the Application. In response, the Commission established File No. EO-2012-0070.

Attachment 1 is the decommissioning cost study performed by the engineering company, TLG Services, Inc. (TLG). This document, entitled "Decommissioning Cost Analysis for the Callaway Energy Center" (Cost Study), consists of the detailed cost estimates for the process of decommissioning the nuclear plant at the Callaway Energy Center (Callaway). The cost to decommission encompasses not only radiological decontamination, but also the dismantling of plant, equipment and other structures at Callaway. Attachment 1 is discussed in more detail below.

Attachment 2 consists of the financial / economic / investment projection analysis (Economic Analysis) Ameren Missouri performed to estimate required decommissioning trust fund contributions needed to fund the costs estimated in Attachment 1. Attachment 2 contains

Ameren Missouri's financial, economic and investment assumptions used to conclude that the current annual decommissioning trust fund contribution level is adequate to ensure sufficient funds to decommission Callaway starting in 2024, the end of the present operating license. Attachment 2 is discussed in more detail below.

In Ameren Missouri's Application in File No. EO-2012-0070, Ameren Missouri requests that the Commission state in its Report and Order that the annual decommissioning expense and contribution amount are based on the TLG Cost Study, which is Attachment 1 to the Application, and the parameters and assumptions, which are contained in Attachment 2 and summarized on pages 9 to 10 of the Application.

Although past Ameren Missouri decommissioning trust fund cases requested additional findings, the stipulations and agreements reached with the Company have required the Commission to find only the following: (1) current decommissioning costs for the nuclear unit are included in the utility's cost of service and are reflected in its current rates for ratemaking purposes, (2) that the current cost study meets the requirements of 4 CSR 240-2.185(3) and (3) identify the jurisdictional demand allocator. In past decommissioning cases and in this decommissioning case, Staff has taken the view that limiting the Commission to acknowledging the aforementioned items was appropriate due to the uncertainty of the numerous assumptions required to determine whether the current level of funding was appropriate, i.e., the Commission should not be making findings as to what are "reasonable" financial / economic / investment projections and approving them as "reasonable." However, in this case, Ameren Missouri advised Staff that since the filing of the last stipulation and agreement, the NRC has been closely scrutinizing nuclear decommissioning trust fund rate-of-return assumptions pursuant to 10 CFR §50.75(e)(1)(ii). Consequently, Ameren Missouri needs the Commission to issue an Order approving the expected annual rate of return and more specifically, the expected annual real rate of return, in addition to the items the Commission usually addresses in its Order approving an Ameren Missouri decommissioning trust fund stipulation and agreement.

Ameren Missouri informed Staff it needed the Commission to explicitly approve the capital market return assumptions contained in Attachment 2 due to the following NRC rule, 10 CFR §50.75(e)(1)(ii), which states:

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 a site-specific estimate under §50.75(b)(1) of this section may take credit for projected earnings on the external sinking funds using up to a 2 percent annual real rate of return from the time of future funds' collection through the decommissioning period, provided that the site-specific estimate is based on a period of safe storage that is specifically described in the estimate. This includes the periods of safe storage,

final dismantlement, and license termination. 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)

In response to Staff's continuing concerns about the aggressiveness of Ameren Missouri's rate-of-return expectations, further addressed below, Ameren Missouri provided Staff an update to Attachment 2 using lower rate-of-return expectations, which were based on the upper end of return expectations provided to Ameren Corporation (Ameren) by its pension consultant, Towers Watson, for purposes of Ameren developing an assumed rate-of-return for its pension plans. Ameren Missouri's Revised 05/29/2012 Economic Analysis, used March 31, 2012, fund balances and assumed a switch out of equities in 2023 rather than 2022.

After revising its analysis, Ameren Missouri still believes that the current annual contribution amount of \$6,758,605 should be maintained because it believes this will result in sufficient funding under the current NRC operating license termination date of 2024.

Ameren Missouri is requesting the following specific language from the Commission in its Order approving the Non-Unanimous Stipulation and Agreement, among other things:

Approving the expected nominal return on plan assets of 7.338% through 2023, which assumes a 65% allocation to equity securities with an expected 9.000% nominal return and a 35% allocation to bonds with an expected 4.250% nominal return provided as part of the Revised 05/29/2012 Economic Analysis;

Approving 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%;

Summary of Staff's Analysis

Staff's primary concern with Ameren Missouri's September 1, 2011 Application and Attachments was related to Ameren Missouri's continued use of aggressive expected returns in its Economic Analysis (Attachment 2) and that Ameren Missouri was seeking Staff acceptance and Commission approval of the aggressive expected returns. This concern was somewhat alleviated with the Company's Revised 05/29/2012 Economic Analysis, which is attached to the Stipulation and Agreement as Appendix A. Staff found the updated expected return parameters to be within a range of reasonableness, even though they are at the high end of return estimates provided to Ameren by its pension consultant, Towers Watson.

Staff has considered Ameren Missouri's Nuclear Decommissioning Trust Fund expected returns to be aggressive in past decommissioning cases, but in past decommissioning cases Ameren Missouri has not needed explicit Commission approval of expected return parameters in

order to satisfy the NRC's concerns and Staff had not taken issue with these specific parameters, considering that there were many other factors which could affect the reasonableness of the required contribution amount. In order to address Staff's concern about the aggressiveness of Ameren Missouri's return assumptions, Ameren Missouri has agreed to use Ameren's pension consultant's capital market return expectation information for purposes of developing expected portfolio returns for Ameren Missouri's Nuclear Decommissioning Trust Fund. Staff has not taken issue with these specific parameters, considering that there are many other factors, namely the possible longer investment horizon if Ameren Missouri receives its operating license extension, which could affect the reasonableness of the required contribution amount. Staff believes past stipulation and agreements were clear that the signatories were not recommending the Commission approve specific parameters in the economic analyses as reasonable, but rather receive the economic analyses into evidence and accept the annual contribution amount as reasonable, considering the uncertainty of the many other factors and variables. However, as already explained, Ameren Missouri has related it needs explicit approval of not only the annual contribution amount, as previously, but also the expected return parameters in order to satisfy the NRC.

Staff believes the expected return parameters used in Ameren Missouri's Revised 05/29/2012 Economic Analysis are at the high end of the range of reasonableness. If Ameren Missouri receives the NRC's approval to extend the current operating license from its current 2024 expiration date to 2044,¹ Staff currently anticipates a potential reduction to Ameren Missouri's required annual contribution amounts, even if the expected return is reduced from the high end of the range of reasonableness. For this reason, Staff supports keeping the funding level the same

¹ Ameren Missouri made application to the NRC by letter dated December 15, 2011 for renewal of its operating license NPF-30 for Callaway for an additional 20 years. On February 14, 2012, Melanie A. Galloway, Acting Director, Division of License Renewal, Office of Nuclear Reactor Regulation sent a letter to Ameren Missouri advising that NRC staff had determined Ameren Missouri's application was sufficient and acceptable for docketing. The letter from Ms. Galloway forwarded the NRC staff's safety and environmental review schedule for the license renewal schedule. Originally, the projected date for a decision on Callaway relicensing, if there was no NRC hearing, was December 2013.

On June 8, 2012, the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) vacated and remanded the NRC's 2010 Update to its Waste Confidence Decision concerning storage and disposal of spent nuclear fuel from commercial reactors and the NRC's regulatory implementation of the 2010 Update of the Waste Confidence Decision through a new Temporary Storage Rule. On August 7, 2012, the NRC in the Ameren Missouri Callaway relicensing docket, among various other licensing and relicensing dockets, issued a Memorandum and Order stating, in part, that although it will not issue licenses dependent upon an Update of the Waste Confidence Decision or a new Temporary Storage Rule until the D.C. Circuit's remand is appropriately addressed, "[t]his determination extends just to *final* license issuance; all licensing reviews and proceedings should continue to move forward." (Emphasis in original).

For other ratemaking areas, such as depreciation, Staff and Ameren Missouri have already been assuming that the Company will receive NRC approval for its operating license extension. When contested, the Commission ordered that depreciation for Callaway was to be based on a 20-year operating license extension for setting rates in Case No. ER-2007-0002. (May 22, 2007 Report and Order, pp. 85-88). Without dispute, depreciation for Callaway was based on a license extension in setting rates in Case Nos. ER-2008-0318, ER-20010-0036, and ER-2011-0028, as well.

for purposes of this case. Staff also believes that if any party proposes changes to the annual contribution to Ameren Missouri's Nuclear Decommissioning Trust Fund, the changes should be based on capital market return expectation information used in developing expected returns for Ameren's pension assets or the 2% real rate of return set forth in 10 CFR §50.75(e)(1)(ii), unless interested parties agree to use a different source and/or methodology for capital market return expectations or the Commission finds in a contested case that a different source and/or methodology for developing capital market return expectations is more appropriate.

The Company believes that the \$6,758,605 annual contribution should provide sufficient funds to decommission Callaway at the expiration of its current operating license in 2024. If Ameren Missouri receives the NRC's approval to extend the current operating license from its current 2024 expiration date to 2044, Staff anticipates that the present contribution level would be more than adequate and may need to be adjusted on a going forward basis. For this reason, Staff supports keeping the funding level the same for purposes of this case.

Staff Recommendation

Staff recommends the Commission approve the Non-Unanimous Stipulation and Agreement which contains the following provisions:

1. Receiving into evidence the 2011 Cost Study filed on September 1, 2011 and the Revised 05/29/2012 Economic Analysis;
2. Approving the expected nominal return on plan assets of 7.338% through 2023, which assumes a 65% allocation to equity securities with an expected 9.000% nominal return and a 35% allocation to bonds with an expected 4.250% nominal return provided as part of the Revised 05/29/2012 Economic Analysis;
3. Approving 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%;
4. Finding, pursuant to the Non-Unanimous Stipulation and Agreement, that Ameren Missouri's Missouri retail jurisdiction annual decommissioning expense accruals and trust fund payments shall continue at the current level of \$6,758,605;
5. Finding, in order for the Callaway decommissioning fund to continue to utilize the sinking fund method of decommissioning funding that the current decommissioning costs for Callaway are included in Ameren Missouri's current Missouri cost of service and are reflected in its current rates for ratemaking purposes;
6. Recognizing that Ameren Missouri's 2011 Cost Study meets the requirements of 4 CSR 240-3.185(3);

7. Approving, pursuant to 4 CSR 240-20.070(4)(C), the use of a jurisdictional demand allocator of 100.00%; and,
8. The Parties agree that it is reasonable to use capital market return expectation information provided by Ameren'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'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 is more appropriate.

In summary, Staff believes the Commission should approve the Non-Unanimous Stipulation and Agreement given the reasonableness of the key items that the Commission is being asked to approve and the uncertainty of the many other factors and variables.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

Style of Case : In the Matter of the)
Application of Union Electric Company)
d/b/a Ameren Missouri for Approval of)
Decommissioning Cost Estimate for)
Callaway Energy Center and Funding Level)
of Nuclear Decommissioning Trust Fund.

File No. EO-2012-0070

AFFIDAVIT OF SHANA ATKINSON

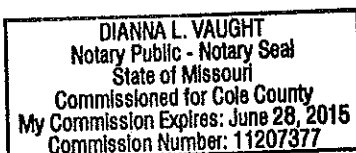
STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

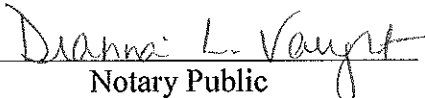
Shana Atkinson, of lawful age, on her oath states: that she has participated in the preparation of the foregoing Staff Recommendation in memorandum form, to be presented in the above case; that the information in the Staff Recommendation was developed by her; that she has knowledge of the matters set forth in such Staff Recommendation; and that such matters are true and correct to the best of her knowledge and belief.



SHANA ATKINSON

Subscribed and sworn to before me this 24th day of September, 2012.





Notary Public