

**FILED<sup>2</sup>**

OCT 6 2000

Missouri Public  
Service Commission

**Exhibit No.:**

**Issue:** Callaway Nuclear  
Decommissioning

**Witness:** Kevin L. Redhage

**Type of Exhibit:** Direct Testimony

**Sponsoring Party:** Union Electric Co.  
d/b/a AmerenUE

**Case No.:**

**Date Testimony Prepared:** October 5, 2000

**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO.** Elm-2001-233

**DIRECT TESTIMONY**

**OF**

**KEVIN L. REDHAGE**

**FILED<sup>2</sup>**

OCT 6 2000

Missouri Public  
Service Commission

**St. Louis, Missouri**

MISSOURI PUBLIC SERVICE COMMISSION

STATE OF MISSOURI

FILED<sup>2</sup>  
OCT 6 2000

Missouri Public  
Service Commission

In the matter of the Application of Union )  
Electric Company (d/b/a AmerenUE) for )  
an order to authorizing the sale, transfer )  
and assignment of certain Assets, Real )  
Estate Leased Property, Easements and )  
Contractual Agreements to Central Illinois )  
Public Service Company (d/b/a AmerenCIPS) )  
and, in connection therewith, certain other )  
related transactions. )

Case No. EM-2001-233

AFFIDAVIT OF KEVIN L. REDHAGE

STATE OF MISSOURI )  
 ) SS  
CITY OF ST. LOUIS )

Kevin L. Redhage, being first duly sworn on his oath, states:


1. My name is Kevin L. Redhage. I work in the City of St. Louis, Missouri, and I am a Financial Specialist in the Financial Planning & Investments Department of Ameren Services Company.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony consisting of pages 1 through 7, including Schedules 1 through 3, all of which testimony has been prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. \_\_\_\_\_ on behalf of Union Electric Company.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

  
Kevin L. Redhage

Subscribed and sworn to before me this 5<sup>th</sup> day of October, 2000.

  
Notary Public

CAROL A. HEAD  
Notary Public - Notary Seal  
STATE OF MISSOURI  
St. Charles County  
My Commission Expires: Sept. 23, 2002

1                                   **DIRECT TESTIMONY**  
2                                   **OF**  
3                                   **KEVIN L. REDHAGE**  
4                                   **UNION ELECTRIC COMPANY**  
5                                   **d/b/a AmerenUE**

6                                   **CASE NO. EM-2001-233**

**FILED<sup>2</sup>**  
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**Service Commission**

7   **Q.     Please state your name, address, and occupation.**

8   A.     My name is Kevin L. Redhage, and I reside in Chesterfield, Missouri. I am a Financial  
9         Specialist in the Financial Planning and Investments Department at Ameren Services.

10 **Q.     How long have you held this position?**

11 A.     I have held this position since February 1992.

12 **Q.     What are your principal duties?**

13 A.     My principal duties include the following: monitoring investment activity and coordination  
14         of trust and regulatory issues concerning the Company's Nuclear Decommissioning Trust  
15         Fund; reviewing capital expenditure justifications to assure that they are conducted in  
16         accordance with Company policies; and developing economic models for the performance of  
17         financial analyses. I also perform other projects as assigned, relative to the area of financial  
18         planning, on a case-by-case basis.

19 **Q.     Please describe your educational background.**

20 A.     I graduated with a Bachelor of Science degree in Civil Engineering from the University of  
21         Missouri - Rolla in 1979. In 1991, I received a Masters degree in Business Administration  
22         (MBA) from Webster University in St. Louis, Missouri, with an emphasis in Finance.

23 **Q.     What is your work experience at Union Electric Company?**

Direct Testimony of  
Kevin L. Redhage

1 A. I was employed by Union Electric Company in May 1981 as an Assistant Engineer in the  
2 Nuclear Construction Department at the Company's Callaway Plant. While serving in this  
3 department, I was promoted from Assistant Engineer to Engineer. In these positions, I  
4 performed various construction management activities, both technical and administrative in  
5 nature.

6 In April 1986, following the completion of Callaway construction, I transferred to the  
7 newly formed Quality Services Department, located in the Company's St. Louis headquarters.

8 My principal responsibility in this position was the review of Company suppliers' quality  
9 assurance (QA) programs, and the on-site verification of the implementation of the QA  
10 programs at the suppliers' facilities. In this position, I also was involved in the development  
11 of internal Company QA programs.

12 After I attained my MBA in Finance, I was assigned to the Financial Planning and  
13 Investments Department as a Financial Specialist. This is the position I currently hold with  
14 the principal duties as described earlier.

15 **Q. Are you familiar with the subject matter of this proceeding?**

16 A. Yes. Ameren Corporation is proposing to transfer the electric transmission and distribution  
17 and gas properties of AmerenUE (the "Company") in the Metro East area in Illinois to  
18 AmerenCIPS. The logistics of this transfer and the benefits expected to accrue to Missouri  
19 ratepayers are discussed in Mr. Craig D. Nelson's testimony.

20 **Q. What is the scope of your testimony?**

21 A. My testimony will address the effect the proposed transfer will have on Missouri ratepayers  
22 relative to the recovery of nuclear decommissioning expenses.

23 **Q. Are you sponsoring any schedules?**

1 A. Yes. I am sponsoring Schedule Numbers 1 through 3.

2 **Q. Please describe how nuclear decommissioning costs are currently allocated between the**  
3 **various jurisdictions that the Company serves.**

4 A. The amount of decommissioning costs that each jurisdiction is responsible for is computed  
5 by multiplying the total decommissioning cost estimate by the "12-Month Coincident Peak  
6 Demand Allocation Factor" applicable to that jurisdiction.

7 These "allocation factors" are based on a twelve-month average of the amount of  
8 jurisdictional peak demand coincident with the Company's peak demand, excluding  
9 interruptible demands, for each of the Company's three jurisdictions: Missouri, Illinois and  
10 Wholesale. The current allocation factors, as of June 30, 2000, are as indicated in the "Pre-  
11 Property Transfer" table of Schedule 1. As indicated on this schedule, the allocation factors  
12 applicable to the Missouri, Illinois and Wholesale jurisdictions are 88.77%, 7.09% and  
13 4.14%, respectively.

14 **Q. How would the foregoing "12-Month Coincident Peak Demand Allocation Factors" be**  
15 **adjusted to reflect the transfer of the Company's Illinois properties, assuming it is**  
16 **approved?**

17 A. As a result of the transfer, the Company would no longer have an Illinois jurisdiction.  
18 Coincident demands for that jurisdiction would consequently go to "0". The allocation  
19 factors for the remaining Missouri and Wholesale jurisdictions would then be based on the  
20 proportionate average coincident peak demand values for these two jurisdictions. The "Post-  
21 Property Transfer" table of Schedule 1 illustrates the resulting allocation factors, assuming  
22 the elimination of the Illinois jurisdiction's average coincident demand. The Missouri  
23 allocation factor increases to 95.55% and the Wholesale allocation factor increases to 4.45%.

1   **Q.     What effect would the foregoing change in allocation factors have on the amount of**  
2       **decommissioning cost for which Missouri ratepayers are responsible?**

3   A.     The latest site-specific study (performed by TLG Services, Inc. in August 1999) estimated  
4       total decommissioning costs to be \$509,451,856 in terms of 1999 dollars. This amount was  
5       approved by the Commission in its order in Case No. EO-2000-205 (our most recent triennial  
6       decommissioning cost and funding update filing). Applying the allocation factor of 95.55%  
7       to this total cost of decommissioning results in a decommissioning cost of \$486,781,248  
8       allocable to Missouri ratepayers.

9   **Q.     What is the current valuation of the Illinois jurisdictional sub-account of the Callaway**  
10       **Plant Tax-Qualified Nuclear Decommissioning Trust Fund (the "trust fund")?**

11  A.     As of June 30, 2000, the Illinois jurisdictional sub-account of the trust fund contained assets  
12       with a market value of \$14,350,509; and a book value of \$9,245,616. At the applicable  
13       composite income tax rate of 24.5283%, this results in a "after-tax liquidation value" of  
14       \$13,098,278.

15  **Q.     Assuming that the proposed property transfer is approved, what would be done with**  
16       **the funds in the Illinois sub-account?**

17  A.     The funds in the Illinois jurisdictional sub-account would be reallocated to the Missouri and  
18       Wholesale sub-accounts. The latest available 12-Month Coincident Peak Demand Allocation  
19       Factors, adjusted to exclude Illinois demands, would be applied to the market value of the  
20       funds in the Illinois jurisdictional sub-account to determine the amounts to be allocated to the  
21       remaining Missouri and Wholesale jurisdictions. Schedule 3 illustrates this reallocation,  
22       based on the June 30, 2000 allocation factors and trust fund valuations.

23  **Q.     Is there a precedent for the jurisdictional responsibility for nuclear decommissioning**

costs and the jurisdictional sub-account being reallocated in this manner?

A. Yes, there is. At the time when Union Electric sold the transmission and distribution properties in its Iowa jurisdiction in 1992, the nuclear decommissioning cost and trust fund balance were reallocated to Missouri in this same manner. The Commission approved this reallocation in its Order in Case Nos. EM-92-225 and EM-92-253, dated December 22, 1992.

**Q. Will the increase in decommissioning cost allocable to Missouri ratepayers require an increase in the annual jurisdictional expense and amount currently being contributed to the Missouri jurisdictional sub-account of the Callaway Nuclear Decommissioning Trust Fund?**

A. No. A "Zone of Reasonableness" analysis was performed for the Missouri jurisdictional sub-account assuming the reallocation of the Illinois decommissioning expense liability to Missouri ratepayers and assuming the reallocation of a portion of the existing Illinois jurisdictional sub-account's assets to the Missouri jurisdictional sub-account, as previously discussed. All of the other financial and economic assumptions and input parameters were held identical to those used in the "Zone of Reasonableness" analysis presented in Case No. EO-2000-205.

The results of the "Zone of Reasonableness" analysis are presented in Schedule 3. In summary, the analysis indicates that the current annual contribution amount of \$6,214,184 would be adequate within a range of decommissioning inflation values from a low of 3.88% (based on "conservative" financial and economic assumptions) to a high of 4.53% (based on "optimistic" assumptions). At "expected" financial and economic assumption values, the current annual contribution amount would be adequate for a decommissioning inflation level of 4.14%.

Actual decommissioning cost estimates appear to be escalating in this general range.

The decommissioning cost estimate for the Callaway plant escalated at an annualized rate of 4.15% from 1995 to 1999, which coincides with the decommissioning inflation rate for which the current annual contribution amount would be adequate, given "expected" financial and economic assumption values.

**Q. To put the issue of decommissioning expense into perspective of overall rates, what percentage does this expense comprise of the overall cost of serving Missouri jurisdictional customers?**

A. The current annual decommissioning expense of \$6,214,184 constitutes approximately 0.40% of the total annual operating expense associated with serving the Company's Missouri customers.

**Q. Will the Company continue to monitor the valuation of the trust fund and the annual contribution amounts to assure that funding adequacy is maintained in the future?**

A. Yes. 4 CSR 240-20.070(9) requires the Company to file updated decommissioning cost studies and proposed funding levels with the Commission every three years. The Company must make its next filing by September 1, 2002. Should any adjustments in the level of annual contributions be necessary to maintain decommissioning funding adequacy, they will be addressed at that time.

#### SUMMARY

**Q. In summary, what does the Company seek from the MPSC?**

A. In conjunction with the proposed transfer of the Company's properties in the Metro East area in Illinois to AmerenCIPS, the Company is requesting that the MPSC concurrently approve:

- 1) The reallocation of a portion of the decommissioning cost previously allocated to Illinois ratepayers to Missouri ratepayers;



Direct Testimony of  
Kevin L. Redhage

1           2) The reallocation of a portion of the funds currently in the Illinois jurisdictional sub-  
2           account of the nuclear decommissioning trust fund to the Missouri jurisdictional sub-  
3           account;

4           3) The use of the latest available 12-Month Coincident Peak Demand Allocation Factors,  
5           adjusted for the elimination of the Illinois demands, for the performance of the above  
6           reallocations; and

7           4) The Company's continuing to accrue decommissioning expenses and to make  
8           contributions to the trust fund at the current level of \$6,214,184 annually.

9           The Company is also requesting the Commission to confirm that the foregoing  
10          decommissioning expenses for the Callaway Plant are included in the Company's current cost  
11          of service and are reflected in its current rates for ratemaking purposes; and, that the  
12          economic and financial input parameters used in the Zone of Reasonableness analysis  
13          contained in Schedule 3 (identical to those presented in Case No. EO-2000-205) continue to  
14          be valid and acceptable to the Commission.

15   **Q.   Does this conclude your testimony?**

16   **A.   Yes, it does.**

**Union Electric Company**  
**(d/b/a AmerenUE)**  
**AVERAGE PEAK DEMANDS AT TIME OF AMEREN PEAK**  
**12 Months Ended**  
**30-Jun-00**

<b>Pre-Property Transfer</b>				
<b>Includes Illinois Demands</b>				
	<b>Total Company</b>	<b>Ultimate Consumers</b>		<b>Sales For Resale</b>
		<b>Missouri</b>	<b>Illinois</b>	
<b>Average Demands:</b>	6,055,982	5,626,354	429,628	0
<b>Applicable to Resale:</b>	0	(250,640)	0	250,640
<b>Total:</b>	6,055,982	5,375,714	429,628	250,640
<b>Fixed Allocation %:</b>	100.00%	88.77%	7.09%	4.14%

<b>Post-Property Transfer</b>				
<b>Excludes Illinois Demands</b>				
	<b>Total Company</b>	<b>Ultimate Consumers</b>		<b>Sales For Resale</b>
		<b>Missouri</b>	<b>Illinois</b>	
<b>Average Demands:</b>	5,626,354	5,626,354	0	0
<b>Applicable to Resale:</b>	0	(250,640)	0	250,640
<b>Total:</b>	5,626,354	5,375,714	0	250,640
<b>Fixed Allocation %:</b>	100.00%	95.55%	0.00%	4.45%

**CALLAWAY PLANT TAX-QUALIFIED NUCLEAR DECOMMISSIONING TRUST FUND  
REALLOCATION OF ILLINOIS JURISDICTIONAL SUBACCOUNT BALANCES  
(All Values as of June 30, 2000)**

	Jurisdictional Sub-Account			Total
	Missouri	Illinois	Wholesale	
<b>Pre-Property Transfer Balances (Pre-Reallocations):</b>				
Market Value:	\$172,329,650.94	\$14,350,508.75	\$4,993,218.97	\$191,673,378.66
Book Value:	106,572,997.42	9,245,615.62	3,680,672.48	119,499,285.52
Unrealized Capital Gain:	65,756,653.52	5,104,893.13	1,312,546.49	72,174,093.14
Composite Income Tax Rate:	24.5283%	24.5283%	24.5283%	24.5283%
Income Tax Liability on Unrealized Capital Gain:	(16,128,989.25)	(1,252,143.50)	(321,945.34)	(17,703,078.09)
After-Tax Liquidation Value:	\$156,200,661.69	\$13,098,365.25	\$4,671,273.63	\$173,970,300.57
<b>Reallocation Factor:</b>	95.55%	0.00%	4.45%	100.00%
<b>Amounts of Reallocations:</b>				
Market Value:	\$13,711,911.11	(\$14,350,508.75)	\$638,597.64	\$0.00
Book Value:	8,834,185.72	(9,245,615.62)	411,429.90	(0.00)
Unrealized Capital Gain:	4,877,725.39	(5,104,893.13)	227,167.74	0.00
Income Tax Liability on Unrealized Capital Gain:	(1,196,423.12)	1,252,143.50	(55,720.39)	0.00
After-Tax Liquidation Value:	\$12,515,487.99	(\$13,098,365.25)	\$582,877.25	\$0.00
<b>Post-Property Transfer Balances (Post-Reallocations):</b>				
Market Value:	\$186,041,562.05	\$0.00	\$5,631,816.61	\$191,673,378.66
Book Value:	115,407,183.14	0.00	4,092,102.38	119,499,285.52
Unrealized Capital Gain:	70,634,378.91	0.00	1,539,714.23	72,174,093.14
Income Tax Liability on Unrealized Capital Gain:	(17,325,412.36)	0.00	(377,665.73)	(17,703,078.09)
After-Tax Liquidation Value:	\$168,716,149.69	\$0.00	\$5,254,150.88	\$173,970,300.57

Note: In actual practice, the securities in the Illinois sub-account will not be sold and the proceeds reinvested in the remaining jurisdictional sub-accounts. Doing this would result in a realized gain which would incur an income tax liability. Instead, the individual securities in the Illinois sub-account will be "reassigned" to the Missouri and Wholesale sub-accounts. This "reassignment" will be performed in such a manner that the market value is reallocated as closely as possible in accordance with the reallocation factors. But, since the reallocation is being performed by reassigning individual securities with fixed book values, the exact reallocation percentages may vary slightly when considered from a market versus a book value perspective. Consequently, reallocation of the "After-Tax Liquidation Value" should coincide very closely with the stated reallocation factors, but may not match precisely.

Nuclear Decommissioning Trust Fund Model  
Zone of Reasonableness

**AmerenUE**  
**Callaway Plant Tax-Qualified Nuclear Decommissioning Trust Fund Projection**  
**Missouri Jurisdiction**

**1 Portfolio Return Assumptions**

Equity Allocation:  
Bond Allocation:  
Real Return on Bonds:  
CPI Inflation:  
Nominal Return on Bonds:  
Equity Premium over Bonds:  
Nominal Return on Equities:  
Weighted Average Return:  
Switch out of Equities at End-Of-Year:

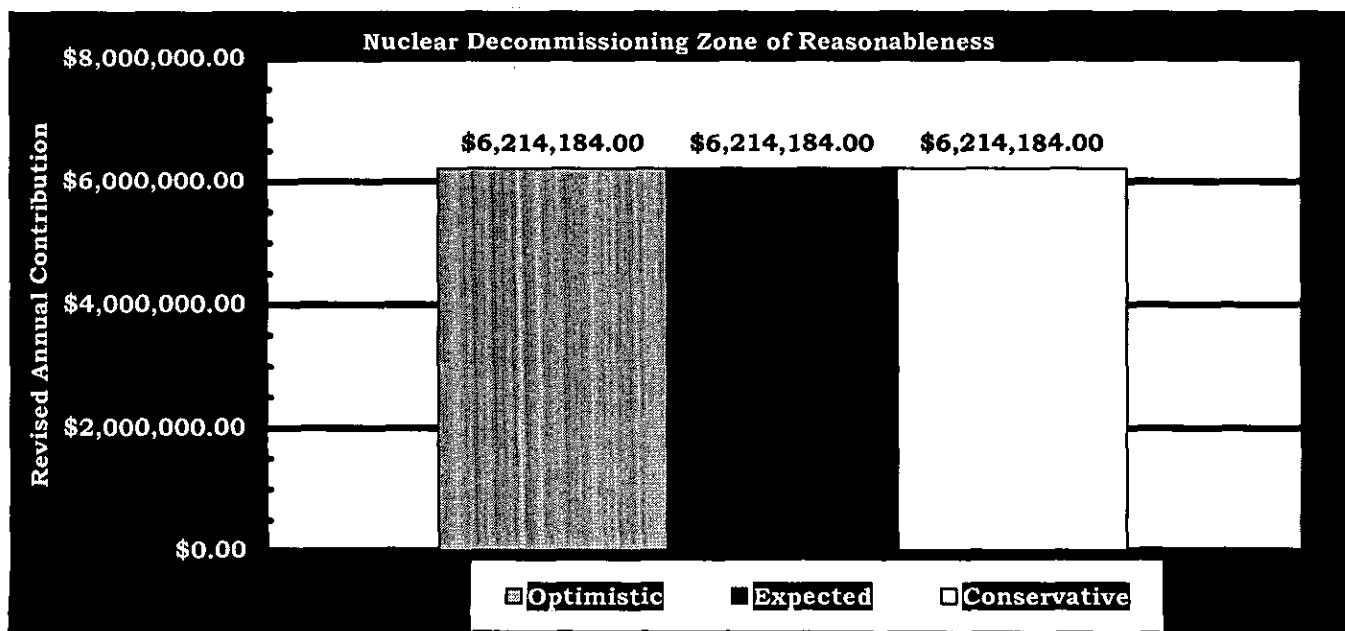
Contribution Boundary Estimates		
Optimistic Estimate	Expected Estimate	Conservative Estimate
65.00%	65.00%	65.00%
35.00%	35.00%	35.00%
2.00%	2.00%	2.00%
4.00%	4.00%	4.00%
6.00%	6.00%	6.00%
7.00%	6.50%	6.00%
13.00%	12.50%	12.00%
10.55%	10.23%	9.90%
2024	2022	2021

**2 Decommissioning Expense Estimates**

Decommissioning Inflation:

4.53%	4.14%	3.88%
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	Optimistic	Expected	Conservative
<b>Revised Annual Contribution:</b>	<b>\$6,214,184.00</b>	<b>\$6,214,184.00</b>	<b>\$6,214,184.00</b>



Nuclear Decommissioning Trust Fund Model  
Fund ProjectionsAmerenUE  
Callaway Plant Tax-Qualified Nuclear Decommissioning Trust Fund Projection  
Missouri Jurisdiction

Current Year:	2000	Equities:	68.00%	Federal Tax Rate:	20.00%
Year Decommissioning Begins:	2024	Bonds:	35.00%	Missouri State Income Tax Rate:	6.25%
Year Decommissioning Ends:	2033	Real Return on Bonds:	2.00%	Percentage of Federal Taxes Deductible on MO Taxes:	50.00%
		CPI Inflation:	4.00%	Composite Tax Rate:	24.5283%
		Nominal Return on Bonds:	6.00%		
June 30, 2000 End-Of-Qtr Fund Balance:	\$168,716,149.69	Equity Premium over Bonds:	6.50%	Original, Total Decommissioning Cost Est Aug. 1999 TLG Study:	\$509,431,856.00
2033 EOY Fund Balance:	\$0.00	Nominal Return on Equities:	12.50%	Current, Total Decommissioning Cost Est 2000:	\$509,431,856.00
Current Contribution:	\$6,214,184.00	Weighted Average Return:	10.225%	Demand Allocator (Missouri):	As of 06/30/2000
Revised contribution:	\$6,214,184.00	Switch Out of Equities at EOY:	2022	MO Jurisdictional, Total Decommissioning Cost Estimate:	\$486,781,248.41
		Management & Trust Fees (BP):	15.00	Decommissioning Inflation Assumption:	4.14%

Fund Projections								
Year	Beginning-of-Year Balance	Annual Contributions To Fund	Pre Tax & Fee Income	Investment Management & Trust Fees	Federal & State Income Taxes	After Tax & Fee Income	Missouri Jurisdictional Decommissioning Expenses (Reflected \$)	End-Of-Year Balance
<b>TOTAL</b>		<b>\$182,247,508.00</b>	<b>\$1,722,683,142.43</b>	<b>\$31,500,947.20</b>	<b>\$414,818,274.31</b>	<b>\$1,276,363,920.95</b>	<b>\$1,597,327,578.64</b>	
June 30, 2000								168,716,149.69
2000	168,716,149.69	3,107,092.00	8,705,038.19	130,966.66	2,103,074.15	6,470,997.38	0.00	178,294,239.07
2001	178,294,239.07	6,214,184.00	18,548,286.10	286,013.21	4,479,425.43	13,782,847.46	0.00	198,291,270.54
2002	198,291,270.54	6,214,184.00	20,592,982.57	317,542.28	4,973,221.20	15,302,219.09	0.00	219,807,673.62
2003	219,807,673.62	6,214,184.00	22,793,034.78	351,466.92	5,504,535.51	16,937,032.35	0.00	242,958,889.97
2004	242,958,889.97	6,214,184.00	25,160,246.66	387,969.16	6,076,219.01	18,696,058.49	0.00	267,869,132.46
2005	267,869,132.46	6,214,184.00	27,707,318.95	427,244.83	6,691,338.94	20,588,735.19	0.00	294,672,051.65
2006	294,672,051.65	6,214,184.00	30,447,917.44	469,504.65	7,353,195.59	22,625,217.20	0.00	323,511,452.84
2007	323,511,452.84	6,214,184.00	33,396,746.21	514,975.38	8,065,340.02	24,816,430.82	0.00	354,542,067.66
2008	354,542,067.66	6,214,184.00	36,569,626.58	563,900.96	8,831,593.08	27,174,132.54	0.00	387,930,384.20
2009	387,930,384.20	6,214,184.00	39,983,581.94	616,543.90	9,656,065.93	29,710,972.11	0.00	423,855,540.31
2010	423,855,540.31	6,214,184.00	43,656,929.15	673,186.65	10,543,182.12	32,440,560.38	0.00	462,510,284.69
2011	462,510,284.69	6,214,184.00	47,609,376.77	734,133.10	11,497,701.28	35,377,542.39	0.00	504,102,011.08
2012	504,102,011.08	6,214,184.00	51,862,130.79	799,710.25	12,524,744.66	38,537,675.88	0.00	548,853,870.96
2013	548,853,870.96	6,214,184.00	56,438,008.46	870,269.95	13,629,822.65	41,937,915.86	0.00	597,005,970.82
2014	597,005,970.82	6,214,184.00	61,361,560.67	946,190.76	14,818,864.32	45,596,505.59	0.00	648,816,660.41
2015	648,816,660.41	6,214,184.00	66,659,203.68	1,027,880.03	16,098,249.20	49,533,074.45	0.00	704,563,918.87
2016	704,563,918.87	6,214,184.00	72,359,360.86	1,115,776.04	17,474,841.56	53,768,743.26	0.00	764,546,846.13
2017	764,546,846.13	6,214,184.00	78,492,615.17	1,210,350.37	18,956,027.22	58,326,237.59	0.00	829,087,267.72
2018	829,087,267.72	6,214,184.00	85,091,873.28	1,312,110.44	20,549,753.15	63,230,009.59	0.00	898,531,461.41
2019	898,531,461.41	6,214,184.00	92,192,542.09	1,421,602.24	22,264,570.15	68,506,369.70	0.00	973,252,015.10
2020	973,252,015.10	6,214,184.00	99,832,718.70	1,539,413.20	24,109,678.71	74,183,626.79	0.00	1,053,649,825.90
2021	1,053,649,825.90	6,214,184.00	108,053,394.85	1,666,175.42	26,094,978.35	80,292,241.08	0.00	1,140,156,250.98
2022	1,140,156,250.98	6,214,184.00	116,898,676.82	1,802,569.02	28,231,120.78	86,864,987.02	0.00	1,233,235,421.99
2023	1,233,235,421.99	6,214,184.00	126,180,550.84	1,910,149.18	30,549,702.29	94,420,849.36	0.00	1,333,993,305.35
2024	1,333,993,305.35	6,214,184.00	136,603,450.66	2,021,887.62	33,000,000.00	103,581,352.93	20,804,540.59	1,336,168,185.76
2025	1,336,168,185.76	0.00	76,603,450.66	1,972,338.85	18,305,695.35	56,325,216.45	118,888,016.31	1,273,605,385.91
2026	1,273,605,385.91	0.00	70,191,472.58	1,807,430.42	16,773,444.30	51,610,597.86	207,495,019.15	1,117,720,964.61
2027	1,117,720,964.61	0.00	59,560,660.90	1,533,687.02	14,233,031.33	43,793,942.55	250,086,365.86	911,428,341.30
2028	911,428,341.30	0.00	47,063,609.72	1,211,887.95	11,246,648.74	34,605,073.03	254,069,692.05	691,963,722.29
2029	691,963,722.29	0.00	33,631,785.18	866,018.47	8,036,886.18	24,728,880.54	262,867,938.50	453,824,664.32
2030	453,824,664.32	0.00	19,561,920.47	503,719.45	4,674,653.08	14,383,547.94	255,585,313.07	212,622,899.19
2031	212,622,899.19	0.00	10,982,723.84	282,803.14	2,624,508.36	8,075,410.34	59,155,003.74	161,543,305.78
2032	161,543,305.78	0.00	7,016,807.12	180,682.78	1,676,785.22	5,159,339.13	89,193,040.74	77,509,604.17
2033	77,509,604.17	0.00	2,275,102.79	58,583.90	543,674.45	1,672,844.45	79,182,448.62	0.00

Nuclear Decommissioning Trust Fund Model  
Input Data

**AmerenUE**  
**Callaway Plant Tax-Qualified Nuclear Decommissioning Trust Fund Projection**  
**Missouri Jurisdiction**

**1 Current Year:** 2000

**2 Year Decommissioning Begins:** 2024

**3 Year Decommissioning Ends:** 2033

**4 End-Of-Year Fund Balances**

June 30, 2000 End-Of-Quarter Fund Balance:

\$168,716,149.69

2033 End-Of-Year Fund Balance:

\$0.00

↑ After entering all data, manually set this cell equal to the Final, Ending Balance of Fund, located on "Fund Projections" worksheet!

**5 Annual Contribution to Fund**

Current:

\$6,214,184.00

Revised:

\$6,214,184.00

**Effective Date of Revised Annual Contribution**

Year:

2000

Quarter:

3

**6 Portfolio Return Assumptions**

Asset Allocation

Equities:

65.000%

Bonds:

35.000%

Real Return on Bonds:

2.000%

CPI Inflation:

4.000%

Nominal Return on Bonds:

6.000%

Equity Premium over Bonds:

6.500%

Nominal Return on Equities:

12.500%

Weighted Average Return:

10.225%

Switch Out of Equities at End-Of-Year:

2022

**7 Investment Management & Trust Fees (Basis Points):**

15.00

**8 Federal & State Tax Assumptions**

Federal Tax Rate:

20.000%

Missouri State Income Tax Rate:

6.250%

Percentage of Federal Taxes Deductible on MO Taxes:

50.000%

Composite Tax Rate:

24.528%

Nuclear Decommissioning Trust Fund Model  
Decommissioning Expense Projections

**AmerenUE**  
**Callaway Plant Tax-Qualified Nuclear Decommissioning Trust Fund Projection**  
**Missouri Jurisdiction**

**1 Decommissioning Expense Estimates**

Original, Total Decommissioning Cost Estimate:

Original Estimate Based On:

Current, Total Decommissioning Cost Estimate:

Demand Allocator (Missouri - As of 06/30/2000):

MO Jurisdictional, Total Decommissioning Cost Estimate:

Decommissioning Inflation:

**\$509,451,856.00**

Aug. 1999 TLG Study

**\$509,451,856.00**

95.55%

**\$486,781,248.41**

4.14%

**Decommissioning Expense Calculation**

Year	Aug. 1999 TLG Study Total Decommissioning Expenses	Aug. 1999 TLG Study Decommissioning Expenses % OF TOTAL	Missouri Jurisdictional Decommissioning Expenses 1999	# of Years of Inflation	Inflation Factor At 4.14% Decommissioning Inflation Rate	Missouri Jurisdictional Decommissioning Expenses (Inflated \$\$)
<b>TOTAL</b>	<b>\$509,451,856.00</b>	<b>100.00%</b>	<b>\$486,781,248.41</b>			<b>\$1,597,327,578.64</b>
2000	0.00	0.00%	0.00	1	1.0414	0.00
2001	0.00	0.00%	0.00	2	1.0845	0.00
2002	0.00	0.00%	0.00	3	1.1295	0.00
2003	0.00	0.00%	0.00	4	1.1762	0.00
2004	0.00	0.00%	0.00	5	1.2250	0.00
2005	0.00	0.00%	0.00	6	1.2757	0.00
2006	0.00	0.00%	0.00	7	1.3285	0.00
2007	0.00	0.00%	0.00	8	1.3836	0.00
2008	0.00	0.00%	0.00	9	1.4409	0.00
2009	0.00	0.00%	0.00	10	1.5005	0.00
2010	0.00	0.00%	0.00	11	1.5627	0.00
2011	0.00	0.00%	0.00	12	1.6274	0.00
2012	0.00	0.00%	0.00	13	1.6948	0.00
2013	0.00	0.00%	0.00	14	1.7650	0.00
2014	0.00	0.00%	0.00	15	1.8381	0.00
2015	0.00	0.00%	0.00	16	1.9142	0.00
2016	0.00	0.00%	0.00	17	1.9935	0.00
2017	0.00	0.00%	0.00	18	2.0761	0.00
2018	0.00	0.00%	0.00	19	2.1620	0.00
2019	0.00	0.00%	0.00	20	2.2516	0.00
2020	0.00	0.00%	0.00	21	2.3448	0.00
2021	0.00	0.00%	0.00	22	2.4420	0.00
2022	0.00	0.00%	0.00	23	2.5431	0.00
2023	0.00	0.00%	0.00	24	2.6484	0.00
2024	7,894,343.00	1.55%	7,543,044.74	25	2.7581	20,804,540.59
2025	43,318,308.00	8.50%	41,390,643.29	26	2.8723	118,888,016.31
2026	72,596,657.00	14.25%	69,366,105.76	27	2.9913	207,495,019.15
2027	84,018,486.00	16.49%	80,279,663.37	28	3.1152	250,086,565.86
2028	81,962,065.00	16.09%	78,314,753.11	29	3.2442	254,069,692.05
2029	81,427,892.00	15.98%	77,804,350.81	30	3.3786	262,867,938.50
2030	76,023,351.00	14.92%	72,640,311.88	31	3.5185	255,585,313.07
2031	16,895,776.00	3.32%	16,143,913.97	32	3.6642	59,155,003.74
2032	24,462,068.00	4.80%	23,373,505.97	33	3.8160	89,193,040.74
2033	20,852,910.00	4.09%	19,924,955.51	34	3.9740	79,182,448.62