Exhibit No.:
Issues: Updated Capital Structure
Witness: Michael G. O’Bryan
Sponsoring Party: Union Electric Company
Type of Exhibit: Supplemental Direct Testimony
Case No.: ER-2008-0318
Date Testimony Prepared: June 16, 2008

# MISSOURI PUBLIC SERVICE COMMISSION 

CASE NO. ER-2008-0318

## SUPPLEMENTAL DIRECT TESTIMONY

OF
MICHAEL G. O'BRYAN

ON
BEHALF OF

UNION ELECTRIC COMPANY d/b/a AmerenUE

St. Louis, Missouri
June, 2008

TABLE OF CONTENTS
I. INTRODUCTION ..... 1
II. PURPOSE OF TESTIMONY ..... 1
III. UPDATED OVERALL FAIR RATE OF RETURN ..... 2
 Commission’s Order Adopting Procedural Schedule and Test Year issued on May 29, 2008.

## III. UPDATED OVERALL FAIR RATE OF RETURN

Q. Have you prepared or has there been prepared under your direction and supervision any schedules relating to overall fair rate of return for purposes of this supplemental direct testimony?
A. Yes, I am sponsoring Schedules MGO-E5 through MGO-E8 for that purpose. These schedules are based upon the test year twelve months ended March 31, 2008, and are designated as follows:

| Schedule MGO-E5 | Capital Structure / Weighted Average Cost of Capital |
| :--- | :--- |
| Schedule MGO-E6 | Embedded Cost of Long-Term Debt |
| Schedule MGO-E7 | Cost of Short-Term Debt |
| Schedule MGO-E8 | Embedded Cost of Preferred Stock |
| Scheduled MGO-E5 through E8, which use actual data for the entire test year, |  | effectively replace Schedules MGO-E1 through E4 to my direct testimony, which were based in on data through December, 2007.

Q. How did you calculate the overall fair rate of return or weighted average cost of capital for AmerenUE?
A. I calculated these items in the same manner as that submitted in my direct testimony in this proceeding.
Q. Please describe the capital structure of AmerenUE.
A. As outlined on Schedule MGO-E5, the capital structure of AmerenUE on March 31, 2008 consisted of 46.558\% long-term debt, $0.739 \%$ short-term debt, 1.776\% preferred stock and 50.928\% common equity.
Q. How were the balances of the components of AmerenUE's capital structure determined?
A. The balance of long-term debt, $\$ 3,001,633,545$, is the total carrying value of the Company's long-term debt using the net proceeds method. The net proceeds method calculates the carrying value by taking the indebtedness principal amount outstanding and subtracting the unamortized discount, issuance expenses and any loss on reacquired debt.

The balance of short-term debt, $\$ 47,612,601$, is the last twelve-month average of net short-term debt - see Schedule MGO-E7. This approach measures the average monthly short-term debt balance, less Construction Work in Progress ("CWIP"), over the 12 months in the test year. It recognizes that short-term debt balances can fluctuate substantially during the year and includes in the Company's capital structure only that portion of short-term debt which may represent permanent capital - i.e. the extent to which short-term debt plays a continual role on the financing of long-term assets.

The balance of preferred stock, $\$ 114,502,040$, is also the carrying value or net proceeds amount of AmerenUE’s preferred stock as found in the embedded cost calculation for this component of capitalization.

The balance of common equity, $\$ 3,283,398,137$, represents AmerenUE's book value of common equity at March 31, 2008 adjusted to remove the effects of its investments in its formerly wholly-owned subsidiaries, Union Electric Development Corporation and Electric Energy, Inc. ("EEInc."). As of March 31, 2008, these subsidiaries are no longer owned by AmerenUE. I further adjusted the book value by removing AmerenUE's total other comprehensive income.

## Q. What is the embedded cost of AmerenUE's long-term debt?

A. AmerenUE's embedded cost of long-term debt was $5.774 \%$ as of March 31, 2008. Schedule MGO-E6 provides the calculation of the embedded cost of long-term debt. AmerenUE has about $\$ 208$ million principal amount of variable rate environmental improvement indebtedness (in various series) outstanding under which the interest rates are reset by a Dutch auction process every 7 or 35 days. The effective cost used for this indebtedness for purposes of this proceeding was derived using current rates for these securities including related auction broker/dealer fees.
Q. Did you make any adjustments to AmerenUE's long-term debt balance?
A. Yes, I did. First, I included AmerenUE’s April 8, 2008 \$250 million issuance of senior secured notes that refinanced the early redemption of the Company’s Series 1991 and Series 2000 A, B and C Environmental Improvement auction rate securities. These auction rate securities were redeemed between April 30, 2008, and May 6, 2008. Also, I did not include the Company’s obligations under capital leases related to the Chapter 100 "financing" of its Peno Creek (City of Bowling Green) and Audrain County gas-fired generating facilities. These transactions and the related capital leases did not generate any proceeds nor were they a source of capital for the Company.

## Q. What is the cost of AmerenUE's short-term debt?

A. AmerenUE's cost of short-term debt was $3.384 \%$ based on the Company's borrowing rates as of May 31, 2008 on outstanding bank loans, commercial paper and a direct loan from Ameren Corporation.

## Q. What is the embedded cost of AmerenUE's preferred stock?

A. AmerenUE's embedded cost of preferred stock was $5.189 \%$ as of March 31, 2008. Schedule MGO-E8 provides the calculation of the embedded cost of preferred stock.

Using the net proceeds method of calculating the balance of preferred stock, the balance outstanding as of March 31, 2008 was $\$ 114,502,040$.
Q. Did you consider expenses associated with AmerenUE's issuance of preferred stock in developing the embedded cost of this component of the Company's capital structure?
A. Yes, I did. I included expenses in the same manner as that reflected in my earlier direct testimony.
Q. Please describe your calculation of AmerenUE's balance of common equity.
A. I derived AmerenUE's balance of common equity, $\$ 3,283,398,137$, by adjusting the Company's book value of common equity at March 31, 2008 of \$3,421,823,617 by the unappropriated undistributed subsidiary earnings associated with AmerenUE's investment in its formerly wholly-owned subsidiaries, Union Electric Development Corporation -- $(\$ 6,944,266)$ and EEInc. -- $\$ 152,125,791$. Further, I adjusted the stated book value by removing AmerenUE’s March 31, 2008 total other comprehensive income -(\$6,756,045).

## Q. What is the cost of common equity for AmerenUE?

A. I used the same returns on common equity as that used in my earlier direct testimony in this proceeding - 10.9\% (with a fuel adjustment clause ("FAC")) and 11.15\% (without an FAC).
Q. What is the overall fair rate of return for AmerenUE for this proceeding?
A. As shown on Schedule MGO-E5, as of March 31, 2008, the overall fair rate of return for AmerenUE is $8.356 \%$ (with an FAC) and $8.483 \%$ (without an FAC). I derived this

Supplemental Direct Testimony of Michael G. O’Bryan
result by using the capital structure and embedded costs of long-term debt, short-term debt and preferred stock discussed above, and shown on the various Schedules attached, along with the costs of common equity for AmerenUE developed by Dr. Morin in his direct testimony.

## Q. Does this conclude your supplemental direct testimony?

A. Yes, it does.

# BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI 

In the Matter of Union Electric Company ) d/b/a AmerenUE for Authority to File ) Tariffs Increasing Rates for Electric )

Case No. ER-2008-0318
Service Provided to Customers in the Company's Missouri Service Area.

## AFFIDAVIT OF MICHAEL G. O'BRYAN

## STATE OF MISSOURI ) <br> ss <br> CITY OF ST. LOUIS )

Michael G. O'Bryan, being first duly sworn on his oath, states:

1. My name is Michael G. O'Bryan. I work in the City of St. Louis, Missouri, and I am employed by Ameren Services Company as Senior Capital Markets Specialist.
2. Attached hereto and made a part hereof for all purposes is my Supplemental Direct Testimony on behalf of Union Electric Company d/b/a AmerenUE consisting of 6 pages, and Schedules MGO-E5 through MGO-E8, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.


Subscribed and sworn to before me this $16^{6 / h}$ day of June, 2008.


My commission expires:

## Union Electric Company d/b/a AmerenUE Weighted Average Cost of Capital

With Fuel Adjustment Clause
at $3 / 31 / 2008$ :

| CAPITAL COMPONENT | AMOUNT | PERCENT <br> OF TOTAL | COST | WEIGHTED <br> COST |
| :--- | ---: | ---: | ---: | ---: |
| Long-Term Debt | $\$ 3,001,633,545$ | $46.558 \%$ | $5.774 \%$ | $2.688 \%$ |
| Short-Term Debt | $\$ 47,612,601$ | $0.739 \%$ | $3.384 \%$ | $0.025 \%$ |
| Preferred Stock | $\$ 114,502,040$ | $1.776 \%$ | $5.189 \%$ | $0.092 \%$ |
| Common Equity | $\$ 3,283,398,137$ | $50.928 \%$ | $10.900 \%$ | $5.551 \%$ |
| TOTAL | $\$ 6,447,146,323$ | $\mathbf{1 0 0 . 0 0 0} \%$ |  | $\mathbf{8 . 3 5 6 \%}$ |

Without Fuel Adjustment Clause
at $3 / 31 / 2008$ :

| CAPITAL COMPONENT | AMOUNT | PERCENT OF TOTAL | COST | WEIGHTED COST |
| :---: | :---: | :---: | :---: | :---: |
| Long-Term Debt | \$3,001,633,545 | 46.558\% | 5.774\% | 2.688\% |
| Short-Term Debt | \$47,612,601 | 0.739\% | 3.384\% | 0.025\% |
| Preferred Stock | \$114,502,040 | 1.776\% | 5.189\% | 0.092\% |
| Common Equity | \$3,283,398,137 | 50.928\% | 11.150\% | 5.678\% |
| TOTAL | \$6,447,146,323 | 100.000\% |  | 8.483 |

## Union Electric Company d/b/a AmerenUE

Embedded Cost of Long-Term Debt
At March 31, 2008

| $\begin{gathered} \text { SERIES } \\ \text { C1 } \end{gathered}$ | $\begin{gathered} \text { COUPON (a) } \\ \text { C2 } \end{gathered}$ | $\begin{aligned} & \text { ISSUED } \\ & \text { C3 } \\ & \hline \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { MATURITY } \\ \text { C4 } \\ \hline \end{array}$ | PRINCIPALC5 | FACE AMOUNT outstanding C6 | UNAMORTIZED BALANCES |  |  | CARRYING value C10 | ANNUALIZED couponint. C11 | ANNUALIZED AMORTIZATION |  |  |  | EMBEDDEDcostc16 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | ISSUE EXP. c8 | $\begin{gathered} \text { Loss } \\ \text { c9 } \end{gathered}$ |  |  | DISC/(PREM) C12 | ISSUE EXP <br> C13 | $\begin{aligned} & \text { LOSS } \\ & \mathrm{C} 14 \end{aligned}$ | int. Exp. C15 |  |
| First Mortgage Bonds | 6.750\% | 01-May-93 | 01-May-08 | \$148,000,000 | \$148,000,000 | \$3,490 | \$6,762 |  |  | \$9,990,000 | \$41,880 | \$81,144 |  |  |  |
| Senior Secured Notes | 5.250\% | 22-Aug-02 | 01-Sep-12 | \$173,000,000 | \$173,000,000 | \$89,411 | \$540,971 |  |  | \$9,082,500 | \$20,244 | \$122,484 |  |  |  |
| Senior Secured Notes | 4.650\% | 07-Oct-03 | 01-Oct-13 | \$200,000,000 | \$200,000,000 | \$218,526 | \$872,850 |  |  | \$9,300,000 | \$39,732 | \$158,700 |  |  |  |
| Senior Secured Notes | 5.500\% | 18-May-04 | 15-May-14 | \$104,000,000 | \$104,000,000 | \$218,670 | \$460,428 |  |  | \$5,720,000 | \$35,460 | \$74,664 |  |  |  |
| Senior Secured Notes | 4.750\% | 09-Apr-03 | 01-Apr-15 | \$114,000,000 | \$114,000,000 | \$108,444 | \$529,368 |  |  | \$5,415,000 | \$15,492 | \$75,624 |  |  |  |
| Senior Secured Notes | 5.400\% | 08-Dec-05 | 01-Feb-16 | \$260,000,000 | \$260,000,000 | \$574,940 | \$1,495,015 |  |  | \$14,040,000 | \$72,624 | \$188,844 |  |  |  |
| Senior Secured Notes | 6.400\% | 15-Jun-07 | 15-Jun-17 | \$425,000,000 | \$425,000,000 | \$345,876 | \$2,904,981 |  |  | \$27,200,000 | \$37,392 | \$314,052 |  |  |  |
| Senior Secured Notes (b) | 6.000\% | 08-Apr-08 | 01-Apr-18 | \$250,000,000 | \$250,000,000 | \$755,000 | \$1,875,000 |  |  | \$15,000,000 | \$75,500 | \$187,500 |  |  |  |
| Senior Secured Notes | 5.100\% | 28-Jul-03 | 01-Aug-18 | \$200,000,000 | \$200,000,000 | \$73,036 | \$1,186,060 |  |  | \$10,200,000 | \$7,068 | \$114,780 |  |  |  |
| Senior Secured Notes | 5.100\% | 23-Sep-04 | 01-Oct-19 | \$300,000,000 | \$300,000,000 | \$98,808 | \$1,847,958 |  |  | \$15,300,000 | \$8,592 | \$160,692 |  |  |  |
| Senior Secured Notes | 5.000\% | 27-Jan-05 | 01-Feb-20 | \$85,000,000 | \$85,000,000 | \$531,080 | \$563,882 |  |  | \$4,250,000 | \$44,880 | \$47,652 |  |  |  |
| First Mortgage Bonds | 5.450\% | 15-Oct-93 | 01-Oct-28 | \$44,000,000 | \$44,000,000 | \$199,998 | \$367,278 |  |  | \$2,398,000 | \$9,756 | \$17,916 |  |  |  |
| Senior Secured Notes | 5.500\% | 10-Mar-03 | 15-Mar-34 | \$184,000,000 | \$184,000,000 | \$1,719,120 | \$1,508,832 |  |  | \$10,120,000 | \$66,120 | \$58,032 |  |  |  |
| Senior Secured Notes | 5.300\% | 21-Jul-05 | 01-Aug-37 | \$300,000,000 | \$300,000,000 | \$932,096 | \$2,733,280 |  |  | \$15,900,000 | \$31,776 | \$93,180 |  |  |  |
| Subordinated Debentures | 7.690\% | 16-Dec-96 | 15-Dec-36 | \$65,500,000 | \$65,500,000 | \$411,930 | \$95,220 |  |  | \$5,036,950 | \$14,328 | \$3,312 |  |  |  |
| Environmental Improvement, Series 1992 | 3.505\% | 01-Dec-92 | 01-Dec-22 | \$47,500,000 | \$47,500,000 |  | \$541,447 |  |  | \$1,664,875 |  | \$97,800 |  |  |  |
| Environmental Improvement, Series 1998 ABC | 3.936\% | 04-Sep-98 | 01-Sep-33 | \$160,000,000 | \$160,000,000 |  | \$2,361,405 |  |  | \$6,297,800 |  | \$391,452 |  |  |  |
| TOTAL LONG-TERM DEBT |  |  |  | \$3,060,000,000 | \$3,060,000,000 | \$6,280,425 | \$19,890,737 | \$32,195,293 | \$3,001,633,545 | \$166,915,125 | \$520,844 | \$2,187,828 | \$3,702,828 | \$173,326,625 | 5.774\% |

Carrying Value $=$ Face Amount Outstanding less Unamorized Discount, Issuance Expenses, and Loss on Reacquired Debt
$\mathrm{C} 10=\mathrm{C} 6-\mathrm{C} 7-\mathrm{C8}-\mathrm{C} 9$
Annualized Interest Expense $=$ Annual Coupon Interest plus Annual Amortization of Discount, Issuance Expenses, and Loss on Reacquired Debt
$\mathrm{C} 15=\mathrm{C} 11+\mathrm{C} 12+\mathrm{C} 13+\mathrm{C} 14$
Embedded Cost = Annualized Interest Expense divided by Carrying Value
C16 = C15 / C10
(a) Coupon rate for variable rate auction securities reflects prevailing rates as of $5 / 31 / 08$ and includes ongoing broker dealer fees
(b) The $6 \%$ Senior Notes issued on April 8,2008 refinanced the Environmental Improvement auction rate bonds, Series 1991 and 2000 Series A, B and C.

The redemptions of these bonds happened in April and May 2008.

Union Electric Company d/b/a AmerenUE

## Cost of Short-term Debt

April 1, 2007 - March 31, 2008

| $\begin{gathered} \text { MONTH } \\ \text { C1 } \end{gathered}$ | BALANCE OF SHORT-TERM DEBT (a) C2 | BALANCE OF TOTAL CWIP C3 | BALANCE OF CWIP ACCRUING AFUDC C4 | NET AMOUNT OUTSTANDING C5 | INTEREST RATE C6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| April 2007 | \$710,800,000 | \$341,513,402 | \$432,843,662 | \$277,956,338 | 5.449\% |
| May | 669,500,000 | 302,036,513 | 376,105,131 | 293,394,869 | 5.790\% |
| June | 254,600,000 | 332,516,228 | 361,064,128 | 0 | 5.870\% |
| July | 176,600,000 | 341,269,174 | 349,650,018 | 0 | 5.688\% |
| August | 99,100,000 | 388,043,452 | 340,236,201 | 0 | 5.934\% |
| September | 148,700,000 | 411,983,830 | 364,211,544 | 0 | 5.744\% |
| October | 219,200,000 | 445,251,694 | 383,638,947 | 0 | 5.231\% |
| November | 230,700,000 | 467,042,905 | 472,855,882 | 0 | 4.864\% |
| December | 0 | 545,901,947 | 517,979,394 | 0 | 5.399\% |
| January 2008 | 98,000,000 | 557,789,442 | 563,410,698 | 0 | 4.397\% |
| February | 193,800,000 | 632,388,934 | 551,775,422 | 0 | 3.728\% |
| March | 329,900,000 | 681,225,285 | 664,764,084 | 0 | 3.450\% |
| AVERAGE | \$260,908,333 | \$453,913,567 | \$448,211,259 | \$47,612,601 |  |

C5 Net Amount Outstanding = Balance of Short-Term Debt less Balance of CWIP Accruing AFUDC

$$
\mathrm{C} 5=\mathrm{C} 2-\mathrm{C} 4
$$

(a) Short-term debt amounts are net of cash. Negative amounts are excluded.

## Union Electric Company d/b/a AmerenUE

Embedded Cost of Preferred Stock
at March 31, 2008

| SERIES, TYPE, PAR C1 | $\begin{gathered} \text { DIVIDEND } \\ \text { C2 } \end{gathered}$ | $\begin{aligned} & \text { ISSUED } \\ & \text { C3 } \end{aligned}$ | MATURITY C4 | SHARES OUTSTANDING C5 | PAR ISSUED/ OUTSTANDING C6 | PREMIUM C7 | ISSUANCE EXPENSEIDISCOUNT C8 | NET PROCEEDS C9 | ANNUAL DIVIDEND C10 | $\begin{array}{\|c} \hline \text { EMBEDDED } \\ \text { COST } \\ \text { C11 } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$4.50 Series, Perpetual, \$100 par | \$4.500 | 01-May-41 | - | 213,595 | \$21,359,500 | (\$825,000) | \$440,294 | \$21,744,206 | \$961,178 |  |
| \$5.50 Series, Perpetual, \$100 par | \$5.500 | 01-Oct-41 | - | 14,000 | \$1,400,000 |  |  | \$1,400,000 | \$77,000 |  |
| \$3.70 Series, Perpetual, \$100 par | \$3.700 | 01-Oct-45 | - | 40,000 | \$4,000,000 | $(\$ 70,000)$ | \$69,396 | \$4,000,604 | \$148,000 |  |
| \$3.50 Series, Perpetual, \$100 par | \$3.500 | 01-May-46 | - | 130,000 | \$13,000,000 | (\$910,000) | \$252,772 | \$13,657,228 | \$455,000 |  |
| \$4.30 Series, Perpetual, \$100 par | \$4.300 | 01-Jul-46 | - | 40,000 | \$4,000,000 |  |  | \$4,000,000 | \$172,000 |  |
| \$4.75 Series, Perpetual, \$100 par | \$4.750 | 01-Oct-49 | - | 20,000 | \$2,000,000 |  |  | \$2,000,000 | \$95,000 |  |
| \$4.00 Series, Perpetual, \$100 par | \$4.000 | 01-Nov-49 | - | 150,000 | \$15,000,000 | (\$384,000) | \$326,896 | \$15,057,104 | \$600,000 |  |
| \$4.56 Series, Perpetual, \$100 par | \$4.560 | 01-Nov-63 | - | 200,000 | \$20,000,000 | (\$266,000) | \$297,633 | \$19,968,367 | \$912,000 |  |
| \$7.64 Series, Perpetual, \$100 par | \$7.640 | 01-Jan-93 | - | 330,000 | \$33,000,000 |  | \$325,469 | \$32,674,531 | \$2,521,200 |  |
| TOTAL PREFERRED STOCK |  |  |  |  | \$113,759,500 | (\$2,455,000) | \$1,712,460 | \$114,502,040 | \$5,941,378 | 5.189\% |

issuance expenses, discount/premium, and any loss incurred in acquiring/redeeming prior series are not amortized due to the perpetual nature of the company's preferred stock

Net Proceeds = Par Value Outstanding plus Premium less Issuance Expense and Discount
C9 = C6 + C7-C8
Embedded Cost = Annual Dividend divided by Net Proceeds
C11 = C10 / C9

