Exhibit No.:	_____
Issue(s):	Rate of Return
Witness:	Charles W. King
Type of Exhibit:	Surebuttal
Sponsoring Party:	Public Counsel
Case No.:	ER-2007-0002
Date Testimony Prepared:	February 27, 2007

SUREBUTTAL TESTIMONY

OF

CHARLES W. KING

Submitted on Behalf of
the Office of the Public Counsel

UNION ELECTRIC COMPANY, D/B/A AMERENUE

Case No. ER-2007-0002

February 27, 2007

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 Service Provided to Customers in the Company's Missouri Service Area.	))))	**Case No. ER-2007-0002** Tariff No. YE-2007-0007

AFFIDAVIT OF CHARLES W. KING

CITY OF WASHINGTON)
) ss
DISTRICT OF COLUMBIA)

Charles W. King, of lawful age and being first duly sworn, deposes and states:

1. My name is Charles W. King. I am a Public Utility Consultant for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my sur-rebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

Charles W. King
Public Utility Consultant

Subscribed and sworn to me this 27th day of February 2007.

Angel Finch
Notary Public

My commission expires March 14, 2011.

Witness: Charles W. King
Type of Exhibit: Surebuttal Testimony
Sponsoring Party: Public Counsel
Case No.: ER-2007-0002
Date Testimony Prepared: February 27, 2007

SUREBUTTAL TESTIMONY OF CHARLES W. KING

INTRODUCTION

Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.

A. My name is Charles W. King. I am President of the economic consulting firm of Snavely King Majoros O'Connor & Lee, Inc. ("Snavely King"). My business address is 1111 14th Street, N.W., Suite 300, Washington, D.C. 20005.

Q. ARE YOU THE SAME CHARLES W. KING WHO SUBMITTED DIRECT TESTIMONY IN THIS CASE ON DECEMBER 15, 2006 AND REBUTTAL TESTIMONY ON JANUARY 31, 2007?

A. Yes. I am.

Q. DOES YOUR DIRECT TESTIMONY CONTAIN A STATEMENT OF YOUR QUALIFICATIONS AND EXPERIENCE?

A. Yes. Attachment A to that testimony is a brief summary of my educational and professional career. Attachment B is a listing of my appearances before regulatory agencies.

Q. WHAT IS THE OBJECTIVE OF YOUR SUREBUTTAL TESTIMONY?

A. The objective of this surebuttal testimony is to respond to the rebuttal testimony of the rate-of-return witnesses for AmerenUE. For matters relating to capital structure, these witnesses are Lee R. Nickloy and James H. VanderWeide. For

matters concerning the cost of equity, they are James H. VanderWeide and Kathleen C. McShane.

DOUBLE-LEVERAGE ADJUSTMENT

Q. BOTH MR. NICKLOY AND DR. VANDERWEIDE OBJECT TO YOUR DOUBLE-LEVERAGE ADJUSTMENT. WHAT IS THE NATURE OF THEIR OBJECTIONS?

A. At page 2 of his pre-filed rebuttal testimony, Mr. Nickloy states that because Ameren Corp. has not issued debt and contributed equity to AmerenUE, no double-leverage adjustment should be made. At page 101 of his rebuttal testimony, Dr. VanderWeide makes two points. The first is that AmerenUE's equity conforms to the definition of equity, and the second is that not all commissions have accepted double-leverage adjustments.

Q. HOW DO YOU RESPOND TO MR. NICKLOY'S ASSERTION THAT NO DOUBLE-LEVERAGE ADJUSTMENT IS NECESSARY BECAUSE AMEREN HAS NOT USED DEBT TO FUND AMERENUE?

A. It is not necessary to track funds across Ameren Corporation's balance sheet to justify the double-leverage adjustment, as Mr. Nickloy implies. The reason for the double-leverage adjustment is to avoid over-compensating Ameren's shareholders. That is the inevitable result of not making this adjustment.

I demonstrate this fact in Schedule CWK-SR-1. In this schedule, I have assumed that the Commission adopts all of my rate-of-return proposals except the double-leverage adjustment. The effect of this assumption is set forth in lines 1 through 7 of schedule CWK-SR-1. I have applied AmerenUE's capital structure (column

A) to its proposed rate base (line 1) to show the distribution of that rate base among the four components of capital. Column C presents AmerenUE's cost of debt and my recommended cost of equity. Column D shows the dollar return on each component. Cell 7D reveals that AmerenUE's equity return, after gross-up for income taxes, is $478,184,000.

Lines 8 through 13 show what happens when that $478,184,000 is passed up to Ameren Corp. The $3,053 million (cell 5B) of AmerenUE's "equity" is not, in fact, all equity at the parent level, only 94.3 percent of it is. The remaining 5.7 percent is short and long-term debt. This means that at the parent company level only $2,879 million of AmerenUE's $3,053 million "equity" is actually equity. In column C, lines 8 and 9, I apply AmerenUE's debt cost rates to the parent company debt and column D on those same lines I show the dollar cost of that debt. When that dollar cost is subtracted from the equity return allowed to AmerenUE (cell 6D), the residual return to the parent company's shareholders is $468,677,000 (line 10).

When this $468,677,000 is divided by AmerenUE's equity at the parent company level, the pre-tax return is 16.28 percent (line 11). When that return is divided by the tax gross-up factor (line 6), the after-tax return to Ameren's ultimate shareholders is 10.03 percent. That return is 38 basis points higher than the Commission intended to give AmerenUE's shareholders when it made the 9.65 percent equity return award.

The double-leverage adjustment is thus necessary to ensure that the actual equity investors in AmerenUE receive only the authorized rate of return on their investment.

Q. HOW DO YOU RESPOND TO DR. VANDERWEIDE'S OBJECTIONS TO YOUR DOUBLE-LEVERAGE ADJUSTMENTS?

A. They are both irrelevant. I never suggested that AmerenUE's equity does not conform to the conventional definition of equity. As I have just pointed out, the reason for the adjustments has to do with ensuring that AmerenUE's ultimate equity owners, who are the shareholder in Ameren Corp., are not overcompensated for their investment in AmerenUE.

Of course there have been cases where double-leverage adjustments have been rejected, just as there are cases where those adjustments have been accepted. I have not taken a poll to identify the double-leverage acceptance score, for two reasons. First, the circumstances undoubtedly differ from case to case, and second, even if they were exactly analogous, regulation is not governed by the majority vote of various regulatory commissions. It is governed by the evidence submitted in each case.

COMPARISON COMPANIES

Q. AT PAGE 4 OF HIS TESTIMONY, AND THEN AGAIN AT PAGE 89 TO 93, DR. VANDERWEIDE OBJECTS THAT YOUR COMPARISON GROUP IS TOO SMALL. HOW DO YOU RESPOND?

A. To begin with, Dr. VanderWeide should have directed his objections on this score to his co-witness, Kathleen McShane. She uses only 17 electric companies, seven less than my 24 companies and 17 less than Dr. VanderWeide's 34 companies. But more to the point, I have presented good reasons for my classifications. I reject four companies because they are predominantly gas companies, not electric

companies, and therefore have a different risk profile than AmerenUE's electric service.

I reject another seven companies because they do not have 60 percent of their revenues from regulated service. Finally, I reject TXU because its capital structure is excessively leveraged. These are the most important exclusions because of the very issue raised by both Company rate-of-return witnesses concerning capital structure. Both Dr. VanderWeide and Ms. McShane argue that it is inappropriate to apply unadjusted market-based equity returns to book-value capital structures because the book capital structures are much more leveraged than market capital structures.

As I point out in my rebuttal testimony, this argument has some validity when the rate of return is derived from comparison groups that include largely or totally unregulated companies. The disconnect between market and book capital structures for those companies can lead to understated returns if their market rates of return are applied to a book equity proportion of a regulated company. That is why those companies must be eliminated from the comparison group.

CAPITAL STRUCTURE ADJUSTMENT

Q. AT PAGE 8 OF HER REBUTTAL TESTIMONY, MS. MCSHANE ASSERTS THAT YOU ARE INCORRECT IN EQUATING THE COMPARABLE EARNINGS STANDARD OF *HOPE NATURAL GAS* WITH THE CAPITAL ATTRACTION STANDARD WHEN A MARKET-BASED RATE OF RETURN IS APPLIED TO A BOOK VALUE CAPITAL STRUCTURE. IS SHE CORRECT?

A. No. As I have just observed, Ms. McShane's point might be valid if the market-based rate of return is derived using a comparison group of largely unregulated companies. But my comparison group consists entirely of electric utilities whose earnings are authorized in the same manner as AmerenUE's. Each of those companies receives its earning allowance through a market-based rate of return applied to a book-based capital structure. When these companies, and only these companies, are used in the comparison, there is no mistreatment of AmerenUE's shareholders. The equity investors in each of these companies know that their earnings, like AmerenUE's earnings, are tied to a book value rate base and a book value capital structure.

Q. AT PAGE 12 OF HER TESTIMONY, MS. MCSHANE CONTENDS THAT YOU, THE STAFF AND OTHER INTERVENOR WITNESSES "TARGET" A MARKET-TO-BOOK RATIO OF 1.0. IS SHE CORRECT?

A. No. Objective evidence contradicts Ms. McShane's contention. Notwithstanding that all of the companies in my comparison group have their regulated earnings determined through a procedure that applies market-based returns to book-based capital structures, all of them have market-to-book ratios greater than 1.0.

The reason for this pervasive pattern of market values in excess of book values becomes obvious when one examines the theory behind the DCF methodology. That theory holds that an investor's return requirement consists of two components, the current dividend yield and the expectation of future growth in dividends. When this DCF-based return is applied to a book value rate base in the current year, investors are arguably over-compensated because they do not require the growth component immediately. Rather, they look for that part of their return out in the future. So, when their immediate return includes that growth element, they find that their earnings exceed what they require on the book value of their

stock. As a result, they are willing to pay substantially more than book value to acquire the stock.

Q. AT PAGE 13 OF HER REBUTTAL TESTIMONY, MS. MCSHANE CHALLENGES YOUR CONTENTION THAT THERE WOULD BE CIRCULARITY IN A REGULATORY REGEME THAT ADJUSTS THE RATE OF RETURN FOR THE ALLEGED DIFFERENCE BETWEEN MARKET AND BOOK CAPITAL STRUCTURES. IS SHE CORRECT?

A. No. On page 14 of her rebuttal testimony, Ms. McShane presents a table that describes a steady state condition in which the regulatory commission has presumably adopted her recommended "financial risk" adjustment. She finds that this steady state would result in no change to the calculated DCF return.

Ms. McShane does <u>not</u> model the condition in which a commission converts from the current practice of relying on book values and unadjusted rates of return to one where the rate of return is adjusted in the manner she and Dr. VanderWeide propose. If that happened, the utility would suddenly becomes more profitable, which would drive up the value it its stock. That increase in the market value of the stock would in turn be reflected in the market-based capital structure, causing it to have a larger equity component. In the next rate case, the larger market-based equity component would lead to a larger McShane/VanderWeide adjustment to the DCF return, leading to a further increase in the allowed return, hence a further increase in the market value of the stock. It could take quite a few rate cases before this iterative process played itself out into the steady state condition that Ms. McShane presents on page 14.

<u>DISCOUNTED CASH FLOW ANALYSIS</u>

Q. WHAT OBJECTIONS DO THE AMERENUE WITNESSES RAISE AGAINST YOUR DISCOUNTED CASH FLOW ANALYSIS?

A. Both witnesses object that I use an "annual" model that does not recognize quarterly compounding. Both argue that I employ what they deem to be an incorrect procedure for forecasting the next year's dividend. Both object that my application of the FERC 2-step methodology does not use the same inputs as FERC. Dr. VanderWeide objects to my inclusion of Value Line's earnings forecasts in estimating the "g" factor in the DCF formula. He also argues that the Surface Transportation Board ("STB") uses only I/B/E/S forecasts in its DCF analyses and that it applies those DCF results to the market values, not the book values of the railroads' capital structures. Dr. VanderWeide asserts that the FCC's Wireline Competition bureau did not use the DCF formula but rather the CAPM procedure to estimate an equity return of 13.068 percent.

Q. HAVE YOU PREVIOUSLY ADDRESSED THE ISSUE OF QUARTERLY COMPOUNDING?

A. Yes. In my rebuttal testimony, I pointed out that the compounding of quarterly earnings happens when the investor receives the dividends and then reinvests them. This occurs outside of the dividend issuing company and is therefore not its responsibility.

Q. HAVE YOU USED THE INCORRECT PROCEDURE TO ESTIMATE THE NEXT YEAR'S DIVIDEND?

A. No. I submit that the Company's witnesses use the incorrect procedure. Neither witness provides a justification for the use of 1+g as the basis for the forecast of next year's dividend. Each simply asserts that it is "correct." My use of Value

Line's forecast allows for company-specific analysis of dividend policy. In my rebuttal, I noted the example of Empire District Electric, a company that has been issuing dividends greater than its quarterly earnings. That company will not increase its dividend in 2007, a fact that Value Line recognizes but the witnesses' 1+g approach does not.

Q. HAVE YOU INCORRECTLY APPLIED THE FERC 2-STEP DCF PROCEDURE?

A. No. The fact that I have not used exactly the same sources of inputs as FERC does not detract from the propriety of my formulation. For reasons I will discuss shortly, I believe it is better to include Value Line's growth forecasts with those of I/B/E/S in the DCF formulation. I did not use the same sources of GDP forecasts as FERC, but neither did Ms. McShane. She used March 2006 Blue Chip *Economic Indicators*, a source that is not publicly available. I used the Congressional Budget Office, a source that is publicly available. The CBO is charged by Congress to forecast future economic activity for purposes of determining the likely revenues and expenditures of the Federal Government. This heavy responsibility conveys an obligation to produce the most reliable predictions that sophisticated economic analysis can possibly produce. None of the other sources – Blue Chip, the Energy Information Agency, the Social Security Administration, Global Insights – bears this level of responsibility.

Q. IS IT INCORRECT, AS DR. VANDERWEIDE ASSERTS, TO USE VALUE LINE FORECASTS IN ESTIMATING THE "g" FACTOR IN THE DCF FORMULA?

A. No. Here, Dr. VanderWeide is being somewhat inconsistent. For his comparison group selection he argues that more is better, and for his beta selection he insists

that Value Line is superior. But when it comes to the "g" factor, he strongly recommends a single source, and that is I/B/E/S.

The reason for including Value Line forecasts has to do with the charge that has been leveled at I/B/E/S and similar surveys of brokerage house analysts that they are biased upward. The brokerage firms are in the business of buying and selling stocks, and the argument is made that stocks trade more actively if it appears that their earnings will increase at a rapid rate. Value Line, by contrast, does not buy or sell stocks; it is purely an investment research firm. It has no incentive to "highball" its earnings forecasts.

Q. IS IT TRUE THAT THE STB USES MARKET VALUE CAPITAL STRUCTURES IN DETERMINING THE COST OF CAPITAL TO THE RAILROADS?

A. This statement is correct, but it has little relevance here. The use of market value capital structures was justified by the Interstate Commerce Commission, the STB's predecessor, on the grounds that most of the railroads' traffic is unregulated.[1] That is not the case with electric utilities.

I should add that the STB is now reconsidering its cost of capital methodology in light of objections that have been raised to the very high 15.18 percent return to equity recently found for the year 2005.[2]

Q. HAS THE FCC REJECTED THE DCF METHOD AND ADOPTED CAPM, AS DR. VANDERWEIDE IMPLIES?

[1] *Railroad Revenue Adequacy – 1988 Determination*, 6 I.C.C.2d 919, at 940 (1990).
[2] In written testimony dated December 8, 2006 and oral testimony to the STB commissioners on February 15, 2007 in Ex Parte No. 664, *Railroad Cost of Capital*, I recommended that recent developments justify the STB reconsidering its use of market value capital structures in finding the railroads' cost of capital.

A. No. In the *Virginia Arbitration Order* [3] the Wireline Competition Bureau – not the FCC itself – found that the DCF inputs provided by the parties in that case were inadequate or inappropriate for purposes of finding the cost of capital to be used prospectively by Verizon Virginia to provide Unbundled Network Elements to Competitive Common Carriers. Because of these DCF data problems, it adopted the CAPM results. The Bureau made no finding as to the superiority of one methodology over the other. The last such finding was in the last FCC cost of capital inquiry, when the Commission found CAPM inadequate compared to DCF.

CAPITAL ASSET PRICING MODEL

Q. WHAT DO AMERENUE'S COST OF CAPITAL WITNESSES HAVE TO SAY ABOUT YOUR APPLICATION OF THE CAPITAL ASSET PRICING MODEL ("CAPM")?

A. They strongly object to my selection of the three inputs to the CAPM model: the risk-free rate, the beta, and the total market return.

Q. WHAT IS YOUR RESPONSE TO THESE OBJECTIONS?

A. These witnesses illustrate the main point that I have made with regard to the CAPM, which is that there is so much judgment involved in selecting the inputs that a creative analyst can manipulate the results to fit any preconception of the appropriate rate of return. I do not contend that my beta and my market return are the ideal inputs into this model for the simple reason that there are no ideal inputs.

[3] CC Docket No. 00-251, Memorandum Opinion and Order, DA 02-1731, July 17, 2002.

Nonetheless, my inputs are both tenable and consistent with the CAPM theory. Yet, my results are at the other end of the rate-of-return spectrum from the results derived by the AmerenUE witnesses.

Please note, incidentally, that I do not use my CAPM results in estimating AmerenUE's rate of return. Arguably, the witnesses' objections to my CAPM formulation are beside the point.

Q. WHAT ARE THE WITNESSES' OBJECTIONS TO YOUR RISK-FREE RATE?

A. Ms. McShane observes that I use the long-term Treasury bond yield as of December 1, 2006, and that rate has since increased. She complains that I have not used the Blue Chip *Financial Forecast* prediction of 5.0 percent in 2007 and 5.2 percent in 2008.

Q. WHAT IS YOUR RESPONSE TO THESE OBJECTIONS?

A. The only objection that has any validity is that my interest rate is now out-dated. As of the week ending February 9, 2007, the yield on 30-year Treasury bonds was 4.86 percent. I have rerun my CAPM application, and I find that substituting this value as the risk-free rate raises the result from 9.08 percent to 9.11 percent. The 4.86 percent is the most current measure of a risk-free rate that is known and measurable. The Blue Chip forecasts do not meet this criterion.

Q. WHAT ARE THE WITNESSES' OBJECTIONS TO YOUR SELECTION OF BETAS?

A. They both object to my inclusion of the betas developed by Thomson Financial, the same company that produces the I/B/E/S forecasts. They argue that Thomson's betas are not adjusted for the tendency of betas to gravitate toward 1.0.

Q. ARE THOMSON FINANCIAL'S BETAS ADJUSTED?

A. Yes. Schedule CWK-SR-2 is a copy of an e-mail I received from Thomson Financial describing the derivation of their betas. The final sentence states that "(t)he reported beta (B) is the adjusted value of 0.35+0.685B (According to Blume, 1971)." The reference to "Blume" is to an article titled "On the Assessment of Risk" by Marshall E. Blume published in the March 1971 *Journal of Finance*. In that article, Dr. Blume found that there is a tendency of the betas of portfolios of stocks to trend toward the beta of the market, that is, toward 1.0. Since that time, it has been the practice of some analysts of beta to "adjust" the betas so that they avoid the counter-intuitive result of minus values. Minus values of "unadjusted" betas arise when the stock fluctuates inversely with the market.

Assuming the propriety of adjusting betas for individual companies, it would appear that the Thomson adjustment is more sophisticated than that of Value Line. Value line simply adds .25 to the unadjusted beta, while Thomson adds .35 and then 68.5 percent of the unadjusted beta. In any case, it is clear that the Thomson betas are adjusted.

Q. WHAT ARE THE WITNESSES' OBJECTIONS TO YOUR MARKET RETURN?

A. I derive my market return by means of a simplified DCF analysis using market forecasts from Value Line. Dr. VanderWeide objects that I do not perform the

quarterly compounding that he espouses, that I apply this approach to companies that do not issue dividends, and that I use Value Line's forecast of capital appreciation that uses a "normalized" price/earnings ratio. Ms. McShane objects that the Value Line growth forecast is short-term and does not reflect long-term expectations.

Q. HOW DO YOU RESPOND TO THESE OBJECTIONS?

A. I have already demonstrated that quarterly compounding is unnecessary and inappropriate. Value Line's forecast of capital appreciation does not address individual companies. Rather, it covers the entire market, which is the appropriate basis for establishing the expected return to the total market. Value Line's use of a "normalized" P/E ratio means that its capital appreciation forecast is actually a forecast of earnings, which is the appropriate input to the DCF model. Dr.VanderWeide's objection strengthens the validity of my application.

Finally, I do not understand Ms. McShane's objection. Value Line's appreciation forecast is out three to five years. The earnings forecasts of the investment analysts surveyed by I/B/E/S are generally in the same time frame. I doubt that any investment analyst would venture an earnings forecast beyond five years.

Q. MS MCSHANE PRESENTS A FORECAST OF THE EARNINGS GROWTH OF S&P 500 STOCKS. IS HER FORECAST SUPERIOR TO YOURS?

A. Arguably, my forecast is superior because it covers a broader spectrum of companies: 1,700 as opposed to 500. However, Ms. McShane's forecast is thoroughly acceptable, and it demonstrates how the use of different, thoroughly acceptable inputs can change the results of the CAPM application.

Q. DOES THAT COMPLETE YOUR SUR-REBUTTAL TESTIMONY?

A. Yes. It does.

Case No. ER-2007-002
Exhibit of Charles W. King
Schedule CWK-SR-1

AmerenUE - Ameren Corp.
Double-Leverage Effect

		A		B		C		D	
1	Rate Base (000)	$ 5,848,677	GSW-E-17,L13						
		Capital Structure						Return	
		%		$ Thousands		Cost Rate		$Thousands	
	AmerenUE								
2	Short-term Debt	0.8%	LRN-G5-1	46,789	1A*2A	5.36%	LNR-G5-1	2,508	B*C
3	Long-term Debt	45.0%	"	2,631,905	1A*3A	5.47%	"	144,044	"
4	Preferred Stock	2.0%	"	116,974	1A*4A	5.19%	"	6,070	
5	Common Equity	52.2%	"	3,053,009	1A*5A	9.65%	CWK-1		
6	Tax Gross-up Factor					1.623077	GSW-E19 (L9-L5)/L6)		
7	Pre-tax Equity Return					15.66%	5C*6C	478,184	5B*7C
	Ameren Corp. (unconsolidated)								
8	Short-term Debt	0.5%	DR Bible 1	15,265	4B*7A	5.36%	LNR-G5-1	(818)	A*B--1
9	Long-term Debt	5.2%	"	158,756	4B*8A	5.47%	"	(8,689)	"
10	Common Equity	94.3%	"	2,878,988	4B*9A				
11	Return to Common Equity							468,677	7D-8D-9D
12	Pre-tax Return to Ameren Equity					16.28%	11D/10B		
13	Post-tax Return to Ameren Equity					**10.03%**	L12/6C		

Charlie King

From: daipayan.bhattacharjee@thomson.com
Sent: Wednesday, February 07, 2007 11:54 AM
To: charlieking@snavely_king.com
Subject: Beta Calculations

Beta Coefficients

The beta coefficient indicates how a stock's daily changes compare to the daily changes of the S&P 500. The abbreviation displayed next to the "Bta" label for stocks trading for less than a year, and for betas less than 0.4 and greater than 2.5.

In bullish markets, high beta stocks (betas greater than 1.00) tend to outperform the overall market. Likewise, in bearish r (betas less than 1.00) decline less than the general market.

If p^i_t represents the price of security i at time t (days), then the natural log of the price ratio

$Re_i = \ln(p^i_t / p^i_{t-1})$ can be used as an approximation of the daily return on this security.

p^m_t represents the price of the S&P 500, and

$Re_m = \ln(p^i_t / p^i_{t-1})$ represents the return (market return).

The B is the slope coefficient for the regression line formed by using Re_m as the independent variable and Re_i as the d

The beta coefficient is computed from data over the past seven years -- more than 1300 observations of daily price chang

The reported beta (B) is the adjusted value of: 0.35 + 0.685B (according to Blume, 1971).

Regards,
Daipayan Bhattacharjee
Market Data Analyst