SURREBUTTAL TESTIMONY

OF

TRAVIS ALLEN

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2004-0570

INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Travis Allen, 200 Madison St., P.O. Box 2230, Jefferson City MO., 65102.

Q. ARE YOU THE SAME TRAVIS ALLEN WHO FILED DIRECT AND REBUTTAL TESTIMONY IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF THIS TESTIMONY?

A. I will respond to the rebuttal testimony of Empire District Electric Company (Empire) witnesses Donald A. Murry and James H. Vander Weide. I will also respond to the rebuttal testimony of Staff witness David Murray.

<u>REBUTTAL OF EMPIRE WITNESS DONALD A. MURRY REBUTTAL</u>:

Q. DOES WITNESS DONALD A. MURRY CLAIM THAT YOUR RETURN ON EQUITY RECOMMENDATION IS INSUFFICIENT TO ASSURE FINANCIAL CONFIDENCE IN EMPIRE?

A. Yes, he does.

Q. HOW DOES HE SUPPORT THIS CLAIM?

A. He supports this claim by taking the cost rates and capital structure weights that I recommended in my direct testimony, along with data from Staff's accounting schedules and OPC's cost of service study, to calculate, based on his own methodology, the following two ratios: 1) Funds From Operations/Total Debt 2) Funds From Operations/Interest Expense. Upon calculating these two ratios, he compares the results to the guidelines published by Standard and Poor's (S&P) and concludes that since my ROE recommendation results in a Funds From Operations/Interest Expense ratio below S&P's published guidelines for investment grade rated companies, my ROE recommendation is insufficient to assure financial confidence in Empire.

Q. DO YOU BELIEVE THAT THIS IS APPROPRIATE?

A. No, there are at least three problems with witness Donald A. Murry's analysis and subsequent conclusions.

Q. WHAT IS THE FIRST PROBLEM?

A. The first problem is that witness Donald A. Murry makes an error in his calculation. As seen on line 2 of his Rebuttal Schedule DAM 8, witness Donald A. Murry used the high end of witness David Murray's ROE recommendation (9.29%) instead of the high end of my ROE recommendation (9.41%) in his calculations and subsequent critique of my analysis.

Q. WHAT IS THE SECOND PROBLEM WITH WITNESS DONALD A. MURRY'S CONCLUSION REGARDING YOUR ROE RECOMMENDATION AND EMPIRE'S CREDIT RATING?

A. The second problem is that witness Donald A. Murry inappropriately suggests to this Commission that if Empire does not meet these published guidelines, Standard and Poor's will rate Empire's bonds below investment grade. The following is an excerpt from page 16, lines 9-15 of witness Donald A. Murry's rebuttal testimony:

> *Mr. Allen's FFO to Interest coverage is 2.54 times as I calculated in Rebuttal Schedule DAM-9. As Mr. Murray pointed out in his direct testimony, the return should be sufficient to produce a FFO to Total Debt Ratio of 20 to 27 percent and a FFO Interest Coverage of 3.0 to 4.0 times. Consequently, Mr. Allen's recommended return on common equity also will produce a return that would not earn Empire an investment grade credit rating by these S&P standards.*

Q. WHAT IS WRONG WITH THIS STATEMENT?

A. The problem with this statement is that S&P has made it painstakingly clear that these ratios are merely guidelines and are by no means the only thing reviewed in the determination of credit ratings. The following is an excerpt from the June 2, 2004 document released by S&P titled New Business Profile Scores Assigned for U.S. Utility and Power Companies; Financial Guidelines Revised:

> *It is important to emphasize that these metrics are only guidelines associated with expectations for various rating levels. Although credit ratio analysis is an important part of the ratings process, these three statistics are by no means the only critical financial measures that Standard & Poor's uses in its analytical process. We also analyze a wide*

array of financial ratios that do not have published guidelines for each rating category. (p. 3)

Again, ratings analysis is not driven solely by these financial ratios, nor has it ever been. In fact, the new financial guidelines that Standard & Poor's is incorporating for the specified rating categories reinforce the analytical framework whereby other factors can outweigh the achievement of otherwise acceptable financial ratios. (p. 4)

Consequently, witness Donald A. Murry cannot possibly know whether or not Empire's attainment or non-attainment of these ratios will result in an investment grade or a non-investment grade bond rating by S&P.

Q. DID WITNESS DONALD A. MURRY ACKNOWLEDGE THIS FACT IN HIS NOVEMBER 10, 2004 DEPOSITION?

A. Yes, the following is an excerpt from witness Donald A. Murry's deposition:

Q. Let me – there's been a lot of talk about the Standard & Poor's rating systems, and you've done some calculations, my understanding, on some – or someone in your office did some calculations in your rebuttal testimony about various coverage ratios, funds from operations and various other coverage ratios from Standard & Poor's.

My question to you is, is it correct that Standard & Poor's has both qualitative and quantitative measures that they go over –

A. Of course.

> *Q.* *-- to determine a specific range?*
>
> *A.* *They so state.*
>
> *Q.* *And so just focusing on two or three of those, be it qualitative or quantitative measures, doesn't guarantee what Standard & Poor's is going to rate a specific company?*
>
> *A.* *No, it doesn't.* (Donald A. Murray Deposition, November 10, 2004, p. 122, lines 19-25 & p. 123, lines 1-11)

Q. WHAT IS THE THIRD PROBLEM WITH WITNESS DONALD A. MURRY'S CONCLUSION REGARDING YOUR ROE RECOMMENDATION AND EMPIRE'S CREDIT RATING?

A. The third problem is that witness Donald A. Murry does not know whether or not the way that he calculated these two ratios for Empire is the way that S&P would calculate them.

Q. DID WITNESS DONALD A. MURRY ACKNOWLEDGE THIS FACT IN HIS NOVEMBER 10, 2004 DEPOSITION?

A. Yes, the following is an excerpt from witness Donald A. Murry's deposition:

> *Q.* *Have you contacted S&P to determine whether it calculated the three major financial ratios based on Staff's position in direct testimony? And when I talk about the three major financial ratios, I'm referring to funds from operations to interest, funds from operation to debt, and total debt to total capital.*
>
> *A.* *Did I contact and ask them if they contacted it?*

Q. Yes.

A. No, and the rating agencies are notorious for not saying what they look at in any rating instance. I guess what I'm saying is I didn't contact them because I didn't expect to get an answer. (Donald A. Murray Deposition, November 10, 2004, p. 70, lines 13-25)

Q. DOES WITNESS DONALD A. MURRY CRITICIZE SOME OF THE COMPARABLE COMPANIES THAT YOU USED IN YOUR ANALYSIS?

A. Yes. On page 16, lines 19-21 and page 17, lines 1-2 of his rebuttal testimony, witness Donald A. Murry criticizes my selection of the following comparable companies: American Electric Power, FirstEnergy, FPL Group Inc., Progress Energy, and Southern Company.

Q. WHY DOES HE CRITICIZE YOUR USE OF THESE COMPANIES?

A. He states that these companies are too large, based on market capitalization, to compare to Empire (i.e. are not as risky as Empire).

Q. DO YOU BELIEVE THAT THIS IS AN APPROPRIATE CRITICISM?

A. No.

Q. WHY NOT?

A. Because, as I have illustrated on Surrebuttal Schedule TA-1, it is clear that the group as a whole is fairly comparable to Empire. As shown, the group's average beta is 0.77 compared to Empire's beta of 0.65. The group's average Value Line timeliness and safety ratings of 4 and 3, respectively, are identical to Empire's. Finally, the groups average Standard and Poor's (S&P) bond rating of BBB+

is similar to Empire's bond rating of BBB. Witness Donald A. Murry's blanket dismissal of these comparable companies based on market capitalization alone is simply not on point.

Q. WHAT EFFECT WOULD ELIMINATING THESE COMPARABLE COMPANIES HAVE ON YOUR PROXY GROUP DCF AND CAPM ANALYZES?

A. As seen on Schedules TA-11 and TA-12 of my direct testimony, eliminating these comparables companies would have only served to lower my proxy group DCF and CAPM return on equity estimates. In fact, it is interesting to point out that the DCF ROE estimates I obtained for all five of these comparable companies on Schedule TA-11 of my direct testimony are higher than the DCF ROE estimate that I calculated for Empire. Looking at Schedule TA-12 of my direct testimony, it is clear that this holds true for my CAPM ROE estimate as well, with the exception of Southern Company whose CAPM ROE estimate is identical to the CAPM ROE estimate that I calculated for Empire. Consequently, these results indicate that these companies (American Electric Power, FirstEnergy, FPL Group Inc., Progress Energy, and Southern Company), are actually riskier than Empire.

Q. DID EMPIRE'S OTHER COST OF CAPITAL WITNESS, JAMES H. VANDER WEIDE, USE THESE EXACT SAME COMPARABLE COMPANIES IN HIS ANALYSIS?

A. Yes, he did.

Q. DOES WITNESS DONALD A. MURRY CHARACTERIZE YOUR DCF ANALYSIS AS "THEORETICALLY UNSOUND" ON PAGE 17 OF HIS REBUTTAL TESTIMONY?

A. Yes.

Q. WHAT IS THE BASIS FOR HIS CRITICISM?

A. The basis for his criticism is my use of the sustainable growth rate methodology in my DCF analysis.

Q. WHY DOES WITNESS DONALD A. MURRY BELIEVE THAT THE USE OF THE SUSTAINABLE GROWTH RATE METHODOLOGY PRODUCES A "THEORETICALLY UNSOUND" DCF ANALYSIS?

A. Witness Donald A. Murry states that the sustainable growth rate methodology has three "fundamental flaws".

Q. WHAT ARE THE THREE "FUNDAMENTAL FLAWS" THAT WITNESS DONALD A. MURRY IDENTIFIES?

A. The "fundamental flaws" that witness Donald A. Murry identifies are as follows:

1) It is more difficult to estimate the components of the sustainable growth rate than to estimate the growth component directly.

2) The sustainable growth method requires the analyst to assume the rate of return on common equity in order to estimate the growth rate to calculate the rate of return.

3) The empirical finance literature demonstrates that the sustainable method of determining growth is not significantly correlated to measures of value, such as stock price and price/earnings ratios.

Q. DO YOU BELIEVE THAT WITNESS DONALD A. MURRY'S FIRST CRITICISM, (I.E. IT IS MORE DIFFICULT TO ESTIMATE THE COMPONENTS OF THE SUSTAINABLE GROWTH RATE THAN TO ESTIMATE THE GROWTH COMPONENT DIRECTLY) IS A FUNDAMENTAL FLAW OF THE SUSTAINABLE GROWTH RATE METHODOLOGY?

A. Absolutely not. Just because the development of the sustainable growth rate involves calculating its four component parts does not mean that the result is "fundamentally flawed". A rational analyst would look at the resulting growth rate projection and use his or her judgment to determine if it was a reasonable estimate of investor expectations instead of simply dismissing it as "fundamentally flawed" simply because it is tedious to calculate.

Q. DO YOU BELIEVE THAT WITNESS DONALD A. MURRY'S SECOND CRITICISM (i.e. THE SUSTAINABLE GROWTH METHOD REQUIRES THE ANALYST TO ASSUME THE RATE OF RETURN ON COMMON EQUITY IN ORDER TO ESTIMATE THE GROWTH RATE TO CALCULATE THE RATE OF RETURN), IS A "FUNDAMENTAL FLAW"?

A. No. Similar misguided logic would apply to the use of analysts' projected earnings per share growth rates to determine the rate of growth expected by investors. This is because authorized rates of return do influence analysts' forecasts of future growth and, therefore, are very influential in determining investor expectations.

For example, professional analysts may project earnings per share growth for an electric utility of (let's say) 6 percent based in part upon the most recent authorized (and earned) rate of return of (let's say) 12 percent. Further assume that the current stock price for this utility is $25 per share, the expected dividend is $1 and the resulting dividend yield is 4 percent ($1/$25).

If this particular electric utility is currently engaged in a regulatory rate proceeding where the cost of equity is being measured by cost of capital witnesses, a conclusion could be drawn that the current investor required return is 10 percent as measured by the DCF approach (4% dividend yield plus 6% expected growth rate). If the 10 percent DCF cost of equity becomes the new authorized (and earned) rate of return for the utility, the professional analysts who originally estimated 6 percent earnings per share growth may revise their estimates based upon this new information. Based upon the new expectation of an authorized and earned return on equity of 10 percent, the analysts could lower their growth rate expectations to, (let's say), 5 percent.

In this instance, the incorporation of analysts' projected earnings growth rates in the DCF model used to set the authorized rate of return resulted in a change in the authorized rate of return that subsequently led to the revision of the analysts' projected earnings per share growth estimates. Additionally, the analysts' reliance on the then current 12 percent authorized and earned return for the company resulted (in part) in the 6 percent earnings per share growth estimate that was then incorporated into the analysis by the regulatory body that led to the new authorized return of 10 percent. This does not, however, imply that it is inappropriate to utilize analysts' projected earnings per share growth estimates because it is circular to do so. It also does not imply that the whole regulatory process of setting an allowed rate of return is flawed.

One of the primary reasons the process works is because the DCF model, when applied appropriately, results in a market derived cost of equity determination. In the example, if all else remains the same (including investors' risk expectations and required rate of return), when investors' growth rate expectations were lowered from 6 percent to 5 percent that new information became embedded rapidly in stock prices. Again, assuming investors' risk perceptions and required return did not adjust over the period, the likely result is that the stock price decreased, let's say to something like $20 per share, and the corresponding dividend yield rose to 5 percent ($1/$20). The cost of equity as measured by a market-derived DCF would remain the same at 10 percent (5% dividend yield + 5% expected growth rate).

The same mechanism holds true when the retention growth rate method is used and applied appropriately. The stock price (the key element of the DCF analysis) becomes the mechanism that allows for an appropriate determination of the cost of equity. This holds true regardless of the growth rate method utilized as long as that method reflects investors' expectations. Therefore, the argument of circularity does not undermine the retention growth rate method, or the use of analysts' projected earnings per share growth.

Q. WITH REGARDS TO HIS THRID CRITICISM (i.e. THE EMPIRICAL FINANCE LITERATURE DEMONSTRATES THAT THE SUSTAINABLE METHOD OF DETERMINING GROWTH IS NOT SIGNIFICANTLY CORRELATED TO MEASURES OF VALUE, SUCH AS STOCK PRICE AND PRICE/EARNINGS RATIOS), DID WITNESS DONALD A. MURRY CITE ANY OF THESE EMPIRICAL ARTICLES?

A. No, he did not. In fact, witness Donald A. Murry was unable to cite any of these articles during his November 10, 2004 deposition. The following is an excerpt from that deposition:

> *Q. …You indicate that empirical financial literature demonstrates that the sustainable method of determing growth is not significantly correlated through measures of value such as stock price and price earnings ratios; is that correct?*
>
> *A. Yes.*
>
> *Q. Could you name those articles?*
>
> *A. I can do it, but I can't do it as I'm sitting here. Again, if you give me a DR, I'll be glad to give you a reference.* (Donald A. Murry Deposition, November 10, 2004, p. 85, lines 16-25)

Q. HAVE YOU SENT WITNESS DONALD A. MURRY THIS DATA REQUEST?

A. Yes, I sent this data request on November 17, 2004. However, I am still waiting for the response.

Q. IN YOUR REVIEW OF THE FINANCIAL LITERATURE, HAVE YOU SEEN ANYTHING THAT DISCREDITS OR SINGLES THE PROJECTED SUSTAINABLE GROWTH RATE METHODOLOGY OUT AS "FUNDAMENTALLY FLAWED"?

A. No.

Q. DOES WITNESS DONALD A. MURRY CLAIM ON PAGE 19 OF HIS REBUTTAL TESTIMONY THAT YOU USED THE RISK PREMIUM PROVIDED BY THE 2004 IBBOTSON ASSOCIATES YEARBOOK?

A. Yes.

Q. IS THIS A CORRECT STATEMENT?

A. No.

Q. HOW DID YOU CALCULATE THE RISK PREMIUM THAT YOU USED IN YOUR CAPM ANALYSIS?

A. I calculated the risk premium by subtracting the average yield on the 3-month T-Bill from 05-03-2004 to 08-27-2004 from Ibbotson's calculation of the historic arithmetic mean return on large company stocks.

Q. DOES WITNESS DONALD A. MURRY CRITICIZE YOUR USE OF THE 3-MONTH T-BILL AS A SURROGATE FOR THE RISK-FREE RATE?

A. Yes.

Q. WHAT ARE YOUR COMMENTS ABOUT THIS CRITICISM?

A. The CAPM model calls for the rate of interest earned on investments that are free of any risk. Consequently, the closest proxy for this requirement is the interest rate on U.S. Treasury Bills. Like Treasury Bonds, Treasury Bills are free of default risk however, unlike Treasury Bonds, Treasury Bills are also virtually free of any interest rate risk.

Q. DOES WITNESS DONALD A. MURRY CRITICIZE YOU FOR NOT MAKING A SIZE ADJUSTMENT IN YOUR CAPM ANALYSIS?

A. Yes.

Q. WHAT ARE YOU COMMENTS ABOUT THIS CRITICISM?

A. The Capital Asset Pricing Model is a market-based model. Consequently, any risk differential that is attributable to the size of a company is already embedded into that company's stock price and is therefore already embedded into its beta. Thus, an analyst need not make a "size adjustment" to his or her CAPM return on equity estimate because it is already factored into the results.

REBUTTAL OF EMPIRE WITNESS JAMES H. VANDER WEIDE REBUTTAL:

Q. DOES WITNESS VANDER WEIDE CLAIM ON PAGE 19, LINE 1 OF HIS REBUTTAL TESTIMONY THAT YOU USED THE ANNUAL FORM OF THE DCF MODEL IN YOUR ANALYSIS?

A. Yes.

Q. IS THIS A CORRECT OBSERVATION BY WITNESS VANDER WEIDE?

A. No. Although witness Vander Weide illustrates the model that I used correctly, [$k = D_0 * (1 + .5g)/P_0 + g$], he incorrectly identifies it as the annual form of the DCF model when in fact it is the semi-annual form of the DCF model.

Q. DOES WITNESS VANDER WEIDE CLAIM THAT YOUR USE OF THE "ANNUAL" FORM OF THE DCF MODEL IS INAPPROPRIATE?

A. Yes.

Q. WHY DOES HE CLAIM IT IS INAPPROPRIATE?

A. Witness Vander Weide claims that since the "annual" form of the DCF model increases the current dividend by half of the expected growth rate, it underestimates Empire's cost of equity.

Q. IS THIS CORRECT?

A. No.

Q. WHY NOT?

A. As thoroughly discussed on pages 28-31 of my rebuttal testimony, the form of the DCF model that I used in my analysis (the semi-annual form) is most appropriate because it recognizes that the dividend growth an investor receives over the coming year is very much influenced by the timing of his or her investment. On average, a rational investor will expect to receive the mean of the possible dividend income streams, which equates to half of the expected growth rate. Consequently, witness Vander Weide's use of the quarterly form of the DCF model, which adjusts the current dividend by the full amount of the expect growth rate, tends to overstate a company's actual cost of equity.

Q. DOES WITNESS VANDER WEIDE CRITICIZE YOUR USE OF THE "BR + SV" (SUSTAINABLE) GROWTH RATE METHODOLOGY?

A. Yes.

Q. WHAT IS THE BASIS FOR HIS CRITICISM?

A. Similar to witness Donald A. Murry's criticism, witness Vander Weide claims that the methodology is circular.

Q. IS THIS A LEGITIMATE CRITICISM?

A. No, as explained earlier, witness Vander Weide's circularity argument does not undermine the sustainable growth rate methodology because of the self-correcting nature of the DCF model.

Q. DOES WITNESS VANDER WEIDE CRITICIZE YOUR USE OF HISTORICAL GROWTH RATES TO ESTIMATE FUTURE GROWTH IN THE DCF MODEL?

A. Yes.

Q. IS THIS CRITICISM ON POINT?

A. No.

Q. WHY NOT?

A. Because I did not rely on historical growth rates. While it is certainly true that I reviewed historical growth rates, an objective assessment of my analysis clearly shows that my DCF return on equity estimate primarily relies on projected sustainable growth rates and analyst growth forecasts.

Q. DOES WITNESS VANDER WEIDE CRTICIZE YOUR PROXY GROUP OF COMPARABLE COMPANIES?

A. Yes.

Q. WHAT IS THE BASIS OF HIS CRITICISM?

A. Witness Vander Weide claims that my selection criteria eliminated many combination electric and gas companies that are comparable in risk to Empire.

Q. WHAT IS YOUR RESPONSE TO THIS CRITICISM?

A. As discussed earlier, I believe that a fair review of my proxy group indicates that the group as a whole is fairly comparable to Empire. As shown in Surrebuttal Schedule TA-1, the group's average beta is 0.77 compared to Empire's beta of 0.65. The group's average Value Line timeliness and safety ratings of 4 and 3, respectively, are identical to Empire's. Finally, the groups average Standard and Poor's (S&P) bond rating of BBB+ is similar to Empire's bond rating of BBB.

Q. DOES WITNESS VANDER WEIDE CRITICIZE THE RISK-FREE RATE PROXY AND THUS THE MARKET RISK PREMIUM THAT YOU USED IN YOUR CAPM ANALYSIS?

A. Yes.

Q. WHAT IS HIS CRITICISM?

A. Similar to witness Donald A. Murry's criticism, witness Vander Weide claims that the interest rate on the 90 day T-Bill is not an appropriate proxy for the risk-free rate called for in the capital asset pricing model because the CAPM is intended to measure the cost of equity for companies with a long-term investment horizon.

Q. HOW DO YOU RESPOND TO THIS?

A. My response is the same response I gave to witness Donald A. Murry's criticism.

Q. WHAT WAS THAT?

A. The CAPM model calls for the rate of interest earned on investments that are free of any risk. Consequently, the closest proxy for this requirement is the interest rate on U.S. Treasury Bills. Like Treasury Bonds, Treasury Bills are free of default risk however, unlike Treasury Bonds, Treasury Bills are also virtually free of any interest rate risk.

Q. SIMILAR TO WITNESS DONALD A. MURRY, WITNESS VANDER WEIDE ALSO CRITCIZES YOU FOR NOT MAKING A SIZE ADJUSTMENT TO YOUR CAPM RESULTS, CORRECT?

A. Yes.

Q. IS YOUR RESPONSE TO WITNESS VANDER WEIDE'S CRITICISM THE SAME AS YOUR RESPONSE TO WITNESS DONALD A. MURRY'S CRTICISM?

A. Yes. The capital asset pricing model is a market-based model therefore, any risk attributable to a company's "size" is already incorporated into its stock price and beta. Therefore, an analyst need not make any size based risk adjustments to his or her CAPM results.

<u>REBUTTAL OF EMPIRE WITNESS DAVID MURRAY REBUTTAL</u>:

Q. DOES STAFF WITNESS DAVID MURRAY CRITICIZE YOUR DCF COST OF EQUITY ANALYSIS?

A. Yes.

Q. WHAT IS THE BASIS OF HIS CRITICISM?

A. He criticizes my dividend yield calculation.

Q. WHY DOES HE CRITICIZE YOUR DIVIDEND YIELD CALCULATION?

A. Staff witness David Murray believes that it is inappropriate to calculate the dividend yield using an average stock price over a six-week period. Instead, witness David Murray believes that it is more appropriate to use a six-month average high/low stock price to calculate the dividend yield.

Q. DO YOU AGREE WITH STAFF WITNESS DAVID MURRAY'S CRITICISM?

A. No.

Q. WHY NOT?

A. The DCF model is a forward-looking model in that it calculates the cost of equity on a going forward basis. As witness David Murray pointed out on page 53 of his rebuttal testimony, the technical interpretation of the DCF model actually calls for the current stock price of the security being analyzed. While I agree with witness David Murray that it is more appropriate to use an average historical stock price rather than the actual spot price of the security being analyzed, I do not believe that using a stale six-month average stock price gives an accurate measure of current investor expectations. The use of a six-month average stock price not only includes less relevant historical information, but it also gives that less relevant historical information the same weight as current information regarding investor expectations. Since the current expectations of investors is the most important information, calculating the average stock price over a shorter six-week period is superior to calculating the average stock price over a six-month period.

Q. DOES WITNESS MURRAY STATE THAT YOU MADE A "FUNDAMENTAL FLAW"IN YOUR CAPM CALCULATION?

A. Yes, he does on page 54 of his rebuttal testimony.

Q. DO YOU BELIEVE THAT THIS IS A VALID CRITICISM?

A. No, I do not.

Q. WHY NOT?

A. Like the DCF model, the Capital Asset Pricing Model is a forward-looking model. Consequently, I believe that witness Murray's use of a "stale" risk-free rate is not nearly as indicative of current investor expectations as the current risk-free rate. My use of the current risk-free rate does a better job of capturing the current expectations of investors and is therefore by no means a "fundamental flaw".

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes, it does.