BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

PETITION FOR INCREASE IN RATES BY PROGRESS ENERGY FLORIDA, INC. DOCKET NO. 090079-EI

PETITION FOR LIMITED PROCEEDING TO INCLUDE BARTOW REPOWERING PROJECT IN BASE RATES, BY PROGRESS ENERGY FLORIDA, INC. DOCKET NO. 090144-EI

PETITION FOR EXPEDITED APPROVAL OF THE DEFERRAL OF PENSION EXPENSES, AUTHORIZATION TO CHARGE STORM HARDENING EXPENSES TO THE STORM DAMAGE RESERVE, AND VARIANCE FROM OR WAIVER OF RULE 25-6.0143(1)(C), (D), AND (F), F. A. C., BY PROGRESS ENERGY FLORIDA, INC. DOCKET NO. 090145-EU

VOLUME 22

Pages 2937 through 3131

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PROCEEDINGS: HEARING
COMMISSIONERS

PARTICIPATING: CHAIRMAN MATTHEW M. CARTER, II
COMMISSIONER LISA POLAK EDGAR
COMMISSIONER KATRINA J. McMURRIAN
COMMISSIONER NANCY ARGENZIANO
COMMISSIONER NATHAN A. SKOP

DATE: Tuesday, September 29, 2009

PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	JANE FAUROT, RPR Official FPSC Reporter (850) 413-6732
PARTICIPATING:	(As heretofore noted.)

I N D E X

WITNESSES

EXHIBITS

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P R O C E E D I N G S

(Transcript follows in sequence from Volume 21.)

CHAIRMAN CARTER: We are back on the record, and with that, when we left we were getting ready to recognize Mr. Rehwinkel.

Mr. Rehwinkel, you're recognized, sir.

MR. REHWINKEL: Thank you, Mr. Chairman. And before I call Mr. Woolridge to the stand, I want to thank the Commission and the parties for working around the weather difficulties that Mr. Woolridge -- Dr. Woolridge encountered getting here. Thank you for working with us.

Mr. Chairman, the citizens of Florida call Dr. J. Randall Woolridge to the stand. And Dr. Woolridge has not been sworn.

CHAIRMAN CARTER: Dr. Woolridge, would you please stand and raise your right hand?

(Witness sworn.)

CHAIRMAN CARTER: Please be seated. Mr. Rehwinkel.

MR. REHWINKEL: Thank you, Mr. Chairman.

J. RANDALL WOOLRIDGE

was called as a witness on behalf of the citizens of the State of Florida, and having been duly sworn, testified

as follows:

DIRECT EXAMINATION

BY MR. REHWINKEL:

Q. Dr. Woolridge, can you please state your name, address, employer, and who you represent for the record, please?

A. My name is the initial J. Randall Woolridge. That's spelled W-O-O-L-R-I-D-G-E. My address is 120 Haymaker Circle in State College, Pennsylvania. I am a professor of finance at the Pennsylvania State University.

Q. And on whose behalf are you testifying?

A. I am testifying on behalf of the Office of Public Counsel.

Q. Thank you, Dr. Woolridge.

Dr. Woolridge, have you caused to be prepared direct testimony consisting of 91 pages in this matter?

A. Yes.

Q. Dr. Woolridge, do you have any changes or corrections to make to that testimony?

A. I have an errata sheet.

MR. REHWINKEL: Mr. Chairman, I have passed out an errata sheet that is a hurriedly copied version of my own in my testimony. I neglected to make a clean copy, but I have provided this to all the parties and to

the court reporter, and I think this reflects the changes that Dr. Woolridge has. If there are any variances to what is on here, Dr. Woolridge can explain them.

CHAIRMAN CARTER: Thank you, Mr. Rehwinkel.

BY MR. REHWINKEL:

Q. Okay. Dr. Woolridge, if I asked you -- with these changes and corrections to your testimony, if I asked you the questions contained herein, would your answers be the same?

A. Yes.

MR. REHWINKEL: Mr. Chairman, I would ask that Dr. Woolridge's prefiled direct testimony be entered into the record as though read.

CHAIRMAN CARTER: The prefiled testimony of the witness will be inserted into the record as though read.

DIRECT TESTIMONY

OF

J. Randall Woolridge

On Behalf of the Office of Public Counsel

Before the

Florida Public Service Commission

Docket No. 090079-EI

Q. PLEASE STATE YOUR FULL NAME, ADDRESS, AND OCCUPATION.

A. My name is J. Randall Woolridge. My business address is 120 Haymaker Circle, State College, PA 16801. I am a Professor of Finance and the Goldman, Sachs & Co. and Frank P. Smeal Endowed University Fellow in Business Administration at the University Park Campus of the Pennsylvania State University. I am also the Director of the Smeal College Trading Room and President of the Nittany Lion Fund, LLC. A summary of my educational background, research, and related business experience is provided in Appendix A.

I. SUBJECT OF TESTIMONY AND SUMMARY OF RECOMMENDATIONS

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. I have been asked by the Florida Office of Public's Counsel ("OPC") to provide an opinion as to the overall fair rate of return or cost of capital for the Progress Energy Florida, Inc. ("PEF" or "Company") and to evaluate PEF's rate of return testimony in this proceeding.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. First I will review my cost of capital recommendation for PEF, and detail the primary areas of contention between PEF's rate of return position and OPC. Second, I provide an assessment of capital costs in today's capital markets. Third, I discuss my proxy group of electric utility companies for estimating the cost of capital for PEF. Fourth, I present my recommendations for the Company's capital structure and debt cost rate. Fifth, I discuss the concept of the cost of equity capital and then estimate the equity cost rate for PEF. Finally, I critique Company's rate of return analysis and testimony. I have included a table of contents which provides a more detailed outline.

Q. PLEASE REVIEW YOUR RECOMMENDATIONS REGARDING THE APPROPRIATE RATE OF RETURN FOR PEF.

A. I have developed a capital structure for PEF that reflects the Company's prospective capitalization used by investors. Even with my adjustments, this capital structure has a higher equity component than the capitalizations of most electric utility companies. I have adjusted the Company's debt cost rates to reflect current market interest rates. I have applied the Discounted Cash Flow Model ("DCF") and the Capital Asset Pricing Model ("CAPM") to a proxy group of publicly-held electric utility companies ("Electric Proxy Group") as well as the group of companies used by the Company. My analysis indicates an equity cost rate in the range of 9.5% to 10.0%. I have used the midpoint of this range, 9.75% as my equity cost rate for PEF. Using my capital structure and debt and equity cost rates, I am recommending an overall rate of return of 7.50% for PEF. These findings are summarized in Exhibit JRW-1.

Q. PLEASE SUMMARIZE THE PRIMARY ISSUES REGARDING RATE OF RETURN IN THIS PROCEEDING.

A. PEF's proposed cost of capital is provided in MFR Schedule D. The Company's recommended capital structure has a common equity ratio of 53.9% based on investor provided capital. This figure includes $711 million in imputed equity associated with the Company's Purchased Power Agreements ("PPAs"). I demonstrate that a capital structure with a common equity ratio of 53.9% is high relative to (1) the Company's actual historic as well as (2) the capital structures of other electric utilities. In my testimony, I show that the Company's imputed equity adjustment is unwarranted. My recommended capital structure reflects the capitalization of PEF as viewed by investors, and has a higher common equity ratio than the capitalizations of electric utility companies. I have also adjusted the Company's proposed debt cost rates to reflect market interest rates.

Dr. James A. Vander Weide provides the Company's equity cost rate. Dr. Vander Weide's estimated common equity cost rate is 12.54%. We have both used DCF and CAPM approaches in estimating an equity cost rate for the Company. Dr. Vander Weide has also used a Risk Premium ("RP") approach to estimate an equity cost rate for PEF. Dr. Vander Weide has applied these approaches to a proxy group of twenty-four electric companies.

In terms of the DCF approach, the two major areas of disagreement are (1) the appropriate adjustment to the DCF dividend yield and (2) most significantly, the estimation of the expected growth rate. With respect to (1), Dr. Vander Weide has made an inappropriate adjustment to the spot dividend yield. With respect to (2), Dr. Vander Weide has relied exclusively on the forecasted earnings per share ("EPS") growth rates of Wall Street analysts to compute the equity cost rate. I have used both

historic and projected growth rate measures and have evaluated growth in dividends, book value, and earnings per share. A very significant factor that I consider and highlight is the upwardly-biased expected earnings growth rates of Wall Street analysts.

The RP and CAPM approaches require an estimate of the based interest rate and the equity risk premium. In both approaches, Dr. Vander Weide's base interest rate is above current market rates. However, the major area of disagreement involves our significantly different views on the alternative approaches to measuring the equity risk premium as well as the magnitude of equity risk premium. Dr. Vander Weide's equity risk premiums are excessive and do not reflect current market fundamentals. As I highlight in my testimony, there are three procedures for estimating an equity risk premium – historic returns, surveys, and expected return models. Dr. Vander Weide uses a historical equity risk premium which is based on historic stock and bond returns. He also calculates an expected risk premium in which he applies the DCF approach to the S&P 500 and public utility stock. I provide evidence that risk premiums based on historic stock and bond returns are subject to empirical errors which result in upwardly biased measures of expected equity risk premiums. I demonstrate that Dr. Vander Weide's projected equity risk premiums, which use analysts' EPS growth rate projections, includes unrealistic assumptions regarding future economic and earnings growth and stock returns.

In his DCF, RP, and CAPM approaches, Dr. Vander Weide's makes an unwarranted adjustment for flotation costs which serve to inflate his DCF equity cost rate.

Finally, Dr. Vander Weide also makes a leverage adjustment to his equity cost rate estimates derived from his comparable groups to reflect the leverage difference between the market value capital structures of the group and PEF's book value capital structure which is used for rate making purposes. The adjustment increases his equity cost rate estimate by 104 basis points. In my testimony I discuss why this adjustment is not appropriate and highlight the fact that it produces illogical results.

In the end, the most significant areas of disagreement in measuring PEF's cost of capital are: (1) the appropriate capital structure; 2) the Company's short-term and long-term debt cost rates; (3) the use of the earnings per share growth rates of Wall Street analysts to measure expected DCF growth; (4) the measurement and magnitude of the equity risk premium used in CAPM and RP approaches; and (5) whether or not equity cost rate adjustments are needed to account for leverage and flotation costs.

II. CAPITAL COSTS IN TODAY'S MARKETS

Q. PLEASE DISCUSS CAPITAL COSTS IN U.S. MARKETS.

A. Long-term capital cost rates for U.S. corporations are a function of the required returns on risk-free securities plus a risk premium. The risk-free rate of interest is the yield on long-term U.S Treasury yields. The yields on ten-year U.S. Treasury bonds are provided on page 1 of Exhibit JRW-2 from 1953 to the present. These yields peaked in the early 1980s and have generally declined since that time. In the summer of 2003 these yields hit a 60-year low at 3.33%. They subsequently increased and fluctuated between the 4.0% and 5.0% levels over the next four years in response to ebbs and flows in the economy. Ten-year Treasury yields began to decline in mid-2007 at the

beginning of the current financial crisis. In 2008 Treasury yields declined to below 3.0% as a result of the expansion of the mortgage and sub-prime market credit crisis, the turmoil in the financial sector, the government bailout of financial institutions, and the economic recession. Overall, these economic developments led investors to seek out low risk investments. This 'flight to quality' in the fixed income market has driven Treasury yields to historically low levels.

Panel B on page 1 of Exhibit JRW-2 shows the differences in yields between ten-year Treasuries and Moody's Baa rated bonds since the year 2000. This differential primarily reflects the additional risk required by bond investors for the risk associated with investing in corporate bonds. The difference also reflects, to a much lesser degree, yield curve changes over time. The Baa rating is the lowest of the investment grade bond ratings for corporate bonds. The yield differential hovered in the 2.0% to 3.0% area until 2005, declined to 1.5% until late 2007, and then increased significantly in response to the current financial crisis. This differential peaked at 6.0% in November of 2008, at the height of the financial crisis, due to tightening in credit markets which increased corporate bond yields and the 'flight to quality' which decreased treasury yields. The differential has declined over the past several months.

As noted, the risk premium is the return premium required by investors to purchase riskier securities. As illustrated in Panel B of Exhibit JRW-2, the risk premium required by investors to buy corporate bonds is observable based on yield differentials in the markets. The equity risk premium is the return premium required to purchase stocks as opposed to bonds. The equity risk premium is not readily observable in the markets (as are bond risk premiums) since expected stock market returns are not

readily observable. As a result, equity risk premiums must be estimated using market data. There are alternative methodologies to estimating the equity risk premium, and the alternative approaches and equity risk premium results are subject to much debate. One way to estimate the equity risk premium is to compare the mean returns on bonds and stocks over long historical periods. Measured in this manner, the equity risk premium has been in the 5-7 percent range. But studies by leading academics as well as surveys of financial professionals indicate the forward-looking equity risk premium is in the 4.0 percent range

Q. PLEASE DISCUSS THE FINANCIAL CRISIS AND THE RESPONSE OF THE U.S. GOVERNMENT.

A. The mortgage crisis, subprime crisis, credit crisis, economic recession and the restructuring of financial institutions has had tremendous global economic implications. This issue first surfaced in the summer of 2007 as a mortgage crisis. It expanded into the subprime area in late 2008 and led to the collapse of certain financial institutions, notably Bear Stearns, in the first quarter of 2008. Commodity and energy prices peaked and then began to decline in the summer of 2008 as the crisis in the financial markets spread to the global economy. The turmoil in the financial sector peaked in September with the failure of several large financial institutions, Bank of America's buyout of Merrill Lynch, and the government takeover of Fannie Mae and Freddie Mac.

The spillover to the economy has been ongoing. According to the National Bureau of Economic Research, the economy slipped into a recession in the 4th quarter of 2007 and remains there. The unemployment rate has increased steadily and was at 9.5% in

June of 2009. Certain industries - especially those tied to discretionary spending, commodities, and industrial goods – have been especially hard hit. Inflationary pressures--which were tied to global growth and increases in commodity prices until mid-2008-- largely disappeared in late 2008 and early 2009. A barrel of oil, which was nearly $150 in mid-2008, declined to the $30 range and now has increased to $70. Other commodity prices also peaked last year, bottomed out in the first quarter of 2009, and now have rebounded. The stock market bottomed out in early March, and has increased some 25% since that time. The increase in commodity and energy prices and the stock market since the first quarter of this year provides evidence that the worst of the financial crisis and economic recession appears to be over.

In response to the market crisis, the Federal Reserve took extraordinary steps in an effort to stabilize capital markets. Most significantly, the Fed has opened its lending facilities to numerous banking and investment firms to promote credit markets. As a result, the balance sheet of the Federal Reserve has grown by hundreds of billions of dollars in support of the financial system. The federal government has taken a series of measures to shore up the economy and the markets. The Troubled Asset Relief Program ("TARP") is aimed at providing over $700B in government funds into the banking system in the form of equity investments. The federal government has spent billions bailing out a number of prominent financial institutions, including AIG, Citigroup, and Bank of America. The government is also moving to bail out other industries, most notably the auto industry. Earlier this year, President Obama's signed into law his $787B economic stimulus which includes significant tax cuts and government spending aimed at creating jobs and turning around the economy.

In summary, the Federal Reserve and government have taken never-before seen

actions and have provided or will provide extraordinary sums of money in various ways to rescue the economy, certain industries, and the credit markets.

Q. PLEASE DISCUSS THE RESPONSE OF THE FINANCIAL MARKETS TO THE ACTIONS OF THE U.S. GOVERNMENT.

A. In response to the financial crisis, United States ("U. S.") Treasury Rates declined to levels not seen since the 1950s. This reflects the 'flight to quality' in the credit markets, as investors have sought out low risk investments. The credit market for corporate and utility debt has experienced higher rates due to the credit crisis. The short-term credit markets were initially hit with credit issues, leading to the demise of several large financial institutions. The primary indicator of the short-term credit market is the 3-month London Interbank Offered Rate ("LIBOR") rate. LIBOR peaked in the third quarter of 2008 at 4.75%. It has declined to below 1.0% as the short-term credit markets have opened up and Treasury rates have continued to decline.

The long-term credit market has remained tighter, but has improved significantly over the first half of 2009. The credit crisis is associated with concerns among credit providers – mainly financial institutions – in terms of making loans and investing in bonds due to the overleveraging and perceived weakness of the economy. Panel A of page 1 of Exhibit JRW-3 provides the yields on A, BBB+, and BBB rated public utility bonds. These yields peaked in November and have since declined by over 150 basis points. For example, the yields on 'A' rated utility bonds, which peaked at over 7.50% in November of 2008, have declined to below 6.0% in recent weeks. Panel B of Exhibit JRW-3 provides the yield spreads on A, BBB+, and BBB rated public

utility bonds relative to Treasury bonds. These yield spreads increased dramatically in the third quarter during the peak of the financial crisis and have since decreased by about 200 basis points.

Thus, the yields and yield spreads have declined in response to the federal government's unprecedented actions in response to the financial crisis. Public utility debt in particular has found favor with fixed income investors. Pages 2 and 3 of Exhibit JRW-3 contain an article from the *Wall Street Journal* which highlights the fact that the market for the bonds of utilities came back significantly in early 2009. In particular, the article highlights the fact that utility bonds are viewed as a 'safe haven' in the current market and that yields on utility bonds declined significantly and bond issuances picked up early in 2009. It quotes from the CFO of Progress Energy, who says:

> "People have turned the page on 2008 and spreads have come down for people like us," said Mark Mulhern, Progress Energy's chief financial officer.

In sum, it appears that the massive government spending and Federal Reserve actions have had an effect on the credit markets. The Obama administration is clearly committed to bringing the economy around. The worst of the credit crisis appears to be over. The short-term credit market has loosened up considerably. LIBOR rates peaked in the fall and have declined to below 1.0%. Likewise, the long-term credit market has loosened as well and credit spreads have declined significantly. In addition, the stock market has rebounded from its lows in March of this year.

Q. PLEASE PROVIDE YOUR ASSESSMENT OF THE IMPACT OF RECENT

CAPITAL MARKET CONDITIONS ON THE VOLATILITY OF STOCKS AND BONDS.

A. To assess the effect of recent capital market volatility on the equity risk premium and the equity cost rate, one must look at the volatility of stocks relative to bonds. To compare the volatility of stocks and bonds, one must standardize the volatility measure. This is normally done by dividing the volatility measure, the standard deviation, by the mean. This standardized volatility measure is known as the Coefficient of Variation ("CV").

I have performed an analysis of the volatility of stocks relative to bonds since 2000. I have used the S&P 500 and the Bear Sterns Bond Price Index ("BSBPI") to compute the CV using a twenty-two day mean and standard deviation. A twenty two day period approximates one month of trading. In Panel A of Exhibit JRW-3, page 4, I have graphed the CV for the S&P 500 and the BSBPI since the year 2000. In association with the unprecedented economic events in the third quarter of 2008, there is a dramatic increase in the volatility of stocks and a not so dramatic increase in the volatility of bonds. After the September – October time frame, stock volatility declined significantly while bond volatility increased. In the first quarter of 2009, there was another increase in the volatility of stocks relative to bonds. However, stock volatility has declined over the past two months. Panel B of page 4 of Exhibit JRW-3 shows the ratio of the Stock CV/Bond CV. Hence, this graph shows the standardized volatility of stocks relative to bonds. Higher levels of this ratio represent time periods when stock volatility is high relative to bond volatility, and low levels of this ratio occur during time periods when stock volatility is low relative to bonds. As such, the volatility of stocks relative to bonds has declined over the past two months, suggesting

that the markets have settled somewhat compared to the third quarter of 2008 and the first quarter of 2009.

Q. HAVE LEADING FINANCIAL PRACTITIONERS WEIGHED IN ON THE IMPACT OF THE FINANCIAL CRISIS ON THE COST OF EQUITY CAPITAL?

A. Yes. McKinsey & Co., recognized as the leading management consulting firm in the world, recently published a study entitled "Why the Crisis Hasn't Shaken the Cost of Capital." In the study, the authors contend the financial crisis has not significantly changed the firm's long-term estimate of the equity risk premium, which is in the 3.5 to 4 percent range. McKinsey develops an equity risk premium based on the price level of the S&P 500, GDP growth, and corporate profits. In summing up their analysis of the impact of the financial crisis on S&P 500, GDP growth, and corporate profits, they conclude: "Taking all these factors into account, we think there has been no significant change in the long-term cost of equity capital.[1]"

III. PROXY GROUP SELECTION

Q. PLEASE DESCRIBE YOUR APPROACH TO DEVELOPING A FAIR RATE OF RETURN RECOMMENDATION FOR PEF.

[1]Richard Dobbs, Bin Jang, and Timothy Koeller, "Why the Crisis Hasn't Shaken the Cost of Capital," *McKinsey Quarterly* (December 2008), p. 6.

A. To develop a fair rate of return recommendation for PEF, I have evaluated the return requirements of investors on the common stock of a proxy group of publicly-held electric utility companies.

Q. PLEASE DESCRIBE YOUR PROXY GROUP OF ELECRIC UTILITY COMPANIES.

A. My Electric Proxy Group consists of fifteen electric utility companies. These companies met the following selection criteria: (1) listed as a Electric Utility or Combination Electric and Gas Company in *AUS Utility Reports*; (2) listed as a Electric Utility in the Standard Edition of the *Value Line Investment Survey*; (3) at least 75% regulated electric revenues; (4) operating revenues of less than $15B; (5) at least a three-year history of paying dividends, with no actual or pending dividend cuts; and (6) an investment grade bond rating by Moody's and/or Standard & Poor's. Summary financial statistics for the Electric Proxy Group are listed in Panel A of Exhibit JRW-4. The median operating revenues and net plant for the group are $5,873.6 million and $8,313.5 million, respectively. On average, the group receives 89% of revenues from regulated electric operations, a current common equity ratio of 44%, and an earned return on common equity of 11.4%.

Q. HAVE YOU ALSO CONSIDERED THE RESULTS OF DR. VANDER WEIDE'S PROXY GROUP OF ELECTRIC UTILITIES?

A. Yes. I have also performed an equity cost rate study on Dr. Vander Weide's group of utility companies. Dr. Vander Weide's proxy group consists of twenty-four utility companies. Summary financial data are provided for this group in Panel B of Exhibit JRW-4. On average, this group is much larger than the Electric Proxy Group and PEF.

The median operating revenues and net plant for the group are $10,087.4 million and $17,577.7 million, respectively. These companies, on average, receive 76% of revenues from regulated electric operations and have a current common equity ratio of 43% and an earned return on common equity of 11.7%.

Q. WHAT IS YOUR SUMMARY ASSESSMENT OF THE RISKINESS OF THE TWO GROUPS?

A. Dr. Vander Weide's group is larger, has a lower percentage of regulated electric revenue. But, the two groups do have similar bond ratings as well as relatively similar pre-tax interest coverage, common equity ratio, and earned return on common equity. However, the variability of the bond ratings is higher for Dr. Vander Weide's group than the Electric Proxy Group. Based on this cursory analysis, I believe that Dr. Vander Weide's group is slightly riskier than the Electric Proxy Group.

Q. HOW DOES PEF COMPARE TO THE TWO PROXY GROUPS?

A. The summary financial data for PEF is also provided in Exhibit JRW-4. PEF is very similar to the Electric Proxy Group in terms of operating revenues, net plant, bond ratings, and interest coverage ratio. PEF has a lower return on equity, but a higher common equity ratio. In my opinion, PEF is more comparable to the Electric Proxy Group than to Dr. Vander Weide's proxy group. The data do indicate that PEF's parent, Progress Energy, is more similar to Dr. Vander Weide's proxy group in terms of size and capitalization.

IV. CAPITAL STRUCTURE RATIOS AND DEBT COST RATES

Q. WHAT IS THE REQESTED CAPITAL STRUCTURE OF THE COMPANY?

A. The Company's requested capital structure, based on investor provided capital, is shown in Panel A of page 1 of Exhibit JRW-5. The Company is requesting a capital structure consisting 0.66% short-term debt, 45.10% long-term debt, 0.34% preferred stock, and 53.90% common equity. However, this capital structure includes $711 million of "imputed equity." As discussed at length later in my testimony, imputed equity is a non-GAAP adjustment to the capital structure of the company. As such, it is an adjustment not found in the company's financial statements and SEC filings. Panel B of page 1 of Exhibit JRW-5 shows PEF's requested capital structure, based on investor provided capital, without the imputed equity. Therefore, PEF is actually requesting a capital structure (based on investor provided capital) consisting 0.75% short-term debt, 51.35% long-term debt, 0.39% preferred stock, and 47.51% common equity.

Q. IS THE COMPANY'S REQESTED CAPITAL STRUCTURE APPROPRIATE FOR RATEMAKING PURPOSES?

A. No. This capital structure is not appropriate for three reasons. First, the capital structure includes a common equity ratio (53.90%) which is higher than the common equity ratios of electric utility companies. Second, the company has requested a capital structure that includes a common equity ratio of 53.90%. This claim is based on incorrectly including the $711 million in imputed equity. Third, the Company's requested capital structure includes more common equity than is projected for the Company.

Q. BEFORE DISCUSSING YOUR RECOMMENDED CAPITAL STRUCTURE, PLEASE REVIEW THE CAPITAL STRUCTURES FOR PEF AND ITS PARENT COMPANY, PROGRESS ENERGY.

A. In panels C and D of Exhibit JRW-5, page 1, the average capitalization ratios for PEF and Progress Energy are shown over the past three years. These ratios highlight the fact that Progress Energy employs much more debt and much less equity than PEF. Hence, Progress Energy has a higher degree of financial risk than PEF. These ratios also show that Progress Energy finances its other businesses and operations with more debt than PEF.

Q. PLEASE DISCUSS THE CAPITAL STRUCTURE RATIOS OF YOUR ELECTRIC PROXY GROUP.

A. The capital structures for the Electric Proxy Group are shown in Panel E of Exhibit JRW-5. The average capitalization ratios for the group over the past four quarters are 7.06% short-term debt, 49.41% long-term debt, 0.79% preferred stock, and a 42.74% common equity. These ratios indicate that: (1) the Electric Proxy Group has, on average, a much lower common equity ratio and higher financial risk than PEF; and (2) the average capitalization of the Electric Proxy Group is similar to PEF's parent, Progress Energy.

Q. WHAT CAPITAL STRUCTURE RATIOS ARE YOU EMPLOYING FOR PEF?

A. Panel F (page 2) of Exhibit JRW-5 provides PEF projected actual capitalization for the years 2009 and 2010 based on investor provided capital. These figures represent the projected capitalizations per the company books, and therefore these are the figures that investors would have access to and use. These capitalizations include a

significant capital infusion from Progress Energy. The average capitalization ratios are 1.82% short-term debt, 47.81% long-term debt, 0.36% preferred stock, and a 50.00% common equity. While these capitalization ratios include a much higher common equity ratio than the Electric Proxy Group, they are a much more realistic view of the expected capitalization of the company as viewed by investors.

Q. YOU HAVE REFERRED SEVERAL TIMES TO THE DIFFERING EQUITY RATIOS OF THE ELECTRIC PROXY GROUP, PROGRESS ENERGY, AND PEF. PLEASE ELABORATE ON THE SIGNIFICANCE OF THE AMOUNT OF EQUITY THAT IS INCLUDED IN AN ELECTRIC UTILITY'S CAPITAL STRUCTURE.

A. An electric utility's decision as to the amount of equity capital it will incorporate in its capital structure involves fundamental trade-offs relating to the amount of financial risk the firm carries, the overall revenue requirements its customers are required to bear through the rates they pay, and the return on equity that investors will require.

Q. PLEASE DISCUSS A UTILITY'S USE OF USING DEBT VERSUS EQUITY TO MEET ITS CAPITAL NEEDS.

A. Utilities satisfy their capital needs through a mix of equity and debt. Because equity capital is more expensive than debt, the issuance of debt enables a utility to raise more capital with a given commitment of dollars than it could raise with just equity. Debt is therefore a means of "leveraging" capital dollars. However, as the amount of debt in the capital structure increases, its financial risk increases and the risk of the utility perceived by equity investors also increases. Significantly for this case, the converse is also true. As the amount of debt in the capital structure decreases, the financial risk

decreases. The required return on equity capital is a function of the amount of overall risk that investors perceive, including financial risk in the form of debt.

Q. WHY IS THIS RELATIONSHIP IMPORTANT TO THE UTILITY'S CUSTOMERS?

A. Just as there is a direct correlation between the utility's authorized return on equity and the utility's revenue requirements (the higher the return, the greater the revenue requirement), there is a direct correlation between the amount of equity in the capital structure and the revenue requirements the customers are called on to bear. Again, equity capital is more expensive than debt. Not only does equity command a higher cost rate, it also adds more to the income tax burden that ratepayers are required to pay through rates. As the equity ratio increases, the utility's revenue requirements increase and rates paid by customers increase. If the proportion of equity is too high, rates will be higher than they need to be. For this reason, the utility's management must pursue a capital acquisition strategy that results in the proper balance in the capital structure.

Q. HOW HAVE ELECTRIC UTILITIES TYPICALLY STRUCK THIS BALANCE?

A. Due to regulation and the essential nature of its output, an electric utility is exposed to less business risk than other companies that are not regulated. This means that an electric utility can reasonably carry relatively more debt in its capital structure than can most unregulated companies. Typically, one may see equity ratios for electric utilities range from the 40% to 50% range. As I stated earlier, the average amount of common equity in the average capital structure of the utilities in my proxy group is 42%. In my experience, this value is typical for electric utilities. It is also significant

that Progress Energy has significantly less equity in its capital structure—i.e., is significantly more leveraged—than is its subsidiary, PEF.

Q. TURNING TO PEF'S PROPOSED CAPITAL STRUCTURE, HOW DOES PEF'S EQUITY RATIO RELATE TO THIS DISCUSSION?

A. PEF's real recommended common equity ratio is 47.51% based on investor provided capital. The 53.90% common equity ratio includes the $711 million in inputed equity. My recommended capital structure, with a common equity ratio of 50.0%, is very reasonable given these figures as well as the capitalizations of electric utilities.

Q. DO YOU BELIEVE THAT EQUITY RATIOS IN THE RANGE OF 53% ARE APPROPRIATE FOR PEF?

A. No. It includes imputed equity and is much higher than the capitalizations of electric utilities.

Q. GIVEN YOUR VIEW THAT PEF'S REQUESTED EQUITY RATIO IS HIGHER THAN IS WARRANTED, WHAT SHOULD THE COMMISSION DO IN THIS RATEMAKING PROCEEDING?

A. When a regulated electric utility's actual capital structure contains too high an equity ratio, the options are: (1) to employ a more reasonable capital structure and reflect this capital structure in revenue requirements; or (2) to recognize the downward impact that a high equity ratio will have on financial risk of a utility and authorize a lower common equity cost rate.

Q. PLEASE ELABORATE ON THIS "DOWNWARD IMPACT."

A. As I stated earlier, there is a direct correlation between the amount of debt in a utility's capital structure and the risk that an equity investor will associate with that utility. A relatively lower proportion of debt translates into a lower required return on equity, all other things being equal. Stated differently, a utility cannot expect to "have it both ways." Specifically, a utility cannot maintain an unusually high equity ratio and not expect to have the resulting lower risk reflected in its authorized return on equity. The fundamental relationship between the lower risk and the appropriate authorized return should not be ignored.

Q. OF THE TWO OPTIONS FOR ADDRESSING AN INAPPROPRIATELY HIGH EQUITY RATIO, WHICH HAVE YOU EMPLOYED IN THIS CASE?

A. I have used the Company's projected capital structure which includes an actual common equity ratio of 50.0%. This capital structure includes a capital infusion from Progress Energy and includes a higher common equity ratio and therefore lower financial risk than the capital structures of the Electric Proxy Group and Progress Energy. Concurrently, I have taken into account the relatively lower financial risk of PEF that is associated with high equity ratio in my recommendation that the Commission authorize a return on equity of 9.75%.

Q. PLEASE SUMMARIZE YOUR RECOMMENDED CAPITAL STRUCTURE FOR RATEMAKING PURPOSES.

A. My recommended capital structure for ratemaking purposes is provided in Panel G (page 2) of Exhibit JRW-5. I have included the per books amounts of customer deposits, deferred income tax, and investment tax credits from PEF Schedule D-1A

along with my recommended amounts of short-term and long-term debt and common equity.

Q. WHY IS YOUR RECOMMENDED CAPITAL STRUCTURE MORE APPROPRIATE FOR PEF?

A. My recommended capital structure is more appropriate for three reasons: (1) PEF's requested capital structure ratios do not reflect the actual capitalization of PEF or Progress Energy; (2) PEF's requested capital structure ratios do not reflect the capitalization of electric utility companies; and (3) PEF's requested capital structure is not based on the company book figures but reflects a number of adjustments, most notably imputed equity. My capital structure much more accurately reflects the Company's capital structure as viewed by investors.

Q. PLEASE DISCUSS YOUR SHORT-TERM DEBT COST RATE.

A. PEF has based its short-term debt rates for 2009 and 2010 based on a Commercial Paper ("CP") rate of 4.50%. In response to OPC ROG 4-169 and OPC ROG 4-170, PEF explains how it arrived at the 4.5% CP rate. It is based on the projected 3-month LIBOR rate implied from the Bloomberg LIBOR forward curve plus a CP yield differential. For 2009, the average 3-month LIBOR rate implied from the Bloomberg LIBOR forward curve is 2.66%. This is significantly above the 3-month LIBOR rates that have existed in 2009. These rates are shown on page 4 of exhibit JRW-5. These rates peaked in the fall of 2008 during the financial crisis, fell to 1.0% in May, and have continued to decline. The current 3-month LIBOR rate is only 0.47%.

I have computed a short-term debt cost rate for the Company in a four step process on page 4 of Exhibit JRW-5: (1) I start with PEF's assumed base CR rate of 4.5% and subtracted the average 3-month LIBOR rate implied from the Bloomberg LIBOR forward curve (2.66%). This gives PEF's CP yield spread over 3-Month LIBOR of 1.85%; (2) I computed the average LIBOR rate for 2009, which is 1.0%; and (3) I add the CP spread to the average LIBOR rate for 2009, to get 2.85%; and (2) I add the 21 basis points in fees. The resulting short-term debt cost rate is 3.06%. Given that the current 3-month LIBOR rate is 0.47% versus the 2009 average of 1.00%, this is a very fair short-term debt cost rate.

Q. WHAT LONG-TERM DEBT COST RATE ARE YOU USING IN THE COST OF CAPITAL FOR PEF?

A. I am using PEF's projected long-term debt cost rate for 2009 of 6.05% which is found on page 3 of MFR Schedule D-4a. PEF has used a long-term debt cost rate of 6.42%. The debt cost rate includes a projected 10-year bond issue on March 1, 2010 at an interest rate of 6.98%. This rate is too high given current market interest rates. Page 5 of Exhibit JRW-5 shows the yields on ten-year, A and BBB+ rated utility bonds. These yields have declined since the end of 2008. The current yields on ten-year, A and BBB+ rated utility bonds are 5.19% and 5.60%, respectively, As such, a projected yield at 6.98% is not reflective of current market interest rates.

V. THE COST OF COMMON EQUITY CAPITAL

A. Overview

Q. WHY MUST AN OVERALL COST OF CAPITAL OR FAIR RATE OF RETURN BE ESTABLISHED FOR A PUBLIC UTILITY?

A. In a competitive industry, the return on a firm's common equity capital is determined through the competitive market for its goods and services. Due to the capital requirements needed to provide utility services and to the economic benefit to society from avoiding duplication of these services, some public utilities are monopolies. It is not appropriate to permit monopoly utilities to set their own prices because of the lack of competition and the essential nature of the services. Thus, regulation seeks to establish prices that are fair to consumers and, at the same time, are sufficient to meet the operating and capital costs of the utility (i.e., provide an adequate return on capital to attract investors).

Q. PLEASE PROVIDE AN OVERVIEW OF THE COST OF CAPITAL IN THE CONTEXT OF THE THEORY OF THE FIRM.

A. The total cost of operating a business includes the cost of capital. The cost of common equity capital is the expected return on a firm's common stock that the marginal investor would deem sufficient to compensate for risk and the time value of money. In equilibrium, the expected and required rates of return on a company's common stock are equal.

Normative economic models of the firm, developed under very restrictive assumptions, provide insight into the relationship between firm performance or profitability, capital costs, and the value of the firm. Under the economist's ideal model of perfect competition where entry and exit is costless, products are undifferentiated, and there are increasing marginal costs of production, firms produce

up to the point where price equals marginal cost. Over time, a long-run equilibrium is established where price equals average cost, including the firm's capital costs. In equilibrium, total revenues equal total costs, and because capital costs represent investors' required return on the firm's capital, actual returns equal required returns and the market value and the book value of the firm's securities must be equal.

In the real world, firms can achieve competitive advantage due to product market imperfections. Most notably, companies can gain competitive advantage through product differentiation (adding real or perceived value to products) and by achieving economies of scale (decreasing marginal costs of production). Competitive advantage allows firms to price products above average cost and thereby earn accounting profits greater than those required to cover capital costs. When these profits are in excess of that required by investors, or when a firm earns a return on equity in excess of its cost of equity, investors respond by valuing the firm's equity in excess of its book value.

James M. McTaggart, founder of the international management consulting firm Marakon Associates, has described this essential relationship between the return on equity, the cost of equity, and the market-to-book ratio in the following manner:[2]

> Fundamentally, the value of a company is determined by the cash flow it generates over time for its owners, and the minimum acceptable rate of return required by capital investors. This "cost of equity capital" is used to discount the expected equity cash flow, converting it to a present value. The cash flow is, in turn, produced by the interaction of a company's return on equity and the annual rate of equity growth. High return on equity (ROE) companies in low-growth markets, such as Kellogg, are prodigious generators of cash flow, while

[2] James M. McTaggart, "The Ultimate Poison Pill: Closing the Value Gap," *Commentary* (Spring 1988), p. 2.

> low ROE companies in high-growth markets, such as Texas Instruments, barely generate enough cash flow to finance growth.
>
> A company's ROE over time, relative to its cost of equity, also determines whether it is worth more or less than its book value. If its ROE is consistently greater than the cost of equity capital (the investor's minimum acceptable return), the business is economically profitable and its market value will exceed book value. If, however, the business earns an ROE consistently less than its cost of equity, it is economically unprofitable and its market value will be less than book value.

As such, the relationship between a firm's return on equity, cost of equity, and market-to-book ratio is relatively straightforward. A firm that earns a return on equity above its cost of equity will see its common stock sell at a price above its book value. Conversely, a firm that earns a return on equity below its cost of equity will see its common stock sell at a price below its book value.

Q. PLEASE PROVIDE ADDITIONAL INSIGHTS INTO THE RELATIONSHIP BETWEEN RETURN ON EQUITY AND MARKET-TO-BOOK RATIOS.

A. This relationship is discussed in a classic Harvard Business School case study entitled "A Note on Value Drivers." On page 2 of that case study, the author describes the relationship very succinctly:[3]

> For a given industry, more profitable firms – those able to generate higher returns per dollar of equity – should have higher market-to-book ratios. Conversely, firms which are unable to generate returns in excess of their cost of equity should sell for less than book value.

Profitability	*Value*
If ROE > K	*then Market/Book > 1*
If ROE = K	*then Market/Book =1*
If ROE < K	*then Market/Book < 1*

[3] Benjamin Esty, "A Note on Value Drivers," Harvard Business School, Case No. 9-297-082, April 7, 1997.

To assess the relationship by industry, as suggested above, I have performed a regression study between estimated return on equity and market-to-book ratios using natural gas distribution, electric utility and water utility companies. I used all companies in these three industries which are covered by *Value Line* and who have estimated return on equity and market-to-book ratio data. The results are presented in Panels A-C of Exhibit JRW-6. The average R-squares for the electric, gas, and water companies are 0.65, 0.60, and 0.92.[4] This demonstrates the strong positive relationship between ROEs and market-to-book ratios for public utilities.

Q. WHAT ECONOMIC FACTORS HAVE AFFECTED THE COST OF EQUITY CAPITAL FOR PUBLIC UTILITIES?

A. Exhibit JRW-7 provides indicators of public utility equity cost rates over the past decade. Page 1 shows the yields on long-term 'A' rated public utility bonds. These yields peaked in the early 2000s at over 8.0%, declined to about 5.0% in 2005, and rose to 6.0% in 2006 and 2007. They stayed in that 6.0% range until the third quarter of 2008 when they spiked to almost 7.5%. They have since retreated to the 6.0% range again.

Page 2 provides the dividend yields for the Electric Utility Group over the past decade. These yields peaked in 2003 at 5.25%, declined to the 3.5% range as of 2007, and increased in 2008 to 4.1%.

[4] R-square measures the percent of variation in one variable (e.g., market-to-book ratios) explained by another variable (e.g., expected return on equity). R-squares vary between zero and 1.0, with values closer to 1.0 indicating a higher relationship between two variables.

Average earned returns on common equity and market-to-book ratios for the group are given on page 3 of Exhibit JRW-7. Over the past decade, earned returns on common equity have been in the 9.0%-12.0% range. The average ROE peaked at 12.65% in 2001 and subsequently declined through the year 2005 before rebounding in the 2006 – 2008 years. Over the past decade, the average market-to-book ratios for this group have been between 1.40 to 1.80. As of 2008, the average ROE and market-to-book for the group was 12.1% and 1.72, respectively.

The indicators in Exhibit JRW-7, coupled with the overall decrease in interest rates, suggest that capital costs for the Electric Proxy Group have decreased over the past decade.

Q. WHAT FACTORS DETERMINE INVESTORS' EXPECTED OR REQUIRED RATE OF RETURN ON EQUITY?

A. The expected or required rate of return on common stock is a function of market-wide as well as company-specific factors. The most important market factor is the time value of money as indicated by the level of interest rates in the economy. Common stock investor requirements generally increase and decrease with like changes in interest rates. The perceived risk of a firm is the predominant factor that influences investor return requirements on a company-specific basis. A firm's investment risk is often separated into business and financial risk. Business risk encompasses all factors that affect a firm's operating revenues and expenses. Financial risk results from incurring fixed obligations in the form of debt in financing its assets.

Q. HOW DOES THE INVESTMENT RISK OF PUBLIC UTILITY COMPANIES COMPARE WITH THAT OF OTHER INDUSTRIES?

A. Due to the essential nature of their service as well as their regulated status, public utilities are exposed to a lesser degree of business risk than other, non-regulated businesses. The relatively low level of business risk allows public utilities to meet much of their capital requirements through borrowing in the financial markets, thereby incurring greater than average financial risk. Nonetheless, the overall investment risk of public utilities is below most other industries.

Exhibit JRW-8 provides an assessment of investment risk for 100 industries as measured by beta, which according to modern capital market theory is the only relevant measure of investment risk. These betas come from the *Value Line Investment Survey* and are compiled annually by Aswath Damodoran of New York University.[5] The study shows that the investment risk of public utilities is relatively low. The average beta for electric utility industry is 0.88. This figure put electric utility companies in the bottom twenty percent of all industries and well below the *Value Line* average of 1.24. As such, the cost of equity for the electric utility industry is relatively low compared to other industries in the U.S.

Q. HOW CAN THE EXPECTED OR REQUIRED RATE OF RETURN ON COMMON EQUITY CAPITAL BE DETERMINED?

A. The costs of debt and preferred stock are normally based on historical or book values and can be determined with a great degree of accuracy. The cost of common equity capital, however, cannot be determined precisely and must instead be estimated from

[5] They may be found on the Internet at http:// www.stern.nyu.edu/~adamodar.

market data and informed judgment. This return to the stockholder should be commensurate with returns on investments in other enterprises having comparable risks.

According to valuation principles, the present value of an asset equals the discounted value of its expected future cash flows. Investors discount these expected cash flows at their required rate of return that, as noted above, reflects the time value of money and the perceived riskiness of the expected future cash flows. As such, the cost of common equity is the rate at which investors discount expected cash flows associated with common stock ownership.

Models have been developed to ascertain the cost of common equity capital for a firm. Each model, however, has been developed using restrictive economic assumptions. Consequently, judgment is required in selecting appropriate financial valuation models to estimate a firm's cost of common equity capital, in determining the data inputs for these models, and in interpreting the models' results. All of these decisions must take into consideration the firm involved as well as current conditions in the economy and the financial markets.

Q. HOW DO YOU PLAN TO ESTIMATE THE COST OF EQUITY CAPITAL FOR THE COMPANY?

A. I rely primarily on the DCF model to estimate the cost of equity capital. Given the investment valuation process and the relative stability of the utility business, I believe that the DCF model provides the best measure of equity cost rates for public utilities. It is my experience that this Commission has traditionally relied on the DCF method.

I have also performed a CAPM study, but I give these results less weight because I believe that risk premium studies, of which the CAPM is one form, provide a less reliable indication of equity cost rates for public utilities.

B. Discounted Cash Flow Analysis

Q. DESCRIBE THE THEORY BEHIND THE TRADITIONAL DCF MODEL.

A. According to the DCF model, the current stock price is equal to the discounted value of all future dividends that investors expect to receive from investment in the firm. As such, stockholders' returns ultimately result from current as well as future dividends. As owners of a corporation, common stockholders are entitled to a pro-rata share of the firm's earnings. The DCF model presumes that earnings that are not paid out in the form of dividends are reinvested in the firm so as to provide for future growth in earnings and dividends. The rate at which investors discount future dividends, which reflects the timing and riskiness of the expected cash flows, is interpreted as the market's expected or required return on the common stock. Therefore, this discount rate represents the cost of common equity. Algebraically, the DCF model can be expressed as:

$$P = \frac{D_1}{(1+k)^1} + \frac{D_2}{(1+k)^2} + \ldots \frac{D_n}{(1+k)^n}$$

where P is the current stock price, D_n is the dividend in year n, and k is the cost of common equity.

Q. IS THE DCF MODEL CONSISTENT WITH VALUATION TECHNIQUES EMPLOYED BY INVESTMENT FIRMS?

A. Yes. Virtually all investment firms use some form of the DCF model as a valuation technique. One common application for investment firms is called the three-stage DCF or dividend discount model ("DDM"). The stages in a three-stage DCF model are presented in Exhibit JRW-9. This model presumes that a company's dividend payout progresses initially through a growth stage, then proceeds through a transition stage, and finally assumes a steady-state stage. The dividend-payment stage of a firm depends on the profitability of its internal investments, which, in turn, is largely a function of the life cycle of the product or service.

1. Growth stage: Characterized by rapidly expanding sales, high profit margins, and abnormally high growth in earnings per share. Because of highly profitable expected investment opportunities, the payout ratio is low. Competitors are attracted by the unusually high earnings, leading to a decline in the growth rate.

2. Transition stage: In later years increased competition reduces profit margins and earnings growth slows. With fewer new investment opportunities, the company begins to pay out a larger percentage of earnings.

3. Maturity (steady-state) stage: Eventually the company reaches a position where its new investment opportunities offer, on average, only slightly attractive returns on equity. At that time its earnings growth rate, payout ratio, and return on equity stabilize for the remainder of its life. The constant-growth DCF model is appropriate when a firm is in the maturity stage of the life cycle.

In using this model to estimate a firm's cost of equity capital, dividends are projected into the future using the different growth rates in the alternative stages, and then the equity cost rate is the discount rate that equates the present value of the future dividends to the current stock price.

Q. HOW DO YOU ESTIMATE STOCKHOLDERS' EXPECTED OR REQUIRED RATE OF RETURN USING THE DCF MODEL?

A. Under certain assumptions, including a constant and infinite expected growth rate, and constant dividend/earnings and price/earnings ratios, the DCF model can be simplified to the following:

$$P = \frac{D_1}{k - g}$$

where D_1 represents the expected dividend over the coming year and g is the expected growth rate of dividends. This is known as the constant-growth version of the DCF model. To use the constant-growth DCF model to estimate a firm's cost of equity, one solves for k in the above expression to obtain the following:

$$k = \frac{D_1}{P} + g$$

Q. IN YOUR OPINION, IS THE CONSTANT-GROWTH DCF MODEL APPROPRIATE FOR PUBLIC UTILITIES?

A. Yes. The economics of the public utility business indicate that the industry is in the steady-state or constant-growth stage of a three-stage DCF. The economics include the relative stability of the utility business, the maturity of the demand for public utility services, and the regulated status of public utilities (especially the fact that their

returns on investment are effectively set through the ratemaking process). The DCF valuation procedure for companies in this stage is the constant-growth DCF. In the constant-growth version of the DCF model, the current dividend payment and stock price are directly observable. However, the primary problem and controversy in applying the DCF model to estimate equity cost rates entails estimating investors' expected dividend growth rate.

Q. WHAT FACTORS SHOULD ONE CONSIDER WHEN APPLYING THE DCF METHODOLOGY?

A. One should be sensitive to several factors when using the DCF model to estimate a firm's cost of equity capital. In general, one must recognize the assumptions under which the DCF model was developed in estimating its components (the dividend yield and expected growth rate). The dividend yield can be measured precisely at any point in time, but tends to vary somewhat over time. Estimation of expected growth is considerably more difficult. One must consider recent firm performance, in conjunction with current economic developments and other information available to investors, to accurately estimate investors' expectations.

Q. PLEASE DISCUSS EXHIBIT JRW-10.

A. My DCF analysis is provided in Exhibit JRW-10. The DCF summary is on page 1 of this Exhibit, and the supporting data and analysis for the dividend yield and expected growth rate are provided on the following pages of the Exhibit.

Q. WHAT DIVIDEND YIELDS ARE YOU EMPLOYING IN YOUR DCF ANALYSIS FOR THE PROXY GROUPS?

A. The dividend yields on the common stock for the companies in the proxy group are provided on page 2 of Exhibit JRW-10 for the six-month period ending July 2009. For the DCF dividend yields for the groups, I am using the average of the six month and July, 2009 dividend yields. The table below shows these dividend yields.

	6-Month Average Dividend Yield	August 2009 Dividend Yield	DCF Dividend Yield
Electric Proxy Group	**5.2%**	**5.1%**	**5.15%**
Vander Weide Proxy Group	**5.5%**	**5.2%**	**5.35%**

Q. PLEASE DISCUSS THE APPROPRIATE ADJUSTMENT TO THE SPOT DIVIDEND YIELD.

A. According to the traditional DCF model, the dividend yield term relates to the dividend yield over the coming period. As indicated by Professor Myron Gordon, who is commonly associated with the development of the DCF model for popular use, this is obtained by: (1) multiplying the expected dividend over the coming quarter by 4 and (2) dividing this dividend by the current stock price to determine the appropriate dividend yield for a firm, that pays dividends on a quarterly basis.[6]

In applying the DCF model, some analysts adjust the current dividend for growth over the coming year as opposed to the coming quarter. This can be complicated because firms tend to announce changes in dividends at different times during the year. As such, the dividend yield computed based on presumed growth over the coming quarter as opposed to the coming year can be quite different. Consequently, it is common for

[6] *Petition for Modification of Prescribed Rate of Return*, Federal Communications Commission, Docket No. 79-05, Direct Testimony of Myron J. Gordon and Lawrence I. Gould at 62 (April 1980).

analysts to adjust the dividend yield by some fraction of the long-term expected growth rate.

Q. GIVEN THIS DISCUSSION, WHAT ADJUSTMENT FACTOR WILL YOU USE FOR YOUR DIVIDEND YIELD?

A. I will adjust the dividend yield by one-half (1/2) the expected growth so as to reflect growth over the coming year.

Q. PLEASE DISCUSS THE GROWTH RATE COMPONENT OF THE DCF MODEL.

A. There is much debate as to the proper methodology to employ in estimating the growth component of the DCF model. By definition, this component is investors' expectation of the long-term dividend growth rate. Presumably, investors use some combination of historical and/or projected growth rates for earnings and dividends per share and for internal or book value growth to assess long-term potential.

Q. WHAT GROWTH DATA HAVE YOU REVIEWED FOR THE PROXY GROUPS?

A. I have analyzed a number of measures of growth for companies in the proxy groups. I examined historic growth rates in earnings per share ("EPS"), dividends per share ("DPS"), and book value per share ("BVPS"). I have reviewed *Value Line's* historical and projected growth rate estimates for EPS, DPS, and BVPS. In addition, I have utilized the average EPS growth rate forecasts of Wall Street analysts as provided by Yahoo First Call, Zacks, and Reuters. These services solicit five-year earnings growth rate projections from securities analysts and compile and publish the means

and medians of these forecasts. Finally, I have also assessed prospective growth as measured by prospective earnings retention rates and earned returns on common equity.

Q. PLEASE DISCUSS HISTORICAL GROWTH IN EARNINGS AND DIVIDENDS AS WELL AS INTERNAL GROWTH.

A. Historical growth rates for EPS, DPS, and BVPS are readily available to virtually all investors and presumably an important ingredient in forming expectations concerning future growth. However, one must use historical growth numbers as measures of investors' expectations with caution. In some cases, past growth may not reflect future growth potential. Also, employing a single growth rate number (for example, for five or ten years), is unlikely to accurately measure investors' expectations due to the sensitivity of a single growth rate figure to fluctuations in individual firm performance as well as overall economic fluctuations (i.e., business cycles). However, one must appraise the context in which the growth rate is being employed. According to the conventional DCF model, the expected return on a security is equal to the sum of the dividend yield and the expected long-term growth in dividends. Therefore, to best estimate the cost of common equity capital using the conventional DCF model, one must look to long-term growth rate expectations.

Internally generated growth is a function of the percentage of earnings retained within the firm (the earnings retention rate) and the rate of return earned on those earnings (the return on equity). The internal growth rate is computed as the retention rate times the return on equity. Internal growth is significant in determining long-run earnings and therefore, dividends. Investors recognize the importance of internally generated

growth and pay premiums for stocks of companies that retain earnings and earn high returns on internal investments.

Q. WHY ARE YOU NOT RELYING EXCLUSIVELY ON THE EPS FORECASTS OF WALL STREET ANALYSTS IN ARRIVING AT A DCF GROWTH RATE FOR THE PROXY GROUPS?

A. There are several issues with using the EPS growth rate forecasts of Wall Street analysts as DCF growth rates. First, the appropriate growth rate in the DCF model is the dividend growth rate, not the earnings growth rate. Nonetheless, over the very long-term, dividend and earnings will have to grow at a similar growth rate. Therefore, in my opinion, consideration must be given to other indicators of growth, including prospective dividend growth, internal growth, as well as projected earnings growth. Second, and most significantly, it is well-known that the EPS growth rate forecasts of Wall Street securities analysts are overly optimistic and upwardly biased. Hence, using these growth rates as a DCF growth rate will provide an overstated equity cost rate. This issue is discussed at length in the rebuttal section of this testimony.

Q. PLEASE DISCUSS THE HISTORICAL GROWTH OF THE COMPANIES IN THE GROUPS AS PROVIDED IN THE *VALUE LINE INVESTMENT SURVEY*.

A. Historic growth rates for the companies in the groups, as published in the *Value Line Investment Survey*, are provided on page 3 of Exhibit JRW-10. Due to the presence of

outliers, I have used the median as well as the mean as a measure of central tendency.[7] The historical growth measures in EPS, DPS, and BVPS for the Electric Proxy Group, as measured by the means and medians, range from 1.1% to 2.9%, with an average of 1.9%. For the Vander Weide Proxy Group, the range is from -0.7% to 9.3%, with an average of 4.3%. The results for the Vander Weide Proxy Group are much more volatile than those of the Electric Proxy Group.

Q. PLEASE SUMMARIZE *VALUE LINE'S* PROJECTED GROWTH RATES FOR THE COMPANIES IN THE PROXY GROUPS.

A. *Value Line's* projections of EPS, DPS, and BVPS growth for the companies in the proxy groups are shown on page 4 of Exhibit JRW-10. As above, due to the presence of outliers, both the mean and medians are used in the analysis. For the Electric Proxy Group, the central tendency measures range from 3.0% to 6.0%, with an average of 4.6%. The average of the means and medians is also 4.6% for the Vander Weide Proxy Group.

Also provided on page 4 of Exhibit JRW-10 is prospective sustainable growth for the proxy group as measured by *Value Line*'s average projected retention rate and return on shareholders' equity. As noted above, sustainable growth is significant in a primary driver of long-run earnings growth. For the Electric Proxy Group, the average prospective sustainable growth rate is 4.0%. The prospective sustainable growth rate for the Vander Weide Proxy Group is 4.7%.

[7] Outliers are observations that are much larger or smaller than the majority of the observations that are being evaluated.

Q. PLEASE ASSESS GROWTH FOR THE PROXY GROUPS AS MEASURED BY ANALYSTS' FORECASTS OF EXPECTED 5-YEAR EPS GROWTH.

A. Zacks, Yahoo!/First Call, and Reuters collect, summarize, and publish Wall Street analysts' five-year EPS growth rate forecasts for the companies in the proxy groups. These forecasts are provided for the companies in the proxy groups on page 5 of Exhibit JRW-10. The median of analysts' projected EPS growth rates for the Electric Proxy Group and the Vander Weide Proxy Group are 6.4% and 5.0%, respectively.[8]

Q. PLEASE SUMMARIZE YOUR ANALYSIS OF THE HISTORICAL AND PROSPECTIVE GROWTH OF THE PROXY GROUPS.

A. Page 6 of Exhibit JRW-10 shows the summary DCF growth rate indicators for the two groups. These indicators suggest that the prospective growth of the Vander Weide Group is slightly higher than the Electric Proxy Group. The averages of the growth rate indicators for the Electric Proxy Group and the Vander Weide Proxy Group are 4.7% and 4.9%. The average projected *Value Line* growth rates for EPS, DPS, and BVPS and the average sustainable growth rate are both slightly higher for the Vander Weide Proxy Group. The projected EPS growth rates from Wall Street analysts are similar for both groups. On balance, with these growth rate indicators given greater weight to the prospective growth rate indicators, an expected DCF growth rate in the 4.5% to 5.0% range is indicated for the Electric Proxy Group, and an expected DCF growth rate in the 4.5% to 5.5% range is indicated for Vander Weide Proxy Group. I

[8] Since there is considerable overlap in analyst coverage between the three services, and not all of the companies have forecasts from the different services, I have averaged the expected five-year EPS growth rates from the three services for each company to arrive at an expected EPS growth rate by company.

will use the midpoint of these ranges, 4.75% for the Electric Proxy Group and 5.0% for the Vander Weide Proxy Group, as my DCF growth rates.

Q. BASED ON THE ABOVE ANALYSIS, WHAT ARE YOUR INDICATED COMMON EQUITY COST RATES FROM THE DCF MODEL FOR THE GROUPS?

A. My DCF-derived equity cost rate for the groups is summarized on page 1 of Exhibit JRW-10.

$$\text{DCF Equity Cost Rate (k)} = \frac{D}{P} + g$$

	Dividend Yield	1 + ½ Growth Adjustment	DCF Growth Rate	Equity Cost Rate
Electric Proxy Group	**5.15%**	**1.023750**	**4.75%**	**10.3%**
Vander Weide Proxy Group	**5.35%**	**1.025000**	**5.00%**	**10.5%**

C. Capital Asset Pricing Model Results

Q. PLEASE DISCUSS THE CAPITAL ASSET PRICING MODEL ("CAPM").

A. The CAPM is a risk premium approach to gauging a firm's cost of equity capital. According to the risk premium approach, the cost of equity is the sum of the interest rate on a risk-free bond (R_f) and a risk premium (RP), as in the following:

$$k = R_f + RP$$

The yield on long-term Treasury securities is normally used as R_f. Risk premiums are measured in different ways. The CAPM is a theory of the risk and expected returns of common stocks. In the CAPM, two types of risk are associated with a stock: firm-

specific risk or unsystematic risk, and market or systematic risk, which is measured by a firm's beta. The only risk that investors receive a return for bearing is systematic risk.

According to the CAPM, the expected return on a company's stock, which is also the equity cost rate (K), is equal to:

$$K = (R_f) + ß * [E(R_m) - (R_f)]$$

Where:

- *K* represents the estimated rate of return on the stock;
- $E(R_m)$ represents the expected return on the overall stock market. Frequently, the 'market' refers to the S&P 500;
- (R_f) represents the risk-free rate of interest;
- $[E(R_m) - (R_f)]$ represents the expected equity or market risk premium—the excess return that an investor expects to receive above the risk-free rate for investing in risky stocks; and
- *Beta*—(ß) is a measure of the systematic risk of an asset.

To estimate the required return or cost of equity using the CAPM requires three inputs: the risk-free rate of interest (R_f), the beta (ß), and the expected equity or market risk premium $[E(R_m) - (R_f)]$. R_f is the easiest of the inputs to measure – it is the yield on long-term Treasury bonds. ß, the measure of systematic risk, is a little more difficult to measure because there are different opinions about what adjustments, if any, should be made to historical betas due to their tendency to regress to 1.0 over time. And finally, an even more difficult input to measure is the expected equity or market risk premium $(E(R_m) - (R_f))$. I will discuss each of these inputs below.

Q. PLEASE DISCUSS EXHIBIT JRW-11.

A. Exhibit JRW-11 provides the summary results for my CAPM study. Page 1 shows the results, and the following pages contain the supporting data.

Q. PLEASE DISCUSS THE RISK-FREE INTEREST RATE.

A. The yield on long-term U.S. Treasury bonds has usually been viewed as the risk-free rate of interest in the CAPM. The yield on long-term U.S. Treasury bonds, in turn, has been considered to be the yield on U.S. Treasury bonds with 30-year maturities. However, when the Treasury's issuance of 30-year bonds was interrupted for a period of time in recent years, the yield on 10-year U.S. Treasury bonds replaced the yield on 30-year U.S. Treasury bonds as the benchmark long-term Treasury rate. Ten-year Treasury yields began to decline in mid-2007 at the beginning of the financial crisis, and fell below 3.0% as the housing and sub-prime mortgage crises led to an overall credit crisis and economic recession. These rates bottomed out in December of 2008 and have increased since that time as prospects for an economic recovery have increased.

Q. WHAT RISK-FREE INTEREST RATE ARE YOU USING IN YOUR CAPM?

A. The U.S. Treasury began to issue the 30-year bond in the early 2000s as the U.S. budget deficit increased. As such, the market has once again focused on its yield as the benchmark for long-term capital costs in the U.S. Long Treasury rates have trended up in recent months. As of August 1, 2009, as shown on page 2 of Exhibit JRW-11, the rate on 30- U.S. Treasury Bonds was 4.30%, respectively. Given the recent trend in the 30-year Treasury yields, I believe that a long-term Treasury rate in

the 4.50% range is reasonable for the near future. I will use this as the risk-free rate, or R_f, in my CAPM.

Q. WHAT BETAS ARE YOU EMPLOYING IN YOUR CAPM?

A. Beta (ß) is a measure of the systematic risk of a stock. The market, usually taken to be the S&P 500, has a beta of 1.0. The beta of a stock with the same price movement as the market also has a beta of 1.0. A stock whose price movement is greater than that of the market, such as a technology stock, is riskier than the market and has a beta greater than 1.0. A stock with below average price movement, such as that of a regulated public utility, is less risky than the market and has a beta less than 1.0. Estimating a stock's beta involves running a linear regression of a stock's return on the market return.

As shown on page 3 of Exhibit JRW-11, the slope of the regression line is the stock's ß. A steeper line indicates the stock is more sensitive to the return on the overall market. This means that the stock has a higher ß and greater than average market risk. A less steep line indicates a lower ß and less market risk.

Numerous online investment information services, such as Yahoo! and Reuters, provide estimates of stock betas. Usually these services report different betas for the same stock. The differences are usually due to: (1) the time period over which the ß is measured; and (2) any adjustments that are made to reflect the fact that betas tend to regress to 1.0 over time. In estimating an equity cost rate for the proxy group, I am using the betas for the companies as provided in the *Value Line Investment Survey*. As shown on page 3 of Exhibit JRW-11, the average betas for the companies in Electric Proxy Group and the Vander Weide Proxy Group are 0.70 and 0.73.

Q. PLEASE DISCUSS THE ALTERNATIVE VIEWS REGARDING THE EQUITY RISK PREMIUM.

A. The equity or market risk premium - $(E(R_m) - R_f)$ - is equal to the expected return on the stock market (e.g., the expected return on the S&P 500 ($E(R_m)$) minus the risk-free rate of interest (R_f). The equity premium is the difference in the expected total return between investing in equities and investing in "safe" fixed-income assets, such as long-term government bonds. However, while the equity risk premium is easy to define conceptually, it is difficult to measure because it requires an estimate of the expected return on the market.

Q. PLEASE DISCUSS THE ALTERNATIVE APPROACHES TO ESTIMATING THE EQUITY RISK PREMIUM.

A. Page 4 of Exhibit JRW-11 highlights the primary approaches to, and issues in, estimating the expected equity risk premium. The traditional way to measure the equity risk premium was to use the difference between historical average stock and bond returns. In this case, historical stock and bond returns, also called ex post returns, were used as the measures of the market's expected return (known as the ex ante or forward-looking expected return). This type of historical evaluation of stock and bond returns is often called the "Ibbotson approach" after Professor Roger Ibbotson who popularized this method of using historical financial market returns as measures of expected returns. Most historical assessments of the equity risk premium suggest an equity risk premium of 5-7 percent above the rate on long-term U.S. Treasury bonds. However, this can be a problem because: (1) ex post returns are not the same as ex ante expectations, (2) market risk premiums can change over time, increasing when investors become more risk-averse and decreasing when investors

become less risk-averse, and (3) market conditions can change such that ex post historical returns are poor estimates of ex ante expectations.

The use of historical returns as market expectations has been criticized in numerous academic studies.[9] The general theme of these studies is that the large equity risk premium discovered in historical stock and bond returns cannot be justified by the fundamental data. These studies, which fall under the category "Ex Ante Models and Market Data," compute ex ante expected returns using market data to arrive at an expected equity risk premium. These studies have also been called "Puzzle Research" after the famous study by Mehra and Prescott in which the authors first questioned the magnitude of historical equity risk premiums relative to fundamentals.[10]

Q. PLEASE PROVIDE A SUMMARY OF THE EQUITY RISK PREMIUM STUDIES.

A. Derrig and Orr (2003), Fernandez (2007), and Song (2007) have completed the most comprehensive reviews to date of the research on the equity risk premium.[11] Derrig and Orr's study evaluated the various approaches to estimating equity risk premiums as well as the issues with the alternative approaches and summarized the findings of the published research on the equity risk premium. Fernandez examined four alternative measures of the equity risk premium – historical, expected, required, and

[9] The problems with using ex post historical returns as measures of ex ante expectations will be discussed at length later in my testimony.

[10] R. Mehra and Edward Prescott, "The Equity Premium: A Puzzle," *Journal of Monetary Economics* (1985).

[11] Richard Derrig and Elisha Orr, "Equity Risk Premium: Expectations Great and Small," Working Paper (version 3.0), Automobile Insurers Bureau of Massachusetts, (August 28, 2003), Pablo Fernandez, "Equity Premium: Historical, Expected, Required, and Implied," IESE Business School Working Paper, (2007), and Zhiyi Song, "The Equity Risk Premium: An Annotated Bibliography," CFA Institute, (2007).

implied. He also reviewed the major studies of the equity risk premium and presented the summary equity risk premium results. Song provides an annotated bibliography and highlights the alternative approaches to estimating the equity risk summary.

Page 5 of Exhibit JRW-11 provides a summary of the results of the primary risk premium studies reviewed by Derrig and Orr, Fernandez, and Song. In developing page 5 of Exhibit JRW-11, I have categorized the studies as discussed on page 4 of Exhibit JRW-11. I have also included the results of the "Building Blocks" approach to estimating the equity risk premium, including a study I performed, which is presented below. The Building Blocks approach is a hybrid approach employing elements of both historic and ex ante models.

Q. PLEASE DISCUSS YOUR DEVELOPMENT OF AN EQUITY RISK PREMIUM COMPUTED USING THE BUILDING BLOCKS METHODOLOGY.

A. Ibbotson and Chen (2003) evaluate the ex post historical mean stock and bond returns in what is called the Building Blocks approach.[12] They use 75 years of data and relate the compounded historical returns to the different fundamental variables employed by different researchers in building ex ante expected equity risk premiums. Among the variables included were inflation, real EPS and DPS growth, ROE and book value growth, and price-earnings ("P/E") ratios. By relating the fundamental factors to the ex post historical returns, the methodology bridges the gap between the ex post and ex ante equity risk premiums. Ilmanen (2003) illustrates this approach using the

[12] Roger Ibbotson and Peng Chen, "Long Run Returns: Participating in the Real Economy," *Financial Analysts Journal*, (January 2003).

geometric returns and five fundamental variables – inflation ("CPI"), dividend yield ("D/P"), real earnings growth ("RG"), repricing gains ("PEGAIN") and return interaction/reinvestment ("INT").[13] This is shown on page 7 of Exhibit JRW-11. The first column breaks the 1926-2000 geometric mean stock return of 10.7% into the different return components demanded by investors: the historical U.S. Treasury bond return (5.2%), the excess equity return (5.2%), and a small interaction term (0.3%). This 10.7% annual stock return over the 1926-2000 period can then be broken down into the following fundamental elements: inflation (3.1%), dividend yield (4.3%), real earnings growth (1.8%), repricing gains (1.3%) associated with higher P/E ratios, and a small interaction term (0.2%).

Q. HOW ARE YOU USING THIS METHODOLOGY TO DERIVE AN EX ANTE EXPECTED EQUITY RISK PREMIUM?

A. The third column in the graph on page 7 of Exhibit JRW-11 shows current inputs to estimate an ex ante expected market return. These inputs include the following:

CPI – To assess expected inflation, I have employed expectations of the short-term and long-term inflation rate. Long term inflation forecasts are available in the Federal Reserve Bank of Philadelphia's publication entitled *Survey of Professional Forecasters*.[14] This survey of professional economists has been published for almost 50 years. While this survey is published quarterly, only the first quarter survey includes long-term forecasts of gross domestic product ("GDP") growth, inflation, and

[13] Antti Ilmanen, Expected Returns on Stocks and Bonds," *Journal of Portfolio Management*, (Winter 2003), p. 11.

[14] Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters*, (February 13, 2009). The *Survey of Professional Forecasters* was formerly conducted by the American Statistical Association ("ASA") and the National Bureau of Economic Research ("NBER") and was known as the ASA/NBER survey. The survey, which began in 1968, is conducted each quarter. The Federal Reserve Bank of Philadelphia, in cooperation with the NBER, assumed responsibility for the survey in June 1990.

market returns. In the first quarter 2009 survey, published on February 13, 2009, the median long-term (10-year) expected inflation rate as measured by the CPI was 2.4% (see page 8 of Exhibit JRW-11).

The University of Michigan's Survey Research Center surveys consumers on their short-term (one-year) inflation expectations on a monthly basis. As shown on page 9 of Exhibit JRW-11, the current short-term expected inflation rate is 3.1%. As a measure of expected inflation, I will use the average of the long-term (2.4%) and short-term (3.1%) inflation rate measures, or 2.75%.

D/P – As shown on page 10 of Exhibit JRW-11, the dividend yield on the S&P 500 has decreased gradually over the past decade. Today, it is below its average of 4.3% over the 1926-2000 time period. The S&P dividend yield bottomed out at less than 1.4% in 2000. Currently, as shown on page 10 of Exhibit JRW-11, the S&P 500 dividend yield is 2.35%. I will use this figure in my ex ante risk premium analysis.

RG – To measure expected real growth in earnings, I use the historical real earnings growth rate for the S&P 500 and the expected real GDP growth. The S&P 500 was created in 1960. It includes 500 companies which come from ten different sectors of the economy. On page 11 of Exhibit JRW-11, real EPS growth is computed using the CPI as a measure of inflation. The real growth figure over 1960-2008 period for the S&P 500 is 2.3%.

The second input for expected real earnings growth is expected real GDP growth. The rationale is that over the long-term, corporate profits have averaged a relatively

consistent 5.50% of U.S. GDP.[15] Real GDP growth, according to McKinsey, has averaged 3.5% over the past 80 years. Expected GDP growth, according to the Federal Reserve Bank of Philadelphia's *Survey of Professional Forecasters,* is 2.6% (see page 8 of Exhibit JRW-11).

Given these results, I will use 2.50%, for real earnings growth.

PEGAIN – PEGAIN is the repricing gain associated with an increase in the P/E ratio. It accounted for 1.3% of the 10.7% annual stock return in the 1926-2000 period. In estimating an ex ante expected stock market return, one issue is whether investors expect P/E ratios to increase from their current levels. The P/E ratios for the S&P 500 over the past 25 years are shown on page 10 of Exhibit JRW-11. The run-up and eventual peak in P/Es in the year 2000 is very evident in the chart. The average P/E declined until late 2006, and then increased, primarily due to the decline in EPS as a result of the financial crisis and the recession. As shown on page 11 of Exhibit JRW-11, the average P/E for the S&P 500 as of June 30, 2009 was 134.01.

Given the current economic and capital markets environment, I do not believe that investors expect even higher P/E ratios. Therefore, a PEGAIN would not be appropriate in estimating an ex ante expected stock market return. The current P/E for the S&P 500 is well above the average historical S&P 500 P/E ratio of approximately 16.0. Hence, investors are not likely to expect to get stock market gains from lower interest rates and higher P/E ratios.

[15]Marc. H. Goedhart, et al, "The Real Cost of Equity," *McKinsey on Finance* (Autumn 2002), p.14.

Q. GIVEN THIS DISCUSSION, WHAT IS YOUR EX ANTE EXPECTED MARKET RETURN AND EQUITY RISK PREMIUM USING THE "BUILDING BLOCKS METHODOLOGY"?

A. My expected market return is represented by the last column on the right in the graph entitled "Decomposing Equity Market Returns: The Building Blocks Methodology" set forth on page 7 of Exhibit JRW-11. As shown, my expected market return of 7.45% is composed of 2.75% expected inflation, 2.35% dividend yield, and 2.50% real earnings growth rate.

Q. GIVEN THAT THE HISTORICAL COMPOUNDED ANNUAL MARKET RETURN IS IN EXCESS OF 10%, WHY *DO* YOU *BELIEVE* THAT YOUR EXPECTED MARKET RETURN OF 7.60% IS REASONABLE?

A. As discussed above, in the development of the expected market return, stock prices are still high at the present time in relation to earnings and dividends, and interest rates are relatively low. Hence, it is unlikely that investors are going to experience high stock market returns due to higher P/E ratios and/or lower interest rates. In addition, as shown in the decomposition of equity market returns, whereas the dividend portion of the return was historically 4.3%, the current dividend yield is only 2.35%. Due to these reasons, lower market returns are expected for the future.

Q. IS YOUR EXPECTED MARKET RETURN OF 7.60% CONSISTENT WITH THE FORECASTS OF MARKET PROFESSIONALS?

A. Yes. In the first quarter 2009 *Survey of Financial Forecasters*, published on February 13, 2009 by the Federal Reserve Bank of Philadelphia, the mean long-term expected return on the S&P 500 was 6.62% (see page 8 of Exhibit JRW-11).

Q. IS YOUR EXPECTED MARKET RETURN CONSISTENT WITH THE EXPECTED MARKET RETURNS OF CORPORATE CHIEF FINANCIAL OFFICERS (CFOs)?

A. Yes. John Graham and Campbell Harvey of Duke University conduct a quarterly survey of corporate CFOs. The survey is a joint project of Duke University and *CFO Magazine*. In the June 2009 survey, the mean expected return on the S&P 500 over the next ten years was 7.31%.[16]

Q. GIVEN THIS EXPECTED MARKET RETURN, WHAT IS YOUR EX ANTE EQUITY RISK PREMIUM USING THE BUILDING BLOCKS METHODOLOGY?

A. As shown on page 2 of Exhibit JRW-11, the current 30-year U.S. Treasury yield is 4.30%. My ex ante equity risk premium is simply the expected market return from the Building Blocks methodology minus this risk-free rate:

Ex Ante Equity Risk Premium = 7.60% - 4.30% = 3.30%

Q. GIVEN THIS DISCUSSION, HOW ARE YOU MEASURING AN EXPECTED EQUITY RISK PREMIUM IN THIS PROCEEDING?

A. As discussed above, page 5 of Exhibit JRW-11 provides a summary of the results of the equity risk premium studies that I have reviewed. These include the results of: (1) the various studies of the historical risk premium, (2) ex ante equity risk premium studies, (3) equity risk premium surveys of CFOs, Financial Forecasters, and academics, and (4) the Building Block approaches to the equity risk premium. There

[16] The survey results are available at www.cfosurvey.org.

are results reported for over thirty studies, and the average equity risk premium is 4.37%.

Q. SOME OF THE EQUITY RISK PREMIUM STUDIES THAT YOU USE IN YOUR EQUITY RISK PREMIUM STUDY DATE BACK INTO THE EARLY 2000S. IF YOU ELIMINATE THE OLDER STUDIES, HOW DOES THAT AFFECT YOUR EQUITY RISK PREMIUM?

A. In developing my equity risk premium study, I have used all equity risk premium studies and surveys I could identify that were published over the past decade and that provided an equity risk premium estimate. Since some of these studies were published in the early 2000s at the market peak, one could argue that these results are not as relevant today. However, I must add that most of these studies used data over long periods of time (as long as fifty years of data) and so they were not estimating an equity risk premium as of a point in time (e.g., the year 2001). Nonetheless, to assess as to whether the studies published in the early 2000s significantly affect my equity risk premium results, on page 6 of Exhibit JRW-11 I have reconstructed page 5 of Exhibit JRW-11, but I have eliminated all studies published before 2005. The average for this subset of studies is 4.36%. Therefore, eliminating the earlier studies does not have a significant impact on my equity risk premium estimate.

Q. IS YOUR EX ANTE EQUITY RISK PREMIUM CONSISTENT WITH THE EQUITY RISK PREMIUMS USED BY CFOS?

A. Yes. In the previously referenced June 2009 CFO survey conducted by *CFO Magazine* and Duke University, the expected 10-year equity risk premium was 4.11%.

Q. IS YOUR EX ANTE EQUITY RISK PREMIUM CONSISTENT WITH THE EX ANTE EQUITY RISK PREMIUMS OF PROFESSIONAL FORECASTERS?

A. Yes. The financial forecasters in the previously referenced Federal Reserve Bank of Philadelphia survey project both stock and bond returns. As shown on page 8 of Exhibit JRW-11, the mean long-term expected stock and bond returns were 6.62% and 4.68%, respectively. This provides an ex ante equity risk premium of 1.94%.

Q. IS YOUR EX ANTE EQUITY RISK PREMIUM CONSISTENT WITH THE EQUITY RISK PREMIUMS USED BY THE LEADING CONSULTING FIRMS?

A. Yes. McKinsey & Co. is widely recognized as the leading management consulting firm in the world. It published a study entitled "The Real Cost of Equity" in which the McKinsey authors developed an ex ante equity risk premium for the U.S. In reference to the decline in the equity risk premium, as well as what is the appropriate equity risk premium to employ for corporate valuation purposes, the McKinsey authors concluded the following:

> We attribute this decline not to equities becoming less risky (the inflation-adjusted cost of equity has not changed) but to investors demanding higher returns in real terms on government bonds after the inflation shocks of the late 1970s and early 1980s. We believe that using an equity risk premium of 3.5 to 4 percent in the current environment better reflects the true long-term opportunity cost of equity capital and hence will yield more accurate valuations for companies.[17]

[17] Marc H. Goedhart, et al, "The Real Cost of Equity," *McKinsey on Finance* (Autumn 2002), p. 15.

Q. HAS MCKINSEY RECENTLY REAFFIRMED ITS OPINION ON THE EQUITY RISK PREMIUM IN LIGHT OF THE FINANCIAL TURMOIL OF THE LAST TWO YEARS?

A. Yes. As previously discussed, McKinsey has recently published a study in which they reaffirm their estimate of the equity risk premium in light of the financial turmoil of the past two years.[18]

Q. WHAT EQUITY COST RATES ARE INDICATED BY YOUR CAPM ANALYSIS?

A. The results of my CAPM study for the proxy group are provided below:

$$K = (R_f) + ß * [E(R_m) - (R_f)]$$

	Risk-Free Rate	Beta	Equity Risk Premium	Equity Cost Rate
Electric Proxy Group	**4.50%**	**0.70**	**4.37%**	**7.6%**
Vander Weide Proxy Group	**4.50%**	**0.73**	**4.37%**	**7.7%**

These results are summarized on page 1 of Exhibit JRW-11.

D. Equity Cost Rate Summary

[18]Richard Dobbs, Bin Jang, and Timothy Koeller, "Why the Crisis Hasn't Shaken the Cost of Capital," *McKinsey Quarterly* (December 2008), p. 1-6.

Q. PLEASE SUMMARIZE YOUR EQUITY COST RATE STUDY.

A. The table below provides the equity cost rate results for my DCF and CAPM analyses for the two proxy groups.

Summary Equity Cost Rate Results

	DCF Approach	CAPM Approach
Electric Proxy Group	**10.3%**	**7.6%**
Vander Weide Proxy Group	**10.5%**	**7.7%**

Q. GIVEN THESE RESULTS, WHAT IS YOUR ESTIMATED EQUITY COST RATE FOR THE GROUPS?

A. Given these results, I conclude that the appropriate equity cost rate for the two groups is in the 7.6%-10.5% range. The midpoint of this range is 9.1%. In my opinion, this wide range reflects the uncertainty and volatility in today's capital markets. In recognition of this uncertainty and volatility, I believe that an equity cost rate in the upper end of this range is appropriate at this time. Given that I give primary weight to the results of the Electric Proxy Group, I believe that the relevant range is 9.5% to 10.0%. I will use the midpoint of this range, 9.75% as an equity cost rate for PEF. This is especially fair given the high common equity ratio (50.0%) I am recommending relative to the average common equity ratio of the Electric Proxy Group (44%).

VI. CRITIQUE OF PEF'S RATE OF RETURN TESTIMONY

Q. PLEASE SUMMARIZE PEF'S RATE OF RETURN REQUEST FOR PEF.

A. PEF's cost of capital request for PEF is provided on page 1 of Exhibit JRW-12. The

company is requesting a capital structure from investor sources consisting of 0.66% short-term debt, 45.10% long debt, 0.34% preferred stock, and 53.90% common equity. The Company uses short-term debt, long-term debt and preferred stock cost rates of 4.51%, 6.42%, and an equity cost rate of 11.60%.

Q. WHAT ISSUES DO YOU HAVE WITH THE COMPANY'S COST OF CAPITAL POSITION?

A. Yes. I have issues with the Company's capital structure, short-term and long-term debt cost rates, and most significantly, the equity cost rate. The debt cost rates were previously discussed. I will focus below on the capital structure issue and Dr. Vander Weide's equity cost rate of 11.6%.

A. <u>Capital Structure</u>

Q. WHY IS YOUR RECOMMENDED CAPITAL STRUCTURE MORE APPROPRIATE FOR PEF?

A. As I previously noted, my recommended capital structure is more appropriate for three reasons: (1) PEF's requested capital structure ratios do not reflect the actual capitalization of PEF or Progress Energy; (2) PEF's requested capital structure ratios do not reflect the capitalization of electric utility companies; and (3) PEF's requested capital structure is not based on the company book figures but reflects a number of adjustments, most notably imputed equity. My capital structure much more accurately reflects the Company's capital structure as viewed by investors.

Q. DID YOU USE A BALANCED APPROACH IN ARRIVING AT YOUR PROPOSED CAPITAL STRUCTURE FOR PEF?

A. Yes. My recommended capital structure, which includes a common equity ratio of 50%, is based on the Company's projected year-end capital structures for the years 2009 and 2010. These figures include an equity capital infusion from Progress Energy. Had I used the 13-month average capital structure figures for PEF, my capital structure would have included a lower common equity ratio due to the timing of the proposed equity capital infusion. In addition, had I used the Company's proposed capital structure figures and eliminated the $711 million in imputed equity associated with the PPAs, my capital structure would have included a lower common equity ratio as well. Therefore, in my opinion, my recommended capital structure which includes a common equity ratio of 50.0% is very fair, especially given the much lower common equity ratios in the capital structures of electric utility companies.

Q. PLEASE REVIEW THE COMPANY'S ADJUSTED CAPITAL STRUCTURE THAT INCLUDES IMPUTED EQUITY.

A. The Company's requested capital structure includes $711 million in imputed equity to account for the Company's PPAs. The $711 million is computed by multiplying a risk factor of 25% to the present value of the Company's capacity contracts. In computing credit rating metrics, S&P applies such a risk factor ranging from 0% to 100% which is intended to reflect the risk of recovery of the PPA payments. However, S&P does not indicate how the risk factor that ranges from 0% to 100% is determined. Given a recovery mechanism for PPA payments, the financial condition of an electric utility company in Florida is not impaired by entering into these contracts. Hence, providing incremental revenues through a higher equity ratio and a higher overall rate of return is

unnecessary and would result in an unwarranted revenue benefit to the utility. I have identified several flaws in the adjustment.

Risk Factor

Given the methodology for imputing debt from PPAs, the risk factor is extremely important. PEF has presumed that a risk factor of 25% is appropriate for the Company. However, S&P does not indicate how the risk factor that ranges from 0% to 100% is determined. Hence, the S&P risk factor for imputing debt is not well defined and cannot be assessed in this situation. Given the Commission's support for the collection of long-term contractual payments, the risk of non-recovery appears to be extremely low (perhaps even zero percent). Hence, a risk factor as high as 25% seems out of line. But, given the lack of guidance from S&P, it is impossible to properly assess the risk factor in this situation.

In addition, as opposed to S&P, Moody's appears to recognize some of the benefits of PPAs and looks at them in a more positive manner. For example, Moody's states:[19]

> "If a utility enters into a PPA for the purpose of providing an assured supply and there is reasonable assurance that regulators will allow the costs to be recovered in regulated rates, Moody's may view the PPA as being most akin to an operating cost. In this circumstance, there most likely will be no imputed adjustment to the obligations of the utility."

In other words, under this scenario Moody's would rate the risk factor at 0% and there would be no imputed debt.

[19] Moody's Rating Methodology: Global Regulated Electric Utilities, March 2005, page 10.

S&P Adjustments are Not GAAP Accounting

Even if debt were imputed by S&P from a PPA (assuming a risk factor greater than 0%), no changes would be made to the company's GAAP financial statements. Hence, investors would not see the impact of S&P's adjustment. In addition, the Company does not incur a liability on its GAAP-based financial statements for the PPAs. Furthermore, given a regulatory-mandated recovery method for the payments, investors should be indifferent to a utility entering into a PPA.

From a Regulatory Perspective, PPA Payments are Unlike Debt

In a regulatory setting, a utility is given the 'opportunity to earn' its cost of debt as well as its overall cost of capital through the ratemaking process. Given the many uncertainties associated with revenues and expenses between rate cases, there is no guarantee that the overall cost of debt can be earned. However, with long-term PPAs, the timely and certain recovery of fixed payments is assured. That is, PPA costs do not feature the uncertainty associated with the 'opportunity to earn' as do debt payments. In sum, given S&P's lack of guidance on the risk factor, the Commission's support for the collection of payments for PPAs, the notion that these are not GAAP adjustments that are not recorded as liabilities on the books of the company, and the fact that, from a regulatory perspective, PPA payments are unlike debt, the PPA adjustment to the Company's capital structure is inappropriate.

B. Equity Cost Rate

Q. PLEASE REVIEW DR. VANDER WEIDE'S EQUITY COST RATE APPROACHES.

A. Dr. Vander Weide uses a proxy group of twenty-four electric companies and employs

DCF, RP, and CAPM equity cost rate approaches.

Q. PLEASE SUMMARIZE DR. VANDER WEIDE'S EQUITY COST RATE RESULTS.

A. Dr. Vander Weide's equity cost rate estimates for PEF are summarized in Panel A of page 2 of Exhibit JRW-12. Based on these figures, he concludes that the appropriate equity cost rate for his group is 11.5%. He then makes a leverage adjustment to the equity cost rate to reflect the market value capital structures of his proxy group. This adjustment adds 104 BPs to his equity cost rate. As a result, his recommended equity cost rate for PEF is 12.54%.

Q. PLEASE DISCUSS YOUR ISSUES WITH DR. VANDER WEIDE'S REQUESTED EQUITY COST RATE.

A. Dr. Vander Weide's requested return on common equity is too high primarily due to: (1) the full-year adjustment to the dividend yield in his DCF approach; (2) an inflated growth rate in his DCF approach; (3) excessive equity risk premiums in his RP and CAPM approaches; (4) unwarranted flotation cost adjustments to his equity cost rate results; and (5) an erroneous leverage adjustment based on the market value capital structures of his proxy group.

1. DCF Approach

Q. PLEASE SUMMARIZE DR. VANDER WEIDE'S DCF ESTIMATES.

A. On pages 26-38 of his testimony and his Exhibit No. ___(JVW-1), Dr. Vander Weide develops an equity cost rate by applying a DCF model to his group of electric utility companies. In the traditional DCF approach, the equity cost rate is the sum of the

dividend yield and expected growth. Dr. Vander Weide makes adjustments to the dividend yield to reflect the quarterly payment of dividends and an ex-dividend adjustment to the stock price. Dr. Vander Weide uses one measure of DCF expected growth - the projected EPS growth rate forecasts from Wall Street analysts as provided by IBES. Dr. Vander Weide's DCF results are provided in Panel B of page 2 of Exhibit JRW-12. Based on these figures, Dr. Vander Weide claims that the DCF equity cost rate for the Vander Weide Proxy Group is 12.3%.

Q. BEFORE DETAILING YOUR ISSUES WITH DR. VANDREWEIDE'S DCF ANALYSIS, PLEASE EXPRESS YOUR CONCERNS WITH DR. VANDER WEIDE'S PROXY GROUP AS WELL AS MARKET VALUE WEIGHTING OF HIS EQUITY COST RATE RESUTLS.

A. Even though I have used Dr. Vander Weide's group as a secondary proxy group, there are some issues with this group and how Dr. Vander Weide calculates his equity cost rate results. First, the group has several companies that receive a low percentage of revenues from regulated electric operations. These include Dominion (43%), SCANA (44%), and Vectren (22%). Second, the group's average operating revenue ($9,590.4 million) is more than twice that of PEF. This latter issue is compounded by the fact that Dr. Vander Weide weights his DCF and CAPM results by the market capitalization for each of the companies in his proxy group. As a result, he gives the greatest weight to the companies that are significantly larger than PEF.

DCF Dividend Yield Adjustment

Q. PLEASE DISCUSS THE ADJUSTMENT TO THE DIVIDEND YIELD TO REFLECT THE QUARTERLY PAYMENT OF DIVIDENDS.

A. In Exhibit No. __ (JVW-10), Appendix 2 of his testimony, Dr. Vander Weide discusses the adjustments he makes to his dividend yields. This includes an adjustment to reflect the time value of money. The quarterly timing adjustment is in error and results in an overstated equity cost rate. First, as above, the appropriate dividend yield adjustment for growth in the DCF model is the expected dividend for the next quarter multiplied by four. The quarterly adjustment procedure is inconsistent with this approach.

Second, Dr. Vander Weide's approach presumes that investors require additional compensation during the coming year because their dividends are paid out quarterly instead of being paid all in a lump sum. Therefore, he compounds each dividend to the end of the year using the long-term growth rate as the compounding factor. The error in this logic and approach is that the investor receives the money from each quarterly dividend and has the option to reinvest it as he or she chooses. This reinvestment generates its own compounding, but it is outside of the dividend payments of the issuing company. Dr. Vander Weide's approach serves to duplicate this compounding process, thereby inflating the return to the investor. Finally, the notion that an adjustment is required to reflect the quarterly timing issue is refuted in a study by Richard Bower of Dartmouth College. Bower acknowledges the timing issue and downward bias addressed by Dr. Vander Weide. However, he demonstrates

that this does not result in a biased required rate of return. He provides the following assessment:[20]

> ... authors are correct when they say that the conventional cost of equity calculation is a downward-biased estimate of the market discount rate. They are not correct, however, in concluding that it has a bias as a measure of required return. As a measure of required return, the conventional cost of equity calculation (K*), ignoring quarterly compounding and even without adjustment for fractional periods, serves very well.

He also makes the following observation on the issue:

> Too many rate cases have come and gone, and too many utilities have survived and sustained market prices above book, to make downward bias in the conventional calculation of required return a likely reality.

DCF Growth Rate

Q. PLEASE REVIEW DR. VANDER WEIDE'S DCF GROWTH RATE.

A. Dr. Vander Weide uses the projected EPS growth rate forecasts of Wall Street analysts as compiled by IBES in estimating as his DCF growth rate. His market-value weighted average for the group is 7.3%.

Q. PLEASE DISCUSS THE HISTORICAL AND PROJECTED GROWTH OF DR. VANDER WEIDE'S GROUP AS REPORTED BY *VALUE LINE.*

A. As previously discussed, pages 4 and 5 of Exhibit JRW-10 shows the historic and projected growth rate for Dr. Vander Weide's proxy group as reported by *Value Line*. The historical growth rates, as shown in Panel B of page 3, are highly variable. The

[20] See Richard Bower, The N-Stage Discount Model and Required Return: A Comment," *Financial Review* (February 1992), pp 141-9.

projected rates are in Panel B of page 4, and they indicate projected growth in the 4.0% to 5.5% range for EPS, DPS, and BVPS. This is well below Dr. Vander Weide's unsupportable projected growth of 7.3% for these companies.

Q. GIVEN THAT DR. VANDER WEIDE'S HISTORICAL AND PROJECTED GROWTH RATE MEASURES DO NOT SUPPORT HIS 7.3% DCF GROWTH RATE FOR THE GROUP, HOW DO YOU BELIEVE HE ARRIVES AT THE 7.3% FIGURE?

A. Dr. Vander Weide has relied exclusively on the EPS growth rate forecasts of Wall Street analysts. This is an error. It is well-known that the EPS growth rate forecasts of Wall Street securities analysts are overly optimistic and upwardly biased. Hence, using these projected EPS growth rates as a DCF growth rate will provide an overstated equity cost rate.

Q. PLEASE REVIEW THE BIAS IN ANALYSTS' GROWTH RATE FORECASTS.

A. Analysts' growth rate forecasts are collected and published by Zack's, First Call, I/B/E/S, and Reuters. These services retrieve and compile EPS forecasts from Wall Street analysts. These analysts come from both the sell side (Merrill Lynch, Paine Webber) and the buy side (Prudential Insurance, Fidelity). The problem with using these forecasts to estimate a DCF growth rate is that, as noted above, the objectivity of Wall Street research has been challenged, and many have argued that analysts' EPS forecasts are overly optimistic and biased upwards. To evaluate the accuracy of analysts' EPS forecasts, I have compared actual 3-5 year EPS growth rates with forecasted EPS growth rates on a quarterly basis over the past 20 years for all companies covered by the I/B/E/S data base. In Panel A of page 1 of Exhibit JRW-13, I show the average

analysts' forecasted 3-5 year EPS growth rate with the average actual 3-5 year EPS growth rate for the past twenty years.

The following example shows how the results can be interpreted. For the 3-5 year period prior to the first quarter of 1999, analysts had projected an EPS growth rate of 15.13%, but companies only generated an average annual EPS growth rate over the 3-5 years of 9.37%. This projected EPS growth rate figure represented the average projected growth rate for over 1,510 companies, with an average of 4.88 analysts' forecasts per company. For the entire twenty-year period of the study, for each quarter there were on average 5.60 analysts' EPS projections for 1,281 companies. Overall, my findings indicate that forecast errors for long-term estimates are predominantly positive, which indicates an upward bias in growth rate estimates. The mean and median forecast errors over the observation period are 143.06% and 75.08%, respectively. The forecast errors are negative for only eleven of the eighty quarterly time periods: five consecutive quarters starting at the end of 1995 and six consecutive quarters starting in 2006. As shown in the figure below, the quarters with negative forecast errors were for the 3-5 year periods following earnings declines associated with the 1991 and 2001 economic recessions in the U.S. Thus, there is evidence of a persistent upward bias in long-term EPS growth forecasts.

The average 3-5 year EPS growth rate projections for all companies provided in the I/B/E/S database on a quarterly basis from 1988 to 2007 are shown in Panel B of page 1 of Exhibit JRW-13. In this graph, no comparison to actual EPS growth rates is made, and hence, there is no follow-up period. Therefore, since companies are not lost from the sample due to a lack of follow-up EPS data, these results are for a larger

sample of firms. Analysts' forecasts for EPS growth were higher for this larger sample of firms, with a more pronounced run-up and then decline around the stock market peak in 2000. The average projected growth rate hovered in the 14.5%-17.5% range until 1995 and then increased dramatically over the next five years to 23.3% in the fourth quarter of the year 2000. Forecasted EPS growth has since declined to the 15.0% range.

Q. WHAT IMPACT HAS RECENT REGULATORY DEVELOPMENTS HAD ON ANALYSTS' EPS GROWTH RATE FORECASTS?

A. Analysts' EPS growth rate forecasts have subsided somewhat since the stock market peak of 2000. In addition, the apparent conflict of interest within investment firms with investment banking and analysts' operations was addressed in the Global Analysts Research Settlements ("GARS"). GARS, as agreed upon on April 23, 2003, between the SEC, NASD, NYSE and ten of the largest U.S. investment firms, includes a number of regulations that were introduced to prevent investment bankers from pressuring analysts to provide favorable projections. Nonetheless, despite the new regulations, analysts' EPS growth rate forecasts have not significantly changed and continue to be overly-optimistic. Analysts' long-term EPS growth rate forecasts before and after GARS, are about two times the level of historic GDP growth. Furthermore, historic growth rates in GDP and S&P 500 EPS have been in the 7% range.

Finally, these observations are supported by a *Wall Street Journal* article entitled "Analysts Still Coming Up Rosy – Over-Optimism on Growth Rates is Rampant – and the Estimates Help to Buoy the Market's Valuation." The following quote provides

insight into the continuing bias in analysts' forecasts:

> Hope springs eternal, says Mark Donovan, who manages Boston Partners Large Cap Value Fund. "You would have thought that, given what happened in the last three years, people would have given up the ghost. But in large measure they have not."
>
> These overly optimistic growth estimates also show that, even with all the regulatory focus on too-bullish analysts allegedly influenced by their firms' investment-banking relationships, a lot of things haven't changed: Research remains rosy and many believe it always will.[21]

Q. IS THE BIAS IN ANALYSTS' GROWTH RATE FORECASTS GENERALLY KNOWN IN THE MARKETS?

A. Yes. Page 2 of Exhibit JRW-13 provides a recent article published in the *Wall Street Journal* that discusses the upward bias in analysts' EPS growth rate forecasts.

Q. ARE ANALYSTS' EPS GROWTH RATE FORECASTS LIKEWISE UPWARDLY BIASED FOR ELECTRIC UTILITY COMPANIES?

A. Yes. To evaluate whether analysts' EPS growth rate forecasts are upwardly biased for electric utility companies, I conducted a study similar to the one described above using a group of electric utility companies. The results are shown on page 3 of Exhibit JRW-13. The projected EPS growth rates have declined from about six percent in the 1990s to about five percent in the 2000s. As shown, the achieved EPS growth rates have been volatile. Overall, the upward bias in EPS growth rate projections is not as pronounced for electric utility companies as it is for all companies. Over the entire period, the average quarterly 3-5 year projected and actual EPS growth rates are 4.59% and 2.90%, respectively. These results are consistent with the results for companies in

[21] Ken Brown, "Analysts Still Coming Up Rosy – Over-Optimism on Growth Rates is Rampant – and the Estimates Help to Buoy the Market's Valuation." *Wall Street Journal*, (January 27, 2003), p. C1.

general -- analysts' projected EPS growth rate forecasts are upwardly-biased for electric utility companies.

Q. DR. VANDER WEIDE HAS DEFENDED THE USE OF ANALYSTS' EPS FORECASTS IN HIS DCF MODEL BY CITING A STUDY HE PUBLISHED WITH DR. WILLARD CARLETON. PLEASE DISCUSS DR. VANDER WEIDE'S STUDY.

A. Dr. Vander Weide cites the study on pages 32-3 of his testimony. In the study, Dr. Vander Weide performs a linear regression of a company's stock price to earnings ratio (P/E) on the dividend yield payout ratio (D/E), alternative measures of growth (g), and three measures of risk (beta, covariance, r-squared, and the standard deviation of analysts' growth rate projections). He performed the study for three one-year periods – 1981-1982, and 1983 – and used a sample of approximately 65 companies. His results indicated that regressions measuring growth as analysts' forecasted EPS growth were more statistically significant that those using various historic measures of growth. Consequently, he concluded that analysts' growth rates are superior measures of expected growth.

Q. PLEASE CRITIQUE DR. VANDER WEIDE'S STUDY.

A. Before highlighting the errors in the study, it is important to note that the study was published twenty years ago, used a sample of only sixty five companies, and evaluated a three-year time period (1981-83) that was over twenty-five years ago. Since that time, many more exhaustive studies have been performed using significantly larger data bases and, from these studies, much has been learned about Wall Street analysts

and their stock recommendations and earnings forecasts. Nonetheless, there are several errors that invalidate the results of the study.

Q. PLEASE DESCRIBE THE ERRORS IN DR. VANDER WEIDE'S STUDY.

A. The primary error in the study is that his regression model is misspecified. As a result, he cannot conclude whether one growth rate measure is better than the other. The misspecification results from the fact that Dr. Vander Weide did not actually employ a modified version of the DCF model. Instead, he used a "linear approximation." He used the approximation so that he did not have to measure k, investors' required return, directly, but instead he used some proxy variables for risk. The error in this approach is there can be an interaction between growth (g) and investors' required return (k) which could lead him to conclude that one growth rate measure is superior to others. Furthermore, due to this problem, analysts' EPS forecasts could be upwardly biased and still appear to provide better measures of expected growth.

There are other errors in the study as well that further invalidate the results. Dr. Vander Weide does not use both historic and analysts' projections growth rate measures in the same regression to assess if both historic and forecasts should be used together to measure expected growth. In addition, he did not perform any tests to determine if the difference between historic and projected growth measures is statistically significant. Without such tests, he cannot make any conclusions about the superiority of one measure versus the other.

Q. DO YOU HAVE ANY OTHER THOUGHTS ON DR. VANDER WEIDE'S DCF GROWTH RATE?

A. Yes. In the DCF model, investors are presumed to be forecasting and discounting future dividends per share. *Value Line's* mean projected dividend growth rate for Dr. Vander Weide's proxy group is only 4.2%. He gave no weight to this growth rate indicator, which is especially significant *since the relevant growth variable in the DCF model is dividends.*

Q. FINALLY, PLEASE ASSESS WHETHER DR. VANDER WEIDE'S DCF EQUITY COST RATE IS REALISTIC.

A. Simply stated, Dr. Vander Weide's DCF equity cost rate of 12.3% is not realistic. As shown in the calculations below, a current risk-free rate of 4.5%, an average proxy group beta of 0.73, and an equity cost rate of 12.3%, the implied expected market return is 15.2%.

$$K = (R_f) + ß * [E(R_m) - (R_f)]$$
$$12.3\% = 4.5\% + 0.73 * [E(R_m) - 4.5\%]$$
$$E(R_m) = 15.2\%$$

An expected market return of 15.2% is simply not realistic and well beyond expectations. The historic annual compounded annual return on the U.S. stock market is 9.6% according to Ibbotson Associates. An expected market return of 15.2% indicates that investors would expect a long-term annual stock market return that is more than 50% higher than it has been in the past. There are no logical economic arguments to suggest that the stock market in the U.S. would provide such a higher rate of return in the future than it has in the past. As such, Dr. Vander Weide's DCF equity cost rate of 12.3% is

unrealistic.

Flotation Costs

Q. PLEASE DISCUSS DR. VANDER WEIDE'S ADJUSTMENT FOR FLOTATION COSTS.

A. Dr. Vander Weide claims that an upward adjustment to the equity cost rate is necessary for flotation costs. This adjustment factor is erroneous for several reasons. First, the Company has not identified any actual flotation costs for the Company. Therefore, the Company is requesting annual revenues in the form of a higher return on equity for flotation costs that have not been identified. Second, it is commonly argued that a flotation cost adjustment (such as that used by the Company) is necessary to prevent the dilution of the existing shareholders. In this case, a flotation cost adjustment is justified by reference to bonds and the manner in which issuance costs are recovered by including the amortization of bond flotation costs in annual financing costs. However, this is incorrect for several reasons:

(1) If an equity flotation cost adjustment is similar to a debt flotation cost adjustment, the fact that the market-to-book ratios for electric utility companies are over 1.0X actually suggests that there should be a flotation cost reduction (and not increase) to the equity cost rate. This is because when (a) a bond is issued at a price in excess of face or book value, and (b) the difference between market price and the book value is greater than the flotation or issuance costs, the cost of that debt is lower than the coupon rate of the debt. The amount by which market values of electric utility companies are in excess of book values

is much greater than flotation costs. Hence, if common stock flotation costs were exactly like bond flotation costs, and one was making an explicit flotation cost adjustment to the cost of common equity, the adjustment would be downward;

(2) If a flotation cost adjustment is needed to prevent dilution of existing stockholders' investment, then the reduction of the book value of stockholder investment associated with flotation costs can occur only when a company's stock is selling at a market price at/or below its book value. As noted above, electric utility companies are selling at market prices well in excess of book value. Hence, when new shares are sold, existing shareholders realize an increase in the book value per share of their investment, not a decrease;

(3) Flotation costs consist primarily of the underwriting spread or fee and not out-of-pocket expenses. On a per share basis, the underwriting spread is the difference between the price the investment banker receives from investors and the price the investment banker pays to the company. Hence, these are not expenses that must be recovered through the regulatory process. Furthermore, the underwriting spread is known to the investors who are buying the new issue of stock, who are well aware of the difference between the price they are paying to buy the stock and the price that the Company is receiving. The offering price which they pay is what matters when investors decide to buy a stock based on its expected return and risk prospects. Therefore, the company is not entitled to an adjustment to the allowed return to account for those costs; and

(4) Flotation costs, in the form of the underwriting spread, are a form of a transaction cost in the market. They represent the difference between the price paid by investors and the amount received by the issuing company. Whereas the Company believes that it should be compensated for these transactions costs, they have not accounted for other market transaction costs in determining a cost of equity for the Company. Most notably, brokerage fees that investors pay when they buy shares in the open market are another market transaction cost. Brokerage fees increase the effective stock price paid by investors to buy shares. If the Company had included these brokerage fees or transaction costs in their DCF analysis, the higher effective stock prices paid for stocks would lead to lower dividend yields and equity cost rates. This would result in a downward adjustment to their DCF equity cost rate.

2. Risk Premium ("RP") Approach

Q. PLEASE REVIEW DR. VANDER WEIDE'S RP ANALYSIS.

A. Dr. Vander Weide develops an equity cost rate using expected (ex ante) and a historical RP models. Dr. Vander Weide's RP results are provided in Panels C and D of page 2 of Exhibit JRW-12. In his expected RP approach, Dr. Vander Weide computes an expected stock return by applying the DCF model to the S&P utilities and the S&P 500 and uses the EPS growth rate forecasts of Wall Street analysts as his growth rate. He then subtracts the yield on 'A' rated utility bonds. In his historic RP model, Dr. Vander Weide computes a historical risk premium as the difference in the arithmetic mean stock and bond returns. The stock returns are computed for different time periods for

several different indexes, including S&P and Moody's electric utility indexes as well as the S&P 500.

Q. WHAT ARE THE ERRORS IN DR. VANDER WEIDE'S RP ANALYSES?

A. The errors in Dr. Vander Weide's RP equity cost rate approaches include: (1) an inflated base interest rate; (2) an excessive risk premium which is based on the historical relationship between stock and bond returns; and (3) the inclusion of flotation costs. The flotation cost issue has already been addressed. The other two issues are discussed below.

Q. PLEASE DISCUSS THE BASE YIELD OF DR. VANDER WEIDE'S RISK PREMIUM ANALYSIS.

A. The base yield in Dr. Vander Weide's RP analysis is the projected yield on 'A' rated utility bonds. There are two issues with his projected 6.33% 'A' rated utility bond yield. First, the yield is above current market rates. As shown on Page 1 of Exhibit JRW-3, the current yield on long-term, 'A' rated public utility bonds is below 6.0%. Second, Vander Weide's base yield is erroneous and inflates the required return on equity in two ways. First, long-term bonds are subject to interest rate risk, a risk which does not affect common stockholders since dividend payments (unlike bond interest payments) are not fixed but tend to increase over time. Second, the base yield in Dr. Vander Weide's risk premium study is subject to credit risk since it is not default risk-free like an obligation of the U.S. Treasury. As a result, its yield-to-maturity includes a premium for default risk and therefore is above its expected return. Hence using such a bond's yield-to-maturity as a base yield results in an overstatement of investors' return expectations.

Q. DR. VANDER WEIDE EMPLOYS A DCF-BASED EX ANTE RISK PREMIUM APPROACH. PLEASE DISCUSS THE ERRORS IN THIS APPROACH.

A. Dr. Vander Weide computes a DCF-based equity risk premium. Dr. Vander Weide estimates an expected return using the DCF model and subtracts a concurrent measure of interest rates. The expected return is computed for utilities using the DCF model with analysts' EPS growth rate forecasts for the growth rate. Then Dr. Vander Weide employs 'A' rated utility yields as a measure of interest rates.

The primary error in this approach is the DCF-based or ex ante risk premium. This ex ante risk premium uses of the EPS growth rate forecasts of Wall Street analysts as the one and only measure of growth in the DCF model. This issue was addressed above. In short, as I discuss and demonstrate above, analysts' EPS growth rate forecasts are upwardly biased estimates of actual EPS growth for companies in general as well as for electric utilities.

Q. PLEASE REVIEW DR. VANDER WEIDE'S EX POST OR HISTORIC RP STUDY.

A. Dr. Vander Weide performs an ex-post or historical RP study that appears in Exhibit__(JVW-3) and Exhibit__(JVW-4). This study involves an assessment of the historical differences between S&P Public Utility Index and the S&P 500 stock returns and public utility bond returns over various time periods between the years 1928-2007. From the results of his study, he concludes that an appropriate risk premium is 4.90%.

Q. PLEASE ADDRESS THE ISSUES INVOLVED IN USING HISTORICAL STOCK AND BOND RETURNS TO COMPUTE A FORWARD-LOOKING OR

EX ANTE RISK PREMIUM.

A. Using the historical relationship between stock and bond returns to measure an ex ante equity risk premium is erroneous and, especially in this case, overstates the true market equity risk premium. The equity risk premium is based on expectations of the future and when past market conditions vary significantly from the present, historic data does not provide a realistic or accurate barometer of expectations of the future. Using historical returns to measure the ex ante equity risk premium ignores current market conditions and masks the change in the risk and return relationship between stocks and bonds. This change suggests that the equity risk premium has declined.

Q. PLEASE DISCUSS THE PROBLEMS WITH USING HISTORIC STOCK AND BOND RETURNS TO ESTIMATE AN EQUITY RISK PREMIUM.

A. There are a number of flaws in using historic returns over long time periods to estimate expected equity risk premiums. These issues include:

(A) Biased historical bond returns;

(B) The arithmetic versus the geometric mean return;

(C) The large error in measuring the equity risk premium using historical returns;

(D) Unattainable and biased historical stock returns;

(E) Company survivorship bias;

(F) The "Peso Problem" - U.S. stock market survivorship bias;

(G) Market conditions today are significantly different than the past; and

(H) Changes in risk and return in the markets.

These issues will be addressed in order.

Biased Historical Bond Returns

Q. HOW ARE HISTORICAL BOND RETURNS BIASED?

A. An essential assumption of these studies is that over long periods of time investors' expectations are realized. However, the experienced returns of bondholders in the past violate this critical assumption. Historic bond returns are biased downward as a measure of expectancy because of capital losses suffered by bondholders in the past. As such, risk premiums derived from this data are biased upwards.

The Arithmetic versus the Geometric Mean Return

Q. PLEASE DISCUSS THE ISSUE RELATING TO THE USE OF THE ARITHMETIC VERSUS THE GEOMETRIC MEAN RETURNS IN THE IBBOTSON METHODOLOGY.

A. The measure of investment return has a significant effect on the interpretation of the risk premium results. When analyzing a single security price series over time (i.e., a time series), the best measure of investment performance is the geometric mean return. Using the arithmetic mean overstates the return experienced by investors. In a study entitled "Risk and Return on Equity: The Use and Misuse of Historical Estimates," Carleton and Lakonishok make the following observation: "The geometric mean measures the changes in wealth over more than one period on a buy and hold (with dividends invested) strategy."[22] Since Dr. Vander Weide's study covers more than one period (and he assumes that dividends are reinvested), he should be employing the geometric mean and not the arithmetic mean.

[22] Willard T. Carleton and Josef Lakonishok, "Risk and Return on Equity: The Use and Misuse of Historical Estimates," *Financial Analysts Journal* (January-February, 1985), pp. 38-47.

Q. PLEASE PROVIDE AN EXAMPLE DEMONSTRATING THE PROBLEM WITH USING THE ARITHMETIC MEAN RETURN.

A. To demonstrate the upward bias of the arithmetic mean, consider the following example. Assume that you have a stock (that pays no dividend) that is selling for $100 today, increases to $200 in one year, and then falls back to $100 in two years. The table below shows the prices and returns.

Time Period	Stock Price	Annual Return
0	$100	
1	$200	100%
2	$100	-50%

The arithmetic mean return is simply (100% + (-50%))/2 = 25% per year. The geometric mean return is $((2 * .50)^{(1/2)}) - 1 = 0\%$ per year. Therefore, the arithmetic mean return suggests that your stock has appreciated at an annual rate of 25%, while the geometric mean return indicates an annual return of 0%. Since after two years, your stock is still only worth $100, the geometric mean return is the appropriate return measure. For this reason, when stock returns and earnings growth rates are reported in the financial press, they are generally reported using the geometric mean. This is because of the upward bias of the arithmetic mean. As further evidence of the appropriate mean return measure, the U.S. Securities and Exchange Commission requires equity mutual funds to report historic return performance using geometric mean and not arithmetic mean returns.[23] Therefore, Dr. Vander Weide's arithmetic mean return measures are biased and should be disregarded.

The Error in Measuring Equity Risk Premiums with Historic Data

[23] U.S. Securities and Exchange Commission, Form N-1A.

Q. PLEASE DISCUSS THE ERROR IN MEASURING THE EQUITY RISK PREMIUM USING HISTORICAL STOCK AND BOND RETURNS.

A. Measuring the equity risk premium using historical stock and bond return is subject to a substantial forecasting error. For example, the long-term equity risk premium of 6.5% has a standard deviation of 20.6%. This may be interpreted in the following way with respect to the historical distribution of the long-term equity risk premium using a standard normal distribution and a 95%, +/- two standard deviation confidence interval: We can say, with a 95% degree of confidence, that the true equity risk premium is between -34.7% and +47.7%. As such, the historical equity risk premium is measured with a substantial degree of error.

Unattainable and Biased Historic Stock Returns

Q. YOU NOTE THAT HISTORIC STOCK RETURNS ARE BIASED USING THE IBBOTSON METHODOLOGY. PLEASE ELABORATE.

A. Returns developed using Ibbotson's methodology are computed on stock indexes and therefore (1) cannot be reflective of expectations because these returns are unattainable to investors and (2) produce biased results. This methodology assumes: (a) monthly portfolio rebalancing and (b) reinvestment of interest and dividends. Monthly portfolio rebalancing presumes that investors rebalance their portfolios at the end of each month in order to have an equal dollar amount invested in each security at the beginning of each month. The assumption generates high transaction costs and thereby renders these

returns unattainable to investors. In addition an academic study demonstrates that the monthly portfolio rebalancing assumption produces biased estimates of stock returns.[24] Transaction costs themselves provide another bias in historic versus expected returns. In the past, the observed stock returns were not the realized returns of investors due to the much higher transaction costs of previous decades. These higher transaction costs are reflected through the higher commissions on stock trades and the lack of low cost mutual funds like index funds.

Company Survivorship Bias

Q. HOW DOES COMPANY SURVIVORSHIP BIAS AFFECT DR. VANDER WEIDE'S HISTORIC EQUITY RISK PREMIUM?

A. Using historic data to estimate an equity risk premium suffers from company survivorship bias. Company survivorship bias results when using returns from indexes like the S&P 500. The S&P 500 includes only companies that have survived. The fact that returns of firms that did not perform well were dropped from these indexes is not reflected. Therefore, these stock returns are upwardly biased because they only reflect the returns from more successful companies.

The "Peso Problem" - U.S. Stock Market Survivorship Bias

Q. WHAT IS THE "PESO PROBLEM," AND HOW DOES IT RELATE TO SURVIVORSHIP BIAS IN U. S. STOCK MARKET RETURNS?

[24] See Richard Roll, "On Computing Mean Returns and the Small Firm Premium," *Journal of Financial Economics* (1983), pp. 371-86.

A. Dr. Vander Weide's use of historic return data also suffers from the so-called "Peso Problem," which is also known as U.S. stock market survivorship bias. The "peso problem" issue was first highlighted by the Nobel laureate, Milton Friedman, and gets its name from conditions related to the Mexican peso market in the early 1970s. This issue involves the fact that past stock market returns were higher than were expected at the time because despite war, depression, and other social, political, and economic events, the U.S. economy survived and did not suffer hyperinflation, invasion, and/or the calamities of other countries. As such, highly improbable events, which may or may not occur in the future, are factored into stock prices, leading to seemingly low valuations. Higher than expected stock returns are then earned when these events do not subsequently occur. Therefore, the "peso problem" indicates that historic stock returns are overstated as measures of expected returns because the U.S. markets have not experienced the disruptions of other major markets around the world.

Market Conditions Today are Significantly Different than in the Past

Q. FROM AN EQUITY RISK PREMIUM PERSPECTIVE, PLEASE DISCUSS HOW MARKET CONDITIONS ARE DIFFERENT TODAY.

A. The equity risk premium is based on expectations of the future. When past market conditions vary significantly from the present, historic data does not provide a realistic or accurate barometer of expectations of the future. As noted previously, stock valuations (as measured by the price-earnings ratio) are relatively high and interest rates are relatively low, on a historic basis. Therefore, given the high stock prices and low interest rates, expected returns are likely to be lower on a going forward basis.

Q. PLEASE DISCUSS THE NOTION THAT HISTORIC EQUITY RISK PREMIUM STUDIES DO NOT REFLECT THE CHANGE IN RISK AND RETURN IN TODAY'S FINANCIAL MARKETS.

A. The historic equity risk premium methodology is unrealistic in that it makes the explicit assumption that risk premiums do not change over time based on market conditions such as inflation, interest rates, and expected economic growth. Furthermore, using historic returns to measure the equity risk premium masks the dramatic change in the risk and return relationship between stocks and bonds. The nature of the change, as I will discuss below, is that bonds have increased in risk relative to stocks. This change suggests that the equity risk premium has declined in recent years.

Page 1 of Exhibit JRW-14 provides the yields on long-term U.S. Treasury bonds from 1926 to 2008. One very obvious observation from this graph is that interest rates increased dramatically from the mid-1960s until the early 1980s and have since returned to their 1960 levels. The annual market risk premiums for the 1926 to 2008 period are provided on page 2 of Exhibit JRW-14. The annual market risk premium is defined as the return on common stock minus the return on long-term U.S. Treasury Bonds. There is considerable variability in this series and a clear decline in recent decades. The high was 54% in 1933, and the low was -62% in 2008. Evidence of a change in the relative riskiness of bonds and stocks is provided on page 3 of Exhibit JRW-14, which plots the standard deviation of monthly stock and bond returns since 1930. The plot shows that, whereas stock returns were much more volatile than bond returns from the 1930s to the 1970s, bond returns became more variable than stock

returns during the 1980s. In recent years stocks and bonds have become much more similar in terms of volatility, but stocks are still a little more volatile. The decrease in the volatility of stocks relative to bonds over time can be attributed to several stock related factors: (1) the impact of technology on productivity and the new economy; (2) the role of information in the economy and markets; (3) better cost and risk management by businesses; (4) several bond related factors; (5) deregulation of the financial system; (6) inflation fears and interest rates; and (7) the increase in the use of debt financing. Further evidence of the greater relative riskiness of bonds is shown on page 4 of Exhibit JRW-14, which plots real interest rates (the nominal interest rate minus inflation) from 1926 to 2008. Real rates have been well above historic norms during the past 10-15 years. These high real interest rates reflect the fact that investors view bonds as riskier investments.

The net effect of the change in risk and return has been a significant decrease in the return premium that stock investors require over bond yields. In short, the equity or market risk premium has declined in recent years. This decline has been discovered in studies by leading academic scholars and investment firms, and has been acknowledged by government regulators. As such, using a historic equity risk premium analysis is simply outdated and not reflective of current investor expectations and investment fundamentals.

Q. DO YOU HAVE ANY OTHER THOUGHTS ON THE USE OF HISTORICAL RETURN DATA TO ESTIMATE AN EQUITY RISK PREMIUM?

A. Yes. Jay Ritter, a Professor of Finance at the University of Florida, identified the use of historical stock and bond return data to estimate a forward-looking equity risk

premium as one of the "Biggest Mistakes" taught by the finance profession.[25] His argument is based on the theory behind the equity risk premium, the excessive results produced by historical returns, and the previously-discussed errors such as survivorship bias in historical data.

3. CAPM Approach

Q. PLEASE DISCUSS DR. VANDER WEIDE'S CAPM.

A. Dr. Vander Weide's CAPM results are provided in Panels E and F of page 2 of Exhibit JRW-12. Based on these figures, Dr. Vander Weide estimates an equity cost rate for PEF of 1.73% using his historical CAPM and 11.85% using his expected CAPM approach.

Q. WHAT ARE THE ERRORS IN DR. VANDER WEIDE'S CAPM ANALYSIS?

A. There are three flaws with Dr. Vander Weide's CAPM analysis: (1) his risk-free rate of 4.87%; (2) the historic and expected equity risk premiums; and (3) the flotation cost adjustment.

Q. PLEASE DISCUSS DR. VANDER WEIDE'S RISK-FREE RATE OF INTEREST IN HIS CAPM.

A. Dr. Vander Weide uses a risk-free rate of interest of 4.87% in his CAPM. As previously discussed, the current rate on long-term Treasury bonds is 4.30%.

Q. PLEASE ADDRESS THE PROBLEMS WITH DR. VANDER WEIDE'S HISTORIC CAPM.

[25] Jay Ritter, "The Biggest Mistakes We Teach," *Journal of Financial Research* (Summer 2002).

A. Dr. Vander Weide historical CAPM uses an equity risk premium of 7.1% which is based on the difference between the arithmetic mean stock and bond income returns over the 1926-2007 period. The errors associated with computing an expected equity risk premium using historical stock and bond returns were addressed at length earlier in my testimony. In short, there are a myriad of empirical problems, which result in historical market returns producing inflated estimates of expected risk premiums. Among the errors are the U.S. stock market survivorship bias (the 'Peso Problem'), the company survivorship bias (only successful companies survive – poor companies do not survive), and unattainable return bias (the Ibbotson procedure presumes monthly portfolio rebalancing). In addition, in this case, Dr. Vander Weide has compounded the error by using the bond income return and not the actual bond return. By omitting the price change component of the bond return, he has magnified the historic risk premium by not matching the returns on stock with the actual returns on bonds.

Q. PLEASE REVIEW THE ERRORS IN DR. VANDER WEIDE'S EQUITY OR MARKET RISK PREMIUM IN HIS EXPECTED CAPM APPROACH.

A. Dr. Vander Weide develops an expected equity risk premium for his CAPM of 8.83% in Exhibit__JVW-7) by applying the DCF model to the S&P 500. Dr. Vander Weide estimates an expected market return of 13.7% using a dividend yield of 3.4% and an expected DCF growth rate of 10.3. There are two errors with this approach. First, the published dividend yield for the S&P 500 is only 2.35% (see page 10 of Exhibit JRW-11). Hence, Dr. Vander Weide's calculated expected return is inflated and incorrect. Second, and most significantly, the expected DCF growth rate is the projected 5-year EPS growth rate for the companies in the S&P 500 as reported by IBES. As explained below, this produces an overstated expected market return and equity risk premium.

Q. WHAT EVIDENCE CAN YOU PROVIDE THAT DR. VANDER WEIDE'S S&P 500 GROWTH RATE IS ERRONEOUS?

A. Dr. Vander Weide's expected S&P 500 growth rate of 10.3% represents the forecasted 5-year EPS growth rates of Wall Street analysts. The error with this approach is that the EPS growth rate forecasts of Wall Street securities analysts are overly optimistic and upwardly biased. This was detailed at length earlier in my testimony. Further, a long-term growth rate of 10.3% is inconsistent with economic and earnings growth in the U.S. The long-term economic and earnings growth rate in the U.S. has only been about 7%. I have performed a study of the growth in nominal GDP, S&P 500 stock price appreciation, and S&P 500 EPS and DPS growth since 1960. The results are provided on page 1 of Exhibit JRW-15, and a summary is given in the table below.

GNP, S&P 500 Stock Price, EPS, and DPS Growth 1960-Present

Nominal GDP	**7.20%**
S&P 500 Stock Price Appreciation	**5.88%**
S&P 500 EPS	**6.56%**
S&P 500 DPS	**5.68%**
Average	**6.33%**

These results offer compelling evidence that a long-run growth rate of in the 5% to 7% range is appropriate for companies in the U.S. By comparison, Dr. Vander Weide's long-run growth rate projection of 10.3% is overstated. These estimates suggest that companies in the U.S. would be expected to: (1) increase their growth rate of EPS by over 50% in the future and (2) maintain that growth indefinitely in an economy that is expected to grow at about one half of his projected growth rates. Such a scenario is not economically feasible and is directly attributable to Dr. Vander Weide's use of the upwardly biased EPS growth rate forecasts of Wall Street analysts.

Q. PLEASE PROVIDE A SUMMARY ASSESSMENT OF DR. VANDER WEIDE'S CAPM EQUITY RISK PREMIUMS.

A. Dr. Vander Weide's equity risk premiums are inflated due to errors and bias in his studies. In addition, they do not reflect the equity risk premiums that are used in the real worlds of finance. Investment banks, consulting firms, and CFOs use the equity risk premium concept every day in making financing, investment, and valuation decisions. On this issue, the opinions of CFOs and financial forecasters are especially relevant. CFOs deal with capital markets on an ongoing basis since they must continually assess and evaluate capital costs for their companies. They are well aware of the historical equity risk premium results as published by Ibbotson Associates as well as Wall Street analysts' projections. Nonetheless, the CFOs in the June 2009 *CFO Magazine* – Duke University Survey of over 500 CFOs shows an expected return on the S&P 500 of 7.31% over the next ten years. In addition, the financial forecasters in the February 2009 Federal Reserve Bank of Philadelphia survey expect an annual market return of 6.6% over the next ten years. As such, the appropriate equity cost rate for a public utility should be in the 9.0%-10.0% range and not in the 11.0%-12.0% range.

3. Leverage Adjustment

Leverage Adjustment

Q. PLEASE REVIEW DR. VANDER WEIDE'S LEVERAGE ADJUSTMENT.

A. Dr. Vander Weide has included a leverage adjustment of 104 basis points to his estimated equity cost rates estimated using the DCF, RP, and CAPM approaches. Dr. Vander Weide claims that this is needed since (1) market values are greater than book values for utilities and (2) the overall rate of return is applied to a book value capitalization in the

ratemaking process. This adjustment is unwarranted for the following reasons:

(1) The market value of a firm's equity exceeds the book value of equity when the firm is expected to earn more on the book value of investment than investors require. This relationship is described very succinctly in the Harvard Business School case study which I quote earlier in my testimony. As such, the reason that market values exceed book values is that the company is earning a return on equity in excess of its cost of equity;

(2) Despite Dr. Vander Weide's contention that this represents a leverage adjustment, there is no change in leverage. There is no need for a leverage adjustment since there is no change in leverage. The Company's financial statements and fixed financial obligations remain the same;

(3) Financial publications and investment firms report capitalizations on a book value and not a market value basis; and

(4) Dr. Vander Weide has presented his leverage adjustment in many rate cases before many regulatory commissions. In response to OPC ROG 4-163, Dr. Vander Weide indicated that he: (1) has testified in over 400 cases before regulatory commissions; and (2) had been recommending the leverage adjustment to his cost of equity since the early 1990s. However, he could not identify any proceeding in which he has testified in which the regulatory commission had adopted his leverage adjustment.

Q. PLEASE EXPLAIN WHY YOU BELIEVE THAT REGULATORY COMMISSIONS HAVE REJECTED DR. VANDER WEIDE'S LEVERAGE ADJUSTMENT?

A I believe that Dr. Vander Weide's leverage adjustment has been rejected by regulatory commissions because it increases the ROEs for utilities that have high returns on common equity and decreases the ROEs for utilities that have low returns on common equity.

In the graphs presented in Exhibit JRW-6, I have demonstrated that there is a strong positive relationship between expected returns on common equity and market-to-book ratios for public utilities. Hence, in the context of Dr. Vander Weide's leverage adjustment, this means that: (1) for a utility with a relatively high market-to-book ratio (e.g., 2.5) and ROE (e.g., 12.0%), the leverage adjustment will increase the estimated equity cost rate, while (2) for a utility with a relatively low market-to-book ratio (e.g., 0.5) and ROE (e.g., 5.0%), the leverage adjustment will decrease the estimated equity cost rate. Therefore, the adjustment will result in even higher market-to-book ratios for utilities with relatively high ROEs and even lower market-to-book ratios for utilities with relatively low ROEs.

Q. DOES THIS CONCLUDE YOUR ANSWER TESTIMONY?

A. Yes.

BY MR. REHWINKEL:

Q. Dr. Woolridge, have you also prepared exhibits to your testimony consisting of an Appendix A and Schedules JRW-1 through JRW-15?

A. Yes.

Q. Other than the changes that are shown in the errata to your testimony, do you have any changes or corrections to make to your exhibits?

A. No.

MR. REHWINKEL: Mr. Chairman, these exhibits have been identified as Hearing Exhibits 153 through 168.

CHAIRMAN CARTER: Thank you.

(Exhibit Numbers 153 through 168 marked for identification.)

COMMISSIONER EDGAR: Mr. Chairman, would it be helpful to maybe mark the errata sheet as an exhibit?

CHAIRMAN CARTER: We could do that. Let's give it a number.

MR. WALLS: No objection.

CHAIRMAN CARTER: I beg your pardon?

MR. WALLS: I said no objection.

CHAIRMAN CARTER: Okay.

MR. REHWINKEL: We just heard the objection part.

COMMISSIONER EDGAR: I was trying to be helpful.

CHAIRMAN CARTER: Let's call it Woolridge Errata Sheet.

MR. REHWINKEL: Okay. And that number would be?

CHAIRMAN CARTER: 303.

(Exhibit Number 303 marked for identification and admitted into evidence.)

BY MR. REHWINKEL:

Q. Dr. Woolridge, do you have a summary of your testimony to give, mindful of the five-minute limitation of the Commission?

A. Yes, I do.

Q. Okay. Could you give that at this time?

A. Yes. I forgot the lights.

Q. The Chairman can explain that to you.

CHAIRMAN CARTER: This is my big chance. It is five minutes. You will have three minutes during the green light. When the amber light comes on, you will have two minutes left. When the red light comes on, you have 30 seconds.

THE WITNESS: Okay. Thank you.

CHAIRMAN CARTER: Thank you.

MR. REHWINKEL: Thank you, Mr. Chairman.

Dr. Woolridge literally got off the plane, got in a car and came to the building and got on the stand. I appreciate your help.

CHAIRMAN CARTER: Dr. Woolridge, I won't say anything about Florida State and Penn State today, okay? Welcome to Tallahassee.

THE WITNESS: It was a bad day for both State College and Tallahassee. I apologize for the delay. The mistake was flying through the city of brotherly love.

Anyhow, I have five issues, or five issues as I view them in terms of the cost of capital position between Progress, PEF, and OPC. Up front I would like to say I don't think the proxy group issue is a big issue. If you look at the risk analysis, I think Dr. Vander Weide's risk profile is a little higher. He believes it's a little lower. So I don't believe the proxy group is a big issue.

There are five issues. Number one is capital structure. I proposed a capital structure with a common equity ratio of 50 percent from investor-provided capital. PEF has provided -- has proposed a common equity ratio of 53.90 percent from investor-provided capital, but that includes 700 million in imputed equity from the -- associated with the PPAs.

Now, if you take that 711 million out, their actual common equity ratio is 47.51 percent. As I discussed in my testimony, there were a number of issues of imputing equity. It is not part of a GAAP financial statement. But my equity -- common equity ratio and capital structure appears very fair to the company, given it's -- my common equity ratio is higher than the company's actual common equity ratio, and it is much higher than the average common equity ratio for electric utilities.

The second issue involves the short-term and long-term debt cost rates. I propose a short-term debt cost rate of 3.06 percent. The company has proposed 5.25 percent. The key issue here is the implied three-month LIBOR rate. The company has used an implied three-month LIBOR rate of 2.66 percent. I have used the average for 2009 of 1.0 percent. If we look at the current three-month LIBOR rate it is 0.30 percent. So adjusting it for current rates would mean the short-term debt cost rate would be much lower.

I have used a long-term debt cost rate of 6.05 percent. The company has used 6.42 percent. The difference is they have included a 2010 financing with a debt cost rate of 6.98 percent. The current rates on those bonds would be about 5-1/2 percent. So those

rates are -- the 6.98 percent is well above current rates.

The other three issues deal with the equity cost rate. First of all, the company has proposed 12.54 percent. I have proposed 9.75 percent. The third issue, the first issue with that deals with the DCF analysis. Dr. Vander Weide has used exclusively the analyst forecasted earnings per share growth rates for his proxy group. As I demonstrate in my testimony, it is well known that the five-year projected growth rates of analysts are upwardly biased. In fact, historically on average they have forecasted growth rates of about 15 percent for companies and companies actually have achieved about half of that in terms of actual growth.

Now, Dr. Vander Weide cites certain studies to support saying that these are not upwardly biased, but if you look at these studies -- in fact, if you look at the results for these studies, these are for quarter to quarter earning changes, not for the five-year growth rates that we both use in our analysis.

Issue Number 4 involves a risk-free rate and equity risk premiums. I have used a risk-free rate of 4.5 percent. Dr. Vander Weide has used 4.87 percent. The current rates are actually about 4.0 percent, so interest rates are clearly well below the interest rates

that we both used.

For an equity risk premium, I have used 4.37 percent. Dr. Vander Weide used a historic rate of 7.1 and a projected rate of 8.83. On the historic rate, I have pointed out there are numerous empirical errors with using historic risk premiums, and I would point to J. Reiter (phonetic), who is a professor at the University of Florida, who says using historic returns is one of the biggest mistakes we teach in finance to compute an equity risk premium. Dr. Vander Weide's forward-looking equity risk premium uses the growth rates of Wall Street analysts to establish the growth rate for his DCF for the S&P 500. And as I have discussed, that is upwardly biased.

The last issue involves the adjustments. Dr. Vander Weide makes an adjustment for flotation costs, which I argue is not necessary. He also makes an adjustment for leverage. Now, the leverage adjustment adds 104 basis points to his figure, and it is based on the market value to book value difference of the capital structures, and I argued that is incorrect.

In the end, the biggest issue involves the number 12.54 percent. That number is on Page 72. I provide an analysis that implies that that implies an overall stock market return of 15 percent in the future.

Historically, the stock return has provided 10 percent return, so using 12.54 percent is implying that the stock market in the future will have a 50 percent higher return than the stock market of the past.

MR. REHWINKEL: He used every second of it. I'm proud of him. Dr. Woolridge is tendered for cross-examination.

CHAIRMAN CARTER: Thank you.

Ms. Bradley.

MS. BRADLEY: No questions.

CHAIRMAN CARTER: Mr. Moyle.

MR. MOYLE: I just have one.

CHAIRMAN CARTER: You're recognized.

CROSS EXAMINATION

BY MR. MOYLE:

Q. In your professional judgment, what is the appropriate ROE for PEF?

A. In my recommendation the appropriate ROE is 9.75 percent.

MR. MOYLE: That's all. Thank you.

CHAIRMAN CARTER: Mr. LaVia.

MR. LaVIA: No questions.

CHAIRMAN CARTER: Mr. Walls.

MR. WALLS: I have questions.

CROSS EXAMINATION

BY MR. WALLS:

Q. Dr. Woolridge, it is nice to meet you in person. I met you over the phone for the deposition.

A. Yes. Nice meeting you.

Q. Let me start with some basic principles. You would agree with me that a regulated public utility is entitled to an opportunity to earn a fair and reasonable rate of return on its invested capital, correct?

A. Yes.

Q. And you would also agree that a fair and reasonable rate of return should be sufficient to assure confidence in the financial integrity of the utility so as to maintain credit and attract capital, correct?

A. Yes.

Q. And you would agree that the purpose of establishing a fair and reasonable rate of return is to fairly compensate investors for the risk they have assumed, right?

A. Yes.

Q. And this is a rather long question that I asked you in the deposition, but it is taken from the Bluefield decision, so bear with me. You would also agree with me that a public utility is entitled to such rates as will permit it to earn a return on the value of the property it employs for the convenience of the

public equal to that generally being made at the same time in the same general part of the country on investments and other business undertakings attended by corresponding risks and uncertainties, right?

A. Yes.

Q. Okay. And you would agree that the utilities in your proxy group are supposed to reflect the risk of investing in Progress Energy Florida, correct?

A. Yes.

Q. And your proxy group is included on the first panel of Exhibit JRW-4 to your direct testimony, right?

A. Yes.

Q. Would you agree with me that your utility proxy group excludes every Florida investor-owned utility except for Progress Energy Florida?

A. Yes. I mean, my primary group does. I mean, I have also analyzed the results of Dr. Vander Weide's proxy group, which does include TECO and FPL. So, yes, my primary proxy group does. I have also analyzed the return requirements on Dr. Vander Weide's group.

Q. But you told me that your utility proxy group is supposed to reflect the risk of investing in Progress Energy Florida, correct?

A. Yes.

Q. Okay. And would you also agree with me that

if you exclude Progress Energy, Inc. from your proxy group, you have included no electric utility that is actually operating in Florida in your proxy?

A. Yes.

Q. And your proxy group includes no operating utilities in Georgia, either, does it?

A. That is correct. Dr. Vander Weide's includes Southern Company.

Q. But yours does not, right?

A. No.

Q. And your proxy utility group, excluding Progress Energy, includes no operating utilities in South Carolina, correct?

A. That is correct.

Q. And your proxy utility group, excluding Progress Energy, includes no operating utilities in North Carolina, correct?

A. That is correct.

Q. But you did manage to include one from Vermont, right?

A. Yes, Central Vermont was included in my proxy group.

Q. And would you agree with me that Central Vermont Public Service Corporation has a net plant investment of $340 million?

A. Yes.

Q. Are you aware that PEF's steam generator project alone cost $300 million?

A. No, not that particular investment.

Q. Are you aware that PEF just completed the Bartow combined cycle power plant at a cost of about $800 million, or more than twice the net plant investment of Central Vermont?

A. I mean that specific investment, no.

Q. And you would agree with me that Central Vermont is basically less than one-tenth the size of PEF, right?

A. Yes, it is smaller. I mean, it met my criteria that I looked at which was the percent of revenues and the total revenues, and that is why I -- that is how I put together my proxy group. I also analyzed the risk parameters, as well, the norms, and that sort of thing, to make sure they were in line with Progress Energy.

Q. Well, you say at Page 15, Lines 12 to 13, if you could go there.

A. Yes.

Q. And I guess by starting back on the question that begins on Line 5 on Page 15 through 18, that is where you describe your criteria for selecting proxy

groups, correct?

A. Yes.

Q. And at Lines 12 to 13 you say that one of the criteria for selecting your utility proxy group is that the electric utility has an investment grade bond rating by Moody's and/or Standard and Poor's, correct?

A. Yes.

Q. And you would agree with me that Central Vermont based on your exhibit is not rated by Moody's, correct?

A. That is correct.

MR. WALLS: I would like to pass out an exhibit.

CHAIRMAN CARTER: Do you need a number?

MR. WALLS: Yes.

CHAIRMAN CARTER: We are at 304. Just FYI, everyone, the errata sheet is already entered into evidence, so we don't have to deal with that at the end of this witness, Mr. Rehwinkel.

Mr. Rehwinkel, you got that, right?

MR. REHWINKEL: Sorry. What was the question?

CHAIRMAN CARTER: I was just giving everyone a heads up and letting them know that the errata sheet is entered into evidence already as Exhibit 303.

MR. REHWINKEL: Okay. Thank you.

CHAIRMAN CARTER: So we don't have to deal with it at the end of this witness' testimony, okay?

MR. REHWINKEL: Thank you.

CHAIRMAN CARTER: So this will be 304. Short title?

MR. WALLS: S&P Rating for Central Vermont Public Service Corp.

CHAIRMAN CARTER: Okay.

(Exhibit Number 304 marked for identification.)

BY MR. WALLS:

Q. Dr. Woolridge, do you recognize this exhibit as the S&P bond rating for Central Vermont Public Service Corporation that you provided me as a late-filed deposition exhibit?

A. Yes.

Q. Do you see the S&P bond rating there for the organization Central Vermont Public Service Corporation?

A. Well, that is not a bond rating, that is a credit rating. If you look at -- I have looked at the S&P bond ratings, which are below, and they have two issues there which are rated, and they are rated BBB+.

Q. What is the credit rating for the company itself, Dr. Woolridge?

A. The credit rating for the company is BBB -- I

mean, BB+, but, again, my criteria dealt with the bond rating, not the credit rating.

Q. Would you agree with me that the credit rating is below investment grade?

A. Oh, yes. But, again, I used the bond rating, not the credit rating.

Q. In your Exhibit JRW-4, Dr. Woolridge, you also reference that you relied on as data sources AUS Utility Reports and Value Line Investment Surveys, do you see that?

A. Yes.

MR. WALLS: I would like to pass out another exhibit.

CHAIRMAN CARTER: For the record, that will be 305. Mr. Walls, a short title?

MR. WALLS: Value Line for Woolridge Proxy Group Companies.

(Exhibit Number 305 marked for identification.)

MR. MOYLE: While that is being passed out, if I could just ask counsel for Progress, the exhibit that was just handed out, the 304, the Central Vermont rating, I was trying to understand a date on that. Is it 7-24-09, which is at the bottom of the document?

MR. WALLS: Yes. This is a document that Dr.

Woolridge provided when I asked him for a late-filed exhibit on the S&P rating for Central Vermont Public Service Corporation.

MR. MOYLE: Thank you.

CHAIRMAN CARTER: Commissioner Skop.

COMMISSIONER SKOP: Thank you, Mr. Chairman. Just a point of clarification on Mr. Walls' question. In terms of the rating date, is it the date at the bottom, the 7/24/09, or would that be the rating date for the various credit ratings and the bond issuance that is in the rating date column?

CHAIRMAN CARTER: Dr. Woolridge?

COMMISSIONER SKOP: Yes.

THE WITNESS: Yes.

COMMISSIONER SKOP: I guess -- I guess with respect to the question that was just asked with respect to the date of the ratings, would that be the date at the bottom of which this was printed, or appeared to be printed, and to your response, would that be the respective rating dates for the credit rating as well as the bond issuances?

THE WITNESS: No, I'm sorry, Commissioner. The date, 7/24 was the date it was printed or downloaded. I think it was printed to a PDF file. The rating dates show that -- the fourth column over shows

the rating date, and that is the effective date of the new rating. In other words, that is when the rating was adjusted.

COMMISSIONER SKOP: Okay. Thank you.

CHAIRMAN CARTER: Thank you.

Mr. Walls.

BY MR. WALLS:

Q. Dr. Woolridge, do you have Exhibit Number 305?

A. Yes.

Q. Okay. And if you turn to the first page of that -- well, let's finish Central Vermont, which is the second page.

A. Yes.

Q. Do you see there in the business line underneath the -- about the middle of the page, where it says business in bold?

A. Yes.

Q. And says Central Vermont Public Service Corporation supplies electricity to 159,000 customers in a large portion of Vermont. Did I read that correctly?

A. Yes.

Q. Are you aware of how many customers Progress Energy Florida serves?

A. I believe the households is 1.6 million. I just remember from the website. I forget the exact

number.

Q. And the market cap on the Value Line for Central Vermont is indicated as $225 million, correct?

A. Yes.

Q. Let's back up to the first one, which is Elite, the Value Line for Elite, and this is another company in your proxy group, correct?

A. Yes.

Q. Do you see the same under business where it says Elite is the parent company of Minnesota Power which supplies electricity to 142,000 customers in northeastern Minnesota?

A. Yes.

Q. Did I read that accurately?

A. Yes.

Q. And Elite's market cap is 950 million?

A. Yes.

Q. And considered a small cap utility?

A. Yes.

Q. If we go to the next one in, Cleco Corporation, this is another utility in your proxy group, is that right?

A. Yes.

Q. Under business it says Cleco Corporation is a holding company for Cleco Power, which supplies

electricity to about 276,000 customers in central Louisiana. Did I read that accurately?

A. Yes.

Q. If you go down under the heading below that where it says Cleco Corporation's utility subsidiary has reached a settlement of its rate case with the staff of the Louisiana Commission. Do you see that?

A. Yes.

Q. And in the second sentence there it says, "The utility originally requested a rate hike of 250 million based on a 12.25 percent return on common equity ratio of 52 percent." Did I read that accurately?

A. Yes.

Q. The next Value Line is for IDACORP, Inc., and that is another utility in your proxy group, correct?

A. Yes.

Q. And under business it says IDACORP, Inc. is the holding company for Idaho Power Utility that owns 17 hydroelectric generation developments and partly owns three coal plants. Did I read that accurately?

A. Yes.

Q. And, in fact, would you agree with me that both Elite and IDACORP are hydroplant operators or owners?

A. Yes.

Q. The next one is for NSTAR, the Value Line for NSTAR. And do you see under business it says NSTAR is a holding company for NSTAR Electric, which distributes electricity to an area of 1,702 square miles in eastern Massachusetts, including Boston and 80 surrounding towns and utilities. Did I read that accurately?

A. Yes.

Q. In both NSTAR and UIL Holdings, the next company in this proxy group, both of those are transmission and distribution utilities, correct?

A. That is correct.

Q. And so they don't have generation, do they?

A. No, they do not.

Q. But Progress Energy Florida has generation, right?

A. Yes.

Q. And if we look at the NSTAR Value Line, do you see the bolded paragraph where it says earnings should advance steadily through 2012?

A. Yes.

Q. And it says thanks to a regulatory agreement that provides for annual base rate increases, parenthesis, another good feature of the regulatory plan is an allowed return on equity of 12.5 percent, close parenthesis. Do you see that?

A. Oh, yes, I see it. I don't know what all is involved in that and what the plan is, but I do see that 12.5 percent.

Q. Would you agree with me that operating nuclear power plants has more risk than operating other power plants?

A. Oh, yes. And, again, I took into consideration the risk by looking at the bond ratings and that sort of thing, just like Dr. Vander Weide did.

Q. Would you agree with me that building nuclear power plants would be perceived as having risk above that of building other generation power plants?

A. Yes, and I assume that has been taken into consideration by Standard and Poor's and others when they develop their bond ratings.

Q. At the time of your deposition you didn't remember how many of the utilities in your proxy group are currently operating nuclear power plants, right?

A. That's right.

Q. And other than Progress Energy, you would agree with me that you are not aware of any utility in your proxy utility group that is planning on building nuclear power plants, right?

A. That's correct.

Q. Now, I believe you concluded that an

appropriate equity cost rate for your proxy group and Dr. Vander Weide's proxy group is in the range of 7.6 percent to 10.5 percent, correct?

A. That's correct.

Q. And if you turn to Page 57, Lines 9 to 11 of your direct testimony. Do you see that?

A. Yes.

Q. It says, "Given these results, I conclude that the appropriate equity cost range for the two groups is in the 7.6 to 10.5 percent range," right?

A. Yes.

Q. And you go on to say that this wide range reflects the uncertainty and volatility in today's capital markets, correct?

A. Yes.

Q. And the wide range you are talking about is the 7.6 to 10.5 percent, right?

A. Oh, yes.

Q. And you also say at Page 57, Lines 11 through 13 of your direct testimony, that in recognition of this uncertainty and volatility, I believe that an equity cost rate in the upper end of this range is appropriate at this time, is that right?

A. That's correct.

Q. And, again, if we look back, the range you are

talking about is 7.6 to 10.5 percent, right?

A. Yes.

Q. And given the uncertainty and volatility in the capital markets, isn't it true that the true cost of equity in your analysis could be anywhere in that range, 7.6 percent to 10.5 percent?

A. Yes. I mean, I believe there is a wide range, and primarily related to, obviously, the estimate -- current estimates of the equity risk premium.

Q. Now, you say that you rely primarily on the DCF model, correct?

A. Yes.

Q. And you also claim that in your experience the Commission has traditionally relied on the DCF model, right?

A. Yes, I believe so.

Q. And your DCF model produced an equity cost rate of 10 percent, right?

A. Yes.

Q. And your DCF for Dr. Vander Weide's electric proxy group produced an equity cost rate of 10.5 percent, right?

A. Yes, because -- I mean, my analysis indicates that his group is a little riskier, if you look at the betas, if you look at the variability of the bond

ratings, so you would expect it to be a little bit higher.

Q. But both of these DCF calculations are higher than your recommended ROE of 9.75 percent, isn't that right?

A. Oh, yes. Again, the lower end of my range is somewhat lower, and it really depends -- it gets back to the uncertainty about trying to estimate the equity risk premium.

Q. Now, if you go to Page 30, Lines 23 through 24 of your testimony. Are you there?

A. Yes.

Q. You say that the cost to common equity cannot be determined precisely and must instead be estimated for market data and informed judgment, correct?

A. Yes.

Q. And you would agree that the tools you used, such as the DCF and the CAPM, are estimating tools and not precise calculations of the required cost of common equity, correct?

A. Yes.

Q. And so your estimates could be wrong because it is not an exact science, right?

A. Yes. I mean, it implies that and the use of informed judgment.

Q. Now, Dr. Woolridge, would you agree with me that investors have a choice in making investment decisions?

A. Yes.

Q. And you would agree with me that if investors are looking at utilities to invest in they also have a choice of which utilities to invest in, correct?

A. Yes.

Q. So if the investor has a choice among utilities, they are going to invest their dollars in the utility with the highest expected return relative to the risk, right?

A. Well, they are going to look at the expected return relative to the risk and given the fundamentals of the company and that sort of thing. Yes, it is all relative to the risk.

MR. WALLS: I have another exhibit for Dr. Woolridge.

CHAIRMAN CARTER: Number 306. Short title?

MR. WALLS: AUS Monthly Report, July 2009.

(Exhibit Number 306 marked for identification.)

CHAIRMAN CARTER: You may proceed.

BY MR. WALLS:

Q. Dr. Woolridge, what I have shown you has been

marked as Exhibit 306. This is the same exhibit that we marked as Exhibit 2 to your deposition, and it is what you relied on from AUS to prepare your panel and the information indicated on JRW-4, Panel A for your proxy group, correct?

A. Yes.

Q. Okay. And if we turn to the first page of this July 2009 AUS monthly report, it lists 23 electric companies. Do you see that?

A. Yes.

Q. And if we go over to Column 23, under the heading regulation it says allowed ROE, and that means the ROE that has been established by a regulatory commission which the utility has an opportunity to earn, correct?

A. Yes, that is correct.

Q. And of the 23 electric utility companies listed here, your recommended ROE of 9.75 percent would be the third lowest one, correct?

A. Yes, it is, but you have to look at the dates of some of those, as well. Some of them are rather stale and reflect market data from, you know, four or five years ago. So it is not necessarily the current market data. Those are some historic numbers, as well.

Q. But this is the report that you relied on to

prepare your Panel A electric proxy group on Exhibit JRW-4, right, this is your data?

A. Oh, yes, but this is not -- I didn't use these data because in some cases, again, these data are stale.

Q. Dr. Woolridge, as an investor looking at investing in an electric only utility, if the Commission established an OE of 9.75 percent as you recommend for PEF, at least according to this report that relied on, I would be able to invest my money in 21 other electric utility companies and have the opportunity to earn a higher return, correct?

A. Well, I don't know if I -- first of all, these are, again, authorized returns. Some of them are stale. If we look at the earned returns, we would see those numbers vary somewhat. But if u look at Progress Energy it is earning 9.7 percent. So my recommendation is above that. But, you are correct in that if you look at these historic numbers, some of these numbers are above it because it reflects data at a different market environment.

Q. But, again, when you say it is dated, at least as of July of 2009, this was the allowed ROE as you relied on in your report from AUS, correct?

A. I did not -- I did not rely on these -- the data column that you are pointing to, no.

Q. Do you have your deposition with you?

A. No.

MR. WALLS: Could he approach with the deposition?

BY MR. WALLS:

Q. Dr. Woolridge, I would like you to turn to Page 47, Lines 20 to 25. And there I ask you the following question and you gave me the following answer: But you would agree with me that when you say it is dated, at least as of July 2009, this was the allowed ROE as you relied on reported by AUS, correct? Answer: At the time, yes, for this group of utilities it was 10.75 percent. Did I read that accurately?

A. Oh, yes. I mean, that was the published data, but nowhere in my testimony have I used that column of data. That was my point.

Q. And for this group of utilities, that means that an investor in any one of these utilities would understand that the utility had an opportunity to earn up to this allowed ROE for each of these utilities, correct?

A. I don't understand your question.

Q. Okay. I will ask it again. For this group of utilities that are identified on the first page of this Exhibit 306, an investor in any one of these utilities

would understand that the utility had an opportunity to earn up to this allowed ROE for each of these utilities, correct?

A. Well, yes, but I would qualify that in the sense that, no, this was their authorized return on equity at the time. Some of those are four or five years old. Investors are going to look to see what type of return a company is earning as opposed to necessarily what they are allowed, especially when -- you know, there is a difference between authorized returns and earned returns and they are going to change over time. And there is going to be different factors driving whether a company is earning over or are underearning its authorized return on equity. But my point, again, is some of these are dated, so they may not fully reflect what investors expect to earn as opposed to what the company is authorized.

Q. Well, let's look at some of the data in your exhibit AUS. If I look at the electric companies, the average is 10.75 percent ROE, allowed ROE. That is higher than your 9.75 recommended for PEF, correct?

A. Yes.

Q. And if we turn to the next page for the combination of electric and gas companies, the average is 10.71 ROE, and that is higher than your recommended

9.75 for PEF, correct?

A. Yes. And, again, I will say many of these are dated authorizations that don't reflect today's market fundamentals.

Q. And if we turn to the next page for the natural gas distribution, transmission, and integrated natural gas companies, the average is 10.67 allowed ROE, and that is higher than your recommended ROE of 9.75 percent, correct?

A. Oh, yes. But, just for example, it includes Energen, 13.4 percent. It was an order date 06-02. Again, those are fundamentals that are much different that today's marketplace.

Q. And if you turn to the next page for telephone companies, the average allowed ROE is 11.79 percent, and that is higher than your recommended ROE for PEF of 9.75 percent, correct?

A. Yes.

Q. And if we turn to the next page for water companies.

A. Yes.

Q. The average is 9.91 allowed ROE, and that is higher than your recommended ROE for PEF of 9.75 percent, correct?

A. Yes.

Q. Let's turn to another part of your ROE determination at Page 37, Lines 13 to 15 of your testimony.

A. Yes.

Q. And there you say presumably investors use some combination of historical and/or projected growth rates for earnings and dividends per share and for internal or book value growth to assess long-term potential, correct?

A. Yes.

Q. And that is a correct statement of your opinion, right?

A. Yes.

Q. At Page 38, Lines 21 to 22. Are you there?

A. Yes.

Q. Okay. You say, "Internally generated growth is a function of the percentage of earnings retained within the firm (the earning retention rate), and the rate of return earned on those earnings (the return on equity). Did I read that accurately?

A. Yes.

Q. Of course, you agree with that statement, right?

A. Yes.

Q. Now, let's go to Page 4 of 6 of JRW-10, and

this is where you performed that calculation, correct?

A. Yes.

Q. And, again, Panel A is your electric proxy group, correct?

A. Yes.

Q. And you selected this proxy group as the proxy for Progress Energy Florida's risk, correct?

A. Yes.

Q. Now, as I understand what you are doing on Page 4 of 6 of JRW-10 is you are multiplying the number in the return on equity column under the heading Value Line sustainable growth --

A. Yes.

Q. -- times the number in the retention rate column under the heading Value Line sustainable growth to get the number in the final column titled sustainable growth under the heading Value Line sustainable growth, correct?

A. Yes.

Q. Okay. And the mean and median return on equity for your electric proxy group is 11.3 percent and 11 percent, correct?

A. Yes.

Q. And both of those values are higher than your recommended ROE of 9.75 percent, correct, for PEF?

A. Oh, yes. Yes, they are. And if you note there the number for Progress Energy is 9.5 percent, so my number is above that figure.

Q. But as an investor investing in electric utility stocks, I can look at your proxy group sheet here and see that I can invest in your proxy group and get a higher mean or median return than what you propose for Progress Energy Florida in this case, correct?

A. It is. And, again, some of these ROEs reflect nonregulated businesses and that sort of thing, as well. But, clearly, Progress Energy is reflecting something more in the line of 9.5 percent.

Q. And, Dr. Woolridge, you provided testimony in the Tampa Electric rate case on the cost of equity on November 26, 2008, correct?

A. Yes.

Q. And your recommended ROE for Tampa Electric was 9.75 percent, wasn't it?

A. Yes.

Q. And so your recommended ROE for TECO was 9.75 percent on November 26th, 2008, and now on August 10, 2009 you've recommended an ROE of 9.75 percent for PEF, correct?

A. Yes.

Q. I want to turn to OPC's proposals in this

case. If you would turn to Page 26, Lines 19 to 22 of your direct testimony. Are you there?

A. Yes.

Q. And you quote James McTaggert of Mericon Associates where he says, "Fundamentally, the value of a company is determined by the cash flow it generates over time for its owners, and the minimum acceptable rate of return required by capital investors." Did I read that accurately?

A. Yes.

Q. And you agree with that statement, don't you?

A. Yes.

Q. And you agree that Mr. McTaggert is talking about the fundamental value of a company to investors in that quote, right?

A. Yes.

Q. And that quote applies to all companies, including regulated public utilities, correct?

A. Yes.

Q. You are generally aware that your client, OPC, has proposed a $35 million rate reduction for Progress Energy Florida in this proceeding, right?

A. Yes.

Q. You agree that if OPC's proposal is accepted that there will be a reduction in the cash flows to

Progress Energy Florida, right?

A. I mean, I believe there will be, but I'm not -- I'm not certain of the exact amount. As part of that proposal I was providing the return on equity, and everything else kind of gets put together in terms of the revenue requirements and that sort of thing.

Q. But you did not look at the impact of that reduction in cash flows in your analysis, did you?

A. No, I did not.

Q. And you were also aware that Mr. Pous for OPC proposed $161 million to be taken out of book depreciation reserves and returned to customers over four years, correct?

A. Yes.

Q. But you did not take into account the impact of his proposal to take funds out of depreciation book reserves by a $161 million a year for four years in coming up with your ROE proposal of 9.75 percent, correct?

MR. REHWINKEL: I want to object to the use of the term funds. It assumes facts not in evidence and mischaracterizes testimony.

CHAIRMAN CARTER: Mr. Walls, to the objection.

MR. WALLS: I don't know how I am mischaracterizing Mr. Pous' proposal to take

$161 million a year out of depreciation reserves by my question.

MR. REHWINKEL: Well, I think funds has a specific -- a specific meaning in accounting, and we are talking about a theoretical reserve. There is not a funded reserve.

MR. WALLS: If OPC is going to withdraw their proposal to take $161 million out of book depreciation reserves, I can withdraw my question.

MR. REHWINKEL: Mr. Chairman, it is the use of the word funds. There is not a bank account with funds in it.

CHAIRMAN CARTER: Just rephrase, Mr. Walls.

MR. WALLS: Okay.

BY MR. WALLS:

Q. Dr. Woolridge, you did not take into account the impact of Mr. Pous' proposal to return $161 million by lowering depreciation expense for each year for four years in coming up with your ROE of 9.75 percent, correct?

A. I did not specifically take that into account, no. I am aware that Mr. Lawton looked at some implications of that, but, no, that was not part of my consideration in arriving at 9.75 percent.

Q. Well, Mr. Pous testified here that he

discussed this proposal with you and Mr. Lawton, but do you recall when I asked you that question in your deposition if you discussed the proposal with him, you first said that you had not?

A. I said I don't remember. We had some conference calls. I wasn't sure who all was on the conference calls.

Q. And did they ask you to do anything to look at that proposal from a financial perspective?

A. No. I believe Mr. Lawton was doing that.

Q. And you have not looked at that proposal from a financial perspective on the impact on the company, correct?

A. No, I have not.

Q. But you agree that investors would perceive $161 million reduction in cash flow over four years, and that information would be built into the stock price, correct?

A. Oh, I believe that investors and specifically electric utility analysts follow these hearings, and they understand what the proposals are, and so they provide information to investors about what the implications of rate proceedings are. So I believe the stock price reflects what is going on in the rate proceeding.

Q. And when you came up with a recommendation of a 9.75 ROE for Progress Energy Florida, did you take into account the impact of a $35 million rate reduction as OPC proposes in this case for the test year, yes or no?

A. No, because, obviously, that was part of the output that I put into it, which was the 9.75 percent ROE.

MR. WALLS: I have no further questions.

CHAIRMAN CARTER: Thank you.

Staff.

MS. FLEMING: We have no questions.

CHAIRMAN CARTER: Commissioner Skop.

COMMISSIONER SKOP: Thank you, Mr. Chairman. Just one quick question, Dr. Woolridge. If you would go back to JRW-10, please. On Page 4 of 6 of that exhibit, please.

THE WITNESS: Yes.

COMMISSIONER SKOP: Okay. I guess the questions that Mr. Walls asked called into question your choice of your proxy group. Based on your responses to the questions, do you still feel that that is an appropriate proxy group that you used?

THE WITNESS: I mean going back and, again, reviewing when I started my summary statement, the proxy

group is not the big issue. There are much bigger issues than the proxy group. My proxy group, as I state, was based on revenues. You know, Progress is a mid size, so it includes -- I include both smaller companies and larger companies. And, again, I also analyzed the results for Dr. Vander Weide's proxy group. So I have used a broader group, as well.

But, I believe that, you know, some of the factors that he talked about -- when we look at the bond ratings and the risk parameters, we really pick those parameters up. I think, for example, a very significant number is that Progress Energy has a beta of 0.65, that is among the lowest of all the electric utilities. Obviously, that is a reflection of the risk of the company.

COMMISSIONER SKOP: Okay. Thank you. And then with respect to the proxy group, you mentioned that you used -- that Progress was mid cap, but you also used small cap companies within your proxy group. Why is that appropriate?

THE WITNESS: My selection criteria was trying to find a proxy group whose average size was about the size of PEF. And if you look on JRW-4, Page 1, the median size in terms of revenues of my proxy group is 5.8 billion, for PEF it is 4.4 billion. So I looked at

factors like operating revenue, percent electric revenue, that sort of thing in establishing a proxy group. In the end, again, I don't think one versus the other is a big issue, because I have done the risk analysis here in terms of bond ratings and they are rather similar.

COMMISSIONER SKOP: Okay. Just on -- that raised a different question. On JRW-4, Page 1 of 1, for your proxy group that you just mentioned, you indicated that operating revenue was a primary consideration in your selection of the proxy groups. Why, for IDACORP, which has an operating revenue of 975 million, and UIL Holdings, which has an operating revenue of almost 950 million, and also ALLETE, which has an operating revenue of 2 -- I mean, 792.5 million, in relation to Progress' total revenue, which is about $9.5 billion it looks like, why would those outlier companies, and also Central Vermont not be thrown out and there be more consistent uniformity around the operating revenue? I see a lot of small numbers there in relation to other companies that have comparable numbers.

THE WITNESS: Commissioner, I agree. And, again -- but I included companies like AEP, who has 14 billion in revenues, as well. I mean, again, I don't think the proxy group is the major issue here, but, you

know, you could select criteria and throw certain companies out. Now, if anything, the idea that smaller companies are riskier, so, you know, the idea would be by including those companies this is a riskier profile than, say, PEF.

But I agree, these are much smaller companies than PEF. But if you look at the average revenues for say Dr. Vander Weide, 10 billion are the median, so there is a lot of much bigger ones. But, again, I don't believe the proxy group is the critical issue here. And I agree, I could throw some of those out and the average or the median revenue would be somewhat larger than PEF.

COMMISSIONER SKOP: What, if anything, would you do differently in regards to selecting a proxy group if you were to do it again today?

THE WITNESS: I don't -- I mean, I was trying to find a proxy group of companies that had their median revenue close to the company. And you look at it there are not a lot of electric utilities. You look at the numbers there, PEF at 4.4 billion. I mean, you have Northeast and NSTAR, which are both obviously in the northeast, but they are the only ones that really have operating revenues that are really in the same vicinity of PEF.

And if you go down and look at Dr. Vander Weide's group, it includes Northeast, such as I do. It includes Pinnacle West, which Pinnacle West right now has some issues about their dividend supposedly. But you notice if you look at the whole group -- well, there is SCANA with 5 billion, but, again, only 44 percent of that is regulated electric revenue. So, I mean, PEF is kind of in a size range where there are not a lot of other electric utilities.

COMMISSIONER SKOP: Okay. And with respect to on that same page, looking at the median value for your proxy group, which, again, looks like to be subject to check, $5.873 billion in relation to the operating revenue for Progress, which is about $9.5 billion, versus the median value for Dr. Vander Weide's group, which is the median value, how do you relate those two where your median of your proxy group is approximately one-half of what Dr. Vander Weide's group is?

THE WITNESS: Well, I mean, obviously, I would put a restriction, but if you look at PEF, there is a block there with PEF and their revenue is 4.4 billion. Progress itself is a total of 9.5 billion.

COMMISSIONER SKOP: Okay. All right. And thank you for that clarification. That little one block kind of didn't jump off the page, but that's a problem

I'm having with my glasses. I need to see far away versus being able to see fine up front. So thank you for that clarification.

Going back to JRW-10, two final questions. I know that you mentioned that the choice of proxy group in your opinion is not really important, but I guess Mr. Walls had raised a concern in his question to you as to why your proxy group did not include any other Florida investor-owned utility or an investor-owned utility of a directly approximate sister state, for instance, like in Georgia, or Alabama, or something like that. Can you briefly elaborate or rebut why that is not an appropriate question?

THE WITNESS: Well, again, in the end you do -- the key issue is risk. My primary risk proxy variable is the bond ratings. And so as in terms of finding utilities that met size criteria, percent of regulated electric revenue, you know, the SCANAs of the world didn't come in because of a low percentage of regulated electric revenue. Southern Company didn't come in because of the size.

I did not specifically eliminate these companies for one reason or another. TECO has 63 percent of its revenues from regulated electric revenues. So by trying to find companies that are

relatively the same size and have a high percentage of revenues from -- that are regulated electric revenues, some of these other companies didn't make those screens.

COMMISSIONER SKOP: Okay.

THE WITNESS: So it was nothing purposefully done.

COMMISSIONER SKOP: Okay. And fair enough. Just two additional questions. I need you to go back to JRW-4, please, again.

THE WITNESS: Yes.

COMMISSIONER SKOP: Okay. Now, in your proxy group, I guess from inspection the lowest -- the company with the lowest operating revenue appears to be Central Vermont Public Utility Service Corp. Do you see that?

THE WITNESS: Yes.

COMMISSIONER SKOP: Okay. And that by far is, I guess, significantly lower than any of the other companies, would you agree with that?

THE WITNESS: Yes.

COMMISSIONER SKOP: Okay. Would it not be more appropriate given the alternate analysis that was done by Dr. Vander Weide to perhaps include a company like TECO that has operating revenue more representative of Progress in your proxy group?

THE WITNESS: I mean, I have also analyzed Dr.

Vander Weide's. Again, I don't think the proxy group is a big issue. The issue is obviously I was trying to find companies that had a high percentage of revenues from regulated electric operations. I mean, TECO is 63 percent. Vectren is primarily a gas company. It has 22 percent. So, again, trying to find primary electric utilities screened out some of those companies. But since I also included Dr. Vander Weide's group, I did consider those.

COMMISSIONER SKOP: Okay. All right. And just one final question on JRW-10, Page 4 of 6, please.

THE WITNESS: Yes.

COMMISSIONER SKOP: In your analysis for your proxy group with respect to return on equity under the far right column, Value Line sustainable growth, you identified a mean and a median percentage for your proxy group in relation to the return on equity that you have recommended for Progress. Can you explain briefly the significance of the mean and median of the proxy group and why those are somewhat higher than what you have recommended for Progress?

THE WITNESS: Well, the mean and median -- I mean, these are one indicator of growth. In other words, the idea is market prices reflect these fundamental data. And one of the indicators of growth

that I used was sustainable or internal growth. And to get there, you take their ROEs times their retention rates and we get a growth rate. The median is 4.8 percent for my group, the mean is 5.1 percent. The mean is above the median because there are some outliers on the upper end. For example, DPL has a sustainable growth rate of 9.8 percent. That is much higher than the others, and so I have both means and medians listed there.

COMMISSIONER SKOP: Would it not be important with respect to analysis performed and not only in relation to what you just stated in your response on the growth rate, but also on the proxy groups to eliminate outliers so that you have a more focused representation?

THE WITNESS: Well, one way to do that is to use the median. The median is a better major central tendency since it is an ordinal measure when you are looking at companies that have a large dispersion or a group that has a large dispersion.

COMMISSIONER SKOP: Okay. All right. Thank you.

CHAIRMAN CARTER: Thank you, Commissioner.

Commissioners, anything further from the bench?

Redirect.

MR. REHWINKEL: I have no questions on redirect.

CHAIRMAN CARTER: Exhibits. 153 through 168, Mr. Rehwinkel moves. Are there any objections?

MR. WALLS: No objection.

CHAIRMAN CARTER: Without objection, show it done.

(Exhibit Numbers 153 through 168 admitted into the record.)

CHAIRMAN CARTER: Now, let's go to the back pages.

Okay. Mr. Walls, Exhibit 304.

MR. WALLS: Yes. I would move 304.

CHAIRMAN CARTER: Any objections?

MR. REHWINKEL: No.

CHAIRMAN CARTER: Without objection, show it done.

(Exhibit Number 304 admitted into the record.)

CHAIRMAN CARTER: Exhibit 305.

MR. WALLS: I would move 305.

CHAIRMAN CARTER: Any objections?

MR. REHWINKEL: No.

CHAIRMAN CARTER: Without objection, show it done.

(Exhibit Number 305 admitted into the record.)

CHAIRMAN CARTER: Exhibit 306.

MR. WALLS: I would move 306.

CHAIRMAN CARTER: Any objections?

MR. REHWINKEL: No.

CHAIRMAN CARTER: Without objection, show it done.

(Exhibit Number 306 admitted into the record.)

CHAIRMAN CARTER: Do we have anything further for Dr. Woolridge?

MR. REHWINKEL: No, I would just ask that he be excused from the hearing.

CHAIRMAN CARTER: Dr. Woolridge, thank you for coming. Have a great day.

THE WITNESS: Thank you.

CHAIRMAN CARTER: You may be excused.

Okay. Staff, on our revised schedule, we have --

MS. FLEMING: I believe that since Mr. Pollock is not available until the afternoon, I believe we can continue with Mr. Joyner's rebuttal.

CHAIRMAN CARTER: Let me check with the parties and see if that's -- any objection from the parties if we proceed with Mr. Joyner? Okay. Let's roll.

Commissioner Skop, yes, sir.

COMMISSIONER SKOP: Do we have -- I don't think we have all of the intervenor parties, so I don't want to speak for Mr. Moyle, but is he available if he would have questions?

CHAIRMAN CARTER: Mr. Rehwinkel, we were planning to go with Mr. Pollock -- I mean, excuse me, Mr. Joyner.

MR. REHWINKEL: Yes, sir, I have questions for Mr. Joyner.

CHAIRMAN CARTER: Okay. Well, that will probably give us a chance to -- and I think Mr. Moyle will probably show up by then.

Okay. Mr. Burnett.

MR. BURNETT: Yes, sir. We would call Jackie Joyner.

JACKIE JOYNER, JR.

was recalled as a rebuttal witness on behalf of Progress Energy Florida, and having previously sworn, testified as follows:

DIRECT EXAMINATION

BY MR. BURNETT:

Q. Mr. Joyner, you realize you are still under oath, correct, sir?

A. Yes, sir.

Q. And you have your prefiled rebuttal testimony

with you?

A. I do.

Q. Do you have any corrections or changes to make to your rebuttal testimony?

A. No, sir, I do not.

Q. If I asked you the same questions in your rebuttal testimony today, would you give the same answers that are in that testimony?

A. Yes, sir, I would.

MR. BUTLER: Mr. Chair, no exhibits for this witness on rebuttal, and we request that Mr. Joyner's rebuttal testimony be entered into the record as if read today.

CHAIRMAN CARTER: The prefiled testimony of the witness will be inserted into the record as though read.

PROGRESS ENERGY FLORIDA

DOCKET NO. 090079-EI

Petition for Increase in Rates by Progress Energy Florida, Inc.

REBUTTAL TESTIMONY OF JACKIE JOYNER

August 31, 2009

Q. Please state your name and business address.

A. My name is Jackie Joyner. My business address is 299 First Avenue North, St. Petersburg, Florida 33701.

Q. By whom are you employed and in what capacity?

A. I am employed by Progress Energy Florida, Inc. ("PEF") as Vice President of Distribution.

Q. Have your duties and responsibilities remained the same since your testimony was last filed in this docket?

A. Yes.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to address certain assertions and conclusions made by the Office of Public Counsel ("OPC") witness Helmuth Schultz and Florida Industrial Power Users Group ("FIPUG") witness Martin

Marz in their direct testimony filed on August 10, 2009 in Docket No. 090079-EI.

Q. Are you sponsoring any exhibits to your rebuttal testimony?

A. No.

Q. Would you please summarize your testimony?

A. My testimony addresses the statements made by Mr. Schultz and Mr. Marz in reference to Distribution's 2010 Operation and Maintenance ("O&M") expenditures request. Mr. Schultz and Mr. Marz advance two relatively simple arguments that are easily dismissed as inaccurate when subjected to analytical scrutiny. First, Mr. Schultz alleges that PEF Distribution has a $7.7M variance in its O&M request that cannot be explained and should therefore be denied. My rebuttal testimony, however, shows that this alleged $7.7M variance is a product of Mr. Schultz's lack of understanding of supporting Minimum Filing Requirements ("MFR") and documentation rather than a true variance.

Next, Mr. Schultz and Mr. Marz both imply that PEF has "heavy loaded" its 2010 test year expenses for distribution by deferring storm hardening expenses until 2010. However, my rebuttal testimony shows that contrary to their assertions, PEF Distribution has actually lowered 2010 expenses through its prioritized vegetation management plan, a fact that neither of these witnesses apparently investigated prior to filing their testimony.

DISTRIBUTION O&M EXPENSES

Q. Mr. Schultz contends that PEF has a $7.7M O&M variance that PEF cannot explain or account for. Do you agree with Mr. Schultz's statement?

A. No.

Q. Please explain why you disagree.

A. Mr. Schultz's testimony suggests a lack of familiarity with the methodology behind the MFR Schedules. The MFR Schedules themselves were created by the Florida Public Service Commission and are used to establish PEF's 2010 Adjusted Test Year O&M of $144.9M. I will explain the breakdown of the $144.9M which, in turn, demonstrates that the alleged $7.7M gap cited by witness Schultz does not exist.

MFR C-6, Pages 69 and 71, represent the historical detail of our O&M expenditures broken down into nineteen separate and distinct FERC accounts (FERC's 580 – 598). Schedule C-6 is used to derive the "Base Year Adjusted O&M" found on MFR C-37 (Page 141, Column D). It's important to note that in the base year of 2006, PEF's actual O&M expenditures total $114.4M, which represents the sum of $66.3M (FERC 580 accounts on C-6, Page 69) and $48.1M (FERC 590 accounts on C-6, Page 71). The 2006 Base Year Adjusted O&M of $114.4M is multiplied by a compound multiplier of 1.1415 found on MFR C-40 (Page 147, Column H). The methodology for determining the compound multiplier was established by the Florida Public Service Commission and represents the

percentage change in PEF's average total customers and average CPI since 2006. Multiplying the 2006 Base Year Adjusted O&M of $114.4M by the compound multiplier of 1.1415 yields the 2010 Test Year Benchmark of $130.6M, which is reflected on MFR C-37 (Page 141, Column F). The variance between the 2010 Test Year Benchmark of $130.6M and the 2010 Adjusted Test Year O&M of $144.9M is $14.3M which is reconciled on MFR C-41 (Page 156, Lines 16-20).

MFR C-41, Pages 157-158, provide a detailed explanation for the variances associated with Vegetation Management, Environmental, Operational Cost Efficiencies & Re-organization, and FERC Account Reclassifications with respective amounts of $13.9M, $2.6M, $(6.3M), and $4.1M.[1] These variances equal $14.3M. Adding the $14.3M variance to the 2010 Test Year Benchmark of $130.6M yields the requested $144.9M Adjusted 2010 Test Year O&M amount. Thus, Mr. Schultz's assertion that PEF has an unexplained variance of $7.7M is simply incorrect as the

[1] In 2008, the TRIP program, which was recoverable via the Environmental Cost Recovery Clause ("ECRC"), came to a close. This shifted maintenance costs from ECRC recovery to base rates resulting in the additional increase of $2.6M to the Distribution O&M expenses in 2010.In addition, the FERC re-class from Transmission are costs that in 2006 were reflected in Transmission FERC accounts 566 and 556. These costs are now accounted for in Distribution FERC accounts 582 and 592, which reflects an increase of $4.1M.

exercise above shows and as Table 1 below demonstrates.

TABLE 1: BREAKDOWN OF DISTRIBUTION O&M FOR 2010

FERC 580	66.3		
FERC 590	48.1		
Base Year Adjusted O&M	114.4		
Compound Multiplier	x 1.1415		
Test Year Benchmark		130.6	
Vegetation Mgmt	13.9		
Environmental	2.6		
Op Efficiencies & Re-org	-6.3		
FERC Reclasses	4.1		
Variance from Benchmark		14.3	
Adjusted Test Year O&M			144.9

STORM HARDENING AND VEGETATION MANAGEMENT

Q. Mr. Marz claims that Storm Hardening initiatives were in place in 2006 and therefore should not cause an increase in costs to PEF's Storm Hardening and Vegetation Management costs. Do you agree?

A. No.

Q. Why do you disagree?

A. First, there is no question that since 2005, the year of PEF's last rate case settlement, PEF has spent more money on vegetation management due to hurricane hardening regulatory requirements. Prior to those requirements being enacted, PEF spent approximately $14M per year on vegetation management. Spending increased from about $14M in 2005 to an average of about $19M from 2006-2009. This increase represents about

$21M over the four year period ending in 2009. In other words, PEF spent approximately $21M more on tree pruning during these years under the hurricane hardening requirements than was provided for under the 2005 rate case settlement.

Q. Mr. Schultz suggests that PEF did not trim the required miles during 2006 – 2008 thus creating a shortfall in 2010. He contends that the significant increase in costs from 2009 to 2010 are purposely being deferred to the 2010 projected test year. Do you agree with this assertion?

A. Absolutely not. The vegetation management plan for 2010 includes miles necessary to keep pace with a 3-year backbone cycle and complete the fifth year of a 5-year lateral cycle. What Mr. Schultz doesn't address is that PEF has spent over $20M additional dollars during 2006 – 2009 as discussed above. Therefore, by increasing the amount spent for vegetation management from 2006-2009, PEF was able to meet the 3-year backbone cycle requirement in 2008 and reduce the number of miles that would otherwise be needed in 2010 to meet the required 5-year cycle for laterals. Because of this effort, PEF has actually reduced the amount that would otherwise be needed in 2010 to meet the Commission's 3/5 year cycle requirement, the exact opposite of the result that Mr. Schultz alleges.

Q. Why are PEF's Vegetation Management costs projected to be higher in 2010?

A. The vegetation management plan for 2010 includes miles necessary to keep pace with a 3-year backbone cycle and complete the fifth year of a 5-year lateral cycle.

Feeder backbones are 3-phase trunk lines that serve large numbers of customers and have the greatest impact on system reliability. Backbones are typically located along major roads and are relatively accessible to tree crews and pruning equipment. Feeder laterals are branch lines extending from backbones that serve fewer customers. Laterals extend for many miles and are typically less accessible than backbones. In many instances, lateral lines are located in back-lot areas far removed from roads, which necessitates climbing and manual pruning. The cost to prune a mile of line varies widely across PEF's system and is driven by factors that include accessibility, density of vegetation, and man-hours required to prune and remove vegetation material. Feeder backbones and accessible laterals generally yield a higher reliability benefit per dollar spent than inaccessible lateral lines.

In 2006, PEF began implementation of the Commission's hurricane hardening rule. The hardening rule includes a requirement to complete tree pruning on a 3/5 cycle. Based on this rule, feeder backbone miles must be trimmed every 3 years and feeder lateral miles every 5 years. When enacted, the rule identified an increased required scope of work, but it did not provide additional maintenance dollars that are required to be spent over those established in the 2005 rate case settlement.

Accordingly, tree pruning in all years has been prioritized based upon expected impact to system performance. Annual schedules were established by PEF to yield maximum reliability benefit and customer satisfaction for each dollar spent. Prudent spending on vegetation management has been a major factor in PEF's sustained and consistent reliability performance. By increasing the amount spent for tree pruning, instead of "heavy loading" 2010, as witness Shultz and Martz suggest, PEF was able to meet the 3-year backbone cycle requirement in 2008 and actually reduce the number of miles that would otherwise be needed in 2010 to meet the required five year cycle for laterals.

Q. Will PEF's Vegetation Management requirements decline after 2010?

A. Annual costs fluctuate up and down for the reasons stated previously and it is possible that the annual O&M needed to remain compliant with the Commission's 3/5 cycle could decline after 2010, just as it is possible for those costs to remain constant or increase. However, the fact remains that $34.5M is required in 2010 to meet regulatory obligations, and PEF will continue to aggressively manage costs and prioritize pruning miles for optimum reliability and customer satisfaction in2010 and beyond.

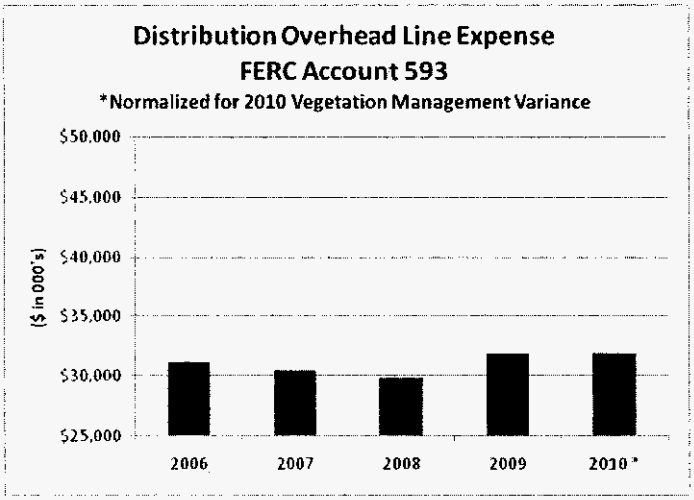
Q. Do you agree with Mr. Schultz's suggested reduction of $8.9M to PEF's Distribution O&M expense budget?

A. No. Mr. Schultz's proposed reduction is arbitrary at best and does not attempt to address or acknowledge how distribution systems must be

maintained and operated. PEF needs the amount of funds it has requested to meet the required 3/5 year cycle for distribution's backbone and lateral circuit miles, and unfounded reductions to those funds will do nothing expect prevent PEF from meeting its regulatory requirements as well as hamper PEF from providing the safe and reliable service that our customers expect and enjoy.

Q. Do you agree with Mr. Marz's suggested reduction of $13.9M of O&M expense for FERC Acct. No. 593 – Distribution Overhead Line Maintenance?

A. Not at all. On page 15 of his testimony, Mr. Marz includes a bar graph which purports to show an unexplained spike in costs for Account 593 in 2010. However, the entire variance cited by witness Martz is accounted for at length in the preceding discussion of 2010 Vegetation Management dollars needed to meet the Commission's 3/5 year requirement, and Mr. Marz does nothing to acknowledge this fact in his testimony. With the $13.9M Vegetation Management variance removed, 2010 FERC account 593 is equal to the 2009 value of $31.9M. Thus, unlike the misleading chart in Mr. Marz's testimony, the chart below properly illustrates2010 FERC account 593 normalized for the 2010 Vegetation Management variance.



Q. Has PEF taken steps to limit rising vegetation management costs?

A. Yes. Several factors, including double digit increases to fuel and labor rates, have driven vegetation management costs higher in 2010 compared to 2006. PEF has taken steps to reduce and stabilize rising costs. These steps include:

- Staffing a Vegetation Management organization with dedicated Foresters and Field Inspectors to ensure quality work at least cost.
- Development of an annual work plan, pre-inspection of vegetation densities, and solicitation of unit based contracts to stabilize the contract work force. This limits rising cost by matching planned work to the least cost resource.
- Work-in-progress and post inspection for quality assurance and a continued focus on prioritization to ensure pruning miles with greatest impact to system reliability and customer satisfaction.

- Investing and leveraging technology for improved inspections, data management, and work planning. By increasing the level of system data collected, cost is reduced through improved understanding of vegetation density and optimized pruning resource compliment (i.e. machine vs. manual pruning).

CONCLUSION

Q. Do you have any concluding remarks regarding the issues that Mr. Schultz and Mr. Marz raise?

A. Yes. PEF presently manages and has historically managed a reliable distribution system through prudent maintenance and compliance with FPSC required initiatives and programs. PEF has accomplished this while balancing the need to prudently manage O&M costs. To continue providing safe and reliable service to our customers and to continue our ability to comply with all of our regulatory requirements, PEF needs the funds that it has requested in this case, and the two unfounded assertions that Mr. Marz and Mr. Schultz have made do nothing to contradict this fact.

Q. Does this conclude your testimony?

A. Yes it does.

BY MR. BUTLER:

Q. Mr. Joyner, do you have a summary of your rebuttal testimony?

A. Yes, I do.

Q. Please give it.

A. Okay. Good afternoon, I believe. Good afternoon, Chairman. Good afternoon, Commissioners.

The purpose of my rebuttal testimony is to address certain assertions and conclusions made by OPC Witness Mr. Schultz and FIPUG Witness Mr. Marz. In the direct testimony filed on August the 10th, 2009, Mr. Schultz alleges that PEF Distribution has a 7.7 million variance in its O&M request that cannot be explained. However, my rebuttal testimony clearly breaks down the 144.9 million O&M 2010 test year request, which in turn demonstrates that the 7.7 gap cited by Mr. Schultz does no exist.

In addition, Mr. Schultz and Mr. Marz both imply that PEF has heavily loaded its 2010 test year expenses by deferring storm hardening expenses until 2010. However, my rebuttal shows that contrary to their assertions distribution actually has attempted to lower its 2010 expenses through its prioritization of its vegetation management plan.

There is no question that since 2005, the year

of PEF's last rate case settlement, PEF has spent more money on vegetation management due to hurricane hardening regulatory requirements. Prior to those requirements, PEF spent approximately 14 million per year on vegetation management. From 2006 to 2009 spending increased from 14 million, as I mentioned earlier, to approximately 19 million, a 5 million per year increase totaling 21 million over a period of 2006 to 2009.

To further elaborate, tree pruning in all years had been prioritized based upon expected impact to system performance. Annual schedules were and are established to yield maximum reliability benefit and customer satisfaction for each dollar spent. Prudent spending on vegetation management has been a major factor in Progress Energy Florida's sustained and consistent reliability performance over the years. By increasing the amount spent for tree pruning, instead of heavy loading in 2010, as Witness Schultz and Marz suggest, PEF was able to meet our three-year backbone cycle requirement in 2008, and actually reduced the number of miles that would otherwise be needed in 2010 to meet the required five-year cycle for laterals.

My rebuttal testimony clearly addresses Mr. Schultz's and Mr. Marz's assertions and justifies the

need for the 144.9 million distribution O&M request in the year 2010. PEF plans to continue to aggressively manage our costs and prioritize pruning miles for optimal reliability and customer satisfaction in 2010 and beyond.

This concludes my summary, and I am happy to answer any questions.

MR. BURNETT: Thank you. We tender Mr. Joyner, sir.

CHAIRMAN CARTER: Mr. Rehwinkel.

MR. REHWINKEL: Thank you, Mr. Chairman.

CROSS EXAMINATION

BY MR. REHWINKEL:

Q. Good afternoon, Mr. Joyner.

A. Good morning, sir -- or good afternoon, sir.

Q. It seems like this is my opening line for everybody. Can you turn to Page 3 of your rebuttal testimony?

Are you there? There on Page 3, isn't it true that you suggest that Mr. Schultz has a lack of familiarity with the methodology behind the MFRs?

A. Yes, sir, I do.

Q. Are you aware of how many years Mr. Schultz has been analyzing rate cases?

A. I have heard discussion previous to today, so

I am aware of that.

Q. Would you agree that it is at least 30 years?

A. Yes, sir.

Q. Did you review Mr. Schultz' experience in Florida rate cases?

A. No, sir.

Q. On Page 4 of your rebuttal testimony you state that Mr. Schultz's assertion that the $7.7 million variance is unexplained, is that correct?

A. Yes, sir.

Q. Would I be correct if I stated that the table on Page 5 of your rebuttal testimony is your proof that Mr. Schultz is incorrect?

A. It is my proof to reflect -- the intent of Table 1 is to specifically reflect my request for the 2010, and also to address the 7.7 million gap.

Q. Well, does the table show -- does the table demonstrate that Mr. Schultz is incorrect?

A. Incorrect in the -- I just want to make sure. Incorrect in response to? I just want to make sure.

Q. Let me ask it this way. Is it your testimony that this Table 1 on Page 5 demonstrates that Mr. Schultz is incorrect that the $7.7 million variance is unexplained?

A. Yes, sir.

Q. On the table there are amounts identified as FERC 580 and FERC 90, correct?

A. Yes, sir.

Q. Am I correct to understand that the amounts shown there are the 2006 expense levels?

A. It is.

Q. Do you have Mr. Schultz's testimony with you?

A. I have those items pertaining to distribution, yes, sir, I do.

Q. Okay. Do you have Page 37?

A. I do.

Q. Can you read aloud for me the sentence that begins in the middle of Line 18 and continues through Line 20?

A. Starting on Line 17, I guess, would be the --

Q. I'm sorry, in the middle of Line 18, in 2008.

A. Okay. "In 2008, there were 120.6 million in costs charged to distribution O&M, and as indicated, the company is seeking 145 million in the 2010 projected test year. Vegetation management accounts for 15.9 million of the --"

Q. You can --

A. I'm sorry.

Q. I just wanted you to read that sentence there, yes. Okay. Thank you. Isn't it true that Mr. Schultz

is making a comparison of the 2008 costs to the costs in 2010?

A. Yes, sir.

Q. Would you also agree with me that the $24.4 million increase that Mr. Schultz identifies on Line 21 of his direct testimony is the difference between the $145 million for 2010 and the $120.6 million in 2008?

A. Yes, sir.

Q. Would it surprise you, Mr. Joyner, that the unexplained difference that Mr. Schultz is discussing on Line 22 is not the 2006 to 2010 benchmark variance, but is, in fact, the unidentified difference between 2008 and 2010?

MR. BURNETT: Mr. Chairman.

CHAIRMAN CARTER: Mr. Burnett.

MR. BURNETT: I would object. Although counsel phrased that as would it surprise you, I believe that is counsel covertly testifying as to what Mr. Schultz intended, and that is not anywhere in his rebuttal. I think the testimony should speak for itself.

MR. REHWINKEL: I can rephrase that question.

CHAIRMAN CARTER: Thank you, Mr. Rehwinkel. Rephrase.

MR. REHWINKEL: Thank you, Mr. Chairman.

BY MR. REHWINKEL:

Q. Isn't it true, Mr. Joyner, that Mr. Schultz -- that the variance that Mr. Schultz has identified and is discussing on Line 22 is an unidentified difference between 2008 and 2010?

A. And you are referring to the $7.7 million gap?

Q. Yes.

A. Looking at the vegetation management, going to the back -- I have go up a few lines if I could, sir. The 24.4 to the 15.9, and in the pole inspection costs for 2010 are .8 million more than 2008. And to be honest with you, sir, I don't know exactly where that came from in the .8 million more than -- on just that one. So in that case, the 7.7 million is essentially unexplained. From the standpoint of just subtraction of the 15.9 and the .8 from 24.4 does leave you with that $7.7 million gap.

Q. So you can see where the gap that he is discussing is the difference between '08 and 2010, can you not?

A. If that is in -- in that context, yes.

Q. Okay. Isn't it true that in your rebuttal that your explanation of the variance that flows from the Table 1 on Page 5 explains a variance between 2006

and 2010?

A. It explains the variance regarding the '06 to '10 from the standpoint of the Commission benchmark and the description of what drives that difference of the 14.3. It is not specifically the difference between '06 and '10 expenses.

Q. Okay. Would it be fair to say that you may have misunderstood exactly what variance Mr. Schultz was challenging in his testimony?

A. Mr. Rehwinkel, in this case this was my assumption or my understanding, I should say, to address the gap. Any other reference that may have been used or what he was assuming and stuff, he never -- in this case, to my understanding I never received any follow-up to say that this response was not adequate.

Q. Okay. But we are all human, and you could have been in error as far as what you were addressing, correct?

A. It very well could have.

Q. Okay. On Page 6 of your rebuttal testimony.

A. Okay.

Q. Do you state there that you do not agree that PEF did not trim the required miles during 2006 through 2008 and that 2009 costs were deferred to 2010?

A. That is correct.

MR. REHWINKEL: Mr. Chairman, I would like to pass out an exhibit for cross-examination.

CHAIRMAN CARTER: Do you need a number?

MR. REHWINKEL: Yes, sir.

CHAIRMAN CARTER: That will be 307, 3-0-7.

MR. REHWINKEL: Okay.

CHAIRMAN CARTER: Short title?

MR. REHWINKEL: This would be Response to OPC Interrogatories.

CHAIRMAN CARTER: Okay.

(Exhibit Number 307 marked for identification.)

BY MR. REHWINKEL:

Q. Do you have a copy of this document, Mr. Joyner?

A. I haven't received the document yet.

Q. Oh, you haven't? Okay. Did you put one, Ms. Bradley? I'm sorry.

A. Oh, that? Yes, I do have a copy of that. Yes.

MR. REHWINKEL: I think I have enough copies, so hold on to that one.

THE WITNESS: Okay.

CHAIRMAN CARTER: You can trust me, too.

THE WITNESS: I just wanted to make sure that

that is the one you were referring to.

MR. REHWINKEL: Yes, sir.

CHAIRMAN CARTER: You may proceed.

MR. REHWINKEL: Thank you, Mr. Chairman.

BY MR. REHWINKEL:

Q. Mr. Joyner, you have Interrogatory 270 with you?

A. I do.

Q. Can I ask you to refer to the first page of that exhibit, which is Interrogatory 270, correct?

A. Yes.

Q. And is that a document you are familiar with?

A. It is.

Q. Did you prepare this interrogatory response?

A. Yes, sir.

Q. Thank you. Can you tell me what was the number of miles trimmed in 2006?

A. 3,419.

Q. And for 2007, what were the miles?

A. 4,303.

Q. And for 2008, the miles?

A. 3,297.

Q. So would it be correct that in 2008 there were fewer miles trimmed in your subject area than in 2007?

A. Yes, sir.

Q. On Page 6 of your rebuttal testimony, do you attempt to explain why Mr. Schultz is not correct in his assessment of the trimming from 2006 through 2009?

A. Yes, sir. Basically, if you look at Mr. Schultz, the fact that -- let me just back up.

Q. That was a yes?

A. I'm sorry.

Q. I was asking if you -- your effort there was to explain why he is not correct in his assessment of the trimming from '06 to '09?

A. Right. And I was going back reading what the actual -- my rebuttal stated before I answered, if that was okay.

Q. Yes, sir.

A. I was just kind of reading aloud. Basically, if you look here, the question is -- the answer is that Mr. Schultz doesn't address that PEF has spent over 20 million additional dollars during the years of '06 and '09, as we discussed previously. Again, prior to 2006 we were spending 14 million a year. We went in and increased our spending over this 2006 to 2009 period to over 20 million.

The other thing in response to that is in our ability to meet the -- excuse me -- hardening requirements, the three-year is the feeder expectation,

the three and five-year. So on the three-year, sir, in this case we did meet our commitment to get the feeder miles trimmed at the three-year period. And now we are talking about the fifth year being -- just happens to be the year 2010.

Q. Okay. But you do believe that he is not correct in his assessment of trimming from '06 to '09?

A. That we did not meet our commitment to the three to five-year cycle, yes, sir, I am challenging that.

Q. Okay. On Lines 15 through 21, isn't it true that you contend that by increasing the amount spent from 2006 to 2009, that the amount spent for 2010 is actually a reduction?

A. Yes, sir.

Q. Can I ask you --

A. And if I may, just make sure I understand, sir.

Q. Sure.

A. The intent if we had continued to spend at our $14 million rate prior to the storm hardening guidelines -- rules, I should say, then that is the reason I make that statement.

Q. Okay. If you could look in Interrogatory 270 again.

A. Yes, sir.

Q. What was the amount expensed for vegetation management or tree trimming in 2006?

A. 2006 was $17,960 -- or excuse me, 17,960,000.

CHAIRMAN CARTER: Million?

THE WITNESS: Million. Thank you.

MR. REHWINKEL: I heard it millions, but I think the Chairman heard it correctly.

THE WITNESS: Mr. Oliver was rounding up to a million. I really rounded on that one, didn't I?

CHAIRMAN CARTER: I thought he said 17,000.

MR. REHWINKEL: We can stipulate to that.

THE WITNESS: I think I was thinking cost per mile.

BY MR. REHWINKEL:

Q. For 2007, the amount expensed was?

A. $19,928,846.

Q. And how about for 2008?

A. 18,530 -- 18,530,730.

Q. And what is the budgeted amount for 2009?

A. The budgeted amount is $20,773,023.

Q. You would agree with me, would you not, that over that period of time that the spending on that -- on that activity was relatively level?

A. Well, it averages out to be over that period

of approximately 19.3 million. It is all -- again, as we have discussed in our direct testimony discussion, sir, is that that was driven as much as anything by, you know, the type mile trimmed.

Q. Okay. But you would agree with me for that four-year period that you said it averages 19.3 million?

A. In that four-year period it looks like it ranges in the $3 million arena.

Q. That is a fairly level amount compared to the total spend, the total annual spend?

A. Yes, sir.

Q. Can you look in this Exhibit 307 to Interrogatory 272, please.

A. 272?

Q. Yes, sir.

A. I've got it.

Q. Is this a document that you are familiar with?

A. I am, sir.

Q. And you prepared this?

A. I did.

Q. What is the number of miles for tree trimming planned for 2010?

A. For 2010 this document reflects planned production miles of 5,080 miles.

Q. Okay. Is that number less than any of the

miles trimmed in the years 2006 through 2008?

A. No, sir, it is not.

Q. What is the amount of tree trimming dollars or expense dollars budgeted for 2010?

A. 34,433,040.

Q. If I asked you, Mr. Joyner, about the -- whether the years -- if I asked you if the years 2006 through 2009 are relatively level, if -- let me start all over again, Mr. Chairman.

If the years 2006 through 2009 are relatively level in spending, and they average approximately $19.3 million, how is it that you can contend that the 2010 amount is less than it would otherwise be needed -- is less than it would otherwise be needed?

A. Again, going back to my reference of our spending prior -- well, during 2006, the Commission and the utilities met, and out of that discussion came our storm hardening requirements, right, sir? At that point there was an enhanced scope of work defined both in pole inspections and vegetation management arenas. So spending increased in both of those areas at that point with no expectations, you know, again, of the expense side of that. It was just a requirement. So we, as a utility, did our best at increasing our level of spending in vegetation management spending, and that is

where I am using that statement of the fact that we did that prior to meeting our fifth year commitment. We actually reduced the number of miles that would have been required in our fifth year spend by spending more than 5 million per year previous to '06. That is where I am making that basis, sir.

Q. Okay. Isn't the real reason that an increase is occurring now in 2010 is because the company was not willing to spend more than what was allowed in the 2005 rate case settlement?

A. No, sir. This is -- as we discussed earlier, we all -- we go in and look at our reliability needs, our customer satisfaction needs, and our employee needs. And at that point we go in and we take a look at a balanced approach of how we go in; again, reactive versus proactive in how we address those issues. This was our best, our optimal spend level in those years to ensure that we meet all of those objectives that we hold true.

Q. On Page 7 of your rebuttal testimony on Lines 21 through 23, you state there, "When enacted, the rule identified an increased scope of work, but it did not provide additional maintenance dollars that are required to be spent over those established in the 2005 rate case settlement." Do you see that?

A. Yes, sir, I do. And that is basically what I just had spoken to.

Q. Okay. On Page 9 of your rebuttal, you state there that the amount requested for 2010 is required to meet the company's regulatory requirements?

A. In what?

Q. On Lines 1 through 6.

A. One through 6?

Q. Yes, sir.

A. Yes, sir.

Q. Did the Commission's cycle requirements for storm hardening change in 2010?

A. No, sir, it did not.

Q. Since the number of miles in any of the years 2006 through 2008 was less than what is required in 2010, and the amount expended in the years 2006 through 2008, and the amount budgeted in 2009 is less than what is requested in 2010, can you tell the Commission that PEF met its regulatory requirements for vegetation management in the years 2006 through 2009?

A. Yes, sir, I can say that we have met our current through those years, yes, sir, I can. And, again, that's based on the fact that our first requirement was to ensure that we had our feeder backbone trimmed on year three of that cycle, which was

the year 2008. I cannot speak for the full requirement because, of course, 2010 is the year five.

Q. Okay.

A. So I can't completely answer that, sir, because of the fifth year.

Q. And, again, you are not contending that there is any increase in the Commission's requirements for 2010 relative to the prior four years?

A. No, sir. They have just stated our requirement that the rule has not changed.

Q. On Page 8, if I could get you to look at Page 8 of your testimony?

A. Yes.

Q. And looking in the Lines 12 through 19, isn't it true there that you testify that the costs for tree trimming could possibly decrease after 2010?

A. Yes, sir.

Q. Mr. Joyner, if rates are set based on a $34.4 million requested tree trimming amount in 2010, and you do not expend the full $34.4 million on tree trimming in 2011, would the customers receive a return of the revenues associated with that expense?

A. It is my understanding, no, sir, they would not. The intent would be, again, to go and take -- I can't at this point in time tell you that those -- that

2011. Right now the intent would be to spend those on vegetation management funds.

MR. REHWINKEL: Okay. Thank you. That is all I have for you.

Mr. Chairman, those are my questions for Mr. Joyner in this case.

CHAIRMAN CARTER: Thank you, Mr. Rehwinkel.

Ms. Bradley.

MS. BRADLEY: No questions.

CHAIRMAN CARTER: Mr. Moyle.

MR. MOYLE: I do have some questions.

CROSS EXAMINATION

BY MR. MOYLE:

Q. Good afternoon, Mr. Joyner.

A. Good afternoon, sir.

Q. And I wanted, first of all, to follow up with you with respect to some conversation we had last week about design criteria. And I think you had agreed to look a little further and try to provide some information with respect to design criteria. Have you been able to do that?

A. Yes, sir, I have.

Q. And what did you come up with?

A. Okay. And it is my understanding from our discussion last time, Mr. Moyle, I went back and

actually researched some of the dockets and some of the information that was shared during those proceedings that took place and when the storm hardening plan was put into effect of when wind loading standards were discussed, and actually had discussions with some individuals that were there during those proceedings of which I was not. And out of that discussion, the conclusion was, and if I may, I am going to read something from that -- from that that kind of summarizes the outcome. From a distribution perspective in its storm hardening plan, Progress Energy does not adopt the extreme wind standard for any distribution level infrastructure. PEF reasoned that its own experience coupled with industry experience shows that flying debris and vegetation are the primary causes of distribution damage, and these are conditions that the extreme wind standards and any other overhead construction standard cannot address.

So when I went and researched that, sir, in this case the design standards for distribution did not change through those storm hardening discussions.

Q. So what are they as we sit here today, if you know?

A. It is -- right now from a distribution design, you design to a Grade C, is the standard. The NESC

standard is a Grade C standard.

Q. And I am concerned specifically about wind velocity.

A. And in that case it does not specifically address wind velocity, sir. There was no mention specifically in those documents and in my reference that it specifically went to a wind velocity.

Q. So, I mean, you're in the process of putting in new distribution systems. A new subdivision comes in, and let's say they don't go underground, they go with the poles. Then if I am the subcontractor, you know, putting in the system, how do I know what kind of poles to get, how deep to bury them, whether to put concrete or -- I mean, how do I know if there is no engineering standards with respect to the design to withstand winds?

A. Let me just help understand that, that question. There are engineering standards. There are construction standards. We have an organization, a governance organization standards that that is what they do. And in this case we -- there is specific -- in your case where a contractor may go out, even outside of our own company, sir, they would actually go out and through the engineering -- the engineering themselves, and they actually have a manual itself that reflects what

construction standard they would -- they would build that to. And that would be to meet NESC, National Electric Standard Code standards of Grade C construction.

Q. Okay. But we don't know what the wind load is for that?

A. No, sir.

Q. Does your company have to meet those same standards?

A. Yes, sir, they do. And we do. As a matter of fact, in that same docket, if I may, 75 percent of our system is even enhanced more than that standard.

Q. Do you know what the extreme wind load standards are that you reference in that document that you said it was decided not to adopt those?

A. Say that again, I'm sorry.

Q. The document you read from, what was that?

A. That was actually from the -- this is our storm hardening plan that we file with the Commission each year.

Q. Okay. And as I understood what you read, you said that you decided not to adopt the extreme wind load because there was more instances of flying debris, and --

A. That was the -- this is the Commission's rule

of this, so this is in agreement with the Commission that we did not change our design standards from distribution.

Q. And, again, some of your testimony centers on this storm hardening effort.

A. Yes, sir.

Q. But I guess given what you are telling me, as we sit here today, you probably can't testify that you believe that the storm hardening efforts have resulted in less exposure of PEF's distribution system to damage from a hurricane.

A. Early indications, and you and I discussed last week that we did do some forensic analysis after our tropical storm. And in specific to those areas where we had conducted our vegetation management hardening, we saw that there was being -- there was improvement based on prior storms and prior experience.

So our storm hardening -- my discussion in storm hardening space is in regards to pole inspections and vegetation management. When it comes to design standards or anything like that, when it comes to distribution, that is -- that was -- again, that is not a change that was made based on the storm hardening rules.

Q. So to talk a little bit about the money that

you all are requesting for the storm hardening.

A. Yes, sir.

Q. If I understand it -- maybe let's talk about your chart that is found on Page 10 of your testimony. The number at the top, do you see that?

A. I do.

Q. So if we were going to graph the money spent for vegetation management, if we put in 2005, we would have to come down to about a $14 million number, isn't that right?

A. Yes, sir, it is.

Q. So it goes from 14 million in 2005 to 32 million in 2006, give or take?

A. No, sir. 2006 being if you were just grafting the vegetation -- this is FERC 593, which is a total FERC account that is inclusive of vegetation management and our restoration costs. There is over $6 million in that amount. And just to let you know, sir, that is what it cost us to restore outages. We have all of our -- all of our costs broke down into units, you know, how much it cost us to restore power, how much it cost us to construct service delivery, all those. So that is a total account just normalized for the vegetation management. The actual expense of vegetation management only was 17,000,960 that year.

Q. I thought -- I thought you said that it was $6 million less because of the restoration?

A. No, sir. What I was talking about, and it may be my attempt to explain. If you look at this, this is FERC Account 593.

Q. Yes, sir.

A. And, basically, that FERC account is encompassed of expenditures to restore power and to vegetation management expenses. That is why you are seeing figures of that amount versus just the expense of vegetation management.

Q. Okay. So --

A. And it is just normalized for 2010 to reflect what this was showing for FERC 593. What it is basically showing there is that if it were not for the request of 13.9 million for vegetation management in that one account, then all things equal, it would mirror 2009.

Q. 2010 would mirror 2009, is that right?

A. Correct. So what it is basically saying is if you look at overall expenses to maintain our system within that account, the differential is strictly vegetation management, and that we are holding costs steady in the other areas within that account.

Q. All right. And, I'm sorry, maybe I didn't

understand this chart. But when you say normalizing it, would that indicate that the 14 million that you are asking for in 2010 is not showing up on this chart?

A. That is correct, sir.

Q. Okay.

A. And if you look -- because there are more things in that FERC Account 593 than just -- it's normalized just for that.

Q. Okay. So if we were going to include the 14 million that you are asking for in this year, correct?

A. Right.

Q. All right. So that would -- that would need to go on top of the 32 million for 2010, correct?

A. Correct.

Q. Okay.

A. And if you go previous to that, Mr. Moyle, on the page before that, it attempts -- it describes that with the -- if you look at the answer to that question, I guess that would be on the bottom of Page 9, with the 13.9 vegetation management variance removed, 2010 FERC Account 593 is equal to the 2009 value of the 31.9 million.

Q. Yes, sir. You see on Line 4 there you said that you have -- you have increased this number in part due to fuel, is that right?

A. Oh, I'm sorry. You are back on Page 10? I'm sorry.

Q. Yes, sir.

A. Yes, we actually -- from the standpoint of when the hurricane -- it displays 2006 once the hurricane hardening rules came into effect. Since that point, we have had double digit increases in fuel and labor rates since that time.

Q. So at what point in time are you starting the measurement, 2006 or 2009?

A. 2006.

Q. Okay. But you would agree that fuel has gone down from 2009 to -- or 2008 to 2009, correct?

A. Right. If you look at that it says in there has driven vegetation management costs higher in 2010 compared to 2006.

Q. I guess just to understand completely, on Page 5 you outline what the vegetation management has been, and it was 14 million before the storm hardening, and then it went to 19 million from 2006 to 2009?

A. Yes, sir.

Q. And now for 2010, you are adding another 14 million on top of that 19?

A. On top of the -- that would be what is required to meet our five-year commitment is that

amount.

Q. Yes, sir. So the answer would be, yes, 14 million is going on top of the 19 for 2010, correct?

A. 19 and 14, yes, sir.

Q. Okay. And that is a pretty large increase, you would agree, correct, from a percentage basis?

A. If you look at the percentage basis, I think we reflected it was about a 14 or 15 percent. As we have stated earlier, I guess everybody has their own perspective on increase, but if you look at the increase from year to year, yes, sir, that is seen as an increase over years spent over years previous.

Q. I mean, if we took -- took the math, 19 million, 10 percent of that is roughly two million, right?

A. Yes, sir.

Q. And if you are going up to 14 million, that is over a 50 percent increase, isn't it?

A. Yes, sir, it is.

Q. And --

A. I was looking at the total FERC account again, sorry.

Q. And has anyone in the company communicated to you that there has -- that it has been communicated to Wall Street that there is an effort to keep in check the

O&M expense?

A. Say that again, sir. I just want to make sure I understand.

Q. Yes, sir. And were you here yesterday when Mr. Dolan was on the stand?

A. Okay. I just wanted to make sure I understood. Yes, sir, I was.

Q. Okay. And you saw that document that was presented to Wall Street.

A. I did.

Q. And one of the items was we are looking to really keep in check O&M, correct?

A. I had not seen the document until it was discussed yesterday.

Q. But, you would agree, would you not -- and I understand your reasons why you say you need to do this additional 14 million, but you would agree that for your area of operation, that an O&M increase of over 50 percent is not keeping O&M to a minimal level increase, correct?

A. And if I may, I know we have referenced that other document at times. Of course, that was made at a Progress Energy, you know, level, but to your point specific, if I was now writing that same script in regards to just the distribution department of Progress

Energy Florida, I would state that two ways; and that is that if we definitely are looking for targeted O&M opportunities to -- you know, we talked about earlier belt tightening. As you know, when we've talked about it, we went through a workforce assessment exercise, or I should say initiative, more than an exercise, an initiative to go in and take cost out of the business and to ensure that we are in this case making sure that our investments, the value that they are providing is for the best dollar spent. And in that case we went through that workforce assessment exercise to ensure we were doing that.

So in that case, I would say, yes, we are. Relative to specifically a storm hardening initiative, 14 million is necessary to be able to meet our fifth year commitment. So I would say, yes, sir -- I would say, yes, we have. But I would also specifically highlight programs and the need for a certain expenditure of a program, whether it be a program to enhance customer service, enhance reliability, enhance safety, those typically -- there may be a specific initiative needed to go in and do that. That is outside of what I call normal day-to-day management of your business.

Q. And I appreciate that. I'm not sure you

focused on my question, which was, you know, given the fact that there is over a 50 percent increase from 2009 to 2010 with respect to O&M related to your area of operation, wouldn't you agree that that is not minimal O&M -- not a minimal O&M increase?

A. And I guess I answered it two ways, sir. One would be I would split that up is the way I attempted to explain. In this case specifically to that initiative, no, sir, I don't know that it would be considered a minimal O&M expense specific to that program. But I would say what are we doing -- your expectations of us, our customers, and yourself is that what are we doing outside of a program initiative, and what we are doing through our business to ensure that we are, you know, mitigating our costs.

Q. If Mr. Dolan came to you and said, Mr. Joyner, I have what I hope you will consider to be good news, I am going to give you a 50 percent raise. You wouldn't consider that a minimal raise, would you?

A. We may have to go with a hypothetical because I don't know that that would ever happen. So I would have to -- I would have to -- I don't know how I would react to that to be honest with you.

Q. But you understand my point, do you not?

A. I understand your point. No, I would not

consider that to be minimal, no, sir.

MR. MOYLE: Just a minute, Mr. Chairman.

CHAIRMAN CARTER: Yes, sir.

BY MR. MOYLE:

Q. And, you know, we have talked percentages and for purposes of writing the document that we have to write, percentages are oftentimes helpful to understand order of magnitude, to me anyway, as compared to dollars. You would agree that the percentage of lines to be trimmed in 2010 is significantly higher than any other time since the storm hardening rules went into effect, correct?

A. There is a -- and I guess the percentages, just going back, Mr. Moyle, when I take a look at that I think it is important to look at percentages, but I think you have also got to look at the dollars to reflect what percentage, you know, you are basing that on. But at the same time, yes, sir, you are absolutely right that we have more miles to trim in 2010 than per year in the past.

Q. And if you go to the exhibit that Public Counsel handed out, if you put a --

A. 270, sir?

Q. Yes, sir.

A. Okay.

Q. And on that Page 69, I mean, if you had 2010 in there, the lines -- the miles to be trimmed would be 5,080 miles, correct?

A. Yes, sir.

Q. And just kind of rough math would be give or take approximately a 20 percent increase compared to the 2007 number, which is I see the highest number?

A. Okay. I haven't done that math, but I agree -- I mean, I'm good with that. And, again, the miles trimmed is driven -- we talked about it is one mile is not a generic mile. So you will see some years where they may be more miles. If you look at that year specifically, there was a lot of feeder miles also as a part of that. And as we discussed earlier, it is all based on the type density and the accessibility. So you do have to look at, you know, several factors I have come to appreciate. So miles is one -- miles is the expectation at the end of three and five-year storm hardening. It is a miles mandate.

Q. Right.

A. But those miles pruned each year are driven by a lot of variables.

Q. And you take issue with Mr. Marz, FIPUG's witness, because he suggests that the numbers for your operations might have been a little heavy for 2010,

correct?

A. The area that I challenged is the fact that we would be seen as loading a test year. What I'm saying here is to meet a five-year storm hardening initiative in 2010, which is the fifth year of this cycle, it is the year 2010 I'm requesting. It is not the fact that this is loading up a test year that just happens to be the year 2010.

Q. Right. And if it was -- if you had to meet your -- if it was a six-year plan, rather than a five-year plan, these numbers might be a little different, correct?

A. They could be different, yes, sir.

Q. And, also, in your testimony I think you had commented that, well, it is possible that the number may go down in 2011, correct?

A. We put that question in there on purpose, only because this is a request for 2010. Until we can go out next year and go out -- and we also are mandated under the storm hardening rule to go out and inspect all of our feeder backbone the year before we expend those, go out and actually execute those expenditures. Until we do that and go out -- and we have inspectors that go out by span and say these are climbing miles, these are aerial miles, until we do that, I cannot tell you what

2011 expenditures will be.

Q. Yes, sir. And I am going to use my rich uncle example with you. Assume that we are not in the context of this PSC regulatory proceeding, you know, but you are in the tree trimming business and you have this job to do.

A. Okay.

Q. And the rich uncle is going to fund it, but he wants to fund it at the average cost that you would expect on an annual basis as you go about conducting your business. He doesn't want to pay more, doesn't want to pay too much, but just kind of an annual -- an annual figure. If we were in that situation, isn't it true that you would not be asking the rich uncle to fund on an annual basis the level of expenses that you are asking this Commission to provide for the test year 2010? Do you follow me?

A. I did. I followed that one. In this case, I could not -- I could not accept your rich uncle's proposal only because in that same situation where it may be seen as a utility in looking at where we go out and hire our vendors, we actually go in each year and have to meet with them and do this again. We have to go out and know what we are holding for the next year before we will go out and actually put out for bid to go

out and say this would be what it would be. So I cannot speak out a year in advance, sir, and so in this case I could not accept that proposal.

Q. Do you see how -- do you think that this storm hardening rule from a consumer or a ratepayer perspective may be viewed as not a particularly helpful thing if one of the results of it is to have to pay another $14 million in costs that, absent the rule, may not be there?

A. I would -- and I can't speak for all of our customers, by all means, but I would suspect that they have a -- that their expectation of us is that we are going in and running a very prudent vegetation management program. And we have an organization you have seen in the rebuttal of what we are going to ensure that we do that on a daily basis.

And I just, if I may, Ms. Bradley, there is cases where customers come up and their concern is tree trimming and the level of expenditures that we -- or the level of, in this case, exposure that we have with trees getting into our lines. So I can't speak specifically for all consumers and customers in this case, but I would suspect that they want to ensure that we do a very good job to ensure that we are not -- outages being driven by trees are as low as possible.

Q. And you were with the company prior to 2004, correct?

A. Yes, sir, I was in our Carolina organization, yes, sir.

Q. Okay. But as you have taken on these responsibilities, you have talked with people and have information about how the company did tree trimming prior to '04?

A. Actually, from the years '02 through '05, I had Florida and Carolina responsibility, and vegetation management was part of that again.

Q. Okay. And as part of that responsibility, isn't it true that Progress Energy did an acceptable good job with respect to vegetation management from 2002 to 2004?

A. From the standpoint of I don't know what reference that would make, of course, our own expectations of ourselves, we were heavily involved in the CTE initiative, commitment to excellence initiative where we were actually looking at how we would go in and support our need to enhance reliability during those days.

Q. So would that be yes, that from 2002 to 2004, generally you think the vegetation management was functioning okay?

A. I cannot speak specifically as to what people, in this case, customers would have said between -- specifically for vegetation management between the '02 and '04. I don't have that answer, sir.

Q. Okay. But as we sit here today, you would agree that those costs have gone from 14 million to 31 million?

A. Yes, sir. And that, again, is being driven from more of a reactive reliability driven program to now more of a proactive program.

MR. MOYLE: Thank you. That's all I have.

CHAIRMAN CARTER: Outstanding timing, Mr. Moyle. See you guys at 2:15.

(Lunch recess.)

(Transcript continues in sequence with Volume 23.)

STATE OF FLORIDA)

: CERTIFICATE OF REPORTER

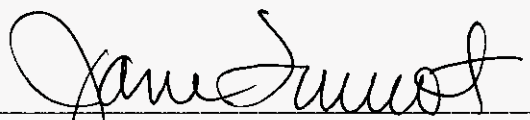
COUNTY OF LEON)

I, JANE FAUROT, RPR, Chief, Hearing Reporter Services Section, FPSC Division of Commission Clerk, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the action.

DATED THIS 2nd day of October, 2009.



JANE FAUROT, RPR
Official FPSC Hearings Reporter
(850) 413-6732