EXHIBIT NO._____

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan.	))))))	Case No. 11-346-EL-SSO Case No. 11-346-EL-SSO
In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of Certain Accounting Authority.	))))	Case No. 11-349-EL-AAM Case No. 11-350-EL-AAM

REBUTTAL TESTIMONY OF

WILLIAM E. AVERA

IN SUPPORT OF AEP OHIO'S

MODIFIED ELECTRIC SECURITY PLAN

Filed June 13th, 2012

REBUTTAL TESTIMONY OF WILLIAM E. AVERA

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BEFORE
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REBUTTAL TESTIMONY OF
WILLIAM E. AVERA
ON BEHALF OF
OHIO POWER COMPANY

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. William E. Avera, President, FINCAP, Inc., 3907 Red River, Austin, Texas, 78751.

Q. DR. AVERA, PLEASE SUMMARIZE YOUR QUALIFICATIONS.

A. I received a B.A. degree with a major in economics from Emory University. After serving in the United States Navy, I entered the doctoral program in economics at the University of North Carolina at Chapel Hill. Upon receiving my Ph.D., I joined the faculty at the University of North Carolina and taught finance in the Graduate School of Business. I subsequently accepted a position at the University of Texas at Austin where I taught courses in financial management and investment analysis. I then went to work for International Paper Company in New York City as Manager of Financial Education, a position in which I had responsibility for all corporate education programs in finance, accounting, and economics.

In 1977, I joined the staff of the Public Utility Commission of Texas ("PUCT") as Director of the Economic Research Division. During my tenure at the PUCT, I managed a division responsible for financial analysis, cost allocation and rate design, economic and financial research, and data processing systems, and I testified in cases on a variety of financial and economic issues. Since leaving the PUCT, I have been engaged as a consultant. I have participated in a wide range of assignments involving utility-related matters on behalf of utilities, industrial customers, municipalities, and regulatory commissions. I have

previously testified before the Federal Energy Regulatory Commission ("FERC"), as well as the Federal Communications Commission, the Surface Transportation Board (and its predecessor, the Interstate Commerce Commission), the Canadian Radio-Television and Telecommunications Commission, and regulatory agencies, courts, and legislative committees in over 40 states, including the Public Utilities Commission of Ohio ("PUCO" or the "Commission").

In 1995, I was appointed by the PUCT to the Synchronous Interconnection Committee to advise the Texas legislature on the costs and benefits of connecting Texas to the national electric transmission grid. In addition, I served as an outside director of Georgia System Operations Corporation, the system operator for electric cooperatives in Georgia.

I have served as Lecturer in the Finance Department at the University of Texas at Austin and taught in the evening graduate program at St. Edward's University for twenty years. In addition, I have lectured on economic and regulatory topics in programs sponsored by universities and industry groups. I have taught in hundreds of educational programs for financial analysts in programs sponsored by the Association for Investment Management and Research, the Financial Analysts Review, and local financial analysts societies. These programs have been presented in Asia, Europe, and North America, including the Financial Analysts Seminar at Northwestern University. I hold the Chartered Financial Analyst (CFA®) designation and have served as Vice President for Membership of the Financial Management Association. I have also served on the Board of Directors of the North Carolina Society of Financial Analysts. I was elected Vice Chairman of the National Association of Regulatory Commissioners (NARUC) Subcommittee on Economics and appointed to NARUC's Technical Subcommittee on the National Energy Act. I have also

served as an officer of various other professional organizations and societies. A resume containing the details of my experience and qualifications is attached as Exhibit WEA-1.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. My rebuttal responds to the testimony of Mr. Lane Kollen, on behalf of the Ohio Energy Group, and Dr. John W. Wilson, on behalf of Ormet Primary Aluminum Corporation, concerning the fair return on common equity ("ROE") for Ohio Power Company ("OPCo"), hereby also referred to as "AEP Ohio" or "the Company".

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION ON RELATED MATTERS?

A. Yes. I have testified before the Commission in a number of cases on ROE and other financial matters involving a number of different utilities since 1983. Most recently I submitted testimony in the Company's retail distribution service rate cases, 11-351-EL-AIR and 11-352-EL-AIR.

Q. WHAT ROE DID MR. KOLLEN AND DR. WILSON RECOMMEND FOR AEP OHIO IN THIS CASE?

A. Mr. Kollen identified a 7% "starting point" for ROE,[1] while Dr. Wilson supports an ROE in the range of 8.0% to 9.0%.[2] Mr. Kollen correctly identifies the Commission's objective in this case of, "ensuring an incumbent electric utility provider's ability to attract capital investment to meet its FRR obligations."[3] My rebuttal testimony demonstrates that these ROE recommendations fall far short of an ROE necessary for the Company to attract capital.

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[1] Kollen Direct at 9, Volume X of May 31, 2012 Kollen Transcript. at 2877.
[2] Wilson Direct at 5.
[3] Kollen Direct at 5.

Q. PLEASE SUMMARIZE THE CONCLUSIONS OF YOUR REBUTTAL TESTIMONY.

A. Investors have many options for their funds and competition for investment dollars is intense. The ROEs recommended by Mr. Kollen and Dr. Wilson are simply far too low and fail to reflect the risk perceptions and return requirements of real-world investors in the capital markets. Because their recommendations fail to provide AEP Ohio an opportunity to earn a return commensurate with other investments of comparable risk, they violate the regulatory and economic standards underlying a fair rate of return. My rebuttal testimony demonstrates that:

- Mr. Kollen's ROE recommendation is overly simplistic and based on speculations about embedded debt costs and pre-tax equity returns that are not indicative of the current ROEs necessary to attract capital investment. He made no evaluation of the financial impact of his recommendations on the Company,[4] and my testimony demonstrates that his recommendation would not allow the company to attract capital investment.
- Dr. Wilson conducts a Discounted Cash Flow ("DCF") analysis and applies the Capital Asset Pricing Model ("CAPM"), purportedly mirroring the Staff's Report of Investigation ("Staff Report") in AEP Ohio's last retail rate case. Dr. Wilson's applications of these models are flawed and violate the very principles Dr. Wilson articulates in his own testimony. Correcting and supplementing Dr. Wilson's analyses resulted in the following cost of equity estimates:

[4] Mr. Kollen's response to Examiner Tauber's questions, Volume X of May 31, 2012 Transcript at 2846.

TABLE WEA-1
COST OF EQUITY – REVISED WILSON ANALYSES

		Indicated ROE		
Revised Wilson DCF Analysis				
Corrected Mid-Year Cash Flows	(a)	10.03%		
AEP DCF Estimate	(a)	10.60%		
Staff Proxy Group Including AEP	(a)	10.10%		
Revised Wilson CAPM Analysis				
Current Bond Yields	(b)	10.88%		
Projected Bond Yields	(c)	11.28%		
Average CAPM		11.08%		
Average - Revised Wilson Results	(d)	10.59%		
Baseline Cost of Equity Range	(e)	10.09%	--	11.09%
ROE Range inc. Flotation Costs	(f)	10.24%	--	11.26%

(a) Exhibit WEA-5.
(b) Exhibit WEA-6.
(c) Exhibit WEA-7.
(d) Average of revised DCF inc. AEP and average of current and projected CAPM.
(e) Average of revised Wilson results, plus (minus) 50 basis points.
(f) Baseline cost of equity range incorporating Wilson flotation cost adjustment factor.

With respect to the analyses contained in Dr. Wilson's testimony, I concluded that:

- The DCF results are biased downward because the methodology incorrectly assumes that investors receive dividend payments at the end of the year, instead of through periodic payments;
- The results of the historical CAPM analysis should be entirely ignored because:
  - Historical data violates the assumptions of the CAPM approach and fails to reflect current capital market requirements;
  - Yields on medium-term Treasury notes are irrelevant in estimating the required return for common equity, which is a long-term asset;
  - Dr. Wilson's application ignored adjustments to correct for differences in firm size that were quantified and explained in the same data source on which his CAPM was based.
- Dr. Wilson's recommendation is woefully inadequate to compensate investors in AEP Ohio when evaluated against the results of the expected earnings approach for his own proxy utilities;
- Allowed ROEs also demonstrate that the recommended ROE range contained in Dr. Wilson's testimony is too low to be reasonable;

- DCF cost of equity estimates for a low-risk group of non-regulated companies provide an important benchmark that is consistent with financial theory, how real-world investors operate, and the guidelines underlying a fair ROE;
- Because of flaws in the selection criteria:
  - Wilson's proxy group is artificially constrained to only seven companies, which undermines the reliability of their quantitative results;
  - Almost one-half of the utilities in Wilson's proxy group are rated single-A, which implies less risk and a lower rate of return than what is necessary to compensate for the risks of AEP Ohio's "BBB" rating;
  - AEP Ohio's parent, American Electric Power Company, Inc. ("AEP"), was erroneously excluded from Wilson's analysis, even though it meets the selection criteria and provides the Company's only source of investor-supplied equity capital.
- If AEP Ohio is unable to offer a return similar to that available from other opportunities of comparable risk, investors will become unwilling to supply the capital on reasonable terms, and investors will be denied an opportunity to earn their opportunity cost of capital; and,
- The evidence contained in my rebuttal testimony supports the reasonableness of the 10.50% ROE requested for AEP Ohio in this case, and supports an ROE within the upper end of the 10.24% to 11.26% range based on corrections and revisions to Wilson's analyses.

II. MR. KOLLEN'S AND DR. WILSON'S ROE RECOMMENDATIONS FAIL REASONABLENESS TEST OF ATTRACTING INVESTMENT

Q. DR. AVERA, WHAT IS THE FUNDAMENTAL REQUIREMENT OF AN ROE THAT WILL ATTRACT CAPITAL INVESTMENT?

A. Mr. Kollen acknowledges that the ROE must be sufficient to protect the Company and attract investment by being in a "zone of reasonableness."[5] To attract investment, the utility must have an opportunity to earn a return competitive with comparable risk investments. If AEP Ohio is expected to earn less than

[5] Kollen Direct at 5, 9; Tr. Vol. X at 2846 (May 31, 2012).

competitive investments, capital will not be forthcoming and electric customers in Ohio will be exposed to degraded electric supplies. Dr. Wilson recognizes the limitations of models and the importance informed judgment in setting the ROE to meet this competitive benchmark:

> Ultimately, the "right" ROE determination of this (and any) utility rate case requires a substantial measure of informed judgment. While "experts" may be able to offer the Commission facts, analyses and insights that will help to inform a reasonable range within which essential judgment can be exercised, it is ultimately a determination that must depend on the Commission's priorities, objectives and exercise of discretion, which no model set of "expert" calculations, or sworn opinions can replace.[6]

But after articulating these principles, Dr. Wilson's only analyses consisted of mechanically inserting inputs into models that the Staff had presented in a past case. He did not test the inputs or outputs to the model for reasonableness, nor did he use informed judgment to determine if the proxy companies used by the Staff in the past were comparable in risk then, much less now.

My testimony demonstrates that the "comparable" utilities used by Dr. Wilson are less risky than AEP Ohio. This difference in relative risk is greater now than when the Staff did their report in the last retail case because of investors' negative reaction to regulatory uncertainty in Ohio. As Dr. Wilson is aware, the settlement in AEP Ohio's last retail rate case specified an ROE of 10.2%, which is considerably higher than results of the Staff DCF and CAPM models relied on by Dr. Wilson, and well in excess of the recommended ROE range of 8.59% to 9.60% from the Staff Report.[7] As Dr. Wilson granted during his cross-examination, he is also cognizant that regulatory commissions around

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[6] Wilson Direct at 7-8.

[7] Tr. Vol. XIV at 3910-3915.

the country and the FERC have been granting considerably higher returns in the 10% to 11% range.[8]

Competition for capital is intense, and utilities such as AEP Ohio must be granted the opportunity to earn an ROE comparable to contemporaneous returns available from alternative investments if the Company is to maintain its financial flexibility and ability to attract capital. According to the principles articulated by Dr. Wilson cited above, rather than becoming bogged down in lengthy, pedantic arguments over the merits of one quantitative approach versus another, the PUCO can make a determination on the key, threshold question, "Do the ROE recommendations of Mr. Kollen and Dr. Wilson meet the threshold test of reasonableness required by established regulatory and economic standards governing a fair rate of return on equity?" Based on the evidence discussed subsequently, the answer is clearly, "No."

Q. WHAT ROLE DOES REGULATION PLAY IN ENSURING THE COMPANY'S ACCESS TO CAPITAL?

A. Considering investors' heightened awareness of the risks associated with the electric power industry, and the implications of ongoing volatility in the markets for long-term capital, supportive regulation remains crucial in preserving AEP Ohio's access to capital. Capital markets recognize that constructive regulation is a key ingredient in supporting utility credit ratings and financial integrity, particularly during times of adverse conditions. Moreover, considering the ongoing turmoil faced by investors, sensitivity to market and regulatory uncertainties has increased dramatically.

Q. WHAT BENCHMARKS ARE USEFUL IN EVALUATING THE EXTENT TO WHICH THE ROES RECOMMENDED BY MR. KOLLEN AND DR.

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[8] Tr. Vol. XIV, at 3913-3915.

WILSON MEET THIS FUNDAMENTAL REGULATORY REQUIREMENT?

A. AEP Ohio must compete for capital with all firms in the capital markets generally, and against firms in its own industry specifically. As discussed in detail subsequently, expected earned rates of return and allowed rates of return for utilities provide useful benchmarks to gauge the reasonableness of the ROEs recommended by Mr. Kollen and Dr. Wilson. Both Mr. Kollen and Dr. Wilson reference allowed returns and expected earned rates of return in their analyses.[9] The rates of return indicated by these approaches are summarized in Table WEA-2:

TABLE WEA-2
SUMMARY OF ROE BENCHMARKS

	Indicated ROE
Expected Earnings Approach	
Value Line Electric Utilities	10.50%
Wilson Proxy Group	10.46%
Allowed ROEs	
Wilson Proxy Group	10.49%
AEP	10.65%
Average	10.53%
Non-Utility DCF	10.9% - 13.2%

Moreover, as noted later in my rebuttal testimony, because utilities must compete for capital with firms in the competitive sector of the economy, rates of return for low-risk, non-utility firms also provide a guide in evaluating ROE recommendations.

[9] Dr. Wilson also cited earned returns based on year-end equity. Wilson Direct at 6. Dr. Wilson acknowledges that he also uses earned returns on average equity. Tr. Vol. XIV at 3879-3882. In my experience, the return on average equity is most relevant to investors.

Q. WHAT DO THESE BENCHMARKS IMPLY WITH RESPECT TO MR. KOLLEN AND DR. WILSON'S RECOMMENDED ROE?

A. These benchmarks clearly demonstrate that the 7.0% and the 8.0% to 9.0% ROE recommendations of Mr. Kollen and Dr. Wilson, respectively, are far too low to allow AEP Ohio to attract capital, and violate the economic and regulatory standards underlying a fair ROE.

Q. IS THERE ANY RELATIONSHIP BETWEEN THE ROE PROPOSED BY MR. KOLLEN AND THE ROE NECESSARY TO ATTRACT CAPITAL TO AEP OHIO?

A. No. Mr. Kollen reasons that an ROE of 7.0% is equivalent to a before-tax return of 10.8%, which is double the cost of new long-term debt, and that 7.0% is comparable to earned returns for other AEP affiliates in 2010 and 2011. But these comparisons are meaningless for a number of important reasons. First, equity investors rationally focus on after-tax returns, not on the 10.8% pre-tax figure cited by Mr. Kollen. The certainty of tax payments means that the after-tax return is the benchmark in the regulatory arena for ROE.

Second, equity investors are exposed to considerably greater levels of risk than debt holders, and the after-tax return on equity must be significantly higher than debt yields to attract capital. As demonstrated by the controversy that surrounds establishing a fair ROE in the regulatory arena, there is no basis to support Mr. Kollen's position that his simplistic comparison between a hypothetical pre-tax return and bond yields has any relationship whatsoever to the ROE required by investors.

As to the actual historical earnings of other AEP subsidiaries, investors understand that regulation offers only an opportunity to earn the allowed ROE that meets the end result test. The fact that the actual earned rates of return for

other AEP subsidiaries have fallen significantly below their allowed ROEs certainly demonstrates the problems associated with attrition, but it provides no justification for Mr. Kollen's unsupported ROE recommendation in this case. While other AEP subsidiaries may at least have some prospect of earning an authorized ROE that meets established regulatory and economic standards, in the case of Mr. Kollen's proposal, that opportunity would be completely denied. Indeed, Mr. Kollen granted that he had not made an assessment of the financial impact that his recommendations would have the Company.[10]

Q. HAVE THERE BEEN ANY CHANGES IN CAPITAL MARKET CONDITIONS THAT WOULD JUSTIFY AN ROE BELOW THE SETTLEMENT ROE AND OTHER BENCHMARKS?

A. No. As Value Line recently recognized, "It has been a turbulent year for the financial markets, to say the least."[11] Investors have faced a myriad of challenges and uncertainties, including the threat of a United States government default, political brinkmanship over raising the federal debt ceiling, and S&P's subsequent downgrade of its United States sovereign debt rating.[12] The sovereign debt crisis in Europe has also dealt a harsh blow to investor confidence, and concerns over potential exposure to a Euro-zone default continues to undermine confidence in the financial and banking sector.[13] Meanwhile, speculation that the economy remains exposed to a potential "double-dip" recession persists, with unemployment remaining stubbornly high, lackluster consumer confidence, rising petroleum prices, and continued weakness plaguing the real estate sector.

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[10] Mr. Kollen's response to Examiner Tauber's questions, Tr. Vol. X at 2846 (May 31, 2012).

[11] The Value Line Investment Survey at 541 (Dec. 9, 2011).

[12] See, e.g., Standard & Poor's Corporation, "Economic Forecast: Still Treading Water," RatingsDirect (Aug. 17, 2011).

[13] *See, e.g.,* Standard & Poor's Corporation, "U.S. Risks To The Forecast: Choppy Seas," *RatingsDirect* (Dec. 21, 2011).

Investors have had to confront ongoing volatility in share prices and stress in the credit markets,[14] and in response have repeatedly fled to the safety of United States Treasury bonds. As Fidelity Investments recently reported to investors:

> It's been quite a year, one of violent mood swings but little overall direction. We seem to be in a time warp where everything happens faster and faster. Everything seems to be correlated. There are very few places to hide, and even those places don't feel like good options anymore.[15]

Fidelity Investments concluded that, "2012 will offer more of the same, with significant ups and downs driven by three major factors: Europe, China, and the U.S."[16]

Fluctuations in the price of gold and other commodities also attests to investors' heightened concerns over prospective challenges and risks, including the overhanging threat of inflation and renewed economic turmoil. Fidelity Investments noted that, "The sovereign debt crisis in the Euro-zone remains at the epicenter of the financial markets.[17] With respect to utilities, Moody's noted the dangers to credit availability associated with exposure to European banks,[18] and concluded:

> Over the past few months, we have been reminded that global financial markets, which are still receiving extraordinary intervention benefits by sovereign governments, are exposed to turmoil. Access to the capital

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[14] *See, e.g.*, Gongloff, Mark, "Stock Rebound Is a Crisis Flashback – Late Surge Recalls Market's Volatility at Peak of Credit Difficulties; Unusual Correlations," *Wall Street Journal* at B1 (Feb. 6, 2010); Lauricella, Tom, "Stocks Nose-Dive Amid Global Fears – Weak Outlook, Government Debt Worries Drive Dow's Biggest Point Drop Since '08," *Wall Street Journal* at A1 (Aug. 5, 2011).

[15] Fidelity Investments, "2012 markets: Expect ups and downs," *Fidelity Viewpoints* (Dec. 21, 2011).

[16] *Id.*

[17] *Id.*

[18] Moody's Investors Service, "Electric Utilities Stable But Face Increasing Regulatory Uncertainty," *Industry Outlook* (Jul. 22, 2010).

> markets could therefore become intermittent, even for safer, more defensive sectors like the power industry.[19]

Uncertainties surrounding economic and capital market conditions heighten the risks faced by utilities, which face a variety of operating and financial challenges.

The ongoing potential for renewed turmoil in the capital markets has been seen repeatedly, with common stock prices exhibiting the dramatic volatility that is indicative of heightened sensitivity to risk. Nowhere has this been more evident than in the market for Treasury bonds, with yields being pushed significantly lower due to a global "flight to safety" in the face of rising political, economic, and capital market risks. In turn, this has led to a dramatic increase in risk premiums, as illustrated by the spreads between triple-B utility bond yields and 30-year Treasuries shown in Figure WEA-1, below:

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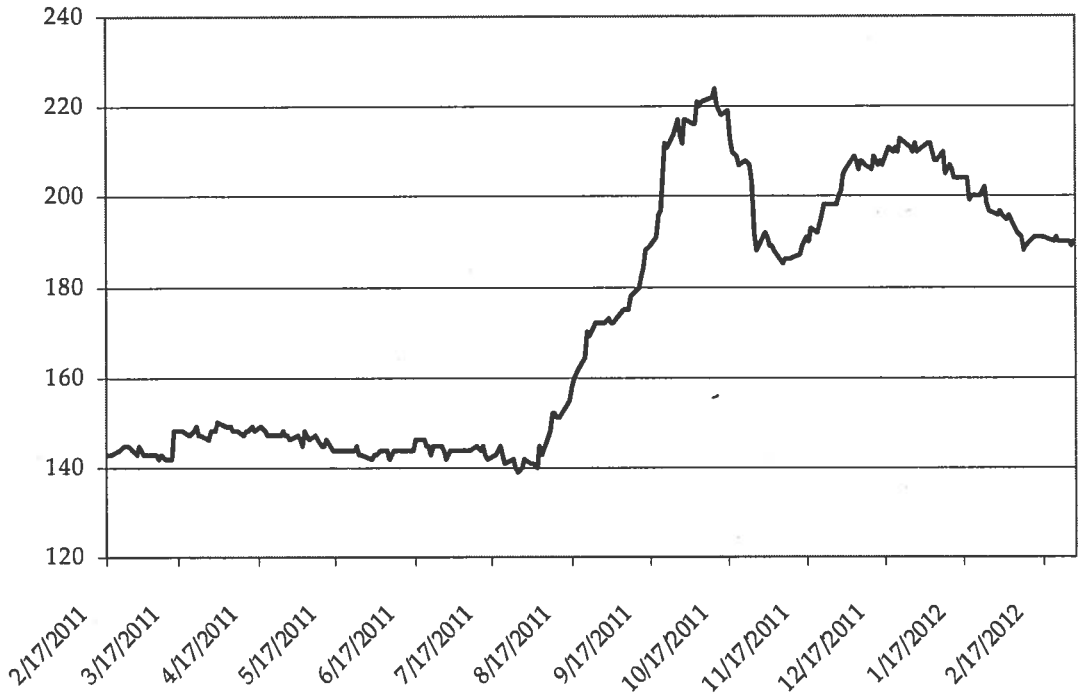
[19] Moody's Investors Service, "Regulation Provides Stability As Risks Mount," *Industry Outlook* (Jan. 19, 2011).

FIGURE WEA-1
YIELD SPREAD (BASIS POINTS) – BBB UTILITY – 30-YR. TREASURY



This increase in the yield spread indicates that the additional compensation investors demand to take on higher risks has increased. As S&P observed:

> Standard & Poor's U.S. speculative-grade composite spread, which measures the extra yield above U.S. Treasury bonds that investors demand to hold the bonds of riskier companies, widened by 63% to 781 basis points (bps) from April 18, 2011, to Sept. 30, 2011. This sharp expansion reflected the bond market's increasing aversion to credit risk in an uncertain and riskier environment. … During periods of stress, correlations frequently increase among risky asset classes such as the relationship between the return on speculative-grade bonds and the return from equities.[20]

This increase in the yield spread indicates that the additional compensation that investors demand to take on higher risks has increased since Staff's analyses were prepared. Equity risk premiums cannot be observed directly, but because

[20] Standard & Poor's Corporation, "Recent Expansion In Credit Spreads Shows Bond Market Stress, But Less Severe Than During The Financial Crisis," *RatingsDirect* (Oct. 11, 2011).

common stock investors are the last in line with respect to their claim on a utility's cash flows, higher yield spreads imply an even steeper increase in the additional return required from an investment in common equity. While Dr. Wilson cited the drop in Treasury interest rates as a reason regulators might lower their allowed returns in the future,[21] the fall in Treasury bond yields is indicative of investors' reticence to invest in riskier assets. In short, heightened capital market and economic uncertainties, and the increase in risk premiums demanded by investors, confirm my conclusions in AEP Ohio's last retail rate case that the ROE recommendations contained in the Staff Report were too low to be reasonable, and further indicate that the ROEs proffered by Mr. Kollen and Dr. Wilson are woefully inadequate.

Q. WHAT OTHER CONSIDERATIONS HAVE IMPACTED INVESTORS' RISK ASSESSMENT SINCE AEP OHIO'S LAST RETAIL RATE CASE?

A. On February 23, 2012, the PUCO rescinded the transitional electric rate structure for AEP Ohio that had been approved in December 2011. Concerns over the implications for the Company's cash flows and the negative impact on projected earnings caused consternation in the investment community. Moody's concluded that, "Recent events cause concern that OPCo's regulatory framework may be heading toward less consistency and greater unpredictability."[22] Both Moody's and S&P observed that prolonged deterioration in the regulatory environment or suppressed returns could result in lower credit ratings.[23]

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[21] Tr. Vol. XIV at 3905-3909.

[22] Moody's Investors Service, "Credit Opinion: Ohio Power Company," *Global Credit Research* (Apr. 5, 2012).

[23] *Id.*; Standard & Poor's Corporation, "Bulletin: Ohio Utility Regulator's Decision Could Be Negative For Credit Quality Of Power Companies In The State," *RatingsDirect* (Feb. 27, 2012).

Q. ARE INVESTORS LIKELY TO BE REASSURED BY STAFF AND INTERVENOR RECOMMENDATIONS IN THIS PROCEEDING?

A. Certainly not. As my rebuttal testimony demonstrates, the ROE recommendations of Mr. Kollen and Dr. Wilson fall far below investors' required rate of return and do not meet accepted economic and regulatory standards. The financial implications of the Staff and intervenor proposals on AEP Ohio are examined in the testimony of Mr. William A. Allen. Dr. Wilson noted the link between financial integrity and earned rates of return,[24] and as Mr. Allen documents, these proposals imply ROEs that fall *below* the yields on utility bonds. Such an outcome violates the risk-return tradeoff that is fundamental to finance and would undermine AEP Ohio's financial integrity, as well as being punitive to investors.

Q. WHAT ARE THE POTENTIAL CONSEQUENCES OF A REGULATORY FRAMEWORK BASED ON AN ROE THAT FALLS BELOW WHAT IS REQUIRED TO MEET THE FINANCIAL END-RESULT TEST?

A. Considering the risks faced by AEP Ohio, the need to fund ongoing investment in utility infrastructure, and the imperative of maintaining access to capital during times of adversity, using an ROE that fails to provide investors with an opportunity to earn returns commensurate with companies of comparable risk would weaken the Company's financial integrity, violate the capital attraction standard, and send the wrong signal to investors at a time when access to capital markets is crucial for the Company.

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[24] Wilson Direct at 5.

III. ROE BENCHMARKS

Q. DID MR. KOLLEN OR DR. WILSON EVALUATE THE REASONABLENESS OF THEIR ROE RECOMMENDATIONS AGAINST ACCEPTED BENCHMARKS?

A. No. As discussed earlier, AEP Ohio must have an opportunity to earn a return competitive with comparable risk investments to be able to attract capital. Mr. Kollen acknowledged that the ROE must fall within a zone of reasonableness and Dr. Wilson recognized the need for informed judgment, but neither witness made any meaningful attempt to ensure that their recommended ROE was sufficient to pass fundamental economic and statutory tests of reasonableness.

Q. DOES THE EXPECTED EARNINGS METHOD REPRESENT A VALID ROE BENCHMARK?

A. Yes. Reference to rates of return available from alternative investments of comparable risk can provide an important benchmark in assessing the return necessary to assure confidence in the financial integrity of a firm and its ability to attract capital. This expected earnings approach is consistent with the economic underpinnings for a fair rate of return established by the U.S. Supreme Court in *Bluefield* and *Hope*. Moreover, it avoids the complexities and limitations of capital market methods and instead focuses on the returns earned on book equity, which are readily available to investors.

Q. WHAT ECONOMIC PREMISE UNDERLIES THE EXPECTED EARNINGS APPROACH?

A. The simple, but powerful concept underlying the expected earnings approach is that investors compare each investment alternative with the next best opportunity. If the utility is unable to offer a return similar to that available from other opportunities of comparable risk, investors will become unwilling to supply the

capital on reasonable terms. For existing investors, denying the utility an opportunity to earn what is available from other similar risk alternatives prevents them from earning their opportunity cost of capital. In this situation the government is effectively taking the value of investors' capital without adequate compensation. The expected earnings approach is consistent with the economic rationale underpinning established regulatory standards, which specifies a methodology to determine an ROE benchmark based on earned rates of return for a peer group of other regional utilities.

Q. WHAT ARE THE IMPLICATIONS OF SETTING AN ALLOWED ROE BELOW THE RETURNS AVAILABLE FROM OTHER INVESTMENTS OF COMPARABLE RISK?

A. It is consistent with economic logic that, when choosing between two opportunities of comparable risk, investors will select the investment with the higher expected return. If the utility is unable to offer a return similar to that available from other opportunities of comparable risk, investors will become unwilling to supply the capital on reasonable terms. For existing investors, denying the utility an opportunity to earn what is available from other similar risk alternatives prevents them from earning their opportunity cost of capital. In this situation the regulator is effectively taking the value of investors' capital without adequate compensation.

Q. HOW IS THE COMPARISON OF OPPORTUNITY COSTS TYPICALLY IMPLEMENTED?

A. The traditional comparable earnings test identifies a group of companies that are believed to be comparable in risk to the utility. The actual earnings of those companies on the book value of their investment are then compared to the allowed return of the utility. While the traditional comparable earnings test is

implemented using historical data taken from the accounting records, it is also common to use projections of returns on book investment, such as those published by The Value Line Investment Survey ("Value Line"), which is a recognized investment advisory publication. Because these returns on book value equity are analogous to the allowed return on a utility's rate base, this measure of opportunity costs results in a direct, "apples to apples" comparison.

Q. HAVE THE EARNINGS ON BOOK VALUE BEEN RECOGNIZED AS A VALID ROE BENCHMARK?

A. Yes. A textbook prepared for the Society of Utility and Regulatory Analysts labels the comparable earnings approach the "granddaddy of cost of equity methods," and points out that the amount of subjective judgment required to implement this method is "minimal", particularly when compared to the DCF and CAPM methods.[25] The *Practitioner's Guide* notes that the comparable earnings test method is "easily understood" and firmly anchored in the regulatory tradition of the *Bluefield* and *Hope* cases,[26] as well as sound regulatory economics.

Q. WHAT ROE IS IMPLIED BY THE RESULTS OF THE EXPECTED EARNINGS APPROACH?

A. Value Line reports that electric utilities as a whole are anticipated to earn a return of 10.5% during its 2015-2017 forecast horizon.[27] A return that is significantly below the level that Value Line expects for electric utilities generally would undermine confidence in the financial integrity of the firm and its ability to attract capital.

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[25] Parcell, David C., *The Cost of Capital—a Practitioner's Guide* (1997).
[26] *Id.* at 7-3.
[27] The Value Line Investment Survey at 137 (May 25, 2012).

Meanwhile, the results of the expected earnings approach for Dr. Wilson's proxy group of electric utilities are presented in Exhibit WEA-2. As shown there, this method results in an implied cost of equity for Dr. Wilson's proxy group of 10.46%. Similarly, rates of return on common equity compiled by the Staff and referenced in their own workpapers implied an average ROE of 10.82%.[28] It is a very simple, conceptual principle that when evaluating two investments of comparable risk, investors will choose the alternative with the higher expected return. If AEP Ohio is only allowed the opportunity to earn a return on the book value of its equity investment at Mr. Kollen's 7% "starting point" or within Dr. Wilson's 8.0% to 9.0% range, while the utilities in his own proxy group are expected to earn an average of approximately 10.5%, the implications are clear – AEP Ohio's investors will be denied the ability to earn their opportunity cost.

Q. HAVE OTHER REGULATORS RECOGNIZED THIS COMPARABLE EARNINGS BENCHMARK?

A. Yes. I have used the comparable earnings approach in my consulting, teaching, and testimony for 35 years, and it has been widely referenced in regulatory decision-making. A NARUC survey reported that 19 regulatory jurisdictions cited the comparable earnings test as a primary method favored in determining the allowed rate of return.[29] While this method predominated before the DCF model became fashionable with academic experts, I continue to encounter it around the country.

Indeed, the Virginia State Corporation Commission ("VSCC") is required by statute (Virginia Code § 56-585.1.A.2.a) to consider the earned returns on book

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[28] See Staff Work Paper 1, Staff Report at fn. 2.

[29] "Utility Regulatory Policy in the U.S. and Canada, 1995-1996," National Association of Regulatory Utility Commissioners (December 1996). In my experience, while a few Commissions have explicitly rejected comparable earnings, most regard it as a useful tool.

value of electric utilities in its region. Under this statute, the allowed ROE must be no lower than the average historical earned return on book equity for a peer group of regional utilities; nor can it exceed this peer group threshold by more than 300 basis points. This methodology adopted by the Virginia Legislature is entirely consistent with the economic rationale underpinning my expected earnings approach. In an order issued on July 15, 2010 the VSCC in Docket PUE-2009-00030, the VSCC established the allowed ROE for APCo based solely on the earned returns on book value for a peer group of other electric utilities. In testimony in Case No. PUE-2011-00037, APCo's last base rate proceeding in Virginia, the Staff witness for the VSCC calculated ROEs consistent with this legislative requirement ranging from 10.33% to 11.89%. These results are reproduced as Exhibit WEA-3.

Q. DID MR. KOLLEN ALSO REFER TO EARNED RATES OF RETURN AS A BENCHMARK?

A. Yes. But rather than consider expectations for a proxy group of other, non-affiliated utilities, as presented above, Mr. Kollen focused exclusively on historical earned returns of some AEP affiliates for 2010 and 2011.[30] Of course the difference between Mr. Kollen's 7% ROE proposal and the actual earnings of AEP Ohio's affiliates is that these utilities (*e.g.*,. Indiana Michigan Power Company and Appalachian Power Company) have allowed returns that exceed their actual earnings. Both companies are trying to rectify attrition and the resulting earnings shortfalls with their regulators. In contrast, Mr. Kollen is turning accepted regulatory policy on its head, by recommending that the regulatory regime incorporate an ROE that reflects a built-in shortfall that would deny AEP Ohio any opportunity to earn a competitive return.

[30] Kollen Direct at 9.

Q. WHAT OTHER EVIDENCE INDICATES THAT THE ROE RECOMMENDATIONS OF MR. KOLLEN AND DR. WILSON ARE INSUFFICIENT TO MEET REGULATORY STANDARDS?

A. Reference to allowed rates of return for other utilities provide an alternative guideline that can be used to assess the extent to which the ROE recommendations of these witnesses are comparable and sufficient. As shown on Exhibit WEA-4, data from *AUS Monthly Report* indicates that the average authorized ROE for the firms in Dr. Wilson's proxy group is 10.49%, with an average allowed ROE reported for AEP of 10.65%. These average authorized returns exceeds the ROE recommendations of Mr. Kollen and Dr. Wilson by a wide margin, and confirms that even the 9.0% top end of Dr. Wilson's range is woefully inadequate.

Q. DO UTILITIES HAVE TO COMPETE WITH NON-REGULATED FIRMS FOR CAPITAL?

A. Yes. The cost of capital is an opportunity cost based on the returns that investors could realize by putting their money in other alternatives. Clearly, the total capital invested in utility stocks is only the tip of the iceberg of total common stock investment, and there are a plethora of other enterprises available to investors beyond those in the utility industry. Utilities must compete for capital, not just against firms in their own industry, but with other investment opportunities of comparable risk. Indeed, modern portfolio theory is built on the assumption that rational investors will hold a diverse portfolio of stocks, not just companies in a single industry.

Q. DO COST OF EQUITY ESTIMATES FOR NON-UTILITY COMPANIES CONFIRM THAT MR. KOLLEN'S AND DR. WILSON'S RECOMMENDED ROES ARE TOO LOW TO ATTRACT CAPITAL?

A. Yes. I applied the constant growth DCF model to a proxy group of non-utility firms composed of those U.S. companies followed by Value Line that: (1) pay common dividends; (2) have a Safety Rank of "1"; (3) have a Financial Strength Rating of "B++" or greater; (4) have a beta of 0.65 or less; and, (5) have investment grade credit ratings from S&P.

Table WEA-3 compares the Non-Utility Group with Dr. Wilson's proxy group and AEP Ohio across four key indicators of investment risk. Because the Company does not have publicly traded common stock, the Value Line risk measures shown reflect those published for the Company's parent, AEP:

TABLE WEA-3
COMPARISON OF RISK INDICATORS

	S&P	Value Line		
Proxy Group	Credit Rating	Safety Rank	Financial Strength	Beta
Non-Utility	A	1	A+	0.66
Wilson	BBB+	2	B++	0.69
AEP Ohio	BBB	3	B++	0.70

With respect to the Non-Utility Group, its average corporate credit rating is three notches higher than the "BBB" rating assigned to AEP Ohio. Similarly, its average Safety Rank and Financial Strength Rating are both superior to the values corresponding to the Company and the group of utilities, with its 0.66 average beta also suggesting less risk. The indicators of investment risk considered in my analysis provide a sound, objective, consistent, and conservative basis to evaluate relative risks across companies and industry sectors. These measures incorporate a broad spectrum of risks, including financial and business

position, the impact of regulation, relative size, and exposure to company specific factors, and they apply equally to regulated and unregulated firms. Indeed, the core idea of modern portfolio theory is that investors will diversify their holdings across multiple firms and industry groups, so that the risk of a stock is directly proportional to its beta, not the extent of competition or the freedom to set prices.

Q. IS IT CONSISTENT WITH THE *BLUEFIELD* AND *HOPE* CASES TO CONSIDER REQUIRED RETURNS FOR NON-UTILITY COMPANIES?

A. Yes. The cost of equity capital in the competitive sector of the economy forms the very underpinning for utility ROEs because regulation purports to serve as a substitute for the actions of competitive markets. The Supreme Court has recognized that it is the degree of risk, not the nature of the business, which is relevant in evaluating an allowed ROE for a utility. The *Bluefield* case refers to "business undertakings attended with comparable risks and uncertainties."[31] It does not restrict consideration to other utilities. Similarly, the *Hope* case states:

> By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks.[32]

As in the *Bluefield* decision, there is nothing to restrict "other enterprises" solely to the utility industry.

Indeed, in teaching regulatory policy I usually observe that in the early applications of the comparable earnings approach, utilities were explicitly eliminated due to a concern about circularity. In other words, soon after the *Hope* decision regulatory commissions did not want to get involved in circular logic by looking to the returns of utilities that were established by the same or similar

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[31] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923).
[32] *Federal Power Comm'n v. Hope Natural Gas Co.* (320 U.S. 391, 1944).

regulatory commissions in the same geographic region. To avoid circularity, regulators looked only to the returns of non-utility companies.

Q. HOW DID YOU DETERMINE THE DIVIDEND YIELD FOR THE NON-UTILITY GROUP?

A. Estimates of dividends to be paid by each of these utilities over the next twelve months, obtained from Value Line, served as D_1. This annual dividend was then divided by a 30-day average stock price for each utility to arrive at the expected dividend yield. The expected dividends, stock prices, and resulting dividend yields for the firms in the Non-Utility Group are presented on page 1 of Exhibit WEA-5.

Q. WHAT ARE SECURITY ANALYSTS CURRENTLY PROJECTING IN THE WAY OF GROWTH FOR THE FIRMS IN THE NON-UTILITY GROUP?

A. The projected EPS growth rates for each of the firms in the Non-Utility Group reported by Value Line, Thomson Reuters ("IBES"), and Zacks Investment Research ("Zacks") are displayed on page 2 of Exhibit WEA-5.[33]

Q. HOW ELSE ARE INVESTORS' EXPECTATIONS OF FUTURE LONG-TERM GROWTH PROSPECTS OFTEN ESTIMATED WHEN APPLYING THE CONSTANT GROWTH DCF MODEL?

A. In constant growth theory, growth in book equity will be equal to the product of the earnings retention ratio (one minus the dividend payout ratio) and the earned rate of return on book equity. Furthermore, if the earned rate of return and the payout ratio are constant over time, growth in earnings and dividends will be equal to growth in book value. Despite the fact that these conditions are seldom,

[33] Formerly I/B/E/S International, Inc., IBES growth rates are now compiled and published by Thomson Reuters.

if ever, met in practice, this "sustainable growth" approach may provide a rough guide for evaluating a firm's growth prospects and is frequently proposed in regulatory proceedings.

Accordingly, while I believe that analysts' forecasts provide a superior and more direct guide to investors' growth expectations, I have included the "sustainable growth" approach for completeness. The sustainable growth rate is calculated by the formula, $g = br+sv$, where "b" is the expected retention ratio, "r" is the expected earned return on equity, "s" is the percent of common equity expected to be issued annually as new common stock, and "v" is the equity accretion rate. These calculations are presented on Exhibit WEA-6.

Q. WHAT COST OF COMMON EQUITY ESTIMATES WERE IMPLIED FOR THE NON-UTILITY GROUP USING THE DCF MODEL?

A. After combining the dividend yields and respective growth projections for each company, the resulting cost of common equity estimates are shown on page 3 of Exhibit WEA-5.

Q. IN EVALUATING THE RESULTS OF THE DCF MODEL, IS IT APPROPRIATE TO ELIMINATE ESTIMATES THAT ARE EXTREME LOW OR HIGH OUTLIERS?

A. Yes. In applying quantitative methods to estimate the cost of equity, it is essential that the resulting values pass fundamental tests of reasonableness and economic logic. Accordingly, DCF estimates that are implausibly low or high should be eliminated when evaluating the results of this method.

Q. HAVE SIMILAR TESTS BEEN APPLIED BY REGULATORS?

A. Yes. FERC has noted that adjustments are justified where applications of the DCF approach produce illogical results. FERC evaluates DCF results against observable yields on long-term public utility debt and has recognized that it is

appropriate to eliminate estimates that do not sufficiently exceed this threshold. The practice of eliminating low-end outliers has been affirmed in numerous FERC proceedings,[34] and in its April 15, 2010 decision in *SoCal Edison*, FERC affirmed that, "it is reasonable to exclude any company whose low-end ROE fails to exceed the average bond yield by about 100 basis points or more."[35]

Q. WHAT WERE THE RESULTS OF YOUR DCF ANALYSIS FOR THE NON-UTILITY GROUP?

A. As summarized in Table WEA-4, below, after eliminating illogical low and high-end values, application of the constant growth DCF model resulted in cost of common equity estimates ranging from 10.9% to 13.2%:

TABLE WEA-4
DCF RESULTS – NON-UTILITY GROUP

	Cost of Equity	
Growth Rate	**Average**	**Midpoint**
Value Line	12.2%	12.6%
IBES	10.9%	10.9%
Zacks	11.7%	12.2%
br + sv	13.2%	12.1%

As discussed earlier, reference to the Non-Utility Group is consistent with established regulatory principles. Required returns for utilities should be in line with those of non-utility firms of comparable risk operating under the constraints of free competition.

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[34] *See, e.g., Virginia Electric Power Co.*, 123 FERC ¶ 61,098 at P 64 (2008).
[35] *Southern California Edison Co.*, 131 FERC ¶ 61,020 at P 55 (2010) ("*SoCal Edison*").

Q. HOW CAN YOU RECONCILE THESE DCF RESULTS FOR THE NON-UTILITY GROUP AGAINST THE SIGNIFICANTLY LOWER ESTIMATES PRODUCED FOR DR. WILSON'S PROXY GROUP?

A. First, it is important to be clear that the higher DCF results for the Non-Utility Group cannot be attributed to risk differences. As I documented earlier, the risks that investors associate with the group of non-utility firms - as measured by S&P's credit ratings and Value Line's Safety Rank, Financial Strength, and Beta – are lower than the risks investors associate with Dr. Wilson's proxy group and AEP Ohio. The objective evidence provided by these observable risk measures rules out a conclusion that the higher non-utility DCF estimates are associated with higher investment risk.

Rather, the divergence between the DCF results for these groups of utility and non-utility firms can be attributed to the fact that DCF estimates invariably depart from the returns that investors actually require because their expectations may not be captured by the inputs to the model, particularly the assumed growth rate. Because the actual cost of equity is unobservable, and DCF results inherently incorporate a degree of error, the cost of equity estimates for the Non-Utility Group provide an important benchmark in evaluating a fair ROE for AEP Ohio. There is no basis to conclude that DCF results for a group of utilities would be inherently more reliable than those for firms in the competitive sector, and the divergence between the DCF estimates for the groups of utilities and the Non-Utility Group suggests that both should be considered to ensure a balanced end-result.

Q. WHAT ARE THE IMPLICATIONS OF MR. KOLLEN'S AND DR. WILSON'S ROE RECOMMENDATION FOR INVESTORS?

A. As explained above, because their ROE recommendations fall significantly below observable benchmarks, they are inconsistent with regulatory and economic standards.[36] Considering the risks faced by AEP Ohio, the need to fund substantial investment in utility infrastructure, and the imperative of maintaining access to capital during times of adversity, setting an ROE that fails to provide investors with an opportunity to earn returns commensurate with companies of comparable risk would weaken the Company's financial integrity, violate the capital attraction standard, and send the wrong signal to investors at a time when access to capital markets is crucial for the Company. Given the importance of utility service to society, hampering the Company's ability to attract the capital needed to meet the economic and reliability needs of its service area is hardly conducive to economic growth or consistent with the broad public interest.

IV. REVISIONS TO DR. WILSON'S DCF APPLICATION

Q. DID DR. WILSON RECOGNIZE THE NEED TO REPLICATE INVESTORS' ACTUAL EXPECTATIONS WHEN APPLYING THE DCF MODEL?

A. Yes. Dr. Wilson makes a clear and correct argument that the benchmark for the inputs to the DCF model is what investors are actually expecting at a point in time.[37] He further emphasizes:

> In this regard, it is important to emphasize that the task of the rate of return analyst is to determine what dividend growth rate *investors* are expecting, and not simply to forecast a growth rate that analysts expect.

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[36] As explained subsequently, because Dr. Wilson's proxy group also fails to reflect the greater risks that investors associate with AEP Ohio, the resulting ROE range is similarly downward biased.

[37] Wilson Direct at 13.

> Nor does it matter whether investors expectations turn out to be right or wrong. Today's common stock prices, which enter the DCF calculation through the dividend yield term, depend upon today's expectations of future growth.[38]

Yet despite this emphasis on investors' current expectations, Dr. Wilson merely plugs in updated inputs to the Staff DCF models, with no consideration of the reasonableness of the underlying data or assumptions. Indeed, he recognizes problems with the growth rates used by the Staff in the past retail case but chose to ignore them:

> While, as explained below, I am not in "full agreement with the use of historic GNP growth as a proxy for investors' long-term dividend growth expectations in the non-constant growth model, in the analyses presented below I provide updated DCF calculations for Ohio Power in conformance with those in the Staff Report in order to establish a reasonable ROE in this matter."[39]

In cross-examination Dr. Wilson also agreed that, in contrast to the GNP growth rates relied on in the Staff's non-constant DCF model, Gross Domestic Product ("GDP") has been the predominant measure of economic activity since 1991.[40]

Q. ARE THERE COMPUTATIONAL ERRORS THAT INTRODUCE A DOWNWARD BIAS IN THE COST OF EQUITY ESTIMATES PRODUCED BY THE DCF ANALYSIS RELIED ON BY DR. WILSON?

A. Yes. The non-constant growth DCF approach applied in the Staff Report and adopted by Dr. Wilson develops estimates of the annual cash flows that would accrue to investors over the next 400 years. To arrive at the estimated cost of equity for each firm in the proxy group, the Staff DCF model relied on by Dr. Wilson uses the internal rate of return ("IRR") function available in Microsoft's Excel spreadsheet program to determine the discount rate (*i.e.*, investors' required

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[38] *Id.* at 13-14, emphasis in the original.
[39] *Id.* at 18-19.
[40] Tr. Vol. XIV at 3909-3911.

rate of return) that would equate this stream of cash flows with the current market price of the stock. This IRR calculation, however, assumes that annual cash flows are received at the end of each year, which is inconsistent with the periodic dividend payments that investors receive throughout the year and imparts a downward bias to the resulting cost of equity estimates.

This bias is illustrated in the example below, which assumes that an investor purchases a share of common stock for $25.00 in year 0, with the expectation of receiving dividend payments and selling the stock for a capital gain at the end of year 5. As shown in the example, assuming that the dividend cash flows are received at mid-year, and calculating a corresponding discount factor, implies a cost of equity of 11.4%:[41]

TABLE WEA-5
MID-YEAR VERSUS END-OF-YEAR DISCOUNTING

	Cash	Mid-Year		End of Year	
Year	Flow	PV Factor	NPV	PV Factor	NPV
0	-$25.00				
1	$1.00	0.94737	$0.95	0.89940	$0.90
2	$1.10	0.85027	$0.94	0.80891	$0.89
3	$1.21	0.76312	$0.92	0.72753	$0.88
4	$1.33	0.68491	$0.91	0.65434	$0.87
5	$1.46	0.61471	$0.90	0.58851	$0.86
End Yr 5	$35.00	0.58236	$20.38	0.58851	$20.60
Net Present Value			$25.00		$25.00
Discount Rate		11.4%		11.2%	

Meanwhile, incorrectly discounting the dividend payments as if they were received at year-end, as is the case with the IRR function used to arrive at the DCF estimates in Dr. Wilson's analysis, results in a lower implied cost of equity of 11.2%.

[41] This is the discount rate that equates the series of annual cash flows to the purchase price of $25.00.

Q. AFTER CORRECTING THIS ERROR, WHAT COST OF EQUITY IS IMPLIED BY THE DCF METHOD RELIED ON BY DR. WILSON?

A. As shown on Exhibit WEA-7, correcting the DCF method applied in the Staff Report to reflect mid-year discounting of cash flows results in an average implied cost of equity of 10.03%.

Q. WHAT COST OF EQUITY IS IMPLIED FOR AEP USING THE DCF APPROACH APPLIED IN THE STAFF REPORT?

A. As discussed earlier, AEP meets the criteria for inclusion in Dr. Wilson's proxy group and provides a logical basis on which to evaluate investors' required return for AEP Ohio. As shown on the far right-hand column of Exhibit WEA-7, application of the Staff DCF method to AEP results in an implied cost of equity of 10.60%. Including AEP in Dr. Wilson's proxy group analysis results in an average DCF cost of equity estimate of 10.10% percent.

V. CAPM RESULTS SHOULD BE IGNORED

Q. WHAT IS THE FUNDAMENTAL PROBLEM ASSOCIATED WITH THE CAPM APPROACH PRESENTED IN THE STAFF REPORT?

A. Like the DCF model, the CAPM is an *ex-ante,* or forward-looking model based on expectations of the future. As a result, in order to produce a meaningful estimate of investors' required rate of return, the CAPM must be applied using data that reflects the expectations of actual investors in the market. However, the CAPM application presented in the Staff Report and adopted by Dr. Wilson was based entirely on *historical* – not projected – rates of return. Morningstar recognized the primacy of current expectations:

> The cost of capital is always an expectational or forward-looking concept. While the past performance of an investment and other

> historical information can be good guides and are often used to estimate the required rate of return on capital, the expectations of future events are the only factors that actually determine cost of capital.[42]

Because it failed to look directly at the returns investors are currently requiring in the capital markets, Dr. Wilson's 6.796% historical CAPM estimate falls woefully short of investors' current required rate of return.

Q. IS THERE GOOD REASON TO ENTIRELY DISREGARD THE RESULTS OF HISTORICAL CAPM ANALYSES, SUCH AS THOSE PRESENTED BY DR. WILSON?

A. Yes. Applying the CAPM is complicated by the impact of the recent capital market turmoil and recession on investors' risk perceptions and required returns. The CAPM cost of common equity estimate is calibrated from investors' required risk premium between Treasury bonds and common stocks. As discussed earlier, in response to heightened uncertainties, investors have repeatedly sought a safe haven in U.S. government bonds and this "flight to safety" has pushed Treasury yields significantly lower while yield spreads for corporate debt widened. This distortion not only impacts the absolute level of the CAPM cost of equity estimate, but it also affects estimated risk premiums. Economic logic would suggest that investors' required risk premium for common stocks over Treasury bonds has also increased.

Meanwhile, the backward-looking approach adopted by Dr. Wilson incorrectly assumes that investors' assessment of the relative risk differences, and their required risk premium, between Treasury bonds and common stocks is constant and equal to some historical average. At no time in recent history has the fallacy of this assumption been demonstrated more concretely. This incongruity

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[42] *Morningstar*, "Ibbotson SBBI, 2012 Valuation Yearbook," at 21.

between investors' current expectations and requirements and historical risk premiums is particularly relevant during periods of heightened uncertainty and rapidly changing capital market conditions, such as those experienced recently.

As a result, there is every indication that the historical CAPM approach fails to fully reflect the risk perceptions of real-world investors in the capital markets, which would violate the standards underlying a fair rate of return by failing to provide an opportunity to earn a return commensurate with other investments of comparable risk. As the Staff of the Florida Public Service Commission concluded:

> [R]ecognizing the impact the Federal Government's unprecedented intervention in the capital markets has had on the yields on long-term Treasury bonds, staff believes models that relate the investor-required return on equity to the yield on government securities, such as the CAPM approach, produce less reliable estimates of the ROE at this time.[43]

Q. DID DR. WILSON ALSO RECOGNIZE THE FRAILTIES OF FOCUSING ON HISTORICAL DATA TO ESTIMATE THE COST OF EQUITY?

A. Yes. Dr. Wilson recognized that it is investors' expectations for the future that establish common stock prices and determine their required rate of return.[44] Dr. Wilson noted that "expectations and requirements may be different at different times, and, therefore, the cost of common equity is likely to change over time."[45] Dr. Wilson concluded that the job of the rate of return analyst was to "estimate, as accurately as possible, what investor expectations actually are,"[46] but instead his CAPM analysis ignored investors' current expectations entirely and focused only on historical earned returns.

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[43] *Staff Recommendation for Docket No. 080677-EI - Petition for increase in rates by Florida Power & Light Company*, at p. 280 (Dec. 23, 2009).
[44] Wilson Direct at 12.
[45] *Id.* at 14.
[46] *Id.*

Q. DOES THE HISTORICAL RISK PREMIUM THAT DR. WILSON RELIES ON COMPORT WITH WHAT MORNINGSTAR REPORTS?

A. No. *Morningstar* (formerly Ibbotson Associates) computes the equity risk premium by subtracting the arithmetic mean income return (not the total return) on long-term Treasury bonds from the arithmetic average return on common stocks. As *Morningstar* explained:

> Price changes in bonds due to unanticipated changes in yields introduce price risk into the total return. Therefore, the total return on the bond series does not represent the riskless rate of return. The income return better represents the unbiased estimate of the purely riskless rate of return, since an investor can hold a bond to maturity and be entitled to the income return with no capital loss.[47]

In other words, *Morningstar* concluded that using only the income component of the long-term government bond return provides a more reliable estimate of the expected risk premium because investors do not anticipate capital losses for a risk-free security. Dr. Wilson, however, calculated his equity risk premium using the *total* return for *Morningstar's* long-term government bond series. As a result, the equity risk premium falls far below what Dr. Wilson's own data source reports and the resulting CAPM cost of equity estimate is understated.

Q. WHAT EQUITY RISK PREMIUM DOES MORNINGSTAR REPORT?

A. The most recent edition of *Morningstar* calculates the long-horizon equity risk premium by subtracting the arithmetic mean average income return on long-term Treasury bonds of 5.15% from the arithmetic mean average return on the S&P 500 of 11.77%, resulting in an equity risk premium of 6.62%.[48]

Q. DO THE YIELDS ON 10-YEAR TREASURY NOTES REFERENCED IN THE STAFF REPORT AND IN DR. WILSON'S TESTIMONY PROVIDE

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[47] *Morningstar*, "Ibbotson SBBI, 2012 Valuation Yearbook," at 56.
[48] *Id.* at 54.

AN APPROPRIATE BASIS TO ESTIMATE THE COST OF EQUITY USING THE CAPM?

A. No. Unlike debt instruments, common equity is a perpetuity. As a result, any application of the CAPM to estimate the return that investors require must be predicated on their expectations for the firm's long-term risks and prospects. This does not mean that every investor will buy and hold a particular common stock into perpetuity. Rather, it recognizes that even an investor with a relatively short holding period will consider the long-term, because of its influence on the price that he or she ultimately receives from the stock when it is sold. This is also the basic assumption underpinning the DCF model, which in theory considers the present value of all future dividends expected to be received by a share of stock.

Shannon P. Pratt, a leading authority in business valuation and cost of capital, recognized that the cost of equity is a long-term cost of capital and that the appropriate instrument to use in applying the CAPM is a long-term bond:

> The consensus of financial analysts today is to use the 20-year U.S. Treasury yield to maturity as of the effective date of valuation for the following reasons:
>
> - It most closely matches the often-assumed perpetual lifetime horizon of an equity investment.
> - The longest-term yields to maturity fluctuate considerably less than short-term rates and thus are less likely to introduce unwarranted short-term distortions into the actual cost of capital.
> - People generally are willing to recognize and accept the fact that the maturity risk is impounded into this base, or otherwise risk-free rate.
> - It matches the longest-term bond over which the equity risk premium is measured in the Ibbotson Associates data series.[49]

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[49] Pratt, Shannon P., *Cost of Capital, Estimation and Applications* at 60 (1998).

Similarly, in applying the CAPM, *Morningstar*, the source of Staff's historical return data, recognized that the cost of equity is a long-term cost of capital and the appropriate interest rate to use is a long-term bond yield:

> The horizon of the chosen Treasury security should match the horizon of whatever is being valued. … Note that the horizon is a function of the investment, not the investor. If an investor plans to hold a stock in a company for only five years, the yield on a five-year Treasury note would not be appropriate since the company will continue to exist beyond those five years.[50]

Accordingly, proper application of the CAPM should focus on long-term government bonds and Dr. Wilson's analysis based on 10-year Treasury notes should be ignored.

Q. ARE THE MARKET RISK PREMIUMS CITED BY DR. WILSON CONSISTENT WITH HIS OWN TESTIMONY?

A. No. Dr. Wilson cites a market risk premiums "in the range of 3 to 5 percentage points above treasury bills,"[51] but these values make no sense and are inconsistent with Dr. Wilson's own views and recommendations. With short-term Treasury bill rates yielding less than 10 basis points in May 2012, Dr. Wilson is suggesting that investors' required return on the market as a whole is in the 3.1% to 5.1% range. Despite the fact that utility stocks are generally considered to be less risky than the market as a whole, these market benchmarks fall considerably below even the anemic ROE that Dr. Wilson is recommending for AEP Ohio.

Q. DOES CORRECTING DR. WILSON'S CAPM APPLICATION CONFIRM THE REASONABLENESS OF AEP OHIO'S 10.5% ROE REQUEST?

A. Yes. Application of the CAPM to the firms in Dr. Wilson's proxy group based on a forward-looking estimate for investors' required rate of return from common

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[50] *Morningstar*, "Ibbotson SBBI, 2012 Valuation Yearbook,"at 44.

[51] Wilson Direct at 28.

stocks is presented on Exhibit WEA-8. In order to capture the expectations of today's investors in current capital markets, the expected market rate of return was estimated by conducting a DCF analysis on the dividend paying firms in the S&P 500.

The dividend yield for each firm was based on the year-ahead projections obtained from Value Line. The growth rate was equal to the earnings growth projections for each firm published by IBES, with each firm's dividend yield and growth rate being weighted by its proportionate share of total market value. Based on the weighted average of the projections for the 382 individual firms, current estimates imply an average growth rate over the next five years of 10.8%. Combining this average growth rate with the average Value Line dividend yield of 2.5% results in a current cost of common equity estimate for the market as a whole (R_m) of approximately 13.3 percent. Subtracting a 3.2% risk-free rate based on the average yield on 30-year Treasury bonds produced a market equity risk premium of 10.1%.

Q. DID DR. WILSON FAIL TO CONSIDER OTHER IMPORTANT FACTORS IN APPLYING THE CAPM?

A. Yes. As explained by *Morningstar*:

> One of the most remarkable discoveries of modern finance is that of a relationship between firm size and return. The relationship cuts across the entire size spectrum but is most evident among smaller companies, which have higher returns on average than larger ones.[52]

Because empirical research indicates that the CAPM does not fully account for observed differences in rates of return attributable to firm size, a modification is required to account for this size effect.

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[52] *Morningstar*, "Ibbotson SBBI 2012 Valuation Yearbook," at 85.

According to the CAPM, the expected return on a security should consist of the riskless rate, plus a premium to compensate for the systematic risk of the particular security. The degree of systematic risk is represented by the beta coefficient. The need for the size adjustment arises because differences in investors' required rates of return that are related to firm size are not fully captured by beta. To account for this, *Morningstar* has developed size premiums that need to be added to the theoretical CAPM cost of equity estimates to account for the level of a firm's market capitalization in determining the CAPM cost of equity.[53] Accordingly, my CAPM analyses incorporated an adjustment to recognize the impact of size distinctions, as measured by the average market capitalization for his proxy group.

Q. WHAT COST OF EQUITY ESTIMATE WAS INDICATED BY CORRECTING DR. WILSON'S CAPM APPLICATION?

A. As shown on Exhibit WEA-8, application of the forward-looking CAPM approach resulted in an unadjusted ROE of 10.1% for the firms in Dr. Wilson's proxy group, or 10.9% after adjusting for the impact of firm size.

Q. DR. WILSON (P. 14) REFERENCED CAPITAL MARKET TRENDS. IS IT APPROPRIATE TO CONSIDER ANTICIPATED CAPITAL MARKET CHANGES IN APPLYING THE CAPM?

A. Yes. There is widespread consensus that interest rates will increase materially as the economy strengthens. Accordingly, in addition to the use of current bond yields, I also adapted Dr. Wilson's CAPM approach based on the forecasted long-term Treasury bond yields developed based on projections published by Value Line, IHS Global Insight and Blue Chip.

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[53] *Id.*

Q. WHAT COST OF EQUITY WAS PRODUCED BY THE CAPM AFTER CORRECTNG DR. WILSON'S CAPM TO INCORPORATE FORECASTED BOND YIELDS?

A. As shown on Exhibit WEA-9, incorporating a forecasted Treasury bond yield for 2012-2016 implied an unadjusted cost of equity of approximately 10.5% for the utilities in Dr. Wilson's proxy group, or 11.3% after accounting for firm size.

VI. RELATIVE RISK OF WILSON PROXY GROUP

Q. HOW DID DR. WILSON IDENTIFY THE SEVEN UTILITIES INCLUDED IN HIS PROXY GROUP?

A. Dr. Wilson adopted the same proxy group used in the Staff Report. Beginning with the 53 utilities followed by the Value Line Investment Survey ("Value Line"), Staff selected those companies with 1) market capitalizations greater than $5 billion, 2) a Value Line Financial Strength Rating of "B++", and 3) no involvement in a merger or acquisition.[54]

Q. DO THESE CRITERIA PROVIDE A REASONABLE BASIS ON WHICH TO DETERMINE A PROXY GROUP FOR AEP OHIO?

A. No. There are several deficiencies associated with the proxy group criteria employed in the Staff Report. First, these criteria are incomplete and ignore key indicators of overall investment risk that are routinely considered by investors and widely referenced in evaluating comparable risks in the regulatory arena. Second, Staff's criteria based on Financial Strength Ratings is far too narrowly defined, and ignores the fact that this measure is not Value Line's primary overall risk indicator. Third, although AEP Ohio's parent, AEP, meets all of Staff's proxy group criteria, it was inexplicably excluded from the analyses contained in the

[54] Staff Report at 14.

Staff Report. As a result of these deficiencies, Staff's proxy group fails to reflect a consistent level of investment risks and is too small to produce a reliable estimate of investors' required rate of return.

Q. WHAT KEY RISK INDICATOR WAS OVERLOOKED IN IDENTIFYING THE PROXY GROUP RELIED ON BY DR. WILSON?

A. The proxy group identified in the Staff Report and adopted by Dr. Wilson failed to consider relative risks, as measured by credit ratings. Credit ratings provide a widely referenced guide to investors' risk perceptions that considers a broad spectrum of factors, including financial and business position, relative size, and exposure to company-specific factors. Credit ratings are routinely referenced, not only by the investment community, but also in the context of assessing comparable risk for the purposes of estimating the cost of equity in regulatory proceedings. While the bond rating agencies are primarily focused on the risk of default associated with the firm's debt securities, bond ratings and the risks of common stock are closely related. As noted in *New Regulatory Finance*:

> Concrete evidence supporting the relationship between bond ratings and the quality of a security is abundant. . . . The strong association between bond ratings and equity risk premiums is well documented in a study by Brigham and Shome (1982).[55]

Q. ARE THE CREDIT RATINGS FOR THE UTILITIES IN THE PROXY GROUP USED BY DR. WILSON UNIFORMLY COMPARABLE TO AEP OHIO?

A. No. S&P has assigned a corporate credit rating of "BBB" to the Company. Meanwhile, three of the firms in Dr. Wilson's proxy group – Dominion Resources, Wisconsin Energy, and Xcel Energy – have corporate credit ratings that fall in the single-A ratings range. Because the lower risks associated with a

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[55] Morin, Roger A., "New Regulatory Finance," *Public Utility Reports* (2006) at 92.

single-A rating imply a lower required rate of return, this distinction has important implications with respect to evaluating a fair ROE for AEP Ohio.

Q. WHAT DOES THIS RISK DISTINCTION IMPLY WITH RESPECT TO THE COST OF EQUITY?

A. The additional return that investors require to take on the greater risks of a "BBB" rated utility versus one that is rated single-A can be observed by comparing the average yields on utility bonds. For the period covered by Dr. Wilson's DCF analysis, the yield spread between triple-B and single-A utility bonds averaged more than 50 basis points, with this differential widening to more than 70 basis points in April 2012.

Because the risks associated with common stocks are significantly higher than for senior, long-term debt, the additional risk premium required by investors to compensate for the greater risks of a "BBB" rated utility versus one rated single-A would be significantly higher. Accordingly, because almost one-half of Dr. Wilson's proxy group is made up of single-A rated utilities, the resulting cost of equity estimates are likely to understate investors' required rate of return for AEP Ohio, which is rated "BBB".

Q. DO YOU AGREE WITH THE MANNER IN WHICH VALUE LINE'S FINANCIAL STRENGTH RATING WAS USED IN THE STAFF REPORT?

A. No. While I agree that the Financial Strength Rating provides a useful guide in evaluating comparable risks, and I incorporated this measure in my analyses, Staff failed to recognize that this measure tells only part of the story. In fact, the Safety Rank is Value Line's primary overall risk indicator and is intended to capture the total risk of a stock. Value Line's Safety Rank actually incorporates the Financial Strength Rating, along with measures of stock price stability. As a result, while the Financial Strength Rating is one important guide, it should be evaluated along

with Value Line's overall risk measure, and other indicators of investment risk (*e.g.*, credit ratings), which the Staff Report failed to consider.

Moreover, the Staff Report provided no justification or rationale for artificially restricting its group to utilities with a Financial Strength Rating of "B++". This Value Line risk indicator ranges from "A++" to "C" in nine steps, and there is no basis to limit proxy group companies to a single rung on this ladder, particularly considering that it is not Value Line's primary measure of total risk. Similarly, the Staff Report contained no evidence to support its elimination of utilities with a market capitalization below $5 billion. While firm size can certainly influence investors' required return, there are numerous utilities from within Value Line's universe with capitalizations below arbitrary threshold adopted in the Staff Report that are commonly included in proxy groups used to estimate a fair ROE.

Q. DOES THE SMALL SIZE OF DR. WILSON'S PROXY GROUP IMPACT THE RELIABILITY OF HIS RESULTS AND CONCLUSIONS?

A. Yes. Any form of analysis that depends on estimates, such as the growth parameter of the DCF model, is subject to measurement error, and the potential for misleading findings increases as the proxy group is narrowed. To the extent that the data used to apply the DCF model does not capture the expectations that investors have incorporated into current stock prices, the resulting cost of equity estimates will be biased and unreliable.

Conceptually, the issue of proxy group size is directly analogous to the use of sampling in statistical analyses. In statistics, a "true" value is often estimated by reference to sample observations, with the analyst having greater confidence in the applicability of the estimated results as the size of the sample increases. As a

result, using the limited group of companies relied on by Dr. Wilson increases the potential for error and further undermines confidence in its results.

Q. DR. WILSON DID NOT INCLUDE AEP IN HIS PROXY GROUP. IS THIS CONSISTENT WITH THE SCREENING CRITERIA USED IN THE STAFF REPORT?

A. No. AEP meets all of the screening criteria imposed in the Staff Report to arrive at the proxy group relied on by Dr. Wilson,[56] and there was no basis to exclude AEP from his analyses. I would not recommend relying solely on cost of equity estimates for AEP to determine a fair ROE in this case, but when estimating the cost of equity for an operating subsidiary with no publicly traded common stock, it is logical to consider the required rate of return for the parent company, which is the ultimate source of investor-supplied capital.

Q. DOES THIS CONCLUDE YOUR PRE-FILED REBUTTAL TESTIMONY?

A. Yes, it does.

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[56] Staff Work Paper 1, cited at fn. 2 to the Staff Report.

EXHIBIT WEA-1

QUALIFICATIONS OF WILLIAM E. AVERA

Q. WHAT IS THE PURPOSE OF THIS EXHIBIT?

A. This exhibit describes my background and experience and contains the details of my qualifications.

Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I received a B.A. degree with a major in economics from Emory University. After serving in the U.S. Navy, I entered the doctoral program in economics at the University of North Carolina at Chapel Hill. Upon receiving my Ph.D., I joined the faculty at the University of North Carolina and taught finance in the Graduate School of Business. I subsequently accepted a position at the University of Texas at Austin where I taught courses in financial management and investment analysis. I then went to work for International Paper Company in New York City as Manager of Financial Education, a position in which I had responsibility for all corporate education programs in finance, accounting, and economics. In 1977, I joined the staff of the Public Utility Commission of Texas ("PUCT") as Director of the Economic Research Division.

During my tenure at the PUCT, I managed a division responsible for financial analysis, cost allocation and rate design, economic and financial research, and data processing systems, and I testified in cases on a variety of financial and economic issues. Since leaving the PUCT, I have been engaged as a consultant. I have participated in a wide range of assignments involving utility-related matters on behalf of utilities, industrial customers, municipalities, and regulatory commissions. I have previously testified before the

Federal Energy Regulatory Commission ("FERC"), as well as the Federal Communications Commission, the Surface Transportation Board (and its predecessor, the Interstate Commerce Commission), the Canadian Radio-Television and Telecommunications Commission, and regulatory agencies, courts, and legislative committees in over 40 states.

In 1995, I was appointed by the PUCT to the Synchronous Interconnection Committee to advise the Texas legislature on the costs and benefits of connecting Texas to the national electric transmission grid. In addition, I served as an outside director of Georgia System Operations Corporation, the system operator for electric cooperatives in Georgia.

I have served as Lecturer in the Finance Department at the University of Texas at Austin and taught in the evening graduate program at St. Edward's University for twenty years. In addition, I have lectured on economic and regulatory topics in programs sponsored by universities and industry groups. I have taught in hundreds of educational programs for financial analysts in programs sponsored by the Association for Investment Management and Research, the Financial Analysts Review, and local financial analysts societies. These programs have been presented in Asia, Europe, and North America, including the Financial Analysts Seminar at Northwestern University. I hold the Chartered Financial Analyst (CFA®) designation and have served as Vice President for Membership of the Financial Management Association. I have also served on the Board of Directors of the North Carolina Society of Financial Analysts. I was elected Vice Chairman of the National Association of Regulatory Commissioners ("NARUC") Subcommittee on Economics and appointed to NARUC's Technical Subcommittee on the National Energy Act. I have also served as an officer of various other professional organizations and societies. A resume containing the details of my experience and qualifications is attached.

WILLIAM E. AVERA

FINCAP, INC.
Financial Concepts and Applications
Economic and Financial Counsel

3907 Red River
Austin, Texas 78751
(512) 458–4644
FAX (512) 458–4768
fincap@texas.net

Summary of Qualifications

Ph.D. in economics and finance; Chartered Financial Analyst (CFA ®) designation; extensive expert witness testimony before courts, alternative dispute resolution panels, regulatory agencies and legislative committees; lectured in executive education programs around the world on ethics, investment analysis, and regulation; undergraduate and graduate teaching in business and economics; appointed to leadership positions in government, industry, academia, and the military.

Employment

Principal, FINCAP, Inc. (Sep. 1979 to present)	Financial, economic and policy consulting to business and government. Perform business and public policy research, cost/benefit analyses and financial modeling, valuation of businesses (almost 200 entities valued), estimation of damages, statistical and industry studies. Provide strategy advice and educational services in public and private sectors, and serve as expert witness before regulatory agencies, legislative committees, arbitration panels, and courts.
Director, Economic Research Division, Public Utility Commission of Texas (Dec. 1977 to Aug. 1979)	Responsible for research and testimony preparation on rate of return, rate structure, and econometric analysis dealing with energy, telecommunications, water and sewer utilities. Testified in major rate cases and appeared before legislative committees and served as Chief Economist for agency. Administered state and federal grant funds. Communicated frequently with political leaders and representatives from consumer groups, media, and investment community.
Manager, Financial Education, International Paper Company New York City (Feb. 1977 to Nov. 1977)	Directed corporate education programs in accounting, finance, and economics. Developed course materials, recruited and trained instructors, liaison within the company and with academic institutions. Prepared operating budget and designed financial controls for corporate professional development program.

Lecturer in Finance, The University of Texas at Austin (Sep. 1979 to May 1981) Assistant Professor of Finance, (Sep. 1975 to May 1977)	Taught graduate and undergraduate courses in financial management and investment theory. Conducted research in business and public policy. Named Outstanding Graduate Business Professor and received various administrative appointments.
Assistant Professor of Business, University of North Carolina at Chapel Hill (Sep. 1972 to Jul. 1975)	Taught in BBA, MBA, and Ph.D. programs. Created project course in finance, Financial Management for Women, and participated in developing Small Business Management sequence. Organized the North Carolina Institute for Investment Research, a group of financial institutions that supported academic research. Faculty advisor to the Media Board, which funds student publications and broadcast stations.

Education

Ph.D., Economics and Finance, University of North Carolina at Chapel Hill (Jan. 1969 to Aug. 1972)	Elective courses included financial management, public finance, monetary theory, and econometrics. Awarded the Stonier Fellowship by the American Bankers' Association and University Teaching Fellowship. Taught statistics, macroeconomics, and microeconomics. Dissertation: *The Geometric Mean Strategy as a Theory of Multiperiod Portfolio Choice*
B.A., Economics, Emory University, Atlanta, Georgia (Sep. 1961 to Jun. 1965)	Active in extracurricular activities, president of the Barkley Forum (debate team), Emory Religious Association, and Delta Tau Delta chapter. Individual awards and team championships at national collegiate debate tournaments.

Professional Associations

Received Chartered Financial Analyst (CFA) designation in 1977; Vice President for Membership, Financial Management Association; President, Austin Chapter of Planning Executives Institute; Board of Directors, North Carolina Society of Financial Analysts; Candidate Curriculum Committee, Association for Investment Management and Research; Executive Committee of Southern Finance Association; Vice Chair, Staff Subcommittee on Economics and National Association of Regulatory Utility Commissioners (NARUC); Appointed to NARUC Technical Subcommittee on the National Energy Act.

Teaching in Executive Education Programs

University-Sponsored Programs: Central Michigan University, Duke University, Louisiana State University, National Defense University, National University of Singapore, Texas A&M University, University of Kansas, University of North Carolina, University of Texas.

Business and Government-Sponsored Programs: Advanced Seminar on Earnings Regulation, American Public Welfare Association, Association for Investment Management and Research, Congressional Fellows Program, Cost of Capital Workshop, Electricity Consumers Resource Council, Financial Analysts Association of Indonesia, Financial Analysts Review, Financial Analysts Seminar at Northwestern University, Governor's Executive Development Program of Texas, Louisiana Association of Business and Industry, National Association of Purchasing Management, National Association of Tire Dealers, Planning Executives Institute, School of Banking of the South, State of Wisconsin Investment Board, Stock Exchange of Thailand, Texas Association of State Sponsored Computer Centers, Texas Bankers' Association, Texas Bar Association, Texas Savings and Loan League, Texas Society of CPAs, Tokyo Association of Foreign Banks, Union Bank of Switzerland, U.S. Department of State, U.S. Navy, U.S. Veterans Administration, in addition to Texas state agencies and major corporations.

Presented papers for Mills B. Lane Lecture Series at the University of Georgia and Heubner Lectures at the University of Pennsylvania. Taught graduate courses in finance and economics for evening program at St. Edward's University in Austin from January 1979 through 1998.

Expert Witness Testimony

Testified in over 300 cases before regulatory agencies addressing cost of capital, regulatory policy, rate design, and other economic and financial issues.

Federal Agencies: Federal Communications Commission, Federal Energy Regulatory Commission, Surface Transportation Board, Interstate Commerce Commission, and the Canadian Radio-Television and Telecommunications Commission.

State Regulatory Agencies: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Missouri, Nevada, New Mexico, Montana, Nebraska, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Testified in 42 cases before federal and state courts, arbitration panels, and alternative dispute tribunals (89 depositions given) regarding damages, valuation, antitrust liability, fiduciary duties, and other economic and financial issues.

Board Positions and Other Professional Activities

Co-chair, Synchronous Interconnection Committee established by Texas Legislature to study interconnection of Texas with national grid; Audit Committee and Outside Director, Georgia System Operations Corporation (electric system operator for member-owned electric cooperatives in Georgia); Chairman, Board of Print Depot, Inc. and FINCAP, Inc.; Appointed by Hays County Commission to Citizens Advisory Committee of Habitat Conservation Plan, Operator of AAA Ranch, a certified organic producer of agricultural products; Appointed to Organic Livestock

Advisory Committee by Texas Agricultural Commissioner; Appointed by Texas Railroad Commissioners to study group for *The UP/SP Merger: An Assessment of the Impacts on the State of Texas; A*ppointed by Hawaii Public Utilities Commission to team reviewing affiliate relationships of Hawaiian Electric Industries; Chairman, Energy Task Force, Greater Austin-San Antonio Corridor Council; Consultant to Public Utility Commission of Texas on cogeneration policy and other matters; Consultant to Public Service Commission of New Mexico on cogeneration policy; Evaluator of Energy Research Grant Proposals for Texas Higher Education Coordinating Board.

Community Activities

Treasurer, Dripping Springs Presbyterian Church; Board of Directors, Sustainable Food Center; Chair, Board of Deacons, Finance Committee, and Elder, Central Presbyterian Church of Austin; Founding Member, Orange-Chatham County (N.C.) Legal Aid Screening Committee.

Military

Captain, U.S. Naval Reserve (retired after 28 years service); Commanding Officer, Naval Special Warfare Engineering (SEAL) Support Unit; Officer-in-Charge of SWIFT patrol boat in Vietnam; Enlisted service as weather analyst (advanced to second class petty officer).

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Monographs

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"Liquidity, Exchange Listing, and Common Stock Performance," with John C. Groth and Kerry Cooper, *Journal of Economics and Business* (Spring 1985); reprinted by National Association of Security Dealers

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"Use of IFPS at the Public Utility Commission of Texas," *Proceedings of the IFPS Users Group Annual Meeting* (1979)

"Production Capacity Allocation: Conversion, CWIP, and One-Armed Economics," *Proceedings of the NARUC Biennial Regulatory Information Conference* (1978)

"Some Thoughts on the Rate of Return to Public Utility Companies," with Bruce H. Fairchild in *Proceedings of the NARUC Biennial Regulatory Information Conference* (1978)

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"Usefulness of Current Values to Investors and Creditors," in *Inflation Accounting/Indexing and Stock Behavior* (1977)

"Consumer Expectations and the Economy," *Texas Business Review* (Nov. 1976)

"Portfolio Performance Evaluation and Long-run Capital Growth," with Henry A. Latané in *Proceedings of the Eastern Finance Association* (1973)

Book reviews in *Journal of Finance* and *Financial Review*. Abstracts for *CFA Digest*. Articles in *Carolina Financial Times*.

Selected Papers and Presentations

"Economic Perspective on Water Marketing in Texas," 2009 Water Law Institute, The University of Texas School of Law, Austin, TX (Dec. 2009).

"Estimating Utility Cost of Equity in Financial Turmoil," SNL EXNET 15th Annual FERC Briefing, Washington, D.C. (Mar. 2009)

"The Who, What, When, How, and Why of Ethics," San Antonio Financial Analysts Society (Jan. 16, 2002). Similar presentation given to the Austin Society of Financial Analysts (Jan. 17, 2002)

"Ethics for Financial Analysts," Sponsored by Canadian Council of Financial Analysts: delivered in Calgary, Edmonton, Regina, and Winnipeg, June 1997. Similar presentations given to Austin Society of Financial Analysts (Mar. 1994), San Antonio Society of Financial Analysts (Nov. 1985), and St. Louis Society of Financial Analysts (Feb. 1986)

"Cost of Capital for Multi-Divisional Corporations," Financial Management Association, New Orleans, Louisiana (Oct. 1996)

"Ethics and the Treasury Function," Government Treasurers Organization of Texas, Corpus Christi, Texas (Jun. 1996)

"A Cooperative Future," Iowa Association of Electric Cooperatives, Des Moines (December 1995). Similar presentations given to National G & T Conference, Irving, Texas (June 1995), Kentucky Association of Electric Cooperatives Annual Meeting, Louisville (Nov. 1994), Virginia, Maryland, and Delaware Association of Electric Cooperatives Annual Meeting, Richmond (July 1994), and Carolina Electric Cooperatives Annual Meeting, Raleigh (Mar. 1994)

"Information Superhighway Warnings: Speed Bumps on Wall Street and Detours from the Economy," Texas Society of Certified Public Accountants Natural Gas, Telecommunications and Electric Industries Conference, Austin (Apr. 1995)

"Economic/Wall Street Outlook," Carolinas Council of the Institute of Management Accountants, Myrtle Beach, South Carolina (May 1994). Similar presentation given to Bell Operating Company Accounting Witness Conference, Santa Fe, New Mexico (Apr. 1993)

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"Growth Rates, Expected Returns, and Variance in Portfolio Selection and Performance Evaluation," with Henry A. Latané, Econometric Society, Oslo, Norway (Aug. 1973)

EXPECTED EARNINGS APPROACH

WILSON PROXY GROUP

Company	(a) Expected Earned Return	(b) Adjustment Factor	(c) Adjusted Return on Common Equity	(d) Return on Equity
Ameren Corp.	7.50%	1.0158	7.62%	8.55%
Dominion Resources	9.00%	1.0244	9.22%	14.02%
Edison International	9.00%	1.0244	9.22%	10.42%
PG&E Corp.	10.50%	1.0254	10.77%	11.17%
PPL Corp.	11.00%	1.0426	11.47%	12.05%
Wisconsin Energy	14.50%	1.0125	14.68%	10.58%
Xcel Energy	10.00%	1.0279	10.28%	8.94%
Average			**10.46%**	**10.82%**

(a) The Value Line Investment Survey (Feb. 24, Mar. 23, & May 4, 2012).
(b) Computed using the formula 2*(1+5-Yr. Change in Equity)/(2+5 Yr. Change in Equity).
(c) Product of average year-end "r" for 2016 and Adjustment Factor.
(d) Staff Work Paper 1, Staff Report at fn. 2.

VIRGINIA LEGISLATIVE BENCHMARK

Exhibit No. ____
Witness: Oliver
Schedule 17

Statutory Peer Group
Return on Equity
Average Equity Basis

Company	2008-2010 Reported ROE on Average Equity Basis
SCE&G	9.35%
Duke Energy Carolinas	9.55%
Tampa Electric Company	9.65%
FP&L Company	10.23%
Entergy Mississippi, Inc.	10.35%
Progress Energy Florida, Inc.	11.08%
Georgia Power	12.00%
Gulf Power	12.18%
Progress Energy Carolinas, Inc.	12.28%
Mississippi Power	12.79%
Alabama Power	13.29%
After Excluding the 2 Highest and Lowest	
Average of Lowest 4	10.33%
Average of Highest 4	11.89%
Average of All	11.11%

Source: *Prefiled Testimony of Lawrence T. Oliver* , Case No. PUE-2011-00037 (Aug. 19, 2011).

ALLOWED RATES OF RETURN **Exhibit WEA-4**

Page 1 of 1

WILSON PROXY GROUP

Company	(a) Allowed ROE
Ameren Corp.	9.54%
Dominion Resources	10.52%
Edison International	10.65%
PG&E Corp.	11.35%
PPL Corp.	10.30%
Wisconsin Energy	10.38%
Xcel Energy	10.70%
Average	**10.49%**
American Electric Pwr	10.65%

(a) AUS Monthy Utility Report (Mar. 1, 2012).

DIVIDEND YIELD

	Company	(a) Price	(b) Dividends	Yield
1	Abbott Labs.	$ 56.68	$ 2.04	3.6%
2	Bard (C.R.)	$ 94.21	$ 0.76	0.8%
3	Church & Dwight	$ 47.75	$ 0.96	2.0%
4	Coca-Cola	$ 69.06	$ 2.04	3.0%
5	Colgate-Palmolive	$ 93.04	$ 2.32	2.5%
6	Gen'l Mills	$ 38.77	$ 1.28	3.3%
7	Kellogg	$ 51.92	$ 1.72	3.3%
8	Kimberly-Clark	$ 72.03	$ 2.96	4.1%
9	McCormick & Co.	$ 50.72	$ 1.24	2.4%
10	PepsiCo, Inc.	$ 63.76	$ 2.18	3.4%
11	Procter & Gamble	$ 65.82	$ 2.10	3.2%
12	Wal-Mart Stores	$ 60.49	$ 1.59	2.6%
	Average			**2.9%**

(a) Average of closing prices for 30 trading days ended Mar. 16, 2012.
(b) The Value Line Investment Survey, *Summary & Index* (Mar. 16, 2012).

GROWTH RATES

		(a)	(b)	(c)	(d)
		Earnings Growth			br+sv
	Company	V Line	IBES	Zacks	Growth
1	Abbott Labs.	8.5%	8.3%	7.5%	18.6%
2	Bard (C.R.)	8.5%	8.5%	10.4%	19.8%
3	Church & Dwight	10.5%	10.5%	11.8%	12.5%
4	Coca-Cola	10.0%	6.4%	8.0%	12.4%
5	Colgate-Palmolive	11.0%	8.8%	8.8%	11.0%
6	Gen'l Mills	8.5%	7.6%	8.0%	9.0%
7	Kellogg	7.5%	8.0%	8.8%	12.4%
8	Kimberly-Clark	7.0%	6.1%	6.5%	11.3%
9	McCormick & Co.	13.5%	8.4%	9.0%	18.0%
10	PepsiCo, Inc.	8.5%	6.2%	8.0%	11.2%
11	Procter & Gamble	10.0%	8.5%	8.8%	5.9%
12	Wal-Mart Stores	8.5%	9.1%	10.6%	5.8%

(a) The Value Line Investment Survey (retrieved Mar. 16, 2012).
(b) www.finance.yahoo.com (retrieved Mar. 16, 2012).
(c) www.zacks.com (retrieved Mar. 16, 2012).
(d) See Exhibit WEA-7.

DCF COST OF EQUITY ESTIMATES

	Company	(a) Earnings Growth V Line	(a) Earnings Growth IBES	(a) Earnings Growth Zacks	(a) br+sv Growth
1	Abbott Labs.	12.1%	11.9%	11.1%	22.2%
2	Bard (C.R.)	9.3%	9.3%	11.2%	20.6%
3	Church & Dwight	12.5%	12.5%	13.8%	14.5%
4	Coca-Cola	13.0%	9.3%	11.0%	15.4%
5	Colgate-Palmolive	13.5%	11.2%	11.3%	13.5%
6	Gen'l Mills	11.8%	10.9%	11.3%	12.3%
7	Kellogg	10.8%	11.3%	12.1%	15.7%
8	Kimberly-Clark	11.1%	10.2%	10.6%	15.5%
9	McCormick & Co.	15.9%	10.8%	11.4%	20.4%
10	PepsiCo, Inc.	11.9%	9.6%	11.4%	14.6%
11	Procter & Gamble	13.2%	11.7%	12.0%	9.1%
12	Wal-Mart Stores	11.1%	11.7%	13.2%	8.4%
	Average (b)	**12.2%**	**10.9%**	**11.7%**	**13.2%**
	Midpoint (c)	**12.6%**	**10.9%**	**12.2%**	**12.1%**

(a) Sum of dividend yield (page 1) and respective growth rate (page 2).
(b) Excludes highlighted figures.
(c) Average of low and high values.

DCF MODEL - NON-UTILITY GROUP

BR+SV GROWTH RATE

		(a)	(a)	(a)			(b)	(c)		(d)	(e)		
		---------- 2016 ----------					Adjust.			--------- "sv" Factor --------			
	Company	EPS	DPS	BVPS	b	r	Factor	Adj. r	br	s	v	sv	br + sv
1	Abbott Labs.	$6.00	$2.20	$20.50	63.3%	29.3%	1.0341	30.3%	19.2%	(0.0068)	0.7722	-0.53%	**18.6%**
2	Bard (C.R.)	$9.00	$0.94	$36.75	89.6%	24.5%	1.0553	25.8%	23.1%	(0.0429)	0.7738	-3.32%	**19.8%**
3	Church & Dwight	$3.10	$0.72	$19.70	76.8%	15.7%	1.0403	16.4%	12.6%	(0.0015)	0.6248	-0.09%	**12.5%**
4	Coca-Cola	$4.90	$2.15	$9.10	56.1%	53.8%	1.0318	55.6%	31.2%	(0.2109)	0.8897	-18.77%	**12.4%**
5	Colgate-Palmolive	$7.60	$3.40	$11.00	55.3%	69.1%	1.0574	73.1%	40.4%	(0.3167)	0.9267	-29.34%	**11.0%**
6	Gen'l Mills	$3.40	$1.60	$14.30	52.9%	23.8%	1.0478	24.9%	13.2%	(0.0561)	0.7400	-4.15%	**9.0%**
7	Kellogg	$4.90	$2.15	$9.10	56.1%	53.8%	1.0318	55.6%	31.2%	(0.2109)	0.8897	-18.77%	**12.4%**
8	Kimberly-Clark	$6.50	$3.00	$21.25	53.8%	30.6%	1.0298	31.5%	17.0%	(0.0724)	0.7763	-5.62%	**11.3%**
9	McCormick & Co.	$5.05	$1.72	$23.10	65.9%	21.9%	1.0778	23.6%	15.5%	0.0314	0.7690	2.42%	**18.0%**
10	PepsiCo, Inc.	$5.95	$2.36	$25.40	60.3%	23.4%	1.0573	24.8%	14.9%	(0.0484)	0.7838	-3.79%	**11.2%**
11	Procter & Gamble	$5.95	$3.00	$32.85	49.6%	18.1%	1.0333	18.7%	9.3%	(0.0507)	0.6715	-3.40%	**5.9%**
12	Wal-Mart Stores	$6.00	$2.20	$26.30	63.3%	22.8%	1.0108	23.1%	14.6%	(0.1257)	0.6994	-8.79%	**5.8%**

BR+SV GROWTH RATE

		(a)	(a)	(f)	(a)	(a)		(g)	(a)	(a)	(f)
		---- Common Equity ----			---------- 2016 Price ---------				----- Common Shares -----		
	Company	2011	2016	Chg.	High	Low	Avg.	M/B	2011	2016	Growth
1	Abbott Labs.	$22,388	$31,500	7.1%	$100.00	$80.00	$90.00	4.390	1,547.00	1,535.00	-0.16%
2	Bard (C.R.)	$1,690	$2,940	11.7%	$180.00	$145.00	$162.50	4.422	84.00	80.00	-0.97%
3	Church & Dwight	$1,871	$2,800	8.4%	$60.00	$45.00	$52.50	2.665	142.40	142.00	-0.06%
4	Coca-Cola	$2,158	$2,965	6.6%	$90.00	$75.00	$82.50	9.066	365.60	325.00	-2.33%
5	Colgate-Palmolive	$2,675	$4,750	12.2%	$165.00	$135.00	$150.00	13.636	494.85	440.00	-2.32%
6	Gen'l Mills	$5,403	$8,720	10.0%	$60.00	$50.00	$55.00	3.846	656.50	610.00	-1.46%
7	Kellogg	$2,158	$2,965	6.6%	$90.00	$75.00	$82.50	9.066	365.60	325.00	-2.33%
8	Kimberly-Clark	$5,917	$7,975	6.2%	$105.00	$85.00	$95.00	4.471	406.90	375.00	-1.62%
9	McCormick & Co.	$1,463	$3,190	16.9%	$110.00	$90.00	$100.00	4.329	133.10	138.00	0.73%
10	PepsiCo, Inc.	$21,476	$38,125	12.2%	$130.00	$105.00	$117.50	4.626	1,581.00	1,500.00	-1.05%
11	Procter & Gamble	$61,439	$85,700	6.9%	$110.00	$90.00	$100.00	3.044	2,838.50	2,610.00	-1.66%
12	Wal-Mart Stores	$68,542	$76,360	2.2%	$95.00	$80.00	$87.50	3.327	3,516.00	2,900.00	-3.78%

(a) The Value Line Investment Survey (retrieved Mar. 16, 2012).
(b) Computed using the formula 2*(1+5-Yr. Change in Equity)/(2+5 Yr. Change in Equity).
(c) Product of year-end "r" for 2016 and Adjustment Factor.
(d) Product of change in common shares outstanding and M/B Ratio.
(e) Computed as 1 - B/M Ratio.
(f) Five-year rate of change.
(g) Average of High and Low expected market prices divided by 2016 BVPS.

REVISED WILSON DCF ANALYSIS

Exhibit WEA-7
Page 1 of 1

MID-YEAR DISCOUNT RATE

	AEE	D	EIX	PCG	PPL	WEC	XEL	*AEP*
AVERAGE PRICE ($)	29.8761	48.7985	38.8420	40.9130	27.4896	32.1179	24.8438	38.3882
QUARTERLY DIV. ($) [2]	0.4000	0.5280	0.3250	0.4550	0.3600	0.3000	0.2600	*0.4700*
	0.4000	0.4930	0.3250	0.4550	0.3500	0.2600	0.2600	*0.4700*
	0.3850	0.4930	0.3200	0.4550	0.3500	0.2600	0.2600	*0.4600*
	0.3850	0.4930	0.3200	0.4550	0.3500	0.2600	0.2600	*0.4600*
ANNUAL DIVIDEND ($)	1.5700	2.0070	1.2900	1.8200	1.4100	1.0800	1.0400	*1.8600*
YIELD	5.26%	4.11%	3.32%	4.45%	5.13%	3.36%	4.19%	*4.85%*
REUTERS [3]	-5.20%	5.07%	1.93%	3.39%	2.87%	6.96%	5.04%	*3.90%*
MSN [4]	4.00%	5.50%	5.00%	4.30%	5.00%	6.60%	5.10%	*3.60%*
YAHOO [5]	-3.90%	4.60%	-1.80%	1.03%	4.60%	6.63%	5.24%	*3.54%*
DCF GROWTH FACTOR	-1.70%	5.06%	1.71%	2.91%	4.16%	6.73%	5.13%	*3.68%*
VALUE LINE [6]								
'11 EARNINGS ($)	2.44	2.76	3.35	2.82	2.61	2.18	1.56	*3.13*
'16 EARNINGS ($)	2.75	4.00	3.50	4.00	2.75	2.75	2.00	*3.75*
	2.42%	7.70%	0.88%	7.24%	1.05%	4.76%	5.09%	*3.68%*
VALUE LINE "BOXED"	-0.50%	5.00%	0.50%	5.00%	5.00%	6.50%	5.00%	*4.00%*
VALUE LINE	0.96%	6.35%	0.69%	6.12%	3.03%	5.63%	5.05%	*3.84%*
DCF GROWTH ESTIMATE	-1.03%	5.38%	1.45%	3.71%	3.87%	6.45%	5.11%	*3.72%*
DCF COST OF EQUITY ESTIMATE	9.04%	10.62%	8.56%	10.23%	10.94%	10.25%	10.58%	*10.60%*
DCF AVERAGE								
WILSON PROXY GROUP				10.03%				
INCLUDING AEP				10.10%				

CAPM - CURRENT BOND YIELD **Exhibit WEA-8**

Page 1 of 1

WILSON PROXY GROUP

Market Rate of Return		
Dividend Yield (a)	2.5%	
Growth Rate (b)	10.8%	
Market Return (c)		13.3%
Less: Risk-Free Rate (d)		
Long-term Treasury Bond Yield		3.2%
Market Risk Premium (e)		10.1%
Utility Proxy Group Beta (f)		0.69
Risk Premium (g)		6.9%
Plus: Risk-free Rate (d)		
Long-term Treasury Bond Yield		3.2%
Unadjusted CAPM (h)		10.1%
Size Adjustment (i)		0.78%
Implied Cost of Equity (j)		**10.9%**

(a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (retrieved Apr. 17, 2012).

(b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 (retrieved May 8, 2012).

(c) (a) + (b)

(d) Average yield on 30-year Treasury bonds for Apr. 2012 from the Federal Reserve Board at http://www.federalreserve.gov/releases/h15/data/Monthly/H15_TCMNOM_Y20.txt.

(e) (c) - (d).

(f) Wilson Direct at 22.

(g) (e) x (f).

(h) (d) + (g).

(i) *Morningstar*, "2012 Ibbotson SBBI Valuation Yearbook," at Appendix C, Table C-1 (2012).

(j) (h) + (i).

CAPM - PROJECTED BOND YIELD **Exhibit WEA-9**

Page 1 of 1

WILSON PROXY GROUP

Market Rate of Return		
Dividend Yield (a)	2.5%	
Growth Rate (b)	10.8%	
Market Return (c)		13.3%
Less: Risk-Free Rate (d)		
Projected Long-term Treasury Bond Yield		4.4%
Market Risk Premium (e)		8.9%
Utility Proxy Group Beta (f)		0.69
Risk Premium (g)		6.1%
Plus: Risk-free Rate (d)		
Projected Long-term Treasury Bond Yield		4.4%
Unadjusted CAPM (h)		10.5%
Size Adjustment (i)		0.78%
Implied Cost of Equity (j)		**11.3%**

(a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (retrieved Apr. 17, 2012).

(b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 (retrieved May 8, 2012).

(c) (a) + (b)

(d) Average projected 30-year Treasury bond yield for 2012-2016 based on data from the Value Line Investment Survey, *Forecast for the U.S. Economy* (Feb. 24, 2012), IHS Global Insight, *U.S. Economic Outlook* at 25 (Dec. 2011), Blue Chip Financial Forecasts, Vol. 30, No. 12 (Dec. 1, 2011).

(e) (c) - (d).

(f) Wilson Direct at 22.

(g) (e) x (f).

(h) (d) + (g).

(i) *Morningstar*, "2012 Ibbotson SBBI Valuation Yearbook," at Appendix C, Table C-1 (2012).

(j) (h) + (i).

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of Ohio Power Company's Rebuttal Testimony of William E. Avera have been served upon the below-named counsel and Attorney Examiners by electronic mail to all Parties this 13th day of June, 2012.

/s/ Steven T. Nourse
Steven T. Nourse

greta.see@puc.state.oh.us,
jeff.jones@puc.state.oh.us,
Daniel.Shields@puc.state.oh.us,
Tammy.Turkenton@puc.state.oh.us,
Jonathan.Tauber@puc.state.oh.us,
Jodi.Bair@puc.state.oh.us,
Bob.Fortney@puc.state.oh.us,
Doris.McCarter@puc.state.oh.us,
Greg.Price@puc.state.oh.us,
Stephen.Reilly@puc.state.oh.us,
Werner.Margard@puc.state.oh.us,
William.Wright@puc.state.oh.us,
Thomas.Lindgren@puc.state.oh.us,
john.jones@puc.state.oh.us,
dclark1@aep.com,
grady@occ.state.oh.us,
keith.nusbaum@snrdenton.com,
kpkreider@kmklaw.com,
mjsatterwhite@aep.com,
ned.ford@fuse.net,
pfox@hilliardohio.gov,
ricks@ohanet.org,
stnourse@aep.com,
cathy@theoec.org,
dsullivan@nrdc.org,
aehaedt@jonesday.com,
dakutik@jonesday.com,
haydenm@firstenergycorp.com,
dconway@porterwright.com,
jlang@calfee.com,
lmcbride@calfee.com,
talexander@calfee.com,
etter@occ.state.oh.us,

grady@occ.state.oh.us,
small@occ.state.oh.us,
cynthia.a.fonner@constellation.com,
David.fein@constellation.com,
Dorothy.corbett@duke-energy.com,
Amy.spiller@duke-energy.com,
dboehm@bkllawfirm.com,
mkurtz@bkllawfirm.com,
ricks@ohanet.org,
tobrien@bricker.com,
myurick@taftlaw.com,
zkravitz@cwslaw.com,
jejadwin@aep.com,
msmalz@ohiopovertylaw.org,
jmaskovyak@ohiopovertylaw.org,
todonnell@bricker.com,
mwarnock@bricker.com,
cmontgomery@bricker.com,
lmcalister@bricker.com,
gthomas@gtpowergroup.com,
wmassey@cov.com,
henryeckhart@aol.com,
laurac@chappelleconsulting.net,
whitt@whitt-sturtevant.com,
thompson@whitt-sturtevant.com,
sandy.grace@exeloncorp.com,
cmiller@szd.com,
ahaque@szd.com,
gdunn@szd.com,
mhpetricoff@vorys.com,
smhoward@vorys.com,
mjsettineri@vorys.com,
lkalepsclark@vorys.com,
bakahn@vorys.com,
Gary.A.Jeffries@dom.com,
Stephen.chriss@wal-mart.com,
dmeyer@kmklaw.com,
holly@raysmithlaw.com,
barthroyer@aol.com,
philip.sineneng@thompsonhine.com,
carolyn.flahive@thompsonhine.com,
terrance.mebane@thompsonhine.com,
cmooney2 @columbus.rr.com,
drinebolt@ohiopartners.org,
trent@theoec.org,
nolan@theoec.org,

gpoulos@enernoc.com,
emma.hand@snrdenton.com,
doug.bonner@snrdenton.com,
clinton.vince@snrdenton.com,
sam@mwncmh.com,
joliker@mwncmh.com,
fdarr@mwncmh.com,
jestes@skadden.com,
paul.wight@skadden.com,
dstahl@eimerstahl.com,
aaragona@eimerstahl.com,
ssolberg@eimerstahl.com,
tsantarelli@elpc.org,
callwein@wamenergylaw.com,
malina@wexlerwalker.com,
jkooper@hess.com,
kguerry@hess.com,
afreifeld@viridityenergy.com,
swolfe@viridityenergy.com,
korenergy@insight.rr.com,
sasloan@aep.com,
Dane.Stinson@baileycavalieri.com,
cendsley@ofbf.org,
bpbarger@bcslawyers.com,
OhioESP2@aep.com,
kaelber@buckleyking.com,
walter@buckleyking.com,
Jeanne.Kingery@duke-energy.com,
Amy.spiller@duke-energy.com,
Elizabeth.watts@duke-energy.com,
Rocco.d'ascenzo@duke-energy.com,
jmclark@vectren.com,
sbruce@oada.com,
cmoore@porterwright.com,
yalami@aep.com,
matt@matthewcoxlaw.com,
rsugarman@keglerbrown.com,
jhummer@uaoh.net,,
tlindsey@uaoh.net,
rjhart@hahnlaw.com,
rremington@hahnlaw.com,
djmichalski@hahnlaw.com,
ssalamido@cloppertlaw.com,
kwatson@cloppertlaw.com,
toddm@wamenergylaw.com,
mchristensen@columbuslaw.org,

matt@matthewcoxlaw.com,
arthur.beeman@snrdenton.com,
Michael.dillard@thompsonhine.com,
stephanie.chmiel@thompsonhine.com

Summary: Testimony Rebuttal Testimony of William E. Avera electronically filed by Mr. Steven T Nourse on behalf of American Electric Power Service Corporation