BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

TESTIMONY OF WILLIAM E. AVERA

DOCKET NO. 050045-EI

MARCH 22, 2005

Q. Please state your name and business address.

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

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

A. I am a principal in Financial Concepts and Applications, Inc. (FINCAP), a firm engaged in financial, economic, and policy consulting to business and government.

OVERVIEW

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to present to the Florida Public Service Commission (FPSC) my independent assessment of the fair rate of return on common equity (ROE) for FPL's jurisdictional electric utility operations. In addition, I also examined the reasonableness of FPL's capital structure, considering both the specific risks faced by FPL and other industry guidelines.

Q. How is your testimony organized?

A. I first reviewed the operations and finances of FPL and the general conditions in the utility industry and the economy. With this as a background, I developed the principles underlying the cost of equity concept and then conducted various quantitative analyses to estimate the cost of equity for a group of reference utilities. These included discounted cash flow (DCF) analyses and risk premium methods encompassing alternative approaches and studies. From the cost of equity range indicated by my analyses, a fair rate of return on equity was selected taking into account the economic requirements and specific risks and potential challenges for FPL, as well as other factors (*e.g.*, flotation costs) that are properly considered in setting a fair rate of return on equity.

Q. Are you sponsoring an exhibit in this case?

A. Yes. I am sponsoring an exhibit consisting of twelve documents, Document WEA-1 through Document WEA-12, which are attached to my direct testimony.

Q. Please describe your educational background and professional experience.

A. A description of my background and qualifications, including a resume containing the details of my experience, is attached as Document WEA-1.

Q. Please summarize the basis of your knowledge and conclusions concerning the issues to which you are testifying in this hearing.

A. As is common and generally accepted in my field of expertise, I have accessed and used information from a variety of sources. I am familiar with the organization, operations, finances, and operation of FPL from my participation in prior proceedings before the FPSC. In connection with the present filing, I obtained information through discussions with corporate management and from my review of numerous documents relating to FPL, including bond rating agency reports, financial filings, and prior regulatory proceedings and orders. I also reviewed information relating generally to capital markets and specifically to investor perceptions, requirements, and expectations for regulated utilities. These sources, coupled with my experience in the fields of finance and utility regulation, have given me a working knowledge of FPL and are the bases for my conclusions.

Q What is the role of the return on equity in setting a utility's rates?

A. The rate of return on common equity compensates shareholders for the use of their capital to finance the plant and equipment necessary to provide utility service. Investors commit capital only if they expect to earn a return on their investment commensurate with returns available from alternative investments with comparable risks. To be consistent with sound regulatory economics and the standards set forth by the United States Supreme Court in the *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n* [262 U.S. 679 (1923)] and *Fed. Power Comm'n v. Hope Natural Gas Co.* [320 U.S. 591 (1944)] cases, a utility's allowed return on common equity should be sufficient to (1) fairly compensate capital invested in the utility, (2) enable the utility to offer a return adequate to attract new capital on reasonable terms, and (3) maintain the utility's financial integrity.

SUMMARY OF CONCLUSIONS

Q. What are your findings regarding the fair rate of return on equity for the 2006 test year?

A. Based on the results of my analyses and the economic requirements necessary to support continuous access to capital, I determined that a fair rate of return on equity for FPL is currently in the range of 11.3 to 12.3 percent, with a midpoint of 11.8 percent. The bases for my conclusion are summarized below:

- *Applications of DCF and risk premium approaches to the reference group of electric utilities implied a cost of equity in the range of 10.0 to 12.0 percent;*
- *Incorporating a 30 basis-point allowance for equity flotation costs resulted in a fair rate of return range for the electric utility proxy*

group of 10.3 to 12.3 percent;

- *Considering the potential exposures associated with FPL's resource mix and service area and the need to support FPL's ability to attract capital under adverse circumstances, I recommend a rate of return for FPL in the range of 11.3 to 12.3 percent, which corresponds to the upper half of the proxy group results.*
- *The 11.8 percent midpoint of my recommended fair rate of return on equity range does not explicitly incorporate any allowance for superior results. An incentive to recognize and encourage exemplary performance, such as that documented in the testimony of FPL's witnesses, is an appropriate consideration in establishing a fair rate of return:*
    - *Consumers in FPL's service area have benefited from efficient and cost-effective operations, excellent customer service, improved reliability, and prices that have declined in real terms;*
    - *Providing the opportunity to earn an incremental return offers an appropriate incentive for FPL to continue to innovate and take risks in pursuit of superior performance;*
    - *Incorporating the 50 basis-point ROE incentive proposed by FPL to my 11.8 percent recommended cost of equity for FPL results in a fair rate of return on equity of 12.3 percent.*

- *Finally, giving effect to the 100 basis-point range typically allowed by the FPSC for regulatory purposes results in an appropriate fair rate of return on equity range for FPL of 11.3 to 13.3 percent.*

My analyses of the cost of equity focused on a comparable group of 21 electric utilities with an average bond rating of single-A. My evaluation indicated that, after taking into account risks specific to FPL and the offsetting effect of FPL's relatively higher equity ratio, investors view FPL's overall investment risks as equivalent to those of the benchmark group of electric utilities. This conclusion was based on the following findings:

- *In evaluating FPL's relative risks, investors consider the implications of its relatively greater reliance on nuclear and purchased power, increased exposure to uncertainties regarding natural gas prices and supplies, and the characteristics of its service area economy;*
- *While these factors suggest that FPL may be somewhat riskier than the firms in the benchmark group, they are mitigated by FPL's financial strength;*
- *FPL's corporate credit rating, which provides the most objective and encompassing measure of overall investment risk, is identical to that maintained by the average firm in the electric utility proxy group.*

Q. What is your conclusion as to the reasonableness of FPL's capital structure?

A. Based on my evaluation, I concluded that the approximately 55 percent common equity ratio (as adjusted for off balance sheet obligations) maintained by FPL represents a reasonable mix of capital sources from which to calculate FPL's overall rate of return. This conclusion was based on the following findings:

- *While FPL's adjusted common equity ratio falls above the average maintained by the electric utility operating companies contained in the proxy group, it is well within the range of individual results for these firms and in-line with the lower leverage expected for the industry going forward;*
- *While FPL's total debt ratio is slightly above rating agency guidelines for a single-A rating, this relatively conservative financial posture has not been sufficient to warrant an upgrade to FPL's credit standing, with S&P continuing to maintain a "negative" outlook, warning investors of the potential for further deterioration;*
- *Absent its relatively conservative capital structure, FPL's debt rating would undoubtedly be lower than present levels and the resulting greater investment risk would imply an increase in investors' required rate of return for FPL's securities;*
- *For an electric utility with an obligation to provide reliable service, uncertainties associated with FPL's resource mix and service area highlight the necessity of preserving flexibility, even during periods of adverse capital market conditions.*

Considering investors' heightened awareness of the risks associated with the electric power industry and the damage that results when a utility's financial flexibility is compromised, supportive regulation is perhaps more crucial now than at any time in the past. Indeed, the investment community is intensely focused on the actions of the FPSC, and if FPL's ongoing request to recover storm repair costs in Docket No. 041291-EI were to be denied, this would imply a significant increase in investment risk and required rate of return, and my recommended ROE would need to be adjusted upward accordingly. The cost of providing FPL an adequate return is small relative to the potential benefits of having a financially sound utility that can provide reliable service at reasonable rates and a platform for economic growth; especially when compared against the extreme burden imposed by a financially troubled service provider.

FUNDAMENTAL ANALYSES

Q. What is the purpose of this section?

A. As a predicate to subsequent quantitative analyses, this section briefly reviews FPL's operations and finances. In addition, it examines the risks and prospects for the electric utility industry and conditions in the capital markets and the general economy. An understanding of the fundamental factors driving the risks and prospects of electric utilities is essential in developing an informed opinion of investors' expectations and requirements, and form the basis of a fair rate of return.

Florida Power & Light Company

Q. Briefly describe FPL and its parent, FPL Group, Inc.

A. Headquartered in Juno Beach, Florida, FPL is engaged in the generation, transmission, and distribution of electric power throughout 34 counties located principally along the east and lower west coasts of Florida. FPL's service territory includes a population of more than 8 million, with service being provided to approximately 4.2 million customers. FPL is the principal subsidiary of FPL Group, Inc. (FPL Group). In addition to the electric utility operations of FPL, FPL Group is involved in the development, construction, and management of independent power generation facilities through FPL Energy, LLC. Through a subsidiary, FPL Energy buys and sells wholesale energy commodities, such as natural gas, oil and electric power and owns and operates a fiber-optic network that interconnects major cities within Florida (FPL FiberNet, LLC). As of December 31, 2004, FPL Group had total assets of approximately $28.3 billion, with consolidated revenues totaling approximately $10.5 billion for the most recent fiscal year.

Q. Please describe FPL's electric utility operations.

A. In addition to an economic base dominated by tourism, principal industries in FPL's service area include agriculture, manufacturing, and international trade. FPL employs approximately 10,000 individuals, with energy sales amounting to over 103 million megawatt hours during 2004. Approximately 51 percent of 2004 retail electric revenues were attributable to residential customers, with 41 percent from commercial and 4 percent from industrial users. With a combined capacity of approximately 18,940 megawatts (MW), FPL's generating facilities include the four nuclear units of the St. Lucie and Turkey Point generating stations, with a total capacity of 2,939 MW. In 2004, nuclear generation accounted for 21 percent of the electric energy provided by FPL, with natural gas at 37 percent, oil at 18 percent, and coal at 6 percent.

The remaining 18 percent of FPL's 2004 energy requirements were obtained through purchased power contracts. Take-or-pay purchased power contracts with the Jacksonville Electric Authority (JEA) and with subsidiaries of The Southern Company (Southern Company) provide approximately 1,300 MW of power through mid-2015 and 381 MW thereafter through 2021. FPL also has various firm contracts to purchase approximately 900 MW of capacity and energy from certain cogenerators and qualifying facilities. In addition, FPL has various agreements with several other electricity suppliers to purchase an aggregate of up to approximately 1,900 MW of power with expiration dates ranging from 2005 through 2009. FPL estimates that capacity and minimum payments under these agreements will average approximately $640 million annually through 2009.

FPL's transmission and distribution facilities consist of over 500 substations and include almost 47,000 miles of overhead lines and approximately 24,300 miles of underground and submarine cables. At December 31, 2004, FPL's investment in net utility plant was approximately $14.0 billion. Capital expenditures for the construction or acquisition of additional facilities to meet customer demand are estimated to be approximately $8.5 billion for the years 2005 through 2009.

FPL's retail electric operations are subject to the jurisdiction of the FPSC, with the interstate jurisdiction regulated by Federal Energy Regulatory Commission (FERC). Additionally, FPL's nuclear facilities are subject to licensing and oversight by the Nuclear Regulatory Commission (NRC). The operating licenses for Turkey Point Units Nos. 3 and 4 received extensions in 2002, which gives FPL the option to operate these units until 2032 and 2033, respectively. The NRC extended the operating licenses for St. Lucie Units Nos. 1 and 2 during 2003, which give FPL the option to operate these units until 2036 and 2043, respectively. FPL's latest decommissioning studies indicate that FPL's portion of the cost of decommissioning its four nuclear units, including costs associated with spent fuel storage, to be $6.4 billion. At December 31, 2004, the accumulated provision for nuclear decommissioning totaled approximately $2.2 billion.

Q. What credit ratings have been assigned to FPL?

A. FPL has been assigned an issuer credit rating of "A1" by Moody's Investors Service (Moody's), with its senior secured debt being rated "Aa3". Similarly, Fitch Ratings has assigned a long-term credit rating of "A+" to FPL, while rating its first mortgage bonds "AA-". Standard & Poor's Corporation (S&P), meanwhile, has assigned FPL an "A" rating with a negative outlook, indicating the possibility of a further reduction in FPL's credit standing going forward.

Electric Utility Industry

Q. What are the general conditions in the electric utility industry?

A. The industry is characterized by structural changes resulting from market forces, deregulation initiatives, and judicial decisions.

Q. Please describe these structural changes.

A. At the federal level, the FERC has been an aggressive proponent of regulatory driven reforms designed to foster greater competition in markets for wholesale power supply. The National Energy Policy Act of 1992, which reformed both the Public Utility Holding Company Act of 1935 and the Federal Power Act, greatly increased prospective competition for the production and sale of power at the wholesale level. In April 1996, FERC adopted Order No. 888, mandating "open access" to the transmission facilities of jurisdictional electric utilities. FERC also has pushed for the regionalization of transmission system control by establishing frameworks for creation of RTOs in its Order No. 2000 [*Regional Transmission Organizations*, Order No. 2000 (Dec. 20, 1999), 89 FERC ¶ 61,285]. In 2002 FERC issued a notice of proposed rulemaking proposing a framework to address alleged discrimination in providing interstate transmission services and in other industry practices.

Subsequently, in April 2003 FERC issued a White Paper refining its vision for a wholesale power market platform, taking into account developments in market design and comments filed in response to the earlier SMD NOPR [FERC White Paper, *Wholesale Power Market Platform,* April 28, 2003]. "Open access" has, in the view of most market observers, resulted in more competition and competitors in wholesale power markets, but not without the introduction of substantial risks – particularly for utilities that depend on wholesale power markets for a portion of their resource requirements.

Q. What impact did the western power crisis have on investors' risk perceptions for firms involved in the electric power industry?

A. Events of last several years caused investors to rethink their assessment of the relative risks associated with the electric power industry. A well-publicized energy crisis throughout the west wreaked havoc on the customers, utilities, and policymakers. It also had dramatic repercussions for western wholesale power markets and investors and utilities nationwide. State regulators and legislators have re-evaluated restructuring initiatives for the retail sector of the electric industry and the financial implications of the western power crisis experience demonstrated the risks facing all segments of the electric power industry.

The massive debts owed by California's retail utilities to banks, power producers and other creditors shattered their financial integrity and the subsequent bankruptcy filing of Pacific Gas and Electric Company (PG&E) brought the uncertainties associated with today's power markets into sharp focus for the investment community. Enron's, and later Mirant Corporation's, bankruptcies only served to magnify the risks associated with the power sector and increased investors' reluctance to commit capital in the energy industry, as former FERC Commissioner Massey succinctly recognized:

> Investor confidence has been shaken by these events, by a declining national economy, indictments of energy traders, accounting irregularities, downgrades by rating agencies, and continuing investigations by the FERC, CFTC, the SEC, and the Justice Department. ...The flight of capital from the industry has been severe since the collapse of Enron. [*Remarks by William L. Massey*, Center for Public Utilities Advisory Council, "The Santa Fe Conference" (March 17, 2003)]

While the case of California and PG&E represents an extreme example, there is every indication that investors' risk perceptions for electric utilities shifted sharply upward in response to events in the western U.S..

Q. What was the impact of these capital and credit market conditions on the ability of electric utilities to raise funds?

A. Combined with economic and global uncertainties, the dramatic upward shift in investors' risk perceptions and the weakened financial picture of most industry participants, combined to produce a severe liquidity crunch in the electric power industry. S&P cited the debilitating impact of these developments on investors' willingness to provide capital:

> The last 24 months have witnessed extraordinary turmoil for power and energy debt, unprecedented since Samuel Insull's utility empire collapsed during the 1930s. Events ranging from the credit collapse of the California utilities, through the Enron bankruptcy and subsequent

> market disruptions for U.S. energy merchant companies have destroyed billions of dollars of value for investors. Wall Street has virtually shut down new investment in this sector. ["U.S. Power Industry Experiences Precipitous Credit Decline in 2002; Negative Slope Likely to Continue", *RatingsDirect* (Jan. 15, 2003)]

S&P went on to recognize that the end result of investors' waning confidence in the industry led to reduced access to capital:

> Increasingly constrained capital market access as a result of investor skepticism over accounting practices and disclosure, more and more federal and state investigations and subpoenas, audits, and failing confidence in future financial performance has created a liquidity crisis.

The challenges faced by electric utilities resulted in reduced financing activity, with many utilities being forced to rely on bank debt. Access to the commercial paper markets, long the low-cost staple of high-grade utilities for meeting working capital needs, virtually disappeared for certain companies. S&P went on to note that the falloff in financing activity was partly attributable to "capital market jitters, especially for those firms that are most in need of capital market access." As a result, at the same time that industry uncertainty and market volatility increased the importance of financial flexibility, S&P observed in a July 24, 2003 report that constrained access to capital markets and investor skepticism was contributing to the bleak credit picture.

Q. How were western utilities impacted by conditions in the electric power industry?

A. The financial integrity of many utilities in the region was severely damaged by the maelstrom of the western energy crisis. While a full description of the western power crisis and its effects is beyond the scope of this testimony, the chaotic market conditions were felt directly and with full force. Utilities were forced to use cash flows from operations, various bank borrowings, and short- and long-term debt to fund unrecovered energy supply costs. This led to a sharp deterioration in financial condition, a severe liquidity crunch, and a dramatic increase in credit risk. As a result, commercial banks were highly reticent to extend financing for ongoing operations or new construction and counterparties involved in meeting the utilities' energy needs became unwilling to transact business absent special credit terms. To varying degrees, utilities throughout the western U.S. were confronted with the difficult task of maintaining reliable service and financial integrity in a power market characterized by short supply and unprecedented price volatility.

Even for electric utilities like FPL that have permanent fuel and purchased power adjustment mechanisms in place, there can be a significant lag between the time the utility actually incurs the expenditure and when it is recovered from customers. One example of the risk of regulatory lag was noted by The Value Line Investment Survey (Value Line) in a November 17, 2000 report:

> **A lag in the recovery of sharply higher power costs is hurting Sierra Pacific Resources.** Power prices in the West have soared since the second quarter of 2000, and until recently, SPR's two utilities lacked a mechanism for recovering these increases. The Nevada

> Commission has granted one, but it won't solve the utilities' problem right away. That's because the mechanism tracks power costs over a trailing 12-month period and because the amount by which the utilities can raise rates each month is capped.

The continuing prospect of further challenges in power markets cannot be discounted, with S&P reporting continued spikes in wholesale market prices:

> For 2003, record-high wholesale power prices were the defining feature of the U.S. merchant power markets. ...Power prices across the U.S. continent generally rose on the order of 50% or more in 2003. ...Prices in the western regions were also the highest on record outside of the 2000-2001 California energy crisis. ["Energy Commodity Report: U.S. Power Prices Record High in 2003," *RatingsDirect* (Jan. 15, 2004)]

Investors recognize that volatile markets and inopportune reliance on wholesale purchases to meet resource needs can constitute a dangerous combination, exposing the utility to the risk of reduced cash flows and unrecovered power supply costs.

Q. What are the implications of the power outages experienced in the upper Midwest and Northeast during August 2003?

A. These events underscore the continuing risks inherent in the industry and the uncertain state of affairs with respect to the industry's structure. The massive blackout, which stretched from New York to Detroit and from Ohio into Canada, was the largest power outage in U.S. history. This event sharpened the focus of industry stakeholders – utilities, consumers, regulators, and investors – on the need to improve the nation's electricity infrastructure, especially in light of the additional stress that deregulated wholesale markets have placed on the network. The importance of rapidly stimulating investment in electric power infrastructure has been almost universally cited as the key to ensuring that further outages are avoided. As FERC Chairman Wood noted in an August 15, 2003 press release:

> If we draw any conclusions from this blackout, it is the urgent need for more investment in the nation's transmission grid to serve broad regional needs.

Q. Have these events affected utilities' credit standing?

A. Yes. The last several years have witnessed steady erosion in credit quality throughout the utility industry, both as a result of revised perceptions of the risks in the industry and the weakened finances of the utilities themselves. For example, in its January 15, 2003 edition of *RatingsDirect,* S&P noted that it had recorded 182 downgrades in the utility industry during 2002, versus only 15 upgrades, while Moody's reported in its July 14, 2003 *Credit Perspectives* that it had downgraded 109 utility issuers and upgraded only 3 – an acceleration of the trend in bond rating changes during the previous two years. Moreover, credit quality continued to decline during 2003. S&P observed the utility industry "continued its downward credit slide that began in early 2000," reporting 139 downgrades during 2003, compared with just 8 upgrades, with downgrades outpacing upgrades by more than 15 to one in the fourth quarter of 2003 [*RatingsDirect*, Jan. 29, 2004]. While the pace and scale of negative ratings actions has since diminished, S&P reported that 44 percent of the utility sector now falls in the triple-B rating category, with 20 percent of issuers being rated below this investment grade threshold, and noted little likelihood for any significant upturn in credit outlook [*RatingsDirect*, Jul. 29, 2004].

Q. Are all of the risks associated with the restructuring of the electric industry known at this time?

A. No. My experience with deregulation in the transportation and natural gas industries demonstrates that the structural changes associated with deregulation produces consequences that no one can predict. As prices become primarily market-driven, future changes in prices become inherently uncertain. Much of this uncertainty simply reflects the superior ability of markets to adjust continually both to changing customer needs and to the changing costs of meeting those needs. This point was succinctly stated in the 1997 *Economic Report of the President*:

> An insufficiently appreciated property of markets is their ability to collect and distribute information on costs and benefits in a way that enables buyers and sellers to make effective, responsive decisions. ...As tastes, technology, and resource availability change, market prices will change in corresponding ways to direct resources to the newly valued ends and away from obsolete means. It is simply impossible for governments to duplicate and utilize the massive amount of information exchanged and acted upon daily by the millions of participants in the marketplace. (p. 191)

If structural evolution in the electric utility industry ultimately provides benefits for both consumers and producers, these benefits come at a cost. Namely, all participants will become exposed to new uncertainties, such as the threat of new entrants and technologies and the threat of price volatility in wholesale markets. It will be the challenge of regulators and policymakers to establish markets that capture the benefits of competition for consumers while mitigating the impacts of its inherent risks.

Q. Are investors likely to consider the impact of market restructuring in assessing their required rate of return for FPL?

A. Absolutely. While restructuring of the electric utility industry has not been implemented in Florida, the final report of the Energy 2020 Study Commission established by the Governor identified the transition to an effective competitive wholesale generation market as one objective, along with encouraging the development of merchant power plants. Similarly, the FPSC has announced that it favors an eventual transition to effective competition in the wholesale power market. While investors recognize that potential wholesale competitors could find FPL's market attractive, deregulation of electric generation will ultimately require legislative action, which is not considered likely in the near-term.

Despite the fact that electric utilities in Florida continue to operate in a regulated environment, FPL nevertheless faces the prospect of changes in the transmission function of their business, as well as more fundamental reforms in how utilities operate to optimize their assets for the benefit of retail customers. Policy evolution in the transmission area has been wide-reaching and investors' focus on regulatory change in their assessment of risks and prospects was exemplified by S&P's remarks in "Electric Transmission at the Starting Gate", *RatingsDirect* (May 10, 2002):

> The FERC is in the process of changing every aspect of the electric utility landscape, with industry sages anticipating further transmission and wholesale market development guidance, which could affect the

> segment's credit prospects and quality. ...Significant uncertainty still exists for transmission companies that may operate under an RTO or ISO structure, which will significantly impact the full scope of capital expenditures necessary to ensure reliability and increase capacity in the future. Uncertainty will exist until operating rules are in place and have stabilized.

Virtually all industry stakeholders have recognized that regulatory uncertainties increase the risks associated with the electric industry. Former FERC Commissioner Massey has noted that regulatory uncertainty is "part of the problem" explaining under-investment in electric utility infrastructure [9th Annual Spring Conference for the New England Energy Industry (May 21, 2002)] The Department of Energy (DOE) identified "reducing regulatory uncertainty" as critical in stimulating increased investment in the power industry and has noted that lack of clarity in the regulatory structure was inhibiting planning and investment [*National Transmission Grid Study* (May 2002)]. The DOE also recognized the impact that this regulatory uncertainty has on investors' required rates of return for electric utilities:

> Because transmission assets are long lived, regulatory uncertainty increases the risks to investors and, therefore, increases the returns they need to justify transmission system investments.

Q. Is there any indication that the importance of these considerations have diminished in the eyes of investors?

A. No. The 2003 blackout only served to reinforce the importance of regulatory risks for investors. The Wall Street Journal ["<u>Overloaded Circuits</u> Blackout Signals Major Weakness in U.S. Power Grid," The Wall Street Journal (Aug. 18, 2003)] cited the debilitating impact of an "unsteady regulatory environment" and the "chaotic combination of regulated and deregulated markets" in explaining inhibitions to increased investment in the electric utility system. Similarly, in an August 21, 2003 comment on the blackout, S&P warned investors that the partial reforms presently characterizing wholesale power markets invites dysfunction and that elevated risks will discourage new capital, "or at least make it more expensive." S&P observed:

> Investors should not expect that such risk will dissipate any time soon. Instead, credit risk could actually intensify if the politically charged debate over reform continues for years, as it might very well do. And even if policy makers succeed in crafting a comprehensive solution to the problems of the nation's energy grid, the regulatory treatment of the costs needed to upgrade the infrastructure remains uncertain.

Even before the establishment of any transition to competition, market trends and federal policies will continue to impact FPL and its investors. Moreover, as the Energy 2020 Study Commission recognized in its February 2001 *Interim Report*, lack of restructuring legislation does not leave industry stakeholders immune from adversity, concluding that "[t]he environment ... will be replete with uncertainty and risk." Because of potential exposure to wholesale markets, the risks of transmission uncertainties and potential market volatility are intensified for utilities that depend heavily on purchased power. Reliance on purchased power to meet resource needs or fill potential shortfalls in generation magnifies the importance of maintaining the financial flexibility necessary to fund an adequate and reliable utility system. At the same time, it also exposes utilities and their investors to the ongoing regulatory uncertainties and other risks imposed by restructuring of wholesale power markets.

Already, FPL has confronted the uncertainties associated with the establishment of regional transmission organizations (RTOs), pursuant to FERC's policy initiatives. In October 2000, together with Progress Energy Florida and Tampa Electric Company, FPL proposed the formation of an independent entity, GridFlorida, to own and operate the transmission system. Since that time, there have been numerous regulatory and legal proceedings concerning the formation of GridFlorida and the framework underlying operation and oversight of the transmission system. Thus, while a competitive wholesale market has not been implemented for FPL's service territory, investors undoubtedly consider these factors in assessing the required rate of return on long-term capital, such as common equity.

Q. Are the uncertainties associated with structural changes the only risks being faced by electric utilities?

A. No. Apart from these factors, a number of electric utilities, once considered the paragon of financial stability, have experienced difficult financial straits. In part to avoid the risks associated with building additional base-load generating capacity, electric utilities have pursued a variety of options, such as increased reliance on power purchases from wholesale suppliers and non-utility generators, although these entail additional risks in and of themselves. The industry continues to face the risks inherent in operating electric utility systems. Electric utilities are confronting increased environmental pressures that could impose significant costs on utilities that rely on coal as a boiler fuel. S&P's *Corporate Ratings Criteria* recognized the potential financial challenges posed by such uncertainties:

Pension obligations, environmental liabilities, and serious legal problems restrict flexibility, apart from the obligations' direct financial implications.

While FPL has demonstrated leadership within its industry in protecting the environment, it remains exposed to uncertainties regarding emissions and potential contamination. Nuclear risk persists for those utilities involved in nuclear plants, although the exposure has shifted from construction to operating and decommissioning uncertainties.

Economy and Capital Markets

Q. What has been the pattern of interest rates over the last decade?

A. Average long-term public utility bond rates, the monthly average prime rate, and inflation as measured by the consumer price index since 1990 are plotted in the graph at the top of Document WEA-2. After rising to approximately 10 percent in mid-1990, the average yield on long-term public utility bonds generally fell as economic conditions weakened in the aftermath of the 1991 Gulf war, with rates dipping below 7 percent in late 1993. Yields subsequently rose again in 1994, before beginning a general decline, with investors requiring approximately 5.8 percent from average public utility bonds in January 2005.

Q. Are investors likely to anticipate any substantial decline in interest rates going forward?

A. No. While interest rates are currently at relatively low levels, investors are unlikely to expect any further significant declines going forward. The general expectation is that interest rates will begin to rise with strengthening economic growth, with Value

Line citing "the strong possibility of rising interest rates in 2005" in its December 17, 2004 report (p. 459). Indeed, the Federal Reserve on February 2, 2005 raised interest rates for the sixth time since June 2004 and signaled it was likely to continue to act at a "measured" pace. The latest quarter-point increase raised the federal funds rate to 2.5 percent, more than double the 46-year low of 1.00 percent in effect when the Fed began its credit-tightening campaign in 2004. Meanwhile, the Wall Street Journal reported (Jan. 5, 2005 at A2) expectations of a steady rise in rates:

> The minutes suggest that the Fed is less likely to pause in its interest-rate increases this year than the markets may have expected. In the wake of the minutes' release, long-term bond prices fell sharply, and yields, which move in the opposite direction, rose.

Consistent with these general expectations for higher interest rates, the most recent forecast of the Energy Information Administration (EIA), a statistical agency of the DOE, anticipates that the double-A public utility bond yield will increase from approximately 6.23 percent in 2004 to 7.07 in 2005, increasing to 7.42 percent over the next five years. [Annual Energy Outlook 2005, Table 19] Similarly, GlobalInsight (formerly DRI/WEFA), a widely referenced forecasting service, calls for double-A public utility bond yields to average 6.69 percent in 2005, reaching 7.62 percent by 2009. ["The U.S. Economy, The 25-Year Focus", Table 33 (Summer 2004)]. The February 1, 2005 edition of Blue Chip Financial Forecasts (Blue Chip) also anticipates that bond yields will rise significantly over the 2005-2006 period covered by its projections.

Q. How has the market for common equity capital performed?

A. Between 1990 and early 2000 stock prices pushed steadily higher as the longest bull market in United States history continued unabated. While the S&P 500 had increased over four times in value by August 2000, mounting concerns regarding prospects for future growth, particularly for firms in the high technology and telecommunications sectors, pushed equity prices lower, in some cases precipitously. While common stock prices have recovered strongly from their lows, the market remains volatile, with share values routinely changing in full percentage points during a single day's trading. The graph at the bottom of Document WEA-2 plots the performances of the Dow-Jones Industrial Average, the S&P 500, and the Dow Jones Utility Average since 1990 (the latter two indices were scaled for comparability).

Q. What is the outlook for the United States economy?

A. During the decade through the first quarter of 2001, the United States economy enjoyed the longest peacetime expansion in history. Monetary and fiscal policies resulted in modest inflation during this period, with unemployment rates falling to their lowest levels since the 1960s. A revolution in information technology, rising productivity, and vibrant international trade all contributed to strong economic growth. However, even before the events of September 11, 2001, there were increasing signs that the economic expansion would not be sustainable. Concerns regarding the slowing pace of economic activity were exemplified by the Federal Reserve's sequential lowering of interest rates. The economic picture has brightened more recently. Gross domestic product surged in the last half of 2003 and is expanded at roughly a 3-4 percent rate for 2004, with Florida's economy expected to outpace the nation in the near term. Manufacturing activity has rebounded and construction spending and retail sales have both increased. Nevertheless, businesses have been reluctant to expand hiring and uncertainties over the durability of the economic recovery continue to be magnified by overhanging government and trade deficits, as well as continued conflict and instability in Iraq and the ongoing threat of terrorism, which undermines consumer confidence and contributes to global economic uncertainty. These factors cause the outlook to remain tenuous, with persistent stock and bond price volatility providing tangible evidence of the uncertainties faced by the United States economy.

Q. How do these capital market uncertainties affect electric utilities?

A. Uncertainties over the extent and durability of the economic recovery have combined to heighten the risks faced by utilities. A return to stagnant economic growth would undoubtedly mean flat sales, while the potential for higher inflation and interest rates that will likely accompany the current economic rebound place additional pressure on the adequacy of existing service rates. While the national economy may ultimately return to a path of steady growth and the volatility in the capital and energy markets may abate, the underlying weaknesses now present cause considerable uncertainties to persist, which increase the risks faced by the utility industry.

CAPITAL MARKET ESTIMATES

Q. What is the purpose of this section of your testimony?

A. In this section, capital market estimates of the cost of equity are developed for a benchmark group of electric utilities. First, I examine the concept of the cost of equity, along with the risk-return tradeoff principle fundamental to capital markets. Next, I describe DCF and risk premium analyses conducted to estimate the cost of equity for the reference group of electric utilities.

Economic Standards

Q. What role does the rate of return on common equity play in a utility's rates?

A. The return on common equity is the cost of inducing and retaining investment in the utility's physical plant and assets. This investment is necessary to finance the asset base needed to provide utility service. Competition for investor funds is intense and investors are free to invest their funds wherever they choose. They will commit money to a particular investment only if they expect it to produce a return commensurate with those from other investments with comparable risks. Moreover, the return on common equity is integral in achieving the sound regulatory objectives of rates that are sufficient to: 1) fairly compensate capital investment in the utility, 2) enable the utility to offer a return adequate to attract new capital on reasonable terms, and 3) maintain the utility's financial integrity. Meeting these objectives allows the utility to fulfill its obligation to provide reliable service while meeting the needs of customers through expansion of the electric system.

Q. What fundamental economic principle underlies this cost of equity concept?

A. Unlike debt capital, there is no contractually guaranteed return on common equity capital since shareholders are the residual owners of the utility. Nonetheless, common equity investors still require a return on their investment; with the cost of equity being the minimum "rent" that must be paid for the use of their money. This cost of equity typically serves as the starting point for determining a fair rate of return on common equity.

The cost of equity concept is predicated on the notion that investors are risk averse, and will willingly bear additional risk only if they expect compensation for doing so. In capital markets where relatively risk-free assets are available (*e.g.*, U.S.

Treasury securities) investors can be induced to hold more risky assets only if they are offered a premium, or additional return, above the rate of return on a risk-free asset. Since all assets compete with each other for investors' funds, more risky assets must yield a higher expected rate of return than less risky assets in order for investors to be willing to hold them.

Given this risk-return tradeoff, the required rate of return (k) from an asset (i) can be generally expressed as:

$$k_i = R_f + RP_i$$

where: R_f = Risk-free rate of return; and

RP_i = Risk premium required to hold risky asset i.

Thus, the required rate of return for a particular asset at any point in time is a function of: 1) the yield on risk-free assets, and 2) its relative risk, with investors demanding correspondingly larger risk premiums for assets bearing greater risk.

Q. Does the risk-return tradeoff principle actually operate in the capital markets?

A. Yes. The risk-return tradeoff is readily observable in certain segments of the capital markets where required rates of return can be directly inferred from market data and generally accepted measures of risk exist. Bond yields, for example, reflect investors' expected rates of return, and bond ratings measure the risk of individual bond issues. The observed yields on government securities, which are considered free of default risk, and bonds of various rating categories demonstrate that the risk-return tradeoff does, in fact, exist in the capital markets.

Q. Does the risk-return tradeoff observed with fixed income securities extend to common stocks and other assets?

A. It is generally accepted that the risk-return tradeoff evidenced with long-term debt extends to all assets. Documenting the risk-return tradeoff for assets other than fixed income securities, however, is complicated by two factors. First, there is no standard measure of risk applicable to all assets. Second, for most assets – including common stock – required rates of return cannot be directly observed. Nevertheless, it is a fundamental tenet that investors exhibit risk aversion in deciding whether or not to hold common stocks and other assets, just as when choosing among fixed income securities. This has been supported and demonstrated by considerable empirical research in the field of finance and is confirmed by reference to historical earned rates of return, with realized rates of return on common stocks exceeding those on government and corporate bonds over the long-term.

Q. Is this risk-return tradeoff limited to differences between firms?

A. No. The risk-return tradeoff principle applies not only to investments in different firms, but also to different securities issued by the same firm. Debt, preferred stock, and common equity vary considerably in risk because they have different characteristics and priorities.

When investors loan money in the form of debt (*e.g.*, long-term bonds), they enter into a contract whereby the utility agrees to pay the bondholders a specified amount of interest and to repay the principal of the loan in full. The bondholders have a senior claim on available cash flow for these payments, and if the utility fails to make them, they may force it into bankruptcy and liquidation for settlement of unpaid claims. Similarly, when a utility sells investors preferred stock, the utility promises to pay preferred stockholders specified dividends and, typically, to retire the preferred stock on a predetermined schedule. While the rights of preferred stockholders to available cash flow for these payments are junior to creditors, and preferred stockholders cannot compel bankruptcy, their claims are senior to those of common shareholders.

The last investors in line are common shareholders. They only receive the cash flow, if any, that remains after all other claimants – employees, suppliers, governments, lenders, and preferred stockholders – have been paid. As a result, the rate of return that investors require from a utility's common stock, the most junior and riskiest of its securities, is considerably higher than the yield on the utility's long-term debt or preferred stock, which have more certain, senior claims.

Q. What does the above discussion imply with respect to estimating the cost of equity?

A. Although the cost of equity cannot be observed directly, it is a function of the returns available from other investment alternatives and the risks to which the equity capital is exposed. Because it is unobservable, the cost of equity for a particular utility must be estimated by analyzing information about capital market conditions generally, assessing the relative risks of the company specifically, and employing various quantitative methods that focus on investors' required rates of return. These various quantitative methods typically attempt to infer investors' required rates of return from stock prices, interest rates, or other capital market data.

Q. Have you relied on a single method to estimate the cost of equity for FPL?

A. No. In my opinion, no single method or model should be relied upon to determine a utility's cost of equity because no single approach can be regarded as wholly reliable.

As the Federal Communications Commission recognized in Report and Order 42-43 (CC Docket No. 92-133, 1995):

> Equity prices are established in highly volatile and uncertain capital markets... Different forecasting methodologies compete with each other for eminence, only to be superceded by other methodologies as conditions change... In these circumstances, we should not restrict ourselves to one methodology, or even a series of methodologies, that would be applied mechanically. Instead, we conclude that we should adopt a more accommodating and flexible position.

Therefore, in addition to the DCF model, I applied the risk premium method based on data for utilities and using forward-looking estimates of required rates of return. In addition, I also evaluated my results using a comparable earnings approach based on investors' current expectations in the capital markets. In my opinion, comparing estimates produced by one method with those produced by other approaches ensures that the estimates of the cost of equity pass fundamental tests of reasonableness and economic logic.

Discounted Cash Flow Analyses

Q. How are DCF models used to estimate the cost of equity?

A. The use of DCF models is essentially an attempt to replicate the market valuation process that sets the price investors are willing to pay for a share of a company's stock. The model rests on the assumption that investors evaluate the risks and expected rates of return from all securities in the capital markets. Given these expected rates of return, the price of each stock is adjusted by the market until investors are adequately compensated for the risks they bear. Therefore, we can look to the market to determine what investors believe a share of common stock is worth. By estimating the cash flows investors expect to receive from the stock in the way of future dividends and capital gains, we can calculate their required rate of return. In other words, the cash flows that investors expect from a stock are estimated, and given its current market price, we can "back-into" the discount rate, or cost of equity, that investors presumptively used in bidding the stock to that price.

Q. What market valuation process underlies DCF models?

A. DCF models are derived from a theory of valuation which assumes that the price of a share of common stock is equal to the present value of the expected cash flows (i.e., future dividends and stock price) that will be received while holding the stock, discounted at investors' required rate of return, or the cost of equity. Notationally, the general form of the DCF model is as follows:

$$P_0 = \frac{D_1}{(1+k_e)^1} + \frac{D_2}{(1+k_e)^2} + \cdots + \frac{D_t}{(1+k_e)^t} + \frac{P_t}{(1+k_e)^t}$$

where: P_0 = Current price per share;

P_t = Expected future price per share in period t;

D_t = Expected dividend per share in period t;

k_e = Cost of equity.

That is, the cost of equity is the discount rate that will equate the current price of a share of stock with the present value of all expected cash flows from the stock.

Q. Has this general form of the DCF model customarily been used to estimate the cost of equity in rate cases?

A. No. In an effort to reduce the number of required estimates and computational difficulties, the general form of the DCF model has been simplified to a "constant growth" form. But converting the general form of the DCF model to the constant growth DCF model requires a number of strict assumptions. These include:

- A constant growth rate for both dividends and earnings;
- A stable dividend payout ratio;
- The discount rate exceeds the growth rate;
- A constant growth rate for book value and price;
- A constant earned rate of return on book value;
- No sales of stock at a price above or below book value;
- A constant price-earnings ratio;
- A constant discount rate (i.e., no changes in risk or interest rate levels and a flat yield curve); and
- All of the above extend to infinity.

Given these assumptions, the general form of the DCF model can be reduced to the more manageable formula of:

$$P_0 = \frac{D_1}{k_e - g}$$

where: g = Investors' long-term growth expectations.

The cost of equity (K_e) can be isolated by rearranging terms:

$$k_e = \frac{D_1}{P_0} + g$$

This constant growth form of the DCF model recognizes that the rate of return to stockholders consists of two parts: 1) dividend yield (D_1/P_0), and 2) growth (g). In other words, investors expect to receive a portion of their total return in the form of current dividends and the remainder through price appreciation.

Q. Are the assumptions underlying the constant growth form of the DCF model met in the real world?

A. In practice, none of the assumptions required to convert the general form of the DCF model to the constant growth form are ever strictly met. Nevertheless, where earnings are derived from stable activities, and earnings, dividends, and book value track fairly closely, the constant growth form of the DCF model offers a reasonable working approximation of stock valuation that provides useful insight as to investors' required rate of return.

Q. How did you implement the DCF model to estimate the cost of equity for FPL?

A. As described above, application of the DCF model to estimate the cost of equity requires an observable stock price. Because FPL is a wholly-owned subsidiary of FPL Group and has no publicly traded stock, its cost of equity cannot be estimated directly using the DCF model. As an alternative, the cost of equity for an untraded firm is often estimated by applying the DCF model to publicly traded companies engaged in the same business activity. In order to reflect the risks and prospects associated with FPL's jurisdictional utility operations, my DCF analyses focused on a reference group of other electric utilities. This electric utility proxy group was composed of companies included in Value Line's Electric Utilities Industry group with an S&P corporate credit rating of "BBB+" or higher and total revenues exceeding $1.0 billion. Finally, one company – ALLETE – was eliminated due to the recent spin-off of its non-regulated automotive services division. These criteria resulted in the reference group of 21 electric utilities shown on Document WEA-3, including FPL Group. The average consolidated corporate credit rating for this group of electric utilities is single-A, the same as for FPL.

Q. What other considerations support the use of a proxy group in estimating the cost of equity for FPL?

A. Apart from recognizing the inherent risks and prospects for comparable risk utilities, reference to a proxy group of utilities is essential to insulate against vagaries that can result when the stochastic process involved in estimating the cost of equity is applied to a single company. The cost of equity is inherently unobservable and can only be inferred indirectly by reference to available capital market data. 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 fail to reflect investors' required rate of return. Indeed, using even a limited group of companies increases the potential for error, as the FERC noted in its July 3, 2003 *Order on Initial Decision* in Docket No. RP00-107-000:

> Both Staff and Williston agreed that a proxy group of only three companies presented problems because "a single company will have a magnified influence on the group results." It was with those changing market dynamics in mind that witnesses of both Staff and Williston proposed to expand the group of proxy companies to determine a zone of reasonableness.

The 21-company proxy group composed of utilities is consistent not only with shared investment risks, but also with the need to ensure against the potential that a single cost of equity estimate may not reflect investors' required rate of return.

Q. How is the constant growth form of the DCF model typically used to estimate the cost of equity?

A. The first step in implementing the constant growth DCF model is to determine the expected dividend yield (D_1/P_0) for the firm in question. This is usually calculated based on an estimate of dividends to be paid in the coming year divided by the current price of the stock. The second, and more controversial, step is to estimate investors' long-term growth expectations (*g*) for the firm. Since book value, dividends, earnings, and price are all assumed to move in lock-step in the constant growth DCF model, estimates of expected growth are sometimes derived from historical rates of growth in these variables under the presumption that investors expect these rates of growth to continue into the future. Alternatively, a firm's internal growth can be estimated based on the product of its earnings retention ratio and earned rate of return on equity. This growth estimate may rely on either historical or projected data, or both. A third approach is to rely on security analysts' projections of growth as proxies for investors' expectations. The final step is to sum the firm's dividend yield and estimated growth rate to arrive at an estimate of its cost of equity.

Q. How was the dividend yield for the reference group of electric utilities determined?

A. Estimates of dividends to be paid by each of these electric utilities over the next twelve months, obtained from Value Line, served as D_1. This annual dividend was then divided by the corresponding stock price for each utility to arrive at the expected dividend yield. The expected dividends, stock price, and resulting dividend yields for the firms in the electric utility proxy group are presented on Document WEA-3. As shown there, dividend yields for the 21 firms in the electric utility proxy group ranged from 2.5 percent to 5.4 percent, with the average being 4.1 percent.

Q. What are investors most likely to consider in developing their long-term growth expectations?

A. In constant growth DCF theory, earnings, dividends, book value, and market price are all assumed to grow in lockstep and the growth horizon of the DCF model is infinite. But implementation of the DCF model is more than just a theoretical exercise; it is an attempt to replicate the mechanism investors used to arrive at observable stock prices. Thus, the only "g" that matters in applying the DCF model is that which investors expect and have embodied in current market prices.

Q. Are historical dividend growth rates likely to provide a meaningful guide to investors' growth expectations for electric utilities?

A. No. In response to more accentuated business risks in the industry, electric utilities adopted dividend policies that were much more conservative than in the past. As a result, dividend growth in the electric utility industry has remained largely stagnant in recent years as utilities conserved financial resources to provide a hedge against heightened uncertainties. Responding to this trend, investors' focus increasingly shifted from dividends to earnings as a measure of long-term growth, as payout ratios for firms in the electric utility industry trended downward from approximately 80 percent historically to on the order of 60 percent. [See, *e.g.*, The Value Line Investment Survey (Sep. 15, 1995 at 161, Sep. 5, 2003 at 154)].

Q. What are investors likely expecting in the way of growth for the electric utility proxy group?

A. While historical trends in electric utility dividends provide little guidance as to future expectations, investors have recently expressed renewed interest in dividend payments. As the industry recovers from the financial challenges of the last several years, electric utilities have begun to reevaluate their dividend policies and reinstate increases to their quarterly payout. As a result, projected growth in dividends per share may provide guidance as to investors' expectations.

The dividend growth projections for each of the firms in the electric utility proxy group reported by Value Line are displayed in the first column of Document WEA-4. As shown there, these security analysts' projections suggested average growth the order of 5.6 percent for the reference group of electric utilities.

Q. What other trends do investors consider in developing growth expectations?

A. Trends in earnings, which ultimately support future dividends and share prices, are likely to play a pivotal role in determining investors' long-term growth expectations. Indeed, the importance of earnings in evaluating investors' expectations and requirements is well accepted in the investment community. As noted in *Finding Reality in Reported Earnings* published by the Association for Investment Management and Research:

> [E]arnings, presumably, are the basis for the investment benefits that we all seek. "Healthy earnings equal healthy investment benefits" seems a logical equation, but earnings are also a scorecard by which we compare companies, a filter through which we assess management, and a crystal ball in which we try to foretell the future. (p. 1)

Value Line's near-term projections and its Timeliness Rank, which is the principal investment rating assigned to each individual stock, are also based primarily on various quantitative analyses of earnings. As Value Line explained in its *Subscribers Guide*:

> The future earnings rank accounts for 65% in the determination of relative price change in the future; the other two variables (current earnings rank and current price rank) explain 35%. (p. 53)

The fact that investment advisory services, such as Value Line and I/B/E/S International, Inc. (IBES), focus on growth in earnings indicates that the investment community regards this as a superior indicator of future long-term growth. Indeed, "A Study of Financial Analysts: Practice and Theory," published in the Financial Analysts Journal (July/August 1999), reported the results of a survey conducted to determine what analytical techniques investment analysts actually use. Respondents were asked to rank the relative importance of earnings, dividends, cash flow, and book value in analyzing securities. Of the 297 analysts that responded, only 3 ranked dividends first while 276 ranked it last. The article concluded:

> Earnings and cash flow are considered far more important than book value and dividends. (p. 88)

Q. What are security analysts currently projecting in the way of earnings growth for the firms in the electric utility proxy group?

A. The earnings growth projections for each of the firms in the electric utility proxy group reported by IBES and published in S&P's *Earnings Guide* are also displayed on Document WEA-4. Also presented are the EPS growth projections reported by Zacks Investment Research (Zacks), Value Line, and First Call Corporation (First

Call). As shown there, these security analysts' projections suggested growth the order of 4.9 to 5.3 percent for the reference group of electric utilities:

Electric Utility Proxy Group

Service	Growth Rate
IBES	5.1%
Value Line	5.3%
First Call	5.1%
Zacks	4.9%

Q. **What considerations are relevant in evaluating these near-term growth rates for electric utilities?**

A. Short-term projected growth rates may be colored by lingering uncertainties regarding the near-term direction of the economy in general and the spate of challenges recently faced in the electric power industry specifically. Consider the example of Value Line (Feb. 11, 2005), which has assigned its Utilities sector the lowest ranking of all 10 sectors it covers for year-ahead stock price performance. Value Line noted (December 31, 2004) that "[t]he electric utility industry carries one of our lowest industry Timeliness ranks." While this cautious outlook may be indicative of relatively low near-term growth projections, it does not necessarily reflect investors' long-term expectations for the industry.

Q. **How else are investors' expectations of future long-term growth prospects often estimated for use in 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 payout ratio are constant over time, growth in earnings and dividends will be equal to growth in book value. Although these conditions are seldom, if ever, met in practice, this approach may provide investors with a rough guide for evaluating a firm's growth prospects. Accordingly, conventional applications of the constant growth DCF model often examine the relationships between retained earnings and earned rates of return as an indication of the sustainable growth investors might expect from the reinvestment of earnings within a firm. The sustainable growth rate is calculated by the formula, g = br + sv, where "b" is the expected retention ratio, "r" is the expected earned ROE, "s" is percent of common equity expected to be issued annually as new common stock, and "v" is the equity accretion rate.

Q. **What is the purpose of the "sv" term?**

A. Under DCF theory, the "sv" factor is a component of the growth rate designed to capture the impact of issuing new common stock at a price above, or below, book value. When a company's stock price is greater than its book value per share, the per-share contribution in excess of book value associated with new stock issues will accrue to the current shareholders. The higher book value per share leads to higher expected earnings and dividends, with the "sv" factor incorporating this additional growth component.

Q. **What growth rate does the earnings retention method suggest for the reference group of electric utilities?**

A. The sustainable, "br + sv" growth rates for each firm in the reference group are shown on Document WEA-5. For each firm, the expected retention ratio (b) was calculated based on Value Line's projected dividends and earnings per share. Likewise, each firm's expected earned rate of return (r) was computed by dividing projected earnings per share by projected average net book value. Meanwhile, percent of common equity expected to be issued annually as new common stock (s) was equal to the product of the projected market-to-book ratio and growth in common shares outstanding, while the equity accretion rate (v) was computed as 1 minus the inverse of the projected market-to-book ratio. As shown there, after incorporating this method resulted in an average expected growth rate for the group of electric utilities of 5.6 percent.

Q. What did you conclude with respect to investors' growth expectations for the reference group of electric utilities?

A. These observable benchmarks suggest that investors currently expect growth on the order of 4.9 to 5.6 percent for the average firm in the electric utility proxy group.

Q. What cost of equity was implied for the reference group of electric utilities using the DCF model?

A. Combining the 4.1 percent average dividend yield with the 5.3 percent midpoint of my representative growth rate range implied a DCF cost of equity for this group of electric utilities of approximately 9.4 percent. As explained earlier, however, no single method or model should be relied upon to determine a utility's cost of equity. In light of anticipated capital market trends, and the recent challenges experienced in the electric utility industry, caution should be exercised in interpreting the results of DCF applications.

Risk Premium Analyses

Q. What other analyses did you conduct to estimate the cost of equity?

A. As I have mentioned previously, because the cost of equity is inherently unobservable, no single method should be considered a solely reliable guide to investors' required rate of return. Accordingly, I also evaluated the cost of equity for

FPL using risk premium methods. My applications of the risk premium method provide alternative approaches to measure equity risk premiums that focused specifically on data for electric utilities and forward-looking estimates of investors' required rates of return.

Q. Briefly describe the risk premium method.

A. The risk premium method of estimating investors' required rate of return extends to common stocks the risk-return tradeoff observed with bonds. The cost of equity is estimated by first determining the additional return investors require to forgo the relative safety of bonds and to bear the greater risks associated with common stock, and by then adding this equity risk premium to the current yield on bonds. Like the DCF model, the risk premium method is capital market oriented. However, unlike DCF models, which indirectly impute the cost of equity, risk premium methods directly estimate investors' required rate of return by adding an equity risk premium to observable bond yields.

Q. How did you implement the risk premium method?

A. The actual measurement of equity risk premiums is complicated by the inherently unobservable nature of the cost of equity. In other words, like the cost of equity itself and the growth component of the DCF model, equity risk premiums cannot be calculated precisely. Therefore, equity risk premiums must be estimated, with adjustments being required to reflect present capital market conditions and the relative risks of the groups being evaluated.

I based my estimates of equity risk premiums for electric utilities on (1) surveys of previously authorized rates of return on common equity, (2) realized rates of return, and (3) alternative applications of the CAPM. Authorized returns presumably reflect regulatory commissions' best estimates of the cost of equity, however determined, at the time they issued their final order, and the returns provide a logical basis for estimating equity risk premiums. Under the realized-rate-of-return approach, equity risk premiums are calculated by measuring the rate of return (including dividends, interest, and capital gains and losses) actually realized on an investment in common stocks and bonds over historical periods. The realized rate of return on bonds is then subtracted from the return earned on common stocks to measure equity risk premiums. The CAPM approach measures the market-expected return for a security as the sum of a risk-free rate and a risk premium based on the portion of a security's risk that cannot be eliminated by holding a well-diversified portfolio. Under the CAPM, risk is represented by the beta coefficient (β), which measures the volatility of a security's price relative to the market as a whole. While controversy surrounds the use of beta to measure a utility's investment risk, the CAPM is routinely referenced in the financial literature and in regulatory proceedings.

While these methods are premised on different assumptions, each having their own strengths and weaknesses, they are widely accepted approaches that have been routinely referenced in estimating the cost of equity for regulated utilities.

Q. How did you implement the risk premium approach using surveys of allowed rates of return?

A. While the purest form of the survey approach would involve querying investors directly, surveys of previously authorized rates of return on common equity are frequently referenced as the basis for estimating equity risk premiums. The rates of return on common equity authorized utilities by regulatory commissions across the

U.S. are compiled by Regulatory Research Associates (RRA) and published in its Regulatory Focus report. In Document WEA-6, the average yield on public utility bonds is subtracted from the average allowed rate of return on common equity for electric utilities to calculate equity risk premiums for each year between 1974 and 2004. Over this 31-year period, these equity risk premiums for electric utilities averaged 3.17 percent, and the yield on public utility bonds averaged 9.59 percent.

Q. Is there any risk premium behavior that needs to be considered when implementing the risk premium method?

A. Yes. There is considerable evidence that the magnitude of equity risk premiums is not constant and that equity risk premiums tend to move inversely with interest rates. In other words, when interest rate levels are relatively high, equity risk premiums narrow, and when interest rates are relatively low, equity risk premiums widen. To illustrate, the graph shown in Document WEA-7 plots the yields on public utility bonds (solid line) and equity risk premiums (shaded line) shown on Document WEA-6.:

The graph clearly illustrates that the higher the level of interest rates, the lower the equity risk premium, and vice versa. The implication of this inverse relationship is that the cost of equity does not move as much as, or in lockstep with, interest rates. Accordingly, for a 1 percent increase or decrease in interest rates, the cost of equity may only rise or fall, say, 50 basis points. Therefore, when implementing the risk premium method, adjustments may be required to incorporate this inverse relationship if current interest rate levels have changed since the equity risk premiums were estimated. Finally, it is important to recognize that the historical focus of the risk premium studies almost certainly ensures that they fail to fully capture the significantly greater risks that investors now associate with providing electric utility service. As a result, they are likely to understate the cost of equity for a firm operating in today's electric power industry.

Q. **What cost of equity is implied by surveys of allowed rates of return on equity?**

A. As illustrated above, the inverse relationship between interest rates and equity risk premiums is evident. Based on the regression output between the interest rates and equity risk premiums displayed at the bottom of page 1 of Document WEA-6, the equity risk premium for electric utilities increased approximately 43 basis points for each percentage point drop in the yield on average public utility bonds. As illustrated there, with the yield on average public utility bonds in January 2005 being 5.80 percent, this implied a current equity risk premium of 4.80 percent for electric utilities. Adding this equity risk premium to the January 2005 yield on single-A public utility bonds of 5.78 percent produces a current cost of equity for the utilities in the benchmark group of approximately 10.6 percent.

Q. **What else should be considered in applying risk premium methods?**

A. As noted earlier, there is widespread consensus that interest rates will increase materially as the economy continues to strengthen, with the Federal Reserve's recent actions indicative of tighter credit conditions in the months ahead. As a result, current bond yields are likely to understate capital market requirements at the time the outcome of this proceeding becomes effective. Accordingly, I also applied the alternative risk premium methods based on a forecasted bond yield for the 2006 test year developed based on an average of the projections published by EIA, GlobalInsight, and Blue Chip. This is analogous to the approach adopted by the FPSC staff in applying the CAPM in its May 20, 2004 *Memorandum* in Docket No.

040006-WS, as well as the methodology employed by FPSC staff witness Andrew L. Maurey in Docket No. 000824-EI.

Q. What cost of equity was produced by the authorized rate of return approach after incorporating the 2006 bond yield forecast?

A. As shown on page 2 of Document WEA-6, after incorporating a forecasted yield for 2006 and adjusting for changes in interest rates since the study period, this implied a current equity risk premium of 4.29 percent for electric utilities. Adding this equity risk premium to the implied yield on single-A public utility bonds for the 2006 test year of 7.0 percent resulted in an implied cost of equity of approximately 11.3 percent.

Q. How did you apply the realized-rate-of-return approach?

A. Widely used in academia, the realized-rate-of-return approach is based on the assumption that, given a sufficiently large number of observations over long historical periods, average realized market rates of return will converge to investors' required rates of return. From a more practical perspective, investors may base their expectations for the future on, or may have come to expect that they will earn, rates of return corresponding to those realized in the past. Indeed, average realized rates of return for historical periods are widely reported to investors in the financial press and by investment advisory services as a guide to future performance. By focusing on data for utilities specifically, my realized rate of return approach avoided the need to make assumptions regarding relative risk (*e.g.*, beta) that are often embodied in applications of this method.

Stock price and dividend data for the electric utilities included in the S&P 500 Composite Index (S&P 500) are available since 1946. Document WEA-8 presents annual realized rates of return for these utilities in each year between 1946 and 2003. As shown there, over this 58-year period realized rates of return for these utilities have exceeded those on single-A public utility bonds by an average of 3.87 percent. In contrast to other risk premium approaches, the realized-rate-of-return method assumes that equity risk premiums are stationary over time; therefore, no adjustment for the inverse relationship between equity risk premiums and interest rates was made. Adding the 3.87-percent equity risk premium to the January yield of 5.78 percent on single-A public utility bonds produces a current cost of equity of approximately 9.7 percent.

Once again, however, this does not consider the anticipated increase in bond yields through the test year. Adding this 3.87 percent equity risk premium to the 7.0 percent forecasted yield on single-A public utility bonds for 2006 implies cost of equity of approximately 10.9 percent.

Q. Please describe your application of the CAPM.

A. The CAPM is a theory of market equilibrium that measures risk using the beta coefficient. Under the CAPM, investors are assumed to be fully diversified, so the relevant risk of an individual asset (*e.g.*, common stock) is its volatility relative to the market as a whole. Beta reflects the tendency of a stock's price to follow changes in the market. A stock that tends to respond less to market movements has a beta less than 1.00, while stocks that tend to move more than the market have betas greater than 1.00. The CAPM is mathematically expressed as:

$$R_j = R_f + \beta_j(R_m - R_f)$$

Where: Rj = required rate of return for stock j;

Rf = risk-free rate;

Rm = expected return on the market portfolio; and,

βj = beta, or systematic risk, for stock j.

I applied the CAPM to the 21 companies in the electric utility proxy group using market risk premiums (R_m - R_f) based on (1) forward-looking estimates of investors' required rates of return and (2) historical realized rates of return.

Q. Please describe your forward-looking application of the CAPM.

A. Application of the CAPM to the utilities in the proxy group based on a forward-looking estimate for investors' required rate of return from common stocks is presented on Document WEA-9. Rather than using historical data, the expected market rate of return was estimated by conducting a DCF analysis on the firms in the S&P 500. The dividend yield was obtained from S&P, with the growth rate equal to the average of the composite earnings growth projections published by IBES for each firm. Based on the average of the individual IBES growth rates for the firms in the S&P 500, as reported in S&P's Earnings Guide (Feb. 2005), current estimates imply an average projected growth rate for the firms in the S&P 500 over the next five years of 12.1 percent. Combining this average growth rate with a contemporaneous yield of 1.8 percent results in a current cost of equity estimate for the market as a whole of approximately 13.9 percent. Subtracting a 4.6 percent risk-free rate based on the February 2005 average yield on 20-year Treasury bonds from the 13.9 percent forward-looking rate of return produced a market equity risk premium of 9.3 percent. Multiplying this risk premium by the average Value Line beta of 0.77 for the electric utilities in the proxy group, and then adding the resulting 7.2 percent risk premium to the February 2005 average long-term Treasury bond yield, resulted in a current cost of equity of approximately 11.8 percent.

Q. What cost of equity is implied by this forward-looking application of the CAPM after incorporating 2006 projected government bond yields?

A. As shown on page 2 of Document WEA-9, interest rate projections published by EIA, GlobalInsight and Blue Chip imply a projected yield on 20-year Treasury bonds of 5.8 percent for the 2006 test year, which results in a market risk premium of 8.1 percent. Once again multiplying the market risk premium by the average Value Line beta of 0.77 for the electric utilities in the proxy group, and then adding the resulting 6.2 percent risk premium to the 5.8 percent long-term Treasury bond yield for 2006, implied a cost of equity of approximately 12.0 percent.

Q. What other CAPM analyses did you conduct to estimate the cost of equity?

A. I also applied the CAPM using risk premiums based on historical realized rates of return. This approach to estimating investors' equity risk premiums is premised on the assumption that, given a sufficiently large number of observations over long, historical periods, average realized market rates of return will converge to investors' required rates of return.

Q. What CAPM cost of equity is produced based on historical realized rates of return for stocks and long-term government bonds?

A. I applied the CAPM using data published by Ibbotson Associates, which is perhaps the most exhaustive and widely referenced annual study of realized rates of return. Application of the CAPM based on historical realized rates of return is presented in Document WEA-10. In their *2004 Yearbook, Valuation Edition*, Ibbotson Associates reported that, over the period 1926 through 2003, the arithmetic mean realized rate of return on the S&P 500 exceeded that on long-term government bonds by 7.2 percent. Multiplying this historical market risk premium by the average Value Line beta of 0.77 produced an equity risk premium of 5.5 percent for the electric utility proxy group. As shown on page 1 of Document WEA-10, adding this equity risk premium to the February 2005 average yield on 20-year Treasury bonds of 4.6 percent resulted in an implied cost of equity of 10.1 percent. As shown on page 2 of Document WEA-10, after incorporating a projected government bond yield for 2006, application of the CAPM based on historical realized rates of return implied a cost of equity of 11.3 percent for the test year.

Q. What else should be considered in applying the CAPM using historical realized rates of return?

A. The CAPM model, like the DCF approach, is an *ex-ante*, or forward-looking model based on expectations of the future. As a result, in order to accurately estimate required returns the CAPM must be applied using data that reflects the expectations of actual investors. While reference to historical data represents one way to apply the CAPM, these realized rates of return reflect, at best, an indirect estimate of investors' current requirements. As a result, applications of the CAPM that look directly at investors' expectations in the capital markets are apt to provide a more meaningful guide to investors' required rate of return. Accordingly, because the historical approach does not incorporate forward-looking estimates, it was given less weight in arriving at my recommended return on equity.

Proxy Group Cost of Equity

Q. What did you conclude with respect to the cost of equity for the proxy group of utilities?

A. The cost of equity estimates implied by my quantitative analyses are summarized in WEA-11. In light of anticipated capital market trends, and the recent challenges experienced in the electric utility industry, caution should be exercised in interpreting the results of DCF and risk premium applications. Considering FPL's 2006 test year, accelerating economic growth and expectations for higher interest rates suggest that test year estimates should receive more weight. Accordingly, based on the results of my quantitative analyses, and my assessment of the relative strengths and weaknesses inherent in each method, I concluded that the cost of equity for the proxy group is in the range of 10.0 to 12.0 percent.

Q. What other considerations are relevant in setting the return on equity for a utility?

A. The common equity used to finance the investment in utility assets is provided from either the sale of stock in the capital markets or from retained earnings not paid out as dividends. When equity is raised through the sale of common stock, there are costs associated with "floating" the new equity securities. These flotation costs include services such as legal, accounting, and printing, as well as the fees and discounts paid to compensate brokers for selling the stock to the public. Also, some argue that the "market pressure" from the additional supply of common stock and other market factors may further reduce the amount of funds a utility nets when it issues common equity.

Q. Is there an established mechanism for a utility to recognize equity issuance costs?

A. No. While debt flotation costs are recorded on the books of the utility, amortized over the life of the issue, and thus increase the effective cost of debt capital, there is no similar accounting treatment to ensure that equity flotation costs are recorded and ultimately recognized. Alternatively, no rate of return is authorized on flotation costs necessarily incurred to obtain a portion of the equity capital used to finance plant. In other words, equity flotation costs are not included in a utility's rate base because neither that portion of the gross proceeds from the sale of common stock used to pay flotation costs is available to invest in plant and equipment, nor are flotation costs capitalized as an intangible asset. Unless some provision is made to recognize these issuance costs, a utility's revenue requirements will not fully reflect all of the costs incurred for the use of investors' funds. Because there is no accounting convention to accumulate the flotation costs associated with equity issues, they must be accounted for indirectly, with an upward adjustment to the cost of equity being the most logical mechanism.

Q. What is the magnitude of the adjustment to the "bare bones" cost of equity to account for issuance costs?

A. There are any number of ways in which a flotation cost adjustment can be calculated, and the adjustment can range from just a few basis points to more than a full percent. One of the most common methods used to account for flotation costs in regulatory proceedings is to apply an average flotation-cost percentage to a utility's dividend yield. Based on a review of the finance literature, Roger A. Morin concluded in *Regulatory Finance: Utilities' Cost of Capital* (1994):

> The flotation cost allowance requires an estimated adjustment to the return on equity of approximately 5% to 10%, depending on the size and risk of the issue. (p. 166)

Applying these expense percentages to a representative dividend yield for a utility of 4.1 percent implies a flotation cost adjustment on the order of 20 to 40 basis points. Similarly, staff witness Mr. Maurey utilized a 26 basis point adjustment in Docket No. 000824-EI, with the FPSC incorporating a 4 percent flotation cost adjustment in its June 10, 2004 Order No. PSC-04-0587-PAA-WS.

Q. What then is your conclusion regarding a fair rate of return on equity for the companies in your proxy group?

A. After incorporating an adjustment for flotation costs of 30 basis points to my "bare bones" cost of equity range, I concluded that a fair rate of return on equity for the proxy group of utilities is currently in the range of 10.3 to 12.3 percent.

RETURN ON EQUITY FOR FPL

Q. What is the purpose of this section?

A. This section addresses the economic requirements for FPL's rate of return on equity. It examines other factors properly considered in determining a fair rate of return, including FPL's relative risk exposure and an ROE reward for exemplary results. This section also discusses the regulatory policy reasons for avoiding a return on equity that is not sufficient to maintain FPL's financial integrity and ability to attract capital. Finally, this section presents my conclusions regarding the fair rate of return and evaluates the reasonableness of FPL's capital structure.

Relative Risks

Q. How can the overall investment risks of FPL be compared with the electric utility proxy group?

A. Perhaps the most objective guide to a utility's overall investment risk is its bond rating. Bond ratings are assigned by independent rating agencies for the purpose of providing investors with a broad assessment of the creditworthiness of a firm. The ratings assigned to a utility by the rating agencies are typically based on an evaluation of the utility's business and financial risks. The evaluation of business risk tends to be fairly qualitative, and involves an examination of the utility's relative markets and service area economy, competitive position, operations, regulation, management, supply position, and asset concentration. Meanwhile, the evaluation of financial risk tends to be more quantitative and involves an examination of financial data concerning earnings protection, capital structure, cash flow adequacy, and financial flexibility. Because the rating agencies' evaluation includes virtually all of the factors normally considered important in assessing a firm's relative credit standing, bond ratings provide the most all-encompassing measure of investment risk readily available to investors. Ratings generally extend from triple-A (the highest) to D (in default). Other numerical designations (*e.g.*, "A1") or symbols (*e.g.*, "A+") are used to show relative standing within a category. Within the investment grade categories (triple-A through triple-B), the distinctions between these refined ratings designations tend to reflect a very modest gradation in risk.

Bond ratings are widely cited in the investment community and referenced by investors as an objective measure of risk. 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 *Regulatory Finance: Utilities' Cost of Capital*:

> 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). (p. 81)

Indeed, bond ratings are frequently used as a primary risk indicator in establishing proxy groups to estimate the cost of equity

Q. What does a comparison of bond ratings indicate with respect to FPL's relative investment risks?

A. The average consolidated corporate debt rating for the utility proxy group is "A-", with ratings for the individual firms ranging from "BBB+" to "A". Considering that the "+" and "-" designations tend to reflect very modest gradations in risk, this average single-A rating for the proxy group is essentially identical to FPL's corporate credit rating. On the other hand, S&P has assigned a "negative" outlook to FPL's senior debt, informing investors of the potential for reduced credit standing and further downgrades going forward. Given that FPL's corporate credit rating is essentially identical to that of the reference group, and considering FPL's "negative" outlook, investors would likely conclude that the overall investment risks for FPL are comparable to those of the firms in the electric utility proxy group.

Q. What other factors would investors likely consider in evaluating the relative investment risks of FPL?

A. Approximately 21 percent of FPL's total energy requirements are provided by its four nuclear units located at the St. Lucie and Turkey Point generating stations.

Meanwhile, of the 20 firms other than FPL Group included in the benchmark group used to estimate the cost of equity, 9 have no nuclear generation, with the average share of total generation from nuclear sources amounting to approximately 13 percent for the proxy group during 2003.

As discussed in the testimony of FPL's witnesses, consumers have realized considerable savings in energy costs as a result of FPL's effective management of its nuclear generating facilities. While nuclear power confers advantages in terms of fuel cost savings and diversity, investors also associate nuclear facilities with risks that are not encountered with other sources of generation. S&P has long recognized the additional risks posed by nuclear facilities. As S&P noted in an August 8, 1994 *CreditWeek* article entitled "Measuring Nuclear Risk in a Competitive Environment":

> Operating and maintaining [nuclear plants] is more complex compared with fossil plants because of safety considerations and the additional safety equipment and operational controls required. (p. 41)

Moreover, while FPL's nuclear operations are widely regarded as exemplary, it remains exposed to impacts from operational or security failures throughout the domestic industry, which could trigger increased regulatory scrutiny and requirements. As the investment firm of Natexis Bleichroeder Inc. noted in a December 1, 2004 research report:

> Any significant radiological or security event at any nuclear facility in the U.S. would likely result in additional costs for unscheduled shutdowns, inspections, and potentially higher insurance reserves.

FPL's nuclear facilities represent a significant portion of its generating capability, and this concentration exposes FPL to substantial additional costs for repairs and replacement power in the event of a disruption.

Longer-term uncertainties regarding the disposal of spent fuel and the ultimate costs of decommissioning continue to accompany any investment in nuclear generating facilities, even for a firm with an exemplary history of operational success like FPL. As of year-end 2004, for example, FPL had paid $520 million to the DOE for transportation and disposal of spent fuel; but the DOE has failed to meet its statutory obligations. As a result, FPL has been forced to store spent fuel on site and, absent expanded capabilities, it will lose its ability to accommodate additional spent fuel storage at St. Lucie Unit Nos. 1 and 2 by 2008 and 2007, respectively. In addition, security risks have been heightened since the September 11th terrorist attacks, mandating increased security measures and oversight. The exposure to potential new threats and additional security-related costs are undoubtedly considered in investors' assessment of the uncertainties surrounding FPL's nuclear plants.

FPL's relatively greater reliance on nuclear power relative to the majority of the other firms in the electric utility proxy group used to estimate the cost of equity implies that it faces additional risks. While a precise quantification of the impact of these uncertainties on the cost of equity is problematic, investors undoubtedly consider them in establishing their required rate of return. Given the benefits that consumers have realized as a result of FPL's investment in nuclear facilities, fairness dictates that the corresponding risks be considered in establishing FPL's allowed rate of return on equity.

Q. What other operational factors are of concern to investors?

A. In order to meet rising demand for electricity across its service territory, FPL has sought to acquire additional power resources to ensure its ability to maintain adequate reserve margins and provide reliable service. In addition to the planned addition of new natural gas-fired facilities at its Martin and Manatee plants (in June 2005) and the additional combined-cycle unit planned for Turkey Point plant (June 2007), FPL also added approximately 2,700 MW of new generation between 2001 and 2003, primarily through repowering existing oil-fired units, thereby converting smaller, less efficient oil-fired generators to larger, very efficient natural gas units. This expansion of gas-fired generation has increased concerns over fuel diversity and exposure to fluctuations in natural gas prices or supply interruption. S&P noted investors' concerns in a July 1, 2004 *RatingsDirect* report:

> By 2009, about half of the energy consumed by the utility will be produced from natural gas, raising concerns about fuel concentration, especially considering Florida's limited supply of gas and dependence on the Gulf of Mexico through two interstate pipelines for its supply.

While FPL continues to explore alternative fuel sources and generation technologies, such as liquefied natural gas (LNG), renewable technologies and advanced coal generation, the potential exposure remains of concern to investors.

Q. How does the nature of the economy in FPL's service territory impact its relative risks?

A. Past experience indicates that the economy in FPL's service territory can be highly vulnerable to any conditions that cause a decline in tourism. In the early 1970s, for example, the Florida economy was experiencing strong growth with the opening of major tourist attractions, a vibrant real estate market, and a residential construction boom. Then came the Arab oil embargo that choked the flow of tourists, who at that time mostly arrived by car, and higher interest and inflation rates that contributed to a collapse of the construction industry. Just as the skyrocketing gas prices of the 1970s dampened consumers' willingness to travel, the 2001 terrorist attacks had a significant and sustained impact on Florida's tourism industry and the state's economy. FPL was one of five utilities singled out by S&P as being particularly vulnerable to a decline in tourism (*RatingsDirect*, October 5, 2001), a viewpoint that was confirmed in the aftermath of the September 11th terrorist attacks. As a contemporaneous commentary on Florida's economy (Florida Trend, "Where We Stand," November 1, 2001) noted:

> Tourism, the linchpin of Florida's economy, unquestionably took the heaviest blow in the fallout from the terrorist attacks. Slightly more than half of all visitors to Florida come by plane (one in 10 comes from New York); the interruption and subsequent reduction in airline service and the public's reluctance to travel turned what had been a soft slide in tourism into a free-fall, with central Florida and south Florida suffering the most. (p. 7)

And while the Florida economy has achieved a degree of diversification that was not present during the tourism-led decline in the 1970s, Floridians are aware that the combined effect of a general business slowdown and a plunge in tourism can result in a particularly severe economic double-whammy, which heightens the risks of an economic downturn for FPL's investors and customers. Investors are undoubtedly positive on the future outlook for Florida's economy, but they nonetheless recognize the additional volatility introduced by the state's dependence on the tourism industry.

Q. What is your conclusion regarding the relative investment risks of FPL, as compared with the average firm in the electric utility proxy group?

A. FPL's corporate credit rating, which provides the most objective and encompassing measure of overall investment risk, is identical to that maintained by the average firm in the electric utility proxy group. Moreover, investors view FPL's relatively high reliance on nuclear generation, evolving exposure to natural gas markets, and the dependence of its service area economy on tourism as significant risks. Based on my evaluation, and considering the mitigating benefits of FPL's relatively conservative capital structure discussed subsequently, I concluded that investors would be unlikely to distinguish between the investment risks of FPL and those of the benchmark group of electric utilities.

Capital Structure

Q. Is an evaluation of the capital structure maintained by a utility relevant in assessing its return on equity?

A. Yes. Other things equal, a higher debt ratio, or lower common equity ratio, translates into increased financial risk for all investors. A greater amount of debt, and preferred stock, means more investors have a senior claim on available cash flow, thereby reducing the certainty that each will receive his contractual payments. This increases the risks to which lenders and preferred stockholders are exposed, and they require correspondingly higher rates of interest and dividends, respectively, for their risk bearing. From common shareholders' standpoint, higher debt and preferred stock ratios mean that there are proportionately more investors ahead of them, thereby increasing the uncertainty as to the amount of cash flow, if any, that will remain.

Q. What capital structure is reflected in FPL's MFR filings?

A. The capital structure reflected in FPL's MFR filings (excluding deposits, deferrals, and cost-free sources) for test year ended December 31, 2006 is as follows ($000):

13-Month Average Jurisdictional Balance

Component	Amount	%
Short-term Debt	$ 61,631	0.61%
Long-term Debt	3,751,548	37.47%
Common Equity	6,200,049	61.92%
Total	$10,013,049	100.00%

Q. Do the ratios shown above provide a representative basis on which to evaluate FPL's capital structure?

A. No. As discussed earlier, a significant portion of FPL's power requirements are obtained through long-term purchased power contracts. Because these agreements obligate FPL to make certain capacity and minimum contractual payments akin to those associated with traditional debt financing, investors consider these commitments in evaluating FPL's financial risks. The implications of purchased power commitments for a utility's financial risks have been repeatedly cited by major bond rating agencies. As early as 1990, Moody's recognized the financial risk imposed by the off-balance-sheet liabilities associated with purchased power and the resulting erosion of the utility's financial flexibility (*Electric Utility Week*, October 8, 1990). Similarly, S&P observed in a 1992 ratings report for FPL that "a utility incurs certain risks when entering into a long-term contract with fixed-cost capacity component" (*CreditWeek*, April 6, 1992). As S&P observed in "Buy Versus Build Debate Revisited" (*CreditWeek*, May 24, 1993):

> When a utility enters into a long-term purchased power contract with a fixed-cost component, it takes on financial risk. Heavy fixed charges reduce a utility's financial flexibility and long-term contractual arrangements represent – at least in part – off balance sheet debt equivalents. (pp. 1-2)

More recently, in reviewing its evaluation of the credit implications of purchased power, S&P reaffirmed its position that such agreements are "debt-like in nature" and that the increased financial risk must be considered in evaluating a utility's credit risks ("'Buy Versus Build': Debt Aspects of Purchased-Power Agreements", *Utilities & Perspectives*, May 12, 2003).

Because the capacity and minimum contractual payment obligations under power purchase agreements are analogous to those associated with traditional debt financing, investors consider these commitments in evaluating FPL's financial risks. Accordingly, incorporating the debt equivalent of FPL's obligations under its purchased power contracts in the Company's capital structure would have the effect of increasing its financial leverage.

Q. What implications do relatively greater amounts of purchased power have for a utility's financial flexibility?

A. Because investors perceive additional financial risks with obligations under purchased power contracts, as reliance on these sources increases, the utility must offset the associated debt equivalent by incorporating a higher equity component in the capital structure to neutralize the effect on leverage. As S&P has recognized, because of purchased power, it has been necessary for FPL to maintain a relatively greater proportion of equity capital in order to maintain its credit standing. In a December 3, 1998 report in *RatingsDirect*, S&P noted that:

> Florida Power & Light has a sizeable amount of fixed payment purchased-power contracts, a portion of which is imputed by Standard & Poor's as an off-balance-sheet obligation, and has maintained a higher amount of equity capital on the balance sheet to counter this off-balance-sheet debt obligation. (p. 2)

More recently, S&P noted that it "includes about $1.3 billion as a debt equivalent" because of FPL's purchased power obligations (*Research: FPL Group, Inc.*, Oct. 21, 2003). Absent financial policies that recognize the leverage implicit in purchased power contracts, the associated investment risks would place downward pressure on utilities' creditworthiness and debt ratings and the greater leverage implied by a lower common equity ratio would increase investors' required rate of return for both debt and equity securities.

Apart from the immediate impact the debt-equivalent portion of purchased power costs has on the utility's financial risk, heavy fixed charges also reduce ongoing financial flexibility, and the utility may face other uncertainties, such as potential replacement power costs in the event of supply disruption. Moreover, investors' focus on the financial ramifications and other uncertainties of purchased power is magnified as the utility's reliance on purchased power increases.

Q. Is the full amount of FPL's purchased power obligations typically treated as debt in evaluating its financial leverage?

A. No. The present value of the fixed obligations associated with FPL's purchased power contracts amounts to approximately $3.83 billion, which is roughly 1.4 times the $2.8 billion in long-term debt reflected on its balance sheet at December 31, 2004. While arguments could be made to consider the full amount as debt equivalents, the major bond rating agencies typically include only a portion of this present value as debt in analyzing relative financial risks. While other rating agencies have expressed similar concerns regarding the financial impacts of purchased power commitments, S&P is largely unique in having a defined quantitative analysis to account for the additional risks associated with these contractual commitments. This methodology begins by quantifying the potential off-balance sheet obligation attributable to long-term power purchase contracts. The first step in this process involves calculating the net present value of the remaining capacity payments over the life of the agreement, determined using a discount rate of 10 percent.

Next, S&P evaluates the characteristics of a utility's purchased power contracts, placing each agreement on a risk spectrum according to the degree to which payments under the contract resemble the fixed obligations of traditional debt instruments, such as long-term bonds. Within the S&P analytical framework, this difference in the relative debt characteristics of purchase power obligations is accommodated using a risk spectrum ranging from 0 to 100 percent. This risk factor represents the proportion of the obligations' net present value to be considered off-balance sheet debt. For example, if S&P determines that the risk factor for a specific purchased power contract is 50 percent, S&P considers 50 percent of the net present value of the related capacity payments as a debt equivalent and adds this to reported obligations.

In determining the risk factor S&P considers a variety of qualitative factors related to the purchased power contract. Previously, contracts that were relatively more firm in terms of their delivery and payment obligations were generally considered more debt-like than others. However, in a May 12, 2003 report ("'Buy Versus Build': Debt Aspects of Purchased-Power Agreements," *Utilities & Perspectives*), S&P explained that it had revised its approach to recognize significant structural changes in the electric power industry. Rather than evaluating the likelihood of payment under purchased power contracts, S&P has revised its assessment to place particular emphasis on the method under which the utility recovers of purchased power costs. For example, assuming adequate regulatory treatment, S&P now assigns a 50 percent risk factor where payments under long-term purchased power commitments are included in a utility's base rates. S&P concluded (*Utilities & Perspectives*, May 12, 2003) that a risk factor as low as 30 percent could be justified for utilities with supportive regulation that recover purchased power costs via a fuel adjustment clause (FAC), as opposed to base rates:

> For utilities in supportive regulatory jurisdictions with a precedent for timely and full cost recovery of fuel and purchased power costs, a risk factor of as low as 30% could be used.

By evaluating the characteristics of a utility's purchased power contracts, S&P places each agreement on a risk spectrum according to the degree to which payments under the contract resemble the fixed obligations of traditional debt instruments, such as long-term bonds. Obligations on the lower end of the scale would have fewer debt-like characteristics and would be considered less firm than the obligations placed at the high end of the scale. Based on this ranking, a risk factor is assigned that indicates the portion of the present value of fixed payments that are considered as debt-equivalents. For example, obligations under take-or-pay contracts that are unconditional as to both acceptance and availability of power are considered relatively firm (risk factors between 40 percent and 80 percent), while agreements that require capacity payments only if power is available are considered less debt-like (risk factors between 10 percent and 50 percent). *S&P* assigns each of FPL's purchased power commitments a risk factor in the 10 to 50 percent range.

Q. **What capital structure is implied for FPL's 2006 test year once the off balance sheet obligations associated with purchased power contracts are incorporated?**

A. As S&P has recognized, because of purchased power, it has been necessary for FPL to maintain a relatively greater proportion of equity capital in order to maintain its credit standing. Based on S&P's methodology described above, a $1.1 billion upward adjustment to long-term debt was incorporated for 2006 to account for the debt equivalent attributed to FPL's off balance-sheet obligations. This results in the adjusted capital structure ratios shown in the following table ($000):

Adjusted 13-Month Average Jurisdictional Balance

Component	Amount	%
Short-term Debt	$ 61,631	0.55%
Long-term Debt	4,843,682	43.62%
Common Equity	6,200,049	55.83%
Total	$11,105,362	100.00%

These calculations not only reflect the investment community's evaluation of FPL's financial risks, they are also consistent with 55.83 percent adjusted equity ratio that forms the surveillance cap specified under the terms of the Revenue Sharing Agreement approved in Docket No. 001148-EI. Moreover, as discussed in Mr. Dewhurst's testimony, past decisions of the FPSC have acknowledged that an adjustment is appropriate to address the capital structure impact associated with purchased power.

Q. Have similar adjustments for the financial impact of purchased power been recognized by other state regulators?

A. Yes. For example, the staff of the Public Service Commission of Wisconsin (PSCW) recommended, and the Commission concurred, that an adjustment to reflect the debt leverage implicit in purchased power obligations was appropriate for Madison Gas and Electric Company in Docket No. 3270-UR-112. Similarly, in a settlement agreement involving Public Service Company of Colorado (Docket No. 04-A-214E), the staff of the Colorado Public Utilities Commission also recognized that a higher equity ratio was required "to offset the debt equivalent of existing purchased power agreements and to improve the Company's overall financial strength."

Q. How can FPL's adjusted capital structure be evaluated?

A. It is generally accepted that the norms established by comparable firms provide one valid benchmark against which to evaluate the reasonableness of a utility's capital structure. The capital structure maintained by other electric utilities should reflect their collective efforts to finance themselves so as to minimize capital costs while preserving their financial integrity and ability to attract capital. Moreover, these industry capital structures should also incorporate the requirements of investors, both debt and equity, as well as the influence of regulators.

Q. What capitalization ratios are maintained by other electric utilities?

A. Document WEA-12 displays capital structure data at year-end 2003 for the group of electric utility operating companies owned by the firms in the proxy group (excluding FPL) used to estimate the cost of equity. As shown there, the permanent, long-term capitalization for this group of other electric utility operating companies was composed of 45.3 percent long-term debt, 2.5 percent preferred, and 52.1 percent common equity. While S&P does not routinely publish data quantifying any off-balance sheet liabilities that might be attributable to these operating companies, in contrast to FPL, such amounts would be unlikely to have a significant impact on the capitalization of most utilities.

The individual common equity ratios for the group of electric utility operating companies ranged from a low of 36.3 percent (PECO Energy) to a high of 77.6 percent (Union Light, Heat, and Power Co.). Incorporating the same short-term debt ratio reflected in FPL's adjusted 2006 capitalization of approximately 0.55 percent results in the average capital structure ratios for this group of other utilities summarized below:

Electric Utility Operating Companies

Capital Component	% of Total
Short-term Debt	0.6%
Long-term Debt	45.1%
Preferred Securities	2.5%
Common Equity	51.8%
Total	100.0%

Q. What implication does the increasing risk of the electric power industry have for the capital structures maintained by utilities?

A. In response to heightened uncertainties in the industry, bond rating agencies have recognized that utilities must adopt a more conservative financial posture if credit ratings are to be maintained. Similarly, the FPSC has also recognized that a more conservative financial policy is consistent with increasing risk in the electric utility industry, observing that "equity ratios in the electric utility industry are increasing, reflecting the increased business risk." [97FPSC 4:320-321] Accordingly, higher levels of business risk imply that utilities will be required to incorporate relatively greater amounts of equity in their capital structures. More recently, Value Line reported in its December 3, 2004 edition (p. 154) that the average common equity ratio for all firms in the electric utility industry is expected to increase significantly over the next three to five years. Indeed, the fact that there has been little moderation in the risks of the electric utility industry since the FPSC approved the Revenue Sharing Agreement in Docket No. 001148-EI supports the continued reasonableness of the 55.83 equity ratio benchmark specified in the stipulation.

Q. How does FPL's capital structure compare with other widely cited financial benchmarks for electric utilities?

A. The financial ratio guidelines published by S&P specify a range for a utility's total debt ratio that corresponds to each specific bond rating. Widely cited in the investment community, these ratios are viewed in conjunction with a utility's *business profile* ranking, which ranges from 1 (strong) to 10 (weak) depending on a utility's relative business risks. Thus, S&P's guideline financial ratios for a given rating category (e.g., triple-B) vary with the business or operating risk of the utility. In other words, a firm with a *business profile* of "2" (*i.e.*, relatively lower business risk) could presumably employ more financial leverage than a utility with a business profile assessment of "9" while maintaining the same credit rating. S&P has assigned FPL a *business profile* ranking of "4".

S&P recently published revised financial guideline ratios, with its capital structure benchmarks being presented in the form of total debt ratios, with the remainder of capital structure being composed of equity. ["New Business Profile Scores Assigned for U.S. Utility and Power Companies: Financial Guidelines Revised," *RatingsDirect* (Jun. 2, 2004)]. Consistent with S&P's current ratings criteria and FPL's S&P *business profile* ranking of "4", a ratio of total debt to total capital in the range of 45 to 52 percent is specified for a single-A bond rating. FPL's 2006 adjusted capital structure shown earlier implies a total debt ratio of approximately 44.2 percent, composed of short-term and long-term debt.

Q. What did you conclude regarding the reasonableness of FPL's capital structure?

A. Based on my evaluation, I concluded that the approximately 55.8 percent common equity ratio maintained by FPL continues to represent a reasonable mix of capital sources from which to calculate FPL's overall rate of return. Although FPL's adjusted common equity ratio falls above the average currently maintained by the proxy group of electric utility operating companies, it is well within the range of individual results for this reference group and consistent with the trend towards lower financial leverage expected for the industry. It is also consistent with the relatively greater uncertainties associated with FPL's exposure to nuclear generation and the South Florida economy. Moreover, while the total debt ratio of 44.2 percent implied by FPL's adjusted capital structure falls slightly below the guidelines that S&P specifies for a single-A bond rating, this relatively conservative financial posture did not forestall S&P from maintaining a "negative" outlook, indicating the potential for further declines in credit ratings.

Q. If FPL's debt ratio exceeds the guidelines for a single-A rating, why wouldn't the utility qualify for an upgrade?

A. As noted earlier, the bond rating agencies consider a plethora of factors relevant to their assessment of a company's overall credit standing. S&P, and investors generally, clearly recognize that the benefits of a strong financial position are offset by a variety of other considerations affecting FPL's relative risk. First, apart from the immediate impact that the debt-equivalent portion of purchased power costs has on FPL's financial risks, other uncertainties are associated with these sources, such as potential replacement power costs in the event of supply disruption. The heavy fixed charges associated with these obligations also reduce FPL's ongoing financial flexibility. Second, investors are undoubtedly sensitive to FPL's relatively greater reliance on nuclear power, which entails significant uncertainties not associated with other forms of generation. FPL's southern location on the Florida peninsula, which dictates that any power flows from outside the region must come from the north, also contributes to FPL's risks, as does increasing concerns over limited gas supplies and potential price volatility. Finally, as the events of 2001 made abundantly clear, the exposure of FPL's service area economy to tourism-led volatility heightens the risks perceived by investors, especially in the midst of an economic downturn. While industry averages provide one benchmark for comparison, each firm must select its capitalization based on the risks and prospects it faces. In this regard, FPL has chosen to maintain a relatively high equity ratio due to the unique challenges posed by its heavy reliance on purchased power and nuclear generation, the burden of its significant capital spending requirements, and the circumstances of its service area economy. Absent these financial policies, FPL's debt ratings would undoubtedly be lower than present levels and the greater investment risks implied by a lower common equity ratio would increase investors' required rate of return for FPL's debt and equity securities. A lower equity ratio for FPL would also imply that its investment risks exceed those of the proxy group used to estimate the cost of equity, implying a cost of equity above that reflected in my recommendations.

Q. What other indications confirm the reasonableness of FPL's capital structure policies?

A. In response to the challenges experienced in the utility industry, debt levels have come under increased scrutiny by bond rating agencies and investors. For those firms with higher leverage, this focus can lead not only to ratings downgrades, but to reduced access to capital and increased borrowing costs. While financial flexibility plays a crucial role in ensuring the wherewithal to meet the needs of customers, utilities with higher leverage may be foreclosed from additional borrowing, especially during times of stress.

FPL's capital structure is just one reflection of FPL's ongoing efforts to maintain access to capital on reasonable terms in order to ensure its ability to meet the demands of its obligations to customers. The reasonableness of FPL's requested capital structure is reinforced by the ongoing uncertainties associated with the electric power industry, FPL's unique risks and geographic position, the need to support continued system expansion, and the imperative of maintaining continuous access to capital, even during times of adverse industry and market conditions.

Implications for Financial Integrity

Q. Why is it important to allow FPL an adequate rate of return on equity?

A. Given the social and economic importance of the electric utility industry, it is essential to maintain reliable and economical service to all consumers. While a utility may be committed to deliver reliable electric service at the lowest possible price, its ability to fulfill this mandate can be compromised if it lacks the necessary financial wherewithal.

Q. What lessons can be learned from recent events in the energy industry?

A. While Florida clearly does not face a California-style power crisis, events in the western U.S. provide a dramatic illustration of the high costs that all stakeholders must bear when a utility's financial integrity is compromised. California's failed market structure led to unprecedented volatility in wholesale power costs throughout the entire western region. For many utilities, recovery of purchased energy costs that they were forced to buy to serve their customers was either prevented and/or postponed. As a result, they were denied the opportunity to earn risk-equivalent rates of return and access to capital was cut off. Regional economies have been jolted and consumers have suffered the results of higher cost power and reduced reliability. Moreover, while the impact of the utilities' deteriorating financial condition was felt swiftly, stakeholders have discovered first hand how difficult and complex it can be to remedy the situation after the fact.

For an electric utility with an obligation to provide reliable service, investors' increased reticence to supply additional capital highlights the necessity of preserving flexibility, even during periods of adverse capital market conditions. *Moody's* affirmed this concern in a January 2001 *Special Comment*:

> [C]areful attention to ensure adequate liquidity, central to any good credit story, is heightened because unexpected increases in demand for capital can occur at any time when so much change is happening. (p. 6)

As the plight of utilities such as PG&E and Sierra Resources makes clear, the consequences of inadequate financial resources can be sudden and severe.

Q. Do you have any personal experience regarding the damage to customers that can result when a utility's financial integrity deteriorates?

A. Yes. I was a staff member of the Public Utility Commission of Texas (PUCT) when the financial condition of El Paso Electric Company (EPE) began to suffer in the late 1970s. I later observed first-hand the difficulties in reversing this slide as a consultant to Asarco Mining, EPE's largest single customer, and later as a consultant to the utility during its struggle recover its financial health. EPE's ultimate bankruptcy imposed enormous costs on customers and absorbed an undue amount of the PUCT's resources, as well as those of the Attorneys General and other state agencies. Some twenty-five years later, EPE has only recently managed to recover an investment grade bond rating and has yet to pay common dividends. There is no question that customers and other stakeholders would have been far better off had EPE avoided bankruptcy by maintaining its financial resilience.

Q. Do the exposures peculiar to FPL highlight the need for ongoing support of the company's financial strength and ability to attract capital?

A. Most definitely. As discussed earlier, FPL faces a number of potential challenges that might require the relatively swift commitment of considerable capital resources in order to maintain the high level of service to which its customers have become accustomed. For example, while FPL's nuclear program is universally regarded as exemplary, mandated shutdowns in response to security threats or a catastrophic event elsewhere in the U.S. would impose significant reliance on wholesale power markets to meet energy shortfalls. FPL's reliance on purchased power for a significant portion of its power requirements also imposes increased vulnerability to supply disruptions, especially in light of its relative geographic isolation on the Florida peninsula. Similarly, any interruption of gas supplies due to deliverability constraints imposed on FPL's suppliers could also result in the need for a considerable financial commitment for an alternative fuel source or replacement power. Given the potential for significant volatility in wholesale energy markets and FPL's lack of control over the timing of such events, FPL must have the wherewithal to meet these challenges even when capital and energy market conditions are unfavorable.

Apart from this exposure to the vagaries of capital and energy market conditions, FPL must simultaneously meet the needs of a fast-growing service area.

Indeed, customer accounts grew by more that 2.6 percent during 2004, with Moody's recognizing in an October 2004 analysis that:

> One of the most important factors driving FP&L's business strategy is the rising demand for electricity across the company's service territory, fueled in large part by the high rate of growth in FP&L's residential customer base. In 2003, FP&L's customer accounts grew by more than 2.4% and electricity sales (excluding interchange sales) hit an all-time high of 100.85 billion kWh, representing a healthy 4.2% increase over 2002 levels.

Similarly, Fitch noted (Sep. 23, 2004) that "significant ongoing capital expenditure requirements for new generating resources to meet customer and usage growth" were a significant credit concern for FPL. Providing the infrastructure necessary to support a buoyant and growing economy is certainly necessary and desirable, but it also imposes considerable responsibilities on FPL. To continue to meet these challenges successfully and economically, it is crucial that FPL receive adequate support for its credit standing. The pace of growth in the Company's service area heightens the critical need to maintain quality of service and accentuates the importance, and the burden, of FPL's obligation to serve, especially in light of the potential challenges discussed above.

While providing an ROE that is sufficient to maintain FPL's ability to attract capital, even under duress, is consistent with the economic requirements embodied in the Supreme Court's *Hope* and *Bluefield* decisions, it is also in customers' best interests. Ultimately, it is customers and the service area economy that enjoy the benefits that come from ensuring that the utility has the financial wherewithal to take whatever actions are required to ensure a reliable energy supply. By the same token, customers also bear a significant burden when the ability of the utility to attract necessary capital is impaired and service quality is compromised.

Q. What evidence illustrates the benefits of maintaining FPL's ability to attract capital?

A. FPL's consistent ability to keep pace with the growing needs of its customers demonstrates the advantage that accrues to all stakeholders when the utility is able to maintain a strong financial position. In recent years, FPL has spent billions of dollars in order to implement the ambitious investment program required to add the new generation and transmission capacity dictated by the demands of a vibrant service area. The relatively large concentration of residential customers in FPL's service area also heightens the critical need to maintain quality of service and accentuates the importance, and the burden, of FPL's obligation to serve. Despite the associated complexities, FPL has effectively and economically responded to these challenges, in part due to its strong financial position. As Fitch concluded in a September 23, 2004 ratings credit report:

> FP&L has continued to improve operational performance and customer satisfaction during a period of considerable growth in its customer base.

The unprecedented hurricane season in 2004 also illustrates the benefits that accrue to a utility that has the financial wherewithal to respond to unforeseen events. After being hit by Hurricanes Charley, Frances, and Jeanne within two months, FPL's service territory experienced significant outages and damage, principally to the distribution system and some transmission lines. FPL restored service to nearly 5.4

million customers, which entailed replacement of approximately 13,200 poles, 11,100 transformers, and 1,700 miles of wire. While the balance in the dedicated storm reserve fund totaled about $354 million, $211 million of which consisted of cash, total expenses for FPL's storm recovery effort were estimated to be approximately $890 million, excluding power plant damage that was covered by insurance. Despite the extent of the damage and lack of sufficient reserves, FPL's strong financial and liquidity position ensured its ability to respond quickly and effectively to these unprecedented events. To meet such challenges successfully and economically, it is crucial that FPL continue to receive adequate support for its credit standing.

Q. What danger does an inadequate rate of return pose to FPL?

A. While FPL has been successful in maintaining its financial flexibility, experience demonstrates that investor confidence can evaporate almost overnight. Moreover, it is difficult to recover and the damage is not easily reversible. Consider the example of bond ratings. To restore a company's rating to a previous, higher level, rating agencies generally require the company to maintain its financial indicators above the minimum levels required for the higher rating over a period of time. Given the negative outlook currently assigned to FPL's long-term debt ratings, the perception of a lack of regulatory support would almost certainly lead to further downgrades. Moreover, the negative impact of declining credit quality on a utility's capital costs and financial flexibility becomes more pronounced as debt ratings move down the scale from investment to non-investment grade.

As discussed in the testimony of FPL's witnesses, FPL has done an outstanding job of meeting customers' power requirements reliably, efficiently, and at rates that compare favorably with other utilities. While FPL's conservative posture has benefited customers and provided a strong platform for continued success, actions that serve to erode financial strength or impair financial flexibility could have swift and damaging consequences. The cost of providing FPL an adequate return is small relative to the potential benefits that a strong utility can have in providing reliable service and fostering growth.

Q. What role does regulation play in ensuring FPL's access to capital is maintained?

A. Considering investors' heightened awareness of the risks associated with the electric power industry and the damage that results when a utility's financial flexibility is compromised, supportive regulation remains crucial to maintaining FPL's access to capital. Investors recognize that constructive regulation is a key ingredient in supporting utility credit ratings and financial integrity, particularly during times of adverse conditions. In a *RatingsDirect* report entitled "Regulation and Credit Quality in the U.S. Utility Sector" (Jan. 30, 2003), S&P noted that:

> When examining the quality of regulation, Standard & Poor's factors in what level of support the utility might get in times of distress, when its needs are most actute.

S&P went on to note the importance of financial flexibility, especially considering the capital markets' ability to constrict access to capital when investors' confidence is compromised. As S&P concluded, "[a]ttributes of a successful firm will include the ability withstand volatility and access to multiple sources of capital."

Investors recognize that regulation has its own risks. Considering the magnitude of the events that have transpired since the third quarter of 2000, investors' sensitivity to market and regulatory uncertainties has increased dramatically. As S&P

noted in an August 21, 2003 *RatingsDirect* report ("Electric Utility Blackout Puts Spotlight on Political and Regulatory Credit Risk"), the 2003 blackout is unlikely to ease investors' concerns:

> Clearly, the blackout has highlighted the complexity of the system, the diversity of its many stakeholders and the susceptibility of the industry to political and regulatory risk.

While investors recognize that the regulatory environment in Florida has been supportive, in some circumstances regulatory uncertainty can eclipse all of the other risk factors facing particular utilities. Indeed, the investment community has expressed concern that one outcome of the California crisis may be the perception that utility bankruptcy in times of distress is not an unreasonable outcome. But as S&P recognized in its January 30, 2003 *RatingsDirect* report, if such an attitude were to take hold, "the utilty industry would be exposed to capital market pressures" and investors "would either flee the industry or demand steep returns," which would ultimately drive up the cost of capital to customers.

Q. What other considerations highlight the need for supportive regulation?

A. Consider Docket No. 041291-EI, FPL's request to recover extraordinary storm-related costs, where the Office of Public Counsel ("OPC") has recommended disallowing reasonable and necessary expenses by forcing FPL's ROE to the 10 percent floor specified in the stipulation. In the aftermath of the crisis in western power markets in 2000-2001, perhaps the preeminent issue of concern to investors is the potential that regulators will prevent utilities from recovering reasonable and necessary expenses incurred to provide customers with reliable service. Investors perceive the expiration of the current stipulation and the resulting rate proceeding as one of the key risks confronting FPL. Because of the overhang of this impending rate case, investors' sensitivity to regulatory risks are particularly heightened, with the FPSC's actions being interpreted as a gauge of future regulatory support.

Moody's Investors Service noted in a February 1, 2005 *Credit Opinion* report that "[r]egulatory risk this year related to the 12/31/05 expiration of current rate agreement and hurricane cost recovery" posed challenges and observed that a "negative regulatory development" could lead to a ratings downgrade. Thus, while FPL's conservative posture and ongoing regulatory support have benefited customers and provided a strong platform for continued success, actions that serve to erode financial strength or impair financial flexibility could have swift and damaging consequences.

Q. Does your recommended cost of equity consider the impact that the potential for storm cost disallowances would have on investors' required rate of return?

A. No. The investment community has cited the FPSC's January 18, 2005 decision to permit the collection of deferred storm repair costs on an interim basis as a supportive and reassuring development for FPL's financial position. Similarly, Value Line's March 4, 2005 report informed investors that "[w]e think the regulators will grant full recovery" of FPL's storm costs. On the other hand, OPC's proposal to engineer a backdoor reduction in FPL's ROE through a novel reinterpretation of the stipulation would send an alarming message to investors – and one that is at odds with their current expectations.

The investment community is intensely focused on the actions of the FPSC, and denying utilities the ability to recover extraordinary costs, such as those related to the extreme storm season in 2004, would imply a dramatic increase in investment risk and required rate of return to FPL. Accordingly, if the FPSC were to adopt OPC's proposals in Docket No. 041291-EI, my recommended ROE would need to be adjusted upward to account for this additional risk.

Return on Equity Recommendation

Q. What then is your conclusion as to a fair rate of return on equity for FPL applicable to the 2006 test year?

A. As explained earlier, based on the various capital market oriented analyses described in my testimony, after incorporating a minimum adjustment for flotation costs I concluded that the fair rate of return on equity range for the electric utility proxy group was 10.3 to 12.3 percent. Considering the potential exposures faced by FPL and the economic requirements necessary to maintain access to capital even under adverse circumstances, it is my opinion that the reasonable ROE range for FPL coincides with the upper half of this range, or between 11.3 percent and 12.3 percent, with the midpoint being 11.8 percent.

Q. Does this recommended rate of return provide for or recognize any return for other factors?

A. No it does not. My 11.8 percent recommended fair rate of return does not explicitly incorporate any allowance for exemplary performance or efficient and economic management, as discussed in the testimony of FPL's witnesses. An incentive to recognize such factors should be added to my fair rate of return on equity for FPL.

Q. In evaluating the fair rate of return for FPL, is it appropriate to consider an incentive to recognize and encourage exemplary management?

A. Yes. As discussed in greater detail in the testimony of Mr. Dewhurst and other FPL witnesses, FPL has distinguished itself in numerous measures of operating efficiency and effectiveness while maintaining moderate electric rates. As a result, consumers and the service area economy have benefited from a climate of rapidly expanding service, efficient and cost-effective operations, excellent customer service, improved reliability, and prices that have declined in real terms. To date, the FPSC has helped to foster an environment in which customers are assured reliable service at reasonable rates, stockholders are fairly treated, and stakeholders are not forced to commit significant resources and bear the concomitant costs of multiple or annual rate cases.

Awarding an increment of return above the cost of equity, such as the 50 basis points proposed by Mr. Dewhurst, recognizes that FPL's superior management continues to be instrumental in achieving these results. Moreover, including an incentive for exemplary management above the minimum fair rate of return required by investors is entirely consistent with the incentive mechanism embodied in the stipulation in Docket No. 001148-EI, which provides for revenue sharing between FPL's customers and shareholders. As demonstrated in the testimony of Mr. Dewhurst, the payoff from achieving efficiencies and stimulating investment in the utility system is so large that the incremental impact of the reward for management effectiveness on the total cost of electricity to consumers pales into insignificance.

Q. What rate of return on equity is implied for FPL after incorporating an incentive for effective management?

A. Adding the 50 basis-point increment proposed by Mr. Dewhurst to my 11.8 percent recommended cost of equity results in a fair rate of return on equity of 12.3 percent. Giving effect to the 100 basis-point range typically allowed by the FPSC for regulatory purposes, this results in an appropriate fair rate of return on equity range of 11.3 to 13.3 percent.

Q. How does a return on equity of 12.3 percent compare with other benchmarks that investors would consider?

A. Reference to rates of return available from alternative investments of comparable risk can also provide a useful guideline in assessing the return necessary to assure confidence in the financial integrity of a firm and its ability to attract capital. This comparable earnings approach is consistent with the economic underpinnings for a fair rate of return established by the Supreme Court. 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.

The average Value Line Safety Ranking for the firms in the electric utility proxy group is “2”. Value Line’s projections (Jan. 28, 2005) indicate that its analysts expect that rates of return on shareholders’ equity for the 283 firms in Value Line’s universe assigned a Safety Rank of “1” or “2” will average 16.6 percent. Thus, the 12.3 percent rate of return on equity requested by FPL is well below the earned returns that investors anticipate for other firms of comparable risk, as measured by Value Line’s Safety Rank.

Q. Does this conclude your direct testimony?

A. Yes.

QUALIFICATIONS OF WILLIAM E. AVERA

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 in 1979, 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, 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 30 states, including the Florida Public Service Commission.

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 also have 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 also have served as an officer of various other professional organizations and societies. A resume containing the details of my experience and qualifications is attached.

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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 (over 100 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 in evening program at St. Edward's University in Austin from January 1979 through 1998.

Expert Witness Testimony

Testified in over 200 cases before regulatory agencies addressing cost of capital, 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, Hawaii, Idaho, Illinois, Indiana, Kansas, Maryland, Michigan, Missouri, Nevada, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Texas, Virginia, Washington, West Virginia, and Wisconsin.

Testified in over 30 cases before federal and state courts, arbitration panels, and alternative dispute tribunals (over 60 depositions given) regarding damages, valuation, antitrust liability, fiduciary duties, and other economic and financial issues.

Board Positions and Other Professional Activities

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.; Co-chair, Synchronous Interconnection Committee, appointed by Governor George Bush and Public Utility Commission of Texas; Operator of AAA Ranch, a certified organic producer of agricultural products; Appointed to Organic Livestock Advisory Committee by Texas Agricultural Commissioner Susan Combs; Appointed by Texas Railroad Commissioners to study group for *The UP/SP Merger: An Assessment of the Impacts on the State of Texas;* Appointed 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

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

"Portfolio Performance Evaluation and Long-run Capital Growth," with Henry A. Latanė 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

"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)

"Regulatory Developments in Telecommunications," Regional Holding Company Financial and Accounting Conference, San Antonio (Sep. 1993)

"Estimating the Cost of Capital During the 1990s: Issues and Directions," The National Society of Rate of Return Analysts, Washington, D.C. (May 1992)

"Making Utility Regulation Work at the Public Utility Commission of Texas," Center for Legal and Regulatory Studies, University of Texas, Austin (June 1991)

"Can Regulation Compete for the Hearts and Minds of Industrial Customers," Emerging Issues of Competition in the Electric Utility Industry Conference, Austin (May 1988)

"The Role of Utilities in Fostering New Energy Technologies," Emerging Energy Technologies in Texas Conference, Austin (Mar. 1988)

"The Regulators' Perspective," Bellcore Economic Analysis Conference, San Antonio (Nov. 1987)

"Public Utility Commissions and the Nuclear Plant Contractor," Construction Litigation Superconference, Laguna Beach, California (Dec. 1986)

"Development of Cogeneration Policies in Texas," University of Georgia Fifth Annual Public Utilities Conference, Atlanta (Sep. 1985)

"Wheeling for Power Sales," Energy Bureau Cogeneration Conference, Houston (Nov. 1985).

"Asymmetric Discounting of Information and Relative Liquidity: Some Empirical Evidence for Common Stocks" (with John Groth and Kerry Cooper), Southern Finance Association, New Orleans (Nov. 1982)

"Used and Useful Planning Models," Planning Executive Institute, 27th Corporate Planning Conference, Los Angeles (Nov. 1979)

"Staff Input to Commission Rate of Return Decisions," The National Society of Rate of Return Analysts, New York (Oct. 1979)

"Electric Rate Design in Texas," Southwestern Economics Association, Fort Worth (Mar. 1979)

"Discounted Cash Life: A New Measure of the Time Dimension in Capital Budgeting," with David Cordell, Southern Finance Association, New Orleans (Nov. 1978)

"The Relative Value of Statistics of Ex Post Common Stock Distributions to Explain Variance," with Charles G. Martin, Southern Finance Association, Atlanta (Nov. 1977)

"An ANOVA Representation of Common Stock Returns as a Framework for the Allocation of Portfolio Management Effort," with Charles G. Martin, Financial Management Association, Montreal (Oct. 1976)

"A Growth-Optimal Portfolio Selection Model with Finite Horizon," with Henry A. Latané, American Finance Association, San Francisco (Dec. 1974)

"An Optimal Approach to the Finance Decision," with Henry A. Latané, Southern Finance Association, Atlanta (Nov. 1974)

"A Pragmatic Approach to the Capital Structure Decision Based on Long-Run Growth," with Henry A. Latané, Financial Management Association, San Diego (Oct. 1974)

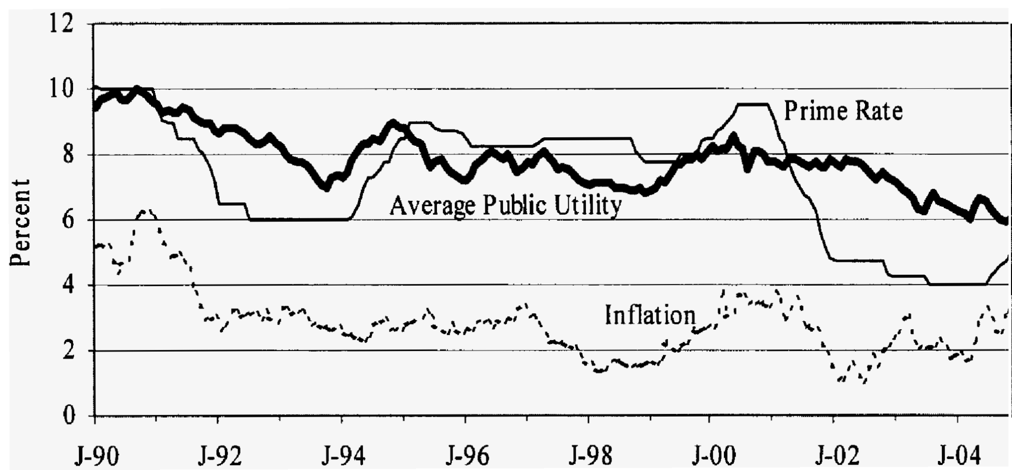
"Multi-period Wealth Distributions and Portfolio Theory," Southern Finance Association, Houston (Nov. 1973)

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

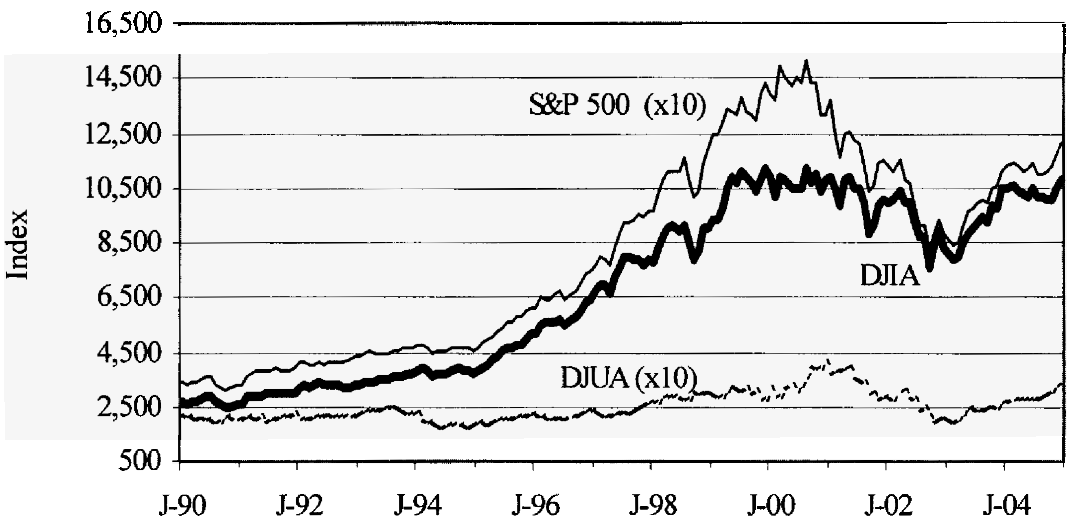
CAPITAL MARKET TRENDS

Docket No. 050045-EI
W. Avera Exhibit No.____
Document WEA-2, Page 1 of 1
Capital Market Trends

Interest Rates



Stock Market



DISCOUNTED CASH FLOW MODEL

EXPECTED DIVIDEND YIELD

Docket No. 050045-EI
W. Avera Exhibit No.____
Document WEA-3, Page 1 of 1
Expected Dividend Yield

	Sym	Company	(a) Stock Price	(a) Estimated Dividends Next 12 Mos.	Implied Dividend Yield
1	LNT	Alliant Energy	$ 26.70	$ 1.08	4.0%
2	AEE	Ameren Corp.	$ 50.11	$ 2.54	5.1%
3	CIN	CINergy Corp.	$ 39.94	$ 1.92	4.8%
4	ED	Consolidated Edison	$ 42.36	$ 2.28	5.4%
5	CEG	Constellation Energy	$ 50.72	$ 1.34	2.6%
6	D	Dominion Resources	$ 70.14	$ 2.70	3.8%
7	DTE	DTE Energy	$ 43.39	$ 2.06	4.7%
8	EAS	Energy East Corp.	$ 25.60	$ 1.15	4.5%
9	EXC	Exelon Corp.	$ 43.89	$ 1.60	3.6%
10	FPL	FPL Group, Inc.	$ 38.48	$ 1.48	3.8%
11	MDU	MDU Resources Group	$ 27.09	$ 0.74	2.7%
12	NU	Northeast Utilities	$ 18.66	$ 0.67	3.6%
13	NST	NSTAR	$ 55.10	$ 2.34	4.2%
14	OGE	OGE Energy Corp.	$ 25.83	$ 1.33	5.1%
15	POM	Pepco Holdings	$ 21.90	$ 1.00	4.6%
16	SCG	SCANA	$ 38.02	$ 1.59	4.2%
17	SRE	Sempra Energy	$ 39.65	$ 1.16	2.9%
18	SO	Southern Company	$ 31.84	$ 1.46	4.6%
19	VVC	Vectren Corp.	$ 26.44	$ 1.19	4.5%
20	WEC	Wisconsin Energy	$ 34.52	$ 0.88	2.5%
21	WPS	WPS Resources	$ 52.53	$ 2.24	4.3%
		Average			**4.1%**

(a) The Value Line Investment Survey, *Summary and Index* (Mar. 4, 2005).

DISCOUNTED CASH FLOW MODEL

PROJECTED EARNINGS GROWTH RATES

			Projected Dividend Growth	Projected Earnings Growth			
			(a)	(b)	(a)	(c)	(d)
	Sym	**Company**	**Value Line**	**IBES**	**Value Line**	**First Call**	**Zacks**
1	LNT	Alliant Energy	NMF	4.0%	3.0%	5.8%	4.7%
2	AEE	Ameren Corp.	NMF	4.0%	NMF	3.0%	3.3%
3	CIN	CINergy Corp.	2.0%	5.0%	2.0%	5.0%	4.3%
4	ED	Consolidated Edison	1.0%	3.0%	NMF	3.0%	2.9%
5	CEG	Constellation Energy	14.5%	7.0%	13.0%	8.0%	9.0%
6	D	Dominion Resources	2.0%	6.0%	6.5%	6.0%	5.9%
7	DTE	DTE Energy	NMF	4.0%	7.5%	5.0%	3.7%
8	EAS	Energy East Corp.	6.0%	5.0%	3.0%	4.0%	4.6%
9	EXC	Exelon Corp.	11.0%	6.0%	6.5%	6.0%	5.4%
10	FPL	FPL Group, Inc.	7.5%	5.0%	4.0%	5.0%	5.1%
11	MDU	MDU Resources Group	5.5%	8.0%	7.5%	8.0%	7.9%
12	NU	Northeast Utilities	9.5%	4.0%	7.0%	4.0%	4.4%
13	NST	NSTAR	3.5%	4.0%	3.5%	5.0%	4.7%
14	OGE	OGE Energy Corp.	1.0%	3.0%	5.0%	3.0%	3.5%
15	POM	Pepco Holdings	13.5%	4.0%	4.5%	4.0%	3.8%
16	SCG	SCANA	5.5%	5.0%	5.0%	4.5%	4.5%
17	SRE	Sempra Energy	NMF	7.0%	5.0%	7.5%	4.9%
18	SO	Southern Company	3.0%	5.0%	4.5%	5.0%	4.4%
19	VVC	Vectren Corp.	3.0%	7.0%	5.0%	6.1%	6.2%
20	WEC	Wisconsin Energy	4.0%	7.0%	4.5%	5.0%	6.4%
21	WPS	WPS Resources	2.0%	4.0%	4.0%	4.0%	4.3%
		Average	**5.6%**	**5.1%**	**5.3%**	**5.1%**	**4.9%**

NMF -- No Meaningful Figure

NA -- Not Available

(a) The Value Line Investment Survey (Dec. 31, 2004, Feb. 11 & Mar. 4, 2005). Negative or *Nil* growth rates recorded as No Meaningful Figure.
(b) I/B/E/S International growth rates from Standard & Poor's *Earnings Guide*, (Feb. 2005).
(c) First Call Earnings Estimates from www.finance.yahoo.com (Feb. 17, 2005).
(d) Zacks Investment Research earnings growth rates from www.zacks.com (Feb. 17, 2005).

DISCOUNTED CASH FLOW MODEL

SUSTAINABLE GROWTH RATE

		(a)	(a)	(a)	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
		Proj. 2007-2010			2003/04		Mid-Year					
	Company	EPS	DPS	Net Book Value	Net Book Value	Annual Change	Adjustment Factor	"b"	Adjusted "r"	"b x r" growth	"sv" Factor	Sustainable Growth
1	Alliant Energy	$2.05	$1.26	$25.55	$21.37	3.6%	1.0179	38.5%	8.2%	3.1%	0.15%	3.3%
2	Ameren Corp.	$2.95	$2.54	$32.30	$26.73	3.9%	1.0189	13.9%	9.3%	1.3%	2.58%	3.9%
3	CINergy Corp.	$2.80	$2.04	$26.10	$20.74	4.7%	1.0230	27.1%	11.0%	3.0%	1.96%	4.9%
4	Consolidated Edison	$2.95	$2.36	$32.60	$28.44	2.3%	1.0114	20.0%	9.2%	1.8%	0.60%	2.4%
5	Constellation Energy	$5.75	$2.14	$40.90	$26.86	8.8%	1.0420	62.8%	14.6%	9.2%	0.16%	9.4%
6	Dominion Resources	$6.00	$3.00	$47.75	$32.42	6.7%	1.0323	50.0%	13.0%	6.5%	0.47%	7.0%
7	DTE Energy	$4.50	$2.06	$38.00	$31.36	3.9%	1.0192	54.2%	12.1%	6.5%	-0.47%	6.1%
8	Energy East Corp.	$2.00	$1.45	$21.50	$17.59	3.4%	1.0167	27.5%	9.5%	2.6%	0.25%	2.9%
9	Exelon Corp.	$3.60	$1.92	$21.95	$14.19	9.1%	1.0436	46.7%	17.1%	8.0%	0.03%	8.0%
10	FPL Group, Inc.	$2.95	$1.90	$26.45	$18.91	5.8%	1.0280	35.6%	11.5%	4.1%	0.82%	4.9%
11	MDU Resources Group	$2.25	$0.86	$19.75	$12.66	9.3%	1.0444	61.8%	11.9%	7.4%	1.15%	8.5%
12	Northeast Utilities	$2.00	$0.97	$21.85	$17.82	4.2%	1.0204	51.5%	9.3%	4.8%	-0.08%	4.7%
13	NSTAR	$4.25	$2.70	$34.25	$25.67	4.9%	1.0240	36.5%	12.7%	4.6%	0.18%	4.8%
14	OGE Energy Corp.	$2.00	$1.40	$16.25	$13.75	3.4%	1.0167	30.0%	12.5%	3.8%	0.26%	4.0%
15	Pepco Holdings	$2.40	$1.16	$21.40	$17.48	3.4%	1.0169	51.7%	11.4%	5.9%	0.43%	6.3%
16	SCANA Corp.	$3.25	$1.90	$29.00	$20.82	5.7%	1.0276	41.5%	11.5%	4.8%	0.90%	5.7%
17	Sempra Energy	$3.75	$1.00	$31.25	$17.17	12.7%	1.0598	73.3%	12.7%	9.3%	1.37%	10.7%
18	Southern Co.	$2.50	$1.70	$18.65	$13.13	6.0%	1.0292	32.0%	13.8%	4.4%	0.90%	5.3%
19	Vectren Corp.	$1.95	$1.31	$16.35	$14.18	2.9%	1.0142	32.8%	12.1%	4.0%	0.48%	4.5%
20	Wisconsin Energy	$3.00	$1.00	$29.00	$19.92	7.8%	1.0375	66.7%	10.7%	7.2%	-0.05%	7.1%
21	WPS Resources	$3.45	$2.36	$33.05	$27.18	4.0%	1.0196	31.6%	10.6%	3.4%	0.41%	3.8%
	Average											5.6%

(a) The Value Line Investment Survey (Dec 31, 2004, Feb. 11 & Mar. 4, 2005).
(b) Annual growth in book value per share from 2003/04 to 2007/10.
(c) Equal to 2(1+b)/(2+b), where b = annual change in net book value.
(d) (EPS-DPS)/EPS.
(e) (EPS/2007-10 Net Book Value) x Mid-Year Adjustment Factor.
(f) (d) x (e).
(g) "s" equals projected market-to-book ratio x growth in common shares. "v" equals (1- 1/projected market-to-book ratio).
(h) (f) + (g).

RISK PREMIUM APPROACH

<u>AUTHORIZED RATES OF RETURN -- CURRENT ESTIMATE</u>

Docket No. 050045-EI
W. Avera Exhibit No.____
Document WEA-6, Page 1 of 2
Authorized Rates of Return

YEAR	(a) ALLOWED ROE	(b) AVERAGE PUBLIC UTILITY BOND YIELD	RISK PREMIUM
1974	13.10%	9.27%	3.83%
1975	13.20%	9.88%	3.32%
1976	13.10%	9.17%	3.93%
1977	13.30%	8.58%	4.72%
1978	13.20%	9.22%	3.98%
1979	13.50%	10.39%	3.11%
1980	14.23%	13.15%	1.08%
1981	15.22%	15.62%	-0.40%
1982	15.78%	15.33%	0.45%
1983	15.36%	13.31%	2.05%
1984	15.32%	14.03%	1.29%
1985	15.20%	12.29%	2.91%
1986	13.93%	9.46%	4.47%
1987	12.99%	9.98%	3.01%
1988	12.79%	10.45%	2.34%
1989	12.97%	9.66%	3.31%
1990	12.70%	9.76%	2.94%
1991	12.55%	9.21%	3.34%
1992	12.09%	8.57%	3.52%
1993	11.41%	7.56%	3.85%
1994	11.34%	8.30%	3.04%
1995	11.55%	7.91%	3.64%
1996	11.39%	7.74%	3.65%
1997	11.40%	7.63%	3.77%
1998	11.66%	7.00%	4.66%
1999	10.77%	7.55%	3.22%
2000	11.43%	8.14%	3.29%
2001	11.09%	7.72%	3.37%
2002	11.16%	7.50%	3.66%
2003	10.97%	6.61%	4.36%
2004	10.73%	6.20%	4.53%
Average		9.59%	3.17%

Regression Output	
Constant	0.07299
Std Err of Y Est	0.00557
R Squared	0.79192
No. of Observations	31
Degrees of Freedom	29
X Coefficient(s)	-0.43083
Std Err of Coef.	0.04101

Current Equity Risk Premium	
Avg. Yield over Study Period	9.59%
Jan. 2005 Avg. Utility Bond Yield (c)	5.80%
Change in Bond Yield	-3.79%
Risk Premium/Interest Rate Relationship	-43.08%
Adjustment to Average Risk Premium	1.63%
Average Risk Premium over Study Period	3.17%
Adjusted Risk Premium	**4.80%**

(a) Regulatory Research Associates, Major Rate Case Decisions, January 1990 - December 2004, *Regulatory Focus* (January 2005); Major Rate Case Decisions, *Regulatory Focus*, (January 16, 1990); Argus, *UtilityScope Regulatory Service* (January 1986).
(b) Moody's *Public Utility Manual* (2003); Moody's *Credit Perspectives* (various editions); Mergent Bond Record (various editions).
(c) Mergent Bond Record (February 2005).

RISK PREMIUM APPROACH

AUTHORIZED RATES OF RETURN -- TEST YEAR ESTIMATE

YEAR	(a) ALLOWED ROE	(b) AVERAGE PUBLIC UTILITY BOND YIELD	RISK PREMIUM
1974	13.10%	9.27%	3.83%
1975	13.20%	9.88%	3.32%
1976	13.10%	9.17%	3.93%
1977	13.30%	8.58%	4.72%
1978	13.20%	9.22%	3.98%
1979	13.50%	10.39%	3.11%
1980	14.23%	13.15%	1.08%
1981	15.22%	15.62%	-0.40%
1982	15.78%	15.33%	0.45%
1983	15.36%	13.31%	2.05%
1984	15.32%	14.03%	1.29%
1985	15.20%	12.29%	2.91%
1986	13.93%	9.46%	4.47%
1987	12.99%	9.98%	3.01%
1988	12.79%	10.45%	2.34%
1989	12.97%	9.66%	3.31%
1990	12.70%	9.76%	2.94%
1991	12.55%	9.21%	3.34%
1992	12.09%	8.57%	3.52%
1993	11.41%	7.56%	3.85%
1994	11.34%	8.30%	3.04%
1995	11.55%	7.91%	3.64%
1996	11.39%	7.74%	3.65%
1997	11.40%	7.63%	3.77%
1998	11.66%	7.00%	4.66%
1999	10.77%	7.55%	3.22%
2000	11.43%	8.14%	3.29%
2001	11.09%	7.72%	3.37%
2002	11.16%	7.50%	3.66%
2003	10.97%	6.61%	4.36%
2004	10.73%	6.20%	4.53%
Average		9.59%	3.17%

Regression Output	
Constant	0.07299
Std Err of Y Est	0.00557
R Squared	0.79192
No. of Observations	31
Degrees of Freedom	29
X Coefficient(s)	-0.43083
Std Err of Coef.	0.04101

Current Equity Risk Premium	
Avg. Yield over Study Period	9.59%
2006 Avg. Utility Bond Yield (c)	7.00%
Change in Bond Yield	-2.59%
Risk Premium/Interest Rate Relationship	-43.08%
Adjustment to Average Risk Premium	1.12%
Average Risk Premium over Study Period	3.17%
Adjusted Risk Premium	**4.29%**

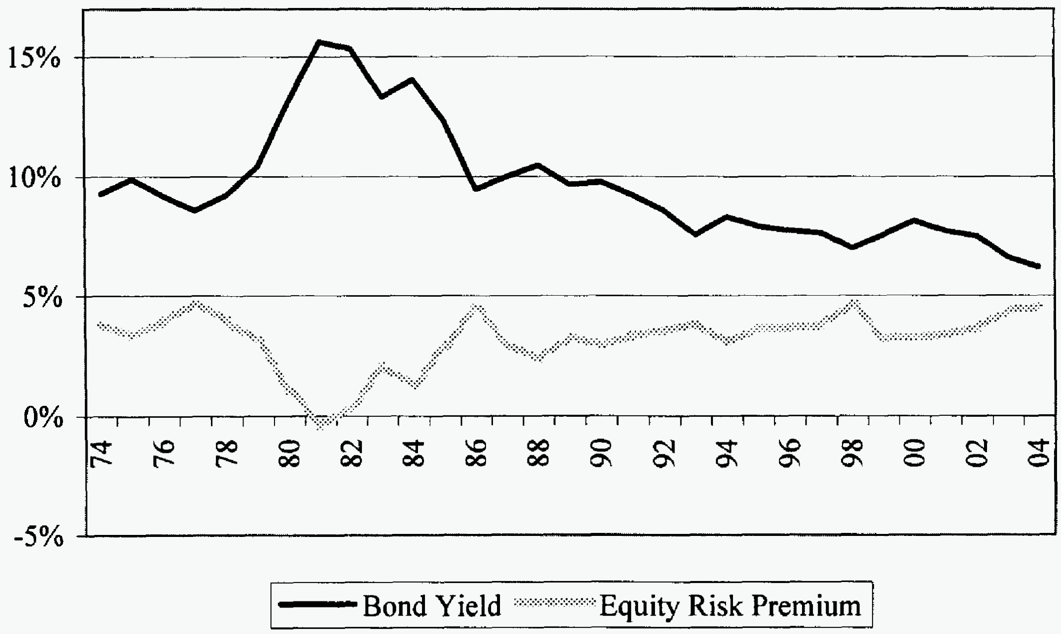
(a) Regulatory Research Associates, Major Rate Case Decisions, January 1990 - December 2004, *Regulatory Focus* (January 2005); Major Rate Case Decisions, *Regulatory Focus*, (January 16, 1990); Argus, *UtilityScope Regulatory Service* (January 1986).

(b) Moody's *Public Utility Manual* (2003); Moody's *Credit Perspectives* (various editions); Mergent Bond Record (various editions).

(c) Projected yield on public utility bonds for 2006 based on interest rate forecasts reported by EIA,

INVERSE RELATIONSHIP

<u>**Bond Yields v. Equity Risk Premium**</u>



RISK PREMIUM APPROACH

REALIZED RATES OF RETURN

Docket No. 050045-EI
W. Avera Exhibit No.____
Document WEA-8, Page 1 of 1
Realized Rates of Return

	S&P ELECTRIC UTILITIES (a)			S&P SINGLE-A PUBLIC UTILITY BONDS (b)		
	CLOSE PRICE	DIV	ANNUAL REALIZED RETURN	CLOSE YIELD	PRICE	ANNUAL REALIZED RETURN
1945	$16.34		(c)	2.73%	(d)	
1946	$15.53	$0.73	-0.49%	2.72%	$100.18	2.91%
1947	$12.89	$0.75	-12.17%	3.04%	$94.87	-2.41%
1948	$12.37	$0.71	1.47%	3.05%	$99.82	2.86%
1949	$14.60	$0.80	24.49%	2.70%	$105.88	8.93%
1950	$14.49	$0.88	5.27%	2.81%	$98.05	0.75%
1951	$16.07	$0.92	17.25%	3.31%	$92.16	-5.03%
1952	$18.28	$0.95	19.66%	3.25%	$101.06	4.37%
1953	$18.97	$0.99	9.19%	3.33%	$98.68	1.93%
1954	$22.39	$1.03	23.46%	3.15%	$102.85	6.18%
1955	$24.06	$1.09	12.33%	3.39%	$96.23	-0.61%
1956	$23.61	$1.13	2.83%	4.19%	$88.60	-8.01%
1957	$24.85	$1.19	10.29%	3.97%	$103.20	7.39%
1958	$33.14	$1.24	38.35%	4.51%	$92.42	-3.61%
1959	$33.42	$1.30	4.77%	4.80%	$96.09	0.60%
1960	$39.35	$1.37	21.84%	4.64%	$102.26	7.06%
1961	$49.28	$1.44	28.89%	4.66%	$99.61	4.25%
1962	$48.60	$1.52	1.70%	4.33%	$104.73	9.39%
1963	$51.97	$1.63	10.29%	4.51%	$97.49	1.82%
1964	$58.21	$1.74	15.36%	4.47%	$100.59	5.10%
1965	$58.05	$1.90	2.99%	4.86%	$94.71	-0.82%
1966	$53.49	$2.04	-4.34%	5.61%	$90.59	-4.55%
1967	$49.90	$2.16	-2.67%	6.50%	$89.61	-4.78%
1968	$51.95	$2.27	8.66%	7.01%	$94.25	0.75%
1969	$42.65	$2.33	-13.42%	8.43%	$85.88	-7.11%
1970	$45.62	$2.40	12.59%	8.44%	$99.91	8.34%
1971	$44.18	$2.47	2.26%	7.70%	$107.78	16.22%
1972	$43.50	$2.53	4.19%	7.74%	$99.66	7.37%
1973	$32.85	$2.51	-18.71%	8.10%	$96.25	3.98%
1974	$22.03	$2.49	-25.36%	9.25%	$89.27	-2.63%
1975	$30.56	$2.57	50.39%	9.63%	$96.63	5.89%
1976	$35.17	$2.58	23.53%	8.37%	$112.58	22.21%
1977	$35.67	$2.74	9.21%	8.81%	$95.71	4.08%
1978	$31.38	$2.94	-3.78%	9.75%	$91.55	0.36%
1979	$28.44	$3.10	0.51%	11.47%	$86.31	-3.94%
1980	$27.19	$3.20	6.86%	13.39%	$86.48	-2.05%
1981	$29.33	$3.42	20.45%	15.66%	$86.06	-0.54%
1982	$36.15	$3.62	35.59%	12.21%	$126.20	41.86%
1983	$37.14	$3.84	13.36%	12.95%	$94.63	6.83%
1984	$42.26	$4.06	24.72%	12.39%	$104.16	17.11%
1985	$48.82	$4.15	25.34%	10.54%	$115.76	28.16%
1986	$58.31	$4.21	28.06%	9.12%	$113.37	23.90%
1987	$49.78	$4.34	-7.19%	10.09%	$91.49	0.61%
1988	$53.87	$4.37	16.99%	10.02%	$100.62	10.71%
1989	$66.55	$4.28	31.48%	9.36%	$106.11	16.13%
1990	$63.47	$4.45	2.06%	9.60%	$97.82	7.18%
1991	$77.25	$4.57	28.91%	8.93%	$106.41	16.01%
1992	$76.78	$4.68	5.45%	8.64%	$102.84	11.77%
1993	$81.71	$4.71	12.56%	8.74%	$99.03	7.67%
1994	$66.30	$4.65	-13.17%	8.68%	$100.59	9.33%
1995	$81.62	$4.67	30.15%	7.97%	$107.32	16.00%
1996	$76.75	$4.61	-0.32%	6.57%	$116.22	24.19%
1997	$91.49	$4.47	25.03%	6.91%	$96.17	2.74%
1998	$100.86	$4.39	15.04%	7.26%	$96.18	3.09%
1999	$77.42	$4.35	-18.93%	8.41%	$88.55	-4.19%
2000	$113.00	$4.42	51.67%	8.25%	$101.61	10.02%
2001	$99.70	$3.56	-8.62%	8.30%	$99.50	7.75%
2002	$77.85	$3.88	-18.02%	6.12%	$126.26	34.56%
2003	$92.63	$3.52	23.51%	5.88%	$102.95	9.07%
AVERAGE 1946-2003			10.55%			6.67%

REALIZED RATE OF RETURN	
S&P ELECTRIC UTILITIES	10.55%
SINGLE-A PUBLIC UTILITY BONDS	6.67%
EQUITY RISK PREMIUM	**3.87%**

(a) S&P's Security Price Index Record (2002), The Analysts' Handbook (1967, 1999, 2001, 2002, Monthly Supplement January 2004).
(b) S&P's Security Price Index Record (1996), S&P Bond Guide (Jan. ed. 1997-2004).
(c) Computed by adding gain or loss (ending stock price - beginning stock price) to annual dividends and dividing by beginning stock price.
(d) Computed as sum of capital gain or loss plus interest income, divided by beginning price.

CAPITAL ASSET PRICING MODEL

FORWARD-LOOKING RISK PREMIUM - CURRENT ESTIMATE

Market Rate of Return		
Dividend Yield (a)	1.8%	
Growth Rate (b)	12.1%	
Market Return (c)		13.9%
Less: Risk-Free Rate (d)		
Long-term Treasury Bond Yield		4.6%
Market Risk Premium (e)		9.3%
Utility Proxy Group Beta (f)		0.77
Utility Proxy Group Risk Premium (g)		7.2%
Plus: Risk-free Rate (d)		
Long-term Treasury Bond Yield		4.6%
Implied Cost of Equity (h)		**11.8%**

(a) Average dividend yield for the S&P 500 at month-end February 2005 from www.standardandpoors.com
(b) Average IBES growth rate for the firms in the S&P 500 based on data from Standard & Poor's *Earnings Guide* (Feb. 2005).
(c) (a) + (b)
(d) Average of the daily yields on 20-year Treasury bonds for February 2005 reported by the U.S. Department of the Treasury at www.treas.gov.
(e) (c) - (d).
(f) The Value Line Investment Survey, *Summary and Index* (Mar. 4, 2005).
(g) (e) x (f).
(h) (d) + (g).

CAPITAL ASSET PRICING MODEL

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Document WEA-9, Page 2 of 2
Forward Looking Risk Premium

FORWARD-LOOKING RISK PREMIUM - TEST YEAR ESTIMATE

Market Rate of Return		
Dividend Yield (a)	1.8%	
Growth Rate (b)	12.1%	
Market Return (c)		13.9%
Less: Risk-Free Rate (d)		
Long-term Treasury Bond Yield		5.8%
Market Risk Premium (e)		8.1%
Utility Proxy Group Beta (f)		0.77
Utility Proxy Group Risk Premium (g)		6.2%
Plus: Risk-free Rate (d)		
Long-term Treasury Bond Yield		5.8%
Implied Cost of Equity (h)		**12.0%**

(a) Average dividend yield for the S&P 500 at month-end February 2005 from www.standardandpoors.com
(b) Average IBES growth rate for the firms in the S&P 500 based on data from Standard & Poor's *Earnings Guide* (Feb. 2005).
(c) (a) + (b)
(c) Projected yield on 20-year Treasury bonds for 2006 based on interest rate forecasts reported by EIA, *Annual Energy Outlook* (2005), GlobalInsight, *Review of the U.S. Economy: Long-term focus* (Summer 2004), Blue Chip Financial Forecasts (Feb. 1, 2005).
(e) (c) - (d).
(f) The Value Line Investment Survey, *Summary and Index* (Mar. 4, 2005).
(g) (e) x (f).
(h) (d) + (g).

CAPITAL ASSET PRICING MODEL

HISTORICAL RISK PREMIUM -- CURRENT ESTIMATE

Market Risk Premium	
Long-Horizon Equity Risk Premium (a)	7.2%
Utility Proxy Group Beta (b)	0.77
Utility Proxy Group Risk Premium (c)	5.5%
Plus: Risk-free Rate (d)	
Long-term Treasury Bond Yield	4.6%
Implied Cost of Equity (e)	**10.1%**

(a) Arithmetic mean return on Large Company Stocks from 1926-2003 reported by Ibbotson Associates, *Stocks, Bonds, Bills, and Inflation, Valuation Edition, 2004 Yearbook*, at 252.
(b) The Value Line Investment Survey, *Summary and Index* (Mar. 4, 2005).
(c) (a) x (b).
(d) Average of the daily yields on 20-year Treasury bonds for February 2005 reported by the U.S. Department of the Treasury at www.treas.gov.
(e) (c) + (d).

CAPITAL ASSET PRICING MODEL	**Docket No. 050045-EI**
	W. Avera Exhibit No.____
HISTORICAL RISK PREMIUM -- TEST YEAR ESTIMATE	**Document WEA-10, Page 2 of 2**
	Historical Risk Premium

Market Risk Premium	
Long-Horizon Equity Risk Premium (a)	7.2%
Utility Proxy Group Beta (b)	0.77
Utility Proxy Group Risk Premium (c)	5.5%
Plus: Risk-free Rate (d)	
Long-term Treasury Bond Yield	5.8%
Implied Cost of Equity (e)	**11.3%**

(a) Arithmetic mean return on Large Company Stocks from 1926-2003 reported by Ibbotson Associates, *Stocks, Bonds, Bills, and Inflation, Valuation Edition, 2004 Yearbook*, at 252.
(b) The Value Line Investment Survey, *Summary and Index* (Mar. 4, 2004).
(c) (a) x (b).
(d) Projected yield on 20-year Treasury bonds for 2006 based on interest rate forecasts reported by EIA, *Annual Energy Outlook* (2005), GlobalInsight, *Review of the U.S. Economy: Long-term focus* (Summer 2004), Blue Chip Financial Forecasts (Feb. 1, 2005).
(e) (c) + (d).

COST OF EQUITY ANALYSES

SUMMARY OF RESULTS

Method	Cost of Equity Estimate
DCF	9.4%
Risk Premium	
Authorized Returns	
Current Estimate	10.6%
Test Year Estimate	11.3%
Realized Rates of Return	
Current Estimate	9.7%
Test Year Estimate	10.9%
CAPM - Forward-looking	
Current Estimate	11.8%
Test Year Estimate	12.0%
CAPM - Historical	
Current Estimate	10.1%
Test Year Estimate	11.3%

CAPITAL STRUCTURE

ELECTRIC UTILITY OPERATING COS.

Company	Long-term Debt	Preferred Stock	Common Equity
Alabama Power Company	48.3%	8.3%	43.3%
Atlantic City Electric	47.6%	0.6%	51.8%
Baltimore Gas & Electric	49.7%	5.6%	44.7%
Boston Edison Company	50.4%	2.6%	47.0%
Central Illinois Light	39.6%	3.5%	56.9%
Central Illinois Public Service	47.7%	0.0%	52.3%
Central Maine Power	31.4%	3.3%	65.3%
Cincinnati Gas & Electric	44.9%	0.6%	54.5%
Commonwealth Edison	42.9%	0.1%	57.0%
Connecticut Light & Power	50.5%	7.1%	42.5%
Consolidated Edison	49.5%	1.9%	48.6%
Delmarva Power & Light	42.4%	2.1%	55.6%
Detroit Edison Co.	52.7%	0.0%	47.3%
Georgia Power	40.7%	10.3%	49.0%
Gulf Power	47.1%	6.2%	46.7%
Interstate Power & Light	40.7%	8.9%	50.3%
Mississippi Power	32.0%	7.6%	60.4%
New York State Elec. & Gas	52.3%	0.5%	47.2%
Oklahoma Gas & Electric	43.5%	0.0%	56.5%
Orange & Rockland	44.9%	0.0%	55.1%
PECO Energy	60.3%	3.4%	36.3%
Potomac Electric Power Co.	51.9%	1.6%	46.5%
PSI Energy	50.7%	1.2%	48.1%
Public Service Co. of New Hampshire	51.7%	0.0%	48.3%
Public Service Co. of North Carolina	36.3%	0.0%	63.7%
Rochester Gas & Electric	50.0%	4.4%	45.6%
San Diego Gas & Electric	46.2%	3.2%	50.6%
Savannah Electric & Power	58.6%	0.0%	41.4%
South Carolina Electric & Gas	49.1%	0.2%	50.7%
Southern Indiana Gas & Elec.	48.0%	0.0%	52.0%
Union Electric	41.8%	0.0%	58.2%
Union Light, Heat, & Power Co.	22.4%	0.0%	77.6%
Virginia Electric Power	52.0%	2.6%	45.3%
Western Massachusetts Elec	50.8%	0.0%	49.2%
Wisconsin Electric Power Co.	42.5%	0.8%	56.7%
Wisconsin Power & Light	27.1%	4.1%	68.8%
Wisconsin Public Service Corp.	39.6%	3.6%	56.7%
Average	**45.3%**	**2.5%**	**52.1%**

Source: At year-end 2003 from Form 10-K and Annual Reports.