BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 120015-EI FLORIDA POWER & LIGHT COMPANY

IN RE: PETITION FOR RATE INCREASE BY FLORIDA POWER & LIGHT COMPANY

COM S	
APA	TESTIMONY & EXHIBITS OF:
ECR ID	
GCL	
RAD	WILLIAM E. AVERA
SRC	
ADM	
OPC	
CLK I-RN	
Crt. Rp. 1	

DROUMENT NUMBER -

1	BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
2	FLORIDA POWER & LIGHT COMPANY
3	DIRECT TESTIMONY OF WILLIAM E. AVERA
4	DOCKET NO. 120015-EI
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	

1

2 A. William E. Avera, 3907 Red River, Austin, Texas, 78751. By whom are you employed and in what capacity? 3 Q. 4 A. I am a principal in Financial Concepts and Applications, Inc. ("FINCAP"), a firm 5 engaged in financial, economic, and policy consulting to business and 6 government. 7 8 **OVERVIEW** I. 9 What is the purpose of your testimony? 10 Q. 11 The purpose of my testimony is to present to the Florida Public Service A. Commission ("FPSC" or the "Commission") my assessment of the fair rate of 12 return on common equity ("ROE") for the jurisdictional electric utility operations 13 14 of Florida Power & Light Company ("FPL" or the "Company"). In addition, I 15 examine the reasonableness of FPL's capital structure. 16 Q. Are you sponsoring any exhibits in this case? 17 A. Yes. I am sponsoring Exhibits WEA-1 through WEA-18, which are attached to 18 my direct testimony. Qualifications of William E. Avera 19 WEA-1, 20 WEA-2, **Interest Rate Trends** 21 WEA-3, Comparison of Proxy Group Risk Indicators 22 WEA-4, DCF Model – Utility Proxy Group 23 WEA-5, Sustainable Growth Rate – Utility Proxy Group

Please state your name and business address.

1

Q.

- WEA-6, Implied Utility Bond Yields
- WEA-7, DCF Model Non-Utility Proxy Group
- WEA-8, Sustainable Growth Rate Non-Utility Proxy Group
- WEA-9, CAPM Utility Proxy Group
- WEA-10, Yield spreads
- WEA-11, Electric Utility Risk Premium
- WEA-12, Expected Earnings Approach
- WEA-13, Summary of Cost of Equity Estimates
- WEA-14, FPL Adjusted Capital Structure
- WEA-15, Capital Structure Electric Utility Operating Cos.
- WEA-16, Capital Structure Utility Proxy Group
- WEA-17, Market Value Capital Structure Utility Proxy Group
- WEA-18, Endnotes to Direct Testimony of William E. Avera
- 14 Q. Are you sponsoring or co-sponsoring any Minimum Filing Requirements
- 15 ("MFRs")?
- 16 A. No.
- 17 Q. Please describe your educational background and professional experience.
- 18 A. A description of my background and qualifications, including a resume containing
- the details of my experience, is attached as Exhibit WEA-1.
- Q. Please summarize the information and materials you relied on to support the
- 21 opinions and conclusions contained in your testimony.
- 22 A. I am familiar with the organization, finances, and operations of FPL from my
- participation in prior proceedings before the FPSC. In connection with the

present filing, I considered and relied upon corporate disclosures, publicly available financial reports and filings, and other published information relating to FPL, including bond rating agency reports, financial filings, and prior regulatory proceedings and orders. I also reviewed information relating generally to current capital market conditions and specifically to current investor perceptions, requirements, and expectations for FPL. These sources, coupled with my experience in the fields of finance and utility regulation, have given me a working knowledge of the issues relevant to investors' required return for FPL, and they form the basis of my analyses and conclusions.

10 Q. Please summarize your findings regarding a fair ROE for FPL.

A.

I determined that 11.25% represents a fair ROE for FPL, which falls at the middle of my recommended range of 10.25% to 12.25%. This conclusion is based on several factors. I applied four accepted methods of estimating ROE to a proxy group of fourteen other utilities with comparable investment risks. Consistent with the fact that utilities must compete for capital with firms outside their own industry, I also referenced a proxy group of companies selected from the least risky, most stable and mature participants in the non-utility sectors of the economy. In addition, my testimony examines the unique financial challenges facing FPL that must be considered in evaluating a fair ROE range from within the proxy group results, and in order to recognize FPL's requirements for financial strength and benefit customers.

I also present the regulatory precedent supporting the 25 basis point adder to recognize FPL's excellence in management, superior service, and its achievement of low rates for its customers. Other FPL witnesses document FPL's accomplishments, while my testimony demonstrates how the proposed adder is consistent with FPSC regulatory policy and objectives. Finally, my testimony demonstrates that FPL's capital structure is consistent with my fair ROE range and necessary to meet the financial challenges facing FPL.

8 Q. Is the requested ROE a reasonable cost for FPL's customers to pay?

A.

A.

Yes. Investors have many options vying for their money. They make investment capital available to FPL only if the expected returns justify the risk. Customers will enjoy reliable and efficient electric service so long as investors are willing to make the huge capital investments necessary to maintain and improve FPL's electric system. Providing an adequate return to investors is a necessary cost to ensure that capital is available to FPL now and in the future. If regulatory decisions increase risk or limit returns to levels that are insufficient to justify the risk, investors will look elsewhere to invest capital. The availability of capital is particularly important to FPL's customers because of the need for financial strength inherent in FPL's location and characteristics.

Q. Have customers benefited from FPL's past financial strength?

Yes. The shocks that have roiled the capital markets in recent years have made investors wary of putting their money into anything other than the safest investments. During the credit crisis, for example, utilities were forced to draw on short-term credit lines to meet debt retirement obligations because of

uncertainties regarding the availability of long-term capital, while others were effectively shut out of the commercial paper market altogether.

In contrast to the experience of many other utilities, FPL has been able to raise funds on reasonable terms, even in times of financial turmoil. The FPSC Staff in its December 23, 2009 Memorandum for Docket Nos. 080677-EI and 09130-EI ("Staff Memorandum") observed:

FPL's position of financial strength has served it and its customers by holding down the Company's cost of capital. During the recent volatility in the capital markets, many companies experienced sharp spikes in their cost to borrow. In some instances, companies had to accept rates as high as 10% to issue bonds. In the case of FPL, however, due to its strong financial position it was able to sell 30-year bonds at rates under 6% during 2008 and 2009 despite significant disruption in the credit markets.²

Unfortunately, the market uncertainties that began in 2008 have lingered as domestic political shocks and foreign financial difficulties have continued to buffet investors. Yet FPL must continue to make significant new capital investments to keep its system efficient and reliable for the customers it serves. If FPL can raise private capital for these vital infrastructure investments, both its customers and the economy of Florida will benefit. In the past, FPL's financial strength, fostered by the support of this Commission, has served customers well

as the Company has been able to raise capital on a reasonable and timely basis to meet past challenges such as devastating storms. To maintain its position of strength and navigate through the current financial shoals, FPL needs the FPSC's support. FPL must be in a position of financial strength to attract private capital on reasonable terms from investors whose first instinct is to rush to the safety of U.S. Treasury securities.

Q. Has the FPSC Staff recognized that customers save money in the long-run if they are served by a financially strong utility?

A.

Yes. The Staff Memorandum in FPL's 2009 rate case cited evidence to demonstrate that FPL customers would pay a lower capital cost in their rates than the Commission had ordered for Tampa Electric Company ("TECO") even if the Commission had approved FPL's requested ROE and capital structure:

The goal of an appropriate equity ratio and capital structure is to minimize the overall weighted average cost of capital and to maintain consistent access to capital on reasonable terms. This is an important consideration in that it's the overall cost of capital that is used to determine revenue requirements and ultimately customer rates. The overall cost of capital of 8.29 percent approved in the TECO rate case was based on an ROE of 11.25 percent and an equity ratio of 54.0 percent as a percentage of investor capital. Due to its ability to raise capital from a position of financial strength, even at the proposed ROE of 12.5 percent

1	and an equity ratio 59.1 percent, FPL's requested overall cost of
2	capital is 7.85 percent. ³

A.

The FPSC Staff was observing the fundamental truth that it is FPL's customers that ultimately benefit when the utility providing service has a strong credit rating, supportive regulation, and excellent management.

- Q. What role does FPSC regulation play in saving FPL's customers money through supporting investor confidence and rewarding superior performance?
 - Regulatory signals are a major driver of investors' risk assessment for utilities. Security analysts study commission orders and regulatory policy statements to advise investors where to put their money. If FPSC actions instill confidence that the regulatory environment is supportive, investors make capital available to Florida's utilities on more reasonable terms. As FPL's past experience indicates, when investors are confident that a utility has supportive regulation, they will make funds available even in times of turmoil in the financial markets. Moreover, suppliers of fuel, replacement power, equipment, and the other goods and services necessary to keep the lights on in Florida will offer more favorable terms to a financially strong utility operating under constructive regulation than to a utility whose financial wherewithal is suspect. Since the FPSC is FPL's primary utility regulator, investors and suppliers look to the FPSC to assess regulatory support behind FPL's financial and contractual obligations. When FPL can negotiate from a position of financial strength it will get a better deal for its customers.

- Q. What is the danger to FPL's customers when investors and suppliers doubt the FPSC's regulatory support of the Company?
- 3 FPL's customers become exposed to less reliable and more expensive electric A. service. Consider the effect of the FPSC's 2010 rate order in Docket Nos. 4 5 080677-EI and 09130-EI. The 10% ROE was unsettling to investors because it 6 was such a low ROE for an electric utility in Florida and the decision was viewed 7 as a departure from the FPSC's tradition of supportive regulation protected from 8 political influence. As described in FPL witness Dewhurst's testimony, the bond 9 rating agencies responded with negative assessments, including downgrades of 10 FPL's bond rating by Moody's Investors Service ("Moody's") and Standard & 11 Poor's Corporation ("S&P"). When the parties reached a settlement that allowed 12 FPL to earn an ROE of 11%, investors reacted with relief that the previous 13 decision may have been a temporary deviation from FPSC tradition of regulatory 14 support.
- Occustomers benefit when investors have confidence that the regulatory environment is constructive?
- 17 Yes. The challenging capital market environment highlights the benefits of the A. 18 ability in attracting the capital needed to secure reliable service at a lower cost for 19 Changing course from the path of financial strength would be customers. 20 extremely short-sighted. Customers and the economy of Florida have benefited 21 from FPL's financial flexibility and ability to raise capital on reasonable terms. If 22 investors perceived that the Commission was withdrawing its support for FPL's financial strength at this crucial juncture, then it would likely take a long time to 23

re-establish the well-deserved reputation that this Commission had earned among investors. By helping sustain FPL's financial strength, the FPSC will facilitate the flow of capital on reasonable terms that is required for the Company to maintain and improve the electric infrastructure so vital to Florida's economic recovery and future growth.

6 Q. Is the ROE in this case an important signal to investors?

Q.

A.

A.

Yes. In setting the ROE in this case, the FPSC has an opportunity to show that it recognizes the importance of financial strength and it will reward superior performance by a utility. A constructive outcome will confirm that the FPSC has returned to the regulatory policy of supportive regulation and that the investors should not expect that the 10% ROE in the last case signals a change in the regulatory climate in Florida. By allowing an ROE in this case that reflects capital market realities and FPL's unique financial challenges while providing justified ROE adder for superior performance, the FPSC will reassure investors of the regulation in Florida has returned to its tradition of fairness and innovation.

Does FPL have any unique characteristics that make it more important to maintain financial strength and regulatory support?

Indeed it does. FPL's location and fuel mix give its customers a larger stake in the Company's financial strength and regulatory support compared to other electric utilities in Florida and the rest of the nation. FPL's exposure to devastating storms requires that FPL mount huge recovery efforts that require ready availability of money and credit. FPL's nuclear generation, while saving customers significant energy costs, can necessitate huge unexpected expenditures.

FPL's dependence on natural gas, while having economic, environmental, and operational advantages benefiting customers, has volatile prices and exposure to transportation disruptions. FPL's unique location at the end of the Florida Peninsula increases the challenges of accessing the nation's energy infrastructure. In addition, FPL's service area is exposed to economic fluctuations and requires large capital investments to support customer growth. FPL must be prepared to meet these challenges even when confronting capital market conditions that might restrict access for utilities with weaker financial profiles or lacking effective regulatory support.

A.

Q. Can the FPSC be confident that allowing an ROE in the 10.25% to 12.25% range represents a reasonable cost for FPL's customers?

Yes. The ROE compensates common equity investors 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 Supreme Court in the *Bluefield*⁴ and *Hope*⁵ cases, a utility's allowed ROE should be sufficient to: (1) fairly compensate investors for 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.

I have developed the range by first estimating investors' required return for a proxy group of comparable risk utilities and a low-risk group of non-utility enterprises using four accepted methods: the discounted cash flow ("DCF") model, Capital Asset Pricing Model ("CAPM"), risk premium method, and the expected earnings approach. In evaluating a reasonable ROE for FPL from within the range of these results, I considered the impact of flotation costs and the imperative of recognizing the unique risk exposures and financial challenges faced by FPL. An ROE in the 10.25% to 12.25% range represents a reasonable and necessary cost to attract investors' funds and to maintain FPL's financial strength.

A.

Q. Is it appropriate to consider customers' stake in FPL's financial strength and encourage effective management and low rates when setting a fair ROE?

Yes. The purpose of regulation is to achieve the best possible long-term outcome for customers in terms of economical rates and reliable service. Florida has led the way in innovative and effective regulation. During the early days of the Public Utility Commission of Texas ("PUCT"), I traveled with the chair of that commission to Florida to interview the FPSC commissioners and senior staff about the forward-looking actions of this commission, particularly its use of incentives in regulation. Since that time regulatory agencies around the nation have followed with measures to encourage and support utilities in building financial strength and encouraging effective management.

The Federal Energy Regulatory Commission ("FERC"), over the last decade has effectively supported utilities in attracting capital and encouraging the improvement of the open access transmission grid by allowing ROE's from the upper end of the reasonable range. For example, FERC has allowed an increment of 50 basis points above the base ROE level for membership in a regional transmission organization. Utilities can qualify for additional ROE adders if they demonstrate that they need a higher ROE to attract sufficient capital or they are bringing other benefits to their customers.

A law passed several years ago in Virginia established a new regulatory framework that allows utilities to request an ROE adder of 50 basis points over and above the cost of equity found by the Virginia State Corporation Commission as an incentive for the utility to meet renewable energy goals. In its recent case, Appalachian Power Company was granted the 50 basis point ROE adder in recognition of its achievements.

Similarly, the Florida Legislature has provided the FPSC with the statutory authority to make adjustments to the ROE to recognize a utility's relative performance. Consistent with this statutory guidance, the FPSC has used the ROE as a lever to recognize a utility's effective management, and on occasion signal dissatisfaction with utility behavior. If the FPSC finds that consumers in FPL's service area have benefited from efficient and cost-effective operations, excellent customer service, and relatively low rates, considering the Company's

exemplary performance through a higher ROE is entirely consistent with sound regulatory policy. FPL's customers will clearly benefit in the long run if the ROE in this case reflects the cost of attracting investors' funds and sends a clear signal that the FPSC understands the importance of supporting investors' confidence and encouraging efficient management and low rates. Given FPL's unique characteristics and recent investor concerns about the FPSC's regulatory support, FPL's customers have a stake in a constructive outcome in this case. Just as customers in the free enterprise system win because companies that provide the best value also have the opportunity to earn higher returns, so also do utility customers benefit when regulators allow utilities that provide superior value the opportunity to earn an increment of return.

A.

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

Based on my evaluation, I concluded that FPL's projected equity ratio of 59.6% based on investor sources described in the testimony of FPL witness Dewhurst represents a reasonable mix of capital sources from which to calculate FPL's overall rate of return. My analyses demonstrate that while FPL's adjusted common equity ratio falls somewhat above the average maintained by the electric utilities 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. In addition, FPL's regulatory capital structure contains less equity than the market value capital structures relevant to investors for the electric utilities in the proxy group used to estimate the cost of equity.

Absent its relatively conservative capital structure, FPL's financial strength would suffer and its debt rating would undoubtedly be lower than present levels. The resulting greater investment risk would imply an increase in investors' required rate of return for FPL's securities and ultimately higher costs for FPL's customers. Given FPL's need for financial strength due to its exposure to devastating storms, nuclear generation, reliance on natural gas, location at the end of the Florida Peninsula, and economic vulnerability and growth of its service area, FPL customers benefit from a more secure capital structure.

Sensitivity to financial market and regulatory uncertainties has increased dramatically and investors recognize that constructive regulation is a key ingredient in supporting utility credit standing and financial integrity. For a utility with an obligation to provide reliable service, investors' increased reticence to supply additional capital during times of financial turmoil highlights the necessity of preserving the flexibility necessary to overcome periods of adverse capital market conditions.

II. RISKS AND FINANCIAL REQUIREMENTS OF FPL

A.

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

As a predicate to my capital market analyses, this section briefly reviews FPL's operations and finances. In addition, it examines the risks that investors take into account in evaluating their required rate of return for FPL, the unique financial

1 requirements that should be considered in establishing a fair ROE for FPL, and 2 conditions in the capital markets and the general economy. 3 4 A. Operations and Finances 5 6 Q. Please briefly describe FPL and its parent, NextEra Energy, Inc. 7 Headquartered in Juno Beach, Florida, FPL is engaged in the generation, A. 8 transmission, and distribution of electric power throughout 35 counties located 9 principally along the east and lower west coasts of Florida. FPL is one of the 10 largest rate-regulated utilities in the U.S., and its service territory includes a 11 population of nearly 8.9 million, with service being provided to approximately 4.6 12 million customers. FPL is a wholly owned subsidiary of NextEra Energy, Inc. 13 ("NextEra"). 14 15 NextEra Energy is a leading energy company with over 41,000 megawatts 16 ("MW") of generating capacity, and approximately 14,800 employees in 24 states and Canada. NextEra Energy's principal subsidiaries are FPL and NextEra 17 18 Energy Resources, LLC, which together with its affiliated entities is the largest 19 generator in North America of renewable energy from the wind and the sun. 20 Through its subsidiaries, NextEra Energy collectively operates the third largest

U.S. nuclear power generation fleet.

21

Q. Please describe FPL's electric utility operations.

1

15

16

18

20

21

22

23

2 During 2011, approximately 51% of electric sales were attributable to residential A. 3 customers, with 42% from commercial and 7% from industrial and other users. 4 With a combined capacity of approximately 24,460 MW, FPL's generating 5 facilities include four nuclear units at the St. Lucie and Turkey Point generating 6 stations, with a total capacity of 2,970 MW. In 2011, nuclear generation 7 accounted for 20% of the electric energy provided by FPL, with natural gas at 8 65%, oil at 1%, and coal at 5%. 9 10 The remaining 9% of FPL's 2011 energy requirements were obtained through 11 purchased power contracts. Take-or-pay purchased power contracts with the 12 Jacksonville Electric Authority and with subsidiaries of The Southern Company 13 provide approximately 1,330 MW of power through 2015 and 375 MW thereafter 14 through 2021. FPL also has various firm contracts to purchase approximately 705

MW of capacity and energy from certain cogenerators and qualifying facilities.

FPL estimates that capacity and minimum payments under these agreements will

exceed approximately \$400 million annually through 2015.

FPL's transmission and distribution facilities consist of over 580 substations and

include over 48,000 miles of overhead lines and approximately 25,000 miles of underground and submarine cables. As of December 31, 2011, FPL's investment in utility assets was approximately \$31.8 billion. FPL's retail electric operations are subject to the jurisdiction of the FPSC, with the interstate jurisdiction

regulated by FERC. Additionally, FPL's nuclear facilities are subject to licensing and oversight by the Nuclear Regulatory Commission. 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 \$6.2 billion. As of December 31, 2011, the accumulated provision for nuclear decommissioning totaled approximately \$2.8 billion.

7 Q. What credit ratings have been assigned to FPL?

FPL has been assigned a corporate credit rating of "A-" by S&P and an issuer rating of "A2" by Moody's. Fitch Ratings Ltd. ("Fitch") has assigned an issuer default rating of "A" to FPL.

A.

B. Risks and Financial Requirements

A.

Q. How have investors' risk perceptions for the utility industry evolved?

Implementation of structural change and related events caused investors to rethink their assessment of the relative risks associated with the utility industry. There has been steady erosion in credit quality throughout the utility industry for more than a decade, both as a result of revised perceptions of the risks in the industry and the weakened finances of the utilities themselves. In December 2009, S&P observed with respect to the industry's future that:

Looming costs associated with environmental compliance, slack demand caused by economic weakness, the potential for permanent demand destruction caused by changes in consumer behavior and

1		closing of manufacturing facilities, and numerous regulatory
2		filings seeking recovery of costs are some of the significant
3		challenges the industry has to deal with. ⁶
4		Similarly, Moody's noted:
5		[A] sustained period of sluggish economic growth, characterized
6		by high unemployment, could stress the sector's recovery
7		prospects, financial performance, and credit ratings. The quality of
8		the sector's cash flows are already showing signs of decline, partly
9		because of higher operating costs and investments. ⁷
10		
11		More recently, Moody's concluded, "we also see the sector's overall business and
12		operating risks increasing."8
13	Q.	Does FPL anticipate the need to access the capital markets going forward?
14	A.	Yes. FPL will require capital investment to meet customer growth, provide for
15		necessary maintenance and replacements, and fund new investment in the
16		facilities needed to generate, transmit and distribute electricity. As discussed in
17		greater detail by FPL witness Dewhurst, over the 2011-2013 period alone, FPL
18		plans to invest approximately \$9 billion to strengthen and improve Florida's
19		electric generation and delivery system.
20		
21		Continued support for FPL's financial integrity and flexibility will be
22		instrumental in attracting the long-term capital necessary to fund these projects in
23		an effective manner. In addition, FPL must meet short-term liquidity needs

arising from seasonal cash flows and ongoing construction programs. FPL's exposure to storm restoration activities and the substantial liquidity requirements necessary to support its fuel hedging program magnify the importance of maintaining financial flexibility, which is essential to guarantee access to the cash resources and interim financing required to cover operating cash flows and fund required investments in the utility system.

A.

Q. Is the potential for energy market volatility an ongoing concern for investors and does it affect FPL's financial requirements?

Yes on both counts. In recent years utilities and their customers have had to contend with dramatic fluctuations in fuel costs due to ongoing price volatility in the spot markets, and investors recognize the potential for further turmoil in energy markets. In times of extreme volatility, utilities can quickly find themselves in a significant under-recovery position with respect to power costs, which can severely stress liquidity. The power industry and its customers have had to contend with dramatic fluctuations in gas costs due to ongoing price volatility in the spot markets. Similarly, the Energy Information Administration ("EIA"), which is a statistical agency of the U.S. Department of Energy ("DOE"), reported that the weighted-average price paid for uranium oxide equivalent in 2008 was \$45.88 per pound, representing an increase of 40% compared to 2007 price levels and coming on the heels of a 76% price increase during the previous year.⁹

While current expectations for significantly lower power prices reflect weaker fundamentals affecting current load and fuel prices, investors recognize the potential that such trends could quickly reverse. For example, recurring political crises in the Middle East have led to sharp increases in petroleum prices. Moody's concluded that utilities remain exposed to fluctuations in energy prices, observing, "This view, that commodity prices remain low, could easily be proved incorrect, due to the evidence of historical volatility." Fitch recently observed that market conditions will likely result in higher natural gas prices, and noted the utility industry's potential exposure to future price shocks. 11

Q. Are volatile natural gas prices relevant to FPL's financial requirements?

A.

Yes. 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. The expansion of gas-fired generation has resulted in this fuel representing over 60% of FPL's fuel mix. Exposure to fluctuations in natural gas prices or supply interruption is a significant concern, with S&P noting that, "a large and growing reliance on natural gas to fuel utility generation could over time turn from an advantage (because of its environmental status) to a weakness if gas prices continue to fluctuate and trend up." FPL's significant exposure to natural gas detracts from the Company's credit quality and should be considered in evaluating a fair ROE. While FPL has stated that it continues to explore alternative fuel sources and technologies, the potential for a continuation of the extreme price volatility experienced in the market for natural gas means that FPL must be able to fund

- fuel under-recoveries and have the financial strength to effectively hedge price risks.
- Q. Do the Commission's adjustment mechanisms protect FPL from exposure to fluctuations in power supply costs?
- 5 A. To a limited extent, yes. The investment community views FPL's ability to 6 periodically adjust retail rates to accommodate fluctuations in fuel and purchased 7 power as an important source of support for FPL's financial integrity. 8 Nevertheless, they also recognize that there can be a lag between the time FPL 9 actually incurs the expenditure and when it is recovered from ratepayers. As a 10 result, FPL is not insulated from the need to finance deferred power production 11 and supply costs and support the substantial liquidity requirements related to its 12 fuel hedging program. Indeed, despite the significant investment of resources to 13 manage fuel procurement, investors are aware that the best FPL can do is to 14 recover its actual costs. In other words, FPL earns no return on fuel costs and is 15 exposed to substantial short-term financing responsibilities, regulatory lag, and 16 the potential for disallowances for imprudence in its fuel procurement.
- Q. What other financial pressures impact investors' risk assessment of FPL and
 its financial requirements?
- 19 A. Investors are aware of the financial and regulatory pressures faced by utilities
 20 associated with rising costs and the need to undertake significant capital
 21 investments. S&P noted that cost increases and capital projects, along with
 22 uncertain load growth, were a significant challenge to the utility industry. As
 23 Moody's observed:

1		[W]e also see the sector's overall business risk and operating risks
2		increasing, owing primarily to rising costs associated with
3		upgrading and expanding the nation's trillion dollar electric
4		infrastructure. ¹⁴
5		
6		As noted earlier, investors anticipate that FPL will undertake significant electric
7		utility capital expenditures. While providing the infrastructure necessary to meet
8		the electricity needs of customers is certainly desirable, it imposes additional
9		financial responsibilities on the Company.
0	Q.	Are environmental considerations also affecting investors' evaluation of
1		electric utilities, including FPL?
12	A.	Yes. Although FPL's exposure is moderated through the Company's reliance on
13		natural gas and nuclear generation, and the environmental compliance cost

on natural gas and nuclear generation, and the environmental compliance cost recovery clause established by the FPSC, utilities are confronting increased environmental pressures that impose significant uncertainties and costs. Moody's noted that, "the prospect for new environmental emission legislation – particularly concerning carbon dioxide - represents the biggest emerging issue for electric utilities."15 While the momentum for carbon emissions legislation has slowed, expectations for eventual regulations continue to pose uncertainty.

14

15

16

17

18

19

of

- 20 Q. Please discuss the impact that FPL's nuclear operations have on its financial requirements? 21
- 22 Approximately 20% of FPL's total energy requirements are provided by its four A. 23 nuclear units located at the St. Lucie and Turkey Point generating stations.

1	Moreover, in light of political opposition to the construction of new coal-fired
2	generation in Florida, expanding FPL's nuclear generating capacity will likely be
3	required in order to diversify fuel mix while meeting customer load.
4	
5	As discussed in the testimony of FPL's witnesses, consumers have realized
6	considerable savings in energy costs as a result of FPL's effective management of
7	its nuclear generating facilities. While customers benefit from the advantages of
8	fuel cost savings and diversity that nuclear power confers, investors also associate
9	nuclear facilities with risks that are not encountered with other sources of
10	generation. S&P has long recognized the additional risks posed by nuclear
11	facilities, as reflected in a 1994 article:
12	Operating and maintaining [nuclear plants] is more complex
13	compared with fossil plants because of safety considerations and
14	the additional safety equipment and operational controls required. ¹⁶
15	
16	More recently, Moody's confirmed that "ownership of nuclear generating
17	facilities brings a higher level of complexity associated with operating and
18	maintaining the units."17
19	
20	These concerns have been exacerbated by the events at the Fukushima Daiichi
21	nuclear complex in Japan, as S&P recently noted:
22	Standard & Poor's Ratings Service believes that the failure of the
23	back-up safety systems will heighten scrutiny of the systematic

risks for U.S. nuclear power generators. We aren't taking any rating actions at this time. Still, the failures and their consequences raise the likelihood of greater costs and enhanced regulatory oversight for existing U.S. facilities. A renewed public focus on the inherent risks of nuclear power will demand as much. This could result in delays in license-extension approvals and deteriorating economics for new plant construction. At the same time, closure of nuclear power plants, either due to increased costs or regulatory action, might significantly affect U.S. electricity supply and have substantial capital spending implications for utilities.¹⁸

As Moody's noted, "[O]ne of the biggest risks associated with nuclear generation is an unanticipated extended outage," concluding that "an extended outage can significantly stress an owner's liquidity and over-all financial profile." In addition, longer-term uncertainties regarding the disposal of spent fuel and the ultimate costs of decommissioning continue to accompany any investment in nuclear generating facilities. In order to mitigate these potential exposures, Moody's cited the importance of a constructive regulatory relationship and "a need to establish financial policies over the near-term aimed at producing very strong financial credit ratios in order to maintain a given rating." 20

Ο	What other ope	rational factors	increase FPL's	need for finan	icial strength?
v.	What other obe	rational factors	increase FFL s	need for imag	iciai su engui:

A.

- A. Because of the geographical location of FPL's service territory, the potential exposures associated with a prolonged outage at key generating facilities or disruptions in fuel supply are heightened. As Fitch noted:
- Given the location of the company's service territory at the extreme southern end of the Florida peninsula, there are limits on the ability to import power.²¹

Apart from its relative isolation, FPL's service territory has extreme exposure to the catastrophic damage of tropical storms. While the investment community recognizes that the FPSC has been generally supportive in permitting recovery of the costs of storm damage, FPL nonetheless must maintain the financial strength and liquidity necessary to effect a rapid and far-reaching response in the likely event of a future hurricane strike.

14 Q. How does the nature of the economy in FPL's service territory impact its 15 relative risks and financial requirements?

Past experience indicates that the economy in FPL's service territory can be highly vulnerable, especially to conditions that cause a decline in tourism. And while the Florida economy has achieved a degree of diversification that was not present during the tourism-led slump of 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 that an economic downturn poses for FPL's investors and customers. More recently, the economy of FPL's service territory has been the epicenter for the

monumental collapse in real estate values that precipitated a global financial crisis. As Fitch recently noted, "FPL's south Florida service territory still has above average unemployment and a weak housing market," S&P recently recognized, "Maintaining financial strength despite regulatory setbacks and a moribund economy has been challenging." While the long-term outlook for Florida's economy may remain positive, investors nonetheless recognize the exposure introduced by current uncertainties.

C. Impact of Capital Market Conditions

A.

Q. What are the implications of recent capital market conditions?

As The Value Line Investment Survey ("Value Line") recently recognized, "It has been a turbulent year for the financial markets, to say the least." Investors have faced a myriad of challenges and uncertainties, including the threat of a U.S. government default, political brinkmanship over raising the federal debt ceiling, and S&P's subsequent downgrade of its U.S. sovereign debt rating. The sovereign debt crisis in Europe has also dealt a harsh blow to investor confidence, and concerns over potential exposure to a Euro-zone default has again undermined confidence in the financial and banking sector. Meanwhile, speculation that the economy remains exposed to a potential "double-dip" recession persists, with unemployment remaining stubbornly high, rising petroleum prices, lackluster consumer confidence, and continued weakness plaguing the real estate sector.

Investors have had to confront ongoing fluctuations in share prices and stress in the credit markets.²⁵ In response, investors have repeatedly fled to the safety of U.S. Treasury bonds, and stock prices have experienced renewed volatility. As the *Wall Street Journal* noted in August 2011:

Stocks spiraled downward Thursday as investors buckled under the strain of the global economic slowdown and the failure of policy makers to stabilize financial markets.... The nervousness among investors is being reflected in an extraordinary rally in U.S. Treasury bonds, regarded as a safe haven for investors in time of turmoil.... The Dow's decline was its biggest point drop since the market was plunging amid a crisis of confidence in banks in late 2008. On Thursday, the focus shifted to world governments, which are laboring under mountains of debt and have diminished ability to prop up the financial system.²⁶

The dramatic rise in the price of gold and other commodities also attests to investors' heightened concerns over prospective challenges and risks, including the overhanging threat of inflation, a double-dip recession, and renewed economic turmoil. With respect to utilities, Moody's noted the dangers to credit availability associated with exposure to European banks, ²⁷ and concluded:

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

1		turmoil. Access to the capital markets could therefore become
2		intermittent, even for safer, more defensive sectors like the power
3		industry. ²⁸
4		
5		Uncertainties surrounding economic and capital market conditions heighten the
6		risks faced by utilities, which, as described earlier, face a variety of operating and
7		financial challenges.
8	Q.	How do interest rates on long-term bonds compare with those projected for
9		the next few years?
10	A.	Exhibit WEA-2 compares current interest rates on 30-year Treasury bonds, triple-
11		A rated corporate bonds, and double-A rated utility bonds with near-term
12		projections from Value Line, IHS Global Insight, Blue Chip Financial Forecasts
13		("Blue Chip"), S&P, and the EIA.
14		As shown on Exhibit WEA-2, there is a clear consensus that the cost of
15		permanent capital will be higher in the 2012-2016 timeframe than it is currently.
16		As a result, current cost of capital estimates are conservative, because they are
17		likely to understate investors' requirements at the time the rates set in this
18		proceeding become effective.
19	Q.	What do these events imply with respect to the ROE for FPL?
20	A.	No one knows the future of our complex global economy. We know that the
21		financial crisis had been building for a long time, and few predicted that the
22		economy would fall as rapidly as it did, or that corporate bond yields would

	fluctuate as dramatically as they have. While conditions in the economy and
	capital markets appear to have stabilized significantly since 2009, investors
	continue to react swiftly and negatively to any signs of future trouble in the
	financial system or economy. Given the importance of reliable utility service, it
	would be unwise to ignore investors' increased sensitivity to risk and future
	capital market trends in evaluating a fair ROE in this case.
Q	Does the prospect for continued turmoil in capital markets also influence the
	appropriate capital structure for FPL?
A	Yes. Financial flexibility plays a crucial role in ensuring the wherewithal to meet
	funding needs, and utilities with higher financial leverage may be foreclosed from
	additional borrowing, especially during times of stress. Fitch recently highlighted
	this exposure:
	Capital Markets Freeze: Significant tightening or loss of capital
	markets and bank access would have a deleterious affect on sector
	creditworthiness in the face of high capex budgets. ²⁹
	As a result, the Company's capital structure must maintain an equity "cushion"
	that preserves the flexibility necessary to maintain continuous access to capital
	even during times of unfavorable market conditions.

III. CAPITAL MARKET ESTIMATES

$\overline{}$	
1	
~	

A.

Q. What is the purpose of this section?

In this section, I develop capital market estimates of the cost of equity. First, I address the concept of the cost of equity, along with the risk-return tradeoff principle fundamental to capital markets. Next, I describe DCF, CAPM, and risk premium analyses conducted to estimate the cost of equity for benchmark groups of comparable risk firms and evaluate expected earned rates of return for utilities. Finally, I examine the issue of flotation costs, which are properly considered in evaluating a fair ROE.

A. Economic Standards

A.

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

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. Investors 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.

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

A. The fundamental economic principle underlying the cost of equity concept is the notion that investors are risk averse. In capital markets where relatively risk-free assets are available (e.g., U.S. Treasury securities), investors can be induced to hold riskier assets only if they are offered a premium, or additional return, above the rate of return on a risk-free asset. Because all assets compete with each other for investor funds, riskier assets must yield a higher expected rate of return than

9

10

11

13

16

17

19

20

21

22

23

24

A.

8

1

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

 $k_{i} = R_{f} + RP_{i}$

where: $R_f = \text{Risk-free rate of return, and}$

 RP_i = Risk premium required to hold riskier asset i.

safer assets to induce investors to invest and hold them.

15 Thus, the required rate of return for a particular asset at any time is a function of:

(1) the yield on risk-free assets, and (2) the asset's relative risk, with investors demanding correspondingly larger risk premiums for bearing greater risk.

18 Q. Is the cost of equity observable in the capital markets?

No. Unlike debt capital, there is no contractually guaranteed return on common equity capital since shareholders are the residual owners of the utility. Because it is not readily observable, 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.

B. Comparable Risk Proxy Groups

A.

6 Q. How did you implement these quantitative methods to estimate the cost of common equity for FPL?

A. Application of the DCF model and other quantitative methods to estimate the cost of equity requires observable capital market data, such as stock prices. However, even for a firm with publicly traded stock, the cost of equity can only be estimated. As a result, applying quantitative models using observable market data only produces an estimate that inherently includes some degree of observation error. Thus, the accepted approach to increase confidence in the results is to apply the DCF model and other quantitative methods to a proxy group of publicly traded companies that investors regard as risk-comparable.

16 Q. What specific proxy group of utilities did you rely on for your analysis?

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 utilities composed of those companies classified by Value Line as electric utilities with:

(1) an S&P corporate credit rating of "BBB+" to "A", (2) a Value Line Safety Rank of "1" or "2", (3) a Value Line Financial Strength Rating of "B++" or better, and (4) a market capitalization of approximately \$1.8 billion or greater. In addition, I eliminated two utilities that otherwise would have been in the proxy

group, but are not appropriate for inclusion because they are currently involved in a major merger or acquisition. These criteria resulted in a proxy group composed of fourteen companies, which I will refer to as the "Utility Proxy Group."

4 Q. What other proxy group did you consider in evaluating a fair ROE for FPL?

A.

Α.

Under the regulatory standards established by *Hope* and *Bluefield*, the salient criterion in establishing a meaningful benchmark to evaluate a fair ROE is relative risk, not the particular business activity or degree of regulation. With regulation taking the place of competitive market forces, required returns for utilities should be in line with those of non-utility firms of comparable risk operating under the constraints of free competition. Consistent with this accepted regulatory standard, I also applied the DCF model to a reference group of low-risk companies in the non-utility sectors of the economy. I refer to this group as the "Non-Utility Proxy Group."

Q. Do utilities have to compete with non-regulated firms for capital?

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

1	Q.	Is it consistent with the <i>Bluefield</i> and <i>Hope</i> cases to consider required returns
2		for non-utility companies?
3	A.	Yes. Returns in the competitive sector of the economy form the very
4		underpinning for utility ROEs because regulation purports to serve as a substitute
5		for the actions of competitive markets. The Supreme Court has recognized that it
6		is the degree of risk, not the nature of the business, which is relevant in evaluating
7		an allowed ROE for a utility. The Bluefield case refers to, "business undertakings
8		attended with comparable risks and uncertainties."30 It does not restrict
9		consideration to other utilities. Similarly, the <i>Hope</i> case states:
10		By that standard the return to the equity owner should be
11		commensurate with returns on investments in other enterprises
12		having corresponding risks. ³¹
13		
14		As in the <i>Bluefield</i> decision, there is nothing to restrict "other enterprises" solely
15		to the utility industry.
16		
17		Indeed, in teaching regulatory policy I usually observe that in the early
18		applications of the comparable earnings approach, utilities were explicitly
19		eliminated due to a concern about circularity. In other words, soon after the Hope
20		decision, regulatory commissions did not want to get involved in circular logic by
21		looking to the returns of utilities that were established by the same or similar
22		regulatory commissions in the same geographic region. To avoid circularity
23		regulators looked only to the returns of non-utility companies.

1	Q.	Does consideration of the results for the Non-Utility Proxy Group make the
2		estimation of the cost of equity using the DCF model more reliable?
3	A.	Yes. The estimates of growth from the DCF model depend on analysts' forecasts.
4		It is possible for utility growth rates to be distorted by short-term trends in the
5		industry or the industry being in temporary favor or disfavor by analysts. The
6		result of such distortions would be to bias the DCF estimates for electric utilities.
7		
8		Because the Non-Utility Proxy Group includes low risk companies from many
9		industries, it diversifies away any distortion that may be caused by the ebb and
10		flow of enthusiasm for a particular sector.
11	Q.	What criteria did you apply to develop the Non-Utility Proxy Group?
12	A.	My comparable risk proxy group of non-utility firms was composed of those U.S.
13		companies followed by Value Line that: (1) pay common dividends, (2) have a
14		Safety Rank of "1", (3) have a Financial Strength Rating of "B++" or greater; (4)
15		have a beta of 0.60 or less, and, (5) have investment grade credit ratings from
16		S&P.
17	Q.	Do these criteria provide objective evidence to evaluate investors' risk
18		perceptions?
19	A.	Yes. Credit ratings are assigned by independent rating agencies for the purpose of
20		providing investors with a broad assessment of the creditworthiness of a firm.
21		Ratings generally extend from triple-A (the highest) to D (in default). Other
22		symbols (e.g., "A+") are used to show relative standing within a category.
23		Because the rating agencies' evaluation includes virtually all of the factors

normally considered important in assessing a firm's relative credit standing, corporate credit ratings provide a broad, objective measure of overall investment risk that is readily available to investors. Although the credit rating agencies are not immune to criticism, their rankings and analyses are widely cited in the investment community and referenced by investors. Investment restrictions tied to credit ratings continue to influence capital flows, and credit ratings are also frequently used as a primary risk indicator in establishing proxy groups to estimate the cost of common equity.

While credit ratings provide the most widely referenced benchmark for investment risks, other quality rankings published by investment advisory services also provide relative assessments of risks that are considered by investors in forming their expectations for common stocks. Value Line's primary risk indicator is its Safety Rank, which ranges from "1" (Safest) to "5" (Riskiest). This overall risk measure is intended to capture the total risk of a stock, and incorporates elements of stock price stability and financial strength. Given that Value Line is perhaps the most widely available source of investment advisory information, its Safety Rank provides useful guidance regarding the risk perceptions of investors.

The Financial Strength Rating is designed as a guide to overall financial strength and creditworthiness, with the key inputs including financial leverage, business volatility measures, and company size. Value Line's Financial Strength Ratings

1 range from "A++" (strongest) down to "C" (weakest) in nine steps. Finally, Value 2 Line's beta measures the volatility of a security's price relative to the market as a 3 whole. A stock that tends to respond less to market movements has a beta less 4 than 1.00, while stocks that tend to move more than the market have betas greater than 1.00. 5 6 Q. How do the overall risks of your proxy groups compare with FPL? 7 Exhibit WEA-3 compares the Non-Utility Proxy Group with the Utility Proxy A. 8 Group and FPL across four key indicators of investment risk. Because FPL has 9 no publicly traded common stock, the Value Line risk measures shown reflect 10 those published for its parent, NextEra Energy. 11 Q. Does this comparison indicate that investors would view the firms in your 12 proxy groups as risk-comparable to FPL? 13 Yes. As shown in Exhibit WEA-3, the average corporate credit rating for the A. 14 Utility Proxy Group is "BBB+", with ratings for the individual firms ranging from "BBB+" to "A", while the Non-Utility Proxy Group's average credit rating is 15 16 slightly higher at "A". These average ratings for the Utility and Non-Utility 17 Proxy Groups bracket FPL's "A-"corporate credit rating. 18 19 Meanwhile, the average Value Line Safety Rank and Financial Strength Rating 20 for the Utility Proxy Group are identical to the values corresponding to FPL, 21 while the average beta value of 0.70 indicates less risk than for FPL. With respect

to the Non-Utility Proxy Group, its average Safety Rank, Financial Strength

Rating and beta all indicate less risk than the values corresponding to FPL.

22

23

Considered together, a comparison of these objective measures, which consider of a broad spectrum of risks, including financial and business position, relative size, and exposure to company specific factors, indicates that investors would likely conclude that the overall investment risks for FPL are comparable to those of the firms in the Utility and Non-Utility Proxy Groups.

While the impact of differences in regulation is reflected in objective risk measures, my analyses conservatively focus on a lower-risk group of non-utility firms. The 13 companies that make up the Non-Utility Proxy Group are representative of the pinnacle of corporate America. These firms, which include household names such as Coca-Cola, Colgate-Palmolive, Proctor & Gamble, and Wal-Mart, have long corporate histories, well-established track records, and exceedingly conservative risk profiles. The companies in my Non-Utility Proxy Group have a stable track record of dividend payments, with the average dividend yield for the group approaching 3%. Moreover, because of their significance and name recognition, these companies receive intense scrutiny by the investment community, which increases confidence that published growth estimates are representative of the consensus expectations reflected in common stock prices.

C. Discounted Cash Flow Analyses

Q. How is the DCF model used to estimate the cost of equity?

- A. DCF models 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 expectations, 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 implicitly used in bidding the stock to that price.
- Q. What form of the DCF model is customarily used to estimate the cost of equity in rate cases?
- 18 A. Rather than developing annual estimates of cash flows into perpetuity, the DCF

 19 model can be simplified to a "constant growth" form:³²

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

where: P_0 = Current price per share;

 D_1 = Expected dividend per share in the coming year;

 $k_e = \text{Cost of equity}; \text{ and}$

g = Investors' long-term growth expectations.

The cost of equity (k_e) can be isolated by rearranging terms within the equation:

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

8 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.

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

6

18

19

14 A. The first step in implementing the constant growth DCF model is to determine the

expected dividend yield (D₁/P₀) 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. The final step

is to sum the firm's dividend yield and estimated growth rate to arrive at an

20 estimate of its cost of equity.

- 21 Q. How was the dividend yield for the Utility Proxy Group determined?
- 22 A. Estimates of dividends to be paid by each of these utilities over the next 12

months, obtained from Value Line, served as D₁. This annual dividend was then divided by the average stock price for the 30 days ended November 28, 2011 to arrive at the expected dividend yield for each utility. The stock prices, expected dividends, and resulting dividend yields for the firms in the Utility Proxy Group are presented on page 1 of Exhibit WEA-4. As shown there, dividend yields for the firms in the Utility Proxy Group ranged from 2.0% to 5.3%, and averaged 4.1%.

A.

A.

8 Q. Do the dividend yields incorporated in your DCF analyses reflect the quarterly timing of dividend payments?

No. The traditional annual form of the constant growth DCF model applied in my testimony is based on the assumption that dividends are received as a lump sum payment at the end of the year, when in fact most utilities pay dividends on a quarterly basis. Because of the time value of money, a stock that pays quarterly dividends will command a higher price than a stock that pays the same amount as a lump sum at year-end. As a result, the annual model that is most frequently relied on in regulatory proceedings understates investors' required rate of return because it ignores the quarterly timing of dividend cash flows.

18 Q. What is the next step in applying the constant growth DCF model?

The next step is to evaluate long-term growth expectations, or "g", for the firm in question. 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

1	arrive at observable stock prices. A wide variety of techniques can be used to
2	derive growth rates, but the only "g" that matters in applying the DCF model is
3	the value that investors expect

- 4 Q. Are historical growth rates likely to be representative of investors'
 5 expectations for utilities?
- 6 No. If past trends in earnings, dividends, and book value are to be representative A. 7 of investors' expectations for the future, then the historical conditions giving rise to these growth rates should be expected to continue. That is clearly not the case 8 9 for utilities, where structural and industry changes have led to declining growth in 10 dividends, earnings pressure, and, in many cases, significant write-offs. While these conditions serve to distort historical growth measures, they are not 11 representative of long-term expectations for the utility industry or the forward-12 13 looking expectations that investors have incorporated into current market prices. As a result, historical growth measures for utilities do not currently meet the 14 requirements of the DCF model. 15
- Q. Do the growth rate projections of security analysts nonetheless considerhistorical trends?
- 18 A. Yes. Professional security analysts study historical trends extensively in
 19 developing their projections of future earnings. Hence, to the extent there is any
 20 useful information in historical patterns, that information is incorporated into
 21 analysts' growth forecasts.

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

While the DCF model is technically concerned with growth in dividend cash flows, implementation of this DCF model is solely concerned with replicating the forward-looking evaluation of real-world investors. In the case of utilities, dividend growth rates are not likely to provide a meaningful guide to investors' current growth expectations. This is because utilities have significantly altered their dividend policies in response to more accentuated business risks in the industry.³³ As a result of this trend towards a more conservative payout ratio, dividend growth in the utility industry has remained largely stagnant as utilities conserve financial resources to provide a hedge against heightened uncertainties.

A.

As payout ratios for firms in the utility industry trended downward, investors' focus has increasingly shifted from dividends to earnings as a measure of long-term growth. Future trends in earnings per share ("EPS"), which provide the source for future dividends and ultimately support share prices, play a pivotal role in determining investors' long-term growth expectations. The importance of earnings in evaluating investors' expectations and requirements is well accepted in the investment community, and surveys of analytical techniques relied on by professional analysts indicate that growth in earnings is far more influential that trends in dividends per share ("DPS"). Apart from Value Line, investment advisory services do not generally publish comprehensive DPS growth projections, and this scarcity of dividend growth rates relative to the abundance of

1		earnings forecasts attests to their relative influence. The fact that securities
2		analysts focus on EPS growth, and that dividend growth rates are not routinely
3		published, indicates that projected EPS growth rates are likely to provide a
4		superior indicator of the future long-term growth expected by investors.
5	Q.	What are security analysts currently projecting in the way of growth for the
6		firms in the utility proxy group?
7	A.	The projected EPS growth rates for each of the firms in the Utility Proxy Group
8		reported by Value Line, Thomson Reuters ("IBES"), and Zacks Investment
9		Research ("Zacks") are displayed on page 2 of Exhibit WEA-4. ³⁴
10	Q.	Some argue that analysts' growth rates are biased. Do you believe these
11		projections are inappropriate for estimating investors' required return using
12		the DCF model?
13	A.	No. In applying the DCF model to estimate the cost of common equity, the only
14		relevant growth rate is the forward-looking expectations of investors that are
15		captured in current stock prices. Investors, just like securities analysts and others
16		in the investment community, do not know how the future will actually turn out.
17		They can only make investment decisions based on their best estimate of what the
18		future holds in the way of long-term growth for a particular stock, and securities
19		prices are constantly adjusting to reflect their assessment of available information.
20		
21		Any claims that analysts' estimates are not relied upon by investors are unfounded
22		given the reality of a competitive market for investment advice. The market for
23		investment advice is intensely competitive, and securities analysts are personally

and professionally motivated to provide the most accurate assessment possible of future growth trends. If financial analysts' forecasts do not add value to investors' decision making, then it is irrational for investors to pay for these estimates. Those financial analysts who fail to provide reliable forecasts will lose out in competitive markets relative to those analysts whose forecasts investors find more credible. The reality that analyst estimates are routinely referenced in the financial media and in investment advisory publications (*e.g.*, Value Line) strongly suggests that investors use them as a basis for their expectations.

The continued success of investment services such as Thomson Reuters and Value Line, and the fact that projected growth rates from such sources are widely referenced, provides strong evidence that investors give considerable weight to analysts' earnings projections in forming their expectations for future growth. While the projections of securities analysts may be proven optimistic or pessimistic in hindsight, this is irrelevant in assessing the expected growth that investors have incorporated into current stock prices, and any bias in analysts' forecasts – whether pessimistic or optimistic – is similarly irrelevant if investors share the analysts' views. Earnings growth projections of security analysts provide the most frequently referenced guide to investors' views and are widely accepted in applying the DCF model. As explained in *New Regulatory Finance*:

Because of the dominance of institutional investors and their influence on individual investors, analysts' forecasts of long-run growth rates provide a sound basis for estimating required returns.

Financial analysts exert a strong influence on the expectations of many investors who do not possess the resources to make their own forecasts, that is, they are a cause of g [growth]. The accuracy of these forecasts in the sense of whether they turn out to be correct is not an issue here, as long as they reflect widely held expectations.³⁵

How else are investors' expectations of future long-term growth prospects often estimated when applying the constant growth DCF model?

In constant growth theory, growth in book equity will be equal to the product of the earnings retention ratio (one minus the dividend payout ratio) and the earned rate of return on book equity. Furthermore, if the earned rate of return and the payout ratio are constant over time, growth in earnings and dividends will be equal to growth in book value. Despite the fact that these conditions are seldom, if ever, met in practice, this "sustainable growth" approach may provide a rough guide for evaluating a firm's growth prospects and is frequently proposed in regulatory proceedings.

Q.

A.

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

1 accretion rate.

A.

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. This increase to the book value of existing
shareholders 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 Utility Proxy Group?

The sustainable, "br+sv" growth rates for each firm in the Utility Proxy Group are summarized on page 2 of Exhibit WEA-4, with the underlying details being presented on Exhibit 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 net book value. Because Value Line reports end-of-year book values, an adjustment was incorporated to compute an average rate of return over the year, consistent with the theory underlying this approach to estimating investors' growth expectations. Meanwhile, the 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
- 2 the inverse of the projected market-to-book ratio.
- 3 Q. What cost of equity estimates were implied for the Utility Proxy Group using
- 4 the DCF model?
- 5 A. After combining the dividend yields and respective growth projections for each
- 6 utility, the resulting cost of equity estimates are shown on page 3 of Exhibit
- 7 WEA-4.
- 8 Q. In evaluating the results of the constant growth DCF model, is it appropriate
- 9 to eliminate estimates that are extreme low or high outliers?
- 10 A. Yes. In applying quantitative methods to estimate the cost of equity, it is essential
- that the resulting values pass fundamental tests of reasonableness and economic
- logic. Accordingly, DCF estimates that are implausibly low or high should be
- eliminated when evaluating the results of this method.
- 14 Q. How did you evaluate DCF estimates at the low end of the range?
- 15 A. It is a basic economic principle that investors can be induced to hold more risky
- assets only if they expect to earn a return to compensate them for their risk
- bearing. As a result, the rate of return that investors require from a utility's
- common stock, the most junior and riskiest of its securities, must be considerably
- higher than the yield offered by senior, long-term debt. Consistent with this
- principle, the DCF results must be adjusted to eliminate estimates that are
- determined to be extreme low outliers when compared against the yields available
- 22 to investors from less risky utility bonds.

1 Q. What does this test of logic imply with respect to the DCF results for the

2 **Utility Proxy Group?**

12

13

14

15

16

17

18

19

20

21

22

Α.

3 As noted earlier, S&P corporate credit ratings for the firms in the Utility Proxy A. Group ranged from "BBB+" to "A", with Moody's monthly yields on triple-B and 4 single-A bonds averaging approximately 5.1% and 4.3%, respectively, in 5 December 2011.³⁶ It is inconceivable that investors are not requiring a 6 substantially higher rate of return for holding common stock. Consistent with this 7 principle, the DCF results for the Utility Proxy Group must be adjusted to 8 9 eliminate estimates that are determined to be extreme low outliers when compared 10 against the yields available to investors from less risky utility bonds.

11 Q. Have similar tests been applied by regulators?

Yes. FERC has noted that adjustments are justified where applications of the DCF approach produce illogical results. FERC evaluates DCF results against observable yields on long-term public utility debt and has recognized that it is appropriate to eliminate estimates that do not sufficiently exceed this threshold. In a 2002 opinion establishing its current precedent for determining ROEs for electric utilities, for example, FERC noted:

An adjustment to this data is appropriate in the case of PG&E's low-end return of 8.42 percent, which is comparable to the average Moody's "A" grade public utility bond yield of 8.06 percent, for October 1999. Because investors cannot be expected to purchase stock if debt, which has less risk than stock, yields essentially the

1		same return, this low-end return cannot be considered reliable in
2		this case. ³⁷
3		
4		Similarly, in its August 2006 decision in Kern River Gas Transmission Company,
5		FERC noted that:
6		[T]he 7.31 and 7.32 percent costs of equity for El Paso and
7		Williams found by the ALJ are only 110 and 122 basis points
8		above that average yield for public utility debt. 38
9		
10		The Commission upheld the opinion of Staff and the Administrative Law Judge
11		that cost of equity estimates for these two proxy group companies "were too low
12		to be credible." ³⁹
13		
14		The practice of eliminating low-end outliers has been affirmed in numerous
15		FERC proceedings, ⁴⁰ and in its April 15, 2010 decision in SoCal Edison, FERC
16		affirmed that, "it is reasonable to exclude any company whose low-end ROE fails
17		to exceed the average bond yield by about 100 basis points or more.",41
18	Q.	What else should be considered in evaluating DCF estimates at the low end of
19		the range?
20	A.	As indicated earlier, while corporate bond yields have declined substantially as
21		the worst of the financial crisis has abated, it is generally expected that long-term
22		interest rates will rise as the recession ends and the economy returns to a more
23		normal pattern of growth. As shown in Exhibit WEA-6, forecasts of IHS Global

Insight and the EIA imply average triple-B and single-A bond yields of approximately 6.6% and 6.0%, respectively, over the period 2012-2016.

3

4

5

6

7

- The increase in debt yields anticipated by IHS Global Insight and EIA is also supported by the widely-referenced Blue Chip Financial Forecasts, which projects that yields on corporate bonds will climb more than 100 basis points through the period 2013-2017.⁴²
- Q. What does this test of logic imply with respect to the DCF estimates for the
 Utility Proxy Group?
- 9 **Utility Proxy Group?**10 A. As highlighted on page 3 of Exhibit WEA-3, the low end of the range of results
- 11 was set by a 5.9% cost of equity estimate for Pacific Gas and Electric Company 12 ("PG&E") Corporation. In light of the risk-return tradeoff principle and the test 13 applied in SoCal Edison, it is inconceivable that investors are not requiring a 14 substantially higher rate of return for holding common stock, which is the riskiest 15 of a utility's securities. As a result, consistent with the test of economic logic 16 applied by FERC and the upward trend expected for utility bond yields, this value 17 provides little guidance as to the returns investors require from utility common 18 stocks and should be excluded.
- 19 Q. Do you also recommend excluding estimates at the high end of the range of 20 DCF results?
- 21 A. Yes. The upper end of the cost of common equity range was set by cost of equity 22 estimates of 20.7% and 18.5%. When compared with the balance of the 23 remaining estimates, these values are clearly implausible and should be excluded

1		in evaluating the results of the DCF model for the Utility Proxy Group. This is
2		also consistent with the precedent adopted by FERC, which has established that
3		estimates found to be "extreme outliers" should be disregarded in interpreting the
4		results of the DCF model. ⁴³
5	Q.	What cost of common equity estimates are implied by your DCF results for
6		the Utility Proxy Group?
7	A.	As shown on page 3 of Exhibit WEA-4, after eliminating illogical low-end values,
8		application of the constant growth DCF model resulted in an average cost of
9		common equity estimates ranging from 9.6% to 10.3%.
10	Q.	What were the results of your DCF analysis for the Non-Utility Proxy
11		Group?
12	A.	I applied the DCF model to the Non-Utility Proxy Group in exactly the same
13		manner described earlier for the Utility Proxy Group. The results of my DCF
14		analysis for the Non-Utility Proxy Group are presented in Exhibit WEA-7, with
15		the sustainable, "br+sv" growth rates being developed on Exhibit WEA-8. As
16		shown on Exhibit WEA-7, after eliminating illogical low- and high-end values,
17		application of the constant growth DCF model resulted in cost of common equity
18		estimates ranging from 11.5% to 12.3%.
19	Q.	How can these DCF results for the Non-Utility Proxy Group be reconciled
20		against the significantly lower estimates produced for your comparable-risk
21		group of utilities?
22	A.	First, it is important to be clear that the higher DCF results for the Non-Utility
23		Proxy Group cannot be attributed to risk differences. As I documented earlier, the

risks that investors associate with the group of non-utility firms - as measured by S&P's credit ratings and Value Line's Safety Rank, Financial Strength, and Beta - are lower than the risks investors associate with the Utility Proxy Group and FPL. The objective evidence provided by these observable risk measures rules out a conclusion that the higher non-utility DCF estimates are associated with higher investment risk.

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

D. Capital Asset Pricing Model

2

3

1

Q. Please describe the CAPM.

A. The CAPM is a theory of market equilibrium that measures risk using the beta coefficient. Because investors are assumed to be fully diversified, the relevant risk of an individual asset (e.g., common stock) is its volatility relative to the market as a whole, with beta reflecting the tendency of a stock's price to follow changes in the market. The CAPM is mathematically expressed as:

 $R_i = R_f + \beta_i (R_m - R_f)$

where: R_j = required rate of return for stock j;

 $R_f = risk-free rate;$

 $R_{\rm m}$ = expected return on the market portfolio; and

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

14 Q. How did you apply the CAPM to estimate the cost of equity?

Application of the CAPM to the Utility Proxy Group based on a forward-looking estimate for investors' required rate of return from common stocks is presented on Exhibit WEA-9. In order to capture the expectations of today's investors in current capital markets, the expected market rate of return was estimated by conducting a DCF analysis on the dividend paying firms in the S&P 500. This is directly analogous to the CAPM approach previously utilized by the FPSC Staff.⁴⁴

21

22

23

15

16

17

18

19

20

A.

The dividend yield for each firm was obtained from Value Line, and the growth rate was equal to the consensus earnings growth projections for each firm

published by IBES, with each firm's dividend yield and growth rate being weighted by its proportionate share of total market value. Based on the weighted average of the projections for the 373 individual firms, current estimates imply an average growth rate over the next five years of 10.9%. Combining this average growth rate with a year-ahead dividend yield of 2.6% results in a current cost of common equity estimate for the market as a whole (R_m) of approximately 13.5%. Subtracting a 3.0% risk-free rate based on the average yield on 30-year Treasury bonds produced a market equity risk premium of 10.5%.

9 Q. What was the source of the beta values you used to apply the CAPM?

I relied on the beta values reported by Value Line, which in my experience is the most widely referenced source for beta in regulatory proceedings. As noted in *New Regulatory Finance*:

Value Line is the largest and most widely circulated independent investment advisory service, and influences the expectations of a large number of institutional and individual investors.... Value Line betas are computed on a theoretically sound basis using a broadly based market index, and they are adjusted for the regression tendency of betas to converge to 1.00.⁴⁵

Q What else should be considered in applying the CAPM?

20 A. As explained by *Morningstar*:

A.

One of the most remarkable discoveries of modern finance is that of a relationship between firm size and return. The relationship cuts across the entire size spectrum but is most evident among

1		smaller companies, which have higher returns on average than
2		larger ones. ⁴⁶
3		
4		Because empirical research indicates that the CAPM does not fully account for
5		observed differences in rates of return attributable to firm size, a modification is
6		required to account for this size effect.
7		
8		According to the CAPM, the expected return on a security should consist of the
9		riskless rate, plus a premium to compensate for the systematic risk of the
10		particular security. The degree of systematic risk is represented by the beta
11		coefficient. The need for the size adjustment arises because differences in
12		investors' required rates of return that are related to firm size are not fully
13		captured by beta. To account for this, Morningstar has developed size premiums
14		that need to be added to the theoretical CAPM cost of equity estimates to account
15		for the level of a firm's market capitalization in determining the CAPM cost of
16		equity. ⁴⁷ Accordingly, my CAPM analyses incorporated an adjustment to
17		recognize the impact of size distinctions, as measured by market capitalization.
18	Q.	What cost of equity is indicated based on this forward-looking application of
19		the CAPM?
20	Α.	The average market capitalization of the Utility Proxy Group is \$12.9 billion.

Based on data from Morningstar, this means that the theoretical CAPM cost of

equity estimate must be increased by 81 basis points to account for the industry

group's relative size. As shown on page 1 of Exhibit WEA-9, adjusting the 10.4%

21

22

23

- theoretical CAPM result to incorporate this size adjustment results in an indicated cost of common equity of 11.2%.
- Q. Is it appropriate to consider anticipated capital market changes in applyingthe CAPM?
- 5 A. Yes. As discussed earlier, there is widespread consensus that interest rates will 6 increase materially as the economy continues to strengthen. As a result, current 7 bond yields are likely to understate capital market requirements at the time the 8 outcome of this proceeding becomes effective. Accordingly, in addition to the use 9 of current bond yields, I also applied the CAPM based on the forecasted long-10 term Treasury bond yields developed based on projections published by Value 11 Line, IHS Global Insight, and Blue Chip. Incorporating projected bond yields in 12 applying the CAPM is analogous to the approach that has been adopted by the FPSC staff in prior proceedings.⁴⁸ 13
- Q. What cost of equity was produced by the CAPM after incorporating forecasted bond yields?
- A. As shown on page 2 of Exhibit WEA-9, incorporating a forecasted Treasury bond yield for 2012-2016 implied a cost of equity of approximately 10.8% for the Utility Proxy Group, or 11.6% after adjusting for the impact of relative size.
- 19 Q. Should the CAPM approach be applied using historical rates of return?
- A. No. Like the DCF model, the CAPM is an *ex-ante*, or forward-looking model based on expectations of the future. As a result, in order to produce a meaningful estimate of investors' required rate of return, the CAPM must be applied using data that reflects the expectations of actual investors in the market. Applications

of the CAPM method that are based on historical data – such as realized rates of return or expected returns estimated in the past – ignore the returns that investors are currently requiring in the capital markets. As a result, they violate a fundamental requirement of the CAPM approach.

5 Q. Is there good reason to entirely disregard the results of historical CAPM 6 analyses?

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

A.

Meanwhile, backward-looking approaches incorrectly assume that investors' assessment of the required risk premium between Treasury bonds and common stocks is constant, and equal to some historical average. At no time in recent history has the fallacy of this assumption been demonstrated more concretely than it is today. This incongruity between investors' current expectations and historical risk premiums is particularly relevant during periods of heightened uncertainty

and rapidly changing capital market conditions, such as those experienced 1 recently. 49 As the FPSC Staff concluded: 2 3 [R]ecognizing the impact the Federal Government's unprecedented intervention in the capital markets has had on the yields on long-4 term Treasury bonds, staff believes models that relate the investor-5 6 required return on equity to the yield on government securities, 7 such as the CAPM approach, produce less reliable estimates of the ROE at this time.⁵⁰ 8 9 Has the Federal Reserve continued to pursue a policy of actively managing Q. 10 long-term government bond yields? Yes. In September 2011, the Federal Reserve announced "Operation Twist," 11 A. 12 involving the exchange of short-term Treasury instruments for longer-term government bonds, in an effort to put downward pressure on long-term interest 13 14 The ongoing potential for renewed turmoil in the capital markets has 15 certainly come to a head in recent months, with common stock prices exhibiting 16 the dramatic volatility that is indicative of heightened sensitivity to risk. 17 Nowhere has this been more evident than in the market for Treasury bonds, with 18 19 vields being pushed significantly lower due to a global "flight to safety" in the 20 face of rising political, economic, and capital market risks. In turn, this has led to a dramatic increase in risk premiums, as illustrated by the spreads between triple-21 B utility bond yields and 30-year Treasuries shown in Exhibit WEA-10. This 22

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

Standard & Poor's U.S. speculative-grade composite spread, which measures the extra yield above U.S. Treasury bonds that investors demand to hold the bonds of riskier companies, widened by 63% to 781 basis points (bps) from April 18, 2011, to Sept. 30, 2011. This sharp expansion reflected the bond market's increasing aversion to credit risk in an uncertain and riskier environment.... During periods of stress, correlations frequently increase among risky asset classes such as the relationship between the return on speculative-grade bonds and the return from equities.⁵¹

Equity risk premiums cannot be observed directly, but because common stock investors are the last in line with respect to their claim on a utility's cash flows, higher yield spreads imply an even steeper increase in the additional return required from an investment in common equity. In short, heightened capital market and economic uncertainties, and the increase in risk premiums demanded by investors, further undermine any reliance on historical studies to apply the CAPM.

Q. Did your CAPM analysis rely on geometric or arithmetic means in arriving at an equity risk premium?

A. No. Reference to arithmetic or geometric mean risk premiums is associated with applications of the CAPM that depend on historical data. In order to derive an

estimate of the market equity risk premium under this approach, historical average returns on Treasury bonds are typically subtracted from those for common stocks. These average rates of return based on backward-looking data for historical time periods can be derived using both arithmetic and geometric means.

5

6

7

8

9

10

11

14

15

16

17

18

19

20

A.

1

2

3

4

As discussed above, however, my application of the CAPM was a purely forwardlooking approach, which is consistent with the underlying assumptions of this method and the standards underlying a determination of a fair rate of return. Because I looked directly at investors' current expectations in the capital markets - and not at historical rates of return - my CAPM analysis did not need to reference either the arithmetic or geometric mean of historical rates of return.⁵²

12 Q. Are there selected academic studies or other sources that might measure an 13 equity risk premium that is less than what is indicated based on investors' current expectations for the stocks in the S&P 500?

> There are numerous studies that examine what investors have actually realized in terms of equity returns versus stocks. Similarly, there are articles suggesting what investors should expect based on "building blocks" or other techniques. Further, there are surveys of corporate executives and others about what they expect the return differential to be over various horizons. Finally, there are projections that the managers of utility pensions funds use for actuarial purposes.

21

22

23

None of these values are comparable to the risk premium, as I have applied it in my forward-looking CAPM analyses, which is based not on some generic notion of the equity risk premium but is derived from contemporaneous projections for individual stocks in the S&P 500. Average realized risk premiums computed over some selected time period may be an accurate representation of what was actually earned in the past, but they don't answer the question as to what risk premium investors were actually expecting to earn on a forward-looking basis during these same time periods. Similarly, calculations of the equity risk premium developed at a point in history – whether based on actual returns in prior periods or contemporaneous projections – are not the same as the forward-looking expectations of today's investors, which are premised on an entirely different set of capital market and economic expectations.

The purpose of my analysis was to determine an allowed return that would meet the regulatory requirement of allowing FPL to attract capital and maintain its financial integrity. The most appropriate benchmark for a meaningful forward-looking estimate of the return investors require from FPL is what investors are currently requiring for other investments with which FPL must compete for capital. The risk premium used in my CAPM is derived from current market data and is forward-looking in the sense of using the projected earnings estimates used by investors. It does not depend on analysis of past historical data on risk premiums nor does it purport to identify what investors will actually realize in the future, or what they should reasonably expect over the long-term. Rather it is an estimate of what investors currently require when they allocate their capital to competing investments. These current forward-looking required returns are the

touchstone of whether an authorized ROE can meet the FPSC's standard of capital attraction and maintaining financial integrity.

E. Risk Premium Approach

Α.

A.

6 Q. Briefly describe the risk premium method.

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?

I based my estimates of equity risk premiums for electric utilities on surveys of previously authorized rates of return on common equity. Authorized returns presumably reflect regulatory commissions' best estimates of the cost of equity, however determined, at the time they issued their final order. Such returns should represent a balanced and impartial outcome that considers the need to maintain a utility's financial integrity and ability to attract capital. Moreover, allowed returns are an important consideration for investors and have the potential to influence

other observable investment parameters, including credit ratings and borrowing costs. Thus, this data provides a logical and frequently referenced basis for estimating equity risk premiums for regulated utilities. Using the survey approach avoids the assumption that the average realized returns for stocks and bonds over some historical period represent what investors expected.

A.

A.

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

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 and published in its *Regulatory Focus* report. In Exhibit WEA-11, 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 2011. Over this 38-year period, these equity risk premiums for electric utilities averaged 3.41%, and the yield on public utility bonds averaged 8.91%.

17 Q. Is there any capital market relationship that must be considered when 18 implementing the risk premium method?

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. 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% 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. Based on the regression output between the interest rates and equity risk premiums displayed on page 4 of Exhibit WEA-11, the equity risk premium for electric utilities increased approximately 41 basis points for each percentage point drop in the yield on average public utility bonds. As illustrated on page 1 of Exhibit WEA-11, with the yield on average public utility bonds in December 2011 being 4.47%, this implied a current equity risk premium of 5.24% for electric utilities. Adding this equity risk premium to the yield on single-A utility bonds of 4.33% produces a current cost of equity of approximately 9.6%.

Q. What cost of equity was produced by the risk premium approach after incorporating forecasted bond yields?

As shown on page 2 of Exhibit WEA-11, incorporating a forecasted yield for 2012-2016 and adjusting for changes in interest rates since the study period implied an equity risk premium of 4.56% for electric utilities.⁵³ Adding this equity risk premium to the average implied yield on single-A public utility bonds for 2012-2016 of 6.00% resulted in an implied cost of equity of approximately 10.6%.

A.

F. Expected Earnings Approach

A.

12 Q. What other benchmarks did you develop to evaluate the ROE for FPL?

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

Q. What economic premise underlies the expected earnings approach?

A.

A. The simple, but powerful concept underlying the expected earnings approach is that investors compare each investment alternative with the next best opportunity. If the utility is unable to offer a return similar to that available from other opportunities of comparable risk, investors will become unwilling to supply the capital on reasonable terms. For existing investors, denying the utility an opportunity to earn what is available from other similar risk alternatives prevents them from earning their opportunity cost of capital. In this situation the government is effectively taking the value of investors' capital without adequate compensation.

11 Q. How is the comparison of opportunity costs typically implemented?

The traditional comparable earnings test identifies a group of companies that are believed to be comparable in risk to the utility. The actual earnings of those companies on the book value of their investment are then compared to the allowed return of the utility. While the traditional comparable earnings test is implemented using historical data taken from the accounting records, it is also common to use projections of returns on book investment, such as those published by recognized investment advisory publications (e.g., Value Line). Because these expected returns on book value equity are analogous to the allowed return on a utility's rate base, this measure of opportunity costs results in a direct, "apples to apples" comparison. My application of the expected earnings approach was focused exclusively on forward-looking projections, not historical data.

Moreover, regulators do not set the returns that investors earn in the capital markets – they can only establish the allowed return on the value of a utility's investment, as reflected on its accounting records. As a result, the expected earnings approach provides a direct guide to ensure that the allowed ROE is similar to what other utilities of comparable risk will earn on invested capital. This opportunity cost test does not require theoretical models to indirectly infer investors' perceptions from stock prices or other market data. As long as the proxy companies are similar in risk, their expected earned returns on invested capital provide a direct benchmark for investors' opportunity costs that is independent of fluctuating stock prices, market-to-book ratios, debates over DCF growth rates, or the limitations inherent in any theoretical model of investor behavior.

A.

Q. What rates of return on equity are indicated for electric utilities based on the expected earnings approach?

Value Line reports that its analysts anticipate an average rate of return on common equity for the electric utility industry as a whole of 10.5% over its forecast horizon.⁵⁴ While this provides a rough guide to investors' expectations, the returns on common equity projected by Value Line over its forecast horizon for the comparable-risk group of utilities are shown on Exhibit WEA-12. Consistent with the rationale underlying the development of the br+sv growth rates, these year-end values were converted to average returns using the same adjustment factor discussed earlier and developed on Exhibit WEA-5. As shown on Exhibit

1	WEA-12, Value Line's projections for the Utility Proxy Group suggest an average
2	ROE of 12.0%.

4 G. Flotation Costs

Α.

6 Q. What other considerations are relevant in setting the return on equity for 7 FPL?

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

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

While there are a number of ways in which a flotation cost adjustment can be calculated, 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, *New Regulatory Finance* concluded:

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.⁵⁵

Q.

A.

Alternatively, a study of data from Morgan Stanley regarding issuance costs associated with utility common stock issuances suggests an average flotation cost percentage of 3.6%.⁵⁶

Applying these expense percentages to a representative dividend yield for a utility of 4.0% implies a flotation cost adjustment on the order of 14 to 40 basis points. Issuance costs are a legitimate consideration in setting the return on equity for a utility, and I recommend incorporating a minimal, 15 basis-point adjustment in determining a reasonable ROE range for FPL.⁵⁷

IV. RETURN ON EQUITY RANGE FOR FPL

A.

9 Q. What is the purpose of this section?

This section addresses the economic requirements for FPL's rate of return on equity. It 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. This section also demonstrates the benefits to FPL's customers of an ROE that reflects FPL's need for financial strength and recognizes FPL's low rates and excellent service through management effectiveness. The 11.5% recommended ROE remains well below the 12.25% upper end of my range, and is a reasonable cost for FPL's customers to pay so investors will provide their money to FPL on reasonable terms. Ensuring FPL's financial flexibility and access to capital ultimately results in low cost and reliable service to customers in the long-run, while assuring that Florida has private capital to develop and maintain the vital electric infrastructure.

A. Implications for Financial Integrity

1	
2	

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

A. Given the importance of the utility industry to the economy and society, it is essential to maintain reliable and economical service to all consumers. While FPL remains committed to provide reliable electric service, a utility's ability to fulfill its mandate can be compromised if it is allowed a return too low to attract investors' money.

As documented earlier, the major rating agencies have warned of FPL's exposure to uncertainties associated with ongoing capital expenditure requirements, uncertain economic and financial market conditions, uncertain environmental compliance costs, and the potential for continued energy price volatility. Investors understand just how swiftly unforeseen circumstances can lead to deterioration in a utility's financial condition.

While maintaining and improving the electric infrastructure for customers is certainly desirable, it imposes additional financial responsibilities on FPL. Coupled with FPL's inherent characteristics that require financial strength, investors' fear during times of crisis requires that FPL have the flexibility necessary to overcome periods of adverse capital market conditions. Without an adequate ROE FPL will not be able to compete for investors' money at the very time it is needed most to protect customers.

1	Q.	What role does regulation play in ensuring that FPL has access to capital
2		under reasonable terms and on a sustainable basis?
3	A.	Supportive regulation plays a central role in maintaining FPL's access to capital
4		on reasonable terms. Investors recognize that regulation has its own risks, and
5		that constructive regulation is a key ingredient in supporting utility credit ratings
6		and financial integrity, particularly during times of adverse conditions. Fitch
7		concluded, "[G]iven the lingering rate of unemployment and voter concerns about
8		the economy, there could well be pockets of adverse rate decisions, and those
9		companies with little financial cushion could suffer adverse effects."58 Moody's
10		has also emphasized the need for regulatory support, concluding:
11		For the longer term, however, we are becoming increasingly
12		concerned about possible changes to our fundamental assumptions
13		about regulatory risk, particularly the prospect of a more
14		adversarial political (and therefore regulatory) environment. A
15		prolonged recessionary climate with high unemployment, or an
16		intense period of inflation, could make cost recovery more
17		uncertain. ⁵⁹
18		
19		S&P noted, "the quality of regulation is at the forefront of our analysis of utility
20		creditworthiness." 60
21		
22		With respect to Florida specifically, the investment community expressed

significant concerns over the highly politicized atmosphere surrounding FPL's last

base rate proceedings. S&P acknowledged that FPL's credit fundamentals have been aided by constructive regulation and a sound service area economy, but noted:

Both of those pillars have been shaken in recent years as Florida, and FP&L's service territory in particular, suffered during the recession, and regulators have responded in ways that reflect greater political influence over regulatory decisions.⁶¹

A.

More recently, however, the rating agencies have expressed optimism that this period of regulatory and political strife has been replaced by a return to a more orderly and constructive climate. For example, the investment community noted the regulatory clarity provided by the FPSC's approval in December 2010 of the settlement agreement governing FPL's base rates. Although cautioning that deterioration in the regulatory outlook could prompt a downgrade, Moody's noted that FPL's current ratings, "reflect the stabilization of the political and regulatory environment for investor owned utilities in Florida."

Q. Does the fact that FPL operates under various cost adjustment mechanisms warrant any adjustment in your evaluation of a fair ROE?

No. Investors recognize that FPL is exposed to significant risks associated with energy price volatility and rising costs and concerns over these risks have become increasingly pronounced in the industry. The FPSC's cost adjustment mechanisms are a valuable means of mitigating those risks, but they do not eliminate them. Of particular concern to investors is the impact of regulatory lag

and cost-recovery on the utility's ability to earn its authorized return. The adjustment mechanisms approved for FPL only serve to preserve FPL's opportunity to earn its authorized return, as required by established regulatory standards.

Moreover, adjustment mechanisms and contractual arrangements that enable utilities to implement rate changes to pass-through fluctuations in fuel costs have been widely prevalent in the industry and utilities increasingly benefit from a wide variety of mechanisms designed to mitigate against the risks associated with fluctuations in costs and regulatory lag. While not always directly analogous to the specific mechanisms in effect for FPL, the objective is similar; namely, to allow the utility an opportunity to earn a fair rate of return and partially attenuate exposure to attrition in an era of rising costs. Reflective of this industry trend, the companies in the Utility Proxy Group operate under a variety of cost adjustment mechanisms, which range from riders to recover bad debt expense and post-retirement employee benefit costs to adjustment clauses designed to address the rising costs of environmental compliance measures.

For example, PG&E also operates under numerous balancing account mechanisms that cover a significant portion of its revenue requirements and effectively dampen the impact of fluctuations in electric sales and expenses on its ability to recover the costs of providing service. Similarly, SCANA Corporation's electric and gas utilities operate under weather normalization and

revenue decoupling mechanisms, as well as the ability to implement periodic rate adjustments to reflect new nuclear construction costs. Moreover, in response to the heightened risk associated with utilities' exposure to substantial costs for environmental remediation, adjustment mechanisms designed to allow for recovery of these costs outside a general rate case have become increasingly prevalent. As a result, the mitigation in risks associated with utilities' ability to attenuate the impact of fluctuations in costs is already reflected in the cost of equity estimates developed earlier. Similarly, the firms in the Non-Utility Proxy Group also have the ability to alter prices in response to rising production costs, with the added flexibility to withdraw from the market altogether.

Α.

- Q. Do the exposures inherent to FPL highlight the need for ongoing support of the company's financial strength and ability to attract capital on reasonable terms?
 - Most definitely. As discussed earlier, FPL faces a number of challenges that require the relatively swift commitment of capital in order to maintain reliable service and preserve low rates. For example, if federal agencies ordered FPL to shutdown one or more generating units (possibly in response to security threats or events far from Florida) this would impose significant reliance on wholesale power markets to meet energy shortfalls. In light of its relative geographic isolation on the Florida Peninsula, contracting for the resources necessary to keep the lights on in the FPL service area would require strong credit and ready access to cash. Similarly, weather emergencies that can devastate parts of Florida have required FPL to fund enormous recovery efforts to protect the health and safety of

its customers and restore utility service. These massive undertakings require FPL to mobilize money and credit on a scale beyond the experience of utilities elsewhere in America. In addition, it is crucial that FPL maintain its ability to meet the significant liquidity requirements necessary for its fuel hedging program.

A.

Apart from this exposure to the vagaries of capital and energy market conditions, FPL must simultaneously meet the long-term energy needs of its service area. To continue to meet these challenges successfully and economically, it is crucial that FPL receive adequate support for its credit standing. 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 invest in infrastructure and take whatever actions are required to ensure a reliable energy supply. By the same token, customers and the service area economy suffer when the utility is unable to attract necessary capital.

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

FPL's 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 to add the new generation and transmission capacity dictated by the demands of a vibrant

service area and repair the devastation wrought by tropical storms. At the same time, FPL was increasing efficiency and lowering emissions from its generating facilities. Despite the associated complexities, including volatile conditions in energy and capital markets, FPL has responded to these challenges while charging relatively low rates to its customers.

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 in Florida. While FPL's financial strength has benefited customers and provided a strong platform for continued success, regulatory actions that undermine 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 benefits of strong utility in providing reliable service and fostering economic growth. And as FPL's history demonstrates, financial strength leads to relatively low rates over the long run.

B. Return on Equity Recommendation

A.

Q. Please summarize the results of your analyses.

The cost of equity estimates produced by the analyses described in my testimony are summarized in Exhibit WEA-13. As shown there, the "bare bones" cost of equity estimates (*i.e.*, excluding flotation costs) produced by the alternative approaches explained in my testimony ranged from 9.6% to 12.3%. In evaluating

a fair ROE range for FPL from within these results, I considered the relative strengths and weaknesses inherent in each method, and the implications of quarterly dividend payments and flotation costs. In addition, my assessment also reflects the specific risks and exposures faced by FPL, and the need to consider the importance of maintaining FPL's financial flexibility. Based on my evaluation of these considerations, I concluded that my analyses indicate a fair ROE for FPL in the 10.25% to 12.25% range.

8 Q. What then is your conclusion as to a fair ROE for FPL applicable to the 2013

Test Year?

After 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 Commission should allow an ROE at the midpoint of my recommended range, or 11.25%, before any adder for low rates and excellent management. Apart from the results of these quantitative methods, it is crucial to recognize the importance of maintaining a strong financial position so that FPL remains prepared to respond to unforeseen events that may materialize in the future. While this imperative is reinforced by current capital market conditions, it extends well beyond the financial markets and includes the Company's ability to absorb potential shocks associated with devastating hurricanes, volatile fuel pricing, and disruptions in energy supply.

A.

Recent challenges in the capital markets and regulatory environments, and ongoing economic uncertainties, highlight the benefits of FPL's strong credit

rating in attracting the capital needed to secure reliable service at a lower cost for customers. Changing course from the path of financial strength would be extremely short-sighted, especially considering that a combination of events could adversely impact FPL's ability to serve customers if its current financial strength were not maintained.

6 Q. In evaluating the fair ROE for FPL, is it also appropriate to recognize that 7 customers have benefited from FPL's low rates?

A.

A.

Yes. As discussed in the testimony of FPL witness Dewhurst and other FPL witnesses, the Company has distinguished itself in numerous measures of operating efficiency and effectiveness while maintaining relatively low electric rates compared to other Florida utilities. As a result, consumers and the service area economy have benefited from FPL's efficient and cost-effective operations, excellent customer service, improved reliability, and prices that have declined in real terms. As S&P noted, "costs and rates are low, and reliability and customer satisfaction is high." I therefore support FPL's request that the Commission approve a 25 basis point adder, or an ROE totaling 11.50%. An ROE of 11.50% remains well below the 12.25% top end of my reasonable range.

18 Q. Is an adjustment to recognize FPL's relative performance consistent with sound regulatory policy?

Yes. Considering exemplary performance when establishing a fair ROE from within my recommended range is entirely consistent with regulatory economics and past incentive mechanisms approved by the FPSC. While traditional cost of service regulation has provided a foundation for the development of an efficient

and reliable utility system, it is not without drawbacks. One of these is a lack of incentive to achieve increased efficiencies and innovate. Regulation presumably serves as a substitute for the outcome of a competitive market, but unlike firms operating under free competition, which can reap the benefits of efficiency and innovation through higher returns, the ROE for a regulated utility is generally set based on cost of equity estimates for a risk-comparable proxy group. As a result, the traditional cost of service model provides little incentive to encourage and support increased efficiencies. Frequently, the results of the regulatory process are asymmetric, with cost savings associated with innovations and exemplary management being passed on to customers, while less successful endeavors are disallowed, penalized, and absorbed by investors.

This potential inequity was specifically addressed by the Florida Legislature, which granted the FPSC the statutory authority to explicitly consider relative performance when setting rates for utility service. Similarly, the Florida Supreme Court has recognized that adjustments to the ROE represent "the only incentive available" to reward efficiency or punish mismanagement. Thus, including an award for exemplary management above the minimum fair ROE required by investors is entirely consistent with the current regulatory regime in Florida.

Similarly, it is also consistent with past actions of the FPSC. For example, the Commission has formerly approved agreements providing for earnings sharing between FPL's customers and shareholders, and has adjusted allowed ROEs – both upward and downward – to recognize relative performance. Considering FPL's relative performance in establishing the ROE in this case would further confirm the FPSC's commitment to foster an environment in which customers are assured reliable service at reasonable rates, while stockholders are fairly treated.

V. CAPITAL STRUCTURE

A.

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

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 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 are exposed, and they require correspondingly higher rates of interest. From common shareholders' standpoint, a higher debt ratio means 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.

1 Q. What equity ratio is implied by FPL's requested capital structure for the

2013 Test Year?

- As discussed in the testimony of FPL witness Dewhurst, FPL's capital structure based on investor sources results in an equity ratio of 59.6%.
- 5 Q. Does this provide a representative basis on which to evaluate FPL's capital structure?
 - A. No. Depending on their specific attributes, contractual agreements that obligate the utility to make specified payments may be treated as debt in evaluating a utility's financial risk. Because power purchase agreements typically obligate the utility to make specified minimum contractual payments akin to those associated with traditional debt financing, investors consider a portion of these commitments as debt in evaluating total financial risks. The implications of purchased power commitments and other off-balance-sheet obligations have been repeatedly cited by major bond rating agencies in connection with assessments of utility financial risks. Because bond ratings agencies and investors consider the debt impact of such fixed obligations in assessing a utility's financial position, they imply greater risk and reduced financial flexibility.

As discussed earlier, a significant portion of FPL's power requirements are currently obtained through purchased power contracts. These contractual payment obligations are fixed commitments with debt-like characteristics and are properly considered when evaluating the financial risks implied by FPL's capital structure. S&P reported that it adjusts FPL's current capitalization to include

approximately \$949 million in imputed debt from off-balance sheet obligations.⁶⁷
Unless the Company takes action to offset this additional financial risk by
maintaining a higher equity ratio, the resulting leverage will weaken FPL's
creditworthiness, implying a higher required rate of return to compensate
investors for the greater risks.⁶⁸

6

7

8

13

19

20

21

22

23

A.

- Q. What capital structure is implied for FPL's 2013 Test Year once the off-balance sheet obligations associated with purchased power contracts are incorporated?
- 9 A. Based on S&P's quantification, an upward adjustment to long-term debt of \$949 million was incorporated for 2013 to account for the debt equivalent attributed to FPL's off-balance sheet obligations. As shown in Exhibit WEA-14, this results in an adjusted common equity ratio of 56.3%.

This adjustment not only reflect the investment community's evaluation of FPL's financial risks, it is also consistent with past decisions of the FPSC, which have acknowledged that an adjustment is appropriate to address the capital structure impact associated with purchased power.

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

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.
- What capitalization ratios are maintained by other electric utility operating companies?
- Exhibit WEA-15 displays capital structure data at year-end 2010 for the group of electric utility operating companies owned by the firms in the Utility Proxy Group used to estimate the cost of equity. As shown there, common equity ratios for these electric utilities ranged from 44.0% to 62.9% and averaged 53.8%.

 Incorporating the same short-term debt ratio reflected in FPL's 2013 capitalization of approximately 2.2% results in an average common equity ratio for this group of other utilities of 52.6%.
- 12 Q. What was the average capitalization maintained by the Utility Proxy Group?
- A. As shown on Exhibit WEA-16, for the nineteen firms in the Utility Proxy Group, common equity ratios at December 31, 2010 ranged between 30.9% and 52.4% and averaged 45.9%. Adjusting the average capitalization to include short-term debt in the same proportion as FPL would result in an adjusted equity ratio of 44.9%.
- 18 Q. What capitalization is representative for the Utility Proxy Group going
 19 forward?
- As shown on Exhibit WEA-16, Value Line expects an average common equity ratio for the Utility Proxy Group of 48.1% for its three-to-five year forecast horizon, with the individual common equity ratios ranging from 35.0% to 54.5%.

Adjusting the average capitalization to include short-term debt in the same proportion as FPL would result in an adjusted equity ratio of 47.1%.

Q. What other benchmarks are relevant in assessing FPL's capital structure?

A. From an investor's perspective, the relevant capital structure is based on the market values of securities because investors can only buy and sell securities at market value. To be able to raise capital, companies must pay returns that are competitive at the current market prices of their securities, not the embedded book value of the mix of stocks and bonds. As a result, the market value capitalization for the firms in the Utility Proxy Group also serves as a benchmark in evaluating FPL's capital structure.

A.

As shown on Exhibit WEA-17, at year-end 2010, the market value capitalization for the firms in the Utility Proxy Group implied an average common equity ratio of 59.7%, or 58.9% based on Value Line's projections for its 2014-16 forecast horizon. Adjusting these ratios to consider FPL's short-term debt balances would result in adjusted equity ratios of 58.4% and 57.6%, respectively.

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

As discussed earlier, utilities are facing rising cost structures, significant capital investment plans, energy market volatility, uncertainties over accommodating future environmental mandates, and ongoing regulatory risks. Coupled with the potential for turmoil in capital markets, these considerations warrant a stronger balance sheet to deal with an increasingly uncertain environment. A more

conservative financial profile, in the form of a higher common equity ratio, is consistent with increasing uncertainties and the need to maintain the continuous access to capital that is required to fund operations and necessary system investment, even during times of adverse capital market conditions.

Moody's has repeatedly warned investors of the risks associated with debt leverage and fixed obligations and advised utilities not to squander the opportunity to strengthen the balance sheet as a buffer against future uncertainties.⁶⁹ As Moody's concluded:

From a credit perspective, we believe a strong balance sheet coupled with abundant sources of liquidity represents one of the best defenses against business and operating risk and potential negative ratings actions.⁷⁰

Similarly, S&P noted that, "we generally consider a debt to capital level of 50% or greater to be aggressive or highly leveraged for utilities." Fitch affirmed that it expects regulated utilities to employ "a judicious mix of debt and equity to finance high levels of planned investments." More recently, Moody's affirmed that it expects regulated utilities to strengthen their balance sheets in order "to prepare for more challenging business conditions." This is especially the case for FPL, which faces the prospect of financing significant capital expansion plans in a turbulent market while at the same time maintaining its ability to respond to other significant challenges.

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

Based on my evaluation, I concluded that the 59.6% common equity ratio requested by FPL represents a reasonable mix of capital sources from which to calculate FPL's overall rate of return. Although this adjusted common equity ratio is higher than the average book value equity ratio currently maintained by the group of electric utility operating companies, it is well within the range of individual results for this reference group, below the average market value equity capitalization, and consistent with the trend towards lower financial leverage expected for the industry. As discussed earlier, it is also consistent with the relatively greater financial strength required to counterbalance the various exposures faced by FPL.

A.

While industry averages provide one benchmark for comparison, each firm must select its capitalization based on the risks and prospects it faces, as well as its specific needs to access the capital markets. A public utility with an obligation to serve must maintain ready access to capital under reasonable terms so that it can meet the service requirements of its customers. The need for access becomes even more important when the company has capital requirements over a period of years, and financing must be continuously available, even during unfavorable capital market conditions.

Financial flexibility plays a crucial role in ensuring the wherewithal to meet the needs of customers, and utilities with higher leverage may be foreclosed from additional borrowing, especially during times of stress. FPL's capital structure reflects the Company's ongoing efforts to maintain its credit standing and support access to capital on reasonable terms. The reasonableness of FPL's capital structure is reinforced by the ongoing uncertainties associated with the electric power industry, the need to accommodate the specific exposures faced by FPL, and the importance of supporting continued system investment, even during times of adverse industry or market conditions.

10 Q. Does this conclude your direct testimony?

11 A. Yes.

EXHIBIT WEA-1

QUALIFICATIONS OF WILLIAM E. AVERA

Q. WHAT IS THE PURPOSE OF THIS EXHIBIT?

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

Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

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

In 1977, I joined the staff of the Public Utility Commission of Texas ("PUCT") as Director of the Economic Research Division. During my tenure at the PUCT, I managed a division responsible for financial analysis, cost allocation

Docket No. 120015-EI

Qualifications of William E. Avera

Exhibit WEA-1, Page 2 of 9

and rate design, economic and financial research, and data processing systems, and I

testified in cases on a variety of financial and economic issues. Since leaving the

PUCT, I have been engaged as a consultant. I have participated in a wide range of

assignments involving utility-related matters on behalf of utilities, industrial

customers, municipalities, and regulatory commissions. I have previously testified

before the Federal Energy Regulatory Commission ("FERC"), as well as the Federal

Communications Commission, the Surface Transportation Board (and its

predecessor, the Interstate Commerce Commission), the Canadian Radio-Television

and Telecommunications Commission, and regulatory agencies, courts, and

legislative committees in over 40 states.

In 1995, I was appointed by the PUCT to the Synchronous Interconnection

Committee to advise the Texas legislature on the costs and benefits of connecting

Texas to the national electric transmission grid. In addition, I served as an outside

director of Georgia System Operations Corporation, the system operator for electric

cooperatives in Georgia.

I have served as Lecturer in the Finance Department at the University of Texas at

Austin and taught in the evening graduate program at St. Edward's University for

twenty years. In addition, I have lectured on economic and regulatory topics in

programs sponsored by universities and industry groups. I have taught in hundreds of

educational programs for financial analysts in programs sponsored by the Association

for Investment Management and Research, the Financial Analysts Review, and local financial analysts societies. These programs have been presented in Asia, Europe, and North America, including the Financial Analysts Seminar at Northwestern University. I hold the Chartered Financial Analyst (CFA®) designation and have served as Vice President for Membership of the Financial Management Association. I have also served on the Board of Directors of the North Carolina Society of Financial Analysts. I was elected Vice Chairman of the National Association of Regulatory Commissioners ("NARUC") Subcommittee on Economics and appointed to NARUC's Technical Subcommittee on the National Energy Act. I have also served as an officer of various other professional organizations and societies. A resume containing the details of my experience and qualifications is attached.

WILLIAM E. AVERA

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

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

Summary of Qualifications

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

Employment

Principal, FINCAP, Inc. (Sep. 1979 to present)

Director, Economic Research Division, Public Utility Commission of Texas (Dec. 1977 to Aug. 1979)

Manager, Financial Education, International Paper Company New York City (Feb. 1977 to Nov. 1977) Financial, economic and policy consulting to business and government. Perform business and public policy research, cost/benefit analyses and financial modeling, valuation of businesses (almost 200 entities valued), estimation of damages, statistical and industry studies. Provide strategy advice and educational services in public and private sectors, and serve as expert witness before regulatory agencies, legislative committees, arbitration panels, and courts.

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.

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.

Docket No. 120015-EI Qualifications of William E. Avera Exhibit WEA-1, Page 5 of 9

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

<u>University-Sponsored Programs:</u> 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.

<u>Business and Government-Sponsored Programs:</u> Advanced Seminar on Earnings Regulation, American Public Welfare Association, Association for Investment Management and Research, Congressional Fellows

Docket No. 120015-EI Qualifications of William E. Avera Exhibit WEA-1, Page 6 of 9

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

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

Expert Witness Testimony

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

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

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

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

Board Positions and Other Professional Activities

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 Public Utility Commission of Texas and approved by governor; Appointed by Hays County Commission to Citizens Advisory Committee of Habitat Conservation Plan, Operator of AAA Ranch, a certified organic producer of agricultural products; Appointed to Organic Livestock Advisory Committee by Texas Agricultural Commissioner 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 of Directors, Sustainable Food Center; Chair, Board of Deacons, Finance Committee, and Elder, Central Presbyterian Church of Austin; Founding Member, Orange-Chatham County (N.C.) Legal Aid Screening Committee.

Military

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

Bibliography

Monographs

- Ethics and the Investment Professional (video, workbook, and instructor's guide) and Ethics Challenge Today (video), Association for Investment Management and Research (1995)
- "Definition of Industry Ethics and Development of a Code" and "Applying Ethics in the Real World," in *Good Ethics: The Essential Element of a Firm's Success*, Association for Investment Management and Research (1994)
- "On the Use of Security Analysts' Growth Projections in the DCF Model," with Bruce H. Fairchild in *Earnings Regulation Under Inflation*, J. R. Foster and S. R. Holmberg, eds. Institute for Study of Regulation (1982)
- An Examination of the Concept of Using Relative Customer Class Risk to Set Target Rates of Return in Electric Cost-of-Service Studies, with Bruce H. Fairchild, Electricity Consumers Resource Council (ELCON) (1981); portions reprinted in Public Utilities Fortnightly (Nov. 11, 1982)
- "Usefulness of Current Values to Investors and Creditors," *Research Study on Current-Value Accounting Measurements and Utility*, George M. Scott, ed., Touche Ross Foundation (1978)
- "The Geometric Mean Strategy and Common Stock Investment Management," with Henry A. Latané in *Life Insurance Investment Policies*, David Cummins, ed. (1977)
- Investment Companies: Analysis of Current Operations and Future Prospects, with J. Finley Lee and Glenn L. Wood, American College of Life Underwriters (1975)

Articles

- "Should Analysts Own the Stocks they Cover?" The Financial Journalist, (March 2002)
- "Liquidity, Exchange Listing, and Common Stock Performance," with John C. Groth and Kerry Cooper, Journal of Economics and Business (Spring 1985); reprinted by National Association of Security Dealers
- "The Energy Crisis and the Homeowner: The Grief Process," *Texas Business Review* (Jan.–Feb. 1980); reprinted in *The Energy Picture: Problems and Prospects*, J. E. Pluta, ed., Bureau of Business Research (1980)
- "Use of IFPS at the Public Utility Commission of Texas," *Proceedings of the IFPS Users Group Annual Meeting* (1979)
- "Production Capacity Allocation: Conversion, CWIP, and One-Armed Economics," *Proceedings of the NARUC Biennial Regulatory Information Conference* (1978)
- "Some Thoughts on the Rate of Return to Public Utility Companies," with Bruce H. Fairchild in *Proceedings of the NARUC Biennial Regulatory Information Conference* (1978)

- "A New Capital Budgeting Measure: The Integration of Time, Liquidity, and Uncertainty," with David Cordell in *Proceedings of the Southwestern Finance Association* (1977)
- "Usefulness of Current Values to Investors and Creditors," in *Inflation Accounting/Indexing and Stock Behavior* (1977)
- "Consumer Expectations and the Economy," Texas Business Review (Nov. 1976)
- "Portfolio Performance Evaluation and Long-run Capital Growth," with Henry A. Latané in *Proceedings of the Eastern Finance Association* (1973)
- Book reviews in *Journal of Finance* and *Financial Review*. Abstracts for *CFA Digest*. Articles in *Carolina Financial Times*.

Selected Papers and Presentations

- "Economic Perspective on Water Marketing in Texas," 2009 Water Law Institute, The University of Texas School of Law, Austin, TX (Dec. 2009).
- "Estimating Utility Cost of Equity in Financial Turmoil," SNL EXNET 15th Annual FERC Briefing, Washington, D.C. (Mar. 2009)
- "The Who, What, When, How, and Why of Ethics," San Antonio Financial Analysts Society (Jan. 16, 2002). Similar presentation given to the Austin Society of Financial Analysts (Jan. 17, 2002)
- "Ethics for Financial Analysts," Sponsored by Canadian Council of Financial Analysts: delivered in Calgary, Edmonton, Regina, and Winnipeg, June 1997. Similar presentations given to Austin Society of Financial Analysts (Mar. 1994), San Antonio Society of Financial Analysts (Nov. 1985), and St. Louis Society of Financial Analysts (Feb. 1986)
- "Cost of Capital for Multi-Divisional Corporations," Financial Management Association, New Orleans, Louisiana (Oct. 1996)
- "Ethics and the Treasury Function," Government Treasurers Organization of Texas, Corpus Christi, Texas (Jun. 1996)
- "A Cooperative Future," Iowa Association of Electric Cooperatives, Des Moines (December 1995). Similar presentations given to National G & T Conference, Irving, Texas (June 1995), Kentucky Association of Electric Cooperatives Annual Meeting, Louisville (Nov. 1994), Virginia, Maryland, and Delaware Association of Electric Cooperatives Annual Meeting, Richmond (July 1994), and Carolina Electric Cooperatives Annual Meeting, Raleigh (Mar. 1994)
- "Information Superhighway Warnings: Speed Bumps on Wall Street and Detours from the Economy," Texas Society of Certified Public Accountants Natural Gas, Telecommunications and Electric Industries Conference, Austin (Apr. 1995)
- "Economic/Wall Street Outlook," Carolinas Council of the Institute of Management Accountants, Myrtle Beach, South Carolina (May 1994). Similar presentation given to Bell Operating Company Accounting Witness Conference, Santa Fe, New Mexico (Apr. 1993)
- "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)
- ""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)
- "Growth Rates, Expected Returns, and Variance in Portfolio Selection and Performance Evaluation," with Henry A. Latané, Econometric Society, Oslo, Norway (Aug. 1973)

Docket No. 120015-EI Interest Rate Trends Exhibit WEA-2, Page 1 of 1

	Current (a)	2012	2013	2014	2015	<u>2016</u>
30-Yr. Treasury						_
Value Line (b)	3.4%	3.9%	4.1%	4.5%	5.0%	
IHS Global Insight (c)	3.4%	3.3%	3.8%	4.5%	5.1%	5.3%
Blue Chip (d)	3.4%	3.7%	4.2%	4.8%	5.3%	5.5%
AAA Corporate						
Value Line (b)	4.2%	4.6%	4.7%	5.2%	5.7%	
IHS Global Insight (c)	4.2%	4.2%	4.5%	5.1%	6.0%	6.2%
Blue Chip (d)	4.2%	4.3%	4.7%	5.4%	5.8%	6.2%
S&P (e)	4.2%	4.2%	4.6%	5.1%	6.0%	
AA Utility						
IHS Global Insight (c)	4.3%	4.4%	4.9%	5.6%	6.5%	6.8%
EIA (f)	4.3%	4.7%	4.8%	5.7%	6.8%	6.9%

⁽a) Based on monthly average bond yields for the six-month period Jul. - Dec. 2011 reported at www.credittrends.moodys.com and http://www.federalreserve.gov/releases/h15/data.htm.

⁽b) The Value Line Investment Survey, Forecast for the U.S. Economy (Nov. 25, 2011).

⁽c) IHS Global Insight, U.S. Economic Outlook at 25 (Dec. 2011).

⁽d) Blue Chip Financial Forecasts, Vol. 30, No. 12 (Dec. 1, 2011).

⁽e) Standard & Poor's Corporation, "U.S. Economic Forecast: Just Like Ol' Times," *RatingsDirect* (Jan. 12, 2012).

⁽f) Energy Information Administration, Annual Energy Outlook 2012, Early Release (Jan. 23, 2012).

Docket No. 120015-EI Comparison of Proxy Group Risk Indicators Exhibit WEA-3, Page 1 of 1

	S&P		Value Line	
	Credit	Safety	Financial	
	Rating	Rank	Strength	Beta
Utility Proxy Group	BBB+	2	A	0.70
Non-Utility Proxy Group	A	1	A+	0.58
FPL	A-	2	A	0.75

Docket No. 120015-EI DCF Model - Utility Proxy Group Exhibit WEA-4, Page 1 of 3

DIVIDEND YIELD

		(a)	(b)	
	Company	Price	Dividends	<u>Yield</u>
1	Alliant Energy	\$ 41.09	\$ 1.80	4.4%
2	Consolidated Edison	\$ 58.26	\$ 2.40	4.1%
3	Dominion Resources	\$ 51.11	\$ 2.11	4.1%
4	Integrys Energy Group	\$ 51.42	\$ 2.72	5.3%
5	ITC Holdings Corp.	\$ 73.04	\$ 1.45	2.0%
6	NextEra Energy, Inc.	\$ 55.39	\$ 2.28	4.1%
7	OGE Energy Corp.	\$ 51.39	\$ 1.59	3.1%
8	PG&E Corp.	\$ 40.70	\$ 1.82	4.5%
9	SCANA Corp.	\$ 42.11	\$ 1.98	4.7%
10	Sempra Energy	\$ 53.09	\$ 2.04	3.8%
11	Southern Company	\$ 43.20	\$ 1.94	4.5%
12	Vectren Corp.	\$ 28.56	\$ 1.41	4.9%
13	Wisconsin Energy	\$ 32.46	\$ 1.20	3.7%
14	Xcel Energy, Inc.	\$ 25.67	\$ 1.06	4.1%
	Average			4.1%

⁽a) Average of closing prices for 30 trading days ended Nov. 28, 2011.

⁽b) The Value Line Investment Survey, Summary & Index (Dec. 23, 2011).

Docket No. 120015-EI DCF Model - Utility Proxy Group Exhibit WEA-4, Page 2 of 3

GROWTH RATES

		(a) (b) (c		(c)	(d)
		Earn	wth	br+sv	
	Company	V Line	Growth		
1	Alliant Energy	7.0%	4.9%	6.0%	5.6%
2	Consolidated Edison	3.0%	3.7%	3.3%	3.9%
3	Dominion Resources	4.5%	3.2%	5.0%	5.2%
4	Integrys Energy Group	9.0%	9.4%	4.5%	3.1%
5	ITC Holdings Corp.	14.0%	18.8%	16.5%	13.8%
6	NextEra Energy, Inc.	4.5%	5.8%	6.4%	6.4%
7	OGE Energy Corp.	6.5%	8.3%	6.8%	7.0%
8	PG&E Corp.	6.0%	1.4%	4.0%	6.0%
9	SCANA Corp.	3.0%	4.6%	4.2%	5.0%
10	Sempra Energy	3.5%	7.3%	7.0%	6.1%
11	Southern Company	6.0%	5.9%	5.1%	5.6%
12	Vectren Corp.	5.5%	6.0%	4.7%	3.9%
13	Wisconsin Energy	8.5%	7.8%	7.5%	4.7%
14	Xcel Energy, Inc.	5.0%	5.3%	5.1%	4.3%

⁽a) The Value Line Investment Survey (Nov. 4, Nov. 25, & Dec. 23, 2011).

⁽b) www.finance.yahoo.com (Retrieved Nov. 29, 2011).

⁽c) www.zacks.com (retrieved Nov. 30, 2011).

⁽d) See Exhibit WEA-5.

DCF COST OF EQUITY ESTIMATES

		(a)	(a)	(a)	(a)			
		Earn	Earnings Growth					
	Company	V Line	<u>IBES</u>	Zacks	Growth			
1	Alliant Energy	11.4%	9.3%	10.4%	10.0%			
2	Consolidated Edison	7.1%	7.8%	7.4%	8.0%			
3	Dominion Resources	8.6%	7.3%	9.1%	9.3%			
4	Integrys Energy Group	14.3%	14.7%	9.8%	8.4%			
5	ITC Holdings Corp.	16.0%	20.7%	18.5%	15.8%			
6	NextEra Energy, Inc.	8.6%	9.9%	10.5%	10.5%			
7	OGE Energy Corp.	9.6%	11.3%	9.9%	10.1%			
8	PG&E Corp.	10.5%	5.9%	8.5%	10.4%			
9	SCANA Corp.	7.7%	9.3%	8.9%	9.7%			
10	Sempra Energy	7.3%	11.2%	10.8%	9.9%			
11	Southern Company	10.5%	10.4%	9.6%	10.1%			
12	Vectren Corp.	10.4%	10.9%	9.6%	8.8%			
13	Wisconsin Energy	12.2%	11.5%	11.2%	8.4%			
14	Xcel Energy, Inc.	9.1%	9.4%	9.2%	8.4%			
	Average (b)	10.2%	10.3%	9.6%	9.9%			

⁽a) Sum of dividend yield (page 1) and respective growth rate (page 2).

⁽b) Excludes highlighted figures.

Docket No. 120015-EI Sustainable Growth Rate - Utility Proxy Group Exhibit WEA-5, Page 1 of 2

		(a)	(a)	(a)			(b)	(c)		(d)	(e)		
		2015					Adjustment		"sv" Factor				
	Company	EPS	DPS	BVPS	<u>b</u>	_r_	Factor	Adjusted r	br	<u>_s</u> _	_v_	_sv_	br + sv
1	Alliant Energy	\$3.60	\$2.10	\$30.15	41.7%	11.9%	1.0192	12.2%	5.1%	0.0143	0.3653	0.52%	5.6%
2	Consolidated Edison	\$3.95	\$2.48	\$42.60	37.2%	9.3%	1.0179	9.4%	3.5%	0.0159	0.2255	0.36%	3.9%
3	Dominion Resources	\$3.75	\$2.45	\$26.50	34.7%	14.2%	1.0265	14.5%	5.0%	0.0027	0.4952	0.13%	5.2%
4	Integrys Energy Group	\$4.00	\$2.72	\$41.75	32.0%	9.6%	1.0122	9.7%	3.1%	0.0028	0.1211	0.03%	3.1%
5	ITC Holdings Corp.	\$5.75	\$1.70	\$37.25	70.4%	15.4%	1.0599	16.4%	11.5%	0.0369	0.6079	2.24%	13.8%
6	NextEra Energy, Inc.	\$5.50	\$2.60	\$46.25	52.7%	11.9%	1.0296	12.2%	6.5%	(0.0007)	0.3833	-0.03%	6.4%
7	OGE Energy Corp.	\$4.00	\$1.80	\$33.75	55.0%	11.9%	1.0382	12.3%	6.8%	0.0076	0.3571	0.27%	7.0%
8	PG&E Corp.	\$4.25	\$2.20	\$38.00	48.2%	11.2%	1.0360	11.6%	5.6%	0.0183	0.2000	0.37%	6.0%
9	SCANA Corp.	\$3.50	\$2.10	\$37.25	40.0%	9.4%	1.0444	9.8%	3.9%	0.0518	0.2158	1.12%	5.0%
10	Sempra Energy	\$5.50	\$2.50	\$52.25	54.5%	10.5%	1.0354	10.9%	5.9%	0.0061	0.2536	0.16%	6.1%
11	Southern Company	\$3.25	\$2.20	\$25.00	32.3%	13.0%	1.0336	13.4%	4.3%	0.0276	0.4444	1.23%	5.6%
12	Vectren Corp.	\$2.30	\$1.60	\$21.20	30.4%	10.8%	1.0223	11.1%	3.4%	0.0131	0.3943	0.52%	3.9%
13	Wisconsin Energy	\$2.75	\$1.65	\$19.50	40.0%	14.1%	1.0133	14.3%	5.7%	(0.0193)	0.5125	-0.99%	4.7%
14	Xcel Energy, Inc.	\$2.00	\$1.15	\$21.00	42.5%	9.5%	1.0255	9.8%	4.2%	0.0076	0.1600	0.12%	4.3%

Docket No. 120015-EI Sustainable Growth Rate - Utility Proxy Group Exhibit WEA-5, Page 2 of 2

		(a)	(a)	(f)	(a)	(a)	(f)	(g)	(a)	(a)		(h)	(a)	(a)	(g)
			2010			2015		Chg	2015 Price				Common Shares		ares
	Company	Eq Ratio	Tot Cap	Com Eq	Eq Ratio	Tot Cap	Com Eq	Equity	<u>High</u>	Low	Avg.	M/B	2010	<u>2015</u>	Growth
1	Alliant Energy	49.5%	\$5,841	\$2,891	51.5%	\$6,805	\$3,505	3.9%	\$55.00	\$40.00	\$47.50	1.575	110.89	116.00	0.91%
2	Consolidated Edison	50.9%	\$21,732	\$11,062	50.5%	\$26,200	\$13,231	3.6%	\$60.00	\$50.00	\$55.00	1.291	291.62	310.00	1.23%
3	Dominion Resources	42.8%	\$28,012	\$11,989	42.0%	\$37,200	\$15,624	5.4%	\$60.00	\$45.00	\$52.50	1.981	581.00	585.00	0.14%
4	Integrys Energy Group	56.8%	\$5,119	\$2,907	54.5%	\$6,025	\$3,284	2.5%	\$55.00	\$40.00	\$47.50	1.138	77.35	78.30	0.24%
5	ITC Holdings Corp.	30.9%	\$3,614	\$1,117	36.0%	\$5,650	\$2,034	12.7%	\$110.00	\$80.00	\$95.00	2.550	50.72	54.50	1.45%
6	NextEra Energy, Inc.	44.5%	\$32,474	\$14,451	45.5%	\$42,700	\$19,429	6.1%	\$85.00	\$65.00	\$75.00	1.622	420.86	420.00	-0.04%
7	OGE Energy Corp.	49.2%	\$4,653	\$2,289	49.5%	\$6,775	\$3,354	7.9%	\$60.00	\$45.00	\$52.50	1.556	97.60	100.00	0.49%
8	PG&E Corp.	49.3%	\$22,863	\$11,271	53.5%	\$30,200	\$16,157	7.5%	\$55.00	\$40.00	\$47.50	1.250	395.23	425.00	1.46%
9	SCANA Corp.	47.1%	\$7,854	\$3,699	49.5%	\$11,650	\$5,767	9.3%	\$55.00	\$40.00	\$47.50	1.275	127.00	155.00	4.07%
10	Sempra Energy	49.6%	\$18,186	\$9,020	51.0%	\$25,200	\$12,852	7.3%	\$80.00	\$60.00	\$70.00	1.340	240.45	246.00	0.46%
11	Southern Company	45.7%	\$35,438	\$16,195	45.5%	\$49,800	\$22,659	6.9%	\$50.00	\$40.00	\$45.00	1.800	843.34	910.00	1.53%
12	Vectren Corp.	50.1%	\$2,874	\$1,440	50.0%	\$3,600	\$1,800	4.6%	\$40.00	\$30.00	\$35.00	1.651	81.70	85.00	0.80%
13	Wisconsin Energy	49.0%	\$7,765	\$3,805	46.0%	\$9,450	\$4,347	2.7%	\$45.00	\$35.00	\$40.00	2.051	233.77	223.00	-0.94%
14	Xcel Energy, Inc.	46.3%	\$17,452	\$8,080	48.5%	\$21,500	\$10,428	5.2%	\$30.00	\$20.00	\$25.00	1.190	482.33	498.00	0.64%

- (a) The Value Line Investment Survey (Nov. 4, Nov. 25, & Dec. 23, 2011).
- (b) Computed using the formula 2*(1+5-Yr. Change in Equity)/(2+5 Yr. Change in Equity).
- (c) Product of average year-end "r" for 2015 and Adjustment Factor.
- (d) Product of change in common shares outstanding and M/B Ratio.
- (e) Computed as 1 B/M Ratio.
- (f) Product of total capital and equity ratio.
- (g) Five-year rate of change.
- (h) Average of High and Low expected market prices divided by 2015 BVPS.

Docket No. 120015-EI Implied Utility Bond Yields Exhibit WEA-6, Page 1 of 1

IMPLIED UTILITY BOND YIELDS

	2012-15
Projected AA Utility Yield	
IHS Global Insight (a)	5.37%
EIA (b)	5.52%
Average	5.44%
Current BBB - AA Yield Spread (c)	0.90%
Implied Triple-B Utility Yield	6.34%
Comment A. A.A.V. II Comment (A)	0.200/
Current A - AA Yield Spread (c)	0.28%
Implied Single-A Utility Yield	5.72%

⁽a) IHS Global Insight, U.S. Economic Outlook at 25 (Dec. 2011).
(b) Energy Information Administration, Annual Energy Outlook 2012, Early Release (Jan. 23, 2012).

⁽c) Based on monthly average bond yields for the six-month period July -December 2011.

Docket No. 120015-EI DCF Model - Non-Utility Proxy Group Exhibit WEA-7, Page 1 of 1

		(a)	(a)	(b)	(c)	(d)	(e)	(e)	(e)	(e)
		Dividend		EPS				EPS		
	Company	<u>Yield</u>	V Line	IBES	Zacks	<u>br+sv</u>	V Line	<u>IBES</u>	Zacks	<u>br+sv</u>
1	Abbott Labs.	3.55%	8.5%	9.3%	8.0%	18.2%	12.1%	12.8%	11.6%	21.8%
2	Bard (C.R.)	0.88%	8.5%	10.5%	10.9%	20.3%	9.4%	11.4%	11.8%	21.1%
3	Church & Dwight	1.53%	10.5%	11.4%	11.8%	12.5%	12.0%	12.9%	13.3%	14.0%
4	Coca-Cola	2.74%	10.0%	8.0%	8.0%	10.3%	12.7%	10.7%	10.7%	13.1%
5	Colgate-Palmolive	2.67%	10.5%	9.0%	8.8%	6.3%	13.2%	11.6%	11.5%	9.0%
6	Gen'l Mills	3.18%	8.5%	7.9%	8.0%	9.0%	11.7%	11.1%	11.2%	12.2%
7	Hormel Foods	1.94%	10.0%	9.5%	9.3%	10.0%	11.9%	11.4%	11.2%	11.9%
8	Kellogg	3.12%	8.5%	8.8%	9.0%	14.4%	11.6%	12.0%	12.1%	17.5%
9	Kimberly-Clark	3.94%	7.0%	5.8%	6.7%	12.4%	10.9%	9.7%	10.6%	16.3%
10	McCormick & Co.	2.26%	14.5%	8.4%	9.0%	20.5%	16.8%	10.6%	11.3%	22.8%
11	PepsiCo, Inc.	3.32%	9.5%	8.9%	8.0%	11.3%	12.8%	12.2%	11.3%	14.7%
12	Procter & Gamble	3.22%	10.0%	8.8%	9.0%	5.9%	13.2%	12.0%	12.2%	9.1%
13	Wal-Mart Stores	2.53%	8.5%	9.0%	12.6%	7.4%	11.0%	11.5%	15.1%	9.9%
	Average (f)						12.3%	11.5%	11.8%	12.2%

⁽a) www.valueline.com (retrieved Nov. 2, 2011).

⁽b) www.finance.yahoo.com (retrieved Nov. 3, 2011).

⁽c) www.zacks.com (retrieved Nov. 7, 2011).

⁽d) See Exhibit WEA-8.

⁽e) Sum of dividend yield and respective growth rate.

⁽f) Excludes highlighted figures.

Docket No. 120015-EI Sustainable Growth Rate - Non-Utility Proxy Group Exhibit WEA-8, Page 1 of 2

		(a)	(a)	(a)			(b)	(c)		(d)	(e)		
			2015				Adjust.			"s	v" Factor		
	Company	EPS	<u>DPS</u>	BVPS	<u>b</u>	<u>r</u>	Factor	<u>Adj. r</u>	_br_	s	_ v _	sv	br + sv
1	Abbott Labs.	\$6.00	\$2.20	\$20.50	63.3%	29.3%	1.0341	30.3%	19.2%	(0.0120)	0.7842	-0.94%	18.2%
2	Bard (C.R.)	\$8.25	\$0.90	\$38.85	89.1%	21.2%	1.0703	22.7%	20.2%	0.0003	0.7410	0.02%	20.3%
3	Church & Dwight	\$3.10	\$0.72	\$19.70	76.8%	15.7%	1.0403	16.4%	12.6%	(0.0015)	0.6248	-0.09%	12.5%
4	Coca-Cola	\$5.60	\$2.80	\$20.45	50.0%	27.4%	1.0372	28.4%	14.2%	(0.0469)	0.8260	-3.87%	10.3%
5	Colgate-Palmolive	\$7.50	\$3.20	\$11.20	57.3%	67.0%	1.0588	70.9%	40.7%	(0.3710)	0.9253	-34.33%	6.3%
6	Gen'l Mills	\$3.40	\$1.60	\$14.30	52.9%	23.8%	1.0481	24.9%	13.2%	(0.0561)	0.7400	-4.15%	9.0%
7	Hormel Foods	\$2.25	\$0.80	\$15.10	64.4%	14.9%	1.0508	15.7%	10.1%	(0.0019)	0.6225	-0.12%	10.0%
8	Kellogg	\$5.20	\$2.15	\$9.90	58.7%	52.5%	1.0400	54.6%	32.0%	(0.1998)	0.8835	-17.65%	14.4%
9	Kimberly-Clark	\$6.60	\$3.00	\$20.00	54.5%	33.0%	1.0236	33.8%	18.4%	(0.0769)	0.7895	-6.07%	12.4%
10	McCormick & Co.	\$5.30	\$1.44	\$23.20	72.8%	22.8%	1.0783	24.6%	17.9%	0.0328	0.7790	2.56%	20.5%
11	PepsiCo, Inc.	\$6.20	\$2.34	\$26.75	62.3%	23.2%	1.0621	24.6%	15.3%	(0.0509)	0.7816	-3.98%	11.3%
12	Procter & Gamble	\$5.95	\$3.00	\$32.85	49.6%	18.1%	1.0334	18.7%	9.3%	(0.0507)	0.6715	-3.40%	5.9%
13	Wal-Mart Stores	\$6.00	\$2.20	\$24.20	63.3%	24.8%	1.0025	24.9%	15.7%	(0.1210)	0.6877	-8.32%	7.4%

Docket No. 120015-EI Sustainable Growth Rate - Non-Utility Proxy Group Exhibit WEA-8, Page 2 of 2

		(a)	(a)	(f)	(a)	(a)		(g)	(a)	(a)	(f)
		Cor	nmon Equi	ty		2015 Price			Con	nmon Sha	res
	Company	<u>2010</u>	<u>2015</u>	Chg.	<u>High</u>	<u>Low</u>	Avg.	<u>M/B</u>	<u>2010</u>	<u>2015</u>	Growth
1	Abbott Labs.	\$22,388	\$31,500	7.1%	\$100.00	\$90.00	\$95.00	4.634	1,555.00	1,535.00	-0.26%
2	Bard (C.R.)	\$1,632	\$3,300	15.1%	\$165.00	\$135.00	\$150.00	3.861	84.97	85.00	0.01%
3	Church & Dwight	\$1,871	\$2,800	8.4%	\$60.00	\$45.00	\$52.50	2.665	142.40	142.00	-0.06%
4	Coca-Cola	\$31,003	\$45,000	7.7%	\$130.00	\$105.00	\$117.50	5.746	2,292.00	2,200.00	-0.82%
5	Colgate-Palmolive	\$2,67 5	\$4,820	12.5%	\$165.00	\$135.00	\$150.00	13.393	494.85	430.00	-2.77%
6	Gen'l Mills	\$5,403	\$8,740	10.1%	\$60.00	\$50.00	\$55.00	3.846	656.50	610.00	-1.46%
7	Hormel Foods	\$2,407	\$4,000	10.7%	\$45.00	\$35.00	\$40.00	2.649	265.96	265.00	-0.07%
8	Kellogg	\$2,158	\$3,220	8.3%	\$95.00	\$75.00	\$85.00	8.586	365.60	325.00	-2.33%
9	Kimberly-Clark	\$5,917	\$7,490	4.8%	\$105.00	\$85.00	\$95.00	4.750	406.90	375.00	-1.62%
10	McCormick & Co.	\$1,463	\$3,205	17.0%	\$115.00	\$95.00	\$105.00	4.526	133.10	138.00	0.73%
11	PepsiCo, Inc.	\$21,476	\$40,000	13.2%	\$135.00	\$110.00	\$122.50	4.579	1,581.00	1,495.00	-1.11%
12	Procter & Gamble	\$61,439	\$ 85,775	6.9%	\$110.00	\$90.00	\$100.00	3.044	2,838.50	2,610.00	-1.66%
13	Wal-Mart Stores	\$68,542	\$70,245	0.5%	\$85.00	\$70.00	\$77.50	3.202	3,516.00	2,900.00	-3.78%

- (a) www.valueline.com (retrieved Nov. 2, 2011).
- (b) Computed using the formula 2*(1+5-Yr. Change in Equity)/(2+5 Yr. Change in Equity).
- (c) Product of year-end "r" for 2015 and Adjustment Factor.
- (d) Product of change in common shares outstanding and M/B Ratio.
- (e) Computed as 1 B/M Ratio.
- (f) Five-year rate of change.
- (g) Average of High and Low expected market prices divided by 2015 BVPS.

Docket No. 120015-EI CAPM - Utility Proxy Group Exhibit WEA-9, Page 1 of 2

Market Rate of Return	
Dividend Yield (a)	2.6%
Growth Rate (b)	10.9%
Market Return (c)	13.5%
Less: Risk-Free Rate (d)	
Long-term Treasury Bond Yield	3.0%
Market Risk Premium (e)	10.5%
Utility Proxy Group Beta (f)	0.70
Risk Premium (g)	7.4%
Plus: Risk-free Rate (d)	
Long-term Treasury Bond Yield	3.0%
Unadjusted CAPM (h)	10.4%
Size Adjustment (i)	0.81%
Implied Cost of Equity (j)	11.2%

- (a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (retrieved Jan. 21, 2012).
- (b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 (retrieved Jan. 23, 2012).
- (c) (a) + (b).
- (d) Average yield on 30-year Treasury bonds for December 2011 from the Federal Reserve Board at http://www.federalreserve.gov/releases/h15/data/Monthly/H15_TCMNOM_Y20.txt.
- (e) (c) (d).
- (f) www.valueline.com (retrieved Nov. 17, 2011).
- (g) (e) x (f).
- (h) (d) + (g).
- (i) Morningstar, "Ibbotson SBBI 2011 Valuation Yearbook," at Table 7-5 (2011).
- (j) (h) + (i).

Docket No. 120015-EI CAPM - Utility Proxy Group Exhibit WEA-9, Page 2 of 2

Market Rate of Return	
Dividend Yield (a)	2.6%
Growth Rate (b)	10.9%
Market Return (c)	13.5%
Less: Risk-Free Rate (d)	
Projected Long-term Treasury Bond Yield	4.3%
Market Risk Premium (e)	9.2%
<u>Utility Proxy Group Beta (f)</u>	0.70
Risk Premium (g)	6.4%
Plus: Risk-free Rate (d)	
Projected Long-term Treasury Bond Yield	4.3%
Unadjusted CAPM (h)	10.8%
Size Adjustment (i)	0.81%
Implied Cost of Equity (j)	11.6%

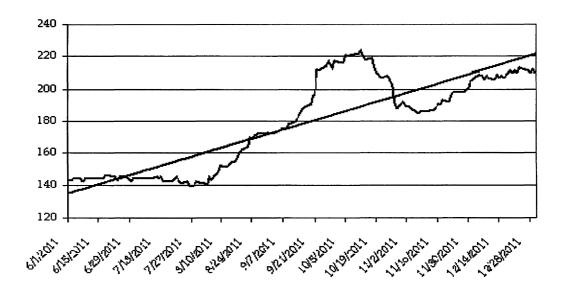
- (a) Weighted average dividend yield for the dividend paying firms in the S&P 500 from www.valueline.com (retrieved Jan. 21, 2012).
- (b) Weighted average of IBES earnings growth rates for the dividend paying firms in the S&P 500 (retrieved Jan. 23, 2012).
- (c) (a) + (b).
- (d)

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

- (e) (c) (d).
- (f) www.valueline.com (retrieved Nov. 17, 2011).
- (g) (e) x (f).
- (h) (d) + (g).
- (i) Morningstar, "Ibbotson SBBI 2011 Valuation Yearbook," at Table 7-5 (2011).
- (j) (h) + (i).

Docket No. 120015-EI Yield Spreads Exhibit WEA-10, Page 1 of 1

YIELD SPREAD (BASIS POINTS) BBB UTILITY -30-YR. TREASURY



Docket No. 120015-EI Electric Utility Risk Premium Exhibit WEA-11, Page 1 of 4

CURRENT BOND YIELDS

Current Equity Risk Premium	
(a) Avg. Yield over Study Period	8.91%
(b) December 2011 Average Utility Bond Yield	<u>4.47%</u>
Change in Bond Yield	-4.44%
(c) Risk Premium/Interest Rate Relationship	<u>-0.4114</u>
Adjustment to Average Risk Premium	1.83%
(a) Average Risk Premium over Study Period	3.41%
Adjusted Risk Premium	5.24%
Implied Cost of Equity	
(b) December 2011 Single-A Utility Bond Yield	4.33%
Adjusted Equity Risk Premium	5.24%
Risk Premium Cost of Equity	9.57%

- (a) Docket No. 120015-EI, page 3.
- (b) Moody's Investors Service, www.creditrends.com.
- (c) Docket No. 120015-EI, page 4.

Docket No. 120015-EI Electric Utility Risk Premium Exhibit WEA-11, Page 2 of 4

PROJECTED BOND YIELDS

Current Equity Risk Premium	
(a) Avg. Yield over Study Period	8.91%
(b) Projected Avg. Utility Bond Yield 2012-15	<u>5.83%</u>
Change in Bond Yield	-3.08%
(c) Risk Premium/Interest Rate Relationship	<u>-0.4114</u>
Adjustment to Average Risk Premium	1.27%
(a) Average Risk Premium over Study Period	<u>3.41%</u>
Adjusted Risk Premium	4.68%
Implied Cost of Equity	
(d) Projected Single-A Utility Bond Yield 2012-15	5.72%
Adjusted Equity Risk Premium	4.68%
Risk Premium Cost of Equity	10.40%

- (a) Docket No. 120015-EI, page 3.
- (b) Implied average yield on utility bonds for 2012-15 based on data from IHS Global Insight, *U.S. Economic Outlook* at 25 (Dec. 2011), Energy Information Administration, *Annual Energy Outlook* 2011 (Apr. 26, 2011), and Moody's Investors Service at www.credittrends.com.
- (c) Docket No. 120015-EI, page 4.
- (d) Exhibit WEA-6.

Docket No. 120015-EI Electric Utility Risk Premium Exhibit WEA-11, Page 3 of 4

	(a)	(b)		
	Allowed	Average Utility	Risk	
Year	ROE	Bond Yield	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%	8.09%	3.34%	
2001	11.09%	7.72%	3.37%	
2002	11.16%	7.53%	3.63%	
2003	10.97%	6.61%	4.36%	
2004	10.75%	6.20%	4.55%	
2005	10.54%	5.67%	4.87%	
2006	10.36%	6.08%	4.28%	
2007	10.36%	6.11%	4.25%	
2008	10.46%	6.65%	3.81%	
2009	10.48%	6.28%	4.20%	
2010	10.34%	5.56%	4.78%	
2011	<u>10.22%</u>	<u>5.13%</u>	<u>5.09%</u>	
lverage	12.32%	8.91%	3.41%	

⁽a) Major Rate Case Decisions, Regulatory Focus, Regulatory Research Associates; *UtilityScope Regulatory Service*, Argus.

⁽b) Moody's Investors Service.

SUMMARY OUTPUT

Regression Statistics								
Multiple R	0.9062018							
R Square	0.8212016							
Adjusted R Square	0.816235							
Standard Error	0.005182							
Observations	38							

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.004439957	0.00444	165.3441	5.054E-15
Residual	36	0.000966702	2.69E-05		
Total	37	0.005406659			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.0707625	0.00297293	23.80226	1.28E-23	0.06473308	0.07679183	0.064733085	0.07679183
X Variable 1	-0.4114494	0.031997942	-12.8586	5.05E-15	-0.47634415	-0.34655465	-0.476344147	-0.346554648

Docket No. 120015-EI Expected Earnings Approach Exhibit WEA-12, Page 1 of 1

		(a)	(b)	(c)	
	Company	Expected Return on Common Equity	Adjustment F <u>actor</u>	Adjusted Return on Common Equity	
1		12.0%	1.019234	12.2%	
1	Alliant Energy				
2	Consolidated Edison	9.5%	1.017906	9.7%	
3	Dominion Resources	14.0%	1.026475	14.4%	
4	Integrys Energy Group	9.5%	1.012171	9.6%	
5	ITC Holdings Corp.	15.5%	1.05988	16.4%	
6	NextEra Energy, Inc.	12.0%	1.02959	12.4%	
7	OGE Energy Corp.	12.0%	1.038173	12.5%	
8	PG&E Corp.	11.5%	1.035992	11.9%	
9	SCANA Corp.	9.0%	1.044369	9.4%	
10	Sempra Energy	10.5%	1.035388	10.9%	
11	Southern Company	13.0%	1.033572	13.4%	
12	Vectren Corp.	11.0%	1.022319	11.2%	
13	Wisconsin Energy	14.0%	1.013327	14.2%	
14	Xcel Energy, Inc.	10.0%	1.02550	10.3%	
	Average (d)			12.0%	

⁽a) The Value Line Investment Survey (Nov. 4, Nov. 25, & Dec. 23, 2011).

⁽b) Adjustment to convert year-end return to an average rate of return from Exhibit WEA-5.

⁽c) (a) x (b).

⁽d) Excludes highlighted figures.

Docket No. 120015-EI Summary of Cost of Equity Estimates Exhibit WEA-13, Page 1 of 1

Utility	Non-Utility
10.2%	12.3%
10.3%	11.5%
9.6%	11.8%
9.9%	12.2%
10.4%	
11.2%	
10.8%	
11.6%	
9.6%	
10.4%	
10.5%	
12.0%	
	10.2% 10.3% 9.6% 9.9% 10.4% 11.2% 10.8% 11.6% 9.6% 10.4%

Docket No. 120015-EI FPL Adjusted Capital Structure Exhibit WEA-14, Page 1 of 1

	Amount (\$ 000)	<u>Percent</u>
Short-term Debt	360,542	2.1%
Long-term Debt		
Jurisdictional Adjusted Utility	6,199,550	
S&P Debt Equivalent	949,000	
	7,148,550	41.6%
Common Equity	9,684,101	56.3%
Total	17,193,193	100.0%

Docket No. 120015-EI Capital Structure - Electric Utility Operating Cos. Exhibit WEA-15, Page 1 of 1

	Company	Long-term Debt	Preferred Stock	Common Equity
1	Alabama Power Co.	50.4%	5.6%	44.0%
2	Consolidated Edison of NY	49.0%	1.1%	49.9%
3	Georgia Power Co.	48.1%	1.5%	50.4%
4	Gulf Power Co.	51.1%	4.1%	44.8%
5	International Transmission Co.	40.0%	0.0%	60.0%
6	Interstate Power & Light	45.4%	6.4%	48.2%
7	ITC Great Plains	38.8%	0.0%	61.2%
8	ITC Midwest	40.0%	0.0%	60.0%
9	Michigan Elec. Transmission Co.	39.1%	0.0%	60.9%
10	Mississippi Power Co.	48.3%	2.2%	49.5%
11	Northern States Power Co. (MN)	48.8%	0.0%	51.2%
12	Northern States Power Co. (WI)	42.2%	0.0%	57.8%
13	Oklahoma Gas & Electric Co.	39.2%	0.0%	60.8%
14	Orange & Rockland	52.3%	0.0%	47.7%
15	Pacific Gas & Electric Co.	49.2%	1.1%	49.7%
16	Public Service Co. of Colorado	43.9%	0.0%	56.1%
17	San Diego Gas & Electric	51.5%	1.2%	47.4%
18	South Carolina Electric & Gas	46.3%	0.0%	53.7%
19	Southern Indiana Gas & Electric Co.	48.1%	0.0%	51.9%
20	Southwestern Public Service Co.	48.3%	0.0%	51.7%
21	Upper Penninsula Power Co.	37.1%	0.0%	62.9%
22	Virginia Electric Power	43.4%	1.7%	55.0%
23	Wisconsin Electric Power Co.	39.2%	0.6%	60.2%
24	Wisconsin Power & Light	43.1%	2.4%	54.5%
25	Wisconsin Public Service Corp.	42.3%	2.5%	55.2%
	Average	45.0%	1.2%	53.8%

Source: Company Form 10-K Reports and FEF Company Form 10-K and Annual Reports.

Docket No. 120015-EI Capital Structure - Utility Proxy Group Exhibit WEA-16, Page 1 of 1

		At Fiscal Year-End 2010 (a)		Value Line Projected (b)			
				Common			Common
	Company	Debt	Preferred	Equity	Debt	Other	Equity
1	Alliant Energy	46.3%	4.2%	49.5%	45.5%	3.0%	51.5%
2	Consolidated Edison	48.6%	1.0%	50.4%	49.5%	0.0%	50.5%
3	Dominion Resources	57.0%	0.9%	42.1%	57.5%	0.5%	42.0%
4	Integrys Energy Group	47.6%	0.0%	52.4%	45.0%	0.5%	54.5%
5	ITC Holdings Corp.	69.1%	0.0%	30.9%	64.0%	0.0%	36.0%
6	NextEra Energy, Inc.	58.0%	0.0%	42.0%	54.5%	0.0%	45.5%
7	OGE Energy Corp.	49.6%	0.0%	50.4%	50.5%	0.0%	49.5%
8	PG&E Corp.	50.4%	1.1%	48.5%	45.5%	1.0%	53.5%
9	SCANA Corp.	54.8%	0.0%	45.2%	50.5%	0.0%	49.5%
10	Sempra Energy	50.2%	0.5%	49.2%	49.0%	0.0%	51.0%
11	Southern Company	53.0%	2.9%	44.1%	52.5%	2.0%	45.5%
12	Vectren Corp.	54.0%	0.0%	46.0%	50.0%	0.0%	50.0%
13	Wisconsin Energy	53.5%	0.4%	46.2%	53.5%	0.5%	46.0%
14	Xcel Energy, Inc.	53.2%	0.6%	46.2%	51.5%	0.0%	48.5%
	Average	53.2%	0.8%	45.9%	51.4%	0.5%	48.1%

⁽a) Company Form 10-K and Annual Reports.

⁽b) The Value Line Investment Survey (Nov. 4, Nov. 25, & Dec. 23, 2011).

Docket No. 120015-EI

Market Value Capital Structure - Utility Proxy Group

Exhibit WEA-17, Page 1 of 1

		At Fiscal Year-End 2010 (a)			Value Line Projected (b)		
		(a)	(b)	(c)	(a)	(b)	(c)
		Long-term		Common	Long-term		Common
	Company	Debt	Preferred	Equity	Debt	Other	Equity
1	Alliant Energy	38.5%	3.5%	58.0%	35.1%	2.3%	62.5%
2	Consolidated Edison	41.9%	0.8%	57.3%	43.2%	0.0%	56.8%
3	Dominion Resources	38.9%	0.6%	60.5%	40.9%	0.4%	58.7%
4	Integrys Energy Group	39.4%	0.0%	60.6%	42.0%	0.5%	57.6%
5	ITC Holdings Corp.	44.3%	0.0%	55.7%	41.1%	0.0%	58.9%
6	NextEra Energy, Inc.	46.2%	0.0%	53.8%	42.5%	0.0%	57.5%
7	OGE Energy Corp.	34.2%	0.0%	65.8%	39.5%	0.0%	60.5%
8	PG&E Corp.	37.6%	0.8%	61.6%	40.1%	0.9%	59.0%
9	SCANA Corp.	45.5%	0.0%	54.5%	44.4%	0.0%	55.6%
10	Sempra Energy	41.8%	0.4%	57.7%	41.8%	0.0%	58.2%
11	Southern Company	36.1%	2.0%	61.9%	38.4%	1.5%	60.1%
12	Vectren Corp.	42.8%	0.0%	57.2%	37.7%	0.0%	62.3%
13	Wisconsin Energy	23.1%	0.2%	76.7%	36.1%	0.3%	63.6%
14	Xcel Energy, Inc.	44.8%	0.5%	54.7%	47.1%	0.0%	52.9%
	Average	39.6%	0.6%	59.7%	40.7%	0.4%	58.9%

⁽a) Debt outstanding computed by multiplying long-term debt ratio by total book capital, both as reported by The Value Line Investment Survey (Nov. 4, Nov. 25, & Dec. 23, 2011).

⁽b) Balance of other long-term capital not accounted for in long-term debt and common equity ratios.

⁽c) Market value of common equity computed by multiplying stock price by the number of common shares outstanding, both as reported by The Value Line Investment Survey (Nov. 4, Nov. 25, & Dec. 23, 2011.

EXHIBIT WEA-18

ENDNOTES TO DIRECT TESTIMONY OF WILLIAM E. AVERA

¹ Riddell, Kelly, "Cash-Starved Companies Scrap Dividends, Tap Credit," Pittsburgh Post-Gazette (Oct. 2, 2008).

² Staff Memorandum at 260 (references omitted).

³ *Id.* at 261 (references omitted).

⁴ Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n, 262 U.S. 679 (1923).

⁵ Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944).

⁶ Standard & Poor's Corporation, "U.S. Regulated Electric Utilities Head Into 2010 With Familiar Concerns," *RatingsDirect* (Dec. 28, 2009).

⁷ Moody's Investors Service, "U.S. Electric Utilities: Uncertain Times Ahead; Strengthening Balance Sheets Now Would Protect Credit," *Special Comment* (Oct. 28, 2010).

⁸ Moody's Investors Service, "Regulation Provides Stability As Risks Mount," *Industry Outlook* (Jan. 19, 2011).

⁹ Energy Information Administration, 2008 Uranium Marketing Annual Report (May 26, 2009).

¹⁰ Moody's Investors Service, "U.S. Electric Utilities: Uncertain Times Ahead; Strengthening Balance Sheets Now Would Protect Credit," *Special Comment* (Oct. 28, 2010).

¹¹ Fitch Ratings Ltd., 2012 Outlook: Utilities, Power, and Gas," *Outlook Report* (Dec. 5, 2011).

¹² Standard & Poor's Corporation, "Florida Power & Light Co.," *RatingsDirect* (Aug. 20, 2008).

¹³ Standard & Poor's Corporation, "Industry Economic And Ratings Outlook," *RatingsDirect* (Feb. 2, 2010).

¹⁴ Moody's Investors Service, "Regulation Provides Stability As Risks Mount," *Industry Outlook* (Jan. 19, 2011).

¹⁵ Moody's Investors Service, "U.S. Investor-Owned Electric Utilities," *Industry Outlook* (Jan. 2009).

¹⁶ Standard & Poor's Corporation, "Measuring Nuclear Risk in a Competitive Environment," *CreditWeek* (Aug. 8, 1994).

¹⁷ Moody's Investors Service, "New Nuclear Generation in the United States: Keeping Options Open vs. Addressing An Inevitable Necessity," *Special Comment* (Oct. 2007).

¹⁸ Standard & Poor's Corporation, "The U.S. Nuclear Power Industry Looks At Japan And Awaits More Scrutiny," *Global Credit Research* (Mar. 16, 2011).

¹⁹ Moody's Investors Service, "New Nuclear Generation in the United States: Keeping Options Open vs. Addressing An Inevitable Necessity," *Special Comment* (Oct. 2007). ²⁰ *Id.*

²¹ Fitch Ratings Ltd., "Florida Power & Light Company," *Global Power North American Credit Analysis* (Feb. 12, 2008).

²² Fitch Ratings Ltd., "Florida Power & Light Co.," Full Rating Report (Sep. 7, 2011).

²³ Standard & Poor's Corporation, "Summary: Florida Power & Light Co," *RatingsXpress* (Oct. 13, 2011).

²⁴ The Value Line Investment Survey at 541 (Dec. 9, 2011).

²⁵ See, e.g., Gongloff, Mark, "Stock Rebound Is a Crisis Flashback – Late Surge Recalls Market's Volatility at Peak of Credit Difficulties; Unusual Correlations," *Wall Street Journal* at B1 (Feb. 6, 2010).

²⁶ Lauricella, Tom, "Stocks Nose-Dive Amid Global Fears – Weak Outlook, Government Debt Worries Drive Dow's Biggest Point Drop Since '08," *Wall Street Journal* at A1 (Aug. 5, 2011).

²⁷ Moody's Investors Service, "Electric Utilities Stable But Face Increasing Regulatory Uncertainty," *Industry Outlook* (Jul. 22, 2010).

²⁸ Moody's Investors Service, "Regulation Provides Stability As Risks Mount," *Industry Outlook* (Jan. 19, 2011).

²⁹ Fitch Ratings Ltd., "2012 Outlook: Utilities, Power, and Gas," *Outlook Report* (Dec. 5, 2011).

³⁰ Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n, 262 U.S. 679 (1923).

³¹ Federal Power Comm'n v. Hope Natural Gas Co. (320 U.S. 391, 1944).

³² The constant growth DCF model is dependent on a number of strict assumptions, which in practice are never strictly met. 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.

³³ For example, the payout ratio for electric utilities fell from approximately 80% historically to on the order of 60%. The Value Line Investment Survey (Sep. 15, 1995 at 161, Feb. 4, 2011 at 2237).

³⁴ Formerly I/B/E/S International, Inc., IBES growth rates are now compiled and published by Thomson Reuters.

³⁵ Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* at 298 (2006) (emphasis added).

³⁶ Moody's Investors Service, www.credittrends.com.

³⁷ Southern California Edison Company, 92 FERC \P 61,070 at p. 22 (2000).

 $^{^{38}}$ Kern River Gas Transmission Company, Opinion No. 486, 117 FERC \P 61,077 at P 140 & n. 227 (2006).

³⁹ *Id.*

⁴⁰ See, e.g., Virginia Electric Power Co., 123 FERC ¶ 61,098 at P 64 (2008).

⁴¹ Southern California Edison Co., 131 FERC ¶ 61,020 at P 55 (2010) ("SoCal Edison").

⁴² Blue Chip Financial Forecasts, Vol. 30, No. 12 (Dec. 1, 2011).

⁴³ See, e.g., ISO New England, Inc., 109 FERC ¶ 61,147 at P 205 (2004).

⁴⁴ See, e.g., Direct Testimony of Andrew L. Maurey, Docket No. 000824-EI at 15 (Jan. 28, 2002). Mr. Maurey's forward-looking CAPM analysis was based on the dividend-paying firms in the ValueScreen data base, and produced an expected market rate of return of 12.92%.

⁴⁵ Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports* at 71 (2006).

⁴⁶ Morningstar, "Ibbotson SBBI 2010 Valuation Yearbook," at p. 85 (footnote omitted).

⁴⁷ *Id.* at Table C-1.

⁴⁸ See, e.g., FPSC Staff Memorandum, Docket No. 040006-WS (May 20, 2004); Direct Testimony of Andrew L. Maurey, Docket No. 000824-EI at 15 (Jan. 28, 2002).

⁴⁹ FERC has previously rejected CAPM methodologies based on historical data because whatever historical relationships existed between debt and equity securities may no longer hold. See Orange & Rockland Utils., Inc., 40 F.E.R.C. P63,053, at pp. 65,208 -09 (1987), aff'd, Opinion No. 314, 44 F.E.R.C. P61,253 at 65,208.

⁵⁰ Staff Recommendation for Docket No. 080677-E1 - Petition for increase in rates by Florida Power & Light Company, at p. 280 (Dec. 23, 2009).

⁵¹ Standard & Poor's Corporation, "Recent Expansion In Credit Spreads Shows Bond Market Stress, But Less Severe Than During The Financial Crisis," *RatingsDirect* (Oct. 11, 2011).

⁵² The forward-looking CAPM is more comparable to the arithmetic mean than the geometric mean. This distinction was made clear in the new edition of the text used by the Chartered Financial Analyst (CFA) program worldwide: "the geometric mean is appropriate for making investment statements about past performance...the arithmetic mean is appropriate for making investment statements in a forward-looking context." DeFusco, Richard A., CFA, McLeavey, Dennis W., CFA, Pinto, Jerald E., CFA, Runkle, David E., CFA, Quantitative Investment Analysis (Second Edition), at 127 (2007).

- ⁵³ As noted earlier, incorporating forecasted bond yields is consistent with the views of the FPSC Staff.
- ⁵⁴ The Value Line Investment Survey at 901 (Nov. 25, 2011).
- ⁵⁵ Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* at 323 (2006).
- ⁵⁶ Application of Yankee Gas Services Company for a Rate Increase, DPUC Docket No. 04-06-01, Direct Testimony of George J. Eckenroth (Jul. 2, 2004) at Exhibit GJE-11.1. Updating the results presented by Mr. Eckenroth through April 2005 also resulted in an average flotation cost percentage of 3.6%.
- ⁵⁷ 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.
- ⁵⁸ Fitch Ratings Ltd., "U.S. Utilities, Power and Gas 2010 Outlook," *Global Power North America Special Report* (Dec. 4, 2009).
- ⁵⁹ Moody's Investors Service, "U.S. Regulated Electric Utilities, Six-Month Update," *Industry Outlook* (July 2009).
- ⁶⁰ Standard & Poor's Corporation, "Assessing U.S. Utility Regulatory Environments," *RatingsDirect* (Nov. 7, 2008).
- ⁶¹ Standard & Poor's Corporations, "Florida Power & Light Co.," *RatingsXpress* (Apr. 18, 2011).
- ⁶² Moody's Investors Service, "Credit Opinion: Florida Power & Light Company," *Global Credit Research* (Apr. 11, 2011).
- ⁶³ Standard & Poor's Corporation, "Florida Power & Light Co.," *RatingsXpress* (Apr. 18, 2011).
- ⁶⁴ Florida Statute 366.041(1).
- 65 Gulf Power v. Wilson, 597 So. 2d 270 (Fla. 1992).
- ⁶⁶ See, e.g., Order No. PSC-02-0787-FOF-EI (2002), awarding 25 basis points to Gulf Power's ROE for customer satisfaction and reliability; Order No. PSC-09-0385-FOF-WS (2008), adopting 100 basis point reduction to ROE for unsatisfactory water quality and marginal customer service.
- ⁶⁷ Standard & Poor's Corporation, "Florida Power & Light Co.," *RatingsXpress* (Apr. 18, 2011).
- ⁶⁸ Apart from the immediate impact that the fixed obligation of purchased power costs has on the utility's financial risk, higher 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.

⁶⁹ Moody's Investors Service, "Storm Clouds Gathering on the Horizon for the North American Electric Utility Sector," *Special Comment* (Aug. 2007); "U.S. Electric Utility Sector," *Industry Outlook* (Jan. 2008).

⁷⁰ Moody's Investors Service, "U.S. Electric Utilities Face Challenges Beyond Near-Term," *Industry Outlook* (Jan. 2010).

⁷¹ Standard & Poor's Corporation, "Ratings Roundup: U.S. Electric Utility Sector Maintained Strong Credit Quality In A Gloomy 2009," *RatingsDirect* (Jan. 26, 2010).

⁷² Fitch Ratings Ltd., "U.S. Utilities, Power, and Gas 2010 Outlook," *Global Power North America Special Report* (Dec. 4, 2009).

⁷³ Moody's Investors Service, "U.S. Electric Utilities: Uncertain Times Ahead; Strengthening Balance Sheets Now Would Protect Credit," *Special Comment* (Oct. 28, 2010).